Atlantic States Marine Fisheries Commission

American Eel Management Board

October 22, 2024
4:30 – 5:30 p.m.

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 *(K. Kuhn)*	4:30 p.m.
2.	Board Consent • Approval of Agenda • Approval of Proceedings from May 2024	4:30 p.m.
3.	Public Comment	4:35 p.m.
4.	Review and Provide Feedback on CITES Actions and Committee Work *(D. Hahn)*	4:45 p.m.
5.	Consider Approval of Fishery Management Plan Review and State Compliance for 2023 Fishing Year *(C. Starks)* **Action**	5:15 p.m.
6.	Other Business/Adjourn	5:30 p.m.

The meeting will be held at The Westin Annapolis (100 Westgate Circle, Annapolis, Maryland; 888.627.8994) and via webinar; click here for details

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

MEETING OVERVIEW

American Eel Management Board
October 22, 2024
4:30 – 5:30 p.m.

Chair: Kris Kuhn (PA) Assumed Chairmanship: 10/23	Technical Committee Chair: Danielle Carty (SC)	Law Enforcement Committee Rep: Rob Beal (ME)
Vice Chair: Jesse Hornstein (NY)	Advisory Panel Chair: Grant Moore (MA)	Previous Board Meeting: May 1, 2024
Voting Members: ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, PRFC, VA, NC, SC, GA, FL, DC, NMFS, USFWS (19 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from May 2024

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-in 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 Chair will not allow additional public comment on an issue. 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. Review and Provide Feedback on CITES Actions and Committee Work (4:45-5:15 p.m.)

Background

- The Convention on International Trade in Endangered Species (CITES) Standing Committee formed an intersessional work group on eels. The work group will provide recommendations to the Standing Committee in February 2025 regarding eel species that could impact the US eel fishery.

Presentations

- CITES Actions and Committee Work by D. Hahn

5. Consider Fishery Management Plan Review and State Compliance Reports for the 2023 Fishing Year (5:15-5:30 p.m.) Action

Background

- State Compliance Reports were due on September 1, 2024.
- The Plan Review Team reviewed each state report and compiled the annual FMP Review **(Briefing Materials).**
- New Hampshire, Massachusetts, Pennsylvania, District of Columbia, and Georgia have requested and meet the requirements for *de minimis* for their yellow eel fisheries. Florida requested but does not qualify for *de minimis* as the state landings in 2023 exceed 1% of the coastwide yellow eel landings.

Presentations • Fishery Management Plan Review for the 2023 Fishing Year for American Eel by C. Starks
Board Actions for Consideration • Approve Fishery Management Plan Review, State Compliance Reports, and *de minimis* requests

6. Other Business/Adjourn (5:30 p.m.)

American Eel

Activity level: Low

Committee Overlap Score: Medium (SAS overlaps with BERP, Atlantic herring, horseshoe crab)

Committee Task List
• TC – July 2025 review of Maine's aquaculture proposal • TC – September 1st: Annual compliance reports due

TC Members: Danielle Carty (SC, TC Chair), Alexis Park (MD), Bradford Chase (MA), Caitlin Craig (NY), Casey Clark (ME), Chris Adriance (DC), Chris Wright (NOAA), Ingrid Braun (PRFC), Jennifer Pyle (NJ), Jordan Zimmerman (DE), Troy Tuckey (VIMS), Jim Page (GA), Kevin Molongoski (USGS), Kimberly Bonvechio (FL), Mike Porta (PA), Patrick McGee (RI), Robert Atwood (NH), Sheila Eyler (USFWS), Tim Wildman (CT), Todd Mathes (NC), Caitlin Starks (ASMFC)

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

AMERICAN EEL MANAGEMENT BOARD

The Westin Crystal City
Arlington, Virginia
Hybrid Meeting

May 1, 2024

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INDEX OF MOTIONS

8. **Main Motion**
   Move to approve:
   - **For Section 3.3, Option 1 (Status Quo);**
   - **For Section 3.4, Option 1 (mandatory CPUE data collection)**

   (Page 22). Motion by Jeff Kaelin; second by Lynn Fegley. Motion amended.

   Motion to Amend
   Move to amend to replace Option 1 with Option 2 for section 3.3 (Page 22). Motion by John Clark; second by Doug Grout. Motion passes (16 in favor, 2 opposed, 1 abstention) (Page 22).

   Main Motion as Amended
   Move to approve:
   - **For Section 3.3, Option 1 (Status Quo);**
   - **For Section 3.4, Option 1 (mandatory CPUE data collection)**

   Motion passes (18 in favor, 1 opposed) (Page 23).

9. **Move to approve Addendum VII to the American Eel FMP, as modified** (Page 23). Motion by Emerson Hasbrouck; second by Roy Miller. Motion passes by consent (Page 23).

10. **Move to approve an implementation date of January 1, 2025** (Page 24). Motion by John Clark; second by Joe Cimino. Motion passes (18 in favor, 1 opposed) (Page 24).

11. **Move to elect Jesse Hornstein as Vice-Chair** (Page 24). Motion by Joe Cimino; second by Lynn Fegley. Motion passes by consent (Page 24).

12. **Move to adjourn** by consent (Page 25).

ATTENDANCE

Board Members

Megan Ware, ME, proxy for P. Keliher (AA)
Steve Train, ME (GA)
Rep. Allison Hepler, ME (LA)
Renee Zobel, NH, proxy for C. Patterson (AA)
Doug Grout, NH (GA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)
Dan McKiernan, MA (AA)
Raymond Kane, MA (GA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)
Phil Edwards, RI, proxy for J. McNamee (AA)
David Borden, RI (GA)
Justin Davis, CT (AA)
William Hyatt, CT (GA)
Robert LaFrance, CT, proxy for Rep. Gresko (LA)
Marty Gary, NY (AA)
Emerson Hasbrouck, NY (GA)
Jesse Hornstein, NY, proxy for Sen. Kaminsky (LA)
Joe Cimino, NJ (AA)
Jeff Kaelin, NJ (GA)
Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)
Kris Kuhn, PA, proxy for T. Schaeffer (AA)
Loren Lustig, PA (GA)
John Clark, DE (AA)
Roy Miller, DE (GA)
Craig Pugh, DE, proxy for Rep. Carson (LA)
Lynn Fegley, MD (AA, Acting)
Russel Dize, MD (GA)
Shanna Madsen, VA, proxy for J. Green (AA)
Chris Batsavage, NC, proxy for K. Rawls (AA)
Chad Thomas, NC, proxy for Rep. Wray (LA)
Ross Self, SC, proxy for B. Keppler (AA)
Doug Haymans, GA (AA)
Spud Woodward, GA (GA)
Jeffrey Renchen, FL, proxy for J. McCawley (AA)
Gary Jennings, FL (GA)
Dan Ryan, DC, proxy for R. Cloyd
Ron Owens, PRFC
Chris Wright, NMFS
Rick Jacobson, US FWS

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

Ex-Officio Members

Staff

Bob Beal
Toni Kerns
Tina Berger
Madeline Musante
Tracy Bauer
Caitlin Starks
Emilie Franke
Chelsea Tuohy
James Boyle
Jeff Kipp
Katie Drew
Kristen Anstead
Jainita Patel
Kurt Blanchard

