

Atlantic States Marine Fisheries Commission

American Eel Management Board

*August 8, 2018
8:00 – 10:30 a.m.
Arlington, Virginia*

Draft Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary.

1. Welcome/Call to Order (*M. Gary*) 8:00 a.m.
2. Board Consent 8:00 a.m.
 - Approval of Agenda
 - Approval of Proceedings from February 2018
3. Public Comment 8:05 a.m.
4. Update on Illegal Glass Eel Harvest in Maine (*P. Keliher and R. Cloutier*) 8:15 a.m.
5. Consider Addendum V for Final Approval **Final Action** 8:30 a.m.
 - Review Options and Public Comment Summary (*K. Rootes-Murdy*)
 - Reports from the Law Enforcement Committee, Technical Committee, and Advisory Panel (*M. Robson, J. Zimmerman, M. DeLucia*)
 - Consider Final Approval of Addendum V
6. Consider Maine Aquaculture Proposal **Action** 9:30 a.m.
 - Maine Proposal for 2019 Fishing Season (*S. Rademaker and P. Keliher*)
 - Reports from the Law Enforcement Committee, Technical Committee, and Advisory Panel (*M. Robson, J. Zimmerman, and M. DeLucia*)
7. Update on North Carolina Aquaculture Plan: 2018 Fishing Season (*C. Batsavage*) 10:15 a.m.
8. Other Business/Adjourn 10:30 a.m.

The meeting will be held at the Westin Crystal City, 1800 South Eads Street, Arlington, Virginia; 703.486.1111

Atlantic States Marine Fisheries Commission

MEETING OVERVIEW

American Eel Management Board Meeting

August 8, 2018

8:00 – 10:30 a.m.

Arlington, Virginia

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| Chair: Marty Gary (PRFC) Assumed Chairmanship: 10/17 | Technical Committee Chair: Jordan Zimmerman (DE) | Law Enforcement Committee Representative: Cloutier |
| Vice Chair: Lynn Fegley (MD) | Advisory Panel Chair: Mari-Beth DeLucia | Previous Board Meeting: February 6, 2018 |

Voting Members: ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, VA, NC, SC, GA, FL, D.C., PRFC, USFWS, NMFS (19 votes)

2. Board Consent:

- Approval of Agenda
- Approval of Proceedings from February 2018 Board Meeting

3. Public Comment:

At the beginning of the meeting, public comment will be taken on items not on the Agenda. Individuals that wish to speak at this time must sign-up at the beginning of the meeting. For agenda items that have already gone out for public hearing and/or have had a public comment period that has closed, the Board Chair may determine that additional public comment will not provide additional information. In this circumstance the Board Chair will not allow additional public comment. For agenda items that the public has not had a chance to provide input, the Board Chair may allow limited opportunity for comment. The Board Chair has the discretion to limit the number of speakers and/or the length of each comment.

4. Update on Illegal Glass Eel Harvest in Maine (8:15 – 8:30 a.m.)

Background

- In May 2018, the state of Maine closed the glass eel/elver fishing season early due to evidence of illegal harvest.

Presentation

- Update on Illegal Glass Eel Harvest in Maine by P. Keliher and R. Cloutier

5. Consider Addendum V for Final Approval (8:30 – 9:30 a.m.) Final Action

Background

- In October 2017 the Board initiated draft addendum V to address the commercial management of yellow and glass/elver life stage fisheries starting in the 2019 fishing season.
- The Board approved Draft Addendum V for public comment in February 2018.

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| <p>(Briefing Materials)</p> <ul style="list-style-type: none"> Public comment was collected between May and June. Public hearings were held in ME, MA, RI, CT, NY, NJ, DE, MD, VA, NC, SC, and FL. (Briefing Materials) The Law Enforcement Committee and Advisory Panel met on June 28th to review the draft addendum (Briefing Materials) The Technical Committee met on July 10th to review the draft addendum (Briefing Materials) |
| <p>Presentation</p> <ul style="list-style-type: none"> Review of management options and public comment by K. Rootes-Murdy Law Enforcement Committee Report by M. Robson Technical Committee Report by J. Zimmerman Advisory Panel Report by M. DeLucia |
| <p>Board Actions for Consideration</p> <ul style="list-style-type: none"> Select management options Approve final document |

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| <p>6. Consider Maine Aquaculture Proposal (9:30 – 10:15 a.m.) Action</p> |
| <p>Background</p> <ul style="list-style-type: none"> Maine submitted an aquaculture proposal on behalf of the company American Unagi for the 2019 fishing season. (Briefing Materials) The Law Enforcement Committee and Advisory Panel met on June 28th to review the draft addendum (Briefing Materials) The Technical Committee met on July 10th to review the draft addendum (Briefing Materials) |
| <p>Presentation</p> <ul style="list-style-type: none"> Overview of Maine aquaculture proposal by S. Rademaker and P. Keliher Law Enforcement Committee Report by M. Robson Technical Committee Report by J. Zimmerman Advisory Panel Report by M. DeLucia |
| <p>Board Actions for Consideration</p> <ul style="list-style-type: none"> Approval of the Maine aquaculture proposal for the 2019 fishing season |

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| <p>7. Update on North Carolina Aquaculture Plan: 2018 Fishing Season (10:15-10:30 a.m.)</p> |
| <p>Background</p> <ul style="list-style-type: none"> In August 2017, the Board approved the North Carolina Aquaculture Plan for two years (2018-2019). As part of the approval, the state must provide an update to the Board on 2018 fishing season, including any permit violations or citations. (Briefing Materials) |
| <p>Presentation</p> <ul style="list-style-type: none"> Update on North Carolina Aquaculture Plan by C. Batsavage |

8. Other Business/ Adjourn

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
AMERICAN EEL MANAGEMENT BOARD**

**The Westin Crystal City
Arlington, Virginia
February 6, 2018**

These minutes are draft and subject to approval by the American Eel Management Board.
The Board will review the minutes during its next meeting.

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NDEX OF MOTIONS

1. **Approval of Agenda** by Consent (Page 1).
2. **Approval of Proceedings of October, 2017** by Consent (Page 1).
3. **Move to strike the following language from the Draft Addendum V, based on the Stock Assessment Subcommittee’s questioning of the statement. Given the American eel’s panmictic life history, if the fishery were causing a population decline that population decline should be evident in all areas of its range, especially the areas of maximum exploitation** (Page 12). Motion by Cheri Patterson; second by Lynn Fegley. Motion carried (Page 12).
4. **Move to establish a transfer cutoff date of no more than 45 days after the fishing season ends, February 15** (Page 13). Motion by Rob O’Reilly; second by Michele Duval. Motion carried (Page 14).
5. **Move to delete Option 3 of Issue 3, Modified Addendum IV Quotas, which discusses minimum landings to states** (Page 14). Motion by Cheri Patterson; second by Sen. Craig Miner. Motion failed (Page 15).
6. **Move to set an option for the coastwide cap that is a 12 percent reduction from the baseline harvest of 1998 to 2016; which would be 836,969 pounds** (Page 16). Motion by Bob Ballou; second by Ritchie White. Motion carried (Page 16).
7. **Move to approve Addendum V as modified today** (Page 20). Motion by Eric Reid; second by Emerson Hasbrouck. Motion carried (Page 21).
8. **Move to approve the 2017 FMP Review of the 2016 fishing year and approve de minimis requests for New Hampshire, Massachusetts, Pennsylvania, District of Columbia, South Carolina, Georgia and Florida for yellow eel** (Page 22). Motion by Roy Miller; second by Jim Gilmore. Motion carried (Page 22).
9. **Move to nominate Ms. Lynn Fegley as Vice-Chair** (Page 23). Motion by Cheri Patterson; second by John Clark. Motion carried (Page 23).
10. **Move to adjourn** by consent (Page 24).

ATTENDANCE

Board Members

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| Pat Keliher, ME (AA) | Roy Miller, DE (GA) |
| Sen. Brian Langley, ME (LA) | Rachel Dean, MD (GA) |
| Stephen Train, ME (GA) | Ed O'Brien, MD, proxy for Del. Stein (LA) |
| Dennis Abbott, NH, proxy for Sen. Watters (LA) | Dave Blazer, MD (AA) |
| Cheri Patterson, NH, proxy for D. Grout (AA) | Lynn Fegley, MD, Administrative proxy |
| G. Ritchie White, NH (GA) | Rob O'Reilly, VA, proxy for J. Bull (AA) |
| Sarah Ferrara, MA, proxy for Rep. Peake (LA) | Cathy Davenport, VA (GA) |
| Dan McKiernan, MA, proxy for D. Pierce (AA) | David Bush, NC, proxy for Rep. Steinburg (LA) |
| Raymond Kane, MA (GA) | Steve Murphey, NC (AA) |
| Jason McNamee, RI (AA) | Michelle Duval, NC, Administrative proxy |
| Eric Reid, RI, proxy for Sen. Sosnowski (LA) | Doug Brady, NC (GA) |
| Mark Alexander, CT (AA) | Ross Self, SC, proxy for R. Boyles (AA) |
| Sen. Craig Miner, CT (LA) | Pat Geer, GA, proxy for Rep. Nimmer (LA) |
| Jim Gilmore, NY (AA) | Spud Woodward, GA (GA) |
| Emerson Hasbrouck, NY (GA) | Doug Haymans, GA (AA) |
| John McMurray, NY, proxy for Sen. Boyle (LA) | Jim Estes, FL, proxy for J. McCawley (AA) |
| Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA) | Chris Wright, NMFS |
| Heather Corbett, NJ, proxy for L. Herrighty (AA) | Sherry White, USFWS |
| John Clark, DE, proxy for D. Saveikis (AA) | Martin Gary, PRFC |
| Craig Pugh, DE, proxy for Rep. Carson (LA) | |

(AA = Administrative Appointee; GA = Governor Appointee; LA = Legislative Appointee)

Ex-Officio Members

Rene Cloutier, Law Enforcement Representative

Staff

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|--------------------|-----------------|
| Bob Beal | Kristen Anstead |
| Toni Kerns | Jessica Kuesel |
| Kirby Rootes-Murdy | Mike Schmidtke |

Guests

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|----------------------------|------------------------|
| Rachel Baker, NOAA | Derek Orner, NOAA |
| Bob Ballou, RI DEM | Jeffrey Pierce, MEFA |
| Chris Batsavage, NC DMF | Jon Siemien, USFWS |
| Jeff Brust, NJ DFW | Terry Stockwell, NEFMC |
| Joe Cimino, VMRC | Mike Tolhurst, MCCF |
| Colleen Giannini, CT DEEP | Jack Travelstead, CCA |
| Arnold Leo, E. Hampton, NY | Darrell Young, MEFA |
| Chip Lynch, NOAA | Angela Young, MEFA |
| Paul Nitsche, NEFSC | Chris Wright, NMFS |

The American Eel Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; February 6, 2018, and was called to order at 4:19 o'clock p.m. by Chairman Martin Gary.

CALL TO ORDER

CHAIRMAN MARTIN GARY: Welcome everyone to the American Eel Management Board. Hi, my name is Marty Gary; I'm with the Potomac River Fisheries Commission and I'll be your Chair. Before we start our meeting today I would like to defer to our Executive Director Bob Beal. We have a couple new folks at the management board table.

EXECUTIVE DIRECTOR ROBERT E. BEAL: I just want to make a couple quick introductions; two new Administrative Commissioners and one new Governor's Appointee, who used to be an Administrative Commissioner. From North Carolina there is a new Administrative Commissioner; Steve Murphey. Steve is in the audience. I think, Steve are you back there? There he is there is Steve Murphey sitting behind the delegation from North Carolina. Welcome Steve, we're glad you're here.

From Georgia, Doug Haymans is the new Administrative Commissioner from Georgia. He's taking Spud Woodward's position. Don't let Spud's presence here fool you; he's not in his old job, he's in a new position. He's now the Governor's Appointee from Georgia; so he switched seats but he came back for more. We're glad to see all you here, thank you. That's it, Mr. Chairman.

CHAIRMAN GARY: Thank you, Bob. Before we start, thanks to Herring Board Chairman Pat Keliher and Dr. Pierce for getting us back on time and giving us an extra 11 minutes; it's our last meeting of the day and we've got a lot of ground to cover.

APPROVAL OF AGENDA

CHAIRMAN GARY: Our first item of the day is the approval of the agenda. Does anyone have any changes to the agenda? Seeing none; is there any objection to approving the agenda as presented? Seeing none the agenda is approved.

APPROVAL OF PROCEEDINGS

CHAIRMAN GARY: The next item is the approval of the proceedings from the October, 2017 meeting. Are there any changes to the proceedings of that meeting? Is there any objection to accepting the proceedings of the October, 2017 meeting? Seeing none; those proceedings are approved. The next item is public comment.

PUBLIC COMMENT

CHAIRMAN GARY: I understand nobody has signed up; but just to double check, is there anyone in the audience that would like to offer public comment on items that are not on the agenda?

CONSIDERATION OF DRAFT ADDENDUM V FOR PUBLIC COMMENT

CHAIRMAN GARY: Seeing none; we'll move on to our next item, Consideration of Approval of Draft Addendum V for Public Comment with potential management action. We have two components to this. The way we would like to proceed is a presentation from Kirby; followed by questions only, followed by a presentation by Kristen from the Stock Assessment Subcommittee with questions only. Then we'll go to Board discussion; Kirby.

PRESENTATION OF MANAGEMENT OPTIONS

MR. KIRBY ROOTES-MURDY: Marty laid out pretty much how I'm going to go through the presentation. First, in terms of the Draft Addendum V, there is a statement of the problem. I'm going to briefly outline that; the

potential time table for this document moving forward, and overview of the management options.

If there are any questions after I go through that because it will be the bulk of my presentation, I'm happy to answer it and then as Marty said we'll turn it over to Kristen. She'll present the Stock Assessment Subcommittee's response on a couple of the questions that the Allocation Working Group posed; answer any questions that you all have on that and then move to Board discussion.

On the statement of the problem, the Board decided to initiate management action back in October of 2017; largely around two issues. On yellow eels there was concerns raised about the current management triggers as spelled out in Addendum IV, and the potential implementation of state-by-state quotas due to the coastwide overage of the coastwide cap based on 2016 landings information.

The other component is regarding the glass eel fishery. The Board took action to set Maine's glass eel quota for the 2018 season. The Addendum IV laid out what the quota was for 2015 through 2017; but required that the Board reconsider that quota prior to the 2018 season. The Board has already dealt with what the quota will be for this year; but moving forward the Addendum puts forward options regarding how to either maintain or increase that potential quota.

At the bottom of the slide lays out that specific motion that also specifies that the Addendum the Board initiated would start, in terms of any new management during the 2019 fishing season. Regarding the potential timeline for this draft document, the Board initiated it in October. Today the Board will consider approval of Draft Addendum V for public comment.

If the Board decides to approve the document today for public comment, public comment would start this month and go through March; at which point public comment would end and the Board would then take final action on this document at the May, 2018 board meeting. First I'm going to go through the glass eel specific portion of the document.

There are two sections that are dealing with glass eel management. The first is regarding Maine's glass eel quota. The second, based on the Allocation Working Group's discussions is the proposal to consider changes to the aquaculture allowances. Currently Addendum IV lays out that states may request the Board's approval of aquaculture plans for domestic aquaculture purposes of harvesting up to 200 pounds for use in those aquaculture facilities.

In dealing with the first part of that section 3.1, Options for Maine's Glass Eel Quota, it's pretty straightforward. There are just two options that are put forward in the document; starting on Page 11. The first is to either maintain Maine's glass eel, Option 1 at its current level of 9,688 pounds. The second option would be to increase Maine's glass eel quota back to the 2014 level of 11,479 pounds. This would be about a 19 percent increase in the quota from recent years; 2015 through 2017. But it's important to note that it's also a 35 percent decrease from what the quota was prior to 2014. In 2012 the quota level was around 21,610 pounds. Additionally in that section the state of Maine sites the implementation of the swipe card program as part of the reason for why an increase in the quota is warranted.

The swipe card program has improved tracking of landings and reduced poaching; and that is given as justification for a potential increase in the quota level. The second section is regarding proposed changes to the aquaculture plan. The first would either maintain the status quo provisions that are laid out in Addendum IV that allow for states, as I mentioned before, to

request up to 200 pounds of glass eel harvest for domestic aquaculture purposes.

The second option I'll get into now; and it allows for the pooling of harvest allowances across states and jurisdictions. There are a number of components to this; and hopefully you can read it on the screen. But what this option lays out is that up to three contiguously bordered states and/or jurisdictions would be allowed to pool that 200 pound allowance; up to a maximum of 600 pounds.

Those 200 pounds that traditionally would be attributed to just a single state, under this option would need to be harvested from each of the individual states; unless a strong argument is made that it would be preferred that they were all pooled and harvested from a single watershed system.

Additionally, because the pooling of this harvest is up to 600 pounds and below 750 pounds, which was a threshold laid out in Addendum IV; regarding the requirements that if harvest was above that a life cycle survey needed to be implemented. Because it's below that threshold, states and jurisdictions pooling under this option would not be required to implement a new life-cycle survey.

An additional change that this option puts forward is that states would no longer need to demonstrate that the harvest of glass eels would only occur in watersheds that minimally contribute to the spawning stock of American eels. Those were the two sections for the glass eel proposed options.

I'm going to move on to the yellow eel proposed management sections; and there are four issue items under Section 3.3. The first is regarding the coastwide cap. There are three options specific to that. The second is regarding the management triggers. There are three options specific to that.

The third is regarding allocation. There are five options that are put forward; including three with suboptions and the last is regarding transfer provisions and there are two options. Before I get into those issue items under Section 3.3, it is important for the Board to know that there has been an update in the commercial landings information.

When the Allocation Working Group had their call towards the end of November, it was pointed out that there were issues with a number of the states landings information. Based on that feedback, staff coordinated and worked with ACCSP staff and all the states to confirm the landings data that we currently had on file; or to submit new landings information that was a correction of what we had on file, no later than the beginning of January, 2018. We now have new landings information for the yellow eel fishery that differs from what was presented to the Board back in August; and also differs from what is included in the stock assessment report. The updated landings indicate that the coastwide landing in 2018 were 943,808 pounds. That is still above the coastwide cap; and it's an increase from what was previously reported by approximately 15 to 20,000 pounds.

I've tried to include on the screen what these updated landings look like for the last five years. Similar to how we've presented the landings information in the document, we've excluded the states of New Hampshire, Georgia, and South Carolina due to low landings or confidentiality issues. But as you can see at the bottom of this slide, it lays out what the coastwide totals are.

As you can see for 2016, we have the new number that is again still above the coastwide cap. Moving on to the Issue Item 1; Proposed Management Options for the Coastwide Cap. The first option is to maintain the cap at its current status quo level of 907,671 pounds. Option 2 would move to set the cap at the 50th

percentile or the median of the 1998 to 2016 landings period; which is 943,808 pounds.

Option 3 would set the coastwide cap at the mean of the 1998 to 2016 landings level. That would be 951,102 pounds. It's important to note that because we have updated landings information that we requested from the states, and again that differs from the information that has been presented to the Board over the last six months.

It revises the average landings data that was used to set the coastwide cap in Addendum IV. The new revised coastwide landings average from 1998 to 2010 increases from the status quo level of 907,000 up to 916,469 pounds. The second issue item is regarding the management triggers. Again, these are holdovers from Addendum IV.

The status quo would maintain those two management triggers; the first being that if the coastwide cap is exceeded by 10 percent in any given year that would constitute triggering state-by-state allocation. The second management trigger was regarding if the coastwide cap is exceeded for two consecutive years, regardless of the poundage that would trigger state-by-state allocation.

For Option 1, 2 and 3, before I even get to those two. It's important to note that there is an interaction that would take place between what is specified by this Board in Issue Item 1, and the subsequent management triggers that would come from that. If the coastwide cap is set at a different level, based on the options in this document, it's important to note that that could change what those management triggers are; in terms of the 10 percent overage for one year.

Getting back to the options for Issue 2, Option 2 under Issue Item 2 is a one-year trigger. That would just be instead of having two components, it would just be if the coastwide

cap is exceeded by 10 percent in a given year that would trigger state-by-state allocation. Option 3 would increase it to two years of exceeding the cap by 10 percent.

As I was trying to point out that the interaction between Issue 1 and Issue 2 is that if the coastwide cap is set at a potentially higher level, either Option 2 or 3 under Issue Item 1. The management trigger could rise to 1.04 million pounds; which would be about a 4.7 percent increase from our current status quo management trigger. The third issue item is regarding allocation. There are five options under this. The first one would be status quo; state-by-state quotas. Those are laid out in Addendum IV. We've also included them in this document for reference. Option 2 is no state-by-state quotas with 2 suboptions under it. Option 3 puts forward modified Addendum IV quotas. Option 4 lays out two suboptions that are based on time series average of yellow eel landings over two different time periods.

Option 5 is an allocation scheme that is based on a weighted time series average of yellow eel landings over two time periods. Moving on to Issue Item 3, Option 2, where there would be no state-by-state quota. The Suboption 2A puts forward the idea of an equitable reduction; where states would collectively develop measures to achieve the needed reduction if the coastwide cap is exceeded, and the management trigger is in turn also exceeded.

It's important to note that as the document lays out for that option there isn't a specific process for how that equitable reduction would be determined. It just lays out that collectively the states would develop measures to achieve the needed reduction. Option 2B moves forward with a 1 percent rule; where only those states that are harvesting above 1 percent of the coastwide landings would be responsible for the reduction.

Those states in the above the 1 percent rule would collectively work to develop measures to achieve that needed reduction. But again, it does not specify how that process would play out. Option 3 puts forward modified Addendum IV quotas. I'm going to try to lay out as simply as possible, and again these start on Page 17, how these adjusted quotas were calculated.

States assigned quota not exceeding the 2012 to 2016 average landings by more than 25 percent. The previous 2,000 pound minimum quota that was established for New Hampshire, Massachusetts, Connecticut, South Carolina and Georgia, would be redistributed to the remaining states.

All of those previous states would have their previous quota reduced to 1,000 pounds. Maine's quota would be set at the 2012 to 2016 average landings level of 5,952 pounds. With these changes the remaining quota above would be added to the state quotas of New York, Maryland, and Virginia with an additional amount added to Maryland's quota that is directly tied to those states that previously had a 2,000 pound minimum quota.

Here on this slide it lays out, and on Page 20 in the document it has the table for where you can find what the average landings were for those states from 2012 to 2016; what their Addendum IV allocation is, how their average harvest compares to that Addendum IV quota, what the Addendum V Option 3 quota is relative to Addendum IV quota, and then also how that new quota compares to their previously specified quota.

Next we have Option 4 that lays out the simple average of time series of the yellow eel landings. The first one puts forward average landings over the most recent ten year period; so 2007 to 2016. That is Option 4A. Option 4B is average landings over the most recent five-year time series; 2012 to 2016.

On this slide here we have the first one, the average landings over ten years. As you can see, it lays out what the Addendum IV allocation is in a percentage, what the Addendum IV allocation was in pounds, what the new percentage allocation would be under this option, and in turn what the new quota would be under this option for the state. This is for 4A, the ten-year averaged yellow eel landings. Option 4B is for a five-year average landings amount. Similar to the previous one, it lays out how percentage allocation and the quota would change under this option; relative to what's in place under Addendum IV.

Option 5 is a weighted-time-series average of yellow eel landings over those two time periods. Suboption 5A takes 50 percent and is weighted 50 percent towards the full time-series average of 1998 to 2016, and 50 percent of the recent ten-year average, 2007 to 2016. Option 5B lays out what the weighted average is of the full time series 1998 to 2016, and 50 percent of the most recent five year, 2012 to 2016.

These options are laid out on Page 24. It's important to note that I've also included the math for how these weighted averages were calculated in Appendix 2. Similar to Options 4A and B, these slides lay out what the percentage allocation is for each of the states under Addendum IV, and then how they change under these options in Addendum V.

This is for weighted full time series 50 percent and 50 percent weighted towards the recent ten years, 5B 50 percent to the full time series and 50 percent to the most recent five years. The last issue item under the Addendum is regarding the transfer of provisions. There are two options. The first would maintain the current transfer provisions that are laid out in Addendum IV. There are no transfers that are allowed after December 31st. Option 2 provides the option to extend transfers through April 1 through the following fishing season.

The reason this option was put forward by the Allocation Working Group was due to some of the concerns of reconciling landings data through the following fishing season; and if state-by-state quotas were implemented the need to try to reconcile that into the current year. It is important to note that among the Commission's FMPs right now, this would be a first in terms of having the ability to transfer quota after the ending of the fishing year, while also specifying a new cutoff date.

We have for a number of FMPs the ability to have transfers take place after the fishing year ends; but without any sunset clause or any cutoff date. For sea bass and for scup, it specified that transfers can happen up to 45 days after the fishing season ends. This would obviously be longer than that. With that I will take any questions the Board has on the options or issue items in the document.

CHAIRMAN GARY: Questions for Kirby? Rob O'Reilly.

MR. ROB O'REILLY: Thank you, Kirby. I guess I'm just wondering; Addendum IV is a reference for us. Were most of the data problems that states had, and if I recall there were three states perhaps that had the same data for Addendum IV that moved over to Addendum V, but a number of states had different data. Were most of the data situations that were problematic involved in the later years after 2010 or were there also some data inconsistencies from the 1998 through 2010 period?

MR. ROOTES-MURDY: Thanks Rob, for your question. I can't remember the specifics for all the states that provided revised data. I do know that some of them did revise their historical data prior to say the last five years; but it varied across the coast. Some states needed to use averaging for earlier part of the time series; because they don't have great

confidence in individual year's landings data. But it really varied state to state.

CHAIRMAN GARY: Additional questions; Bob Ballou.

MR. ROBERT BALLOU: Kirby, I'm trying to read through the document and make sure the document is clear enough on what the two options represent regarding the Maine glass eel quota issue. Option 1 is very clear; in that it is the level that has been in place since 2015, and if I'm not mistaken it's based on 2014 landings that's 9,688.

The Option 2, 11,479, the document says that this quota level was specified for 2014, and was a 35 percent reduction from 2012. I'm not sure really what that means, and I'm concerned the public won't have a good sense as to what that Option 2 is about. For example, what does it mean to say specified for 2014? Can you add some more clarity as to what that option is intended to represent?

MR. ROOTES-MURDY: I will take a stab at it, and I might turn to Maine to provide a little bit more clarity. They had a quota that they specified for the 2014 fishing season that was a reduction from their 2012 landings level. I believe part of that was due to some of the requests by the Addenda at the time; Addenda III and IV to reduce fishing mortality across eels on all life stages, and so it was a 35 percent reduction in landings level from 2012, in terms of what the 2014 quota was. The 2015 through 2017 quota level was further reduced from that 2014 quota.

CHAIRMAN GARY: Pat, did you want to add anything to that?

MR. PATRICK C. KELIHER: Sure. The only thing I think I would add is that Kirby has referenced several times about this 35 percent reduction; 2012 was when we hit the all-time-high landings of 21,000 pounds. There was

tremendous concern around this table in regards to the future of this fishery.

Obviously I don't need to relive all the problems we had. But there was a wild west happening out there and we needed to constrain what was happening. One of the measures we took was a voluntary 35 percent reduction; it took two years to get to it. We did that from the 18,000 pound harvest, which dropped us to that 11,000 pound number.

There was that first year we had the 11,000 pound quota, we had harsh winter, a lot of icing, spring freshet problems. We didn't achieve that quota, we didn't reach that quota. We caught 9,000 pounds. We were in the process of the Addendum, and then the Board said well, you didn't catch it so we'll freeze you at that level. It probably could have been clearer in the document; but I've lived it so much that I've read it so much that probably I wasn't thinking about it from a public perception; but I do take your point.

STOCK ASSESSMENT SUBCOMMITTEE REPORT

CHAIRMAN GARY: Additional questions for Kirby. Seeing none; we'll now transition to Kristen's report from the Stock Assessment Subcommittee. Kristen.

MS. KRISTEN ANSTEAD: Several questions were posed to the SAS by the Working Group. We met via conference call to go over these questions that were posed. They were of a technical nature, so this went to the SAS rather than the TC. We received a presentation much like the one you saw today. The SAS has not reviewed the full document, nor has this been sent to the TC. Before I get into it, I would say one of the first comments from the SAS was that they recommend the TC review the draft addendum before public comment. The first question to the Working Group was to provide feedback on the accuracy of the following statement.

I'll just read the statement. American eels reach maturity at a young age, and smaller size in estuarine waters than in fresh water, and the 19 year time series of landings likely represents at least two generations of estuarine yellow eels that have been exposed to the yellow eel fishery. Given the American eels panmictic life history, if the fishery were causing a population decline that population decline should be evident in all areas of the species range, especially the areas of maximum exploitation.

The SAS agreed that the statement was incorrect. They cited that stocks declining usually decline from the edges inward; and that we don't manage the full range of this species that we don't actually know what's going on some of the big stream edges of this population south of Florida or north of Maine.

Additionally, the assessment tracks trends in the estuarine waters, not in freshwater areas. There is a whole other population we don't have information on; and that detecting hyper stability can be difficult for data-poor species. There just isn't enough information to kind of make that determination.

It also does not consider how sex ratios and maturity varies along the coast. We continue to go back to the stock assessment and say that "no trend" in a lot of these abundance indices does not mean that they're not increasing. It just means that they're not increasing or decreasing. It doesn't mean that it's meaningless information.

We did see a lot of variety along the coast in many abundance indices. This was another place that the SAS chimed in that the TC really could have something to add to this conversation; had they had the opportunity to review the document, and this statement. Then lastly, when it came to the statement they did want to restate that the stock is stable; but it's stable at low and depleted levels.

The second question that we discussed was for the new proposed coastwide landings cap above the status quo, what are the implications for the stock if the coastwide cap is set at a different, higher level than its current level? The SAS responded with that none of these proposed options that 12 percent reduction from the time series average that was suggested the last time they reviewed this for Addendum IV.

At that time the SAS and the TC did meet; and they recommended a decrease of mortality at all life stages, and they suggested a 12 percent reduction from the '98 to 2010 baseline average, and that number is in parentheses. They thought that was precautionary; and I'll go into in a second why that number was chosen.

At that time the Board still chose the time series average, again this stock is data poor and we have a depleted status. But we don't have reference points, we don't have a model. We have a bunch of abundance indices. We have time series. We can't do projections. We don't have something to measure this against; but that the current level of harvest may not allow for rebuilding. This is not a table that the SAS reviewed. This is something that I made for your reference for that 12 percent reduction. This is coming from the 2014, and some of this table was in the TC response to the last Addendum. The 12 percent reduction represented the CVs from the 1998 to 2010 harvest.

At that time the TC and SAS recommended a 12 percent decrease; because it would provide a measurable harvest reduction. I calculated that up here for you. This is the baseline harvest for 1998 to 2010; which is what it was last time at Addendum IV. You have your cap in the first column, and what the harvest should be with a 12 percent reduction.

I revised that same value for the new landings; since the landings have been updated to be a

higher value. With the 12 percent reduction the Addendum IV cap would be around 806,000 pounds. If you take the different time series that is suggested by this proposed Addendum, that would still be 836,000 pounds. That's just for your reference what the 12 percent reduction is.

Again, the SAS didn't review this, but it is consistent with their advice last time. Question 3, in considering changes to the current management triggers, what is the impact of the resource if the current coastwide cap is exceeded by two current management triggers? Those are listed there. The SAS responded that the assessment is just not quantitative enough to answer this question.

But that given the depleted status, increasing harvest will hamper rebuilding possibilities; that stock status is unchanged. This remains a low, depleted stock, and also the SAS is now unclear about the Board's management goals. It would be easier to respond to some of this if it was clear whether we are trying to keep the stock at the current depleted status at current levels, or if we would like to rebuild, and what we're willing to take, how risky we're willing to be around those estimates.

Finally, what type of guidance can the SAS and TC provide the Board in addressing overages in the coastwide cap? The SAS felt that this was an allocation issue, not a biological population issue, and that it depended on your rebuilding targets or if you intend to rebuild the stock. We couldn't fully answer that question. Finally, we did discuss the aquaculture plan. While it does not increase harvest of glass eels along the coast, the quota remains the same as 200 from each state.

It does increase access to this quota that a state that previously didn't have the ability to have aquaculture can now still use their quota. Potentially glass eel harvest is going up. Doing this without requiring any extra data was

discouraging to the SAS. You know we're bringing the quota up for an aquaculture facility, up to 600 falls under the 750 pounds that would require life survey.

Understanding that's very difficult to implement, we still may be increasing catch without any additional data coming out of it that will help us better answer these questions in the future, if they come back to the SAS or the TC. With the depleted status, harvesting more eels at any stage will not improve the stock and may be detrimental. With that I will take any questions.

CHAIRMAN GARY: Thank you Kristen for your report, are there questions for Kristen?

MR. JOHN CLARK: Thank you for that report, Kristen. The first response you gave to the statement about the life history; while I was responsible for putting that in the Addendum in the first place, and I had some questions about the response, which I won't go into all of them here. But one that kind of surprised me was that the SAS reiterated this idea that the eel stock is declining from the edge.

This of course goes back years and years to before we even had the eel plan, with the problems that we're seeing up in Lake Ontario and the St. Lawrence. It's I know been a huge argument, even up in Canada, because of course while there were those huge declines in Lake Ontario, in the Gulf of St. Lawrence eel stocks are in excellent shape.

In fact, I just saw this recent magazine article where Dr. Cairns, Dave Cairns who is probably the top eel expert anywhere of American eels has said that the stock in the Gulf of St. Lawrence that the stock is three times what they were 20 years ago. Based on that and back when the assessment was first done in about 2004, and this idea was brought up.

I thought that idea had kind of been put by the wayside, just because of the unique life history of eels. That is one of the reasons I brought that up in that point is that the life history as such is what mechanism would there be for the life history of eel with the leptocephali drifting on the Gulf Stream to have an extinction occurring from the edges and not throughout the range?

MS. ANSTEAD: I think that could certainly be worth the discussion that the SAS has, as well as the TC, and that is the first point where they wondered why this hadn't gone to a broader crowd or been able to review the document in its entirety.

CHAIRMAN GARY: Additional questions for Kristen? Rob.

MR. O'REILLY: Thank you Kristen and I watched your math exercise there. I'm a little surprised; because for some reason starting back in 2013, I thought the TC was recommending a 10 percent reduction. But I guess not, and that that 12 percent is the CV of the 1998 through 2010 data. But what is the CV of the 1998 through 2016 data? It probably is pretty close, but at the same time I'm wondering.

You mentioned the precautionary element that we all talked about back then. Does the fact that the landings from 2011 to '16 still within the range of the cap and everything else, and the idea that when you went through the assessment process. You know more or less there were some trends down, indices down, some up. Everything is still in a situation where it's depleted stock. But clearly does the precautionary element change at all in your mind?

MS. ANSTEAD: I'm sorry, I should have been more clear with that table. I did recalculate the CVs, and they are still 12 percent, even with the updated landings for all three of those boxes, 12 percent is the CV. Again, we did not debate

that specific table; we merely discussed how the stock assessment update did not indicate there has been a big shift since the benchmark that status is the same.

Therefore, advice from the SAS was pretty much the same as well. I think that would require a full TC conversation on the precautionary side, but the SAS did say that their recommendations are similar to the Addendum IV, so that would have been the 12 percent.

CHAIRMAN GARY: We have a question from Dan McKiernan.

MR. DANIEL MCKIERNAN: In one of the previous slides there was a statement that the 600 pound combined allocations of glass eels would not increase the overall allocation. Does that assume that every state has a 200 pound allocation?

MS. ANSTEAD: I think every state has the ability to harvest 200 pounds for aquaculture purposes; and so that hasn't changed, even under the new proposal. Every state still has 200 pounds to deal with; whether they allocate it to one facility or two facilities, it is 200 pounds. The argument from the SAS was potentially increasing harvest, because maybe more people can access that quota now.

MR. MCKIERNAN: If I could respond. In Massachusetts we have a \$10,000.00 fine established by statute for taking glass eels. It's really not possible for my state, unless legislation were to be passed, to take part in that 200 pound allocation. I suspect New Hampshire is in the same boat. They have very severe penalties; so if a third state was then asking for 600 pounds that definitely is an increase of the overall allocation. From a state-to-state basis, some of our states are simply out of this game completely of glass eels by statute.

CHAIRMAN GARY: Additional questions for Kristen; Lynn.

MS. LYNN FEGLEY: Thank you Kristen for all of your work on this. I just wanted to state that I think the intention of that question that was asking about the impacts of exceeding the cap over two years, really had to do with what is the magnitude of change in harvest that is going to impact this population?

I am very cognizant that we don't have the answers to those questions right now; because the species is data poor. But when we're looking at the difference between the recommended cap years ago of 700 and something thousand pounds, and the current cap of 907, I wonder if that difference of less than 200,000 pounds is really the difference between depleting further, maintaining biomass or rebuilding?

I would challenge going forward us to find the data. I would challenge the TC to maybe look at alternative methods; and as this Board starts to consider management goals, what is our goal? Is it to maintain stable biomass? Is it to rebuild? The rebuilding question is a puzzle to me; because when I look at the indices in the stock assessment, the 30 year and the 40 year, there is not that much of a change over those decades.

The increase is really right back there at the very beginning of the time series. You can't really know if that was the tail of a downhill or if it's just a spike. It's hard for me, looking at the numbers, to understand what exactly we would be rebuilding to. I think some advice from the TC on what would we consider if we're looking at rebuilding. How would we do that math?

MS. ANSTEAD: As you know, we struggle with a lot of these questions; because we just don't have the data or the model to answer them in a quantitative way. You know data needs certainly go into that and I know we've brought

that up before, you know addressing some of those research recommendations and tagging on more data requests when we increase the cap. I will say another comment that came up on the SAS is that it hasn't been long since we put in Addendum IV, and so we haven't given it much opportunity to see what we've done differently, as far as the stock is concerned, from now until then. We only have one or two years of data since then, so we don't know how it's even reacted in its entirety to these changes, since they haven't been in place for very long. We haven't let the aquaculture be proven or disproven as successful, or the cap really.

CHAIRMAN GARY: Are there any additional questions for Kristen? All right seeing none; our next step would be Board discussion of Draft Addendum V. Before we do that I know there are some folks from the Maine Elvers Association that traveled down here; and I think this would be an appropriate time to allow them a minute or two at the table, and I believe Jeff Pierce. Are you here? You could take the microphone.

MR. JEFFREY PIERCE: Good afternoon Chairman Gary, members of the American Eel Board. My name is Jeffrey Pierce. I'm here on behalf of the Maine Elver Fishermen's Association. Thank you for allowing me to make comment on Addendum V. I'm here to urge the Board to support an 11,749 pound glass eel quota as an option in this upcoming Addendum.

Raising the quota to 11,749 pounds is justifiable as we look at the history of this fishery. The elimination of harvesting pigmented eels, the state of Maine has a small yellow eel fishery. The state of Maine no longer allows the harvesting of silver eels, which we haven't for years. Maine also has addressed poaching in a very successful manner.

Maine has successfully implemented swipe cards; which now track every elver from stream

to exporter. The state of Maine's management of this glass eel fishery is what success looks like. It would still be a reduction from the 2012/2013 seasons with recorded landings of 18,000 and 20,000 pounds.

We at MEFA hope that the quota from Maine's elver fishery would be restored to the 2014 quota. Addendums always have provisions to reduce quota, but rarely provisions to increase quota when things improve, such as the great work that has been done in Maine to improve and open up over 20,000 acres of habitat through dam removal and fish passage projects. We would also ask that this Board consider the aquaculture option, as these are new and emerging markets. Thank you for your time.

CHAIRMAN GARY: Thank you, Jeff. Our next step is Board discussion of Draft Addendum V for public comment. Before we do that I would just remind the Board that at the October meeting the Board voted unanimously to move this Addendum forward, develop it, create the Working Group, get their input, and as Kirby described it today.

Now our challenge is to describe this and what we're going to need from the Board today is focused on what you want to see in that plan as it goes forward. Assuming that we do approve it today, what do you want deleted, added or modified? We'll need motions for all of those, unless the modifications are not substantive. With that we'll go ahead and start our discussion of Draft Addendum V. Bob.

MR. BALLOU: Either we have a third option for the Maine glass eel quota, or we have some transposed numbers. I think the number in the draft addendum for Option 2 is 11,479. We have a letter and we just heard Mr. Pierce advocating for 11,749. I'm going to assume that the draft document is accurate and that there has been a transposition of numbers by the advocates. I just want to make sure that's the case and we're not talking about a third option

here. My first point is just to clarify that the number in the document is the accurate number.

MR. ROOTES-MURDY: To the best of my understanding right now, Bob, but we can double check that.

MR. KELIHER: I'm sorry, I was just looking at some notes that I made and doing some quick math on our reductions, and I came up with 11,749 as well when I did it. We may have two numbers switched.

MR. BALLOU: If I could follow up, Mr. Chair.

CHAIRMAN GARY: Yes, Bob.

MR. BALLOU: Thank you for that clarification. I think it will be important to get that number correct. Then I think just to follow up on my earlier point. I think it would behoove the public to just provide a little bit more in the way of background; in terms of how the Maine elver fishery has evolved, you know the fishery as it intersected with management, because it sounds to me, and Pat thank you for that answer earlier that there were some self-imposed quotas that Maine instituted, if I'm not mistaken.

It's not really clear from the document that that is what happened; which was then followed by Board action that codified the quota at a lesser amount. To help the public in trying to understand what this option is about, I would suggest, so this is just a qualitative suggestion. I don't have any specific language. It's just to perhaps put a little bit more in this document that walks the public through the evolution of the Maine glass eel fishery, to help them better understand how these two options relate.

CHAIRMAN GARY: Additional comments hopefully focused on changes that you would like to see. John.

MR. CLARK: Under 3.3, Issue 1, The Coastwide Cap, the comment that the SAS actually evaluated in their statement. As I mentioned I do want to discuss it further. But being that it is controversial, I would think it would be a good idea just to take that whole statement out of the Addendum; the one that American eels reach maturity at a younger age. That whole point that was found incorrect by the SAS, like I said I want to discuss it further but don't think it needs to be in the Addendum.

CHAIRMAN GARY: To remove that language that John, you mentioned, we need a motion to strike that language, so if somebody would make a motion to that effect. Cheri.

MS. CHERI PATTERSON: **You can't hear me yet? I would like to move to strike the following language from the Draft Addendum V, based on the Stock Assessment Subcommittee's questioning of the statement: Given the American eel's panmictic life history, if the fishery were causing a population decline that population decline should be evident in all areas of its range, especially the areas of maximum exploitation.**

CHAIRMAN GARY: Do we have a second to the motion? Lynn. **Is there any discussion? Is there any opposition to this motion? Seeing none; the motion passes.** Moving on, Lynn Fegley.

MS. FEGLEY: I'm just wondering to Dan's point about the pooling of harvest where some states the harvest of glass eels is absolutely prohibited, and so you would have states with no glass eel harvest essentially seeding their 200 pound allocation to a neighboring state. I think it might be good for the public to understand a little bit about that; if there could be a little bit of language added.

CHAIRMAN GARY: All right additional comments; Rob O'Reilly.

MR. O'REILLY: Is this open season on everything there?

CHAIRMAN GARY: It is.

MR. O'REILLY: Okay, I guess when Kirby went over the options that there is really not anything in place for how it would be moving forward. I don't remember the exact numbers, whether it was 5A, 5B, the 1 percent, all of that. But there is nothing in place really to decide how things move forward.

It might be better to say whoever it's going to be, the Technical Committee, perhaps the Working Group; just some assurance to the public that it's not as if it's not going to be taken care of. That is one comment. The second comment, I would like to comment on the transfers. I think we've heard throughout, whether it's transfer, allocation, whatever the situation is that there have been data problems.

There is no doubt about it. However, it does seem that those data problems have been reconciled; and Kirby gave everyone enough time to do that. States that didn't already have the same data traveled from Addendum IV to Addendum V did provide more information. We can't now say that the data that are there through 2016 are inconsistent.