Guests

Travis Atwood , MEFA
Pat Augustine
Mel Bell
Sue Bertoline
Alan Bianchi, DC DMF
Jason Boucher, NOAA
Colleen Bouffard, CT DEEP
Michael Bowen, Cornell Univeristy
Jeffrey Brust, NJ DFW
James Cassin, NOAA
Matthew Cieri, ME DMR
Michael Clough
Allison Colden, CBF
Margaret Conroy, DE DNREC
Heather Corbett, NJ DEP
Caitlin Craig, NYS DEC
Scott Curatolo-Wagemann, Cornell Cooperative Extension of Suffolk County
Micah Dean, MA DMF
Danny Deraps, MSN
Adam Dragon, MEFA
Roman Dudus
Paul Eidman, Reel Therapy Fishing Charters
Julie Evans, East Hampton Town Fisheries Advisory Cmte.
Sheila Eyler, US FWS

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

Peter Fallon, Maine Assn. of Charterboat Captains
Corrin Flora, MA DMR
Tom Fote, JCAA
Anthony Friedrich, ASGA
Lewis Gillingham, VMRC
Willam Gorham, Bowed up Lures
Harry Hornick, MD DNR
Stephen Jackson, US FWS
James Jewkes
Fred Johnson
Amy Karlnoski, NYS Assembly
Carrie Kennedy, MD DNR
Gregg Kenney, NYS DEC
Andrew Konchek
Robert LaCava, MD DNR
Laura Lee, US FWS
Brooke Lowman, VMRC
Michael Luisi, MD DNR
John Maniscalco, NYS DEC
Eric Marek, US FWS
Todd Mathes, NC DMF
Joe McDonald
Joshua McGilly, VMRC
Jack McGovern, NOAA
Kevin McMenamin, Annapolis Anglers Club
Jason McNamee, RI (AA)
Meredith Mendelson, ME DMR
Nichola Meserve, MA DMF
Steve Meyers
Chris Moore, Chesapeake Bay Foundation
Jeff Moore, NC DMF
Nicole Ogrysko, Maine Public Radio
Alexis Park, MD DNR
Cheri Patterson, NH (AA)
Gregory Pavlov
Jennifer Pyle, NJ DEP
Jill Ramsey, VMRC
Stephanie Richards, MD DNR
Harry Rickabaugh, MD DNR
Sefatia Romeo Theken, MA DFG
Bryan Rosa, Origin Outfitters
Zachary Schuller, NYS DEC
McLean Seward, NC DEQ
Alexei Sharov, MD DNR
David Sikorski
John Sweka, US FWS
Rustin Taylor, Maine Elver Fisherman's Assn.
Kristen Thiebault, MA DMF
Peter Whelan
Keith Whiteford, MD DNR
Patrick Whittle
Travis Williams, NC DEQ
Al Williams
Daniel Zapf, ND DEQ
Jordan Zimmerman, DE DNREC

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, via hybrid meeting, in-person and webinar; Wednesday, May 1, 2024, and was called to order at 3:00 p.m. by Chair Kristopher M. Kuhn.

CALL TO ORDER

CHAIR KRISTOPHER M. KUHN: Good afternoon, everyone, welcome to the Atlantic States Marine Fisheries Commission American Eel Management Board. I'm calling this meeting to order. I'm Kris Kuhn, the Administrative Proxy for Pennsylvania, and current Chair of the American Eel Board.

Currently we have the Vice-Chair position vacant, but will be considering filling that role later in this meeting. Our Technical Committee Chair is Danielle Carty from South Carolina, and we have a new Advisory Panel Chair; Mitch Feigenbaum from Pennsylvania. Mitch is certainly not new to the AP or ASMFC participation, but I would like to welcome him into his renewed role as AP Chair.

I would also like to thank our previous AP Chair, Mari-Beth DeLucia with the Nature Conservancy, for her longstanding service and leadership in that capacity. Our Law Enforcement Committee representative is Rob Beal from Maine, and I'm joined here at the front table by Caitlin Starks and Dr. Kristen Anstead with the Commission, Law Enforcement Committee Rep Rob Beal, and AP Chair Mitch Feigenbaum.

APPROVAL OF AGENDA

CHAIR KUHN: We have a full agenda here this afternoon, so let's go ahead and get started with this afternoon's business. The first order of which is Approval of the Agenda. Are there any proposed modifications to the agenda? Any hands online? Seeing none; the agenda is approved by consent.

APPROVAL OF PROCEEDINGS

CHAIR KUHN: Next up, Approval of Proceedings from the January, 2024 Board Meeting. Are there any edits to the proceedings from the January, 2024 meeting of the American Eel Management Board? Okay, seeing none there again they are approved by consent.

PUBLIC COMMENT

CHAIR KUHN: Now we'll move on to the Public Comment period. Are there any members of the public either here or online that would like to make comment pertaining to items that are not on today's agenda?

Again, this is only for items that are not on the agenda. Depending on time, you will be given additional opportunity to comment on motions for specific items to be covered in the agenda later in this meeting. Also, as a reminder to Commissioners and others making comments in the room, please move your microphone down and ensure that it is turned on when speaking, so we can hear you. Anyone wishing to make public comment at this time for items not on the agenda? Okay, seeing none

CONSIDER ADDENDUM VI ON MAINE GLASS EEL QUOTA FOR FINAL APPROVAL

CHAIR KUHN: We'll go ahead and move on to the fourth item that is on the agenda, which is to Consider Addendum VI, pertaining to Maine Glass Eel Quota for Final Approval. Draft Addendum VI was approved for public comment in January, and today the Board meets to select management options and implementation dates, and provide final approval of Addendum VI.

Specifically, this includes deciding upon Maine's glass eel quota, and a timeframe for implementation. Caitlin Starks is going to start us off with a presentation. Following that I'll turn it over to AP Chair, Mitch Feigenbaum for an Advisory Panel report pertaining to, specifically Addendum VI. Then we'll take questions on the presentation

and report. Caitlin, we're ready for your presentation.

REVIEW OPTIONS AND PUBLIC COMMENT SUMMARY

MS. CAITLIN STARKS: I'm going to go over Eel Draft Addendum VI, again this is on Maine glass eel quota and eel/elver management. I'm going to start with the background and statement of the problem for this Addendum, and then go over the proposed management options, the summary of the public comments, and then we'll go over to the AP Chair for the AP report, and finally the Board action for consideration today.

Draft Addendum VI was initiated in August, 2023, when the Board moved to initiate and addendum to address the Maine glass eel quota. Following that meeting the Plan Development Team, PDT, developed the Draft Addendum Document for public comment. Our public comment period was in February and March of this year, and then today the Board will consider those comments and take final action on this addendum.

If approved today, the implementation of the measures is expected in time for January, 2025. That timeline is important, and the reason for this Addendum is because Maine's commercial glass eel quota expires after this year, and so it needs to be reestablished for 2025 and beyond. The quota was set for 2015 through 2017 and 9,688 pounds by Addendum IV in 2014, and then Addendum V maintains the same quota, which was extended through Board action through 2024.

However, a new addendum was needed for fishing beyond 2024. Now I'll just go through the proposed management action. This is a pretty short and sweet Addendum, so the first couple options here, well one option, is related to the Maine glass eel quota level. Option 1 is status quo, that would be 9,688 pounds.

This is maintaining the same quota that has been in place since 2015. Before the Addendum was approved for public comment there was an additional option to consider reducing that quota, but the Board decided to remove that option from consideration. If no action is taken on this Addendum, then there would not be a quota for Maine in the Commission's FMP.

The next set of options is Section 3.2, and these address the duration of the quota that will be established at final action. Option 1 is for no sunset, and that would mean the Maine glass eel quota would just remain the same indefinitely, unless changed through another addendum or amendment. Then Option 2 is a 3-year duration after which the Board would be required to initiate a new addendum to establish Maine's glass eel quota for 2028 and beyond. Then Option 3 is a 3-year duration after which the Board could extend the same quota indefinitely via Board action. However, if a change to the quota is desired under this option, there would still need to be a new addendum and public input process. Now for the Public Comment Summary. During our comment period we had one virtual public hearing, and that was called at the end of February.

We had 23 attendees from the public, but no comments were provided during that hearing. We received 35 total written comments, and I want to note that this number is revised from what was in the memo in the materials, in order to account for all of the signatories that were signed on to a single comment, when there was more than one. We had 33 individual comments and 2 letters from organizations.

This table summarizes the support for each of the options in the Addendum, so 34 of the 35 written comments indicated support for the status quo quota option. Then for the quota duration, 6 indicated support for the no sunset option, and 1 favored Option 2, which would require a new addendum after 3 years.

In the comments that supported the status quo quota option, the rationales included that they are seeing plentiful numbers of elvers in Maine, and that harvesters are easily able to fill their quotas early in the season. Some comments mentioned that they think the Maine fishery is already well managed and regulated, and also that the state has laws and conducts conservation efforts to allow harvest to continue without depleting the population.

A few folks also noted that Maine is unique, in that there are large amounts of habitat for eels in the state. Under Section 3.2 on the quota duration. For those that supported Option 1 for no sunset, the reasoning was just generally that the quota is working and it should stay in place. Then from the 1 comment that supported Option 2, which was from the Pasamaquoddy Tribe.

The letter expressed that the quota should be fully reviewed in 3 years, so that any necessary adjustments to that quota can be made based on changing conditions and information, and additionally that full review in 3 years would allow for an opportunity for the Commission to engage with and coordinate with the Tribe, with regard to this Maine glass eel fishery.

Then we have some additional comments that were not related to a specific option in the Addendum, but 3 comments said that Maine glass eel quota should be increased, rather than stay the same. They think that it wouldn't hurt the biomass, given the small number of fishermen, and also because there should be some credit given back to the fishery for dam removals and other habitat restoration projects.

Then 1 comment expressed that states without glass eel fisheries shouldn't get to vote on Maine's management, and 1 individual favored reducing or ending glass eel harvest, because of the species stock status. In the comment letter from the Pasamaquoddy Tribe, there were a few other points raised about the Commission's management.

First the letter stated that the Commission should consult with the Tribe before proposing any management actions that would affect American eel and other species in their region. It also noted the opinion that ASMFC and its partners should prioritize population and habitat restoration efforts in eel management over harvest quotas. I can pass it over to Mitch for the APs report.

ADVISORY PANEL REPORT

MR. MITCH FEIGENBAUM: I can report that 2 of 5 AP members present at our meeting were representing Maine. Both supported Option 1 on the quota, as well as on the quota timeframe. Two of the other 3 AP members either supported or offered no opinion about the views of their colleagues from Maine. Not only Maine's AP members, but attendees at the State Public Meeting report that glass eel runs are strong, and note that the quota is easily reached every year.

I apologize for the redundancy. They cite the reduction of adult eel fisheries and an impressive record of dam removal as proof of the state's responsible approach to species management. While the harvester community in Maine asks the Board to consider increases to the state's glass eel quota, this matter was not addressed by the AP, since it was not an option for consideration in the Addendum. Thank you.

MS. STARKS: Thank you, and I just have one more slide to wrap up. The first item for the Board's consideration today would be the selection of management measures, and then followed by the final approval of Addendum VI.

CHAIR KUHN: At this point we'll take questions on the presentation for Caitlin or Mitch on the AP report. Yes, Dan McKiernan.

MR. DANIEL McKIERNAN: Could I get clarification on, Mitch, the third bullet referencing the reduction of adult eel fisheries in Maine. Does Maine prohibit yellow eel harvest?

MR. FEIGENBAUM: It is my understanding that they do. I know that when the rules were imposed in Maine to eliminate the silver eel fishery and adult eel harvesting, it was grandfathering that was implemented, and I don't know the status of that. Perhaps the folks from Maine could answer better.

CHAIR KUHN: Any additional questions in the room for Caitlin or Mitch? Okay, seeing none; do we have any hands online? Okay, we have a hand from a member of the public online, but we're going to go ahead and hold that until we get to motions. You will have an opportunity to speak once we get the motions.

CONSIDER APPROVAL OF ADDENDUM VI

CHAIR KUHN: If there are no more questions on the presentation or the AP report, let's go ahead and open it up to the Board for discussion on the presentation. Megan Ware.

MS. MEGAN WARE: I had sent staff a motion to get our conversation started today.

CHAIR KUHN: We're getting that up on the board now, it looks like it's up there.

MS. WARE: For Draft Addendum VI, **move to select under 3.1 Maine Glass Eel Quota, Option 1: Status Quo (9,688 lbs. quota) and under 3.2 Timeframe for Maine Glass Eel Quota, Option 3 (Three years, with the ability to extend via Board action)**.

CHAIR KUHN: Okay, do we have a second? Doug Grout. Okay, Megan, as maker of the motion would you like to provide some additional comments?

MS. WARE: I would, certainly, support maintaining our existing quota, and prefer that to not managing this fishery under a quota, which would be what we get if we don't choose Option 1 today. Just to echo some of my comments from our meeting in January. There is no recommendation coming out of the assessment for a reduction in Maine glass eel quota. Our young of the year survey trends have been steadily increasing.

The assessment is pretty clear that harvesting glass eels has a lower impact on the population, given the high net mortality at that life stage. In terms of the timeframe, I believe our system for reviewing the glass eel quota every three years has worked well, and I hope that that provides a little more comfort to the Board today, with the status quo quota. I like Option 3 from an efficiency standpoint, because it does allow for Board action if the Board decides to maintain the quota after three years.

CHAIR KUHN: Doug, would you like to provide some additional comments?

MR. DOUGLAS E. GROUT: No, Sir.

CHAIR KUHN: Okay, before we go to the Board for discussion on the motion, I'll now accept some public comments specific to the motion. Do we have any members of the public that would like to speak or make a comment specific to this motion? Any hands online? Okay, no hands online. Let's bring this back to the Board for discussion on the motion. Is there any discussion on the motion? Okay, seeing none.