What we can say, as far as transfers is that there still can be situations, especially with the late fall fishery that it may make it difficult to have a calendar year transfer. For that reason, when the Working Group met, I did suggest April 1. The reason I suggested April 1 is I know by April 1 all the data we have offshore and inshore that's it. That is the cutoff for us. But it doesn't have to be April 1. I recognize that Kirby put up scup and black sea bass, which have 45 days and carryover to February 15.

That probably would work in my opinion as well; at least it gives that extra time for the state that wishes to transfer to realize that the

data are pretty sound, rather than doing projections at some point earlier in the same calendar year of a transfer where they're unsure. **I would think probably to be consistent that I would move that we establish the transfer period for 45 days following the previous calendar year. I think that was February 15, if I'm not mistaken.** I would like to make that motion.

CHAIRMAN GARY: We'll try to get that up on the screen.

MR. ROOTES-MURDY: Yes, give us a second Rob, to get it up on the screen for you.

CHAIRMAN GARY: While we're waiting for that to go up, can I cue up a couple of other folks that are interested again looking at changes, additions, deletions, and modifications; anyone? All right, we'll wait. There is a second to the motion; Cathy Davenport. The motion is Move to establish a transfer cutoff date of no more than 45 days.

We can't have a second from the same state; Cathy and Rob are from Virginia. I'm looking for that second again; Michelle Duval. All right, now we can read it in. Move to establish a transfer cutoff date of no more than 45 days after the fishing season ends, February 15; motion by Mr. O'Reilly, seconded by Dr. Duval. Discussion, Cheri.

MS. PATTERSON: One of the main points that the Workgroup came up with is that there still could not be data that has been received by some states by this deadline; and that data quality are assessed at the time that the data are available to ACCSP, which is at that April deadline. It's actually a little bit before the ACCSP deadline. This would ensure that any data that are assessed are correct for transfers or for quota.

CHAIRMAN GARY: Additional discussion, Rob.

MR. O'REILLY: Cheri is correct. We had that discussion. I think what ACCSP told us that by May 1 they would have more or less final data. There is always some amount of delinquent. I just don't think we can get it any later than what's up there and that's why I made the motion. I think it gives a little bit of tolerance.

Generally when you make transfers you're doing some type of projection, and you're usually being conservative anyway. When you transfer quota you're making sure that you don't implicate yourself in a problem with an overage. Although I recognize what ACCSP said, I think that probably this is as close as we're going to be able to come to having tolerance that is necessary; you know given the way the fishery is prosecuted, especially in the late fall.

CHAIRMAN GARY: Additional discussion. **Is there any opposition to the motion? Seeing none; the motion passes.** All right, we're moving on. Are there any other items that the management board sees? Cheri Patterson.

MS. PATTERSON: **I would like to move to delete Option 3 of Issue 1; where there is discussion of reduction of minimum landings to five states.** Amendment 4 provided a minimum of 2,000 pounds for the states that have had low landings. To take those landings and reduce them even more continues to prevent fisheries that had been there or that may be developing in the future. Just keep in mind that if there are no fisheries in these five states that the quota can be transferred to other states.

CHAIRMAN GARY: Cheri, can you clarify which option we're referring to in the document?

MS. PATTERSON: Option 3. I'm sorry; Issue 1, Option 3. It's the allocation, Issue 3, sorry.

CHAIRMAN GARY: All right, we're going to go ahead and get that up on the board. Do we

have a second to that motion; Craig Miner, all right discussion, Lynn?

MS. FEGLEY: I would oppose this motion. You know this is allocation. It's an extremely difficult topic; and I fully understand the sentiment of cutting that base allocation for the low harvest states, to leave room that there wouldn't be as much room for them to develop fisheries. But on the other hand that base allocation, the higher you make it the bigger the cost to fishermen who are earning livings now.

It's allocation. It's very difficult. I think for full disclosure in the Work Group, with the inception of Option 3 the idea was to maintain that spirit of the Addendum IV allocation. But to redistribute the quota more equitably and initially the thought was to leave these low harvest states; to leave them alone and not bind them to a quota, because they have such little impact on the harvest as a whole.

Essentially it's taking a little bit of a play out of the menhaden book. But none of us really have the stomach to do that for another species. The idea was to give low harvest states quota that they would have ownership of. I can see the point that it's less; but I also think that there are other options that extremely create great problems.

There are options that give certain states a quota of 2 pounds. There are options that reduce the state of Maryland by over 30 percent. I think given that broad range, at the end of the day with allocation that's what we do. We create winners and losers; and I think we owe it to the public to take all of the options out for comment.

CHAIRMAN GARY: Would anybody else like to speak to this motion? Dan.

MR. McKIERNAN: I just have a question. Did the Working Group consider a system analogous to what we have in black sea bass

and scup; where underages are redistributed to states with overages, based on the proportional shares that the states with overages have?

MR. ROOTES-MURDY: Yes, thanks for the question, Dan. My recollection was while there might have been some discussion; I don't believe that the Allocation Working Group flushed out an option to mirror what we have in place for black sea bass and scup for the yellow eel fishery.

MR. McKIERNAN: If I could follow up. Well the advantage to that is states that aren't using their quota, it would automatically get placed back into the mix and available to those states with overages. I think it is certainly better than a system where we start getting phone calls; you know late in the season.

As much as it's rewarding to be able to give your friends some fish when they need it, it seems like it's a system that ASMFC could do without; in terms of the first state that makes the call gets the fish. I don't know if there is a way to get that into the Addendum or not.

MR. ROOTES-MURDY: As Marty laid out; you know if that is an option you want to see in the document, this would be the time now to add that in, to make a motion to add that in. I will point out that when the Allocation Working Group did discuss this as staff, I did bring up that the black sea bass transfer system is not a perfect one; and that we spend much of the later part of the fall into the winter trying to reconcile some of those landings. For summer flounder, scup, black sea bass we have some of the best reporting in place. We know that the eel fishery is not quite on the same level. As staff, I did express some concern that trying to mirror it might not be quite the same.

CHAIRMAN GARY: We still have the motion on the table; and Dan we may come back if you want to make that motion. Do we have further discussion on this motion? Michelle.

DR. MICHELLE DUVAL: I have to agree with my colleague from Maryland; regarding I think we really owe it to the public to take all of the options with regard to allocation out for public comment. We spent a long time on all of these. As Lynn has stated, this is a difficult issue.

I think it bears noticing that there are some other options in there that would provide those states even less than the 2,000 pound allocation that is available under the current Addendum IV quota. I think the Working Group did a really good job of paring things down to a reasonable range of alternatives to use some Magnuson Act language; but I am not going to support this motion.

CHAIRMAN GARY: Okay are there any additional comments? Ready for a vote then; is there a need to caucus? We're ready for the vote? **All those in favor of this motion raise your hand. All those opposed; abstentions, null votes. The motion fails 4, 11, 2.** All right we'll move on; additions, deletions, modifications, Bob.

MR. BALLOU: Kirby, and I apologize, I should have asked Kirby this question earlier. Did the Rec Working Group consider lowering the coastwide cap; namely to a level that I think I heard Kristen refer to, which would be consistent with the Technical Committee's recommendation as adjusted, based on the updated landings? The number I think I got from her presentation was 836,969. Did the Rec Working Group; in their recommendation was there any discussion to returning to that recommended Technical Committee level for the coastwide cap?

MR. ROOTES-MURDY: Thank you for the question, Bob. My recollection was that the Allocation Working Group did not discuss a coastwide cap below the current status quo level.

MR. BALLOU: My follow, Mr. Chair is I'm wondering if this is a disservice to the public; to not offer. Although I realize it may not be warmly received by a number of Board members. If I'm not mistaken, we are still right now essentially under a recommendation to lower the coastwide cap. Kristen was kind enough to offer that adjusted number of 836,969.

I'm going to put that in the form of a motion that that should be added as an option to the document; and explained in the way that essentially it should be explained, consistent with the recommendations that this Board received from the Technical Committee several years ago, which as I understand remain relevant. I would like to move to add that option to the Addendum for consideration. I hope staff captured that. If not, I'll try to further clarify.

MR. ROOTES-MURDY: Just wanted to be clear. **Your motion is to set an option for the coastwide cap that is a 12 percent reduction from the baseline harvest of 1998 to 2016; which would be 836,969 pounds.**

MR. BALLOU: I couldn't have said it any better.

CHAIRMAN GARY: There is a motion; do we have a second, Ritchie White, discussion on the motion. There is no discussion on this motion; Michelle Duval.

DR. DUVAL: I mean certainly that is a reasonable option. It is consistent with technical advice received in the past. I certainly don't have a problem including it to take out to the public; but I suspect that it may not necessarily be an option that the Board is willing to entertain as a final option down the road when we get there.

CHAIRMAN GARY: Is there any other discussion by the Board? Is there any opposition to this motion? All right let's have a vote then. **All**

those in favor of this motion raise your hands. All those opposed raise their hands; abstentions, zero. The motion passes 15, 2, 0; on with further discussion on Draft Addendum V. Colleen.

MS. COLLEEN GIANNINI: Hi, I'm hoping that maybe somebody who was on the Working Group can just help me explain the rationale for the approach on Page 19; under Option 3, the last paragraph where three-quarters of a percent of the coastwide cap was set aside, divided, and then reduced.

MS. FEGLEY: Yes, I can take it. One of the things, the idea here was if you envision if you look at the table that shows how the quotas compare to the last five years of harvest. If you take the Addendum IV quotas and you compare them to the last five years of harvest, there were three states that took a reduction.

The intent of this was to mitigate those reductions by those three states. Basically all that did with that division, we took that 0.75 percent, set it aside, divided it among the small harvest states, and then just rounded down, and then just allocated that extra which was a couple. It wasn't maybe not even, I can't remember the number but it was maybe 1,000 pounds, back to the state of Maryland to help mitigate their reduction. That's all it was.

CHAIRMAN GARY: Colleen, did that answer your question?

MS. GIANNINI: Yes, thank you.

CHAIRMAN GARY: Michelle.

DR. DUVAL: I guess maybe just a quick circling back to the pooling of the 200 pound potential aquaculture allocation; and the point that Dan was making earlier about for Massachusetts it would require a statutory change in order to allow for any glass eel harvest, if I understand that correctly, without the \$10,000.00 fine. It

seems to me that it might not be possible; based on that statutory language for a 200 pound aquaculture allocation that Massachusetts itself is unable to apply for, could be allowed to be used in this pooling fashion.

I mean I understand we have the language in there with regard to making an argument for allowing for all of that pooled harvest to potentially be used in one watershed, or in one state. Maybe the question that I'm trying to get to is, so a state that has that type of statutory restriction could not be forced into entering into one of these pooling agreements. Is that correct?

MR. McKIERNAN: Yes that was my concern. I guess when I think of the 200 pound allowance among all states, I never really thought of that as a cumulative allocation of glass eels; because if it was I wouldn't think twice about sending eels up to Maine. But we don't look at that as a foregone allocation, because our state has a prohibition as does New Hampshire's. I am not comfortable with this notion that that is foregone allocation.

CHAIRMAN GARY: Question to any of the other Board members. Do any of the other states have a similar potential statutory impediment as Massachusetts described; and as Michelle brought up that you're aware of? Craig, can you talk to it?

SENATOR CRAIG A. MINER: Under our current law we have a statutory prohibition against the taking of glass eels. I'm not aware that we have any fines such as laid out in Massachusetts.

CHAIRMAN GARY: John.

MR. CLARK: That was part of Addendum III right, is we had to have a nine-inch minimum, so all states other than Maine and South Carolina I think effectively have a prohibition on taking glass eels. But the point of this is that if

states decide they want to do this for aquaculture, which is allowed by Addendum IV. They could still do that under Addendum V, except states could pool those 200 pounds that Addendum IV says they can apply for.

CHAIRMAN GARY: Cheri.

MS. PATTERSON: Yes the state of New Hampshire also has that limitation for harvest under nine inches.

CHAIRMAN GARY: Pat Geer.

MR. PAT GEER: I believe all the states have a 9-inch minimum; so as John said, it's de facto with the exception of the original management plan said that only the states that had a glass eel fishery at the time. I know this is a little bit different; because this is aquaculture. I think what we're trying to do is avoid having what we had to do for the North Carolina plan, having countless meetings where we're discussing this, so make it more general. But I'm not sure if that is going to work having three states do this as a consolidation.

CHAIRMAN GARY: Ross was that just an acknowledgement or did you want to?

MR. ROSS SELF: My recollection of that discussion was that there would be that potential for a 200 pound aquaculture allocation for each state. But the pooling of those allocations was not, in my recollection of the discussion, was not shipping 200 pounds of glass eels from New Hampshire somewhere.

It was allowing a state that needed to accumulate some aquaculture allocation to borrow those allocations from other states; and all those glass eels would come from within that jurisdiction. Hence the concern about the 750 pound trigger, so that a state that had a prohibition there would still be the option for them to let somebody have their allocation,

because they couldn't use it. That was my understanding of what we discussed.

CHAIRMAN GARY: I had Michelle and then Pat Keliher.

DR. DUVAL: Just a follow up. Obviously everyone has got the 9-inch minimum size limit in there. I mean for us, for North Carolina, our Commission had to provide a declaratory ruling in order to allow an aquaculture facility to actually harvest and possess eels that are under that limit. But I think there is a difference between something that is in rule versus statute. I think that was really what I was getting at; is that are there statutory impediments that would prevent that pooling. Based on what Ross and others just said, it doesn't sound like that is necessarily an impediment.

MR. KELIHER: I certainly understand the point that Dan and others have made about their statutes. If the Commonwealth of Massachusetts wanted to move forward with the development of an aquaculture facility, and there was an economic benefit and the driver to push in that direction.

The state would have that flexibility to change that law or change that rule. I think that is really the intent of this. It's not to be restrictive; it's to say, here is an opportunity for a state if it wanted to work with another state to be able to pool their resources. If it doesn't work for a state they don't have to.

If it does then there is a benefit here for them to change their rules, if there is again that economic benefit back to that state through partnerships or whatever the issue may be. I think there is very real interest in this country to see the development of aquaculture. It would be great to see the value added side of this. Leave those Asian countries and be done here in the United States, and to try to find a way to

help enable that to happen, was the intent of this addition.

CHAIRMAN GARY: Are there any additional comments on this concept? I want to look to staff. I was trying to sort through that to see whether or not this causes any issues for this narrative to remain in the document; based on what we've heard.

MR. ROOTES-MURDY: I think Michelle pointed out kind of well what we're trying to clarify here. If states have statutory language that would provide impediments to this versus if they have rules in place right now on prohibition of harvesting glass eels below 9 inches. It would be helpful for developing this document further.

If the will of the Board is to have this option in here to clarify how moving forward states who currently have language in their either statutes or regulations may seek to change those to allow for this option to move forward, or how it would work for those states who can't make those changes or are planning not to.

CHAIRMAN GARY: Dan.

MR. McKIERNAN: I'll be quick. Yes Pat is right. His perspective is correct here. I guess I feel a little frustrated; because the North Carolina experiment to my knowledge has failed, in terms of production. If somebody came forward and said, you know I've hit the wall here on 200 pounds. Is there any way we could grab 200 pounds from adjacent states and make a viable operation? I would feel a little more sympathetic. But right now I think we're jumping the gun.

CHAIRMAN GARY: Is there any further discussion? I guess the question again, is there a concern on the Board to the point where we might consider modification or removal of this component? Is there any desire on the Board to do so? Craig.

SENATOR MINER: I would like to speak on behalf of leaving it in there. I don't know what the synergy is. I don't know what the magic number is in terms of an appropriate aquaculture model. But let's say it is some number beyond 200 pounds.

If there are three states that have statutory prohibitions to developing this kind of a fishery, yet from a scientific perspective and from a business perspective putting three states allocation together somewhere makes sense. Then I think going out to the public now with it in there would allow us a pathway in the future. If we don't have it in there, then we're kind of trying to create something after we've just gone out to the public. I would request that it stay in.

CHAIRMAN GARY: Is there any advocacy for removing this narrative; or modifying it in some way? If not then we'll see if we can find a way to keep this intact. I think Kirby what you were suggesting is some additional clarification; based on some of those concerns that we can build in to address this. If that meets the Board's satisfaction we'll move on with any additional ideas, concerns, additions or deletions. David.

MR. DAVID E. BUSH, JR.: While I'm certainly not an advocate of I guess reallocating things on a whim. I know that we have some options that we have to keep; and one of them is status quo, as far as allocation or triggers. If we do go to an allocation scheme, you know some of these numbers are pretty scary on the first pass. Then I understand the more weighted approach and the three-quarters of a percent helps to minimize such an acute impact.

But I don't know what will be the appropriate language to add. While this might not be the biggest fishing on the east coast, it's probably a very huge fishery to certain folks. Maybe there might be some, I don't know some interest on the Board to possibly find a way to, if we do get to this path, if this is what we have chosen, a

way to phase it in rather than well you're one year, two boom next year.

You guys get 108, you guys take a 62 percent loss, and we'll see you next week. You know some way to sort of ease that transition. I would hate to see any state have to take even a 20 percent cut. You know we've done it repeatedly, but anyway. Any help I could get possibly. If there is any interest in doing that I would appreciate it.

CHAIRMAN GARY: Any other thoughts, comments about the Draft Addendum V? One question Kirby and I are discussing is there was some concern around the table about having the SAS review the document one more time before we put it out to the public; sorry the Technical Committee. Is that desirous of this Board, or is this Board comfortable with approving the agenda with the modifications we've moved forward today? Would anybody like to comment on that? Pat Keliher.

MR. KELIHER: I think those two things can happen in parallel. I would like to see the document move out to the public and then have the TC review the modified document; and then that can be part of the overall discussion when we come back.

CHAIRMAN GARY: Ritchie.

MR. G. RITCHIE WHITE: I was just questioning timing; if we were going to send it back to the Technical Committee then what would the timing be?

MR. ROOTES-MURDY: Thank you Ritchie for the question. The next Board meeting we would have scheduled right now is in May. Unless the Board wanted to move to try to have a conference call to review the document again prior to public comment period starting, the plan moving forward would be to modify the document today based on the Board's feedback, and start public comment period

without an additional review by the Board. It's at the pleasure of the Board on how you want to proceed.

MR. WHITE: Follow up. How would that then proceed timing for a finished product?

MR. ROOTES-MURDY: I think if the Board was interested in seeing a modified version of the document before it went out for public comment that would change the time table. We may still be able to get it out for public comment; and public comment period to happen before the May meeting.

That is assuming that there was a quick modification to the document and a short period for the Board to have an additional time to look at it. The question then becomes if there is an interest in having a conference call of the Board to clarify and specify that all Board members are fine with it; or if it would simply be an e-mail review and sign off.

CHAIRMAN GARY: Pat.

MR. KELIHER: I was going to quickly try to find it. I haven't, so I'm going to ask Kirby. Any delay beyond that where does that leave the state of Maine, as far as our quota for this coming year, unlimited? There are a few elver fishermen in the back of the room I might have just made happy with that.

MR. ROOTES-MURDY: Pat, as you remember, we at the annual meeting specified Maine's glass eel quota for 2018. This Addendum is specific to changes in management starting in the 2019 fishing season.

CHAIRMAN GARY: Lynn.

MS. FEGLY: The technical review wouldn't change the options as they're written, right? It would just change language in the background and in some of the rationales; is that correct? But the options themselves wouldn't change.

MR. ROOTES-MURDY: It would be kind of at the please of the Board how to specify the Technical Committees review of the document. Part of the reason why as staff we had the SAS review the document, in terms of the questions that were posed was due to the very specific nature of that to the conditions of the stock, how things would respond on the stock level to changes in harvest levels. In terms of having the Technical Committee review the document, it's at the Board's discretion how you want to specify that TC tasking. Otherwise, it would just go to the TC as we do with all of our technical documents, and have them provide any comments and recommendations during the public comment period.

CHAIRMAN GARY: I have Eric Reid and then Ritchie White.

MR. ERIC REID: **I would like to make a motion to approve Addendum V as modified today for public comment.** I don't like the thought of having. I'm sorry if I get a second, maybe I'll give my rationalization.

CHAIRMAN GARY: Second by Emerson Hasbrouck.

MR. REID: Okay thank you Mr. Chairman. I don't like the idea of sending a document out to the public and to the TC at the same time. That makes me really uncomfortable. I'm sure to the delight of everyone, I think we only took out one thing, which was some language, and then we've added a bunch of stuff in here. I don't really see why the TC has to get back into this before we go to the public; that's my motion and let's get moving.

CHAIRMAN GARY: We have a motion and a second; do we have further discussion on this? Seeing none; do we need to caucus? I'll give you one minute. Are you ready to call for the vote? Before we offer that up, I was just talking to Kirby. For those individuals on the Board who made additions.

It would be very helpful for staff if they would commit to take some time to help staff; and I can help moderate that to work with them to incorporate the language as they intended. As long as everybody is amenable to that we'll go forward with the vote. We have a motion; sorry I don't have my screen up, to approve Draft Addendum V for public comment as modified today.

Motion by Mr. Reid; seconded by Mr. Hasbrouck, all those in favor please raise your hand. All of those opposed please raise your hand; abstentions, the motion passes unanimously.

**CONSIDER 2017 FISHERY MANAGEMENT PLAN
REVIEW AND
STATE COMPLIANCE REPORTS**

CHAIRMAN GARY: All right our next item on the agenda is the Approval of the 2017 Fishery Management Plan Review and State Compliance Reports; and Kirby will lead this discussion.

MR. ROOTES-MURDY: I'll try to go through this quickly as we're a little bit behind schedule; and I would like to try to get us to end on time if possible. All right so the outline, I'm just going to go through the status of the FMP, stock status as you're all familiar with, status of the fishery, state compliance with the FMP and Plan Review Team recommendations.

As you all are aware, there were no new addenda that were initiated in 2016. Another plan for the America Eel Aquaculture Farm was submitted and approved for the 2017 fishing season. Just so you all are aware again for these FMP reviews, we have a one-year lag, so we're talking about how things played out in 2016.

Again, the FMP specifies per Addendum IV that any state that harvests over 750 pounds of glass eel a year must implement a fishery

independent life cycle survey. Maine implemented this survey starting in 2016. No data was collected in 2016; due to staffing issues and that has been rectified and the Technical Committee anticipates receiving an update on the 2017 survey results later this year. I will go through this briefly again. The stock status per the 2017 stock assessment update, the American eel stock status remains depleted as we have no reference points to base management on. There has been no update from that level that was laid out in 2012. It's important to note that in the fall of this year, given the depleted status and interest in addressing some of the management concerns, the Board initiated an addendum to consider alternative allocations for the coastwide cap management trigger and state-by-state allocations for the yellow eel and glass eel fisheries.

In terms of the status of the fishery on the commercial side, I'm reporting out here what the landings were as was reported through the compliance reports. Please note that these numbers do differ from what I went through in Addendum V. They are in turn old. State reported landings of yellow and silver eels were 885,000 pounds in 2015 and 937,000 pounds in 2016.

It was an increase from 2015 to 2016, and Maryland and Virginia accounted for the bulk of the harvest at about 72 percent. Landings of glass eels were reported from Maine and South Carolina; and we aggregate those together. In 2015 it was 5,442 pounds, and in 2016 it was 9,339 pounds. Again, South Carolina harvests a very small number.

In terms of the recreational fishery, as of 2009 recreational data was no longer provided for American eels in the compliance reports. This is due to the unreliability of intercepting anglers who fish for eels; and the associated high PSEs with those estimates. I'm going to go through

very quickly the glass eel, yellow eel, and silver eel regulations.

Because there were no changes and no noted change in state regulations, the PRT found no issues there on the glass eel front. Regarding the yellow eel there were no changes in management measures, as reported in the Compliance Reports. Again, the PRT noted no issues on yellow eel regulations.

Regarding the silver eel regulations the same. There were no changes in regulations, and in turn the Plan Review Team noted there were no issues. In terms of other management measures, there were no other additional changes in regulations. In terms of considering other management measures and potential issues, the PRT when they did their review did note that the District of Columbia had not submitted a compliance report.

We have an update to this. As of yesterday afternoon we did receive a compliance report from DC, and they continue to not have a commercial fishery or commercial landings, or recreational data. Regarding de minimis, the FMP stipulates that states may apply for de minimis status for each life stage; if the preceding two years their average commercial landings constitute less than 1 percent of the coastwide commercial landings for that life stage.

New Hampshire, Massachusetts, Pennsylvania, South Carolina, Georgia, and Florida requested de minimis status for their yellow eel fisheries. All states that applied for de minimis status for yellow eels met the 1 percent landing criteria. The District of Columbia also met that criteria, but did not specify an interest in continuing de minimis status.

South Carolina requested de minimis status for glass eels, but did not meet the 1 percent landings criteria. Lastly, in terms of Plan Review Team recommendations, the PRT had the

following items to bring to the Board's attention. First the state compliance reports noted no issues in terms of regulations, or issues with the FMP. But in terms of considerations, currently the plan lays out that states should provide an estimate of the percent of harvest that goes to food versus bait. It was noted on the Plan Review Team call that this is a challenging estimate; one that isn't very reliable, and that it isn't clear that it's being used for management purposes, and so there should be the consideration of possibly doing away with it. There was also a recommendation that states should continue to work with law enforcement agencies to include information on illegal or undocumented fisheries for eels. The PRT also requested that the state of New York work to separate their yellow and silver eel landings.

As you know Addendum IV laid out that the allocations didn't count for eel landings in New York that did have silver eels in them. Then there was also request by the Plan Review Team that states should try to quantify upstream and downstream passage changes; and then provide that information to the Technical Committee for review, as there have been some changes in both upstream and downstream passages in a number of states. With that I'll take any questions on the FMP Review or state compliance reports.

CHAIRMAN GARY: Barring any questions, do we have a motion to accept the 2017 FMP Review and Compliance Reports and the de minimis requests? Roy Miller.

MR. ROY W. MILLER: So moved, Mr. Chairman.

CHAIRMAN GARY: And a second, Jim Gilmore. The motion is to approve the 2017 FMP Review of the 2016 Fishing Year and approve de minimis requests for New Hampshire, Massachusetts, Pennsylvania, the District of

Colombia, South Carolina, Georgia and Florida for yellow eel.

Motion by Mr. Miller; seconded by Mr. Gilmore, all those in favor please raise your hand. I should have asked if there were any objections; any objections? Learning every minute, and the motion passes unanimously.

ADVISORY PANEL REPORT

CHAIRMAN GARY: Next up is the Advisory Panel Report, and Kirby will offer that.

MR. ROOTES-MURDY: I'll again try to be brief on this. The AP met back in December of 2017. They received an update on the 2017 Stock Assessment Report, recent Technical Committee work, and an update on recent Management Board activities. You all are aware of the Stock Assessment Update Report.

Jeff Brust of the SAS provided that. There were questions that were posed on whether fishing license data information dating back to the 1970s could be used to ascertain the stocks size in a more historical context. It was pointed out that many states did not actually have license data information on eels until the 1990s.

The AP encouraged the Stock Assessment Subcommittee to collaborate with Canada's Division of Fish and Oceans to conduct a range-wide stock assessment. Regarding recent Technical Committee work, my colleague Kristen Anstead presented on the Aging Workshop that took place in January of this year; at least the planning that was going into that recent analysis on the young of year surveys, and nematode research that has been conducted by Zoemma.

Information on each of those reports can be found in the Advisory Panel summary that was included in meeting materials. Then next regarding recent Board activity, as staff we highlighted the recent Board approval of North

Carolina's aquaculture proposals and the Board's initiation of Draft Addendum V. One AP member requested that the Addendum consider an option for pooling of glass eel aquaculture harvest among multiple states; and that that interest stemmed from the high market price for glass eels. The AP, it was noted, will have an opportunity to comment on the Draft Addendum V during the public comment period, and that that AP report will be presented to the Board at their next meeting.

Lastly, Mari-Beth DeLucia, the AP Chair brought up that the IUCN is going through a reassessment of the American Eel resource in 2018. The IUCN currently lists American eel on their red list. That designation is used for American eel and a number of species to guide the prioritization of conservation initiatives by governments, NGOs, and scientific institutions.

It is also important to note that the IUCN does not have management authority; but can influence public perception and international trade. It was highlighted that any new information that comes out of that will be shared both with the Advisory Panel and the Board once available. With that I'll take any questions.

ELECTION OF VICE-CHAIR

CHAIRMAN GARY: We'll move on to Item 7 on the agenda, the election of a Vice-Chair. Do we have a motion? Cheri Patterson.

MS. PATTERSON: Yes, I would like to move to nominate Lynn Fegley as Vice-Chairperson to the American Eel Management Board.

CHAIRMAN GARY: Do we have a second; John Clark? **Is there any objection to this nomination? Lynn Fegley, welcome to the American Eel Board; you're the Vice-Chair.** Our last item is Other Business; before we do that I did have a question for staff. Perhaps this would trickle over to Sherry with U.S. Fish and

Wildlife Service. I recall at the October Board meeting a brief update on CITES. I'm just wondering, is that something that would manifest itself say at the next Board meeting; or are we looking further down the line on that Kirby?

MR. ROOTES-MURDY: Maybe I'll take a first stab and then Sherry can clarify my comments. As staff we were notified that CITES is going to go through a process in 2018 of evaluating trade of American eel. That means that they're going to look at landings data; not just in terms of what was caught in the U.S. but what was also exported out of the country. They will be likely in contact with us again to try to make sense of any discrepancies they find there. In terms of the time table of when we're expecting that follow up, it's yet to be determined. We don't have a set date yet.

MS. SHERRY WHITE: That's correct, Kirby. I think that you summed that up just right. We'll let you know if we do hear any more information on timing on that.

ADJOURNMENT

CHAIRMAN GARY: Thank you Kirby and thank you Sherry. Is there any other business to come before this Board? Seeing none; we are adjourned, and thank you for your infinite patience.

(Whereupon the meeting adjourned at 6:06 o'clock p.m. on February 6, 2018)

Draft Addendum for Board Review

Atlantic States Marine Fisheries Commission

**DRAFT ADDENDUM V TO THE AMERICAN EEL FISHERY
MANAGEMENT PLAN FOR BOARD REVIEW**

Commercial Yellow and Glass/Elver Eel Allocation and Management



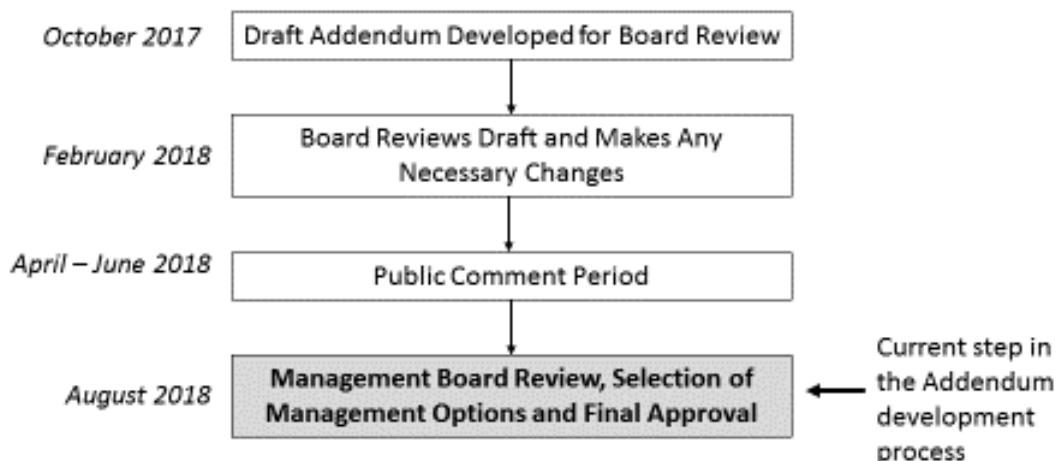
ASMFC Vision:
Sustainably Managing Atlantic Coastal Fisheries

August 2018

Draft Addendum for Board Review

Timeline

In October 2017, the American Eel Management Board initiated the development of an addendum to the Interstate Fishery Management Plan (FMP) to address the commercial management of yellow and glass/elver life stage fisheries starting in the 2019 fishing season. This Draft Addendum presents background on the Atlantic States Marine Fisheries Commission's (Commission) management of American eel; the addendum process and timeline; statement of the problem; and potential management options.



Draft Addendum for Board Review

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Draft Addendum for Board Review

1.0 Introduction

The Atlantic States Marine Fisheries Commission (Commission) has coordinated interstate management of American eel (*Anguilla rostrata*) from 0-3 miles offshore since 2000. American eel is currently managed under the Interstate Fishery Management Plan (FMP) and Addenda I-IV to the FMP. Management authority in the exclusive economic zone (EEZ) from 3-200 miles from shore lies with NOAA Fisheries. The management unit is defined as the portion of the American eel population occurring in the territorial seas and inland waters along the Atlantic coast from Maine to Florida.

The Commission's American Eel Management Board (Board) approved the following motions on October 17, 2017:

Move to initiate an addendum to consider alternative allocations, management triggers, and coastwide caps relative to the current management program for both the yellow and glass eel commercial fisheries starting in the 2019 fishing season.

This Draft Addendum proposes alternate commercial quota and aquaculture provisions for glass eels (both glass and elvers), coastwide commercial landings caps, alternative management triggers if caps are exceeded, and commercial allocations for the yellow eel fishery.

2.0 Overview

2.1 Statement of Problem

The Commission's Interstate Fisheries Management Program (ISFMP) Charter establishes fairness and equity as guiding principles for the conservation and management programs set forth in the Commission's FMPs. Allocations for the commercial fisheries of American eel have strived to achieve these principles through Addendum IV to the American eel FMP. In 2014, Addendum IV outlined a new coastwide commercial quota system for yellow and glass/elver life stage fisheries for American eel. Specifically for the yellow eel fishery, Addendum IV set an annual commercial coastwide landings quota (referred to as the Coastwide Cap) of 907,671 pounds that included two management triggers:

1. The Coastwide Cap is exceeded by more than 10% in a given year (998,438 pounds); or
2. The Coastwide Cap is exceeded for two consecutive years, regardless of percent overage. Exceeding one of the two triggers would result in automatic implementation of state-by-state quotas.

Since the implementation of Addendum IV, states have raised several concerns about the current management structure. The management trigger provision that if there is a second-year overage of any amount is troublesome to some jurisdictions given the inherent uncertainty of the landings data. The FMP requires states to report commercial landings by life stage, gear type, month, and region, although not all states were able to

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provide this level of information for either the benchmark (2012) or updated (2017) stock assessment. In addition to not always having a complete data set to distinguish landings by life stage, there are other potential biases present in the commercial yellow eel data set. At least a portion of commercial American eel landings are from non-marine waters. Even with mandatory reporting, requirements do not always extend outside marine districts. Additionally, misreporting between conger eel, hagfish, slime eel, and American eel has been known to occur. Despite these uncertainties, the commercial landings do represent the best data available and are indicative of the trend of total landings over time.

Estimated landings indicate that the Coastwide Cap was exceeded by less than 10% in 2016. Therefore, if the Coastwide Cap is exceeded by any amount in 2017, state-by-state quotas would be implemented. Many have expressed concern that a small overage in 2017 could result in significant economic consequences for multiple jurisdictions. States have also expressed concern that the current Coastwide Cap was set independent of any ability to quantify the amount of change in landings necessary to affect fishing mortality rates and spawning stock status. Neither of those stock status elements are currently calculated for American eel due to a lack of data. In addition, states have expressed concern that moving to state-specific quotas for the American eel yellow life stage fishery would create a new administrative burden. Finally, equitable allocation of this resource is particularly difficult given the variation in the availability of the resource and the market demand for eels up and down the Atlantic coast.

Additionally, Addendum IV specified an annual glass eel commercial quota for Maine of 9,688 pounds for the 2015-2017 fishing seasons, and that it be re-evaluated after 3 years (prior to the start of the 2018 fishing season). In October 2017, the Board specified a glass eel commercial quota for Maine of 9,688 pounds for the 2018 fishing season. The state of Maine has expressed interest in increasing their glass eel quota, which requires a new addendum.

2.2 Background

American eel inhabit fresh, brackish, and coastal waters along the Atlantic, from the southern tip of Greenland to Brazil. American eel eggs are spawned and hatch in the Sargasso Sea. After hatching, leptocephali—the larval stage—are transported to the coasts of North America and the upper portions of South America by ocean currents. Leptocephali then transform into glass eels via metamorphosis. In most areas, glass eel enter nearshore waters and begin to migrate up-river, although there have been reports of leptocephali found in freshwater in Florida. Glass eels settle in fresh, brackish, and marine waters, where they undergo pigmentation, reaching the elver life stage. Elvers subsequently mature into the yellow eel phase, most by the age of two years.

The ASMFC American Eel Board first convened in November 1995 and finalized the FMP for American Eel in November 1999 (ASMFC 2000a). The goal of the FMP is to conserve and protect the American eel resource to ensure its continued role in its ecosystems

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while providing the opportunity for commercial, recreational, scientific, and educational uses (ASMFC 2000a). The FMP requires all states and jurisdictions to implement an annual young-of-year (YOY) abundance survey to monitor annual recruitment of each year's cohort (ASMFC 2000a, 2000b). In addition, the FMP requires a minimum recreational size and possession limit and a state license for recreational harvesters to sell eels. The FMP requires that states and jurisdictions maintain existing or more conservative American eel commercial fishery regulations for all life stages, including minimum size limits. Each state is responsible for implementing management measures within its jurisdiction to ensure the sustainability of its American eel population.

Since the FMP was approved in 1999, it has been modified four times. Addendum I (approved in February 2006) established a mandatory catch and effort monitoring program for American eel. Addendum II (approved in October 2008) made recommendations for improving upstream and downstream passage for American eels. Most recently, Addendum III (approved in August 2013) made changes to the commercial fishery, specifically implementing restrictions on pigmented eels, increasing the yellow eel size limit from 6 to 9 inches, and reducing the recreational creel limit from 50 fish to 25 fish per day. In October 2014, the Board approved Addendum IV which set goals of reducing overall mortality and maximizing the conservation benefit to American eel stocks (ASMFC 2014). The Addendum established a Coastwide Cap of 907,671 pounds of yellow eel, reduced Maine's glass eel quota to 9,688 pounds (2014 landings), and allowed for the continuation of New York's silver eel weir fishery in the Delaware River. For yellow eel fisheries, the Coastwide Cap was implemented starting in the 2015 fishing year and established two management triggers: (1) if the Coastwide Cap is exceeded by more than 10% in a given year, or (2) the Coastwide Cap is exceeded for two consecutive years regardless of the percent overage. If either one of the triggers are met then states would implement state-specific allocations based on average landings from 1998-2010 with allocation percentages derived from 2011-2013. **Please note** the Coastwide Cap specified in Addendum IV (907,671 pounds) is slightly above the combined state-by-state allocations (907,669 pounds) due to a rounding error. For all subsequent tables in this document that reference status quo state allocations, the combined state-by-state allocations is set equal to 907,699 pounds.

The objectives of Draft Addendum V are to:

- 1) Re-evaluate Maine's glass/elver eel quota based on updated information;
- 2) Re-evaluate the Coastwide Cap and management triggers to include recent fishery performance and updated landings data, and to ensure the overarching goal of the FMP - *to conserve and protect the American eel resource to ensure its continued role in the ecosystems while providing the opportunity for its commercial, recreational, scientific, and educational use* - is met; and
- 3) Address allocation issues including difficulties in equitable allocation and the administrative burden that would result from state-by-state quotas.

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2.3 Description of the Fishery

2.3.1 Glass Eel/Elver Fishery

Life stage glass and elver eel harvest along the Atlantic coast is prohibited in all states except Maine and South Carolina. Prior to the implementation of the FMP, Maine was the only state compiling glass eel and elver fishery catch statistics. Under the FMP, all states are now required to submit fishery-dependent information. In recent years, Maine was the only state reporting substantial glass eel or elver harvest.

Maine Glass Eel/Elver Fishery

Since the implementation of the 9,688 pound glass eel quota for Maine in 2015 through Addendum IV, landings have tracked close to the quota. In both 2016 and 2017, landings were 97% and 96% of the quota, respectively, after being much lower in 2015 (5,260 pounds).

Table 1. Maine's Glass/Elver Eel Landings 2007-2017 (Source: ACCSP)

| Year | Landings | Value |
|--------|----------|---------------|
| 2007 | 3,714 | \$1,287,479 |
| 2008 | 6,951 | \$1,486,353 |
| 2009 | 5,199 | \$514,629 |
| 2010 | 3,158 | \$592,405 |
| 2011 | 8,585 | \$7,656,345 |
| 2012 | 21,610 | \$38,791,627 |
| 2013 | 18,081 | \$32,926,991 |
| 2014 | 9,688 | \$8,440,333 |
| 2015 | 5,260 | \$11,389,891 |
| **2016 | 9,399 | \$13,388,040 |
| **2017 | 9,282 | >\$12,000,000 |

**Preliminary landings

In 2012, Maine's glass eel landings hit an all-time high of 21,610 pounds with a landed value of over \$38 million. This huge spike in price per pound created a gold rush mentality that brought with it poaching problems that most thought Maine could not overcome, and there was a call to close the fishery all together. Over the next two years, the Maine Department of Marine Resources (MEDMR) responded by instituting a voluntary reduction in harvest of 35% from the 18,076 pounds that was landed in 2013. This established the first glass eel quota for Maine at 11,749 pounds. Maine then

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instituted individual fishing quotas, and penalties were moved from civil to criminal and included a “two-strike” provision where a harvester license would be permanently revoked. Also in 2013, MEDMR began to develop a swipe card program that would allow dealers to enter daily landings data quickly and allow MEDMR staff to analyze that data within 24 hours of receipt, as well as serve as a fishery management tool to implement an individual fishing quota (IFQ) for harvesters. The original harvester-to-dealer system was expanded in 2015 to include dealer-to-dealer transactions. With the implementation of Addendum IV, the elver quota was cut another 11%, reducing Maine’s glass eel quota to 9,688 pounds. Since the implementation of the 9,688 pound glass eel quota, landings have tracked close to the quota with the exception of 2015 where a late spring with ice and high water contributed to a drop in landings – down to 5,260 pounds.

Since 2014, MEDMR has been able to effectively track the individual quotas of approximately 900 active harvesters each season as well as the overall quota. In a two-year period, over 23,000 daily landings reports did not need to be key-entered by MEDMR staff due to the Swipe Card System, and only two card failures were reported. In addition, the number of fishery-related infractions reported by the Marine Patrol dropped from over 200 in 2013 to under 20 in 2014 through 2016. The addition of the dealer-to-dealer swipe card program resulted in a difference of just over 120 pounds (approximately 2%) between what dealers reported purchasing directly from harvesters to what was exported from Maine dealers in 2015. These 120 pounds is likely attributed to shrinkage (die off between initial purchases to final shipment) and did not raise concerns for MEDMR staff.

Given their high market value, poaching of glass eels and elvers is known to be a serious problem in several states. Enforcement of the regulations is challenging due to the nature of the fishery (very mobile, nighttime operation, and high value for product). However, the recent cooperation between the State’s enforcement agencies and the USFWS remains a high priority and has resulted in several convictions for violation of the Lacey Act.

North Carolina Aquaculture

Addendum IV to the FMP also allows approved Aquaculture Plans from states and jurisdictions to harvest up to 200 pounds of glass/elver eel annually from within their state waters for use in domestic aquaculture activities. The American Eel Farm (AEF) in North Carolina is the only facility to have applied and been approved for domestic aquaculture, which they have done annually since 2016. Fishing did not take place in 2016 due to permitting issues in North Carolina. In 2017, a total of 0.25 pounds of glass eels were harvested of the 200 pound quota. North Carolina Division of Marine Fisheries (NCDMF) submitted an amended plan on behalf of AEF for 2018-2020 which was approved by the Board in August 2017.

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2.3.2 Yellow Eel Fishery

Coastwide Description

Yellow eel landings have varied considerably over the years due to a combination of market trends and availability. These fluctuations are evident both within states and jurisdictions, as well as at a regional level. Such fluctuations pose significant management challenges with regard to balancing sustainable landings and access to the resource with economic considerations. Over the last 19 years, total coastwide landings have ranged from a low of approximately 717,698 pounds in 2002 to a high of approximately 1,189,455 pounds in 2011. State reported landings of yellow/silver eels in 2016 totaled 943,808 pounds (Table 2), which represent an 9% increase in landings from 2015 (868,122 pounds). 2016 yellow eel landings increased in Maine, Rhode Island, Connecticut, Maryland through Virginia, and Florida but decreased in all other states and jurisdictions.

Table 2. State-by-state Yellow Eel Landings: 1998-2016. Source: Personal Communication from State and Jurisdictions, January 2018.

| Year | ME | NH | MA | RI | CT | NY | NJ | DE | MD | PRFC | VA | NC | SC | GA | FL | Total |
|------|--------|---|-------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---|---|--------|-----------|
| 1998 | 0 | Time series average of less than 400 pounds | 3,456 | 967 | 5,606 | 16,867 | 94,327 | 131,478 | 301,833 | 209,008 | 123,837 | 91,084 | Time series average of less than 400 pounds | Time series average of less than 400 pounds | 13,819 | 992,741 |
| 1999 | 0 | | 3,456 | 140 | 10,250 | 7,882 | 90,252 | 128,978 | 305,812 | 163,351 | 183,255 | 99,939 | | | 17,533 | 1,011,093 |
| 2000 | 0 | | 2,976 | 25 | 4,643 | 5,824 | 45,393 | 119,180 | 259,552 | 208,549 | 114,972 | 127,099 | | | 6,054 | 894,577 |
| 2001 | 9,007 | | 3,867 | 14,357 | 1,724 | 18,192 | 57,700 | 121,515 | 271,178 | 213,440 | 97,032 | 107,070 | | | 14,218 | 929,523 |
| 2002 | 11,617 | | 3,949 | 22,965 | 3,710 | 30,930 | 64,600 | 99,529 | 208,659 | 128,595 | 75,549 | 59,940 | | | 7,587 | 717,698 |
| 2003 | 15,312 | | 4,047 | 24,883 | 1,868 | 8,296 | 100,701 | 155,516 | 346,412 | 123,450 | 121,091 | 172,065 | | | 8,486 | 1,082,614 |
| 2004 | 29,646 | | 5,328 | 19,858 | 1,374 | 5,354 | 120,607 | 137,489 | 273,142 | 116,263 | 123,812 | 128,875 | | | 7,330 | 969,318 |
| 2005 | 17,189 | | 3,073 | 22,001 | 337 | 27,726 | 148,127 | 111,200 | 378,659 | 103,628 | 66,956 | 49,278 | | | 3,913 | 932,087 |
| 2006 | 27,489 | | 3,676 | 1,034 | 3,443 | 10,601 | 158,917 | 123,994 | 362,966 | 83,622 | 82,756 | 33,581 | | | 1,248 | 894,192 |
| 2007 | 14,251 | | 2,853 | 1,230 | 935 | 14,881 | 169,902 | 139,647 | 343,141 | 97,361 | 56,512 | 37,937 | | | 7,379 | 886,470 |
| 2008 | 3,882 | | 3,297 | 8,866 | 6,046 | 15,025 | 137,687 | 80,002 | 381,993 | 71,655 | 84,031 | 23,833 | | | 15,624 | 832,475 |
| 2009 | 2,285 | | 1,217 | 4,855 | 435 | 12,676 | 118,533 | 59,619 | 335,575 | 58,863 | 117,974 | 65,481 | | | 6,824 | 784,420 |
| 2010 | 2,605 | | 322 | 3,860 | 167 | 12,179 | 105,089 | 69,355 | 524,768 | 57,755 | 77,263 | 122,104 | | | 11,287 | 986,937 |
| 2011 | 2,666 | | 368 | 2,038 | 60 | 36,451 | 120,576 | 92,181 | 715,162 | 29,010 | 103,222 | 61,960 | | | 25,601 | 1,189,455 |
| 2012 | 12,775 | | 462 | 1,484 | 2,228 | 35,603 | 113,806 | 54,304 | 590,412 | 90,037 | 121,605 | 64,110 | | | 11,845 | 1,100,881 |
| 2013 | 4,596 | | 2,499 | 2,244 | 546 | 42,845 | 90,244 | 82,991 | 587,872 | 32,290 | 100,379 | 33,980 | | | 15,059 | 997,052 |
| 2014 | 4,320 | | 3,903 | 2,353 | 1,390 | 38,143 | 91,225 | 62,388 | 619,935 | 49,293 | 109,537 | 60,755 | | | 14,092 | 1,057,467 |
| 2015 | 3,559 | | 2,255 | 1,538 | 2,271 | 50,194 | 88,828 | 44,708 | 493,043 | 31,588 | 86,715 | 57,791 | | | 5,632 | 868,122 |
| 2016 | 4,509 | | 1,705 | 2,651 | 2,445 | 36,371 | 67,422 | 44,558 | 583,578 | 58,223 | 96,336 | 39,911 | | | 6,034 | 943,808 |

Note: Due to data confidentiality rules, annual landings for New Hampshire, South Carolina, and Georgia are not shown rather the time series landings average of less than 400 pounds.

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State-by-state Descriptions

The yellow American eel fishery in Maine occurs in both inland and tidal waters. Yellow eel fisheries in southern Maine are primarily coastal pot fisheries managed under a license requirement, minimum size limit, and gear and mesh size restrictions. New Hampshire has monitored its yellow eel fishery since 1980; reporting effort in the form of trap haul set-over days for pots or hours for other gears has been mandatory since 1990. Small-scale, commercial eel fisheries occur in Massachusetts and Rhode Island and are mainly conducted in coastal rivers and embayments with pots during May through November. Connecticut has a similar small-scale, seasonal pot fishery for yellow eels in the tidal portions of the Connecticut and Housatonic rivers. All New England states presently require commercial fishing licenses to harvest eels and maintain trip-level reporting.

Licensed eel fishing in New York occurs primarily in the Hudson River, the upper Delaware River (Blake 1982), and in the coastal marine district; prior to a closure starting fishing also occurred in Lake Ontario. A slot limit (greater than 9 inches and less than 14 inches to limit PCB exposure) exists for eels fished in the tidal Hudson River (from the Battery to Troy and all tributaries upstream to the first barrier), strictly for use as bait or for sale as bait only. Due to PCB contamination of the main stem, commercial fisheries have been closed on the freshwater portions of the Hudson River and its tributaries since 1976. The fishery in the New York portion of the Delaware River consists primarily of silver eels collected in a weir fishery. In 1995, New York approved a size limit in marine waters. New Jersey fishery regulations require a commercial license, a minimum mesh, and a minimum size limit. A minimum size limit was set in Delaware in 1995. Delaware mandated catch reporting in 1999 and more detailed effort reporting in 2007.

Maryland, Virginia, and Potomac River Fisheries Commission have primarily pot fisheries for American eels in Chesapeake Bay. Large eels are exported whereas small eels are used for bait in the crab trotline fishery, except in Virginia. Ninety-five percent of all American eel harvest in Virginia is by pots, and eel pots are the major pot gear. Virginia implemented a voluntary buyer reporting system in 1973 and a mandatory harvester reporting system, for all seafood species began in 1993. Since 1991, it has been mandatory that eel pots are equipped with mesh that cannot be less than one-half inch (1/2") by one-half inch (1/2"), with at least one unrestricted 4-inch by 4-inch square escape panels consisting of 1/2-inch by 1-inch mesh, regardless of pot shape. Maryland did not require licenses until 1981. Effort reporting was not required in Maryland until 1990. The Potomac River Fisheries Commission has had harvester reporting since 1964, and has collected eel pot effort since 1988.

North Carolina has a small, primarily coastal pot fishery that fluctuates with market demands. The majority of landings come from the Albemarle Sound area, with additional landings reported from the Pamlico Sound and "other areas." No catch records are maintained for freshwater inland waters, and no sale of eels harvested from

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these waters is permitted. Landings for “other areas” reported by the state come from southern waterbodies under the jurisdiction of NCDMF. South Carolina instituted a permitting system over ten years ago to document total eel gear and commercial landings. Pots and traps are permitted in coastal waters for the yellow eel life stage fishery; fyke nets and dip nets are permitted for glass eels.

American eel fishing in Georgia was restricted to coastal waters prior to 1980 when inland fishing was permitted (Helfman et al. 1984). Landings data are available for the states, but effort data is not because no specific license is required to fish eels. The Florida pot fishery has a minimum mesh size requirement in the fishery and it is operated under a permit system.

2.4 Status of the Stock

The last peer reviewed and accepted benchmark stock assessment was approved for management use in 2012. Analyses and results indicated that the American eel stock had declined and that there were significant downward trends in multiple surveys across the coast. It was determined that the stock was depleted but no overfishing determination could be made based on the analyses performed.

The 2012 benchmark stock assessment was updated in 2017 with data through 2016. All three trend analysis methods (Mann-Kendall, Manly, and ARIMA) detected significant downward trends in some indices. The Mann-Kendall test detected a significant downward trend in six of the 22 YOY indices, 5 of the 15 yellow eel indices, 3 of the 9 regional indices, and the 30-year and 40-year yellow-phase abundance indices. The remaining surveys tested had no trend, except for two which had positive trends. The Manly meta-analysis showed a decline in at least one of the indices for both yellow and YOY life stages. For the ARIMA results, the probabilities of being less than the 25th percentile reference points in the terminal year for each of the surveys were similar to those in ASMFC 2012 and currently three of the 14 surveys in the analysis have a greater than 50% probability of the terminal year of each survey being less than the 25th percentile reference point. Overall, the occurrence of some significant downward trends in surveys across the coast remains a cause for concern and the assessment maintained that the stock remains depleted.

3.0 Proposed Management Program

The following options were developed from the Board motion from October 2017. The options are organized by the specific life stage fishery and issue item.

3.1 Proposed Options for Maine Glass Eel Quota

Note: This addendum proposes changes to Maine’s glass/elver eel quota as specified in Addendum IV. The following items will remain components of the commercial glass/elver eel fishery management program:

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- **Quota Overages:** For any state or jurisdiction managed with a commercial glass/elver eel quota, if an overage occurs in a fishing year, that state or jurisdiction will be required to deduct their entire overage from their quota the following year, on a pound for pound basis.
- **Reporting Requirements:** Any state or jurisdiction with a commercial glass eel fishery is required to implement daily trip-level reporting with daily electronic accounting to the state for both harvesters and dealers in order to ensure accurate reporting of commercial glass eel harvest. The state of Maine's swipe card system is used by the state as a dealer report. Harvesters in Maine are currently reporting monthly via paper report submission. States or jurisdictions commercially harvesting less than 750 pounds of glass eels are exempt from this requirement.
- **Monitoring Requirements:** Any state or jurisdiction with a commercial glass eel fishery must implement a fishery-independent life cycle survey covering glass/elver, yellow, and silver eels within at least one river system. If possible and appropriate, the survey should be implemented in the river system where the glass eel survey (as required under Addendum III) is being conducted to take advantage of the long-term glass eel survey data collection. At a minimum the survey must collect the following information: fishery-independent index of abundance, age of entry into the fishery/survey, biomass and mortality of glass and yellow eels, sex composition, age structure, prevalence of *Anguillicoloides crassus* (invasive nematode), and average length and weight of eels in the fishery/survey. Survey proposals will be subject to Technical Committee (TC) review and Board approval. States or jurisdictions commercially harvesting less than 750 pounds of glass eels are exempt from this requirement.
- **Glass Eel Harvest Allowance Based on Stock Enhancement Programs:** Any state or jurisdiction can request an allowance for commercial harvest of glass eels based on stock enhancement programs implemented after January 1, 2011, subject to TC review and Board approval. Provisions of the stock enhancement program include: demonstration that the program has resulted in a measurable increase in glass eel passage and/or survival; harvest shall not be restricted to the basin of restoration (i.e. harvest may occur at any approved location within the state or jurisdiction); and harvest requests shall not exceed 25% of the quantified contribution provided by the stock enhancement program. See Addendum IV for more detail on specific stock enhancement program examples.

Option 1: Status Quo Quota for Maine of 9,688 pounds of glass eel

Maine's glass eel quota for 2019 and beyond would remain at 9,688 pounds. This quota level was specified based on the state's 2014 landings which was below the state's 2014 quota of 11,749 pounds, and has been in place since 2015. The Board chose to specify

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the quota at this level starting in the 2015 fishing year due in part to interest in reducing landings from the previous two year period (2012-2013) while balancing concerns over economic hardship and incentivizing poaching if the quota were set at a lower level. To change the quota in future years, a new addendum would be required. Noted in the fishery description section is an overview of Maine's implementation of the swipe card program to improve the accuracy of state landings. As part of the provisions of Addendum IV and the 2015-2017 quota, the state also developed a life cycle fishery-independent survey, aimed at getting more biological data on glass, yellow, and silver eel life stages within one river system. The state was unable to collect data in 2016 but continued developing the survey in 2017; results will be presented to the TC in 2018.

Option 2: Maine Quota of 11,749 pounds of glass eel

Maine's glass eel quota for 2019 and beyond would be set at 11,749 pounds. This quota level was specified for 2014 based on input from industry and tribal representatives and was a 35% reduction from 2013 landings. This quota is approximately a 19% increase from the 2015-2017 quota. Through the swipe card program, the state of Maine has made great efforts to curtail poaching of glass eels. The swipe card system coupled with individual fishing quotas ensures that the sale of an individual's eels is not comingled with poached eels. Maine also tracks dealer to dealer elver transactions, as well as what is exported out of the State by Maine licensed elver exporters. These transactions are compared to shipping invoices to ensure glass eels are not added to a shipment once it leaves Maine's jurisdiction. The Maine Marine Patrol has also been authorized to use as much overtime as needed to enforce all laws and regulations related to the glass eel fishery. A new addendum would be required to adjust the quota in future years to higher level.

3.2 Proposed Options of Glass Eel Aquaculture Plans

Due to the increased desire to bring eels to market, this addendum proposes a new option for allowing states and jurisdictions to pool harvest allocations for use in domestic aquaculture facilities.

Option 1: Status Quo

The Aquaculture Plan provisions as specified in Addendum IV would remain in place and pooling of harvest among states and jurisdictions for domestic aquacultures would not be allowed. For more information on the current aquaculture plan provisions please refer to Appendix I. Addendum IV Aquaculture Plan Provisions.

Option 2: Pooling of Harvest allowance across states and jurisdictions

Under this option, up to **three contiguously bordered states** and jurisdictions would be allowed to pool their harvest of 200 pounds of glass eels up to a maximum of **600 pounds**. The 200 pound allowable harvest would be harvested from each state within the pooled grouping of states and jurisdictions, unless the states and jurisdictions can make a strong argument to have all eels harvested from a single watershed system. As

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the pooling of harvest would be up to a maximum of 600 pounds, less than the 750 pounds that requires a life cycle survey, states and jurisdictions pooling harvest of glass eels for domestic aquaculture purposes would not need to implement a life cycle survey.

Additionally, it would be up to the states and jurisdictions to determine the number of aquaculture facilities per state. If under this option multiple facilities within a state or 'pooled' states are seeking glass eel harvest, it will be up to the states and jurisdictions to determine how the allowable harvest would be allocated among aquaculture facilities. States and jurisdictions would need to define harvest areas in their proposal to the Board.

This option would also seek to maintain all other Addendum IV Aquaculture Plan provisions (see Appendix I for more detail) with the exception of requiring states to objectively show that harvest would only occur from watersheds that minimally contribute to the spawning stock of American eel. If this option is selected, states would no longer need to objectively demonstrate harvest of glass eels for domestic aquaculture purposes are from watersheds that minimally contributes to the spawning stock of American eel. **Please note:** Under this option, current regulations for many states would not allow them to participate in pooling of glass eel harvest for aquaculture purposes. Most states (with the exception of Maine and South Carolina) currently have regulations and state statutes prohibiting the harvest of glass eels and assessing fines if these regulations and statutes are violated. If this option is selected and states that currently have these restrictions in place are requested to be party to a pooled harvest request and are unable to do so, this could result in greater harvest of glass eels from a single watershed or jurisdiction.

3.3 Proposed Options for Yellow Eel Coastwide Cap, Management Trigger, and State-by-state Allocations

Issue 1: Coastwide Cap

The Addendum IV Coastwide Cap of 907,671 pounds, was set at the coastwide average landings during the years of 1998 through 2010 (based on landings information in 2014) which was the period covered by the 2012 benchmark stock assessment. Although the 2017 assessment update repeated the 2012 finding that the American eel population is depleted, the American Eel Allocation Working Group noted the following reasons to consider increasing the Coastwide Cap:

- Yellow eel landings have fluctuated over a narrow range during the period of 1998 through 2016, suggesting a Coastwide Cap set at the mean landings level during this period is sustainable.
- Yellow eel landings are difficult to verify in the time frame specified by the Addendum IV triggers because most yellow eels are sold as live product. Yellow

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eels are held live by harvesters until sold, so yellow eels can be harvested in one year, but not weighed, sold, and reported until the following year. Yellow eels also are often transported out of the state of landing and sold in another state, requiring two states to reconcile the landings information to avoid reporting duplication. These problems may result in the Coastwide Cap appearing to be exceeded based on initial landings reports and states being required to implement quotas unnecessarily per the management triggers before reports are finalized. The verification process of reported yellow eel landings is exemplified by the Addendum IV Coastwide Cap, now that the landings data used to calculate the Addendum IV Coastwide Cap have been updated for Addendum V. As noted below, the Addendum IV Coastwide Cap calculated using the updated Addendum V landings for the same 1998-2010 timeframe is 916,469 pounds, almost 10,000 pounds greater than the Addendum IV Coastwide Cap.

- Addendum IV allocated 88% of the yellow eel landings to the Delaware and Chesapeake Bay states in the event that state-by-state quota allocations were enacted. The yellow eel fishery in these states is conducted solely in estuarine waters. The yellow eel surveys conducted in Delaware and Chesapeake Bay states analyzed in the 2017 American Eel Assessment Update Report, either showed no trend or an increasing trend, suggesting the fishery is not diminishing the yellow eel abundance in this region. In addition, the commercial fishery CPUE as reported in state compliance reports has not declined in this region.
- American eels reach maturity at a younger age and smaller size in estuarine water than in fresh water (Clark 2009) and the 19-year time series of landings likely represents at least two generations (COSEWIC 2012) of estuarine yellow eels that have been exposed to the yellow eel fishery.

NOTE: For all Coastwide Cap options below, this Addendum will alter management starting in 2019 and the 2018 landings data will be used to evaluate the selected option below. In turn, depending on the subsequent options selected under Section 3.3 Issue items 2, 3, and 4, the earliest potential state-by-state allocations or other management response would be implemented starting in 2020 (i.e. 2018 landings data available in 2019 would be evaluated in 2019 with management response in 2020).

Option 1: Status Quo

Under this option, the current Coastwide Cap of 907,671 pounds would remain in place as well as provisions of the Coastwide Cap as specified in Addendum IV. **Please note:** The Coastwide Cap was specified in Addendum IV based on available data through 2010. That data has been subsequently revised and new coastwide landings averaged from 1998-2010 are 916,473 pounds. If the Board wishes to specify a new Coastwide Cap of 916,473 pounds based on average landings from 1998-2010, they can do so because it is between the highest and lowest cap options offered through this document.

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Option 2: Coastwide Cap set at **943,808 pounds**; the 50th percentile or median of 1998-2016 landings

The yellow eel fishery is dependent on foreign market fluctuations, thus effort and landings can vary considerably between years regardless of the yellow eel population. The median (50th percentile) of annual landings accounts for these variations by setting the coastwide landings cap at the mid-point in landings, which should reflect the midpoint in effort for the time series as well.

Option 3: Coastwide Cap set at **951,102 pounds**; the mean or average of 1998-2016 landings

The Coastwide Cap will be set at the mean of 1998 through 2016 landings. This option updates the Coastwide Cap to include more recent landings data.

Option 4: Coastwide Cap set at **836,969 pounds**; a 12% decrease from the mean or average of 1998-2016 landings

During the development of Addendum IV, the TC and Stock Assessment Subcommittee (SAS) recommended that harvest be reduced in all life stages due to the depleted status from the benchmark stock assessment. The TC and SAS advised that any harvest reduction less than 12% from the baseline (years 1998-2010), which was the coefficient of variation (CV) of the landings during that time period, is likely not to provide a measureable harvest reduction. The CV calculated from the landings for 1998-2016 is 12%. A 12% reduction from 951,102 pounds (the average landings from 1998-2016) is 836,969 pounds.

Issue 2: Management Trigger

For all three of the options listed under Issue 2, a management response would be required. The potential management response would be dependent on the selected option under Issue 3: Allocation. If a state-by-state commercial yellow eel quota option is selected, states would be required to implement a management program that would allow the state to constrain landings to the state's quota allocation starting in the subsequent year the management trigger is tripped. As this Addendum outlines management starting in 2019, the earliest year state-by-state quotas would be implemented is 2020 (under either Option 1: Status Quo - Coastwide Cap exceeded by 10% in a given year or Option 2: One-year Trigger).

Option 1: Status Quo

Under this option the current (two) management triggers as outlined in Addendum IV would remain in place regardless of whether the Coastwide Cap is adjusted in the prior subsection (Issue 1). If either of these management triggers is tripped, a management response would be required. The potential management response would be dependent on the selected option under Issue 3 'Allocation' (below).

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Management Triggers

1. The Coastwide Cap is exceeded by more than 10% in a given year (the value of exceedance is dependent on the selected option in Issue 1: Coastwide Cap).
2. The Coastwide Cap is exceeded for two consecutive years, regardless of percent over.

Options 2 and 3 below would establish a management trigger that takes into account the inter-annual variability of the coastwide landings and incorporates years after 2010. From 2011 through 2016 coastwide landings have fluctuated from 29% above to 3% below the Coastwide Cap, with five of the six years above the Coastwide Cap (Figure 1). Note: the Coastwide Cap is set at 907,671 pounds; a 10% exceedance of the Coastwide Cap is 998,438 pounds.

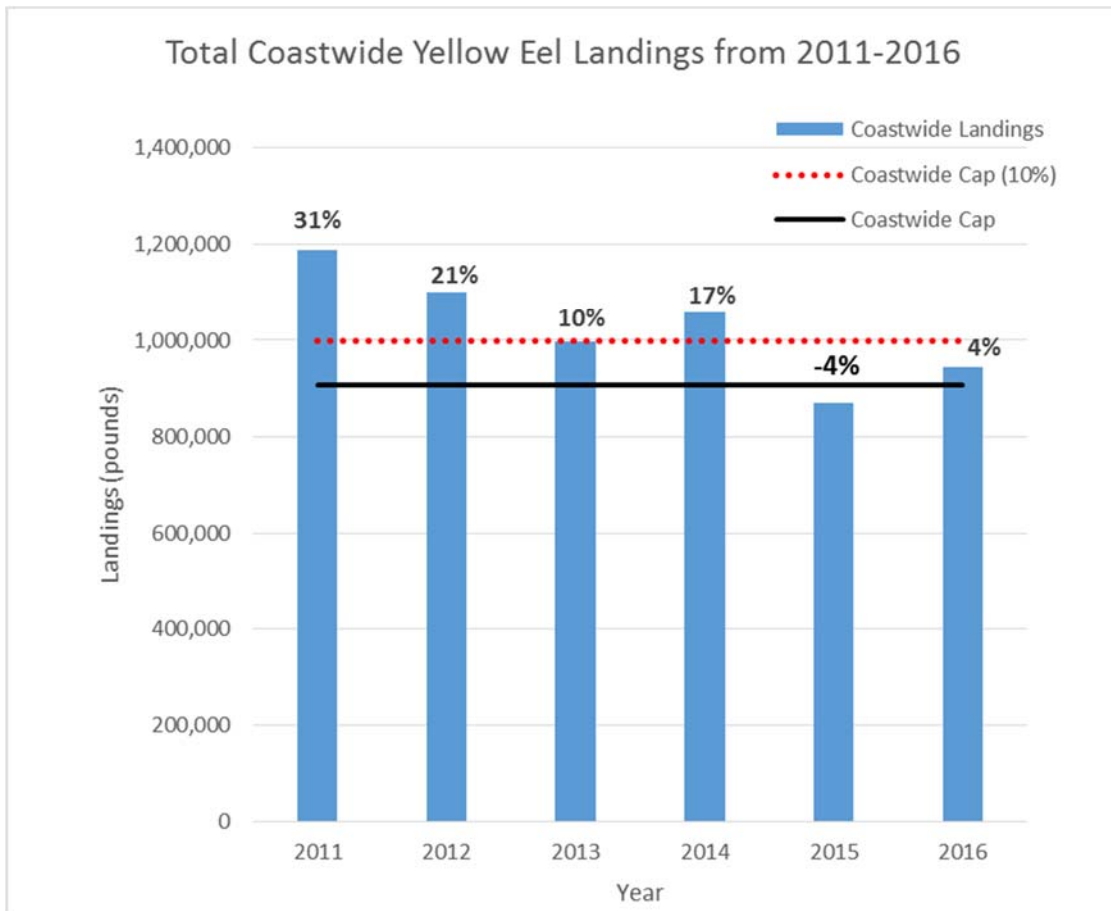


Figure 1. Coastwide yellow eel landings from 2011-2016 compared to Coastwide Cap and 10% exceedance of the Cap (the Management Trigger). Percentages above each bar indicate percent above (or below) the Coastwide Catch Cap.

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Option 2: One year of exceeding the Coastwide Cap by 10% (One-year trigger)

Under this option, the coastwide landings would annually be evaluated against a new one-year management trigger. If the Coastwide Cap is exceeded by 10% (the value of exceedance is dependent on the selected option in Issue 1: Coastwide Cap) in one year, the Board is required to alter the management program as specified below (Issue 3) in order to ensure the objectives of the management program are achieved.

Option 3: Two years of exceeding Coastwide Cap by 10% (Two-year trigger)

Under this option, the coastwide landings would annually be evaluated against a two-year management trigger. If the Coastwide Cap is exceeded by 10% (the value of exceedance is dependent on the selected option in Issue 1: Coastwide Cap) for two consecutive years, the Board is required to alter the management program as specified below (Issue 3) in order to ensure the objectives of the management program are achieved.

Issue 3: Allocation

If the selected management trigger in the above subsection (Issue 2) is tripped, then states would be required to take action for the subsequent fishing year. The following outlines options for state-by-state allocations as well as options for no state allocation. If a state-by-state allocation option is selected, states must ensure that a quota management program is implemented to address quota overages and allow quota transfers, as specified below. It is recommended that monitoring and reporting requirements be sufficient to prevent repeated overages. Additionally, the following provisions would apply to any state-by-state quota allocation options below:

- State quotas will be evaluated on a calendar-year basis.
- Final landings data from the previous year will be evaluated against a state's quota from the same year. Final landings data from the previous year may be made available for the current year by the ASMFC Spring Meeting (i.e. May).
- The Board will confirm overages and adjusted quotas (as needed) for the following year no later than the ASMFC Annual Meeting (i.e. October-November) of the current year.
- States will put forward proposals that have been reviewed and approved by the Technical Committee demonstrating the following year's quota will not be exceeded no later than the ASMFC Winter Meeting (i.e. January-February) of the following year.

Please note: For the timetable listed directly above, there is 2 year lag in addressing overages. For example, in 2020, state allocations are implemented based on 2018 landings data tripping the Coastwide Cap management trigger in 2019. If a state goes over their allocation in 2020, based on landings information available in 2021, that state's quota is reduced and the state's proposal needs to demonstrate an overage won't happen again in 2022 (2021 is unaccounted for).

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Option 1: Status quo

Addendum IV laid out the following process for specifying the Coastwide Cap and state-by-state allocations. The initial quota was set at the 2010 coastwide landings level (978,004 pounds). 2010 represented the last year of data included in the 2012 benchmark stock assessment. The TC recommended to reduce mortality from this level. From this level a 16% reduction was applied to the 2010 landings levels (821,523 pounds). Then average landings for the states from 2011-2013 were used to developed initial allocations. From this point, a filtering method was applied to adjust allocations: 1) states are allocated a minimum 2,000-pound quota, 2) no state is allocated a quota that is more than 2,000 pounds above its 2010 commercial yellow eel landings, and 3) no state is allocated a quota that is more than a 15% reduction from its 2010 commercial yellow eel landings. After the filtering method was applied, the coastwide quota was 893,909 pounds. The difference between the updated quota and the TC's recommendation was 13,762 pounds. This difference was split equally among the states negatively impacted by the quota relative to 2010 commercial landings (RI, NJ, DE, PRFC, and NC). For states that qualify for the 2,000-pound base quota, any overages would be deducted from the 2,000 pound allocation. As previously noted, due to a rounding error the combined total of state by state allocations is equal to 907,669 pounds, slightly less than the current Coastwide Cap of 907,671 pounds.

Table 3. Status Quo State-by-State Allocations for the Commercial Yellow Eel Fishery from Addendum IV. These quotas would ONLY be implemented if the Board-selected management trigger (Issue 2) is tripped.

| | Allocation | Quota |
|-----------------------|------------|---------|
| Maine | 0.43% | 3,907 |
| New Hampshire | 0.22% | 2,000 |
| Massachusetts | 0.22% | 2,000 |
| Rhode Island | 0.51% | 4,642 |
| Connecticut | 0.22% | 2,000 |
| New York | 1.677% | 15,220 |
| New Jersey | 10.45% | 94,899 |
| Delaware | 6.79% | 61,632 |
| Maryland | 51.33% | 465,968 |
| PRFC | 5.76% | 52,358 |
| Virginia | 8.67% | 78,702 |
| North Carolina | 11.79% | 107,054 |
| South Carolina | 0.22% | 2,000 |
| Georgia | 0.22% | 2,000 |
| Florida | 1.46% | 13,287 |
| Total | 100% | 907,669 |

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Option 2: No state-by-state quota

Under this option, the yellow eel fishery would be managed without state-specific quotas through adaptive management. Should the management trigger be tripped the Board will engage the TC to determine the reduction necessary to return coast-wide landings to the cap in the subsequent fishing year and identify mechanisms that could achieve the desired reduction (e.g., trip limits, season closures, or other effort reductions). The reduction may be scaled among states to ensure equitable management. Each state will develop a plan to achieve assigned reductions and submit it to the TC for review. The following sub-options specify how the states would work to achieve the required reduction.

Sub-Option 2A: Equitable reduction

Under this sub-option, all states would work collectively to achieve an equitable reduction in landings from the most recent year's cumulative coastwide landings to the Coastwide Cap if the management trigger is tripped. For example, in 2019, if 2018 landings exceed the Coastwide Cap as specified in the prior section, then the states would collectively develop measures to achieve the needed reduction to limit catch to the Coastwide Cap in the 2020 fishing year.

Sub-Option 2B: 1% rule for states to reduce landings

Under this sub-option, only states with landings greater than 1% of the coastwide landings in the year(s) when the management trigger is tripped will be responsible for reducing their landings to achieve the Coastwide Cap in the subsequent year. Those states with landings greater than 1% of the coastwide landings will work collectively to achieve an equitable reduction to the Coastwide Cap. For those states with landings less than 1% of the coastwide landings, if in subsequent years a state's landings exceeds 1% of the coastwide landings after reductions have been applied, that state must reduce their individual state landings in the subsequent year to return to the <1% level.

Option 3: Modified Addendum IV Quotas

This is a modification of the Addendum IV allocation formula intended to offer greater flexibility given the variability in landings over time.

This option maintains the basic allocation structure from Addendum IV, but makes some adjustments in order to more evenly distribute the impacts of a quota relative to recent (2012-2016) fishery performance, while maintaining the spirit of Addendum IV allocation. Under this option, states whose new quota would have resulted in reductions from average harvest over the most recent five years still will need to reduce, but these reductions are mitigated.

Quota was redistributed among the states from two sources:

- 1) A cap on allocations so that a state's assigned quota cannot exceed their 2012-2016 average harvest by more than 25%.

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- 2) The 2,000 pound minimum quota assigned to New Hampshire, Massachusetts, Connecticut, South Carolina, and Georgia was initially removed and redistributed to the remaining states.

The quota resulting from the removal of the 2,000 pound minimum and from capping states with more than a 25% increase was used two ways: 1) to set Maine's quota close to their 2012-2016 average harvest of 5,952 pounds (quota of 5,907 pounds) and therefore mitigate Maine's reduction if a quota is implemented and 2) the remainder (52,918 pounds) was divided evenly among and added to the Addendum IV quotas of New York, Maryland and Virginia - the only three states who would face a reduction from 2012-2016 average harvest levels under Addendum IV.

Finally, based on harvest history, 0.75% of the Coastwide Cap (6,808 pounds under the current cap) was set aside and divided evenly among those 5 states given the minimum 2,000 pound allocation under Addendum IV ($6,808/5 = 1,362$ pounds). The allocation of 1,362 pound was rounded down to 1,000 pounds for each of the states. The excess from this rounding (1,807.5 pounds) was added back to Maryland's proposed quota to further mitigate their impacts (Table 4 and Figure 2). Appendix II further describes this quota redistribution proposal.

Table 4. State Allocations under Option 3 compared to Addendum IV

| State | Addendum IV Percentage Allocation | Option 3 Percentage Allocation | Addendum IV Quota | Option 3 Quota |
|-------|-----------------------------------|--------------------------------|-------------------|----------------|
| ME | 0.43% | 0.65% | 3,907 | 5,907 |
| NH | 0.22% | 0.11% | 2,000 | 1,362 |
| MA | 0.22% | 0.11% | 2,000 | 1,362 |
| RI | 0.51% | 0.28% | 4,642 | 2,551 |
| CT | 0.22% | 0.11% | 2,000 | 1,362 |
| NY | 1.68% | 3.59% | 15,220 | 32,613 |
| NJ | 10.46% | 10.38% | 94,899 | 94,187 |
| DE | 6.79% | 6.74% | 61,632 | 61,170 |
| MD | 51.34% | 53.08% | 465,968 | 479,978 |
| PRFC | 5.77% | 5.73% | 52,358 | 51,965 |
| VA | 8.67% | 10.53% | 78,702 | 95,619 |
| NC | 11.79% | 7.03% | 107,054 | 63,818 |
| SC | 0.22% | 0.11% | 2,000 | 1,362 |
| GA | 0.22% | 0.11% | 2,000 | 1,362 |
| FL | 1.46% | 1.44% | 13,287 | 13,051 |
| Total | 100% | 100% | 907,669 | 907,669 |

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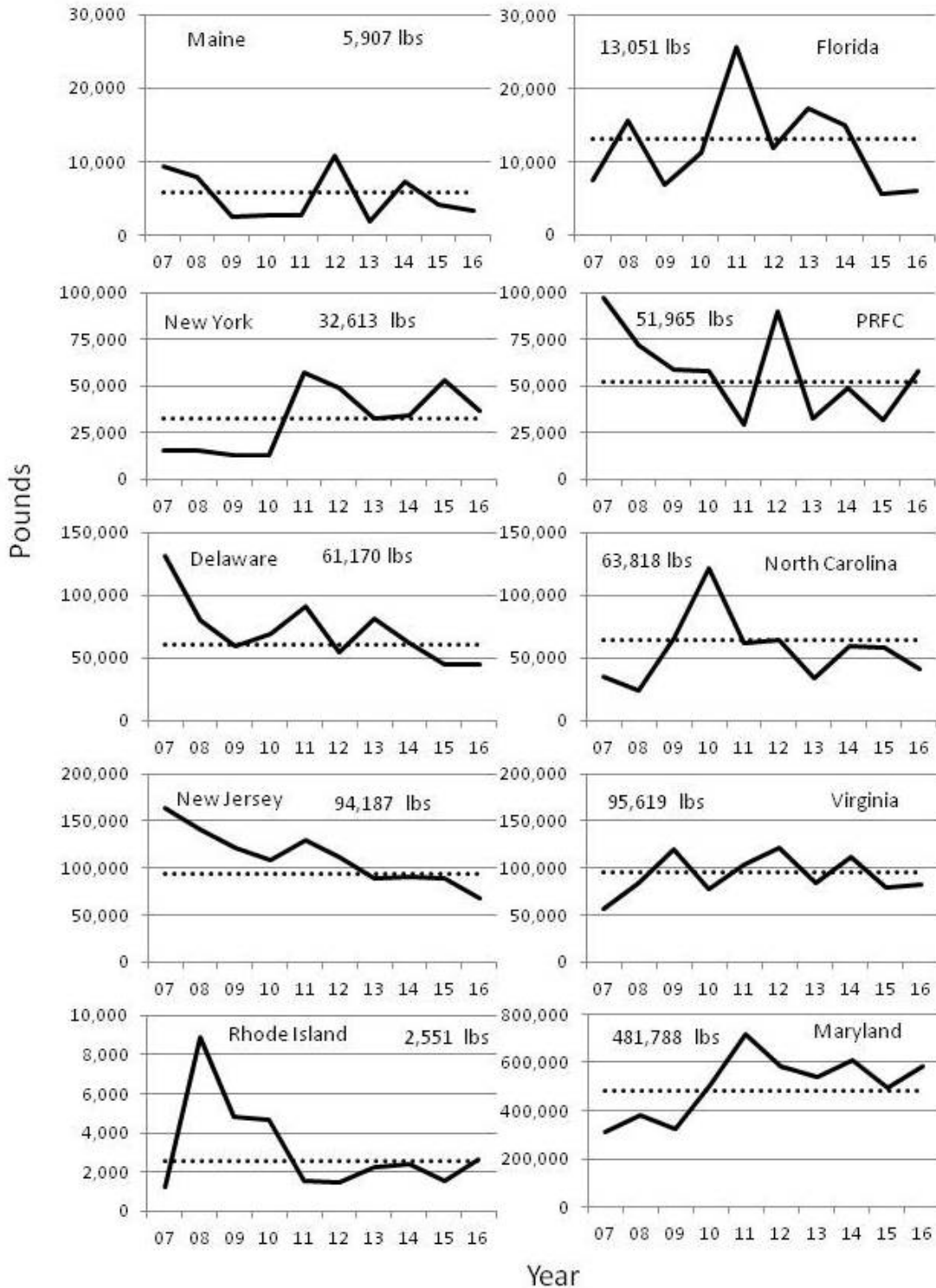


Figure 2. Option 3 State Quotas relative to landings. This shows proposed quotas (dotted line) compared to each state's landings over the past 10 years. States not shown are assigned a base quota of 1,362 pounds. The proposed quota assumes a status quo coastwide quota of 907,699 pounds.

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Note: For Options 3, 4, and 5, the following items on accountability will be carried over from Addendum IV:

- *Accountability:* States will be held accountable for their annual quota. If a state or jurisdiction has an overage in a given fishing year, then the state or jurisdiction is required to reduce their following year's quota by the same amount the quota was exceeded, pound for pound. *For states that qualify for the automatic 2,000 pound quota, any overages would be deducted from the 2,000 pound allocation.**

Under both the landings cap and quota systems, all New York American eel landings (i.e. from both the yellow and silver eel fisheries) are included, until otherwise shown to preclude it.

Additionally, for the following example tables for Options 4 and 5, a breakdown of the previous allocation under Addendum IV state-by-state quotas is compared against the new state allocations of the same Coastwide Cap.

***Note:** if allocation option 3, 4, or 5 is chosen then overages by the states of New Hampshire, South Carolina, and Georgia will be treated on a case-by-case basis since, under these options, these states have quotas significantly lower than 2,000 pounds.

Option 4: Simple Time Series Average of Yellow Eel Landings

Under this option states will be allocated a quota based on their state's average state yellow eel landings data for a specific timeframe. In the example allocations listed below, the coastwide landings quota is set at 907,669 pounds (the Addendum IV coastwide quota) to help compare current state-by-state quotas under Addendum IV to the proposed quotas in Options 4 A and B (Tables 5 and 6). Data used to develop average landings for each time series can be found in Table 2. **Note:** The state-by-state allocations below would differ if either Option 2 or 3 are selected. Additionally, please note that due to low landings and data confidentiality, New Hampshire, South Carolina, and Georgia's average landings for the two time periods are not specified below.

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Table 5. Sub-option 4A: Average landings over most recent 10-year time series (2007-2016)

| State | Average Landings 2007-2016 | Addendum IV Percentage Allocation | New Percentage | Addendum IV Quota | New Quota under Option 4A |
|--------------|-------------------------------|--------------------------------------|-------------------|----------------------|------------------------------|
| ME | 5,545 | 0.43% | 0.57% | 3,907 | 5,217 |
| NH | | 0.22% | 0.01% | 2,000 | 61 |
| MA | 1,888 | 0.22% | 0.20% | 2,000 | 1,776 |
| RI | 3,112 | 0.51% | 0.32% | 4,642 | 2,928 |
| CT | 1,652 | 0.22% | 0.17% | 2,000 | 1,555 |
| NY | 29,437 | 1.68% | 3.05% | 15,220 | 27,696 |
| NJ | 110,331 | 10.46% | 11.44% | 94,899 | 103,808 |
| DE | 72,975 | 6.79% | 7.56% | 61,632 | 68,661 |
| MD | 517,548 | 51.34% | 53.65% | 465,968 | 486,947 |
| PRFC | 57,608 | 5.77% | 5.97% | 52,358 | 54,201 |
| VA | 95,357 | 8.67% | 9.88% | 78,702 | 89,719 |
| NC | 56,786 | 11.79% | 5.89% | 107,054 | 53,429 |
| SC | | 0.22% | 0.00% | 2,000 | 3 |
| GA | | 0.22% | 0.05% | 2,000 | 436 |
| FL | 11,938 | 1.46% | 1.24% | 13,287 | 11,232 |
| Total | 964,709 | 100.00% | 100% | 907,669 | 907,669 |

Table 6. Sub-option 4B: Average landings over most recent 5-year time series (2012-2016)

| State | Average Landings 2012-2016 | Addendum IV Percentage Allocation | New Percentage | Addendum IV Quota | New Quota under Option 4B |
|--------------|-------------------------------|--------------------------------------|-------------------|----------------------|------------------------------|
| ME | 5,952 | 0.43% | 0.60% | 3,907 | 5,438 |
| NH | | 0.22% | 0.01% | 2,000 | 50 |
| MA | 2,165 | 0.22% | 0.22% | 2,000 | 1,978 |
| RI | 2,054 | 0.51% | 0.21% | 4,642 | 1,877 |
| CT | 1,776 | 0.22% | 0.18% | 2,000 | 1,623 |
| NY | 40,631 | 1.68% | 4.09% | 15,220 | 37,122 |
| NJ | 90,305 | 10.46% | 9.09% | 94,899 | 82,506 |
| DE | 57,790 | 6.79% | 5.82% | 61,632 | 52,799 |
| MD | 574,968 | 51.34% | 57.87% | 465,968 | 525,313 |
| PRFC | 52,286 | 5.77% | 5.26% | 52,358 | 47,771 |
| VA | 102,914 | 8.67% | 10.36% | 78,702 | 94,027 |
| NC | 51,309 | 11.79% | 5.16% | 107,054 | 46,878 |
| SC | | 0.22% | 0.00% | 2,000 | 1 |
| GA | | 0.22% | 0.07% | 2,000 | 665 |
| FL | 10,532 | 1.46% | 1.06% | 13,287 | 9,623 |
| Total | 993,466 | 100.00% | 100% | 907,669 | 907,669 |

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Option 5: Allocation Based on Weighted Time Series Average of Yellow Eel Landings
 Under this option, states will be allocated a quota based on the weighted average of their state yellow eel landings data for a specific timeframe. For example, Tables 7 and 8 below compare current state-by-state quotas under Addendum IV to the proposed quotas in Options 5A and B with the coastwide landings quota set at 907,669 pounds (the Addendum IV coastwide quota). Data used to develop weighted average landings for each time series can be found in Table 2. **Note:** The state-by-state allocations in the tables below will differ if either Option 2 or 3 under Issue Item 1 (Coastwide Cap) are selected. Also included for the following sub-options is an example equation demonstrating how the allocation was derived (Appendix III).