I guess we're at the point where we can call the question. Is there a need to caucus before the vote? Caucus, we'll take two minutes. Okay, two minutes are up. Is there any need for further discussion, caucus? Seeing none; we'll try and do this the easy way**. Is there any opposition to the motion? Seeing none; the motion passes by consent**. At this time, we're ready to consider final approval of Addendum VI. Is there anyone willing to make that motion? Megan Ware.

MS. WARE: Yes, I am happy to make that motion. **Move to approve Addendum VI to the American Eel FMP, as modified today**.

CHAIR KUHN: Do we have a second? John Clark. Megan, would you like to speak to that?

MS. WARE: I don't have any comments.

CHAIR KUHN: John Clark. Okay, again we'll do this easy way. **Is there any opposition to the motion? Okay, seeing none, the motion is approved by Board consent**.

CONSIDER ADDENDUM VII ON YELLOW EEL YELLOW EEL COASTWIDE CAP AND MONITORING FOR FINAL APPROVAL

CHAIR KUHN: We'll go ahead and move on to Item 5 on the agenda, which is to Consider Addendum VII on Yellow Eel Coastwide Cap and Monitoring Requirements for Final Approval. Addendum VII was approved for public comment in January, and today the Board needs to select management options and implementation dates, and decide upon final approval of Addendum VII. Specifically, this includes deciding upon the coastwide cap, the management response to exceeding the coastwide cap, timeframe for how long the selected coastwide cap would remain in place, annual young of year abundance survey requirements, catch and effort monitoring requirements, and the American eel de minimis criteria. Caitlin Starks again is going to lead us into questions and discussion with a presentation, then we'll hear the AP report on Addendum VII from AP Chair, Mitch Feigenbaum. Caitlin, the floor is yours.

REVIEW OPTIONS AND PUBLIC COMMENT SUMMARY

MS. STARKS: This will be very similar in structure to the last presentation. I'll go over some background information and statement of the problem, the proposed management options, which are going to be a lot lengthier than the last presentation, and then the public comment summary before going to our AP Chair.

Addendum VII responds to the 2023 stock assessment, which maintains the depleted stock status and recommends reducing the catch of yellow eels. To date the assessment hasn't been able to provide us with biologically based reference points for use for management, so instead the Board has managed eels, yellow eel, using a coastwide catch cap. That is based on historically yellow eel landings.

The most recent assessment is still unable to provide these biological reference points, but it did identify a tool that we could use to inform management of yellow eel, using fishery independent abundance indices and coastwide landings to provide catch advice. This is called I-TARGET and we'll talk about I-TARGET some more later.

This graph just shows the yellow eel abundance index, which is the dotted gray line, and the coastwide landings, which is the black line. You can see the decline in both of these indices over time. The Board initiated this Addendum, specifying in their motion that we should consider using I-TARGET to recommend various catch caps for the yellow eel commercial fishery, but not use I-TARGET, to set biological reference points or stock status.

This Addendum also considers some changes to monitoring requirements, based on recommendations from the Stock Assessment Subcommittee and Technical Committee. First the 2023 assessment indicated that biological sampling in the young of year surveys that's required, specifically the individual lengths and pigment stage, could be made optional, because these data haven't been able to inform coastwide trends in the stock.

Additionally, it notes that the catch per unit effort data that are provided by states, haven't been used in any of the stock assessments as was the intention for those data, because they have also not been indicative of trends in stock as a whole. As a reminder, this Addendum was initiated last August, and after the Board reviewed the 2023 benchmark. In the fall, the Plan Development Team put together the management options in the document, and we had our public hearings and comment period in

February and March, the same time as Addendum VI.

Today, we're also having the Board discuss the comments and consider final approval of the Addendum. Just to go over the management options. These are the five sections of the Addenda that we'll talk through today. We have options on the commercial yellow eel coastwide cap, and the management response to exceeding the cap, timeframe options for that cap, young of year abundance survey requirements, catch in effort monitoring program requirements, and then finally a de minimis status. Starting with the coastwide cap. Issue 1 under 3.1. This deals with the cap level itself. Our current cap is 916,473 pounds. That is based on the average landings from 1998 to 2010. This is our status quo option, and then there are four additional options, which propose a range of alternative harvest caps using that I-TARGET tool that was recommended in the assessment. Just a quick reminder on I-TARGET.

This is a trend-based tool for managing data limited fisheries, and it uses data from landings and abundance indices, and provides a range of catch limit recommendations, based on trends in catch, abundance and management goals. Essentially, the inputs into I-TARGET are the historical catch and abundance trends, where catch and abundance levels currently are, and then the target abundance of where we want to be.

Then as an output, I-TARGET provides us with a cap recommendation for getting to that target abundance level. In addition to those basics, there are these three variables in I-TARGET that need to be defined, in order to configure the tool. We have the reference period, the multiplier and the threshold. These are the knobs that the Board needs to adjust.

The reference period is meant to be a time period where the population is stable or at a desirable abundance level, and this is the time period of abundance that we're comparing our target abundance to. The multiplier determines the level of abundance that management is aiming to achieve. If the multiplier is set to 1, that means you're aiming to achieve the same abundance from the reference period.

If you set the multiplier to 1.25 that means you are aiming to achieve an abundance level that is 25 percent higher than the abundance from the reference period, so that is how that functions. The threshold value is a portion of the I-TARGET value that is dependent on the goals of the fishery. A threshold value of 0.5 is a less conservative value, and generally results in higher catch cap, and a threshold of 0.8 is a more conservative value that generally results in lower catch caps, and that is our range for the threshold options.

The options that use I-TARGET to recommend the catch caps, there are two different reference periods that are considered, so those are shown in this graph in the blue and yellow shaded areas. The blue shaded area is the earlier reference period, which is 1974 to 1987, and in that period the abundance index was at a higher level.

That represents a more desirable abundance level, and then in the yellow areas there is a later reference period, which is the lower level of abundance, but still above abundance levels in the most recent decades. Then this table is showing the four proposed options for coastwide caps that use I-TARGET.

Option 2 and 3, which are highlighted in blue, they use the earlier reference period and a multiplier value of 1.25, so they are using the same multiplier value and reference period, which means they are aiming to achieve the same level of stock abundance. That is 25 percent greater than the stock abundance during that reference period. They differ in that Option 2 uses a threshold of 0.8, and Option 3 uses the threshold of 0.5. The 0.8 threshold results in a coastwide cap of 202,453 pounds, and the 0.5 threshold results in 518,281 pounds, and that is based on the conservativeness of those two options. Then Option 4 and 5 use the

later reference period, which is 1988 to 1999. They both use a threshold value of 0.5, but Option 4 uses a multiplier of 1.5 and Option 5 uses a multiplier of 1.25. This means these two options are aiming for two different levels of stock abundance. Option 4 if aiming for 50 percent higher than the abundance during the reference period, and Option 5 is aiming for 25 percent greater than that abundance level.

Then this graph just shows those four options for coastwide cap compared to the current coastwide cap, which is the black dashed line at the top, as well as the coastwide yellow eel landings since 2015. The next set of options are related to the management response for if that coastwide cap is exceeded.