Table 7. Sub-option 5A: Weighted average: 50 % of the time series (1998-2016) and 50% of the most recent 10 years (2007-2016)

| State | Addendum IV Percentage Allocation | New Percentage Allocation under Option 5A | Addendum IV Quota | New Quota under Option 5A |
|------------------|-----------------------------------|---|-------------------|---------------------------|
| ME | 0.43% | 0.74% | 3,907 | 6,759 |
| NH | 0.22% | 0.01% | 2,000 | 79 |
| MA | 0.22% | 0.24% | 2,000 | 2,209 |
| RI | 0.51% | 0.54% | 4,642 | 4,899 |
| CT | 0.22% | 0.22% | 2,000 | 2,017 |
| NY | 1.68% | 2.71% | 15,220 | 24,570 |
| NJ | 10.46% | 11.21% | 94,899 | 101,743 |
| DE | 6.79% | 8.92% | 61,632 | 80,920 |
| MD | 51.34% | 48.67% | 465,968 | 441,788 |
| PRFC | 5.77% | 8.30% | 52,358 | 75,319 |
| VA | 8.67% | 10.31% | 78,702 | 93,624 |
| NC | 11.79% | 6.91% | 107,054 | 62,731 |
| SC | 0.22% | 0.00% | 2,000 | 2 |
| GA | 0.22% | 0.04% | 2,000 | 376 |
| FL | 1.46% | 1.17% | 13,287 | 10,632 |
| Coastwide | 100% | 100% | 907,669 | 907,669 |

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Table 8. Sub-option 5B: Weighted average: 50 % of the time series (1998-2016) and 50% of the most recent 5 years (2012-2016)

| State | Addendum IV Percentage Allocation | New Percentage Allocation under Option 5B | Addendum IV Quota | New Quota under Option 5B |
|-----------|-----------------------------------|---|-------------------|---------------------------|
| ME | 0.43% | 0.75% | 3,907 | 6,849 |
| NH | 0.22% | 0.01% | 2,000 | 73 |
| MA | 0.22% | 0.25% | 2,000 | 2,305 |
| RI | 0.51% | 0.48% | 4,642 | 4,333 |
| CT | 0.22% | 0.23% | 2,000 | 2,045 |
| NY | 1.68% | 3.24% | 15,220 | 29,432 |
| NJ | 10.46% | 10.01% | 94,899 | 90,891 |
| DE | 6.79% | 8.00% | 61,632 | 72,636 |
| MD | 51.34% | 50.91% | 465,968 | 462,057 |
| PRFC | 5.77% | 7.90% | 52,358 | 71,721 |
| VA | 8.67% | 10.55% | 78,702 | 95,767 |
| NC | 11.79% | 6.53% | 107,054 | 59,247 |
| SC | 0.22% | 0.00% | 2,000 | 1 |
| GA | 0.22% | 0.05% | 2,000 | 493 |
| FL | 1.46% | 1.08% | 13,287 | 9,819 |
| Coastwide | 100% | 100% | 907,669 | 907,669 |

Issue 4: Quota Transfers

As noted in earlier sections, the Allocation Working Group highlighted concerns regarding the timing of when landings information becomes available and finalized, specifically in evaluating fishery performance. Addendum IV outlined the following provisions for transfer of quota under state-by-state allocations:

- Any state or jurisdiction may request approval from the Board Chair or Commission Chair to transfer all or part of its annual quota to one or more states, including states that receive the automatic 2,000 pound quota. Requests for transfers must be made by individual or joint letters signed by the principal state official with marine fishery management authority for each state involved. The Chair will notify the requesting states within ten working days of the disposition of the request. In evaluating the request, the Chair will consider: if the transfer would preclude the overall annual quota from being achieved, if the transfer addresses an unforeseen variation or contingency in the fishery, and if the transfer is consistent with the objectives of the FMP. Transfer

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requests for the current fishing year must be submitted by December 31 of that fishing year.

- The transfer of quota would be valid for only the calendar year in which the request is made. These transfers do not permanently affect the state-specific shares of the quota, i.e., the state specific shares remain fixed. Once quota has been transferred to a state, the state receiving quota becomes responsible for any overages of transferred quota.

Many states are concerned that the implementation of state quotas will lead to fishery inefficiencies both at the state and coastwide level. For example, late fall is often a peak yellow eel harvest period. If a state with unused quota was hesitant to transfer quota to a state that had filled its quota because it was unsure whether it could spare the unused quota, the quota in the potential donor state could go unused while the harvesters in the potential recipient state would be denied extra income. This inefficient use of the fishery and capricious reduction in fishery revenue is in direct contradiction of the ISFMP Charter. To avoid this potential problem, if a state-by-state allocation option is selected under Issue 3, the Allocation Working Group has put forward the following options:

Option 1: Status Quo (Transfers allowed no later than December 31)

Under this option, quota transfer requests must be submitted by December 31 of that fishing year.

Option 2: Extend transfer provisions to February 15 of the following fishing season.

Under this option, quota transfers may occur at any time during the fishing season but no later than February 15 of the following year. All transfers require a donor state (state giving quota) and a receiving state (state accepting additional quota). There is no limit on the amount of quota that can be transferred by this mechanism, and the terms and conditions of the transfer are to be identified solely by the parties involved in the transfer. This strategy will allow both the donor and recipient state to have additional time to reconcile their landings data.

3.4 Timeframe for Addendum Provisions

There is not a sunset for this Addendum. If a new or different management program is desired than what is specified in the prior sections, a new addendum is required. If state-by-state allocations are implemented based on a selected management trigger and Coastwide Cap specified above, state-by-state allocations will be revisited within 3 years (reviewed in 2021). During the revisiting process, the Board may reconsider if state-by-state quotas are needed for the 2022 fishing season if the implemented state-by-state quotas have not been exceeded for 2 years.

Specific to the Maine glass eel quota, the selected quota in the section above will be specified for three years moving forward (starting in the 2019; from 2019-2021), and can be revisited before year four (2022). If the Board decides to maintain Maine's glass

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eel quota at its specified level in the section above, the quota can be extended for an additional three years (2022-2024) without requiring a new addendum. If there is a desire to increase Maine's glass eel quota from the specified level in the section above, a new Addendum will be required.

4.0 Compliance

If the existing American Eel FMP is revised by approval of this draft addendum, the American Eel Management Board will designate dates by which states will be required to implement the addendum starting with the 2019 fishing season. A final implementation schedule will be identified based on the management tools chosen.

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Appendix I. Addendum IV (2014) Aquaculture Plan Provisions

States and jurisdictions may develop a Plan for aquaculture purposes. Under an approved Aquaculture Plan, states and jurisdictions may harvest a maximum of 200 pounds of glass eel annually from within their waters for use in domestic aquaculture facilities provided the state can objectively show the harvest will occur from a watershed that minimally contributes to the spawning stock of American eel. The request shall include: pounds requested; location, method, and dates of harvest; duration of requested harvest; prior approval of any applicable permits; description of the facility, including the capacity of the facility the glass eels will be held, and husbandry methods; description of the markets the eels will be distributed to; monitoring program to ensure harvest is not exceeded; and adequate enforcement capabilities penalties for violations. Approval of a request does not guarantee approval of a request in future years. Eels harvested under an approved Aquaculture Plan may not be sold until they reach the legal size in the jurisdiction of operations, unless otherwise specified.

All Plans are subject to TC and LEC review and Board approval. The Fishing Mortality Based Plan must be submitted by June 1st of the preceding fishing year in order to provide enough time for review for the upcoming fishing season. Transfer and Aquaculture Plans must be submitted by June 1st of the preceding fishing year and approval will be determined by the Board by September 1st. Plans will initially be valid for only one year. After the first year of implementation the TC will evaluate the program and provide recommendations to the Board on the overall impact of and adherence to the plan. If the proposed regulatory changes, habitat improvements, or harvest impact cannot be assessed one year post-implementation, then a secondary review must occur within three to five years post-implementation if the action is still ongoing. If states use habitat improvements and changes to that habitat occurs in subsequent years, the Commission must be notified through the annual compliance report and a review of the Plan may be initiated. Any requests that include a stocking provision would have to ensure stocked eels were certified disease free according to standards developed by the TC and approved by the Board.

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Appendix II. Modified Addendum IV Quotas (Option 3) Explained

Option 3: Modified Addendum IV Quotas under Section 3.3 Issue 3: Allocation (page 21)
Background: The intent of this option is to redistribute quotas assigned in Addendum IV in order to mitigate reductions for some states from the most recent 5 year (2012-2016) landings, while not substantially changing the allocation outcome for any state. States with gray cells have landed less than 1% of the coastwide landings each year since 2007. Table 1 shows the impact of Addendum IV quotas relative to 2012-2016 average landings. Four states would be required to reduce their average landings by more than 15% if the allocation remains the same.

Table 1.

| State | Addendum IV Quota (pounds) | Average Landings 2012-2016 | Percent change from average landings (2012-2016) to Addendum IV quota |
|------------------|----------------------------|----------------------------|---|
| ME | 3,907 | 5,952 | - 34 % |
| NH | 2,000 | | |
| MA | 2,000 | | |
| RI | 4,642 | 2,054 | + 126 % |
| CT | 2,000 | | |
| NY | 15,220 | 40,631 | - 63 % |
| NJ | 94,899 | 90,305 | + 5 % |
| DE | 61,632 | 57,790 | + 7 % |
| MD | 465,968 | 574,968 | - 19 % |
| PRFC | 52,358 | 52,286 | + 0.14 % |
| VA | 78,702 | 102,914 | - 24 % |
| NC | 107,054 | 51,309 | + 109 % |
| SC | 2,000 | | |
| GA | 2,000 | | |
| FL | 13,287 | 10,532 | + 26 % |
| Coastwide | 907,669 | 993,466 | |

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Step 1. 25% rule and reconsideration of minimum base allocation

Quota for redistribution is taken from 2 sources: 1) any state whose quota under Addendum IV results in more than 25% percent increase over the most recent 5 year average landings (2012-2016) has their quota capped at a 25% increase (Rhode Island, North Carolina and Florida), and 2) the 2,000 pound base allocation from the low landings states of New Hampshire, Massachusetts, Connecticut, South Carolina, and Georgia. This generates 54,963 pounds for redistribution.

Table 2.

| State | Addendum IV Quota in pounds | Proposed quota with 25% cap in place. | % change from average landings to proposed quota. | Quota made available for redistribution (pounds) |
|------------------|-----------------------------|---------------------------------------|---|--|
| NH | 2,000 | | | 2,000 |
| MA | 2,000 | | | 2,000 |
| RI | 4,642 | 2,570 | + 25% | 2,072 |
| CT | 2,000 | | | 2,000 |
| NC | 107,054 | 64,300 | + 25% | 42,754 |
| SC | 2,000 | | | 2,000 |
| GA | 2,000 | | | 2,000 |
| FL | 13,287 | 13,150 | + 25% | 137 |
| Coastwide | | | | 54,963 |

Step 2. Redistribution, Part 1

Quotas assigned under Addendum IV resulted in four states with greater than 1% of the coastwide landings having to take reductions from their most recent 5 year (2012-2016) average: Maine (-34%), New York (-63%), Maryland (-19%), and Virginia (-24%). Therefore, the first step in redistribution was to mitigate these reductions. To do so, the quota for Maine was set close to their 2012-2016 average harvest of 5,952 pounds (quota of 5,907 pounds). The remaining 52,918 pounds is split equally among New York, Maryland and Virginia. As shown in Table 3, Maine, New York, Maryland and Virginia now have higher quotas and mitigated reductions compared to Addendum IV. Rhode Island, North Carolina and Florida have proposed quotas that are higher than their average harvest 2012-2016, but the increase is capped at 25%. New Jersey, Delaware, and PRFC have no changes over their Addendum IV quotas. Quota has not yet been assigned to the low harvest states (gray cells).

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Table 3.

| State | Addendum IV Quota (pounds) | Initial quota (pounds) with no base quota for states with low landings | Percent change from average landings (2012-2016) |
|------------------|----------------------------|--|--|
| ME | 3,907 | 5,907 | -1% |
| NH | 2,000 | | |
| MA | 2,000 | | |
| RI | 4,642 | 2,570 | + 25 % |
| CT | 2,000 | | |
| NY | 15,220 | 32,859 | - 19 % |
| NJ | 94,899 | 94,899 | + 5 % |
| DE | 61,632 | 61,632 | + 7 % |
| MD | 465,968 | 483,607 | - 16 % |
| PRFC | 52,358 | 52,358 | 0 |
| VA | 78,702 | 96,341 | - 6 % |
| NC | 107,054 | 64,300 | + 25 % |
| SC | 2,000 | | |
| GA | 2,000 | | |
| FL | 13,287 | 13,150 | + 25 % |
| Coastwide | 907,669 | 907,669 | |

Step 3. Redistribution, Part 2

To provide some base quota for the low landings states of New Hampshire, Massachusetts, Connecticut, South Carolina and Georgia, 0.75% of the coast wide quota was set aside for these landings states, and the quotas for the states of Maine, Rhode Island, New York, New Jersey, Delaware, Maryland, Potomac River Fisheries Commission, Virginia, North Carolina, and Florida shown in Table 3 were scaled down by this amount to create the set aside of 6,808 pounds. This set aside was divided equally among the 5 low landings states generating a rounded base quota of 1,362 pounds. While the states of Maine, New York, Maryland, Potomac River Fisheries Commission, and Virginia would still face reduction from their recent landings levels if state allocations are implemented under Option 3; the proposed option would mitigate those

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reductions. Option 3 state quotas under the status quo Coastwide Cap are shown in Table 4.

Table 4.

| State | Addendum IV Percentage Allocation | Option 3 Percentage Allocation | Addendum IV Quota (pounds) | Option 3 quota (pounds) | % change average landings (2012-2016) to Option 3 quota |
|------------------|-----------------------------------|--------------------------------|----------------------------|-------------------------|---|
| ME | 0.43% | 0.65% | 3,907 | 5,907 | - 1 % |
| NH | 0.22% | 0.11% | 2,000 | 1,362 | |
| MA | 0.22% | 0.11% | 2,000 | 1,362 | |
| RI | 0.51% | 0.28% | 4,642 | 2,551 | + 24 % |
| CT | 0.22% | 0.11% | 2,000 | 1,362 | |
| NY | 1.68% | 3.59% | 15,220 | 32,613 | - 20 % |
| NJ | 10.46% | 10.38% | 94,899 | 94,187 | + 4 % |
| DE | 6.79% | 6.74% | 61,632 | 61,170 | + 6 % |
| MD | 51.34% | 53.08% | 465,968 | 479,980 | - 17 % |
| PRFC | 5.77% | 5.73% | 52,358 | 51,965 | - 0.6 % |
| VA | 8.67% | 10.53% | 78,702 | 95,619 | - 7 % |
| NC | 11.79% | 7.03% | 107,054 | 63,818 | + 24 % |
| SC | 0.22% | 0.11% | 2,000 | 1,362 | |
| GA | 0.22% | 0.11% | 2,000 | 1,362 | |
| FL | 1.46% | 1.44% | 13,287 | 13,051 | + 24 % |
| Coastwide | 100.00% | 100.00% | 907,669 | 907,669 | |

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Appendix III. Calculations for Option #5 Sub-Options

Option 5: Allocation Based on Weighted Time Series Average of Yellow Eel Landings
Section 3.3 Issue 3: Allocation (page 26)

The following calculations are done using North Carolina landings data from Table 2 as an example for Option 5 A: *Weighted average: 50 % of the time series (1998-2016) and 50% of the most recent 10 years (2007-2016)*. Note that the same process is applied to Option 5B with a 5-year time series (2012-2016).

Step 1. Weighting Time Series Average Landings

A state's weighted time series average landings is calculated by multiplying the specified time series averages by the weighting percentages (50% or 0.5) and the two time series' average landings are then summed together through the following equation:

$0.5 \times 19 \text{ year Time Series Average (1998-2016)} + 0.5 \times 10 \text{ year Time Series Average (2007-2016)}$
= Weighting Time Series Average Landings

$0.5 \times \text{NC 19 year Time Series Average (75,621 pounds)} + 0.5 \times \text{NC 10 year Time Series Average (56,786 pounds)}$ = North Carolina Weighted Time Series Average Landings is **66,203 pounds**

Step 2. Solving for New Allocation Percentage

The state's new weighted time series average landings is then divided by the weighted total coastwide average landings to derive a state's new allocation percentage through the following equation:

$\text{State Weighted Time Series Average Landings} / \text{Coastwide Weighted Time Series Average Landings}$
= Allocation Percentage

$\text{North Carolina Weighted Average (66,203 pounds)} / \text{Coastwide Weighted Average (957,905 pounds)}$ = North Carolina's Allocation Percentage is **6.911%**

Step 3. Solving for New State Allocation in Pounds

The state's new allocation percentage is then multiplied by the coastwide quota of 907,669 pounds (Addendum IV total coastwide quota) to derive the state's allocation in pounds through the following equation:

$\text{State Allocation Percentage} \times \text{Addendum IV Total Coastwide Quota} = \text{New State Allocation}$

$\text{NC Allocation Percentage (6.911\%)} \times \text{Total Coastwide Quota (907,669 pounds)}$ = North Carolina's new allocation for Option 5A under a coastwide quota of 907,669 pounds is **62,731 pounds**

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Appendix IV. State Yellow Eel Quotas under each Coastwide Cap Option

The following tables provide information for each combination of possible yellow eel state allocations under different Coastwide Cap levels. The proposed state allocations are presented in both percentage and quota in pounds for the different combinations in comparison to state allocations under Addendum IV (set at a Coastwide Cap of 907, 669 pounds for state allocations). Options can be found for both Coastwide Cap options in Section 3.3 Issue 1: Coastwide Cap, pages 13-15, and for state allocations in Section 3.3 Issue 3: Allocation, pages 17-26. As previously noted, the current Coastwide Cap of 907,671 pounds is slightly above Addendum IV’s specified state-by-state allocations at 907,669 pounds, due to a rounding error. The tables below specify the Coastwide Cap under state-by-state allocations at 907,669 pounds. Additionally, there are no state quotas under Option 2 for Issue 3, so no combinations for that option are offered below. **NOTE:** *When providing public comment on preferred state allocation option under Issue 3: Allocation, please also specify preferred option under Issue 1: Coastwide Cap.*

Table 1. Comparison of State Quota Options as a Percentage Allocation

| State | Option | Percentage Allocation | | | | | |
|-------|--------|-----------------------------|----------|-----------|-----------|-----------|-----------|
| | | Addendum IV (Status Quo) | Option 3 | Option 4A | Option 4B | Option 5A | Option 5B |
| ME | | 0.43% | 0.65% | 0.57% | 0.60% | 0.74% | 0.75% |
| NH | | 0.22% | 0.15% | 0.01% | 0.01% | 0.01% | 0.01% |
| MA | | 0.22% | 0.15% | 0.20% | 0.22% | 0.24% | 0.25% |
| RI | | 0.51% | 0.28% | 0.32% | 0.21% | 0.54% | 0.48% |
| CT | | 0.22% | 0.15% | 0.17% | 0.18% | 0.22% | 0.23% |
| NY | | 1.68% | 3.59% | 3.05% | 4.09% | 2.71% | 3.24% |
| NJ | | 10.46% | 10.38% | 11.44% | 9.09% | 11.21% | 10.01% |
| DE | | 6.79% | 6.74% | 7.56% | 5.82% | 8.92% | 8.00% |
| MD | | 51.34% | 52.88% | 53.65% | 57.87% | 48.67% | 50.91% |
| PRFC | | 5.77% | 5.73% | 5.97% | 5.26% | 8.30% | 7.90% |
| VA | | 8.67% | 10.53% | 9.88% | 10.36% | 10.31% | 10.55% |
| NC | | 11.79% | 7.03% | 5.89% | 5.16% | 6.91% | 6.53% |
| SC | | 0.22% | 0.15% | 0.00% | 0.00% | 0.00% | 0.00% |
| GA | | 0.22% | 0.15% | 0.05% | 0.07% | 0.04% | 0.05% |
| FL | | 1.46% | 1.44% | 1.24% | 1.06% | 1.17% | 1.08% |
| Total | | 100% | 100% | 100% | 100% | 100% | 100% |

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Table 2. Comparison of State Quota Options (in pounds) under Coastwide Cap of 907,669 pounds

| State | Option | Allocation in weight under Coastwide Cap of 907,669 pounds | | | | | |
|--------------|--------|--|----------------|----------------|----------------|----------------|----------------|
| | | Addendum IV (Status Quo) | Option 3 | Option 4A | Option 4B | Option 5A | Option 5B |
| ME | | 3,907 | 5,907 | 5,217 | 5,438 | 6,759 | 6,849 |
| NH | | 2,000 | 1,362 | 61 | 50 | 79 | 73 |
| MA | | 2,000 | 1,362 | 1,776 | 1,978 | 2,209 | 2,305 |
| RI | | 4,642 | 2,551 | 2,928 | 1,877 | 4,899 | 4,333 |
| CT | | 2,000 | 1,362 | 1,555 | 1,623 | 2,017 | 2,045 |
| NY | | 15,220 | 32,613 | 27,696 | 37,122 | 24,570 | 29,432 |
| NJ | | 94,899 | 94,187 | 103,808 | 82,506 | 101,743 | 90,891 |
| DE | | 61,632 | 61,170 | 68,661 | 52,799 | 80,920 | 72,636 |
| MD | | 465,968 | 479,978 | 486,947 | 525,313 | 441,788 | 462,057 |
| PRFC | | 52,358 | 51,965 | 54,201 | 47,771 | 75,319 | 71,721 |
| VA | | 78,702 | 95,619 | 89,719 | 94,027 | 93,624 | 95,767 |
| NC | | 107,054 | 63,818 | 53,429 | 46,878 | 62,731 | 59,247 |
| SC | | 2,000 | 1,362 | 3 | 1 | 2 | 1 |
| GA | | 2,000 | 1,362 | 436 | 665 | 376 | 493 |
| FL | | 13,287 | 13,051 | 11,232 | 9,623 | 10,632 | 9,819 |
| Total | | 907,669 | 907,669 | 907,669 | 907,669 | 907,669 | 907,669 |

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Table 3. State Allocation (Option 1)

For this option under different Coastwide Caps, the state allocation percentages do not change, only the poundage based on the Coastwide Cap. The idea here is that the slice of the pie (state allocation percentage) does not change, only how much bigger or smaller the pie is (Coastwide Cap).

| State | Addendum IV Percentage Allocation | Addendum IV Quota (Coastwide Cap of 907,669) | State Quota under different Coastwide Cap Options (in pounds) | | |
|-------|-----------------------------------|--|---|------------------------------------|------------------------------------|
| | | | Option 2: Coastwide Cap of 943,808 | Option 3: Coastwide Cap of 951,102 | Option 4: Coastwide Cap of 836,969 |
| ME | 0.43% | 3,907 | 4,063 | 4,094 | 3,603 |
| NH | 0.22% | 2,000 | 2,080 | 2,096 | 1,844 |
| MA | 0.22% | 2,000 | 2,080 | 2,096 | 1,844 |
| RI | 0.51% | 4,642 | 4,827 | 4,864 | 4,280 |
| CT | 0.22% | 2,000 | 2,080 | 2,096 | 1,844 |
| NY | 1.68% | 15,220 | 15,826 | 15,948 | 14,034 |
| NJ | 10.46% | 94,899 | 98,677 | 99,440 | 87,507 |
| DE | 6.79% | 61,632 | 64,086 | 64,581 | 56,831 |
| MD | 51.34% | 465,968 | 484,521 | 488,265 | 429,673 |
| PRFC | 5.77% | 52,358 | 54,443 | 54,863 | 48,280 |
| VA | 8.67% | 78,702 | 81,836 | 82,468 | 72,572 |
| NC | 11.79% | 107,054 | 111,316 | 112,177 | 98,715 |
| SC | 0.22% | 2,000 | 2,080 | 2,096 | 1,844 |
| GA | 0.22% | 2,000 | 2,080 | 2,096 | 1,844 |
| FL | 1.46% | 13,287 | 13,816 | 13,923 | 12,252 |
| Total | 100.00% | 907,669 | 943,808 | 951,102 | 836,969 |

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Table 4. Modified Addendum IV Quotas (Option 3)

| State | Addendum IV Percentage Allocation (Status Quo) | Proposed Percentage Allocation (Option 3) | Addendum IV Quota (under Status Quo State Allocations) | State Quota under different Coastwide Cap Options (in pounds) | | | |
|--------------|--|--|--|---|------------------------------------|------------------------------------|------------------------------------|
| | | | | Option 1: Coastwide Cap of 907,669 | Option 2: Coastwide Cap of 943,808 | Option 3: Coastwide Cap of 951,102 | Option 4: Coastwide Cap of 836,969 |
| ME | 0.43% | 0.65% | 3,907 | 5,907 | 6,143 | 6,190 | 5,447 |
| NH | 0.22% | 0.15% | 2,000 | 1,362 | 1,416 | 1,427 | 1,256 |
| MA | 0.22% | 0.15% | 2,000 | 1,362 | 1,416 | 1,427 | 1,256 |
| RI | 0.51% | 0.28% | 4,642 | 2,551 | 2,652 | 2,673 | 2,352 |
| CT | 0.22% | 0.15% | 2,000 | 1,362 | 1,416 | 1,427 | 1,256 |
| NY | 1.68% | 3.59% | 15,220 | 32,613 | 33,911 | 34,173 | 30,073 |
| NJ | 10.46% | 10.38% | 94,899 | 94,187 | 97,937 | 98,694 | 86,851 |
| DE | 6.79% | 6.74% | 61,632 | 61,170 | 63,605 | 64,097 | 56,405 |
| MD | 51.34% | 52.88% | 465,968 | 479,978 | 499,088 | 502,945 | 442,592 |
| PRFC | 5.77% | 5.73% | 52,358 | 51,965 | 54,034 | 54,452 | 47,918 |
| VA | 8.67% | 10.53% | 78,702 | 95,619 | 99,426 | 100,194 | 88,171 |
| NC | 11.79% | 7.03% | 107,054 | 63,818 | 66,359 | 66,872 | 58,847 |
| SC | 0.22% | 0.15% | 2,000 | 1,362 | 1,416 | 1,427 | 1,256 |
| GA | 0.22% | 0.15% | 2,000 | 1,362 | 1,416 | 1,427 | 1,256 |
| FL | 1.46% | 1.44% | 13,287 | 13,051 | 13,571 | 13,676 | 12,035 |
| Total | 100.00% | 100.00% | 907,669 | 907,669 | 943,808 | 951,102 | 836,969 |

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Table 5. Average landings over most recent 10-year time series (2007-2016) (Option 4A)

| State | Addendum IV Percentage Allocation (Status Quo) | Proposed Percentage Allocation (Option 4A) | Addendum IV Quota (Status Quo) | State Quota under different Coastwide Cap Options (in pounds) | | | |
|-------|--|--|--------------------------------|---|------------------------------------|------------------------------------|------------------------------------|
| | | | | Option 1: Coastwide Cap of 907,669 | Option 2: Coastwide Cap of 943,808 | Option 3: Coastwide Cap of 951,102 | Option 4: Coastwide Cap of 836,969 |
| ME | 0.43% | 0.57% | 3,907 | 5,217 | 5,425 | 5,467 | 4,811 |
| NH | 0.22% | 0.01% | 2,000 | 61 | 64 | 64 | 56 |
| MA | 0.22% | 0.20% | 2,000 | 1,776 | 1,847 | 1,861 | 1,638 |
| RI | 0.51% | 0.32% | 4,642 | 2,928 | 3,044 | 3,068 | 2,700 |
| CT | 0.22% | 0.17% | 2,000 | 1,555 | 1,617 | 1,629 | 1,434 |
| NY | 1.68% | 3.05% | 15,220 | 27,696 | 28,799 | 29,022 | 25,539 |
| NJ | 10.46% | 11.44% | 94,899 | 103,808 | 107,941 | 108,775 | 95,722 |
| DE | 6.79% | 7.56% | 61,632 | 68,661 | 71,394 | 71,946 | 63,312 |
| MD | 51.34% | 53.65% | 465,968 | 486,947 | 506,335 | 510,248 | 449,018 |
| PRFC | 5.77% | 5.97% | 52,358 | 54,201 | 56,359 | 56,795 | 49,980 |
| VA | 8.67% | 9.88% | 78,702 | 89,719 | 93,291 | 94,012 | 82,731 |
| NC | 11.79% | 5.89% | 107,054 | 53,429 | 55,556 | 55,985 | 49,267 |
| SC | 0.22% | 0.00% | 2,000 | 3 | 3 | 3 | 3 |
| GA | 0.22% | 0.05% | 2,000 | 436 | 453 | 457 | 402 |
| FL | 1.46% | 1.24% | 13,287 | 11,232 | 11,679 | 11,769 | 10,357 |
| Total | 100.00% | 100.00% | 907,669 | 907,669 | 943,808 | 951,102 | 836,969 |

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Table 6. Average landings over most recent 5-year time series (2012-2016) (Option 4B)

| State | Addendum IV Percentage Allocation (Status Quo) | Proposed Percentage Allocation (Option 4B) | Addendum IV Quota (Status Quo) | State Quota under different Coastwide Cap Options (in pounds) | | | |
|--------------|--|---|--------------------------------|---|------------------------------------|------------------------------------|------------------------------------|
| | | | | Option 1: Coastwide Cap of 907,669 | Option 2: Coastwide Cap of 943,808 | Option 3: Coastwide Cap of 951,102 | Option 4: Coastwide Cap of 836,969 |
| ME | 0.43% | 0.60% | 3,907 | 5,438 | 5,654 | 5,698 | 5,014 |
| NH | 0.22% | 0.01% | 2,000 | 50 | 52 | 52 | 46 |
| MA | 0.22% | 0.22% | 2,000 | 1,978 | 2,057 | 2,072 | 1,824 |
| RI | 0.51% | 0.21% | 4,642 | 1,877 | 1,951 | 1,966 | 1,730 |
| CT | 0.22% | 0.18% | 2,000 | 1,623 | 1,687 | 1,700 | 1,496 |
| NY | 1.68% | 4.09% | 15,220 | 37,122 | 38,600 | 38,899 | 34,231 |
| NJ | 10.46% | 9.09% | 94,899 | 82,506 | 85,791 | 86,454 | 76,080 |
| DE | 6.79% | 5.82% | 61,632 | 52,799 | 54,901 | 55,325 | 48,686 |
| MD | 51.34% | 57.87% | 465,968 | 525,313 | 546,228 | 550,450 | 484,395 |
| PRFC | 5.77% | 5.26% | 52,358 | 47,771 | 49,673 | 50,057 | 44,050 |
| VA | 8.67% | 10.36% | 78,702 | 94,027 | 97,770 | 98,526 | 86,703 |
| NC | 11.79% | 5.16% | 107,054 | 46,878 | 48,745 | 49,121 | 43,227 |
| SC | 0.22% | 0.00% | 2,000 | 1 | 1 | 1 | 1 |
| GA | 0.22% | 0.07% | 2,000 | 665 | 691 | 697 | 613 |
| FL | 1.46% | 1.06% | 13,287 | 9,623 | 10,006 | 10,083 | 8,873 |
| Total | 100.00% | 100.00% | 907,669 | 907,669 | 943,808 | 951,102 | 836,969 |

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Table 7. Weighted average 50% of the time series (1998-2016) and 50% of the most recent 10 years (2007-2016) (Option 5A)

| State | Addendum IV Percentage Allocation (Status Quo) | Proposed Percentage Allocation (Option 5A) | Addendum IV Quota (Status Quo) | State Quota under different Coastwide Cap Options (in pounds) | | | |
|-------|--|--|--------------------------------|---|------------------------------------|------------------------------------|------------------------------------|
| | | | | Option 1: Coastwide Cap of 907,669 | Option 2: Coastwide Cap of 943,808 | Option 3: Coastwide Cap of 951,102 | Option 4: Coastwide Cap of 836,969 |
| ME | 0.43% | 0.74% | 3,907 | 6,759 | 7,028 | 7,082 | 6,233 |
| NH | 0.22% | 0.01% | 2,000 | 79 | 82 | 82 | 72 |
| MA | 0.22% | 0.24% | 2,000 | 2,209 | 2,297 | 2,315 | 2,037 |
| RI | 0.51% | 0.54% | 4,642 | 4,899 | 5,094 | 5,134 | 4,518 |
| CT | 0.22% | 0.22% | 2,000 | 2,017 | 2,097 | 2,113 | 1,860 |
| NY | 1.68% | 2.71% | 15,220 | 24,570 | 25,548 | 25,746 | 22,656 |
| NJ | 10.46% | 11.21% | 94,899 | 101,743 | 105,794 | 106,612 | 93,818 |
| DE | 6.79% | 8.92% | 61,632 | 80,920 | 84,142 | 84,793 | 74,617 |
| MD | 51.34% | 48.67% | 465,968 | 441,788 | 459,378 | 462,928 | 407,377 |
| PRFC | 5.77% | 8.30% | 52,358 | 75,319 | 78,318 | 78,923 | 69,452 |
| VA | 8.67% | 10.31% | 78,702 | 93,624 | 97,352 | 98,104 | 86,332 |
| NC | 11.79% | 6.91% | 107,054 | 62,731 | 65,229 | 65,733 | 57,845 |
| SC | 0.22% | 0.00% | 2,000 | 2 | 3 | 3 | 2 |
| GA | 0.22% | 0.04% | 2,000 | 376 | 391 | 394 | 346 |
| FL | 1.46% | 1.17% | 13,287 | 10,632 | 11,055 | 11,141 | 9,804 |
| Total | 100.00% | 100.00% | 907,669 | 907,669 | 943,808 | 951,102 | 836,969 |

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Table 6. Weighted average 50% of the time series (1998-2016) and 50% of the most recent 5 years (2012-2016) (Option 5B)

| State | Addendum IV Percentage Allocation (Status Quo) | Proposed Percentage Allocation (Option 5B) | Addendum IV Quota (Status Quo) | State Quota under different Coastwide Cap Options (in pounds) | | | |
|-------|--|--|--------------------------------|---|------------------------------------|------------------------------------|------------------------------------|
| | | | | Option 1: Coastwide Cap of 907,669 | Option 2: Coastwide Cap of 943,808 | Option 3: Coastwide Cap of 951,102 | Option 4: Coastwide Cap of 836,969 |
| ME | 0.43% | 0.75% | 3,907 | 6,849 | 7,122 | 7,177 | 6,316 |
| NH | 0.22% | 0.01% | 2,000 | 73 | 75 | 76 | 67 |
| MA | 0.22% | 0.25% | 2,000 | 2,305 | 2,397 | 2,416 | 2,126 |
| RI | 0.51% | 0.48% | 4,642 | 4,333 | 4,506 | 4,540 | 3,995 |
| CT | 0.22% | 0.23% | 2,000 | 2,045 | 2,126 | 2,142 | 1,885 |
| NY | 1.68% | 3.24% | 15,220 | 29,432 | 30,604 | 30,840 | 27,139 |
| NJ | 10.46% | 10.01% | 94,899 | 90,891 | 94,510 | 95,240 | 83,811 |
| DE | 6.79% | 8.00% | 61,632 | 72,636 | 75,528 | 76,111 | 66,978 |
| MD | 51.34% | 50.91% | 465,968 | 462,057 | 480,454 | 484,167 | 426,066 |
| PRFC | 5.77% | 7.90% | 52,358 | 71,721 | 74,577 | 75,153 | 66,135 |
| VA | 8.67% | 10.55% | 78,702 | 95,767 | 99,580 | 100,350 | 88,308 |
| NC | 11.79% | 6.53% | 107,054 | 59,247 | 61,606 | 62,082 | 54,632 |
| SC | 0.22% | 0.00% | 2,000 | 1 | 1 | 1 | 1 |
| GA | 0.22% | 0.05% | 2,000 | 493 | 513 | 517 | 455 |
| FL | 1.46% | 1.08% | 13,287 | 9,819 | 10,210 | 10,289 | 9,054 |
| Total | 100.00% | 100.00% | 907,669 | 907,669 | 943,808 | 951,102 | 836,969 |



Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: American Eel Management Board
FROM: Kirby Rootes-Murdy, Senior FMP Coordinator
DATE: July 20, 2018
SUBJECT: Public Comment on American Eel Draft Addendum V

The following pages represent a summary of all comment received by ASMFC on American Eel Draft Addendum V as of 5:00 PM (EST) on June 15, 2018 (closing deadline).

A total of 104 comments were received on Draft Addendum V from individuals, organizations, and through form letters. A total of 9 organizations submitted comments on Draft Addendum V. In addition, 87 comments were received through form letters. The remainder of comments (7) generally came from individual stakeholders, including commercial fishermen, recreational fishermen, and concerned citizens.

16 public hearings were held in 13 jurisdictions. 145 individuals are estimated to have attended the hearings.

The following tables (pages 2-6) are provided to give the Board an overview of the support for specific options and issues contained in the Draft Addendum. Summaries of the public hearings can be found next and are ordered from North to South. This is then followed by form letters with total petitioner count, letters sent by individuals, and letters sent by organizations.

M18-68

Public Comment Summary Tables

| 3.1 Maine Glass Eel Quota | | | |
|----------------------------------|--------------------------|-----------------|-------------------------------------|
| | Option 1 | Option 2 | Alternative Option Suggested |
| | Status Quo: 9,688 lbs | 11,749 lbs | |
| Individual | 1 | 2 | |
| Organization | 6 | 1 | |
| Form Letter | 87 | | |
| Hearings | | | |
| ME-Augusta | | 37 | |
| ME-Brewer | | 73 | |
| NH* | | | |
| MA* | | | |
| RI* | | | |
| CT | | 4 | |
| NY- New Paltz | 1 | | |
| NY- East Setauket* | | | |
| NJ | 1 | | |
| DE^ | | | 5 |
| MD | 6 | | |
| PRFC | 4 | | |
| VA* | | | |
| NC^^ | | | 1 |
| SC | | 1 | |
| FL | 3 | | |
| TOTAL | 109 | 118 | 6 |

* No comments and/or no attendees

^ Suggested that Maine should not have glass eel fishery in 2019

^^Suggested that Maine's quota should increase to 10,000 pounds in 2019

Additional Comments:

- 1 Commercial harvesting of glass eels should be cut back or stopped altogether.
Maine should permanently take away the licenses of anyone not selling eels legitimately with a swipe card or a dealer selling eels that are not included in the legal quota.
- 1 Recreational Fishing Alliance of Massachusetts, Stellwagen Bank Charter Boat Association: complete shutdown of the commercial fishery in Maine to protect the resource.
- 2 Supports a static or reduced eel fishery quota / harvest. Eels are a critical support factor in the health of the striped bass fishery. Increasing the harvest levels or commercial take of eels will have a potentially negative impact on striped bass populations, which are already under pressure from other influences such as poaching and too much harvest / not enough catch and release of spawning fish every spring.
- 1 Conserve the American eel for all people involved in its fisheries. Do not allow overtaking of species by a few commercial fishermen just to get wealthy.

| 3.2 Glass Eel Aquaculture Plans | | |
|--|-----------------|------------------------------|
| | Option 1 | Option 2 |
| | Status Quo | Pooling of Harvest Allowance |
| Individual | 1 | |
| Organization | 7 | |
| Form Letter | 87 | |
| Hearings | | |
| ME-Augusta | | 37 |
| ME-Brewer | | 73 |
| NH* | | |
| MA* | | |
| RI* | | |
| CT | 1 | |
| NY- New Paltz | | |
| NY- East Setauket* | | |
| NJ | 1 | |
| DE | 5 | 1 |
| MD | 6 | |
| PRFC | 3 | |
| VA* | | |
| NC | 2 | 1 |
| SC | 1 | |
| FL | 3 | |
| TOTAL | 117 | 112 |

* No comments and/or no attendees

| 3.3, Issue 1: Yellow Eel Coastwide Cap | | | | |
|---|---------------------------|-------------------------|-----------------------|---|
| | Option 1 | Option 2 | Option 3 | Option 4 |
| | Status Quo 907,671 lbs | 943,808 lbs - median | 951,102 lbs - mean | 836,969 lbs - 12% decrease from mean |
| Individual | | | | 1 |
| Organization | 1 | | | 5 |
| Form Letter | | | | 87 |
| Hearings | | | | |
| ME-Augusta | | | 37 | |
| ME-Brewer | | | 73 | |
| NH* | | | | |
| MA* | | | | |
| RI* | | | | |
| CT | | | 2 | |
| NY- New Paltz | 1 | | | |
| NY- East Setauket* | | | | |
| NJ | | | | 1 |
| DE | | | 6 | |
| MD | | | 6 | |
| PRFC | | | 4 | |
| VA* | | | | |
| NC | 1 | | | 1 |
| SC | | | 1 | |
| FL | 3 | | | |
| TOTAL | 2 | 0 | 129 | 95 |

* No comments and/or no attendees

| 3.3, Issue 2: Yellow Eel Management Trigger | | | |
|--|-----------------|------------------|------------------|
| | Option 1 | Option 2 | Option 3 |
| | Status Quo | One-year Trigger | Two-year Trigger |
| Individual | 1 | | |
| Organization | 4 | 1 | 1 |
| Form Letter | 87 | | |
| Hearings | | | |
| ME-Augusta | | | 37 |
| ME-Brewer | | | 73 |
| NH* | | | |
| MA | | | |
| RI* | | | |
| CT | 2 | | 1 |
| NY- New Paltz | 1 | | |
| NY- East Setauket* | | | |
| NJ | | | |
| DE | | | 6 |
| MD | | | 6 |
| PRFC | | | 3 |
| VA* | | | |
| NC | 3 | | |
| SC | | | 1 |
| FL | | | |
| TOTAL | 98 | 1 | 128 |

* No comments and/or no attendees

| 3.3, Issue 3: Yellow Eel Allocation | | | | | | | | |
|-------------------------------------|------------|--|---------------------------------------|-----------------------------|---|--|---|--|
| | Option 2 | | | | Option 4 | | Option 5 | |
| | Option 1 | Option 2A | Option 2B | Option 3 | Option 4A | Option 4B | Option 5A | Option 5B |
| | Status Quo | Equitable Reduction: No state-by-state quota | 1% rule for states to reduce landings | Modified Addendum IV Quotas | Average Landings over most recent 10-year time Series | Average Landings over most recent 5-year time Series | Weighted average: 50% 1998-2016 time series and 50% of most recent 10 years | Weighted average: 50% 1998-2016 time series and 50% of most recent 5 years |
| Individual | | | | | | | | |
| Organization | | | | | | | 1 | 3 |
| Form Letter | | | | | | | | |
| Hearings | | | | | | | | |
| ME-Augusta | 1 | | | 1 | | | | |
| ME-Brewer | | | | | | 13 | | 17 |
| NH* | | | | | | | | |
| MA* | | | | | | | | |
| RI* | | | | | | | | |
| CT | | | 2 | | | 1 | | |
| NY- New Paltz | | | | | | | | |
| NY- East Setauket* | | | | | | | | |
| NJ | | | | | | | | |
| DE | | | | | | | 6 | |
| MD | | | 4 | | | | | |
| PRFC | | | | | 4 | | | |
| VA* | | | | | | | | |
| NC | 3 | | | | | | | |
| SC | 1 | | | | | | | |
| FL | 3 | | | | | | | |
| TOTAL | 8 | 0 | 6 | 1 | 4 | 14 | 7 | 20 |

* No comments and/or no attendees

Note: One organization (MFAC) opted for Option 5A or 5B and is recorded twice in the table.

| 3.3, Issue 4: Yellow Eel Quota Transfers | | |
|---|-----------------|-----------------------|
| | Option 1 | Option 2 |
| | Status Quo | Extend to February 15 |
| Individual | | |
| Organization | | 2 |
| Form Letter | | |
| Hearings | | |
| ME-Augusta | | 37 |
| ME-Brewer | | 73 |
| NH* | | |
| MA* | | |
| RI* | | |
| CT | | 3 |
| NY- New Paltz | 1 | |
| NY- East Setauket* | | |
| NJ | | |
| DE | | 6 |
| MD | | 6 |
| PRFC | | 4 |
| VA* | | |
| NC | | 4 |
| SC | | 1 |
| FL | | 3 |
| TOTAL | 1 | 139 |

* No comments and/or no attendees

Draft Addendum V Public Hearing

Brewer, Maine

June 6, 2018

73 Participants

Staff: Pat Keliher (ME Administrative Commissioner), Deidre Gilbert (ME DMR), Jeff Nichols (ME DMR), Kirby Rootes-Murdy (ASMFC)

3.1 Maine Glass Eel Quota → 73 support Option 2: Glass eel quota of 11,749 pounds for Maine

- All attendees were in favor of increasing Maine's glass eel quota to 11,749 pounds. There were a number of reasons cited and they are summarized below:
 - The resource is not 'depleted,' but rather is very abundant, especially in Maine waterways. Concerns were raised over the data used in the Stock Assessment and many took issue with the conclusion that resource is depleted, with abundance at low but stable levels. It was estimated that annually there may be as many as 300,000 pounds of glass eels in Maine waters.
 - Many cited that the swipe card system that the state of Maine has implemented has worked well to ensure accuracy of the landings and accounting of the annual quota, and should be considered as a reason why the quota should be raised from its current level.
 - A number of individuals noted that the quota the state has operated under for the last 4 years has worked and has led to increases in abundance of the resource, in particular sightings of eels in areas where they had not been observed previously; based on the success and observed abundance increases, the quota should be raised.
 - It was noted that glass eels run in greatest volume in June, and that the state of Maine has annually limited the glass eel fishery to finish before June; this should be viewed as an additional conservation measure the state should be given credit for by increasing the quota.
 - One individual noted research conducted by the University of Maine (Dr. James McCleave) demonstrated that fertile, sexually mature female eels may carry millions of eggs, presenting the possibility of a significantly larger population than what is harvested. It was stated that the current harvest level of glass eels and elvers in Maine is likely having no impact on the resource, and that in turn, raising the quota likely will not have an appreciable impact on the resource.
 - The reductions in harvest through the implementation of quotas starting in 2013 and 2014 have not been accounted for through management. Many people lost income and have continued to miss out on potential income; this should be considered as part of the need to raise the quota.
 - The state of Maine has removed many dams throughout the state, creating more habitat and access to habitat for American eel; this work should be credited through increasing the glass eel quota.
 - The glass eel/elver fishery allows for harvesters to have enough income that they can put it back into their community through supporting each other, caring for, and

spending time with their families; without the fishery, other fisheries available to them, such as clamming, wouldn't provide nearly as much income. It was noted that without the fishery, many would not have any income or job to fall back on.

- A few individuals cited that based on the current allocation to those in the elver fishery, they are discarding or throwing back many elvers; these are eels that they think they should be able to bring to market, but cannot, and therefore should be credited for this conservative practice by having an increase in quota.
- The Penobscot Nation is in favor of the quota increase; many who are currently participating in the elver fishery by way of the Nation's allocation have benefited greatly. It was also noted that this is important as the Penobscot people have been systematic oppressed historically and this glass eel fishery has empowered them.
- It was noted that the elver fishery is likely the second most important fishery in the state of Maine and many fishermen are limiting out on their allocation before the season is over; an increase in the quota would be justified for these reasons.
- It was offered that fishermen could help the Atlantic States Marine Fisheries Commission improve data collection by going out and fishing with them.

3.2 Aquaculture Program → 73 support Option 2: Pooling of Aquaculture Harvest Allowance

- All attendees were in favor of Option 2: Pooling of Aquaculture Harvest Allowance. The reasons cited are summarized below:
 - It was noted that aquaculture would potentially bring more jobs to the state of Maine, and provide more stability in the elver fishery, as the aquaculture facility could offset the needed glass eel harvest.
 - One individual offered that the state of Maine should be granted a waiver because there isn't an option for pooling with a state north of Maine.
 - One individual noted the 600 pounds would allow for growth/expansion of domestic aquaculture in Maine and the increase in harvest allowance would facilitate this growth.

3.3 Yellow Eels

Issue 1: Yellow Eel Coastwide Cap → 73 support Option 3: Average of 1998-2016 landings (951,102 pounds)

- All attendees were in favor of Option 3: Average of 1998-2016 landings (951,102 pounds). There were two reasons cited, summarized below:
 - It was noted that voting to increase the yellow eel coastwide cap should be met with a reciprocal increase in the glass eel quota.
 - One individual cited the overage in landings for 2016 relative to the Coastwide Cap as a sign of abundance, showing that the Cap should be increased.

Issue 2: Management Triggers → 73 in support of Option 3: Two year trigger of exceeding the Coastwide Cap by 10%

All attendees were in favor of Option 3: Average of 1998-2016 landings (951,102 pounds). One reason cited was that there has not been a reduction in the yellow eels caught over the years, even with reductions in the number of traps being set; therefore, the Coastwide Cap and management triggers should be set higher than current levels.

Issue 3: Allocation → 13 support Option 4B: Allocation Based on Time Series Average of Yellow Eel Landings: 5-year time series (2012-2016); 17 support Option 5B: Weighted average: 50% of the time series (1998-2016) and 50% of the most recent 5-years (2012-2016)

- 13 individuals were in favor of Option 4B: Allocation Based on Time Series Average of Yellow Eel Landings: 5-year time series (2012-2016). Reason cited was that this provided the high harvesting states the greatest increase quota.
- 17 individuals were in favor of Option 5B: Weighted average: 50% of the time series (1998-2016) and 50% of the most recent 5-years (2012-2016). Reason cited was that this provided the highest quota that the state could get under the options.

Issue 4: Transfers → 73 support Option 2: Extend transfers till February 15

- 73 individuals support Option 2: Transfers allowed through February 15. Reason cited was it will give the state more time to track landings, account for overages, and get transfers as needed.

General Comments

- There were questions raised about why other states are able to vote on Maine's glass eel quota. Many indicated concern and frustration that those in other states could impact what the quota could be in Maine.

Draft Addendum V to the American Eel Fishery Management Plan for Public Comment

Atlantic States Marine Fisheries Commission

June 6, 2018

Brewer, Maine

-- PLEASE PRINT CLEARLY --

| <u>Name</u> | <u>Company/Organization</u> | <u>City, State</u> |
|-------------------|-----------------------------|--------------------|
| Carl J. Ross | | Prospect T, ME |
| Patrick A. Choate | | Admission me |
| Michael Weaver | | Waldo, ME |
| Joseph McDonald | | JONESPORT, ME |
| Susan Boutin | | Trescott Twp. ME |
| David Beal | | Milbridge |
| David Burgess | | Milbridge, ME |
| William Johnson | | Blue Hill, ME |
| ANNETTE CANDAGE | | Blue Hill, ME |
| JAN CANDAGE | | Blue Hill, ME |
| Jim McLeave | | Bangor, ME |
| Whitney Ranco | | Franklin, ME |
| Roger A Ranco # | | Franklin ME. |
| Tamara Parker | | Columbia, ME |
| Lucas Wallace | | Harrington, ME |
| Albert Wallace | | Milbridge, ME |
| Wane Leming | | Old Town, ME |
| Anna Snow | | Blue Hill, ME |
| Berry Snow | | Blue Hill, ME |
| Mark Wakem | | Poland, ME |
| Jim LaRoche | | Woolwich, ME. |
| Steve Bechar | | Penobscot, ME |
| ALAN T. WENDEL | | DEER ISLE, ME. |
| Kate Kay | | STONINGTON, ME |
| Amanda Polard | | Bremen ME |
| Lisa Somes | | Hancock ME |
| Wayne Somes | | Hancock ME |
| Tim Robinson | | Dedham, ME |
| Josiah Simons | | Waldoboro, ME |
| Jellicia Bryant | | Nobleboro, ME |
| Suz Rademacher | | St. George, ME |

| Name | Company/Organization | City, State |
|---------------------------|---------------------------|------------------|
| John Bunick | | ELLSWORTH ME |
| Scott Ingraham | | Brook 1/2 |
| Jesse Ingraham | | Brook Hill |
| Christine Keene | | Lubec, Maine |
| Jessica Card | | Franklin, Maine |
| Jeremy Card | | Franklin, Maine |
| Fred Johnson #1 | | HANCOCK, MAINE |
| Mark Lurvey | | Franklin ME |
| Randel Bushy | | Milbridge, ME |
| JEFF CLARK | | Ellsworth, ME |
| Braden Alley | | Jonesport, ME |
| TRAVIS Atwood | | Orland ME |
| JOHN BANKS | Penobscot Nation | Indian Island ME |
| DAVE Doucette | | Albion, ME |
| Jeff Meals | | Augusta, ME |
| Ryan GEE | | Jonesport ME |
| Joseph Libby | | Beals, ME |
| Patric Barton | | Jonesport ME |
| Aaron Dragon | | Ellsworth, ME |
| Shawn King | MEFA | East Brook ME |
| Donald Havener | | Ellsworth ME |
| Srina Capronel | Bassamaguddy Trina | Bangor Maine |
| Norman AFRAY | | Bass Harbor ME |
| Anala Young | MEFA | Eastbrook, ME |
| MIKE KLINGERMAN | MEFA | EASTBROOK ME |
| Kristen Steele | University College London | Bangor, ME |
| Krista TRIPP | MEFA | Spruce Head, ME |
| KIRK FRANCIS | PENOBSCOT | Indian Island |
| Terri Wright | | |
| James Cannon | | |
| Chad Cannon | | |
| John JULL | | TRESCOTT, ME |
| Therese Smith | MEFA | Bristol Maine |
| W. J. | Self | Newcastle ME |
| Julie Keene | MEFA | TRESCOTT TWP, ME |
| Paul Dragon | | Orland, ME |
| Walter Bissell | MEFA | Lubec, ME |
| Adam Boutin | | TRESCOTT ME |
| Ray Surgeon | | Etna, ME |

Draft Addendum V to the American Eel FMP Public Hearing

Augusta, ME

June 7, 2018

37 Participants

Staff: Patrick Keliher (ME DMR Commissioner), Rene Cloutier (ME DMR), Deirdre Gilbert (ME DMR), Jeff Nichols (ME DMR)

3.1 Options for Maine Glass Eel Quota

→Unanimous support for Option 2 (2014 quota: 11,749 lbs)

- Participants noted that the elver fishery is extremely important to Maine communities and those families with fishing licenses. Maine is one of the most rural states and very dependent on natural resources for its economy.
- Participants noted that Maine has opened up a million acres of habitat that could be beneficial to eels, by removing dams and putting in fishways, etc. Efforts to build the stock have increased.
- Participants noted that Maine has made every effort to control the fishery, including the development of the swipe card system to track the sales of elvers from harvesters to dealers and between dealers.
- Participants noted that they do not see the scientific basis for not restoring the quota to its previous level.
- One individual noted that by limiting the supply of elvers from the US, it has shifted the fishery to other countries (e.g. the Dominican Republic, Haiti) where the take is less regulated.
- Participants noted that with the current quota, most fishermen are done well before the season ends. Most nets are already removed in April. Maine fishermen are currently mainly fishing in brooks and the elvers don't begin to run up the rivers until May.
- Participants noted that while they are fishing, the state is collecting data. When fishermen have reached their quota and stop fishing, so does the information. They believe that they are barely touching what is available – there is a significant resource.
- Participants noted that there are also many areas in Maine that are not fished at all due to mandated area closures.

3.2 Glass Eel Aquaculture Plans

→Unanimous support for Option 2 (Pooling of harvest allowance across states and jurisdictions)

- While participants supported Option 2 to provide greater flexibility in the development of domestic eel aquaculture, they raised the concern that if there is a state that is isolated because the contiguous state(s) do not want to participate, there should be consideration of how to address that circumstance.

3.3. Yellow eel

Issue 1: Coastwide cap

→Unanimous support for Option 3 (Cap set at mean of 1998-2016 landings)

- Participants felt the stock is robust enough to increase the cap. Availability of eels is demonstrated by the fact that the cap was exceeded.

Issue 2: Management triggers

→Unanimous support for Option 3 (Two year trigger of exceeding the Coastwide Cap by 10%)

- Participants supported this option to provide a greater likelihood of avoiding triggering state-by-state quotas, to preserve the most flexibility from year to year.

Issue 3: Allocation

→No identified preference

- One participant suggested Option 3, as Maine would see a small increase and there was minimal effect on other states.
- One participant suggested Option 1 (status quo) because all other options had significant impacts on North Carolina.

Issue 4: Transfers

→Unanimous support for Option 2 (Extend Transfer through February 15)

- Participants noted that the seasons may be different in different states, and by extending into February, the whole season can be taken into account.

Draft Addendum V to the American Eel Fishery Management Plan for Public Comment

Atlantic States Marine Fisheries Commission

June 7, 2018

Augusta, Maine

-- PLEASE PRINT CLEARLY --

| <u>Name</u> | <u>Company/Organization</u> | <u>City, State</u> |
|------------------|-----------------------------|--------------------|
| Jeffrey K Pearce | State Legislature Dis 53 | Dresden |
| Alec Dodge | | Boothbay |
| Dan Baker | | Jofferson |
| Joe Nickerson | | Arundel |
| Kevyn White | | Dumfriescott |
| Bruce Steere | | Rainbow Mac |
| Jeremy Alley | | St. Thomas, ME. |
| Charles Farmer | | Rockport, Maine |
| Young Wilson | | Cushing, ME. |
| Tom Chapman | | Pittsburg |
| Terry Lee Smith | | Trepoint ME |
| Robert Crocker | | Freeport ME |
| Dan Spangola | | WALDEN, ME |
| DANA JOHNSON | | WALDOBORO, ME |
| Shelly Geidel | | Norridgewock, ME. |
| Lance Geidel | | " " |
| Angela Young | MEFA | Eastbrook ME |
| Cam Hawkes | MEFA | Harpwell ME |
| Mark Wakem | | Poland ME |
| John Sheldon | | Woolwich ME |
| James Sewell | | Warren ME |
| EARL GAMMAY | | " " |
| Amanda Pineda | | Bremen ME |
| Abden SIMMONS | MEFA | Waldoboro ME |
| Julie Levesque | | Arrowsic ME |
| Larry M | | Warren ME |
| Glen Barbour | | Waldoboro, ME |
| Julie Keene | MEFA | Trescott ME |
| Denise Gony | MEFA | East Brook me. |
| REDEE GROVER | | WALDOBORO ME |
| Daren Spear | | Cushing Me |

Name

Company/Organization

City, State

Jay Spear
1st Deputy
Kellie Surlle
Sara Chaloner
Tanya Atwood
Michael Williams

Orlando, ME
Nobleboro, ME
Cumberland, ME
St George, ME
Orlando, ME



David E. Pierce, Ph.D.
Director

Commonwealth of Massachusetts

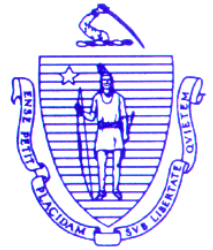
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Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Ronald Amidon
Commissioner

Mary-Lee King
Deputy Commissioner

American Eel
Draft Amendment V Public Hearing
Bourne MA

June 7, 2018

5 Participants were in attendance

Staff: Dan McKiernan and Brad Chase (MA DMF)

Attendees: Raymond Kane and Mike Pierdinock, both of the Governor's appointed Massachusetts Marine Fisheries Advisory Commission. Also, Stanley Bazycki, of the Barnstable County League

The presentation was given by Mr. Chase and Mr. McKiernan. Discussion followed about the options and their impacts.

No comments were received during the meeting, but the MFAC members intended to bring the issues to the full MFAC board at the June 14th business meeting for consideration of a formal position by the Commission. (See June 14th letter submitted by Chairman Kane to Kirby Rootes-Murdy)

Draft Addendum V Public Hearing

Old Lyme, Connecticut

June 4, 2018

4 Participants

Staff: Peter Aarrestad (CT Administrative Commissioner), Melissa Ziobron (Legislative Commissioner Proxy), Colleen Gianinni (CT Administrative Commissioner Proxy), Matt Gates (CT DEEP), Tim Wildman (CT DEEP), Steve Gephard (CT DEEP), Kirby Rootes-Murdy (ASMFC)

3.1 Maine Glass Eel Quota → 4 support Option 2: Glass eel quota of 11,749 pounds for Maine

- 4 individuals offered that Maine's glass eel quota should increase to 11,749 pounds. Reasons cited were an interest in getting more money back from China by increasing the quota, comfort with the current level of monitoring in the Maine glass eel fishery, and a sense that the landings data from Maine has improved in recent years since the swipe card system was implemented.

3.2 Aquaculture Program → 1 supports Option 1: Status Quo

- 1 individual indicated their preference for Option 1: Status Quo Glass Eel Aquaculture provisions. Reason cited was concern that pooling of harvest would make it difficult to determine what each state would do monitor harvest.

3.3 Yellow Eels

Issue 1: Yellow Eel Coastwide Cap → 2 support Option 3: Average of 1998-2016 landings (951,102 pounds)

- 2 individuals were in favor of Option 3: Setting the Coastwide Cap at 951,102 pounds. Reasons cited were that the increase in supply of American yellow eel to the domestic market would better match demand and reduce imports from Canada, Option 3's quota level is not significantly higher than the current quota of 907,671 pounds, and the increase won't affect the resource. There was also concern that if the quota is not increased, there's a greater likelihood of going to state-by-state quotas.

Issue 2: Management Triggers → 2 support Option 1: Status Quo, 1 supports Option 3: Two year trigger of exceeding the Coastwide Cap by 10%

- 2 individuals were in favor of Option 1: Status Quo. No reasons cited.
- 1 individual was in support of Option 3: Two year trigger of exceeding the Coastwide Cap by 10%. Reasons cited were this is the most lenient option and concern that 'paper landings' may be accounted for late in the season and prompt state-by-state quotas that aren't needed if the overage is less than 10%.

Issue 3: Allocation → 2 support Option 2B: 1% rule for states to reduce landings, 1 supports Option 4B: Allocation Based on Time Series Average of Yellow Eel Landings: 5-year time series (2012-2016)

- 2 individuals were in favor of Option 2B: 1% rule for states to reduce landings. Reason cited was that the current quota for Connecticut is very small. A better option would be for Connecticut to not be held to a small quota if the coastwide cap is exceeded.
- 1 individual was in favor of Option 4B: Allocation Based on Time Series Average of Yellow Eel Landings: 5-year time series (2012-2016). Reason cited was it increases the quota to Connecticut.

Issue 4: Transfers → 3 support Option 2: Extend transfers till February 15

- 3 individuals support Option 2: Transfers allowed through February 15. Reason cited was it will give the state more time to figure out overages and get transfers as needed.

General Comments

- One individual noted that average weight of yellow eel is increasing; in turn, as a buyer, he is needing to purchase fewer and fewer eels. He observed this in both Maryland and Connecticut. Another individual seconded this individuals' observation from what he's seen in his pots.
- One individual noted that to reduce crime and law enforcement issues, there shouldn't be a glass eel fishery anywhere. Additionally, this individual noted that there shouldn't be a silver eel fishery either, to protect the population.
- There was discussion as to whether a live market for eels exists in Connecticut; it was noted that all yellow eels for food consumption are exported out of the state.
- One individual noted that some glass eel buyers in Maine are purchasing them from harvesters outside of Maine (and the swipe card system).
- One individual noted that there are a lot of eel imports from countries such as China into the U.S., which is reducing the demand for yellow eels caught in the U.S. They also noted there has been DNA work that demonstrates that Japanese eel (*Anguilla japonica*) has been detected in Connecticut Rivers.
- Concerns were raised over the validity of yellow eel landings data.
- Some concerns were expressed over how Connecticut could improve their quota and fishery opportunities in the future with such a low quota.
- It was requested that an additional option be considered where if a reduction in landings is needed in the yellow eel fishery that Maine also take a reduction in their glass eel harvest. Reason cited was that it is a coastwide stock/population, and therefore potential reductions should be uniform across life stages and all parts of the coast.

Draft Addendum V Public Hearing

New Paltz, New York

May 9, 2018

1 Participant

Staff: Gregg Kenney (NYSDEC), John Maniscalco (NYSDEC), Jess Best (NYSDEC), Moe Grassi (NYSDEC), Chris Bowser (NYSDEC), Kirby Rootes-Murdy (ASMFC)

3.1 Maine Glass Eel Quota

- 1 individual indicated their preference for Option 1: Status Quo Quota of 9,688 pounds. Reasons cited were interest in not adding additional fishing mortality and a belief that the fishery is working fine within its current limit.

3.2 Aquaculture Program → No preference

3.3 Yellow Eels

Issue 1: Yellow Eel Coastwide Cap → 1 supports Option 1: Status Quo

- 1 individual was in favor of maintaining the status quo coastwide cap. Reason cited was that more data is needed to inform what a reduction or increase in harvest could do to the American eel population.

Issue 2: Management Triggers → 1 supports Option 1: Status Quo

- 1 individual supported maintaining the current status quo management triggers. Reason cited was that the current triggers offer sufficient protection of the resource.

Issue 3: Allocation → No preference

Issue 4: Transfers → 1 supports Option 2: Transfers allowed through February 15

- 1 individual supports Option 2: Transfers allowed through February 15. Reasons cited were issues collecting landings data in a timely fashion to compare against quotas.

General Comments

- None

Draft Addendum V Public Hearing

Galway, New Jersey

May 10, 2018

1 Participant

Staff: Tom Fote (NJ Commissioner, Governor's Appointee), Joe Cimino (NJ DFW), Heather Corbett (NJ DFW), Shanna Madsen (NJ DFW), Jen Pyle (NJ DFW) Jamie Darrow (NJ DFW), Samantha MacQuesten (NJ DFW), Kirby Rootes-Murdy (ASMFC)

3.1 Maine Glass Eel Quota → 1 supports Option 1: Status Quo

- 1 individual indicated their preference for Option 1: Status Quo Quota of 9,688 pounds. Reason cited was the need to protect American eels due to the uncertainty in their life cycle, as well as their forage value in the ecosystem.

3.2 Aquaculture Program → 1 supports Option 1: Status Quo

- 1 individual indicated their preference for Option 1: Status Quo Glass Eel Aquaculture provisions. Reason cited was concern about the potential scenario where states pool their harvest to one watershed; the specific concern was this may be harvesting too many eels from one river system.

3.3 Yellow Eels

Issue 1: Yellow Eel Coastwide Cap → 1 supports Option 4: 12% reduction

- 1 individual was in favor of Option 4: Reducing the cap by 12% from the 1998-2016 average coastwide landings. Reason cited was again the need to protect American eels due to the uncertainty in their life cycle and their forage value in the ecosystem.

Issue 2: Management Triggers → No preference

Issue 3: Allocation → No preference

Issue 4: Transfers → No preference

General Comments

- Expressed concerns that the overall harvest of eels should be reduced out of concern for the resource.

Draft Addendum V Public Hearing

Dover, Delaware

May 17, 2018

6 Participants

Staff: John Clark (DE Administrative Commissioner), Roy Miller (Gov. Appt Commissioner), Craig Pugh (Legislative Commissioner Proxy), Kirby Rootes-Murdy (ASMFC)

3.1 Maine Glass Eel Quota → 5 support a glass eel quota for Maine of 0 pounds, 1 in support of Maine Glass Eel Quota (Undefined, unlimited)

- 5 individuals offered that Maine should not have any glass eel quota in 2019; one offered that it should be an unlimited quota. The reason cited by the majority was that there shouldn't be a glass eel fishery for Maine since Delaware does not have glass eel quota. Additionally, an alternative option offered from some of the attendees was that Delaware should have a glass eel quota equivalent to Maine's quota.

3.2 Aquaculture Program → 5 support Option 1: Status Quo, 1 supports Option 2: Pooling Allowance

- 5 individuals indicated their preference for Option 1: Status Quo Glass Eel Aquaculture provisions. Reason cited was the perceived lack of benefit to Delaware eel fisherman from pooling aquaculture harvest allowance across multiple states. Additional concerns were raised that removing glass eels from one part of the coast may impact Delaware's commercial yellow eel fishery at some point in the future, though the group was divided on what the impact of glass eel harvest may or may not be, given uncertainty in population dynamics and the contribution of river systems in different parts of the coast.
- 1 individual indicated their preference for Option 2 for the reason that it may create more of an administrative burden for the Commissions and the states.

3.3 Yellow Eels

Issue 1: Yellow Eel Coastwide Cap → 6 support Option 3: Average of 1998-2016 landings (951,102 pounds)

- 6 individuals were in favor of Option 3: Setting the Coastwide Cap at 951,102 pounds. Reason cited was this was the highest possible Coastwide Cap option and that the revised recent time series data through 2016 is more reliable and supports a higher Coastwide Cap level. Another reason cited was that there are currently too many yellow eels and efforts should be taken to curtail their presence in crab pots as their presence is costing the fishermen money by preventing crabs from entering the pots.

Issue 2: Management Triggers → 6 support Option 3: Two year trigger of exceeding the Coastwide Cap by 10%

- 6 individuals were in favor of Option 3: Two year trigger of exceeding the Coastwide Cap by 10%. The individuals cited that the current abundance of eels will likely trigger state-by-state quotas

under the other two management trigger options; state-by-state quotas are not preferred. Additionally, the individuals noted that this option would allow managers more flexibility to respond to an overage by 10% in the first year to address harvest in year 2.

Issue 3: Allocation → 6 support Option 5A: Allocation Based on Weighted Time Series Average of Yellow Eel Landings: 50% to the full time series (1998-2016) and 50 to the recent 10-year time series (2007-2016)

- 6 individuals were in favor of Option 5A: Weighted Time Series Average, 50% to the full time series and 50% to the recent 10-year time series. Reason cited was that it offered the highest quota for Delaware. Additionally, the individuals indicated that state-by-state quotas are not needed, due to the previously noted abundance of American eel.

Issue 4: Transfers → 6 support Option 2: Extend transfers till February 15

- 6 individuals support Option 2: Transfers allowed through February 15. Reason cited was it will give the state more time to track landings, account for overages, and get transfers as needed.

General Comments

- As noted for several of the issue items above, many individuals reiterated they did not perceive there to be an issue with the stock condition or abundance of American eels. Many took issue with the term 'depleted' in describing the population status as they indicated that they encounter many yellow eels regularly.
- If the preferred options for yellow eel management listed above aren't chosen, the group indicated they are generally in favor of longer time series options and highest landings levels for the coastwide cap and state-by-state allocations.
- It was requested that an additional option be considered where if a reduction in landings is needed in the yellow eel fishery, Maine also takes a reduction in their glass eel harvest. Reason cited was that it is a coastwide stock/population and therefore potential reductions should be uniform across life stages and all parts of the coast.

Draft Addendum V Public Hearing

Annapolis, Maryland

June 11, 2018

6 Participants

Staff: Lynn Fegley (MD Administrative Commissioner Proxy), Keith Whiteford (MD DNR), Carrie Kennedy (MD DNR), Kirby Rootes-Murdy (ASMFC)

3.1 Maine Glass Eel Quota → 6 support Option 1: Status Quo

- 6 individuals indicated their preference for maintaining Maine’s Quota at 9,688 pounds. Reasons cited were concerns about the illegal harvest that took place this year in Maine outside of the swipe card system. An additional comment focused on concern about equity and that the state was trying to get the ‘best of both worlds’ by increasing their yellow and glass eel quotas when most states only have one fishery. Lastly, concerns were raised about removing eels at their most vulnerable life stage, before they mature into adults, potentially undercutting efforts to maintain the population at a certain size.

3.2 Aquaculture Program → 6 support Option 1: Status Quo

- 6 individuals indicated their preference for Option 1: Status Quo Glass Eel Aquaculture provisions. Reason cited was concern that the swipe card system was not fully accounting for current glass eel harvest, and therefore additional harvest of glass eels outside of that system may not be tracked appropriately.

3.3 Yellow eel

Issue 1: Yellow Eel Coastwide Cap → 6 support Option 3: Average of 1998-2016 landings (951,102 pounds)

- 6 individuals were in favor of Option 3, setting the Coastwide Cap at 951,102 pounds. Reason cited was that it was more representative of the abundance in the Chesapeake Bay. Concerns were raised that many of the options are indirectly punishing Maryland because of the volume of yellow eels harvested by the state, therefore options that allow for harvest at levels that match the observed abundance in the Chesapeake Bay region are preferred.

Issue 2: Management Triggers → 6 support Option 3: Two year trigger of exceeding the Coastwide Cap by 10%

- 6 individuals were in favor of Option 3, Two year trigger of exceeding the Coastwide Cap by 10%. Reason cited was that the current management triggers didn’t really allow time for the states to figure out how to respond to the high harvest year in one year. Additionally, it was noted that looking at only one year is not an appropriate period of time from a statistics standpoint, and that a one year spike in harvest may not truly be representative of the population. Last, it allows for a greater margin between exceeding the coastwide cap and meeting the threshold, and the

two year timeframe would allow states to adjust measures in year two in response to harvest in year one.

Issue 3: Allocation → 4 support Option 2B: 1% rule for states to reduce landings; second choice would be option 4B: Average Landings over recent 5-year time series (2012-2016)

- 4 individuals were in favor of 2B: 1% rule for states to reduce landings, because it puts the responsibility on more than just one state and puts the reduction on the more guilty parties. Additionally, a harvest reduction would affect Maryland likely the most, so having other states share in the needed reduction under this option would be helpful.
- It was noted that if sub-option 2B was not preferred by all the states, then Option 4B, Average Landings over recent 5-year time series would be the second choice for the same 4 individuals. Reasons cited was that it was the highest quota that Maryland would receive under any of the options.
- 2 individuals were undecided.

Issue 4: Transfers → 6 support Option 2: Extend transfers till February 15

- 6 individuals support Option 2: Transfers allowed through February 15. Reason cited was that Maryland has the best possibility of going over their quota if state-by-state quotas are implemented and it is helpful to have more time to find additional quota 'donor states'. Additionally, the extra time would help with addressing late reporting in the fall.

General Comments

- There needs to be better management of eels that are leaving the Chesapeake Bay annually. Parallels were drawn to the Maryland Blue Crab dredge survey that is conducted annually and is used to estimate the population; something similar should be considered for eels, given environmental and habitat factors play a role in abundance.
- One individual noted that Maryland catches the majority of the harvest of yellow eels on the coast and the regional abundance has not changed; in fact, in fishing with less gear, the yield per trap/pot has increased. Last, in response to the overage of the coastwide cap in 2016, Maryland took efforts to reduce harvest in 2017 and should be given credit for these efforts.
- Two individuals noted concern that the one vote per state is not fair, as it gives each state equal say in determining the coastwide cap, management triggers, and allocation of yellow eels even though some states harvest significantly more than others.
- The Working Group that Maryland DNR put together to address yellow eel harvest reductions should be considered as a way of proactively addressing needed harvest reductions outside of a quota management system.

Draft Addendum V Public Hearing

Colonial Beach, Virginia

May 15, 2018

4 Participants

Staff: Marty Gary (PRFC Commissioner), Kirby Rootes-Murdy (ASMFC)

3.1 Maine Glass Eel Quota → 4 support Option 1: Status Quo

- 4 individuals indicated their preference for maintaining Maine’s Quota at 9,688 pounds. Reasons cited were concerns about removing eels before they mature into adults, potentially undercutting efforts to maintain the population at a certain size. Other concerns focused on whether there was a correlation between the lack of yellow eels caught in Maine and the harvest of glass eels.

3.2 Aquaculture Program → 3 support Option 1: Status Quo

- 3 individuals indicated their preference for Option 1: Status Quo Glass Eel Aquaculture provisions. Reason cited was the perceived lack of interest from other states besides North Carolina to submit an aquaculture plan; without many states indicating an interest in pursuing glass eel aquaculture, the individuals indicate there was not the need for pooling harvest or increasing the current 200 pound allowance.

3.3 Yellow Eels

Issue 1: Yellow Eel Coastwide Cap → 4 support Option 3: Average of 1998-2016 landings (951,102 pounds)

- 4 individuals were in favor of Option 4: Setting the Coastwide Cap at 951,102 pounds. Reason cited was that the revised time series data through 2016 supports a higher Coastwide Cap level.

Issue 2: Management Triggers → 3 support Option 3: Two year trigger of exceeding the Coastwide Cap by 10%

- 3 individuals were in favor of Option 3: Two year trigger of exceeding the Coastwide Cap by 10%. Reason cited was that the current management triggers are too sensitive to changes in landings, specifically the exceedance by any poundage for two consecutive years. Additionally, the individuals noted that this option would allow managers more flexibility to respond an overage by 10% in the first year to address harvest in year 2.

Issue 3: Allocation → 4 support Option 4A: Average Landings over recent 10-year time series (2007-2016)

- 4 individuals were in favor of Option 4A: Average Landings over recent 10-year time series. Reason cited was that it included a time period that reflects a cross section of landings over the last 10 years. Additionally, the individuals indicated that this option likely would have the most

benefit to the high harvesting states, while having the most minimal impact to most low harvesting states.

Issue 4: Transfers → 4 support Option 2: Extend transfers till February 15

- 4 individuals support Option 2: Transfers allowed through February 15. Reason cited was the issue of collecting landings data in a timely fashion to compare against quotas. One individual noted there should be a later date than February 15 due to the known reporting lag.

Draft Addendum V Public Hearing

Washington, North Carolina

May 14, 2018

5 Participants

Staff: Steve Murphey (NC Commissioner), Chris Batsavage (NC DEQ), Todd Mathes (NC DEQ), Jason Rock (NC DEQ), Sgt. Odell Williams (NC DEQ), Kirby Rootes-Murdy (ASMFC)

3.1 Maine Glass Eel Quota

- 1 individual indicated their preference for increasing Maine's Quota to 10,000 pounds. Reason cited was that this is a more modest increase than returning to the 2014 Quota, which may potentially allow for the eel population to increase.

3.2 Aquaculture Program → 2 support Option 1: Status Quo, 1 supports Option 2: Pooling of Harvest

- 2 individuals indicated their preference for Option 1: Status Quo Glass Eel Aquaculture provisions. Reason cited was concern about the states coming to agreement on how the 'pooling' of harvest across states would be done. Other concerns raised were that states should not be increasing harvest above 200 pounds and that if pooling were to be allowed, each state should harvest just 200 pounds each.
- 1 individual was in favor of Option 2: Pooling of Aquaculture Harvest. No reasons were given. [JK1]

3.3 Yellow Eels

Issue 1: Yellow Eel Coastwide Cap → 1 supports Option 4: 12% reduction, 1 supports Option 1: Status Quo

- 1 individual was in favor of Option 4: Reducing the Cap by 12% from the 1998-2016 average coastwide landings. Reason cited was again the need to protect American eels due to the uncertainty in their life cycle.
- 1 individual was in favor of Option 1: Status Quo. No reasons were given.

Issue 2: Management Triggers → 3 support Option 1: Status Quo

- 3 individuals were in favor of Option 1: Status Quo. Reason cited was that the current management triggers are more sensitive to changes in landings than the other options offered in the draft addendum. Additionally, it was noted that the current triggers may be a better proxy of determining whether too many eels are removed from the population.

Issue 3: Allocation → 3 support Option 1: Status Quo

- 3 individuals were in favor of Option 1: Status Quo Addendum IV State Allocations. Reason cited was the increase in allocation to NC fishermen, as most of the other options reduce the state's

quota. One individual conditioned his preference by saying that if information comes out in the future that the resource is not in good shape, the quotas should be lowered.

Issue 4: Transfers → 4 support Option 2: Extend transfers till February 15

- 4 individuals support Option 2: Transfers allowed through February 15. Reasons cited were issues collecting landings data in a timely fashion to compare against quotas.

General Comments

- Concern that setting catch quotas doesn't have an impact on the population. Draws parallels to river herring, where habitat and water quality may be having a larger impact on the resource than fishing pressure.
- Another concern expressed was that the current catch level may be undercutting the resource's ability to increase from current abundance levels.
- Expressed that the overall harvest of eels should be reduced out of concern for the resource.
- Suggested using the landings data from 1998-2016 as a baseline; if landings fall below that, there should be a management response, similar to a traffic light approach.
- Other comments focused on the need to explore effort data, as the market for American eel may be affecting landings levels across the coast. Effort and market demand may better explain decreases in the landings and further highlight that landings may not be an appropriate proxy of population status.
- There was a question of how well eels are able to get into Lake Mattamuskeet with the gates that are currently in place. The answer was that they can get into the Lake by moving out of the water onto land.

Draft Addendum V Public Hearing

Charleston, South Carolina

May 22, 2018

1 Participant

Staff: Ross Self (SC Administrative Commissioner Proxy), Bill Post (SC DNR), Andrew Watson (SC DNR), Lynn Quattro (SC DNR), Chad Holbrook (SC DNR), Mark Scott (SC DNR), Kirby Rootes-Murdy (ASMFC)

3.1 Maine Glass Eel Quota → 1 supports Option 2: Maine Glass Eel Quota of 11,749 pounds

- 1 individual offered support for Option 2, a Maine Glass Eel Quota of 11,749 pounds. Reason cited was that the increase in harvest could be allowed as it's still below their last peak year of harvest by 35% and they have been limiting out on their individual allocations in many years since 2014.

3.2 Aquaculture Program → 1 supports Option 1: Status Quo

- 1 individual indicated their preference for Option 1: Status Quo Glass Eel Aquaculture provisions. Reason cited was that the aquaculture facility in North Carolina has not been successful and, in turn, it's unclear if there would be a benefit to expanding it to allow multiple states to pool harvest.

3.3 Yellow Eels

Issue 1: Yellow Eel Coastwide Cap → 1 supports Option 3: Average of 1998-2016 landings (951,102 pounds)

- 1 individual was in favor of Option 3, setting the Coastwide Cap at 951,102 pounds. Reason cited was that this was the highest possible coastwide Cap option and that setting the Cap lower than this level might cause overages that would prompt state-by-state quotas, which is not preferred.

Issue 2: Management Triggers → 1 supports Option 3: Two year trigger of exceeding the Coastwide Cap by 10%

- 1 individual was in favor of Option 3, Two year trigger of exceeding the Coastwide Cap by 10%. The reason cited was it was the best approach to try to avoid going to state-by-state quotas.

Issue 3: Allocation → 1 supports Option 1: Status Quo Quota Allocation from Addendum IV

- 1 individual was in favor of the status quo state allocation under Addendum IV. Reason cited was that this offers South Carolina the highest quota level. Additionally, it was noted that the cost to go fishing creates incentives to fish more and that a higher quota would make it worth the time and effort to go fishing for eels.

Issue 4: Transfers → 1 supports Option 2: Extend transfers till February 15

- 1 individual supports Option 2: Transfers allowed through February 15. Reason cited was it will give the state more time to get transfers as needed. Concerns were raised about whether a transfer could be obtained for the state.

General Comments

- It was noted that the 1/8 inch grade requirement in the gear, which was implemented by way of Addendum III (2013), reduced the ability of many fishermen to participate in the glass eel fishery in the state, as many were previously targeting elvers. One individual noted it reduced harvest of glass eels by over 90%.

Draft Addendum V Public Hearing

Palatka, Florida

June 12, 2018

5 Participants

Staff: Jim Estes (FL Administrative Commissioner Proxy), Ryan Hamm (FL FWCC), Kim Bonvechio (FL FWCC), Kirby Rootes-Murdy (ASMFC) (webinar)

3.1 Maine Glass Eel Quota → 3 support Option 1: Status Quo Glass eel quota of 9,688 pounds for Maine

- 3 attendees were in favor of the status quo quota of 9,688 pounds. Reason cited was an interest in maintaining the current fishery allocation without increasing harvest, which could lead to overfishing.

3.2 Aquaculture Program → 3 support Option 1: Status Quo

- All attendees were in favor of Option 1: Status Quo. Reason cited was to be conservative about the harvest of glass eels, as there are important to overall population. Additionally, it was noted that because they do not have a glass eel fishery in Florida, they are not in support of other states having a glass eel fishery.

3.3 Yellow Eels

Issue 1: Yellow Eel Coastwide Cap → 3 support Option 1: Status Quo of 907,671 pounds

- All attendees were in favor of Option 1: Status Quo of 907,671 pounds. The reason cited was that the current coastwide cap is sufficient to manage the resource.

Issue 2: Management Triggers → no stated preference

No comments were provided

Issue 3: Allocation → 3 were in support of Option 1: Status Quo

- 3 individuals were in favor of maintaining the status quo state-by-state allocation. Reason cited was because it offered the best quota for the state of Florida.
- 3 individuals indicated they were opposed to Option 2 and its sub-options. The preference was to have state-by-state quotas.

Issue 4: Transfers → 3 support Option 2: Extend transfers till February 15

- 3 individuals support Option 2: Transfers allowed through February 15. Reason cited was it will give the state more flexibility to get transfers as needed.

General Comments

- 2014-2015 was the last year one individual had a good fishing season; since then, the observed abundance in Florida has gone down. Historically, the harvest was much higher.
- One individual noted concerns that pesticides sprayed near eel grass are deteriorating habitat for eels. Additionally, recent hurricanes have affected habitat. Lastly, wastewater effluence from cities into the St. John's River is affecting the abundance of American eel in Florida.
- One individual noted that global market dynamics, particularly the demand for American eel, is driving a lot of the issues with their abundance.
- It was noted that average price per pound for yellow eels in Florida is approximately \$3 dollars per pound.
- There were questions about whether harvest on the gulf coast of Florida would count against the state quota; historical state landings, prior to 2006, did come from both the gulf and Atlantic coast. It was noted that landings from the Atlantic coast would be counted against their quota.

Letter Signed by 87 Individuals

Dear Atlantic States Marine Fisheries Commission Kirby Rootes-Murdy, Senior FMP Coordinator
1050 North Highland Street, Suite 200A-N Arlington, VA 22201
Fax: (703) 842-0741

According to the U.S Fish and Wildlife Service, in all its life stages, the American eel serves as an important prey species for many fish, aquatic mammals, and fish-eating birds. Climate change may affect future ocean conditions, such as water temperature, current patterns and food sources that may have implications for the eels breeding success. However, high levels of uncertainty in the precise mechanism and timing of such changes make it difficult for scientists to accurately predict how, or to what extent, any changes will affect eel migration, aggregation for reproduction, and ultimately abundance.

According to the ASMFC, The goal of the current American Eel FMP is to conserve and protect the American eel resource to ensure its continued role in its ecosystems. This FMP requires that states and jurisdictions maintain existing or more conservative American eel commercial fishery regulations for all life stages, including minimum size limits. Each state is responsible for implementing management measures within its jurisdiction to ensure the sustainability of its American eel population.

However, the 2012 benchmark stock assessment results indicated that the American eel stock had declined, that there were significant downward trends in multiple surveys across the coast, and that the stock was depleted. And, the 2017 assessment update repeated the 2012 finding that the American eel population is depleted.

In addition to the depleted stock status, the total coastwide yellow eel landings from 2011-2016 exceeded the coastwide cap in 5 out of 6 years. And, there are significant uncertainties in the commercial landings data because not all states comply with the required data reporting, and there are potential biases present in the commercial yellow eel data set because even with mandatory reporting, requirements do not always extend outside marine districts where yellow eel are harvested from non-marine waters, and misreporting between conger eel, hagfish, slime eel, and American eel has been known to occur.

Regarding the current elver harvest, given an estimated 2,000 elvers per pound, the current Maine quota of 9,688 pounds combined with the 15 states aquaculture quota of 200 pounds each would yield a total coast wide quota of 12,688 pounds, or a potential to remove 25,376,000 eels from the water, in addition to the total yellow eels removed under the current coast wide quota of 907,671 pounds.

To achieve the conservation goals of the ASMFC's American Eel Fishery Management Plan through Addendum 5, we feel the following Addendum V options should be implemented:

3.1 Proposed Options for Maine Glass Eel Quota: Option 1: Status Quo Quota for Maine of 9,688 pounds of glass eel.

3.2 Proposed Options of Glass Eel Aquaculture Plans: Option 1: Status Quo.

3.3 Proposed Options for Yellow Eel Coastwide Cap, Management Trigger, and State-by-state Allocations:

Letter Signed by 87 Individuals

Issue 1: Coastwide Cap: Option 4: Coastwide Cap set at 836,969 pounds; a 12% decrease from the mean or average of 1998-2016 landings.