Our status quo option is that if landings exceed the cap by 10 percent for 2 consecutive years, then the state's whose landings are greater than 1 percent of the coastwide total landings in those years, would be responsible for reducing their landings to come back down to that coastwide cap in a subsequent year.

Option 2 modifies this slightly, so that it would be a response by the states whose landings are greater than 5 percent of the coastwide landings being responsible for reducing their landings. That just changes the number of states really that would be responsible. To show that difference, in this table we have some yellow and gray shaded cells.

All of these cells are states that have landings greater than 1 percent of the coastwide landings in each year. Then just the gray cells are those states with greater than 5 percent of the total in each year. Moving on to our options for timeframe. Option 1 is that the cap would not have a sunset date, but that it would need to remain in place for three years, before being updated.

That three-year minimum timeframe was recommended, because less than three years of data wouldn't be as sufficient to evaluate the performance of that cap. Then Option 2 is that the cap would again, not have a sunset date, so that it would have to remain in place for 5 years before being updated.

To clarify what updating the cap means under these options, it would be that additional years of data, whether it's 3 or 5, would be run through the I-TARGET tool as it is configured. It doesn't mean it would be able to change the reference period, multiplier or threshold values. Next are the options related to the young of year survey sampling.

Option 1 is status quo, and this would mean the states must continue to collect individual length and pigment stage during the young of year surveys. Option 2 is that the biological sampling of those two things would become optional, and that was recommended by the SAS in the 2023 assessment. For Section 3.4 we have two options regarding the fishery dependent catch and effort monitoring.

Option 1 status quo would maintain the requirement for harvester reporting of trip level, catch per unit effort data, and that was established by Addendum I. This means the states would continue to require those CPUE data and harvester reports, including soak time, number of units of gear fished and pounds landed. Then Option 2 would be that the states would no longer be required to collect those trip level CPUE data for yellow eel catch. The states would be able to continue that collection of the data if they chose to, and the majority of states indicated that they would likely continue collecting those data, even if it were voluntary. But as a note, this option does not apply to glass eel, it just applies to the yellow eel surveys. Then our last section is de minimis status options.

The Commission approved a new standard for the de minimis policy, and that is to use an average of three years of landings to evaluate whether a state meets the de minimis criteria. Our status quo option would be to continue using two years, which is what is currently in the eel FMP, and Option 2 would be to update the eel FMP to use the three-year average, which is now the Commission standard. If Option 1 is chosen, then our policy

indicates that the Board would need to provide a rationale for why two years is more appropriate for this species.

Now we can go through the summary of public comments on this Addendum. We had six public hearings during the comment period for Addendum VII in February and March, and combined the attendance across all of those hearings was 37 individuals, and 23 comments were provided at hearing. We also received a total of 10 written comments on the Addendum, 9 of which were from individuals, and one letter from the Maryland Watermen's Association.

This table just summarizes the support for the different options indicated by the comments. The main takeaway here is that the public generally supported the status quo option for the coastwide cap for yellow eel. Only one person commented in favor of the different option, which was Option 5. There was not a strong response about the other options in the Addendum.

Three people supported the status quo management response to exceeding the coastwide cap, 6 supported the timeframe option for 3 years before the cap is updated, and 3 supported the 5-year option. Then 3 people supported status quo for keeping the requirements for young of year biosampling, and 3 supported status quo for keeping the requirement for trip level harvester CPUE data, and 3 supported status quo for de minimis.

As you just saw, we got 28 comments in favor of the status quo coastwide cap, and the rationales given were that the fishery does not have an overfished or overfishing status, that effort and landings for yellow eel have declined because of the market and fishing cost, not because of decreased eel abundance.

The status quo option would allow for the fishery to grow back to previous levels if the market were to recover in the future. They also commented that more data are needed for the years after COVID, when things came more back to normal. Then the 1 individual in favor of Option 5 noted that this option would also still allow for growth of the fishery, and wouldn't limit it too much.

Regarding the timeframe for the coastwide cap. There was more support for the 3-year option. General thinking behind that was that within three years the data could be improved, and the update to the cap would possibly benefit the fishery sooner rather than later. Then the 3 individuals in favor of the 5-year timeframe preferred having more years of data. For the young of year biosampling, the support was mainly for status quo, but there weren't really reasons provided for that. For the CPUE data collection options, the supporters of status quo did express some concerns about losing that information on the harvester CPUE, because they do think it's important for assessing the fishery. Then for the de minimis options, 3 were in support of status quo, but again no reasons were given. Then these are some additional comments we received during the period of public comment that weren't necessarily tied to certain options in the Addendum. Several folks commented that we do not need any changes for yellow eel management.

There was also a group that commented about the coastwide cap option, saying that even though they prefer status quo, they were skeptical that status quo would be the outcome of the Board's decision, so they wanted to emphasize that Option 5 was the next best option in their opinion. Then a few individuals mentioned that we need better data for assessing eel abundance, and that the CPUE data would be better if they were collected by fishermen who have more experience, and know how to catch eels.

There were also some comments that mentioned some concerns about illegal catch of undersized eel and foreign aquaculture markets, both affecting the U.S. industry in a negative way. There was also 1 person that commented that eel catch would be better if horseshoe crab harvest were allowed in

New Jersey, and another said that eel catch did significantly decrease when the female horseshoe crab harvest was banned. Now we'll go over to the AP Chair for the AP report.

ADVISORY PANEL REPORT

MR. FEIGENBAUM: On the question of the coastwide cap Issue 1, 3 of 5 AP members favored status quo, questioning how a cap reduction could be justified in an era of historic low fishing effort, and with a stock status that does not find overfishing taking place. This was the dominant position of public comments made at the state meetings.

While supporting status quo, the AP member most closely connected to the processing and export industry acknowledged that Option 5 would cause little short-term disruption. At the same time this member warned that Option 2 is draconian, and could bring an end to the commercial fishery altogether.

One of Maine's AP members expressed no position on the coastwide cap options. The AP member from the NGO sector supported Option 3 for the coastwide cap, believing that the data supports a more precautionary approach, including some data from outside the ASMFC range. On Issue 2, the APs feedback was that the panel members had no preference between the two options.

As far as the sunset date, 2 AP members spoke in support of Option 1, meaning that the cap could be updated after 3 years, based on better data and improved modeling. The other AP members offered no comment on the issue. On the issues in Option 3.3, all AP members were in favor of Option 2, making optional the collection of individual lengths and pigment stages during young of the year surveys.

The APs unanimous position is based on assurances from ASMFC that surveys would continue to distinguish the age classes being sampled. For example, whether they are really Year 0 surveys for glass eels, or Year 1 surveys, which scientists refer to as elvers. All the commercial fishermen use the terms interchangeably. On Issue 3.4, four of the AP members favor Option 1, status quo. They cited the importance of CPUE information in assessing data-poor species. They also noted support for this position in the public comments. The AP member with the longest tenure on the panel at the meeting, noticed that the Technical Committee has previously insisted that favorable catch data may not be used as a stock indicator, unless it's accompanied by CPUE information.

They questioned how ASMFC could justify an about face at a time of historically low effort, when CPUE information provides a unique view of stock status. One AP member supported Option 2 on the grounds that it was potentially distracting from other priorities in an era of limited resources. The AP members stated unanimously that they have no strong views on Item 3.5, and support Option 2 if that is the Commission's recommendation. The AP provided some additional feedback.

During the meeting concerns were raised by at least 1 panel member, as well as a public observer representing the processing and exporting sector, about the Commission's reliance on the stock status assessment, considering that it is the third different model used for assessing eel stock in three successive assessments.

The use of fishery dependent information in this stock status without any CPUE information, especially in an era of historic low effort was the source of other questions. There was a feeling that the abundance index mis-weights fishery independent data, or over-weights fishery independent data that come from areas of commercial fishing that comprise only part of the species vast U.S. range.

It gives low data surveys equal weight to data rich surveys. Finally, pointed out that the peer review comments in three successive assessments have demonstrated in the lack of reference points, all demonstrate the limited authority of the stock

assessments. That is the summary of the AP comments, thank you.

MS. STARKS: Just as we just did with Addendum VI, the Board actions for consideration today are to select management measures for Addendum VII, and consider final approval.

CHAIR KUHN: Thank you, Caitlin and Mitch on those presentations. At this time, we can take questions for Caitlin on the presentation and Mitch on his report. Bill Hyatt.

MR. WILLIAM HYATT: I have a question regarding Figure 11 that was in the materials that were sent out prior to the meeting. I think this was presented as sort of a truncated bar chart in your presentation earlier. I'm looking at that and interpreting it as only Option 2 is the only option that departs from the historical harvest pattern that was associated with the depleted condition today. I just want to make sure that I am interpreting that figure correctly, if there are any nuances that I should be aware of. Thank you.

MS. STARKS: Apologies, I'm trying to find Figure 7, so I can remind myself which one it is.

MR. HYATT: It was Figure 11.

MS. STARKS: Eleven. Okay, you were asking about Option 2, correct?

MR. HYATT: Correct, yes, I am interpreting that as the only option that departs from the historical pattern of harvest that is associated with the depleted condition we have today. The only option that departs from that is Number 2, and I'm seeking any clarification. Are there any nuances that I should be aware of in my interpretation of that?

MS. STARKS: The four lines, and actually, Madeline, I think there is a slide with this on it, if you want to pull it up, just so it is clear what I am talking about. This is the figure you were referring to. Those four lines with the different colors are the results that I-TARGET would provide if that year vertical was the final year.

The black line is the catch landings trend. But the four different lines are just different results of I-TARGET based on different configurations of the tool. The red one at the bottom, which I think is the one you were talking about that is much lower than the others. That is just the tool using the configuration from Option 2, which is 1974 to 1987, 1.24 multiplier at a 0.8 threshold.

What that is telling us is, if you use those variables in a configuration of I-TARGET, it's recommending based on the abundance index, which is not shown in this graph, that the catch in each of those years should have been much lower than the catch that was actually caught in those years.

CHAIR KUHN: Does that answer your question, Bill?

MR. HYATT: Yes, thank you.

CHAIR KUHN: Thank you for the question, and thank you for the informative answer, Caitlin. Do we have any other questions? Yes, Craig Pugh.

MR. CRAIG PUGH: I guess I can make my point through this graph, or the other three-colored bar chart that you had shown earlier. The statements were made in the Advisory Panel, and I agree with them. They are shown very plainly in the black line here with the dots. You see the reduction towards 1989, and that would include relieving us of a female horseshoe crab.

That's when that happened, that's what happened. We've moved to a male and then other baits accordingly. I think Mitch could probably confirm what I'm saying timeline wise. He's been involved with this fishery as long as I have. The baits were not quite as effective, but we still use them, tried for a few years. It didn't really work out. Catch effort has gone down. But in no case can the catch effort imply abundance through this time period. The fact of the matter is, either the market went to

hell in a hand basket, and it has, and the baits are of a degrading quality.

CHAIR KUHN: Mr. Pugh, is there a question in there, I'm sorry to interrupt.

MR. PUGH: It made the history a little tougher for us to get through.

CHAIR KUHN: We're taking questions, is there a question in there? There will be time for comments later.

MR. PUGH: Fine.

CHAIR KIHN: Question, Justin Davis.

DR. JUSTIN DAVIS: Sorry, it must be getting late in the day, I had to navigate through all the empty soda cans and water glasses to get to my microphone here. I just want to make sure I fully understand the mechanics of the I-TARGET approach, and how it's going to potentially play out in coming years.

Under Issue 3.1, issue on the coastwide cap. If we adopt today any option other than status quo, we are officially adopting the I-TARGET approach that will become part of the FMP, and we will use I-TARGET to set coastwide cap in future years at whatever interval we decide to revisit it, but we will not have an opportunity to change the configuration of the threshold and the multiplier and those values, until the next benchmark stock assessment?

Is that when there would be an opportunity to adjust those dials? I'm trying to get a sense for, you know if we officially adopt I-TARGET today, how long will we be required to use the current configuration we adopt? When will there be an opportunity to change those settings? When would there be an opportunity to stop using I-TARGET If the Board wanted to?

MS. STARKS: Yes, thank you for that question. Essentially, if any of those other options is chosen, 2 through 5, it would mean that an Addendum would be required to change the configuration of I-TARGET, or to stop using it in the future. If there were a benchmark stock assessment in 10 years, which is recommended, and things changed and you wanted to use a different configuration or a different management tool, then you could initiate an addendum after that point, or you could initiate an addendum any time. But it would be required to change the configuration.

CHAIR KUHN: Are there any other questions? Yes, Shanna Madsen.

MS. SHANNA MADSEN: Just a quick correction. Caitlin, I verified with my staff member. I know we only had one guy at our eel meetings, and that conversation was very long. But he selected Option 3 actually, it was not Option 5. Just a quick correction on that. I wanted to let the Board know that that is what was coming out of Virginia during our public hearings.

CHAIR KUHN: Yes, Lynn Fegley.

MS. LYNN FEGLEY: Would you mind returning to Figure 11. I'm just going to ask this question, to make sure that I understand and that everybody else understands. If whichever of these levels we decide to fish at, our goal is to get to 125 percent of whatever the reference period is that we choose. My question, I want to make really sure is that if we're fishing at the particular cap. Do we know, have any idea how long it will take to get us to that 125 percent or 150 percent of the reference period? I guess that is my question in a nutshell is, do we know, do we have any means to know. The reason I ask that is because there is a phrase in the peer review report that says that the management action will not necessarily create a population response. I just want to make sure that we're all clear on what we are going to get for a management response as we make this choice.

MS. STARKS: I think like all of the species we manage; the answer is no; we can't predict exactly how management is going to impact the population. With eel, as you know, there are a number of factors that affect the population and it's

coastwide stock. There are lots of things going on, and there is no population projection model.

CHAIR KUHN: Are there any other questions on the presentations, before we move into discussion? Okay, seeing none.