Issue 2: Management Trigger: Option 1: Status Quo

There are also numerous allocation options in Addendum V, but the main options to maintain or increase protections for American Eel are the ones noted above.

Thank you for the opportunity for concerned anglers like me to submit comment!

Sincerely,

Eel Addendum V Form Letter Submitters:

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From: Anglerpmh
To: [Comments](#)
Subject: Draft American Eel Addendum V Comment submission
Date: Monday, June 11, 2018 12:25:16 PM

Kirby,

I support the following options regarding the draft addendum for eels:

3.1 Proposed Options for Maine Glass Eel Quota: Option 1: Status Quo Quota for Maine of 9,688 pounds of glass eel.

3.2 Proposed Options of Glass Eel Aquaculture Plans: Option 1: Status Quo.

3.3 Proposed Options for Yellow Eel Coastwide Cap, Management Trigger, and State-by-state Allocations:

Issue 1: Coastwide Cap: Option 4: Coastwide Cap set at 836,969 pounds; a 12% decrease from the mean or average of 1998-2016 landings.

Issue 2: Management Trigger: Option 1: Status Quo

There are also numerous allocation options in Addendum V, but the main options to maintain or increase protection

for American Eel are the ones noted above.

Thank you for the opportunity for concerned anglers like me to submit comment!

Sincerely,
Paul Haertel

From: cnastasi33
To: [Comments](#)
Subject: eels
Date: Thursday, June 14, 2018 6:28:10 PM

Conserve the American eel for all people involved in its Fisheries. Do not allow the overtaking of the species by a few commercial fisherman just to get wealthy.
Sent from my Verizon, Samsung Galaxy smartphone

From: Dan
To: [Comments](#)
Subject: Eel fishery
Date: Thursday, June 14, 2018 5:52:44 PM

Hello,

I write to support a static or reduced eel fishery quota / harvest. Eels are a critical support factor in the health of the striped bass fishery. Increasing the harvest levels or commercial take of eels will have a potentially negative impact on striped bass populations, which are already under pressure from other influences such as poaching and too much harvest / not enough catch and release of spawning fish every spring.

Thank you,
Dan Sheehan

Sent from my iPhone

From: [Comments](#)
To: [Comments](#)
Subject: FW: Draft Addendum V
Date: Thursday, June 21, 2018 12:05:14 PM

From: marcel nuss [<mailto:marcelnuss10@gmail.com>]
Sent: Monday, June 04, 2018 5:57 PM
To: Caitlin Starks <cstarks@asmfc.org>
Subject: Draft Addendum V

Hello,

I am writing to support option 2 - increasing the glass eel quota to 11,749 lbs. I believe Maine Dept. of Fisheries is doing a fine job of enforcement and monitoring the glass eel fishery. I would also like to see Maine take away permanently the licenses of anyone not selling eels legitimately with a swipe card or a dealer selling eels that are not included in the legal quota. Thank you for allowing the public to submit input.

Sincerely,

Marcel Nuss

From: Chris "Charlie Brown" Francis
To: [Comments](#)
Subject: Draft Addendum V
Date: Friday, May 18, 2018 9:27:23 AM

Hello , I'm a current glass eel fisherman from the state of Maine over the years that I've been fishing for glass eels and especially after the Veazie was removed and miles of habit were again made available to the returning eels I have noticed an increase in the amount of glass eels that are returning to run up the river (Penobscot river) ... I would like to respectfully request that the committee look into accepting Option 2 returning the overall allocations to 2014 levels.

Thank you for your consideration on this matter

From: Rich Mah
To: [Comments](#)
Subject: eel management input
Date: Thursday, May 17, 2018 2:38:15 PM

everyone complains about the decline of the eel population, yet Maine still allows the commercial harvesting of glass eels. they are sold by the pound and it takes several hundred, if not thousands to make up a pound. This multiplied by the many hundreds of pounds that are sold each year. These eels are exported and not even used in this country. this is a net loss for the population. This practice needs to be cut back or stopped altogether.



The Great Egg Harbor Watershed Association & River Council

Fred Akers - Administrator
P.O. Box 109
Newtonville, NJ 08346
856-697-6114
Fred_akers@gehwa.org

June 12, 2018

Kirby Rootes-Murdy, Senior FMP Coordinator
Atlantic States Marine Fisheries Commission
1050 North Highland Street, Suite 200A-N
Arlington, VA 22201

Email: comments@asmfc.org (Subject: Draft Addendum V)

RE: American Eel Addendum V Comments

Dear Kirby Rootes-Murdy:

We appreciate the opportunity to provide categorical comments on the fishery management of American eel by ASMFC in Addendum V. We do have significant concerns for the long term protection and conservation of American eel, which we summarize as follows:

1. The 2012 benchmark stock assessment results indicated that the American eel stock had declined, that there were significant downward trends in multiple surveys across the coast, and that the stock was depleted, but no overfishing determination could be made based on the analyses performed. (Draft Addendum V, page 10).
2. The 2017 assessment update repeated the 2012 finding that the American eel population is depleted. (Draft Addendum V, page 13).
3. The total coastwide yellow eel landings from 2011-2016 exceeded the coastwide cap in 5 out of 6 years. (Draft Addendum V, page 10).
4. Given the depleted stock status and the habitual over harvesting, the current goal of the FMP to conserve and protect the American eel resource to ensure its continued role in its ecosystems is not being met. (Draft Addendum V, page 4).
5. During the development of Addendum IV, the TC and Stock Assessment Subcommittee (SAS) recommended that harvest be reduced in all life stages due to the depleted status from the benchmark stock assessment. (Draft Addendum V, page 15).
6. Fluctuations in yellow eel landings pose significant management challenges with regard to balancing sustainable landings and access to the resource with economic considerations. (Draft Addendum V, page 8). (Continued page 2)

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7. There are significant uncertainties in the commercial landings data because not all states comply with the required data reporting, there are potential biases present in the commercial yellow eel data set, even with mandatory reporting, requirements do not always extend outside marine districts where yellow eel are harvested from non-marine waters, and misreporting between conger eel, hagfish, slime eel, and American eel has been known to occur. (Draft Addendum V, pages 3 and 4).

8. Regarding the current elver harvest, given an estimated 2,000 elvers per pound, the current Maine quota of 9,688 pounds combined with the 14 states aquaculture quota of 200 pounds each would yield a total coast wide quota of 12,488 pounds, or a potential to remove 24,976,000 eels from the water coast wide, in addition to the total yellow eels removed under the current coast wide quota of 907,671 pounds.

9. The International Union for Conservation of Nature (IUCN) lists this species as “endangered.”

To achieve the conservation goals of the ASMFC’s American Eel Fishery Management Plan through Addendum 5, the following Addendum V options should be implemented:

3.1 Proposed Options for Maine Glass Eel Quota: Option 1: Status Quo Quota for Maine of 9,688 pounds of glass eel.

3.2 Proposed Options of Glass Eel Aquaculture Plans: Option 1: Status Quo.

3.3 Proposed Options for Yellow Eel Coastwide Cap, Management Trigger, and State-by-state Allocations:

Issue 1: Coastwide Cap: Option 4: Coastwide Cap set at 836,969 pounds; a 12% decrease from the mean or average of 1998-2016 landings.

Issue 2: Management Trigger: Option 1: Status Quo

There are also numerous allocation options in Addendum V, but the main options to maintain or increase protections and conservation for American Eel are the ones noted above.

Respectfully,



Fred Akers, Administrator

Dear ASMFC,

Eels serve as an important food source for many fish, aquatic animals and fish-eating birds. Climate change may affect future ocean conditions and that may have negative implications for the breeding success of eels. Consequently, the stocks of this fishery must be protected. In addition to climate factors, fishing pressure on the stocks of eels is taking its toll. Glass Eels is a case in point because of the high profits it brings to anglers to supply the Chinese market.

To achieve the conservation goals of the ASMFC's American Eel Fishery Management Plan through Addendum 5, we feel that following Addendum 5 options should be implemented:

3.1 Proposed Options for Maine Glass Eel Quota – Option 1: Status Quo Quota for Maine of 9,688 pounds of glass eel.

3.2 Proposed Options of Glass Eel Aquaculture Plans – Option 1; Status Quo

3.3 Proposed Options for Yellow-Eel Coastwide Cap, Management Trigger, and State-by-State Allocations:

Issue 1: Coastwide Cap – Option 4: Coastwide Cap set at 836, 969 pounds; a 12% decrease from the mean of average of 1998-2016 landings.

Issue 2: Management Trigger: Option 1: Status Quo

Thank You for the opportunity for anglers to submit comments on this Addendum

John Toth

President, Salt Water Anglers of Bergen County



June 8, 2018

Mr. Kirby Rootes-Murdy
ASMFC
1050 N. Highland Street
Suite 200A-N
Arlington, Virginia 22201

RE: Draft Addendum V – Yellow & Glass Eel Management

Dear Mr. Rootes-Murdy:

On behalf of Recreational Fishing Alliance (RFA) of Massachusetts that represents thousands of recreational anglers and charter boat captains in Massachusetts and the east coast we are concerned with the ongoing illegal harvest and noncompliance in the state of Maine and status of the glass eel stock as “depleted” and as a result would recommend a complete shutdown of the commercial fishery in the State of Maine to protect the resource. RFA also recommends the following:

- 3.2 Proposed Options for Glass Eel Aquaculture Plans – Option 1 Status Quo (200 lbs.). Option 2, pooling with an increase to 600 lbs. could lead to non-compliance and exceeding the quota and is therefore not recommended.
- Yellow Eel Allocation – Sub Option 5 B. This approach provides a quota that is consistent with the long term average in Massachusetts waters. Other allocation approaches significantly benefit select states to the detriment of other states.
- Transfers, Option 2 – Extend transfers through February 15th of the following season. This provides a mechanism for delays in reporting to manage the stock.

If you have any questions or comments please call me at (617) 291-8914.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Mike Pierdinock", with a long horizontal line extending to the right.

*Capt. Mike Pierdinock
RFA - Massachusetts Chairman
176 Sandy Beach Road
Plymouth, MA 02360
cfpcharters@yahoo.com*

"To safeguard the rights of saltwater anglers, protect marine, boat and tackle industry jobs and ensure the long-term sustainability of U.S. saltwater fisheries."
www.joinrfa.org

From: Thomas Siciliano
To: [Comments](#)
Subject: Draft Addendum V - American Eel
Date: Friday, June 15, 2018 10:10:37 AM

The following options are supported by the Point Pleasant Fishing Club.

Eels are an important forage fish for many species. The stocks are depleted and need to be protected.

3.1 Option 1: Status Quo Quota for Maine of 9,688 pounds of glass eel.

3.2 Option 1: Status Quo

3.3 Issue 1: Option 4: Coastwide cap set at 836,969 pounds.

Issue 2: Option 1: Status Quo

Thank you

Thomas Siciliano, Treasurer Point Pleasant Fishing Club

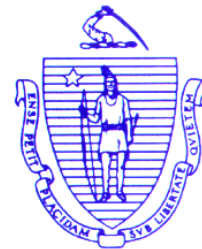
Commonwealth of Massachusetts

Marine Fisheries Advisory Commission

251 Causeway Street, Suite 400

Boston, MA 02114

Fax (617) 626.1509



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June 14, 2018

Kirby Rootes-Murdy
ASMFCFMP Coordinator
1050 N. Highland St., Suite 200A-N
Arlington, VA 22201

Dear Kirby:

The Massachusetts Marine Fisheries Advisory Commission (MFAC) offers the following comments on Addendum V of the American Eel Plan. The MFAC opposes: (1) increases in Maine's glass eel quota; (2) liberalizations of the glass eel allocations for domestic aquaculture; and (3) changes to the allocation schemes that would reduce the Commonwealth's already inadequate yellow eel quota. The MFAC supports using updated yellow eel historical landings data and liberalizing the state-by-state quota management triggers by requiring two consecutive years of exceeding the regional quota by 10%. More detailed comments are presented below.

3.1 Proposed Options for Maine Glass Eel Quota. The MFAC supports Option 1 that maintains the status quo of 9,688 pounds for the Maine glass eel quota. The 9,688 pound quota was implemented with Addendum IV in 2015 and was not exceeded during 2015-2017. The necessity and purpose for an increase was inadequately explained in the draft Addendum. The years in which the harvest was much higher than the present quota were 2012 and 2013: a period of wide-spread poaching when eels were frequently harvested out-of-state (including poaching in some Massachusetts streams) and illegally transported to Maine for sale. Details about the poaching and unlawful transport into Maine have been well publicized by the media coverage of Operation Broken Glass, a joint operation by state and federal law enforcement agencies. We continue to expend significant resources to both restore eel abundance and enforce laws to counter illegal harvest in Massachusetts. The current value of glass eel in world markets has created powerful incentives for illegal activity. A stronger argument is needed in the Addendum before justifying a quota increase after four years of harvest under the present management process.

3.2 Proposed Options of Glass Eel Aquaculture Plans. The MFAC supports Option 1 that maintains the status quo for glass eel aquaculture plans established in Addendum IV. In our estimation, the provisions for a glass eel aquaculture plan in Addendum IV were carefully designed to allow for aquaculture opportunities while reducing risk for population impacts and illegal trading with the direct sale of live glass eels. To date, only North Carolina has an approved aquaculture plan, with no success in the last three years. Option 2 proposes to allow up to three states to pool their harvest up to a maximum of 600 pounds with reduced requirements on demonstrating the suitability of target watersheds for harvesting without impacts to the eel spawning stock. The draft Addendum does not describe why this change is warranted. There has been no demonstration that the structure and intent of Addendum IV aquaculture requirements

were inadequate. Option 2 is clearly less restrictive to an aquaculture permit holder; however, it: (1) allows unnecessary risk for illegal activity; (2) reduces safeguards over site selection; and (3) raises the potential for overharvest in individual watersheds.

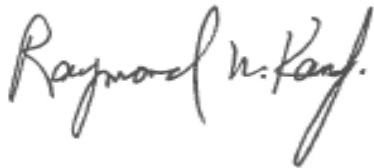
3.3 Proposed Options for Yellow Eel Coast-wide Cap, Management Trigger, and State-by-state Allocations. Overall, the MFAC was encouraged by the progress made with Addendum IV to move towards a modern accounting process for commercial yellow eel harvest on the East Coast. We were supportive of these actions, despite the view that Massachusetts did not receive a favorable allocation from the decision to use the post-stock assessment years of 2011-2013 for the percentage. We are now concerned that some of the options presented in Addendum V are counter to the progress made in Addendum IV and the advice of the Technical Committee. Specifically,

Coast-wide Cap. We support Option 1 to maintain the current Coast-wide Cap of 907,671 pounds with a modest increase to 916,473 pounds based on a technical correction of updated landings data.

Management Trigger. We support Option 3 that requires two consecutive years of exceeding the Coast-wide Cap by 10% to trigger state-by-state quota management.

Allocation. We are strongly opposed to any options that reduce Massachusetts' present cap share or allocation percentage. We do not support continuing to use Option 1 (Status Quo) due to the inappropriate selection of 2011-2013 for deriving state allocation percentages. *The selection of those allocation years was biased to include high landings in some states – to the detriment to other state's interests.* We favor an allocation process that includes a longer period of time to reflect present and recent past fishery performance. Therefore, we support Options 5A and 5B which provide a weighted average that includes longer time series harvest data and recent performance.

Sincerely yours,

A handwritten signature in black ink that reads "Raymond Kane". The signature is written in a cursive, flowing style.

Raymond Kane
Chairman

cc
MFAC members
David E. Pierce
Daniel J. McKiernan



NYC Parks

Marit Larson
Chief of Forestry, Horticulture,
& Natural Resources

T 212-360-1415

E Marit.Larson@parks.nyc.gov

City of New York
Parks & Recreation

Arsenal North
1234 Fifth Avenue
2nd Floor
New York, NY 10029
www.nyc.gov/parks

To:

Kirby Rootes-Murdy
Senior FMP Coordinator
Atlantic States Marine Fisheries Commission
1050 North Highland Street, Suite 200A-N
Arlington, VA 22201

From:

Marit Larson
Chief of Forestry, Horticulture, & Natural Resources
City of New York Parks & Recreation
1234 5th Ave., 2nd Floor
New York, NY 10029

June 15, 2018

RE: Draft Addendum V to the Interstate Fishery Management Plan for American Eel

Dear Mr. Kirby Rootes-Murdy,

I am writing on behalf of the NYC Department of Parks & Recreation (NYC Parks) Natural Resources Group (NRG) to urge you to make conservation of the American Eel, *Anguilla rostrata*, a top priority while finalizing Addendum V to the Interstate Fishery Management Plan for American Eel.

NRG is a division within NYC Parks that is responsible for the acquisition, protection, restoration, and management of remnant and restored natural areas within the nearly 29,000 acres of City parkland. This work includes restoring habitat for and monitoring local populations of diadromous fish, including American Eels. NRG and various local partners established and currently maintain an eel ladder to facilitate the upstream migration of American eels over dams on the Bronx River, as recommended by the ASMFC American Eel Stock Assessment Update in "Passage and Habitat" suggestions; "improve upstream and downstream passage for all life stages of American eels."

The American Eel, listed as endangered on the IUCN Red List of Threatened Species, demonstrates declining populations across the Atlantic coast. NRG strongly urges management that aims to reverse this trend and that considers the American Eel's vulnerable status and depleted stock level. This draft addendum should rely on the clear data trends - American Eel landings remain historically low and maintain a depleted level. In addition, the 2017 ASMFC American Eel Stock Assessment Update reveals "more significant downward trends in [various] indices."



NYC Parks

For the above reasons, **Addendum V should focus on further protecting American Eels from overfishing and not increase catch quotas or reduce management measures for the stock.**

Regarding proposed options for the **Maine glass eel quota**, we strongly encourage implementing the current or reduced glass eel quotas and support **Option 1, 6,688 pounds of glass eel**. State-specific quotas affect the entire Atlantic Coast, as all American Eels belong to a single spawning population. Fewer numbers returning to spawn from particular states will result in fewer total numbers across the Atlantic in the future, a trend that the currently low stock cannot afford to experience.

Regarding proposed options for the **yellow eel coastwide cap**, we strongly encourage implementing the lowest possible coastwide cap, **Option 4, 836,969 pounds**. The American Eel population remains depleted according to the 2017 Stock Assessment. In order to facilitate population growth, a low total cap should be considered. This low cap is necessary to maintain the stable but low total landings reported in the Stock Assessment.

Regarding the **yellow eel management trigger**, a one-year management trigger should be selected (**Option 2**). This option requires an annual assessment of coastwide landings in which management responses are more sensitive to the varied annual landing numbers. In order to best maintain the already low stock of eel, this option should be considered so as to ensure that policy is responding directly to accurate landing data.

Thank you for the opportunity to comment on draft Addendum V. We hope that you will take our recommendations into consideration to ensure the American Eel continues to serve as an important resource for coastal ecosystems and fishermen alike.

Sincerely,
Marit Larson

From: Kirk Francis
To: [Comments](#)
Subject: Penobscot Nation comments
Date: Friday, June 15, 2018 3:52:36 PM

Good Afternoon,

I am writing to express our support for Option 2: Maine quota of 11,749 pounds as laid out in the Public hearing held in Brewer Maine. This represents a 19% increase from the 2015-2017 quota. Thank you for your consideration of Option 2 and our comment.

Kirk

Kirk E. Francis, Chief
Penobscot Indian Nation
12 Wabanaki Way
Indian Island, ME 04468
207-817-7349





June 15, 2018

Marty Gary, Chairman
American Eel Management Board
Atlantic States Marine Fisheries Commission
1050 North Highland Street
Suite 200A-N
Arlington, Virginia 22201

RE: Draft American Eel Addendum V

Dear Mr. Gary and Members of the American Eel Management Board,

Founded by anglers 45 years ago, *Wild Oceans* is our nation's oldest nonprofit conservation group dedicated to marine fishery resources. We advocate for advancing a broad, ecosystems approach to fisheries management that reflects our expanding circle of concern for all marine life and the future of fishing.

Because of its unique life cycle, the American eel is critically important to the food web along our Atlantic coast. Glass eels and elvers are prey for a myriad of stream, river and ocean-dwelling predators. In 2014, *Wild Oceans* supported the ASMFC's actions, taken through Addendum IV to the Interstate Fishery Management Plan for American Eel, to better control and reduce American eel mortality throughout its life cycle. The 2017 stock assessment update affirms that the American eel population remains depleted to historically-low levels. Most troubling is that a number of updated population health indices show significant downward trends in recent decades, more significant downward trends than were reported in the 2012 benchmark assessment.¹ Also in 2017, the International Union for the Conservation of Nature and Natural Resources (IUCN) published an updated assessment for American eel, categorizing the species as "endangered" with a declining population trend.²

Therefore, we are concerned that the American Eel Management Board is considering actions that would liberalize catch, and weaken and postpone management triggers for when the

¹ ASMFC, 2017. American eel stock assessment update. p.iv.

² Jacoby, D., Casselman, J., DeLucia, M. & Gollock, M. 2017. *Anguilla rostrata* (amended version of 2014 assessment). The IUCN Red List of Threatened Species 2017: e.T191108A121739077.
<http://dx.doi.org/10.2305/IUCN.UK.2017-3.RLTS.T191108A121739077.en>. Downloaded on 14 June 2018.

yellow eel coastwide cap is exceeded. The 2012 American Eel Benchmark Stock Assessment advised that actions be taken to reduce mortality across all American eel life stages from 2010 levels, the terminal year of the assessment.³ The 2017 assessment update paints a picture of a depleted stock in a continued state of decline, calling for a strong response from fishery managers to turn the tide for American eel and set the population on a course for recovery.

Bolded below are our recommendations for options to include in Addendum V to the Interstate Fishery Management Plan for American Eel.

3.1 Proposed Options for Maine Glass Eel Quota

Option 1: Status Quo Quota for Maine of 9,688 pounds of glass eel. We note that the 2012 stock assessment subcommittee cautioned that “current levels of fishing effort may still be too high given the additional anthropogenic and environmental stressors affecting the stock. Fishing on all life stages of eels, particularly YOY and out-migrating silver eels, could be particularly detrimental to the stock...”⁴ The 9,688 quota for Maine, established in Addendum IV, was chosen to reduce landings from the previous two years while balancing concerns over economic hardship and incentivizing poaching. A 19% jump in quota (Option 2) would run counter to scientific advice.

3.2 Proposed Options of Glass Eel Aquaculture Plans

Option 1: Status Quo. We oppose Option 2 which would entail the elimination of the requirement to objectively show that harvest would only occur from watersheds that minimally contribute to the spawning stock of American eel. We also note that most states would not benefit from the pooling option because of existing regulations that prohibit glass eel harvest altogether.

3.3 Proposed Options for Yellow Eel Coastwide Cap, Management Trigger, and State-by-state Allocations

Issue 1: Coastwide Cap: Option 4: Coastwide Cap set at 836,969 pounds; a 12% decrease from the mean or average of 1998-2016 landings. This option aligns with the Technical Committee (TC) and Stock Assessment Subcommittee (SAS) recommendation to reduce harvest in all life stages in response to American eel’s depleted status. The 12% reduction takes into account the 12% coefficient of variation in the landings data to ensure that an actual reduction in harvest is realized.

Issue 2: Management Trigger: Option 1: Status Quo. A payback system is a necessary component to an effective catch cap. *Wild Oceans* supports the current management trigger system which calls for state quota allocations to be implemented when either the coastwide cap is exceeded by more than 10% in a given year or when the coastwide cap is exceeded for two consecutive years, regardless of percent overage. It is

³ ASMFC, 2012. American eel benchmark stock assessment. Stock assessment report 12-01 of the Atlantic States Marine Fisheries Commission. 342 pp.

⁴ Ibid, p. 102.

disconcerting that the likelihood of reaching the management trigger seems to have “triggered” Addendum V, resulting in delayed implementation of measures that can effectively reduce catch in subsequent years after overages occur. As explained in Draft Addendum V for Public Comment, even if the status quo option is selected, the earliest implementation could begin is in 2020, although overages occurred in 2016 and possibly in 2017.

In closing, we reiterate that the 2012 American Eel Benchmark Assessment called for a reduction in mortality of all American eel life stages, a recommendation buoyed by the grim trends in the 2017 assessment update. Meaningful conservation strides were achieved through Addendum IV, and we urge the Management Board to stay the course.

Thank you for your consideration.

Sincerely,



Pam Lyons Gromen
Executive Director



Stellwagen Bank Charter Boat Association
P.O.BOX 1230
Marshfield, MA 02050

Mr. Kirby Rootes-Murdy
Atlantic States Marine Fisheries Commission
1050 N. Highland Street
Suite 200A
Arlington, Virginia 22201

June 15, 2018

RE: Draft Addendum V – Yellow & Glass Eel Management

Dear Mr. Rootes-Murdy:

On behalf of the Stellwagen Bank Charter Boat Association which has over 150 members consisting of both recreational and charter boat captains, we are concerned with the ongoing illegal harvest and noncompliance in the state of Maine and status of the glass eel stock as “depleted” and as a result would recommend a complete shutdown of the commercial fishery in the State of Maine to protect the resource. RFA also recommends the following:

- 3.2 Proposed Options for Glass Eel Aquaculture Plans – Option 1 Status Quo (200 lbs.). Option 2, pooling with an increase to 600 lbs. could lead to non-compliance and exceeding the quota and is therefore not recommended.
- Yellow Eel Allocation – Sub Option 5 B. This approach provides a quota that is consistent with the long term average in Massachusetts waters. Other allocation approaches significantly benefit select states to the detriment of other states.
- Transfers, Option 2 – Extend transfers through February 15th of the following season. This provides a mechanism for delays in reporting to manage the stock.

Recreational and commercial anglers depend on being able to purchase eels for striped bass fishing. Please consider the options above and thank you for the opportunity to comment on this subject.

Sincerely,

David Waldrip, President Stellwagen Bank Charter Boat Association



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmf.org

MEMORANDUM

June 28, 2018

To: American Eel Management Board
From: Law Enforcement Committee
RE: LEC Comments on Draft Addendum V and the Maine Aquaculture Proposal for American Eel

The Law Enforcement Committee (LEC) of the Atlantic States Marine Fisheries Commission (ASMFC) met via conference call on June 28, 2018 to review and provide comments on Draft Addendum V for American Eel and the Maine Aquaculture Proposal for Glass Eels. The following members were in attendance:

LEC: Chairman, Steve Anthony (NC); Vice Chairman, Doug Messeck (DE); Kurt Blanchard (RI); Rene Cloutier (ME); Mike Henry (NOAA OLE-for Tim Donovan); Tom Gadowski (NY); Greg Garner (SC); Honnie Gordon (USFWS); Katie Moore (USCG); Keith Williams (CT); Capt. Jason Snellbaker (NJ)

OTHER PARTICIPANTS: Shaun Ledwin (ME); Sara Rademaker (American Unagi)

STAFF: Toni Kerns; Kirby Rootes-Murdy; Mark Robson; Caitlin Starks

Kirby-Rootes Murdy of ASMFC staff briefed the LEC on two key elements of Draft Addendum V of potential enforcement concern.

Maine Glass Eel Quota

Staff presented proposed options in Draft Addendum V to increase Maine's glass eel quota from the current level of 9,688 pounds to 11,749 pounds. The LEC was asked to provide comments on potential impacts and/or consideration as to how changes in the Maine glass eel quota may impact enforcement issues, such as illegal harvest. After reviewing possible options for changing the quota, the LEC had no specific concerns that would impinge on enforcement resources or capabilities.

Aquaculture Provisions

Next, Staff presented potential changes to the Aquaculture provisions in Draft Addendum V, specifically the pooling of aquaculture harvest across multiple states for a combined allowance of 600 pounds. The LEC was asked to provide comments on whether this change could present any enforcement challenges. While some members of the LEC expressed some discomfort with moving towards a pooled quota system with only two states (Maine and South Carolina) currently allowing legal harvest of glass eels, there was general agreement that such a provision would not necessarily complicate enforcement monitoring of a facility within a given state. However, it could present additional enforcement challenges to those states where eels were being harvested and then moved across state lines to a facility as part of the pooled quota. If,

for example, a participating state agrees to a pooled quota but does not otherwise allow glass eel harvest, the deployment of nets in that state under a special permit for aquaculture could be subject to raiding or poaching and could provide a level of cover for illegal harvest in that state. Some LEC members did express confusion as to why this option was being proposed given recent efforts of glass eel aquaculture in North Carolina have been less than successful in obtaining their requested 200-pound harvest allowance.

Maine Aquaculture Proposal from American Unagi

Sara Rademaker from American Unagi presented information on that company's proposal for an aquaculture facility in Maine. This facility would be operated under the current regulations in place in Maine and pursuant to ASMFC Addendum IV. Sara clarified how glass eels from both legal Maine harvesters and the those granted the 200-pound harvest allowance through American Unagi would be kept separate during the initial 4 months of the harvest season; following the season and 'weaning' period, the eels would be combined for further grow out. The 200 pounds of harvest for aquaculture would be tracked through the swipe card program. The LEC raised some questions about the current status of the North Carolina operation and whether there have been any recent enforcement problems that would impinge on conditions for the Maine proposal. However, after hearing how Maine proposes to track eels harvested for aquaculture purposes using a swipe card that is separate from the card used for the open fishery, there was consensus that a licensed operation could be monitored to ensure compliance with that state's regulations. Penalty provisions that allow for revoking licenses and seizing of eels such as exist in Maine were recognized as an effective deterrent, and similar provisions would be helpful in any state where an aquaculture operation is authorized.

The LEC appreciates the opportunity to provide advice and recommendations regarding the management of American Eels.



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmfmc.org

MEMORANDUM

June 28, 2018

To: American Eel Management Board
From: American Eel Advisory Panel
RE: June 2018 AP Call Summary

List of AP Participants: Mari-Beth DeLucia (Chair; TNC), Mitch Feigenbaum (PA), David Allen (ME)

Other: Sara Rademaker, American Unagi

Staff: Kirby Rootes-Murdy (ASMFC), Dr. Kristen Anstead (ASMFC), Sean Ledwin (ME DMR), and Dr. Gail Wippelhauser (ME DMR)

The Commission's American eel Advisory Panel (AP) met on Thursday June 28th 2018 to provide comments on Draft Addendum V, the Maine Aquaculture Proposal, and receive an update on a recent International Workshop on American eel Management in the Dominican Republic.

Draft Addendum V

Staff presented the Draft Addendum V and AP members provided the following comments by issue items:

Glass Eel

Maine Glass Eel Quota: Two AP members were in favor of option 1, Status Quo Quota of 9,688 pounds. Reasons cited were concerns over poaching, the recent new news of illegal harvest in Maine outside of the swipe card system and concern over the status of the resource. It was noted that the recommendation from the 2012 assessment was to reduce mortality on all life stages and raising the quota would go against that advice.

One AP member was in favor of Option 2, Quota of 11,749 pounds. Reasons cited was that the state of Maine is has a good handle on the illegal harvest and that the quick response of Maine Department of Marine Resources (DMR) to close the glass eel fishery early demonstrates they can quickly address issues as they arise.

Aquaculture Plan Provisions: All three AP members were in favor of option 2, Pooling of Aquaculture Harvest Allowance. Reason cited were an interest in spreading the harvest allowance across multiple states to reduce effort and removals from just one watershed and concern that the 200 pound allowance is not enough for an aquaculture business to operate on. Other comments noted frustration that the pooling option 2 didn't require the states in

coordination to complete a life cycle survey. One AP member did note that concern about the enforcement of harvest that may take place in one take and then be transferred across state lines to a facility in another state.

Yellow Eel

Coastwide Cap: Two AP members stated that their preference was for option 4: 12% reduction from the time series average of 1998-2016 landings. Reasons cited were the previous recommendations made by the Technical Committee in 2014 in light of the 2012 assessment results. Both of them also indicated that if option 4 was not selected than their second choice would be option 1: status quo, 907,671 pounds.

One AP member indicated their preference for option 3: time series average of 1998-2016 landings. Reasons cited that the fishery historically averaged closer to 2 million pounds annually and recent genetics research demonstrates that there is significant breeding population that could sustain higher removals. For this AP member, if this option were not selected their second choice would be option 2: median of 1998-2016 landings.

Management Triggers: All three AP members stated their preference for Option 3: two year exceedance of the coastwide cap by 10%. Reasons cited is that adjusting the trigger to be two years will better buffer against fluctuations in the landings.

State Allocations: One AP member indicated their preference for Option 1: Status Quo state allocations. No reasons were cited, but they did note their opposition to Option 2: no state by state quotas. Two AP members did not indicate a preference, instead noting the complexity of the options.

Transfer: All three AP members indicated their preference for Option 2: extending quota transfers to February 15. Reasons cited was that it would allow the states more time to account for overages and get quota transfers as needed.

Maine Aquaculture Proposal

Sara Rademaker of American Unagi presented the Maine Aquaculture Proposal. Sara outlined that the proposal would both purchase glass eels from harvesters in addition to the 200 pound harvest allowance to make the operation financially viable. All harvest the facility would acquire glass eels from would be licensed Maine harvesters using the swipe card system. The facility is a recirculating aquaculture system (RAS) that would have 120 metric ton capacity. Harvest would take place during the currently specified glass eel season of March through June.

The AP posed questions regarding whether converting glass eels into yellow eels would ever be profitable enough to compete with the current price per pound being set by demand for glass eels in Asian seafood markets. Sara noted that there is great volatility in price per pound, which

fluctuated based on market demand, and so domestic production of yellow eels and their facility would hopefully create more stability in the price by augmenting the current market demand. Sara did note that the US annually imports approximately 5,000 metric tons and that when fully operational, their facility would likely 'eat' into that importation demand slightly.

All three AP members were in support of the Maine Aquaculture Proposal because of the opportunity it presents to the state of Maine and potential capacity to reduce the market demand, and potentially fishing mortality, on glass eels.

Range State Workshop in the Dominican Republic

Mari-Beth presented on the recent workshop in the Dominican Republic that brought together Atlantic and Caribbean countries that have or are seeing emerging eel fisheries. The workshop was put on by with funding by the US Fish and Wildlife Service and Canada Department of Oceans and Fisheries, and was organized by the Sargasso Sea Commission. In 2016, at the Convention on the International Trade in Endangered Species (CITES) Meeting in South Africa, a request was made to collect information from all countries that trade anguillid species, include American Eel. This report out of information from all American eel range states conducted at the workshop, as well discussions on future coordinated international management of American eel. The IUCN Species group will be reconsidering the red listed status in November 2018. And lastly the reports by countries will at the next Animals CITES subcommittee meeting this summer, and the full CITES will next consider whether to add American eel to appendix II in summer 2019.



Atlantic States Marine Fisheries Commission

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MEMORANDUM

July 10, 2018

To: American eel Management Board
From: American eel Stock Assessment Subcommittee
RE: Review of Maine's Life Cycle Survey, Maine's Aquaculture Proposal, and Draft Addendum V

Attendees: Jordan Zimmerman (DE), Sheila Eyler (USFWS), Andrew Watson (SC), Patrick McGee (RI), Marty Gary (PRFC), Robert Eckert (NH), Ryan Harrell (GA), Gail Wippelhauser (ME), Derek Orner (NOAA), Ellen Cosby (PRFC), Todd Mathes (NC), Troy Tuckey (VIMS), Kim Bonvechio (FL), Danielle Carty (SC), Jen Pyle (NJ), Keith Whiteford (MD), Brad Chase (MA), Carol Hoffman (NY), Mike Kauffman (PA)

Public: Sara Rademaker (American Unagi)

Staff: Kirby Rootes-Murdy (ASMFC) and Kristen Anstead (ASMFC)

The Commission's American eel Technical Committee (TC) met via conference call on Tuesday July 10, 2018 to discuss the following items:

1. Status of Maine's Life Cycle Survey
2. Maine's Aquaculture Proposal
3. Draft Addendum V
4. Other Business

Call Summary and Recommendations:

1. Status of Maine's Life Cycle Survey

Maine began their survey in 2016 and improvements were made to sampling in 2017, resulting in higher catches of glass and yellow eels in the Cobboseecontee Stream. Sampling includes fyke nets for glass eels in the Coboseecontee near its confluence with the Kennebec River, eel ramp sampling at the first dam on the river, eel pot sampling and electrofishing in upstream areas, including Pleasant Pond, and silver eel sampling with fyke nets and by Didson monitoring at the American Tissue Dam. Good catches of glass eel occurred in the fyke nets in 2017 as well as in the eel ramps.

Eel potting had better results in 2017 than the previous year, likely because of modifications to the gear to reduce escapement. No silver eels were captured in the fyke nets and no confirmed silver eels were identified on Didson monitoring at the American Tissue Dam. Overall it appears that the three dams located on the lower portion of the stream are limiting eel expansion further in the system, resulting in low catches. The second dam on the river will be required to provide upstream and downstream passage through a hydropower license, but no plans are in place for eel passage at the other non-hydropower dams. Sampling is planned to continue for 2018, but it may be impacted by work in the basin, including replacement of a bridge and installation of a siphon hose in West Harbor Pond. The TC is satisfied with Maine's efforts in the survey and the only recommendation was to increase the number of eel pot sets and reduce the soak time from 48 hr to 24 hr to potentially increase catch to generate more useful CPUE and mark/recapture data

2. Maine's Eel Aquaculture Proposal

Sara Rademaker of American Unagi (AU) provided a presentation on the aquaculture proposal, requesting 200 lbs of glass eels in Maine. The TC reviewed the proposal and verified that all required components were included. The TC determined that the proposed harvest locations were not described as areas that would minimally contribute to the American eel stock, which is a requirement of the proposal. However, the TC acknowledges the difficulty in determining "minimal contribution," and because the harvest was to come from several locations, the aquaculture quota was a small proportion compared to harvest of glass eels allowed in Maine, and since Maine is already completing a Life Cycle Survey, there was not significant concern that this proposal did not focus on harvest strictly from areas of "minimal contribution." The TC requested data on survival in the facility after the harvest season was complete and before the current eels were combined in the facility with other cohorts. AU indicated they could provide this information. In discussing the proposal with AU, it was noted that over time, the facility would house cohorts from more than one year of harvest, and identifying different cohorts after the year harvested will likely not be possible due to variable eel growth rates. TC also would like to see more specificity in harvest area of the aquaculture set-aside although it is assumed that harvest of this allocation would generally come from commercial harvest areas. There were no additional concerns or comments on the proposal and the TC recommends approval of Maine's Eel Aquaculture Proposal for 2019.

3. Draft Addendum V

The TC was asked to review the Draft Addendum as well as provide comment on the same questions posed to the SAS. Briefly, these questions were in regard to a statement in the Addendum regarding American eel maturity and the yellow eel fishery, the implications to the stock if the coastwide cap was increased, and guidance for how to address overages to the coastwide cap.

Provide feedback on accuracy of statement: American eels reach maturity at a younger age and smaller size in estuarine water than in fresh water (Clark 2009), and the 19-year time series of landings likely represents at least two generations

(COSEWIC 2012) of estuarine yellow eels that have been exposed to the yellow eel fishery.

The TC recommends finding a different citation for the first statement. Clark 2009 describes landings information but does not address sex or size at maturity. The TC has no further concerns with this statement.

The TC was not able to assess the impact to the resource if the current coastwide cap is exceeded or if increased glass eel quota is approved for Maine. Generally the TC recommends no increases in landings at any life stage due to the depleted stock status identified in the stock assessment in 2012 and again in the stock assessment update in 2017. Any increase in landings could negatively impact the stock, but determining the extent of that impact is not possible at this time given the absence of biological reference points for the eel fishery in the stock assessment.

The TC recommended that seasonal restrictions in harvest may be helpful to address overages. However, a case-by-case analysis should be conducted when an overage occurs to determine why it occurred and those specific reasons should be addressed within one or more jurisdictions as appropriate.

The TC also discussed the language in the addendum specific to pooling of harvest for aquaculture purposes (Option 2 in section 3.2). It was noted that the option does not specify that each of the states can only contribute up to 200 lbs., so theoretically, one state could harvest up to 600 lbs. of glass eels under this option. The TC reiterated that any increase in landings- including the addition of glass eel harvest- could negatively impact the stock, but determining the extent of that impact is not possible at this time.

Last, the TC recommends changing the language in the Aquaculture Plan requirements regarding “minimal contribution.” The TC acknowledges the current language is vague and difficult to evaluate. Instead of removing that requirement completely, as suggested in Option 2 of Addendum V, the TC requests the following language to be included to replace the “minimal contribution” language in that section of Addendum V:

“States and jurisdictions may develop a Plan for aquaculture purposes. Under an approved Aquaculture Plan, states and jurisdictions may harvest a maximum of 200 pounds of glass eels annually from within their waters for use in domestic aquaculture facilities. Site selection for harvest will be an important consideration for applicants and reviewers. Suitable harvest locations will be evaluated with a preference to locations that have (1) established or proposed glass eel monitoring, (2) are favorable to law enforcement and (3) watershed characteristics that are prone to relatively high mortality rates. Watersheds known to have features (ex. impassible dams, limited area of upstream habitat, limited water quality of upstream habitat, and hydropower mortality) that would be expected to cause lower eel productivity and/or higher glass eel mortality will be preferred targets for glass eel harvest. This is not an exclusive requirement, because there will be coastal regions with interest in eel aquaculture where preferred watershed features do not occur or are not easily demonstrated. In all cases, the applicant should demonstrate that the above three interests were prioritized and considered.”

4. Other Business

The TC received an update from Todd Mathes of NC regarding the status of the American Eel Farm (AEF). The AEF received approval for their aquaculture plan to harvest 200 lbs of glass eel for 2018 and 2019 from the Board with the condition that they would provide an update after the 2018 fishing season to check for violations. The AEF did not receive any violations in 2018. For the 2018 fishing season, the AEF caught some glass eels (<1 lb) which were all released. They encountered two elvers which were also released. The AEF fished for a limited number of weeks that were available to them and ultimately did not keep the glass eels they harvested.

The TC nominated Ellen Cosby from PRFC as the new Vice Chair and she accepted the position.

**State of Maine Aquaculture Plan for American Eel Pursuant to
Addendum IV to the ASMFC Interstate Fishery Management Plan**



Maine Department of Marine Resources
32 Blossom Lane
Augusta, ME 04330

MAY 2018



Photo By American Unagi, LLC

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Background

Maine DMR supports the development of domestic aquaculture in Maine. With Maine's existing fishery management measures and eel management infrastructure the state is in a good place to implement a domestic aquaculture quota into its current management plan. Connecting Maine's fishery to a domestic aquaculture provides year-round jobs directly in eel grow-out, supports indirect jobs throughout the local seafood and marine-related industries, and produces an eel product grown under the high standards of US aquaculture production.

The Maine Department of Marine Resources (MDMR) solicited interested parties to participate in this quota request and has selected to work with American Unagi for 2019. Over the course of the last four years, American Unagi has utilized recirculating aquaculture system (RAS) technology, specifically using designs developed and successfully utilized for eels in Europe. This has allowed the company to grow high-value American eels in a controlled environment, certify sustainability and source, and provide a level of product supply to growing customer segments that prefer locally grown/sourced and fully traceable seafood products. Given the success of the last four years of pilot production, American Unagi is scaling production to 120 MT and is requesting a domestic aquaculture quota for the commercial facility.