CONSIDER APPROVAL OF ADDENDUM VII

CHAIR KUHN: I'll open it up to the Board for discussion. Is there anybody that wants to discuss the presentations? Craig Pugh, do you want to finish up your thought?

MR. PUGH: Point being that the catch effort has no indicative conclusion as to abundance. If the effort is not there, how can the landings that entered into this have any meaning at all? That is as far as abundance. I guess that is my true question. Can you answer that for me, Caitlin? If there is, then that would be informative to me.

I know there has been quite a drop off in effort. But with that, we also see them in a bycatch, so a situation with our blue crab fishery that shows a heavy abundance of these, but yet we don't necessarily market them, but we see them quite often. They are a bit of a pain, because they consume our bait before the crabs do. At any rate, I guess that is more my question. Can you help me with that, because that is my conclusion, maybe I'm wrong. But if you can help me with that, I would certainly like to hear it.

MS. STARKS: Yes, I think I can help. We went back to this graph, because this is showing both the abundance index and the catch trend. Again, the catch is the black line, and that is what was on the last graph. But these two things are not related in our stock assessment model or in this I-TARGET model. But it's to show you how they line up with each other. What we were doing in the last graph is just simply showing how the actual catch would have compared to I-TARGET recommendation of catch.

CHAIR KUHN: Yes, Russel Dize.

MR. RUSSEL DIZE: What Craig Pugh was talking about with the catch per unit effort. There is no catch per unit effort now in my area of the Bay. Everyone has had to quit, because it is very expensive to go out and try to catch eels without a market to sell them. If you look at the graph, once that graph goes down like that, that became when we could not sell the eels any longer.

You've got to look at that point. In my area, at Tilghman Island in the middle of Maryland's portion of the Bay, we had loads of people catching eels. Since, if you look at the graph and the time period. Since that happened, since we could not sell them anymore, it's gone down, because in my area we have no catch effort. Another thing, you've got to look at where the Technical Committee are getting their information. I looked into it a little bit. The four points in the Hudson River, which I can't say where they are, because I don't know. But if you go to the Hudson River and it's over a ten-year period, there may be nothing. In the set they do one in Maryland, one, and that is in the upper reaches of the Chesapeake Bay, Sassafras River. The Sassafras River is full of blue cats and snake heads, no eel, they're going to eat them up. Matter of fact, they're going to eat the rockfish up too. This whole thing is really swayed, because you can't get an accurate accounting for what is out there.

Like Craig said, we've got beaucoups of yellow eel in our area, so many that we're complaining about it in our crabbing operations. I think this whole thing has been swayed one way, several factors. Craig pointed out the bait. Another factor is, you cannot sell the eels, so you are not going to catch them.

I think in your report you said you were not going to use the CPUE anymore. If you don't use that, how in the world can you tell what is out there, if you're not going to take the CPUE from it? I just don't understand that, because we've got no one catching them. If you don't have anyone catching

them, you're not going to be able to tell what the effort was. I don't understand the whole thing. Thank you.

CHAIR KUHN: Kristen, would you like to respond to that?

DR. KRISTEN ANSTEAD: Yes, all right just one point of clarification is that you aren't being punished for the current low catches by the I-TARGET method. These recent low catches, we acknowledge that is because of market, because of COVID, because of all those things. The index is what is determining how you're adjusting your catch recommendation.

Just to make sure that is clear to the Board is, like the 2020 low catches are not driving the low recommendation. As for the indices, I totally agree with you. I would love to have more indices for eel. The TC and the SAS would love to have more to consider to put into this tool. The ones that we took to make this abundance index that you see up there, were the best indices we had available to us.

Certainly, we were not cherry picking them, and we did look into the Hudson River issue as tasked by the Board, and it does have an effect on the overall trend of this. But the Hudson River is part of the coastwide stock, and it wasn't one of the Hudson River indices driving this, they all were telling the same story. They do have an effect, but they are also part of the stock, an important part of the stock, because they provide some historical data. I hope that helps answer a couple questions.

CHAIR KUHN: Yes, Russel.

MR. DIZE: But I would like to give you a scenario. I'm on several of the oyster we use on panels in Maryland. Also, Captained the Skip Jack, ran the Skip Jack for 28 years. If you go out dredging oysters, and you go on the oyster bottom. But I can take you to a thousand places where there is neither oyster, not one. I say you should be taking your feedback where you're testing. If you feel you're not getting any, try something different. I mean I would fail as a waterman if I went out and it did the same thing every time, and you kept going down. I mean it doesn't make sense. If you come to the middle of the Chesapeake Bay, down into our area, you're going to find beaucoups of yellow eel. But if you never test it, you're never going to see it. We can't prove it now, because we can't sell the eels. It's a no-win situation. I just think that this is a flawed scenario from start to finish. I'm very unhappy with it. Thank you.

CHAIR KUHN: Thank you for your comments and perspective, Mr. Dize. John Clark.

MR. JOHN CLARK: Yes, Mr. Chair, are you ready to start considering motions on this?

CHAIR KUHN: I was about to if there was no more discussion, but I did see one more hand here before yours, Shanna Madsen, and then we'll go into entertaining motions.

MS. MADSEN: It's just a quick, clarifying question, because I've heard this misconception a lot of times when discussing I-TARGET. Dr. Anstead, correct me if I'm wrong, but the current catch levels are not what is being considered in I-TARGET, or referenced in I-TARGET. You are actually referencing back to the average catch during the reference period, so I-TARGET isn't working in those periods of low catch that people are concerned with.

DR. ANSTEAD: That's correct. The significance of choosing a reference period is you are choosing the average catch during that reference period. If you use the older reference period, your average catch during that earlier period gets adjusted by the fishery independent index. We don't have any fishery dependent CPUEs in here. Depending on where your current index is, compared also to that reference period, is how it's adjusting that historic catch to make a catch recommendation.

CHAIR KUHN: Thank you for that question and explanation. I think we're at the point here where

we are exhausting our discussion, so let's go ahead and get into motions. I know John Clark had tried to offer one previously, so go ahead, John.

MR. CLARK: I don't think anybody will be surprised, considering the comments I've made about this Addendum in the past that I would **move to approve under 3.1, Issue 1, Option 1 that we go with status quo**. If I can get a second, I can speak to that.

CHAIR KUHN: Do we have a second? Russel Dize. Okay John, can you speak to that motion.

MR. CLARK: There are a bunch of reasons here. I think not just the fact that anybody who has fished commercially for eels, as mentioned as Craig and Russel have, that the yellow eel stock in the areas where it is fished, where the fishery is, is in very good shape. But I want to consider all the points here, so defining the stock as overfished was rejected by the Peer Review.

I appreciate all the work the Stock Assessment Subcommittee put into this, but the fact that when the assessment came out it was actually recommended, considering the stock overfished I thought was a gross overreach, and I was very heartened to sees the Peer Review reject that, and continue the depleted. You know as we saw from 2019 to 2022 catches drop from 60 percent of the cap to 35 percent of the cap. I mean this is a market driven fishery. I would say, I know that Russel and Craig had spoken about the catch per effort being the problem. I think what it actually shows, when we look at what has been going on out there. I look at Delaware, where Craig said because of the lack of bait we've had a huge drop off in effort. We've had new people come in, they are not using as good a bait, but there are plenty of eels out there, because our catch per effort every year, which is not used in the assessment, has remained steady.