In October 2014, the ASMFC adopted Addendum IV to the Interstate Fishery Management Plan for American Eel. Addendum IV implemented a provision allowing states and jurisdictions to submit an Aquaculture Plan to allow for the limited harvest of American eel glass eels (hereinafter "glass eels") for use in domestic aquaculture facilities. Specifically, Addendum IV states: "Under an approved Aquaculture Plan, states and jurisdictions may harvest a maximum of 200 pounds of glass eel annually from within their waters for use in domestic aquaculture facilities provided the state can objectively show the harvest will occur from a watershed that minimally contributes to the spawning stock of American eel. The request shall include: pounds requested; location, method, and dates of harvest; duration of requested harvest; prior approval of any applicable permits; description of the facility, including the capacity of the facility the glass eels will be held, and husbandry methods; description of the markets the eels will be distributed to; monitoring program to ensure harvest is not exceeded; and adequate enforcement capabilities and penalties for violations." Pursuant to Addendum IV to the Interstate Fishery Management Plan for American Eel, the MDMR is submitting the following Aquaculture Plan for approval. While only one aquaculture operation, American Unagi, has requested to be included in the Aquaculture Plan for consideration, future plans may consider additional operations.

Pound Requested

American Unagi is requesting 200 pounds for the 2019 fishing year.

Location of Harvest

Maine’s current fishery operates across the state (Figure 1). Under current regulations, harvesters are required to report fishing locations when their catch is sold to dealers. In 2016, approximately 9400 pounds were harvested from multiple locations in 10 counties (Table 1).

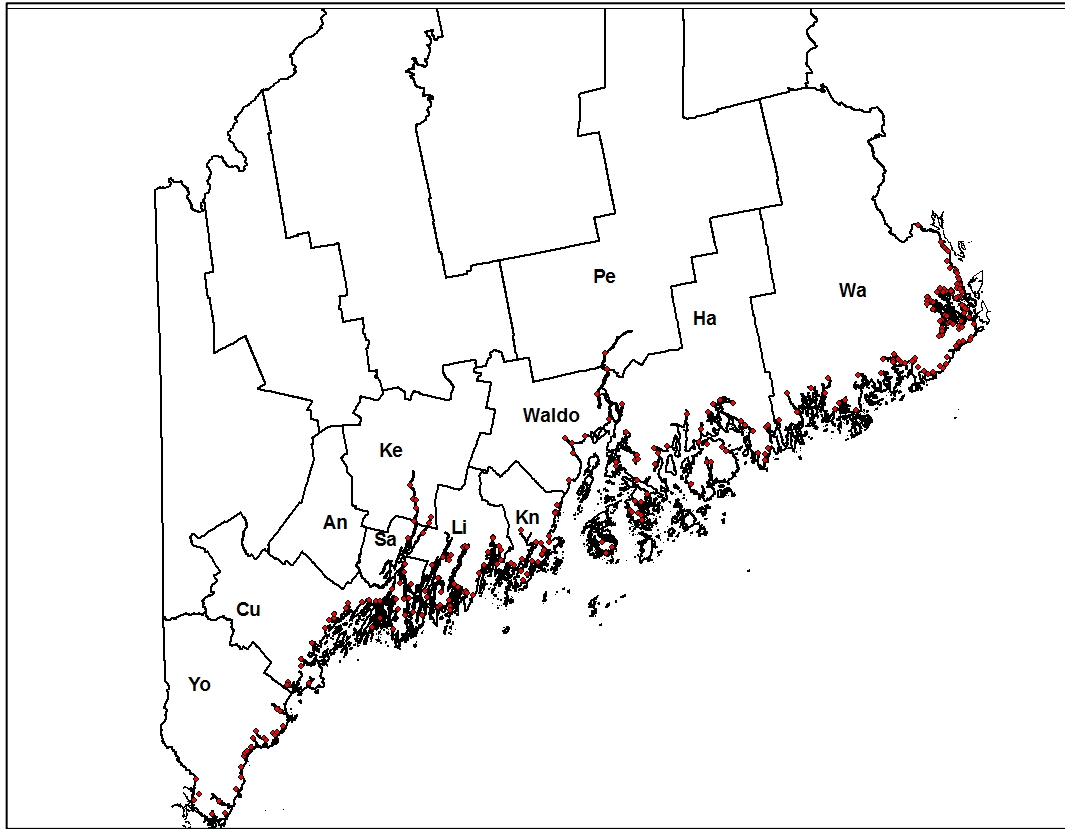


Figure 1 Location of Glass Eel Harvest (red circles) in Maine in 1996. Countries are York (Yo), Cumberland (Cu), Androscoggin (An), Sagadahoc (Sa), Kennebec (Ke), Lincoln (Li), Knox (Kn), Waldo, Penobscot (Pe), Hancock (Ha), and Washington (Wa).

| County | Pounds of glass eels |
|------------|----------------------|
| Cumberland | 2010.27 |
| Hancock | 2603.07 |
| Kennebec | 18.24 |
| Knox | 974.6 |
| Lincoln | 1484.39 |
| Penobscot | 547.46 |
| Sagadahoc | 49.91 |
| Waldo | 541.12 |
| Washington | 942.6 |
| York | 227.95 |
| Total | 9399.61 |

Table 1 Commercial Harvest of Glass in Maine by Country for 2016

Some of the commonly fished rivers include:

| | |
|--------------------|---|
| Lincoln County: | Medomak River (Waldoboro, Muscongus, Friendship) Pemaquid River (New Harbor) Sheepscot River (Sheepscot, Alna) |
| Hancock County: | Penobscot River (Brewer) Orland River (Orland) Union River (Ellsworth) |
| Waldo County: | Penobscot River (Bangor) |
| Washington County: | Tunk Stream (Stuben) Narraguagus River (Cherryfield) Machias River & East Machias River (Machias) |

American Unagi is planning to source the glass eels from several regions in Maine’s watersheds to limit the impacts to individual river systems and be consistent with the statewide approach of the exiting fishery. In addition to data for regulatory measures, having full traceability and accountability of the facility’s eels is important to the company’s end market so the fishermen, volume, and harvest location will be identified for all eels entering the facility.

Rates of Harvest

Aquaculture harvest will be limited to the current glass eel fishing season per State of Maine. By law, the elver season occurs between March 22 and June 7 (Appendix A; 12 M.R.S.A. §6575).

Methods of Harvest

A licensed harvester will be required to fish for all eels used for domestic aquaculture. License are issued by the Department of Marine Resources (Appendix A; 12 M.R.S.A. §6505-A, and §6302-A). For the aquaculture quota, one or more individuals will be issued a specialty aquaculture fishing allowance by MDMR Commissioner that permits the harvester to harvest glass eels for aquaculture purposes beyond the limits of their personal harvest quotas.

Glass eels shall be harvested only by dip net or elver fyke net, with size and construction being in compliance with current Maine law (Appendix A; 12 M.R.S.A. §6001). A license issued under this section must identify the number and types of nets that the license holder may use (Appendix A; 12 M.R.S.A. §6505-A). Elver fyke nets must display a tag issued by the Department when they are submerged (Appendix A; 12 M.R.S.A. §6505-B)

Additional harvest measures include a prohibition on fishing in the middle third of any waterway, within 150 feet of a fishway or a dam with a fishway, and specific area closures where fishing for elvers is prohibited (Appendix A; 12 M.R.S.A. §6575-B; §6575-C; §6575-F; §6575-G).

Finally, no person may fish for, take, possess or transport pigmented eels. All catches shall be screened and graded immediately upon harvest, whereas all eels failing to pass through 1/8" bar mesh net, as well as all bycatch will be returned to the water.

Minimal Contribution

Addendum IV allows states and jurisdictions to harvest a maximum of 200 pounds of glass eel annually from within their waters for use in domestic aquaculture facilities provided the state can objectively show the harvest will occur from a watershed that minimally contributes to the spawning stock of American eel. Given Maine's existing commercial fishery, the aquaculture quota will be minimal with respect to the existing quota and will also be taken from multiple drainages.

This is also difficult to support objectively as the annual spawning stock of American eels has never been quantified, precluding a numeric estimate of the impact of removing 200 pounds of glass eels for domestic aquaculture on the spawning stock. Given this lack of quantitative data we consider this harvest in Maine will have a minimal impact on the spawning stock of American eel because 1) the species is panmictic, 2) the species is widely distributed, and 3) the natural mortality of glass eels during recruitment into freshwater is very high.

Microsatellite DNA analysis of glass eels sampled from Nova Scotia (Canada) to Florida (United States) found no evidence for significant spatial or temporal genetic differentiation (Cote et al 2012), thus confirming the hypothesis that American eels are panmictic – the species is considered a single spawning stock and mating occurs randomly.

The range of the American eel includes eastern Canada, the East Coast and Gulf Coast of the United States, the Mississippi River, the east coast of Central American, the northern coast of Venezuela, and the Caribbean Islands. Within the Atlantic seaboard portion of the range, the major subwatersheds include approximately 230,549 square miles (Table 2) of habitat. This vast area must produce an enormous number of silver eels. For example, Oliveira and McCleave (2000) electrofished four rivers in Maine (Sheepscot, Medomak, Pleasant, East Machias) and calculated the mean density of yellow eels in each system. The riverine portion of the Sheepscot River alone (area from a GIS) would have been inhabited by 124,718 yellow eels (10.8 eels/100m² x 11,548 units of 100m²).

The best available information indicates that natural mortality of glass eels is high. Jessop (2000) estimated a finite mortality rate during recruitment into a coastal river (May-October) of 0.9943-0.9948 (from trap counts) and 0.9958-0.9981 (from mark-recapture). Assuming a finite mortality rate of 0.99, 198 of the 200 pounds would have died of natural causes before reaching maturity.

Table 2 Area of Eastern Seaboard subwatershed¹¹

| Subwatershed | Area (miles ²) | Percent of Total |
|--------------------|----------------------------|------------------|
| Chedabucto Bay | 2,148 | 0.9 |
| Gulf of Maine | 69,115 | 30.0 |
| Long Island Sound | 16,246 | 7.0 |
| Lower New York Bay | 14,000 | 6.1 |
| Delaware Bay | 14,119 | 6.1 |
| Chesapeake Bay | 64,299 | 6.127.9 |
| Albermarle Sound | 14,380 | 6.2 |
| Winyah Bay | 7,221 | 3.1 |
| Santee River | 4,531 | 2.0 |
| Savannah River | 9,850 | 4.3 |
| St. Johns River | 8,840 | 3.8 |
| Biscayne Bay | 2,800 | 1.2 |
| Kissimee River | 3,000 | 1.3 |
| TOTAL | 230, 549 | 100 |

Monitoring Program

The Maine glass eel fishery has been managed under a Total Allowable Catch (TAC) established by the Atlantic States Marine Fisheries Commission (ASMFC) since 2014. In 2014, the TAC was 11,749 lbs, which was determined by calculating a 35% reduction from the 2013 Maine landings of elvers. The TAC was subsequently dropped to 9,688 lbs for the 2015-2018 seasons. This TAC was based on the actual Maine landings achieved during the 2014 season. Landings have typically approached the TAC, except for the 2015 season, when poor weather prevented fishermen from filling their quotas. By law, 21.9% of the annual TAC is allocated to the four federally recognized Indian Tribes in the state.

Concurrent with the implementation of the TAC, Maine implemented an individual quota system for state license holders, calculated based on harvester reported landings during the 2011, 2012, and 2013 seasons. The individual quota system is monitored through the use of a “swipe” card.

The swipe card system was created in 2013 to enable Maine to monitor the elver quota. The system was designed to allow dealers to enter data daily and allow MEDMR staff to quickly analyze that data within 24 hours of receipt. Additionally, the swipe card system was developed as the mechanism to monitor the individual fishing quota of harvesters.

¹ https://en.wikipedia.org/wiki/Atlantic_seaboard_watershed

Swipe cards are issued annually to each elver license by a Marine Patrol Officer. At that time, the license holder signs an acknowledgement form that indicates their understanding of their individual quota and the penalties associated with exceeding their quota. Harvester sales are checked daily against their quota, and when the harvester's quota is reached or exceeded, the swipe card is deactivated by MEDMR Landings Program staff.

Each elver dealer has a swipe card reader for the permanent facility, as well as all vehicles used to transport elvers. Dealers are required to submit swipe card transaction reports (including negative reports) by 2 p.m. for each day of the elver season (March 22nd to June 7th). If dealers are delinquent with two days' worth of reports the swipe card system will not allow dealers to purchase elvers from harvesters until they submit all outstanding reports or create a negative report for the missing days. A dealer to dealer program was added in 2015. The dealer to dealer program required a card swipe each time dealers moved elvers to another location or dealer. The dealer to dealer program uses the same hardware and software as the harvester to dealer system, and is also subject to daily reporting including negative reports.

For the aquaculture quota, MDMR will issue separate cards to the assigned harvesters for a total allocation of 200 pounds. When the facility is assigned its quota it will designate the licensed harvesters that will be collecting the 200lbs. The aquaculture facility will be required to hold an elver dealer permit and license its buying station, transport vehicles, and facility. The permitted aquaculture facility will be the only dealer allowed to swipe aquaculture quota cards in addition to regular individual harvester cards. The data collection on these transitions from harvester to facility will include the harvester's name, harvest site, harvest method, date, and pounds. When the 200 pound quota is achieved, cards will be deactivated.

Due to the nature of the production, the facility will also be able to provide a status report to MDMR on glass eel survival when eels are moved from glass eel intake system into production facility at approximately four months from arrival (see facility description for more details).

Penalties for Violation

Toward the end of the 2018 elver fishing season, an investigation by Maine Marine Patrol determined that some elver dealers were buying elvers for cash at a reduced price, without using the swipe card system. In response, the Commissioner used his emergency rule-making authority to immediately close the fishery for the remainder of the season. Prior to the start of the 2019 elver season, MDMR will pursue any statutory or regulatory changes that are determined necessary to reduce the risk of such practices continuing to occur.

Since 2012, Maine has made numerous law changes to close any remaining loopholes and create the proper penalties for elver violations. The majority of elver violations were criminalized in 2014, changing from a civil violation, to a Class D crime with a \$2000 fine. At the same time, mandatory license

revocations were imposed for the second violation of several elver offenses, including untagged gear, fishing out of season, or exceeding the individual fishing quota. In addition to the \$2000 fine, individuals who exceed their quota are subject to a “pecuniary gain” fine, where they must pay back to the State the value of any elvers that were taken in excess of their quota. The Department is authorized to deny the renewal of the license of an individual who has failed to pay their pecuniary gain fine in its entirety prior to the following elver season.

Harvester, dealers, and aquaculture facilities may have random inspection of the facility and places of harvest conducted to ensure all rules and regulations under conditions of permit(s) are being adhered to. An aquaculture facility permit would hold to these same penalties and loss of license for violations.

Regardless of specific penalties that may be provided in law, the Commissioner also has the authority to suspend any licenses or certificates issued by the Department if a person is convicted or adjudicated in court of violating any marine resources law or regulation. In addition, the Commissioner may pursue license suspension without criminal conviction or civil adjudication through an administrative process.

Prior Approval of Permits

American Unagi was first approved to hold and grow eels by MDMR in 2014. During the course of operating the pilot facility, American Unagi has worked closely with the State regulators on permitting for its operations. The company holds the necessary permits to buy, culture, and sell American eels.

For purchasing elvers from licensed Maine harvesters, American Unagi holds a MDMR Elver dealer license that is renewed annually. Under this permit, the company has permitted a buying station, transport vehicle, and facility. For sale of grown product, the company holds a MDMR Wholesale Dealer Permit that is renewed annually. Prior to November 1st, all eel aquaculture was permitted under MDRM, but as of November 1, 2017, the state of Maine has shifted the responsibilities for permitting land-based aquaculture facilities from the Department of Marine Resources to the Department of Agriculture, Conservation, & Forestry (DACF). The DACF is underway developing interim guidance for licensing and American Unagi is currently working with the State closely during this transition. American Unagi anticipates having the new permitting finalized before the approval of the aquaculture quota.

Description of Market (s)

American Unagi has already been supplying domestic outlets for the eel produced in its pilot facility. The company is planning to expand its sale of live and further develop processed products for domestic consumption. For propriety reasons, specific details are not being provided.

Description of facilities (design, capabilities, and technical facts)

The company is building a 120MT commercial scale land-based recirculating aquaculture plant in midcoast Maine. Following the formula for success of eels and RAS, American Unagi engaged a worldwide leader in RAS design in eels to assist in assessing the feasibility of its commercial plant, develop a schematic design, provide detailed operations and equipment costs to develop the plant.

The farm consists two separate systems: a glass eel system and a grow-out system. When glass eels are brought in they will go into the glass eel system which also serves as quarantine area. This recirculated system includes 9 round tanks of 2.25 meter diameter and 100 cm deep. Every 12 minutes the water is filtered and then recycled. The outlet of the fish tank is equipped with a brushing machine, basically a cylindrical screen that is constantly brushed to prevent clogging. The brushing machine is fed with water from the bottom center of the tank, pulling up dead and dying fish and feces. Glass eels are held in this system for 1-4 months as they are acclimated to commercial aquaculture diet. Once the glass eel reach a weight of 3-5 gram they are size graded and moved into the grow-out system. This system has a two series of tanks split into “nursery” and “grow-out”. The first series of nursery tanks hold the eels from 3-5 grams until around 20 grams. The eels are then moved to the largest series of tanks within the same systems, where they are grown to market size.

Each system has its own filtration equipment. The waste water leaving the tanks is first sieved with a drumfilter; a rotating sieve that is equipped with a sieve cloth with 36-40 micron openings. Once the screen gets clogged with solids it automatically starts a rinsing cycle, spraying the waste into a gutter that is collected and processed. From the drumfilter the water is pumped into a biofilter for the stripping of carbon dioxide and for conversion of ammonia (NH₃) into the relatively harmless nitrate (NO₃). The biofilter is a moving bed biological reactors (MBBR's). These are energy efficient, compact, and are more efficient in maintain heat than other biofilters. From the biofilter the water flows by gravity through a MHO oxygen reactor to add pure oxygen and then by gravity back to the fish tanks.

A monitoring /control system is used for guarding pH, temperature and oxygen. All fish tanks are equipped with water level sensors. Together with some pressure sensors these are connected to an alarm system that dials out to cell phones. Additionally, our facility is equipped with video surveillance for both security and monitoring purposes.

During the course of the aquaculture process there is some expected mortalities and the losses are anticipated in the production planning. In American Unagi's experience, the largest period of mortality occurs during weaning process after glass eels first arrive. While the company has seen as little as 1% loss, it anticipates as high as 10% loss into its production planning to accommodate for this expected mortality. Therefore to produce, 120 MT annually the company will stock up to 360 lbs of glass eels, with 200 lbs of this being secured under the domestic aquaculture permit and the remaining 160 thru the standard quota system. Each year when the glass eels are stocked into facility the first one to four months they are kept

separate from previous year classes. During the this intake period the company tracks growth, survival, and numbers for the years glass eels that would be available to MDMR for review and tracking.

During the production process the eels are size graded every 6-8 weeks. Given eel is a non-domesticated species there is a very big variance between the performance of different individuals. A fast grower may reach market weight in just 6 months but other fish may still weigh a few grams after one year. As a result of the growth variation the farm population in the grow-out tanks will comprise of 2-3 year classes of eel. As part of operating a successful aquaculture facility, meticulous records of growth, survival, and biomass are a necessary part of the business so during the course of the grow-out the farm maintains records of current eels onsite. In addition to supporting the successful operation of the business, these records are also used to support that best management practices are being followed.

References

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Maine Revised Statutes Title 12: Conservation

§6001. DEFINITIONS

13-F. Elver. "Elver" means a member of the species *Anguilla rostrata* in that stage of its life cycle when it is less than 6 inches in length.

[1995, c. 536, Pt. A, §1 (NEW) .]

13-G. Elver fyke net. "Elver fyke net" means a fyke net that is 30 feet or less in length from cod end to either wing tip, is fitted with netting that measures 1/8-inch bar mesh or less, contains a 1/2-inch or less bar mesh excluder panel that covers the entrance of the net, and consists of not more than one funnel end, one cod end and 2 wings.

[1997, c. 575, §1 (AMD) .]

13-H. Elver dip net. "Elver dip net" means a dip net with a hoop of not more than 30 inches in diameter and fitted with netting that measures 1/8 inch bar mesh or less.

[1999, c. 7, §1 (AMD) .]

40-A. Sheldon eel trap. "Sheldon eel trap" means a box trap with a netted wing 10 feet or less in length used to intercept and direct elvers into the trap.

§6302-A. TAKING OF MARINE ORGANISMS BY FEDERALLY RECOGNIZED INDIAN TRIBES

1. Tribal exemption; commercial harvesting licenses. A member of the Passamaquoddy Tribe, Penobscot Nation, Aroostook Band of Micmacs or Houlton Band of Maliseet Indians who is a resident of the State is not required to hold a state license or permit issued under section 6421, 6501, 6502-A, 6505-A, 6505-C, 6535, 6601, 6602, 6701, 6702, 6703, 6731, 6745, 6746, 6748, 6748-A, 6748-D, 6751, 6803, 6804 or 6808 to conduct activities authorized under the state license or permit if that member holds a valid license issued by the tribe, nation or band or the agent of the band to conduct the activities authorized under the state license or permit. A member of the Passamaquoddy Tribe, Penobscot Nation, Aroostook Band of Micmacs or Houlton Band of Maliseet Indians issued a tribal license pursuant to this subsection to conduct activities is subject to all laws and rules applicable to a person who holds a state license or permit to conduct those activities and to all the provisions of chapter 625, except that the member of the tribe, nation or band:

A. May utilize lobster traps tagged with trap tags issued by the tribe, nation or band or the agent of the band in a manner consistent with trap tags issued pursuant to section 6431-B. A member of the tribe, nation or band is not required to pay trap tag fees under section 6431-B if the tribe, nation or band or the agent of the band issues that member trap tags; [2011, c. 598, §17 (AMD) .]

B. May utilize elver fishing gear tagged with elver gear tags issued by the tribe, nation or band or the agent of the band in a manner consistent with tags issued pursuant to section 6505-B. A member of the tribe, nation or band is not required to pay elver fishing gear fees under section 6505-B if the tribe, nation or band or the agent of the band issues that member elver fishing gear tags; and [2011, c. 598, §17 (AMD) .]

C. Is not required to hold a state shellfish license issued under section 6601 to obtain a municipal shellfish license pursuant to section 6671. [1997, c. 708, §1 (NEW); 1997, c. 708, §3 (AFF) .]

[2013, c. 254, §1 (AMD) .]

2. Tribal exemption; sustenance or ceremonial tribal use. Notwithstanding any other provision of law, a member of the Passamaquoddy Tribe, Penobscot Nation, Aroostook Band of Micmacs or Houlton Band of Maliseet Indians who is a resident of the State may at any time take, possess, transport and distribute:

A. Any marine organism, except lobster, for sustenance use if the tribal member holds a valid sustenance fishing license issued by the tribe, nation or band or the agent of the band. A sustenance fishing license holder who fishes for sea urchins may not harvest sea urchins out of season; [2011, c. 598, §17 (AMD).]

B. Lobsters for sustenance use, if the tribal member holds a valid sustenance lobster license issued by the tribe, nation or band or the agent of the band. The sustenance lobster license holder's traps must be tagged with sustenance use trap tags issued by the tribe, nation or band or the agent of the band in a manner consistent with trap tags issued pursuant to section 6431-B; however, a sustenance lobster license holder may not harvest lobsters for sustenance use with more than 25 traps; and [2011, c. 598, §17 (AMD).]

C. Any marine organism for noncommercial use in a tribal ceremony within the State, if the member holds a valid ceremonial tribal permit issued to the tribal member by the Joint Tribal Council of the Passamaquoddy Tribe or the governor and council at either Passamaquoddy reservation, by the Penobscot Reservation Tribal Council, by the Aroostook Band of Micmacs Tribal Council or its agent or by the Houlton Band of Maliseet Indians Tribal Council or its agent. [2013, c. 254, §2 (AMD).]

For purposes of this subsection, "sustenance use" means all noncommercial consumption or noncommercial use by any person within Passamaquoddy Indian territory, as defined in Title 30, section 6205, subsection 1, Penobscot Indian territory, as defined in Title 30, section 6205, subsection 2, Aroostook Band Trust Land, as defined in Title 30, section 7202, subsection 2, or Houlton Band Trust Land, as defined in Title 30, section 6203, subsection 2-A, or at any location within the State by a tribal member, by a tribal member's immediate family or within a tribal member's household. The term "sustenance use" does not include the sale of marine organisms.

A member of the Passamaquoddy Tribe, Penobscot Nation, Aroostook Band of Micmacs or Houlton Band of Maliseet Indians who takes a marine organism under a license or permit issued pursuant to this subsection must comply with all laws and rules applicable to a person who holds a state license or permit that authorizes the taking of that organism, except that a state law or rule that sets a season for the harvesting of a marine organism does not apply to a member of the Passamaquoddy Tribe, Penobscot Nation, Aroostook Band of Micmacs or Houlton Band of Maliseet Indians who takes a marine organism for sustenance use or for noncommercial use in a tribal ceremony. A member of the Passamaquoddy Tribe, Penobscot Nation, Aroostook Band of Micmacs or Houlton Band of Maliseet Indians issued a license or permit under this subsection is exempt from paying elver gear fees under section 6505-B or trap tag fees under section 6431-B and is not required to hold a state shellfish license issued under section 6601 to obtain a municipal shellfish license pursuant to section 6671. A member of the Passamaquoddy Tribe, Penobscot Nation, Aroostook Band of Micmacs or Houlton Band of Maliseet Indians who fishes for or takes lobster under a license or permit issued pursuant to this subsection must comply with the closed periods under section 6440.

[2013, c. 254, §2 (AMD).]

3. Lobster, sea urchin, scallop and elver licenses; limitations. Pursuant to subsection 1:

A. The Passamaquoddy Tribe and Penobscot Nation may each issue to members of its tribe or nation, as the case may be, up to 24 commercial lobster and crab fishing licenses in any calendar year, including all licenses equivalent to Class I, Class II or Class III licenses and student licenses, but not including apprentice licenses. Licenses issued under this paragraph are subject to the eligibility requirements of section 6421, subsection 5; [2011, c. 598, §17 (AMD).]

A-1. The Aroostook Band of Micmacs or its agent may issue to members of the band up to 10 commercial lobster and crab fishing licenses in any calendar year, including all licenses equivalent to Class I, Class II or Class III licenses and student licenses, but not including apprentice licenses. Licenses issued under this paragraph are subject to the eligibility requirements of section 6421, subsection 5; [2011, c. 598, §17 (NEW).]

A-2. The Houlton Band of Maliseet Indians or its agent may issue to members of the band up to 10 commercial lobster and crab fishing licenses in any calendar year, including all licenses equivalent to Class I, Class II or Class III licenses and student licenses, but not including apprentice licenses. Licenses issued under this

paragraph are subject to the eligibility requirements of section 6421, subsection 5; [2013, c. 254, §3 (NEW).]

B. The Passamaquoddy Tribe may not issue to members of the tribe more than 24 commercial licenses for the taking of sea urchins in any calendar year. Sea urchin licenses must be issued by zone in accordance with section 6749-P; [2011, c. 598, §17 (AMD).]

C. The commissioner shall adopt rules authorizing the Penobscot Nation to issue to members of the nation commercial sea urchin licenses if the commissioner determines that sea urchin resources are sufficient to permit the issuance of new licenses. The commissioner may not authorize the Penobscot Nation to issue more than 24 commercial sea urchin licenses to members of the nation in any calendar year; [2011, c. 598, §17 (AMD).]

C-1. The commissioner shall adopt rules authorizing the Aroostook Band of Micmacs or its agent to issue to members of the band commercial sea urchin licenses if the commissioner determines that sea urchin resources are sufficient to permit the issuance of new licenses. The commissioner may not authorize the Aroostook Band of Micmacs or its agent to issue more than 24 commercial sea urchin licenses to members of the band in any calendar year; [2011, c. 598, §17 (NEW).]

C-2. The commissioner shall adopt rules authorizing the Houlton Band of Maliseet Indians or its agent to issue to members of the band commercial sea urchin licenses if the commissioner determines that sea urchin resources are sufficient to permit the issuance of new licenses. The commissioner may not authorize the Houlton Band of Maliseet Indians or its agent to issue more than 24 commercial sea urchin licenses to members of the band in any calendar year; [2013, c. 254, §3 (NEW).]

D. The Penobscot Nation may not issue to members of the nation more than 20 commercial licenses for the taking of scallops in any calendar year, except that the commissioner shall by rule allow the Penobscot Nation to issue additional commercial licenses to members of the nation for the taking of scallops if the commissioner determines that scallop resources are sufficient to permit the issuance of new licenses; [2011, c. 598, §17 (AMD).]

D-1. The Aroostook Band of Micmacs or its agent may not issue to members of the band more than 10 commercial licenses for the taking of scallops in any calendar year, except that the commissioner shall by rule allow the Aroostook Band of Micmacs or its agent to issue additional commercial licenses to members of the band for the taking of scallops if the commissioner determines that scallop resources are sufficient to permit the issuance of new licenses; [2011, c. 598, §17 (NEW).]

D-2. The Passamaquoddy Tribe may not issue to members of the tribe more than 20 commercial licenses for the taking of scallops in any calendar year, except that the commissioner shall by rule allow the Passamaquoddy Tribe to issue additional commercial licenses to members of the tribe for the taking of scallops if the commissioner determines that scallop resources are sufficient to permit the issuance of new licenses; [2013, c. 8, §1 (NEW).]

D-3. The Houlton Band of Maliseet Indians or its agent may not issue to members of the band more than 10 commercial licenses for the taking of scallops in any calendar year, except that the commissioner shall by rule allow the Houlton Band of Maliseet Indians or its agent to issue additional commercial licenses to members of the band for the taking of scallops if the commissioner determines that scallop resources are sufficient to permit the issuance of new licenses; [2013, c. 254, §3 (NEW).]

E. The Penobscot Nation may not issue to members of the nation commercial licenses for the taking of elvers in any calendar year that exceed the following limits:

- (1) Eight licenses that allow the taking of elvers with 2 pieces of gear; and
- (2) Forty licenses that allow the taking of elvers with one piece of gear.

The commissioner shall by rule allow the Penobscot Nation to issue additional commercial licenses to members of the nation for the taking of elvers if the commissioner and the Penobscot Nation determine that elver resources are sufficient to permit the issuance of new licenses; [2015, c. 391, §3 (AMD).]

E-1. The Passamaquoddy Tribe may issue to members of the tribe commercial licenses for the taking of elvers with one piece of gear; [2015, c. 391, §4 (AMD).]

F. The Aroostook Band of Micmacs or its agent may not issue to members of the band more than 8 commercial licenses for the taking of elvers in any calendar year, except that the commissioner shall by rule allow the Aroostook Band of Micmacs or its agent to issue additional commercial licenses for the taking of elvers to members of the band if the commissioner determines that elver resources are sufficient to permit the issuance of new licenses; and [2013, c. 8, §1 (AMD) .]

G. The Houlton Band of Maliseet Indians or its agent may not issue to members of the band more than 16 commercial licenses for the taking of elvers in any calendar year except that the commissioner shall by rule allow the Houlton Band of Maliseet Indians or its agent to issue additional commercial licenses for the taking of elvers to members of the band if the commissioner determines that elver resources are sufficient to permit the issuance of new licenses. [2015, c. 391, §5 (RPR) .]

The Passamaquoddy Tribe, Penobscot Nation, Aroostook Band of Micmacs, Houlton Band of Maliseet Indians and Department of Marine Resources shall report on the status of the sea urchin, scallop and elver fisheries to the joint standing committee of the Legislature having jurisdiction over marine resources matters by January 15th of each even-numbered year.

Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

§6302-B. ELVER QUOTA FOR FEDERALLY RECOGNIZED INDIAN TRIBES IN THE STATE

If the commissioner adopts an elver individual fishing quota system pursuant to section 6505-A, subsection 3-A, this section governs the allocation of the elver quota to federally recognized Indian tribes in the State. [2013, c. 485, §3 (NEW) .]

1. Annual allocation. In accordance with section 6505-A, the commissioner shall annually allocate 21.9% of the overall annual quota of elver fishery annual landings to the federally recognized Indian tribes in the State. If the Passamaquoddy Tribe, the Penobscot Nation, the Aroostook Band of Micmacs and the Houlton Band of Maliseet Indians reach an agreement regarding the division of this 21.9% portion of the overall annual quota among them and communicate in writing that agreement to the commissioner prior to March 1st of the year in which the quota is allocated, the commissioner shall allocate that portion of the quota in accordance with that agreement. If no agreement is reached, the commissioner shall allocate that portion of the quota in accordance with the following:

- A. To the Passamaquoddy Tribe, 14% of the overall annual quota; [2013, c. 485, §3 (NEW) .]
- B. To the Penobscot Nation, 6.4% of the overall annual quota; [2013, c. 485, §3 (NEW) .]
- C. To the Houlton Band of Maliseet Indians, 1.1% of the overall annual quota; and [2013, c. 485, §3 (NEW) .]
- D. To the Aroostook Band of Micmacs, 0.4% of the overall annual quota. [2013, c. 485, §3 (NEW) .]

In making any allocations under this subsection, the commissioner shall reserve a portion no greater than 10% of each allocation in order to ensure that the quota is not exceeded.

[2013, c. 485, §3 (NEW) .]

2. Individual allocations. The following provisions govern the allocation of the quotas established under subsection 1 to members of each of the federally recognized Indian tribes.

A. The commissioner may enter into an agreement with a federally recognized Indian tribe in the State that does not provide for individual allocations of the quota established under subsection 1 to members of that tribe, nation or band. If the commissioner enters into an agreement pursuant to this paragraph, the following provisions apply.

- (1) An elver transaction card under section 6305 must be issued to each person to whom the tribe, nation or band issues a license under section 6302-A, subsection 3.

- (2) The holder of a license issued under section 6302-A, subsection 3 must meet the reporting requirements established by rule pursuant to section 6173.
- (3) The quota established under subsection 1 applies to all elvers taken under licenses issued by the tribe, nation or band under section 6302-A, subsection 3.
- (4) When the quota established under subsection 1 is reached, the department shall notify the tribe, nation or band. When the quota established under subsection 1 is reached, the holder of a license issued by the tribe, nation or band under section 6302-A, subsection 3 may not thereafter take, possess or sell elvers. Taking, possessing or selling elvers after the quota established under subsection 1 is reached is deemed a violation by the license holder of the prohibition on fishing in excess of the person's individual quota in section 6505-A, subsection 3-A. [2015, c. 391, §6 (NEW) .]

B. This paragraph governs the allocation of the quotas established in subsection 1 to members of a federally recognized Indian tribe in the State when the commissioner has not entered into an agreement with members of the tribe, nation or band under paragraph A that applies to members of that tribe, nation or band.

- (1) If there is no agreement under paragraph A between the commissioner and the Passamaquoddy Tribe, the Passamaquoddy Tribe shall allocate to each person to whom it issues a license under section 6302-A, subsection 3, paragraph E-1 a specific amount of the quota allocated to the Passamaquoddy Tribe under subsection 1, paragraph A and shall provide documentation to the department of that allocation for each individual license holder. The Passamaquoddy Tribe shall allocate all of the quota that it has been allocated and may not alter any individual allocations once documentation has been provided to the department.
- (2) If there is no agreement under paragraph A between the commissioner and the Penobscot Nation, the Penobscot Nation shall allocate to each person to whom it issues a license under section 6302-A, subsection 3, paragraph E a specific amount of the quota allocated to the Penobscot Nation under subsection 1, paragraph B and shall provide documentation to the department of that allocation for each individual license holder. The Penobscot Nation shall allocate all of the quota that it has been allocated and may not alter any individual allocations once documentation has been provided to the department.
- (3) If there is no agreement under paragraph A between the commissioner and the Houlton Band of Maliseet Indians, the Houlton Band of Maliseet Indians shall allocate to each person to whom it issues a license under section 6302-A, subsection 3, paragraph G a specific amount of the quota allocated to the Houlton Band of Maliseet Indians under subsection 1, paragraph C and shall provide documentation to the department of that allocation for each individual license holder. The Houlton Band of Maliseet Indians shall allocate all of the quota that it has been allocated and may not alter any individual allocations once documentation has been provided to the department.
- (4) If there is no agreement under paragraph A between the commissioner and the Aroostook Band of Micmacs, the Aroostook Band of Micmacs shall allocate to each person to whom it issues a license under section 6302-A, subsection 3, paragraph F a specific amount of the quota allocated to the Aroostook Band of Micmacs under subsection 1, paragraph D and shall provide documentation to the department of that allocation for each individual license holder. The Aroostook Band of Micmacs shall allocate all of the quota that it has been allocated and may not alter any individual allocations once documentation has been provided to the department. [2015, c. 391, §6 (NEW) .]

The department shall issue an elver transaction card under section 6305 to a person licensed by the Passamaquoddy Tribe under section 6302-A, subsection 3, paragraph E-1, the Penobscot Nation under section 6302-A, subsection 3, paragraph E, the Houlton Band of Maliseet Indians under section 6302-A, subsection 3, paragraph G or the Aroostook Band of Micmacs under section 6302-A, subsection 3, paragraph F only upon receipt of adequate documentation specifying the individual quota allocated to that person by the tribe, nation or band under this subsection.

[2015, c. 391, §6 (RPR) .]

3. Overage. If the total weight of elvers sold by persons licensed by the Passamaquoddy Tribe, Penobscot Nation, Aroostook Band of Micmacs or Houlton Band of Maliseet Indians exceeds the quota allocated under subsection 1 to that tribe, nation or band, the commissioner shall deduct the amount of the overage from any future

allocation to that tribe, nation or band. If the overage exceeds the overall annual quota allocated to that tribe, nation or band for the following year, the overage must be deducted from the overall annual quota allocations to that tribe, nation or band in subsequent years until the entire overage has been accounted for.

[2013, c. 485, §3 (NEW) .]

4. Emergency prohibition. The commissioner may adopt emergency rules to prohibit the Passamaquoddy Tribe, the Penobscot Nation, the Aroostook Band of Micmacs or the Houlton Band of Maliseet Indians from fishing for elvers under a license issued under this Title if the commissioner finds that the tribe, nation or band has authorized fishing for elvers in a way that the commissioner determines will cause the tribe, nation or band to exceed the annual allocation set forth in subsection 1.

[2015, c. 391, §7 (NEW) .]

SECTION HISTORY

2013, c. 485, §3 (NEW). 2015, c. 391, §§6, 7 (AMD).

§6505-A. ELVER FISHING LICENSE

(CONTAINS TEXT WITH VARYING EFFECTIVE DATES)

1. License required. Except as provided in section 6302-A and section 6302-B, a person may not engage in the activities authorized under subsection 1-A unless the person is issued one of the following elver fishing licenses under this section:

- A. A resident elver fishing license for one device; [2003, c. 452, Pt. F, §11 (NEW); 2003, c. 452, Pt. X, §2 (AFF).]
- B. A resident elver fishing license for 2 devices; [2003, c. 452, Pt. F, §11 (NEW); 2003, c. 452, Pt. X, §2 (AFF).]
- C. A nonresident elver fishing license for one device; [2013, c. 468, §23 (AMD).]
- D. A nonresident elver fishing license for 2 devices; [2013, c. 468, §23 (AMD).]
- E. A resident elver fishing license with crew for one device; [2013, c. 468, §23 (NEW).]
- F. A resident elver fishing license with crew for 2 devices; [2013, c. 468, §23 (NEW).]
- G. A nonresident elver fishing license with crew for one device; or [2013, c. 468, §23 (NEW).]
- H. A nonresident elver fishing license with crew for 2 devices. [2013, c. 468, §23 (NEW).]

The department may not issue a license under paragraph E, F, G or H until January 1, 2015.

[2013, c. 485, §5 (AMD) .]

1-A. Licensed activity. The holder of an elver fishing license or elver fishing license with crew may fish for, take or possess elvers. The holder of an elver fishing license or elver fishing license with crew may transport and sell within state limits elvers that the license holder has taken. The holder of an elver fishing license with crew is liable for the licensed activities under this subsection of an unlicensed crew member assisting that license holder pursuant to subsection 1-B. Only the license holder to whom a tag is issued may empty an elver fyke net.

[2013, c. 468, §24 (NEW) .]

1-B. License limitations. An elver fishing license with crew authorizes the license holder to engage in the licensed activities under subsection 1-A. The holder of an elver fishing license with crew may engage one unlicensed crew member to assist the license holder only in certain activities as authorized by rule, and the unlicensed crew member may assist only under the direct supervision of the license holder.

[2013, c. 468, §24 (NEW) .]

1-C. Elver transaction card issued. The department may issue an elver transaction card to each license holder under this section and to each license holder under section 6302-A, subsection 3, paragraphs E, E-1, F and G in accordance with section 6302-B. The department may charge each license holder an annual fee for the elver transaction card that may not exceed \$35. Fees collected under this subsection must be deposited in the Eel and Elver Management Fund under section 6505-D. The license holder shall use the elver transaction card to meet electronic reporting requirements established by rule pursuant to section 6173. The elver transaction card must include the license holder's name and license number.

[2017, c. 250, §2 (AMD) .]

1-D. Use of elver transaction card required. The holder of an elver fishing license issued under this section or section 6302-A, subsection 3, paragraph E, E-1, F or G may not sell or transfer elvers the license holder has taken to an elver dealer licensed under section 6864 unless the holder of the elver fishing license presents to the elver dealer the elver transaction card issued to that person under subsection 1-C.

[2013, c. 468, §24 (NEW) .]

1-E. Elver transaction card limited. A person may not possess an elver transaction card unless that person holds a license issued under this section or section 6302-A, subsection 3, paragraph E, E-1, F or G and the elver transaction card was issued to that person pursuant to subsection 1-C.

[2013, c. 468, §24 (NEW) .]

1-F. Licenses issued. The commissioner may issue up to 425 elver fishing licenses each year under this section.

[2017, c. 250, §3 (NEW) .]

2. Eligibility. An elver fishing license may be issued only to an individual who:

A. [1999, c. 534, §1 (RP) .]

B. [1999, c. 534, §1 (RP) .]

C. Possessed an elver fishing license in the previous calendar year; [2011, c. 549, §3 (AMD) .]

D. [2005, c. 533, §1 (RP) .]

E. Did not possess an elver fishing license in the previous calendar year because the commissioner had suspended the person's license privileges for a length of time that included the previous calendar year; or [2011, c. 549, §3 (AMD) .]

F. Becomes eligible to obtain an elver fishing license pursuant to the elver lottery under subsection 2-C. [2017, c. 250, §4 (AMD) .]

[2017, c. 250, §4 (AMD) .]

2-A. Elver license lottery.

[2005, c. 533, §2 (RP) .]

2-B. Elver lotteries.

[2017, c. 250, §5 (RP) .]

2-C. Elver license lottery. The commissioner shall establish an elver fishing license lottery under which a person may become eligible for that license under subsection 2, paragraph F. An applicant to the lottery must submit a lottery application together with a \$35 nonrefundable application fee no later than January 15th of the same calendar year as the lottery. An applicant may not submit more than 5 elver fishing license lottery applications per lottery year. In any year in which a lottery is held, the lottery must be held on or before February 15th.

The commissioner may adopt rules to implement the elver fishing license lottery, including provisions for the method and administration of the lottery. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

Twenty-five dollars of the application fee collected under this subsection must be deposited in the Eel and Elver Management Fund established in section 6505-D and used to fund a life-cycle study of the elver fishery. Ten dollars of the application fee may be used by the department to fund the costs of administering the elver fishing license lottery.

[2017, c. 250, §6 (NEW) .]

3. Limits on issuance.

[2013, c. 8, §3 (RP) .]

3-A. Elver fishing quotas. The commissioner may adopt rules to establish, implement and administer an elver individual fishing quota system in order to ensure that the elver fishery annual landings do not exceed the overall annual quota established by the Atlantic States Marine Fisheries Commission. Except as provided in section 6575-L, a person issued a license under this section or section 6302-A, subsection 3, paragraph E, E-1, F or G may not take, possess or sell elvers in excess of the weight quota allocated to that person under the quota system. The rules must:

A. Establish an overall annual quota for the State; [2013, c. 485, §7 (NEW) .]

B. Establish the amount of the overall annual quota under paragraph A that is allocated to persons licensed under this section and specify a formula to establish individual quotas for persons licensed under this section. The formula may take into account the amount of elvers a person licensed under this section lawfully harvested in previous seasons based on final harvesting reports. The rules must specify the date by which harvester reports are considered final for the purpose of determining individual quotas; and [2013, c. 485, §7 (NEW) .]

C. Provide, in accordance with section 6302-B, that 21.9% of the overall annual quota under paragraph A is allocated to the federally recognized Indian tribes in the State and establish the amount of that portion of the overall annual quota allocated to the Passamaquoddy Tribe, the Penobscot Nation, the Houlton Band of Maliseet Indians and the Aroostook Band of Micmacs. [2013, c. 485, §7 (NEW) .]

If persons issued licenses under this section collectively exceed the overall annual quota allocated to those persons pursuant to paragraph B, the number of pounds by which the license holders exceeded that overall annual quota must be deducted from the following year's overall annual quota allocated to persons licensed under this section. If the overage exceeds the overall annual quota allocated to persons licensed under this section for the following year, the overage must be deducted from the overall annual quota allocated to persons licensed under this section in subsequent years until the entire overage has been accounted for.

The commissioner may adopt or amend rules on an emergency basis if immediate action is necessary to establish and implement the elver individual fishing quota in advance of the beginning of the elver fishing season.

Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

[2015, c. 131, §1 (AMD) .]

4. (TEXT EFFECTIVE UNTIL 1/1/18) Fees. Fees for elver fishing licenses are:

A. For a person who is a resident, \$205; [2017, c. 250, §7 (AMD) .]

B. For a person who is a nonresident, \$542; [2017, c. 250, §7 (AMD) .]

C. For a person who is a resident with crew, \$405; and [2017, c. 250, §7 (AMD) .]

D. For a person who is a nonresident with crew, \$1,426. [2017, c. 250, §7 (AMD) .]

One hundred and fifty dollars of each license fee collected under paragraphs A and B and \$300 of each license fee collected under paragraphs C and D accrue to the Eel and Elver Management Fund established in section 6505-D.

[2017, c. 250, §7 (AMD) .]

4. (TEXT REPEALED 1/1/18) Fees.

[2017, c. 284, Pt. EEEEE, §31 (AFF); 2017, c. 284, Pt. EEEEE, §7 (RP) .]

4-A. (TEXT EFFECTIVE 1/1/18) License fee. Fees for elver fishing licenses are:

- A. For a resident elver fishing license for one device, \$55; [2017, c. 284, Pt. EEEEE, §8 (NEW); 2017, c. 284, Pt. EEEEE, §31 (AFF).]
- B. For a resident elver fishing license for 2 devices, \$63; [2017, c. 284, Pt. EEEEE, §8 (NEW); 2017, c. 284, Pt. EEEEE, §31 (AFF).]
- C. For a nonresident elver fishing license for one device, \$392; [2017, c. 284, Pt. EEEEE, §8 (NEW); 2017, c. 284, Pt. EEEEE, §31 (AFF).]
- D. For a nonresident elver fishing license for 2 devices, \$400; [2017, c. 284, Pt. EEEEE, §8 (NEW); 2017, c. 284, Pt. EEEEE, §31 (AFF).]
- E. For a resident elver fishing license with crew for one device, \$105; [2017, c. 284, Pt. EEEEE, §8 (NEW); 2017, c. 284, Pt. EEEEE, §31 (AFF).]
- F. For a resident elver fishing license with crew for 2 devices, \$113; [2017, c. 284, Pt. EEEEE, §8 (NEW); 2017, c. 284, Pt. EEEEE, §31 (AFF).]
- G. For a nonresident elver fishing license with crew for one device, \$1,126; and [2017, c. 284, Pt. EEEEE, §8 (NEW); 2017, c. 284, Pt. EEEEE, §31 (AFF).]
- H. For a nonresident elver fishing license with crew for 2 devices, \$1,134. [2017, c. 284, Pt. EEEEE, §8 (NEW); 2017, c. 284, Pt. EEEEE, §31 (AFF).]

[2017, c. 284, Pt. EEEEE, §8 (NEW); 2017, c. 284, Pt. EEEEE, §31 (AFF) .]

4-B. (TEXT EFFECTIVE 1/1/18) License surcharge. In addition to the license fee established in subsection 4-A, the commissioner shall assess a surcharge on each license issued under this section as follows:

- A. For an elver fishing license issued under subsection 4-A, paragraphs A to D, \$150; and [2017, c. 284, Pt. EEEEE, §8 (NEW); 2017, c. 284, Pt. EEEEE, §31 (AFF).]
- B. For an elver fishing license issued under subsection 4-A, paragraphs E to H, \$300. [2017, c. 284, Pt. EEEEE, §8 (NEW); 2017, c. 284, Pt. EEEEE, §31 (AFF).]

The surcharge fees collected under this subsection must be deposited in the Eel and Elver Management Fund established under section 6505-D.

[2017, c. 284, Pt. EEEEE, §8 (NEW); 2017, c. 284, Pt. EEEEE, §31 (AFF) .]

5. Gear. A person issued a license under this section may utilize one elver fyke net, one Sheldon eel trap or one dip net to fish for or take elvers without paying the fee required for a first net or trap pursuant to section 6505-B. A license issued under this section must identify the number and types of nets that the license holder may use pursuant to this section, section 6505-B and section 6575-B.

[2015, c. 391, §8 (AMD) .]

5-A. Possession of elvers. The holder of an elver fishing license may possess elvers only during the open season established in section 6575 and for up to 6 hours beyond the end of the open season.

[2013, c. 301, §10 (NEW) .]

6. Minimum age. A person who is under 15 years of age may not fish for or take elvers.

[2001, c. 421, Pt. B, §28 (AMD); 2001, c. 421, Pt. C, §1 (AFF) .]

7. Nonresident licenses; reciprocity with other states. A nonresident is eligible to purchase an elver fishing license only if the nonresident documents to the commissioner that the nonresident's state of residence allows Maine residents to purchase an elver license and fish for elvers in that state.

[1999, c. 7, §5 (NEW) .]

8. Violation.

[2013, c. 49, §8 (RP) .]

8-A. Violation. A person who violates this section commits a Class D crime for which a fine of \$2,000 must be imposed, none of which may be suspended. Violation of this section is a strict liability crime as defined in Title 17-A, section 34, subsection 4-A.

[2013, c. 49, §9 (NEW) .]

SECTION HISTORY

1995, c. 536, §A8 (NEW). 1997, c. 297, §§1,2 (AMD). 1999, c. 7, §§2-5 (AMD). 1999, c. 534, §§1-3 (AMD). 2001, c. 421, §§B27-29 (AMD). 2001, c. 421, §C1 (AFF). 2003, c. 20, §WW7 (AMD). 2003, c. 452, §F11 (AMD). 2003, c. 452, §X2 (AFF). 2005, c. 533, §§1,2 (AMD). 2007, c. 615, §15 (AMD). 2009, c. 213, Pt. G, §6 (AMD). 2011, c. 549, §§3-5 (AMD). 2013, c. 8, §§2, 3 (AMD). 2013, c. 49, §§8, 9 (AMD). 2013, c. 301, §§9, 10 (AMD). 2013, c. 468, §§23-25 (AMD). 2013, c. 485, §§5-7 (AMD). 2015, c. 131, §1 (AMD). 2015, c. 391, §8 (AMD). 2017, c. 250, §§2-7 (AMD). 2017, c. 284, Pt. EEEEE, §§7, 8 (AMD). 2017, c. 284, Pt. EEEEE, §31 (AFF).

§6505-B. ELVER GEAR FEES

1. Elver fyke net and Sheldon eel trap fee. A person may not submerge an elver fyke net or a Sheldon eel trap in the waters of the State to fish for or take elvers unless the net or trap owner pays annually the following fees:

A. Fifty dollars per net or trap for the use of an elver fyke net or Sheldon eel trap, except that the fee under this paragraph does not apply to an elver fyke net or Sheldon eel trap a person utilizes pursuant to section 6505-A, subsection 5. [2017, c. 284, Pt. EEEEE, §9 (AMD).]

B. [1999, c. 7, §6 (RP).]

C. [1999, c. 7, §6 (RP).]

[2017, c. 284, Pt. EEEEE, §9 (AMD) .]

2. Tags for elver fyke net and Sheldon eel trap. A person may not submerge an elver fyke net or Sheldon eel trap in the coastal waters of the State to fish for or take elvers unless a tag issued by the department is affixed to the shoreside wing of the net or trap and is clearly visible. The department may issue a replacement tag when an owner issued a tag documents that a net or trap has been damaged or lost.

[2001, c. 421, Pt. B, §30 (AMD); 2001, c. 421, Pt. C, §1 (AFF) .]

3. Dip net fee. A person may not utilize a dip net to fish for or take elvers without paying a fee of \$50 per dip net annually.

This subsection does not apply to a dip net a person utilizes pursuant to section 6505-A, subsection 5.

[2017, c. 284, Pt. EEEEE, §10 (AMD) .]

4. Payment with license. The fees required under subsections 1 and 3 must be paid upon application for an elver fishing license under section 6505-A.

[1995, c. 536, Pt. A, §8 (NEW) .]

5. Disposition of fees. Fees collected under this section accrue to the Eel and Elver Management Fund established in section 6505-D.

A. [2017, c. 284, Pt. EEEEE, §11 (RP).]

B. [2017, c. 284, Pt. EEEEE, §11 (RP).]

[2017, c. 284, Pt. EEEEE, §11 (AMD) .]

6. Violation. A person who violates this section commits a Class D crime for which a fine of \$2,000 must be imposed, none of which may be suspended. Violation of this section is a strict liability crime as defined in Title 17-A, section 34, subsection 4-A.

[2013, c. 49, §10 (AMD) .]

SECTION HISTORY

1995, c. 536, §A8 (NEW). 1997, c. 297, §§3-5 (AMD). 1997, c. 575, §2 (AMD). 1999, c. 7, §6 (AMD). 2001, c. 421, §B30 (AMD). 2001, c. 421, §C1 (AFF). 2009, c. 213, Pt. G, §§7-9 (AMD). 2011, c. 549, §6 (AMD). 2013, c. 49, §10 (AMD). 2017, c. 284, Pt. EEEEE, §§9-11 (AMD).

§6505-D. EEL AND ELVER MANAGEMENT FUND

1. Fund established. The Eel and Elver Management Fund, referred to in this section as the "fund," is established as a dedicated, nonlapsing fund.

[1995, c. 536, Pt. A, §8 (NEW) .]

2. Permissible uses. The commissioner may use the fund to research and manage the State's eel and elver resources, to enforce the laws related to eels and elvers and to cover the costs associated with determining eligibility for elver fishing licenses.

[2011, c. 266, Pt. A, §17 (AMD) .]

3. Plan required.

[2011, c. 266, Pt. A, §18 (RP) .]

SECTION HISTORY

1995, c. 536, §A8 (NEW). 1999, c. 309, §2 (AMD). 2011, c. 266, Pt. A, §§17, 18 (AMD).

Article 5: ELVER AND EEL LIMITATIONS

§6575. OPEN SEASON; ELVER HARVESTING

1. Open season. It is unlawful for a person to fish for or take elvers within the waters of the State except during the open season from noon on March 22nd to noon on June 7th.

[2015, c. 391, §9 (AMD) .]

1-A. Federally recognized Indian tribes; violation. It is unlawful for a person to fish for or take elvers in violation of rules adopted by the commissioner under section 6302-B, subsection 4.

[2015, c. 391, §10 (NEW) .]

2. Setting nets and traps. It is unlawful for a person to immerse or leave immersed an elver fyke net or a Sheldon eel trap in any river, stream or brook of the waters of the State at any time other than the open season for elver fishing.

[1999, c. 7, §7 (AMD) .]

3. Locating nets. It is unlawful for a person to designate or claim by any means a location in which to set an elver fyke net or a Sheldon eel trap at any time other than the open season for elver fishing.

[1999, c. 7, §7 (AMD) .]

4. Nets of certain sizes.

[1999, c. 7, §7 (RP) .]

5. Violation. A person who violates this section commits a Class D crime for which a fine of \$2,000 must be imposed, none of which may be suspended. Violation of this section is a strict liability crime as defined in Title 17-A, section 34, subsection 4-A.

[2013, c. 49, §11 (NEW) .]

SECTION HISTORY

1995, c. 536, §A9 (NEW). 1995, c. 536, §A13 (AFF). 1997, c. 91, §4 (AMD). 1999, c. 7, §7 (AMD). 2013, c. 49, §11 (AMD). 2015, c. 391, §§9, 10 (AMD).

§6575-A. CLOSED PERIOD; ELVER HARVESTING

(REPEALED)

SECTION HISTORY

1995, c. 536, §A9 (NEW). 1995, c. 536, §A13 (AFF). 1997, c. 575, §3 (AMD). 1999, c. 7, §8 (AMD). 2011, c. 549, §7 (AMD). 2013, c. 49, §12 (RPR). 2013, c. 468, §26 (AMD). 2015, c. 391, §11 (RP).

§6575-B. METHOD OF ELVER FISHING; LIMITS ON GEAR

1. Gear. It is unlawful for a person to fish for or take elvers by any method other than by dip net, elver fyke net or Sheldon eel trap.

[1995, c. 536, Pt. A, §9 (NEW) .]

2. Number of elver fyke nets and Sheldon eel traps.

[1999, c. 7, §9 (RP) .]

2-A. Number of nets and Sheldon eel traps.

[1999, c. 534, §4 (RP) .]

2-B. Type and amount of gear. It is unlawful for a person to immerse elver fishing gear other than the types and amounts listed on the person's license pursuant to section 6505-A, subsection 5. A person may not immerse an amount of elver fishing gear that exceeds the amount of elver fishing gear listed on the person's license for the previous elver fishing season. A person may elect which types of gear are listed on the person's license prior to the

issuance of the license for that elver fishing season. The commissioner may adopt rules to implement this subsection. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

A. [2015, c. 391, §12 (RP).]

B. [2005, c. 533, §3 (RP).]

C. [2005, c. 533, §3 (RP).]

[2015, c. 391, §12 (AMD) .]

3. Rebuttable presumption. It is a rebuttable presumption that an elver fyke net, Sheldon eel trap or elver dip net immersed in any waters of the State at any time of the year is immersed for the purpose of fishing for or taking elvers.

[1999, c. 7, §11 (AMD) .]

4. Prohibition on fishing from boats. It is unlawful for a person to set or tend an elver fyke net or a Sheldon eel trap from a boat or to fish for or take elvers from a boat. A person may transport an elver fyke net, a Sheldon eel trap or a dip net by boat.

[1995, c. 536, Pt. A, §9 (NEW) .]

5. Use of dip nets. It is unlawful for a person to use a dip net to fish for or take elvers while standing in the coastal waters of the State.

[1997, c. 575, §4 (AMD) .]

6. Prohibition on fishing from artificial platforms. A person may not build or use an artificial platform to fish for elvers. This subsection does not prohibit fishing for elvers from piers or floats established for purposes other than elver fishing.

[1999, c. 7, §12 (NEW) .]

7. Bycatch release. A person immediately shall return alive into the waters of the State any species other than elver that is caught in an elver fyke net.

[1999, c. 7, §12 (NEW) .]

8. St. Croix River; use of fyke nets prohibited.

[2015, c. 391, §13 (RP) .]

SECTION HISTORY

1995, c. 536, §A9 (NEW). 1997, c. 91, §5 (AMD). 1997, c. 575, §4 (AMD). 1999, c. 7, §§9-12 (AMD). 1999, c. 534, §§4,5 (AMD). 2005, c. 533, §3 (AMD). 2013, c. 468, §27 (AMD). 2015, c. 391, §§12, 13 (AMD).

§6575-C. CLOSED AREAS; ELVER FISHING

1. Dams with fishways.

[2013, c. 49, §13 (RP) .]

2. River herring traps. A person may not fish for or take elvers within 50 feet of a licensed river herring trap.

[2011, c. 598, §25 (AMD) .]

3. Portion of rivers, streams and brooks. A person may not:

A. Fish for or take elvers at any time within the middle 1/3 of a river, stream, brook or other watercourse, as measured at mean high tide, within the coastal waters of the State; or [2003, c. 452, Pt. F, §14 (NEW); 2003, c. 452, Pt. X, §2 (AFF) .]

B. Obstruct the middle 1/3 of any river, stream, brook or other watercourse, as measured at mean low tide, within the coastal waters of the State. [2003, c. 452, Pt. F, §14 (NEW); 2003, c. 452, Pt. X, §2 (AFF) .]

[2003, c. 452, Pt. F, §14 (RPR); 2003, c. 452, Pt. X, §2 (AFF) .]

4. Dip nets near elver fyke nets. A person may not fish for or take elvers with a dip net in the mouth of an elver fyke net. For the purposes of this subsection, "mouth of an elver fyke net" means that area within an elver fyke net that is net-side of a straight line that runs from one meshed wing tip of the net to the other meshed wing tip.

[2003, c. 452, Pt. F, §15 (AMD); 2003, c. 452, Pt. X, §2 (AFF) .]

5. Fyke net placement. A person may not place or set an elver fyke net or take elvers from an elver fyke net when any portion of the net, including any anchoring device, is located within an imaginary line between the wing ends of another elver fyke net. Cod end anchoring devices may not exceed 10 feet in length and wing end anchoring devices may not interfere with or create a hazard to navigation within the middle 1/3 of a navigable watercourse. A marine patrol officer may open the cod end of a net that is located in violation of this subsection.

[1999, c. 7, §13 (NEW) .]

6. Obstructing elver fyke nets. A person may not set an elver fyke net or place an obstruction near an elver fyke net in a manner that interferes with the operation of an elver fyke net.

[1999, c. 7, §13 (NEW) .]

7. Rulemaking; gear placement. If necessary to conserve the elver resource, the commissioner may adopt rules pursuant to section 6171 relating to placement of elver fishing gear based on the configuration of specific rivers, streams, brooks or other watercourses. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter II-A.

[1999, c. 7, §13 (NEW) .]

SECTION HISTORY

1995, c. 536, §A9 (NEW). 1997, c. 91, §6 (AMD). 1997, c. 575, §5 (AMD). 1999, c. 7, §13 (AMD). 2003, c. 452, §§F13-15 (AMD). 2003, c. 452, §X2 (AFF). 2011, c. 598, §25 (AMD). 2013, c. 49, §13 (AMD).

§6575-D. MOLESTING ELVER FISHING GEAR

1. Prohibition. Except as provided in subsection 1-A, a person other than a marine patrol officer or the license holder issued a tag for an elver fyke net may not utilize, transfer, alter, possess or in any manner handle the net unless that person has been issued a license to fish for elvers with an elver fyke net under section 6302-A, subsection 3, paragraph E, E-1, F or G or section 6505-A or a license to fish for elvers with crew with an elver fyke net under section 6505-A and the license holder issued the tag for the elver fyke net is present and assisting in setting, tending or removing the net.

A. [1999, c. 7, §14 (RP) .]

B. [2013, c. 468, §28 (RP) .]

[2013, c. 468, §28 (AMD) .]

1-A. Restriction on emptying net or trap; exception. A person other than the license holder identified on the tag for an elver fyke net or a Sheldon eel trap may not empty that net or trap unless that person has been issued an elver fishing license for the same gear type and has been issued written permission by a marine patrol officer to tend that net or trap. A marine patrol officer may issue a person written permission for the person to tend the license holder's net or trap only for the purpose of releasing captured elvers into the waters of the State if the license holder is temporarily unable to tend that net or trap because of a disability or personal or family medical condition. If the license holder is unable to tend that net or trap for more than 2 consecutive weeks, the net or trap must be removed from the water.

[2013, c. 468, §28 (NEW) .]

2. Violation. A person who violates this section commits a Class D crime for which a fine of \$2,000 must be imposed, none of which may be suspended. Violation of this section is a strict liability crime as defined in Title 17-A, section 34, subsection 4-A.

[2013, c. 49, §14 (AMD) .]

SECTION HISTORY

1995, c. 536, §A9 (NEW). 1999, c. 7, §14 (AMD). 2001, c. 421, §B34 (AMD).
2001, c. 421, §C1 (AFF). 2011, c. 549, §8 (AMD). 2013, c. 49, §14 (AMD).
2013, c. 468, §28 (AMD).

§6575-F. WEST SIDE OF ORLAND RIVER CLOSED TO ELVER FISHING

A person may not fish for or take elvers within the portion of the Orland River between the west bank and the center of the river from the southernmost point of land on Fish Point to the dam in Orland. [1999, c. 18, §1 (NEW) .]

SECTION HISTORY

1999, c. 18, §1 (NEW).

§6575-G. DAMS WITH FISHWAYS; ELVER FISHING

1. Dams with fishways. A person may not fish for or take elvers within 150 feet of any part of a dam with a fishway or within 150 feet of a fishway.

[2013, c. 49, §15 (NEW) .]

2. Violation. A person who violates this section commits a Class D crime for which a fine of \$2,000 must be imposed, none of which may be suspended. Violation of this section is a strict liability crime as defined in Title 17-A, section 34, subsection 4-A.

[2013, c. 49, §15 (NEW) .]

SECTION HISTORY

2013, c. 49, §15 (NEW).

§6575-H. SALE AND PURCHASE OF ELVERS

1. Sale of elvers. A person may not sell elvers except as follows.

A. A person may not sell elvers except to a person who holds a valid elver dealer's license under section 6864 or a person who, pursuant to section 6864, subsection 9, is an authorized representative of a person holding a license issued under section 6864. [2013, c. 301, §12 (NEW) .]

B. A person may not accept payment for elvers in any form other than a check or cashier's check that identifies both the buyer, by whom the landings will be reported, and the seller, each of whom must be a person holding a license issued under section 6864, a person who, pursuant to section 6864, subsection 9, is an authorized representative of a person holding a license issued under section 6864 or a person holding a license issued under section 6302-A, subsection 3, paragraph E, E-1, F or G or section 6505-A. [2013, c. 468, §29 (AMD) .]

[2013, c. 468, §29 (AMD) .]

1-A. Purchase of elvers. A person who holds a valid elver dealer's license under section 6864 or a person who, pursuant to section 6864, subsection 9, is an authorized representative of a person holding a license issued under section 6864 shall post at the point of sale the price that that buyer will pay.

[2013, c. 485, §8 (NEW) .]

2. Violation. A person who violates this section commits a Class D crime for which a fine of \$2,000 must be imposed, none of which may be suspended. Violation of this section is a strict liability crime as defined in Title 17-A, section 34, subsection 4-A.

[2013, c. 49, §15 (NEW) .]

SECTION HISTORY

2013, c. 49, §15 (NEW). 2013, c. 301, §12 (AMD). 2013, c. 468, §29 (AMD).
2013, c. 485, §8 (AMD).

§6575-I. ASSISTING IN ILLEGAL HARVEST OF ELVERS

(REPEALED)

SECTION HISTORY

2013, c. 301, §13 (NEW). 2013, c. 468, §30 (RP).

§6575-J. SEIZURE OF ILLEGALLY HARVESTED ELVERS

In addition to any other penalty imposed, elvers that are purchased or possessed that were taken in violation of any law or rule pertaining to elvers are subject to seizure by any officer authorized to enforce this Part. The entire bulk pile containing illegally harvested elvers may be seized. For the purposes of this section, "bulk pile" means all elvers in the possession of a holder of an elver fishing license, an elver dealer's license or an elver exporter's license who fished for, took, possesses or bought elvers in violation of any law or rule regulating elvers under this Part. [2017, c. 250, §8 (AMD) .]

SECTION HISTORY

2013, c. 301, §13 (NEW). 2017, c. 250, §8 (AMD).

§6575-K. ELVER INDIVIDUAL FISHING QUOTA

1. Prohibition on possession or sale of elvers in excess of elver individual fishing quota. A person may not possess or sell a weight of elvers that exceeds the elver individual fishing quota that person has been allocated for the fishing season pursuant to section 6505-A, subsection 3-A, plus any additional quota the person may be authorized to take under section 6575-L.

[2015, c. 131, §2 (AMD) .]

2. Prohibition on fishing after elver individual fishing quota has been reached. Except as provided in section 6575-L, this section applies to fishing after a person's elver individual fishing quota has been reached. A person who has sold a weight of elvers that meets or exceeds that person's elver individual fishing quota may not fish for or possess elvers for the remainder of the season, except that such a person who has been issued a license to fish for elvers may in accordance with section 6575-D assist another person who has been issued a license to fish for elvers who has not met or exceeded that person's elver individual fishing quota as provided in section 6505-A, subsection 3-A. All gear tagged by a license holder who has met or exceeded that person's elver individual fishing quota must be removed. A marine patrol officer may seize the elver transaction card of a license holder who has met or exceeded that person's elver individual fishing quota.

[2015, c. 131, §2 (AMD) .]

3. Violation. An individual who in fact violates this section commits a crime in accordance with section 6204 for which a fine of \$2,000 must be imposed, none of which may be suspended.

[2013, c. 485, §9 (NEW) .]

SECTION HISTORY

2013, c. 485, §9 (NEW). 2015, c. 131, §2 (AMD).

§6575-L. TEMPORARY MEDICAL TRANSFER

The commissioner may authorize a temporary medical transfer of the elver individual fishing quota allocated to a person under section 6505-A in accordance with this section. The holder of an elver fishing license who requests a temporary medical transfer under this section must maintain a valid elver fishing license during the duration of the temporary medical transfer. [2015, c. 131, §3 (NEW) .]

1. Temporary medical transfer requested prior to March 1st. Notwithstanding section 6505-A, subsection 3-A, the commissioner may authorize a temporary medical transfer that permits the holder of an elver fishing license issued under section 6505-A to transfer the entire annual quota allocated to that person to another person holding an elver fishing license issued under section 6505-A if the following criteria are met:

A. The transferor reported elver landings in the prior fishing year; [2015, c. 131, §3 (NEW) .]

B. The transferor is unable to fish the quota allocated to the transferor because the transferor has experienced a substantial illness or medical condition. The transferor shall provide the commissioner with documentation from a physician describing the substantial illness or medical condition; and [2015, c. 131, §3 (NEW) .]

C. The transferor requests a temporary medical transfer in writing before March 1st of the fishing year for which it is being requested, except that the commissioner may adopt rules that provide a method for authorizing a temporary medical transfer requested after March 1st to address emergency medical conditions. [2015, c. 131, §3 (NEW) .]

Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

[2015, c. 1, §5 (COR) .]

SECTION HISTORY

RR 2015, c. 1, §5 (COR). 2015, c. 131, §3 (NEW).



ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

MEMORANDUM

TO: ASMFC American Eel Technical Committee

FROM: Todd Mathes, N.C. Division of Marine Fisheries

DATE: July 10, 2018

RE: Update on N.C. American Eel Aquaculture Plan for the 2018 harvest season

May 2017 Plan (2018-2019 Harvest Seasons)

The May 2017 N.C. Aquaculture Plan was submitted on behalf of the American Eel Farm (AEF), who were solely responsible for drafting the new plan for the 2018-2019 harvest seasons. Based on our experience managing the 2017 glass eel harvest season and numerous discussions with the AEF concerning what worked and did not work in the 2016 plan, the NCDMF decided to allow the AEF to draft a plan that would give them the best opportunity to successfully harvest glass eels, while still satisfying the aquaculture plan requirements in Addendum IV. Table 1 outlines the May 2016 and May 2017 N.C. Aquaculture Plan sections side by side for comparative purposes to better see the modifications that were made.

2018 Glass Eel Harvest Activities

On December 21, 2017, NCDMF sent the permit conditions via mail and email to the AEF, and on the same day, the AEF signed and returned the permit conditions to NCDMF.

On December 23, 2017, NCDMF received net identification information prior to the deployment of any fyke nets.

The AEF did not set any nets in January. On February 11, 2018, the AEF deployed their first fyke net of the season.

Throughout February, March, and April, the AEF successfully deployed fyke nets, no dip nets or Irish eel ladders were used.

On May 18, 2018, the AEF removed all their nets from the water and stopped fishing for the 2018 glass eel season.

2018 Glass Eel Harvest Results

- The AEF fished fyke nets for 5 of 22 weeks during the open season; the AEF waited six weeks after the opening of the glass eel season (Jan. 1, 2017) before setting any nets. Also, the AEF stopped fishing three weeks prior to the end of the season.
- Fyke nets were fished 22 out of 108 days available to be fished (20.3%) (In order to create a 48-hour rest period, there was no fishing allowed from 12:01 pm Friday through 12:01 pm Sunday throughout the season).
- All fishing effort was in the bays and canals surrounding Lake Mattamuskeet (Figure 1).
- Zero glass eels were harvested (Table 2)
- 270 glass eels were released alive (Table 2)
- 200 pounds of unused glass eel quota remained
- 2 elvers were released alive (Table 2)
- The maximum number of fyke nets fished per week was 8, however the AEF was allowed to keep fyke nets deployed in the water with the cod end open (not fishing) for the entire harvest season, so there was a maximum of 11 total fyke nets deployed throughout the season.
- CPUE data – poor data due to: 1) changing harvest locations, 2) different net dimensions, 3) gear modifications (crab protection), 4) inconsistent fishing effort, and 5) periods of no fishing.

2018 AEF Violations

- No citations

Table 1. Comparison between the May 2016 N.C. Aquaculture Plan and the approved May 2017 plan highlighting the modifications.

| Section Heading | 2016 Plan | 2017 Plan | Modification |
|--|--|--|--|
| DATES OF HARVEST | January 1 to April 30 | January 1 to May 30 | <ul style="list-style-type: none"> extended harvest season by 1 month |
| DURATION OF HARVEST | 1-year period | 2-year period | <ul style="list-style-type: none"> extended plan from a 1-year to a 2-year plan |
| METHOD OF HARVEST | Fyke and dip nets | Fyke and dip nets + Irish eel ladder | <ul style="list-style-type: none"> added Irish eel ladder |
| THE CURRENT AND PAST STATUS FOR AQUACULTURE PURPOSES | | Most harvested glass eels are exported, it's extremely important to support and promote domestic aquaculture | <ul style="list-style-type: none"> added new paragraph |
| MINIMAL CONTRIBUTION | Harvest sites located in areas that have been heavily impacted by human development. No harvest in Albemarle Sound, the Tar-Pamlico River Basin, or areas such as National Wildlife Refuges, National Estuarine Reserves, National Forests, National Seashores, North Carolina Coastal Reserves, North Carolina State Parks, North Carolina Preserves, North Carolina Strategic Habitat Areas, and Natural Heritage Natural Areas. | Harvesting glass eels from any North Carolina waters would have little impact on the massive biomass of eels migrating along the eastern seaboard (Most wild caught yellow eels come from Chesapeake Bay and Delaware Bay water basins). Also, the ASMFC took into consideration the 200 pound per state harvest and allocated an amount that would total 2,800 pounds for aquaculture purposes coastwide. | <ul style="list-style-type: none"> changed minimal contribution justification |
| ATLANTIC SEABOARD WATERSHED | | Most yellow eel harvest comes from Chesapeake and Delaware bays, therefore any glass eel harvest in N.C. would have a minimal impact on the population. Also, the ASMCF has already determined that allocating 200 pounds of glass eels per state would have a minimal impact to the population. | <ul style="list-style-type: none"> added new paragraph |

| Section Heading | 2016 Plan | 2017 Plan | Modification |
|--|--|---|---|
| LOCATION OF HARVEST – Harvest Sites | Eleven (11) primary sites and three (3) alternate sites: 1. Bradley Creek 2. Futch Creek 3. Goose Creek 4. Howe Creek 5. Mill Creek 6. Queen Creek 7. Sanders Creek 8. Saucepan Creek 9. Shallotte River 10. Whiskey Creek 11. White Oak River, and 1. Dawson Creek 2. Orchard Creek 3. Pierce Creek | Four (4) sites: 1. Albemarle Sound and tributaries 2. Pamlico Sound and tributaries 3. Newport River and tributaries 4. North River and tributaries | <ul style="list-style-type: none"> removed the primary sites and alternate sites (n=13), and replaced them with the Albemarle/Pamlico sounds and their tributaries, and the Newport and North rivers |
| NCDMF MONITORING PROGRAM – General Conditions | It is unlawful to fail to provide a complete inventory of the fyke nets prior to January 1, 2017, including the Net ID number and identifying gear characteristics (e.g., wing mesh, cod end mesh, wing length, funnel length, number of cod ends, number of funnels, etc.). | No requirement | <ul style="list-style-type: none"> no Net ID numbers (The AEF voluntarily numbered all of their fyke nets) |
| | 1 harvester; 2 mates | 3 harvesters; 2 mates each | <ul style="list-style-type: none"> increased number of authorized harvesters (3 total) increased the number of mates (6 total) |
| | Fyke and dip nets | Fyke and dip nets + Irish eel ladder | <ul style="list-style-type: none"> added Irish eel ladder |
| | No more than 15 total pieces of gear | No more than 30 total pieces of gear | <ul style="list-style-type: none"> increased number of pieces of gear to 30 total |
| | January 1 through February 28, 2017, fyke and dip nets for glass eel harvest may be fished at all hours during the week. Fyke nets may have their cod ends closed during the day, however from 12:01 pm on Friday through 12:01 pm on Sunday fyke nets may | January 1 through May 30, fyke and dip nets for glass eel harvest may be fished at all hours during the week. Fyke nets may have their cod ends closed during the day, however from 12:01 pm on Friday through 12:01 pm on Sunday fyke nets may remain in the | <ul style="list-style-type: none"> extended period by 3 months changed length of the rigid device to 8 inches |

| Section Heading | 2016 Plan | 2017 Plan | Modification |
|---|--|--|---|
| | remain in the water but the terminal portion of a fyke net cod end shall contain a rigid device with an opening not less than three (3) inches in diameter and not exceeding six (6) inches in length that is not obstructed by any other portion of the net and dip nets may not be used. | water but the terminal portion of a fyke net cod end shall contain a rigid device with an opening not less than three (3) inches in diameter and not exceeding eight (8) inches in length that is not obstructed by any other portion of the net and dip nets may not be used. | |
| | Fyke nets shall be fished at least once every twenty-four (24) hours | No requirement | <ul style="list-style-type: none"> • removed requirement |
| | March 1 through April 30, 2017, fyke nets and dip nets for glass eel harvest may only be fished and the cod ends closed from two hours before sunset through two hours after sunrise | No requirement | <ul style="list-style-type: none"> • removed requirement, will no longer be required to remove nets from the water over the weekend during this period |
| | During the March 1 through April 30, 2017 period, from two hours after sunrise through two hours before sunset the gear may remain in the water and the terminal portion of a fyke net cod end contain a rigid device with an opening not less than three (3) inches in diameter and not exceeding six (6) inches in length that is not obstructed by any other portion of the net | No requirement | <ul style="list-style-type: none"> • removed requirement |
| | Tamper evident tags shall be used to secure the cod ends of the net closed while the gear is fishing | No requirement | <ul style="list-style-type: none"> • removed requirement |
| | Tamper evident tags shall be used to secure the cod ends open when the gear is not fishing | No requirement | <ul style="list-style-type: none"> • removed requirement |
| NCDMF MONITORING PROGRAM – Before Harvest | GPS coordinates of each net once they are set, if multiple nets are set the same day, coordinates can be provided once all the nets have been set. | | <ul style="list-style-type: none"> • moved item to After Harvest Section |
| | Daily - Names of individual(s) involved reported daily | Beginning of the season - Names of individual(s) involved reported only at the beginning of the season; any | <ul style="list-style-type: none"> • only reported one time at the beginning of the season |

| Section Heading | 2016 Plan | 2017 Plan | Modification |
|---|---|---|---|
| | | changes or additions would be immediately reported. | |
| | Daily - Description and registration number of the boat(s) | Beginning of the season - see above | <ul style="list-style-type: none"> only reported one time at the beginning of the season |
| | Daily - Description and license plate number of the vehicle(s) | Beginning of the season - see above | <ul style="list-style-type: none"> only reported one time at the beginning of the season |
| NCDMF MONITORING PROGRAM – During Harvest | Record the weight of elvers captured from each piece of gear | No elver data collected | <ul style="list-style-type: none"> removed requirement |
| NCDMF MONITORING PROGRAM – After Harvest | | GPS coordinates of each net once they are set, if multiple nets are set the same day, coordinates can be provided once all the nets have been set. | <ul style="list-style-type: none"> moved item from Before Harvest Section |
| | Require fisherman to call-in to NCDMF the total harvest in pounds prior to leaving the last harvest site and report an estimated time of arrival (within a 15-minute time frame) at the landing site. | No requirement | <ul style="list-style-type: none"> removed requirement |
| | Once all gear is fished, the fisherman must travel directly to the designated landing site | No requirement | <ul style="list-style-type: none"> removed requirement |
| | Once at the designated landing site all eels must be offloaded and transported directly to the AEF facility | No requirement | <ul style="list-style-type: none"> removed requirement |
| | Require AEF to call-in or email to NCDMF by 12:00 pm (noon) each day the total harvest for the previous day in pounds to the nearest 0.1 lb. of glass eels received | Require AEF to call-in or email to NCDMF by 5:00 pm each day the total harvest for the previous day in pounds to the nearest 0.1 lb. of glass eels received | <ul style="list-style-type: none"> change in reporting time (5 hours later) |
| | Require AEF to provide CPUE data from each piece of gear (individual fyke or dip net) by the 10th of the following month. | No requirement | <ul style="list-style-type: none"> removed requirement |
| DESCRIPRION of the FACILITY | | | <ul style="list-style-type: none"> additional information was provided regarding system specifications |

Table 2. American Eel Farm (AEF) summary catch and effort statistics for the 2018 glass eel harvest season. *Indicates weeks when the AEF did not have any nets deployed.

| Week date (Sun - Fri) | Number of nets fished | | | Total number days fished | Total number hours fished | Average number hours fished (min:max) | Total number glass eels harvested | Total number glass eels released | Total number elvers released | Glass eel CPUE (number glass eels/hour) |
|--------------------------|-----------------------|----------|----------|-----------------------------------|------------------------------------|---|---|---|---------------------------------------|---|
| | Average | Min | Max | | | | | | | |
| 1-5 Jan* | - | - | - | - | - | - | - | - | - | - |
| 7-12 Jan* | - | - | - | - | - | - | - | - | - | - |
| 14-19 Jan* | - | - | - | - | - | - | - | - | - | - |
| 21-26 Jan* | - | - | - | - | - | - | - | - | - | - |
| 28 Jan-2 Feb* | - | - | - | - | - | - | - | - | - | - |
| 4-9 Feb* | - | - | - | - | - | - | - | - | - | - |
| 11-16 Feb | 4.3 | 2 | 7 | 5 | 408 | 27.2 (9.0:63.8) | 0 | 20 | 0 | 0.049 |
| 18-23 Feb | - | - | - | - | - | - | - | - | - | - |
| 25 Feb-2 Mar | 5.2 | 0 | 8 | 3 | 326.1 | 40.8 (14.5:64.3) | 0 | 70 | 0 | 0.215 |
| 4-9 Mar | - | - | - | - | - | - | - | - | - | - |
| 11-16 Mar | - | - | - | - | - | - | - | - | - | - |
| 18-23 Mar | 7 | 0 | 8 | 4 | 615.3 | 76.9 (69.5:84.8) | 0 | 0 | 0 | 0.000 |
| 25-30 Mar | 5.6 | 0 | 7 | 4 | 503 | 71.9 (69.5:73.5) | 0 | 90 | 2 | 0.179 |
| 1-6 Apr | - | - | - | - | - | - | - | - | - | - |
| 8-13 Apr | - | - | - | - | - | - | - | - | - | - |
| 15-20 Apr | 3.2 | 0 | 4 | 4 | 263.8 | 66.0 (62.3:75.0) | 0 | 90 | 0 | 0.341 |
| 22-27 Apr | - | - | - | - | - | - | - | - | - | - |
| 30 Apr-4 May | - | - | - | - | - | - | - | - | - | - |
| 6-11 May | - | - | - | - | - | - | - | - | - | - |
| 13-18 May* | - | - | - | - | - | - | - | - | - | - |
| 20-25 May* | - | - | - | - | - | - | - | - | - | - |
| 26-30 May* | - | - | - | - | - | - | - | - | - | - |
| Total | 5.1 | 0 | 8 | 20 | 2116.2 | 56.6 | 0 | 270 | 2 | 0.128 |

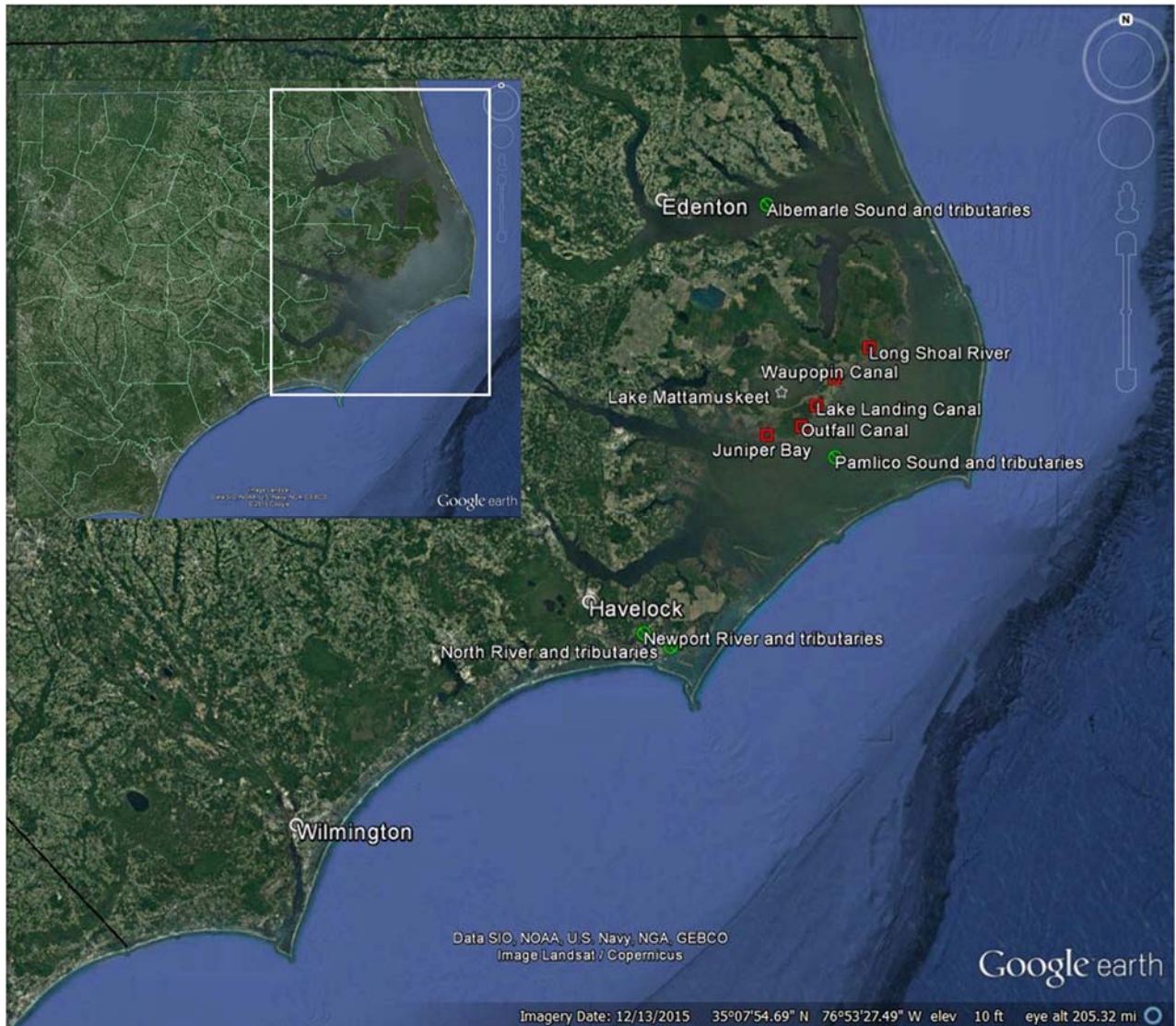


Figure 1. General location of harvest areas (green circles) along the North Carolina coast. All of the fishing effort occurred in the bays and canals (red squares) surrounding Lake Mattamuskeet.