We also want to look at the attempts to link eel declines the parts of its range to overall declines in the population that haven't occurred. Before I was a fish bureaucrat, I was actually a field biologist, and I worked with eels a lot. I did a lot of onboard sampling with commercial eelers, and I think that the eel biology, especially in the estuaries where the fishery is prosecuted, as I've said before, is very unique.

I could be out, you know we would go into a small gut, put out four or five pots, you would load up with eels. You might get that for two or three days, after that they're gone. You pull the pots. You leave it alone for a couple of weeks, you come back, the eels are back. It's just the way it is in the estuaries, the eels there don't stay very long there.

They pretty much mature. We rarely see eels older than five or six years old, whereas the eels that made it inland, like the huge eels they see in Lake Ontario. I mean that was a 20- to 30-year-old eel. Back when this whole process started to manage eels, the concern was that the extirpation of eels from Lake Ontario was the signal that the species was going extinct.

We haven't seen that happen. I think the indices in the Canadian Maritimes have been steady. What they're seeing up in Maine with the life cycle study, which is again at the northern end of the range, shows that there are still plenty of yellow eels out there. I wanted to point out in the assessment that the only survey that targets eels with eel gear actually showed a significant increase.

This is the Maryland survey that takes place in the Sassafras River. Even the decline mentioned for the stock, using the MARSS model, it said it straight in the stock assessment that although the MARSS model fit the yellow and young of the year time series suggested a slightly declining population, the 95 percent confidence intervals on population growth rate estimates overlap zero, suggesting a stable population.

You know we would be taking a very harsh measure here, I think, based on not too much. I think the whole I-TARGET method is almost as arbitrary as using the cap we have now, which is based on

landings. I don't see, you know we're going from one form of expert opinion to another form of expert opinion.

This one tries to objectify it a little bit more, but it's essentially that. Just got a couple more points here, so please, bear with me. I would say that separating the yellow eel and considering it overfished, or trying to reduce the cap, while leaving the glass eel quota status quo, is almost a cognitive dissonance here.

I mean you need yellow eels to go out and reproduce to produce glass eels, obviously. If there are plenty of glass eels out there, clearly the stock is doing something right to keep producing that. Even though in Delaware our catches have really dropped off. We're not the major player in eels that we were 15, 20 years ago, and mostly as Craig said, because of the female horseshoe crabs, which of course is another fraught issue. The fact is, is that lowering the cap will lead to bureaucratic burdens, and make it more difficult for the future of the people that want to get into this fishery. One of the things that is nice about eels in Delaware and other states, is it's an easy fishery to enter. It's pretty low capital investment to get started.

Every time we make one of these fisheries more difficult for young people to get into, you know we've got to start thinking about the next generations of commercial fishing, and give them some options to get into this that don't require them to try to get a gillnet license or a crabbing license transferred to them that could end up costing a lot of money.

I think for all those reasons, I certainly understand the work done and the trends with eels with the population. It would have been nice to see the population show some increases by now, but the fact is that it is basically holding stable. We have a market driven fishery that I'm mostly saying here, it's not broken let's not fix it. I'll just leave it at that for now.

CHAIR KUHN: Thank you, John, appreciate the detailed rationale for the motion. Given the thoroughness of your response and your rationale, I'll still go to Russel Dize to see if you want to add anything additional that is new to what John had just said.

MR. DIZE: I agree with everything John said. But I have a note here that in 2022, 300,000 pounds of glass eels were sent into Hong Kong. We had better get a handle on what's happening, because it is my understanding, and Ms. Starks can keep me straight on it, that all eels spawned in the Sargasso Sea, right?

If they all spawn there, that means that is 300,000 pounds of glass eels, and every pound of glass eels have 2,000 eels in it. Do the figuring on it. This is what is coming out. Where they're coming from, I don't know, but we should try to find out. I know that Haiti didn't catch 200,000 pounds of glass eels last year. That is what they say they caught. It's coming from somewhere else, and it would behoove us to find out where they are coming from for the industry to survive.

CHAIR KUHN: Appreciate those comments, so let's stay focused on the motion here with yellow eels. We heard the rationale, so I'll open it up for discussion on the motion. Justin Davis.

DR. DAVIS: I guess we might as well paint the corners here. I'm going to offer up a **substitute motion**, and that would be **to move to approve under 3.1, Issue 1, Option 2 coastwide cap set at 202,453 pounds** using the I-TARGET configuration recommended in the 2023 benchmark stock assessment.

CHAIR KUHN: Do we have a second? Rick Jacobson. Okay, Justin, would you like to provide rationale for your motion?

DR. DAVIS: Sure, thank you, Mr. Chairman. From my standpoint, I think the Board has two decisions in front of it today, the first being whether we want to adopt the I-TARGET approach for management, and if we do, what sort of settings we want to use

for the I-TARGET. Then given the depleted state of the stock, whether we want to take action today that is likely to provide conservation benefit in the immediate timeframe. For my standpoint, I think we should adopt the I-TARGET approach for management. I like it because it formalizes our goals and what we're trying to achieve, and provides a clear pathway for what to do to get to those goals. I think it makes the best use of the available information we have for this data poor species.

I think the settings recommended in Option 2 are appropriate. I think it's the appropriate reference period, that older time period, when it is obvious abundance was much higher. The multiplier, I like the 1.25 because it's not setting the goal too high, but the threshold is conservative at 0.8, so it suggests that we'll be conservative at least in the near timeframe to try to achieve that goal. From my standpoint also, of the options in front of us here, Option 2 is the only one that is likely to achieve conservation in the near term for this species that is depleted.

I can understand the viewpoint that because we don't have a robust stock assessment model that gives us estimates of biomass and reference points, and tells us you know what F is, and how F is impacting our ability to get those reference points. You know the stock is depleted. I think it is in need of conservation, and I think we should take action today that is likely to provide that conservation in the near term. For those reasons I support Option 2.

CHAIR KUHN: Thank you for that rationale. Rick Jacobson, the seconder, would you like to provide some additional rationale?

MR. RICK JACOBSON: I agree with everything that Dr. Davis has just said. Specifically identifying that the Peer Review did agree with the Working Group that the stock is in fact depleted. I also acknowledge that the Peer Review group, although at the timing by virtue of the I-TARGET we could not conclude that the stock was overfished.

It also did not conclude that the stock was not overfished. It may in fact be. We strive to make our management decisions based on the best available science. However imperfect it might be, the I-TARGET approach does represent the best available science to us, and as a result of that, Option 2 represents the recommendation coming out of the I-TARGET that has the most likely opportunity to rebuild the stock, and that is why I am in favor of it.

CHAIR KUHN: Discussion on the substitute motion. Lynn Fegley.

MS. FEGLEY: I absolutely oppose this motion. I hope that the Board has heard a little bit what my colleagues who commercially fish for these animals around the table are saying. This is a really difficult problem, and I think everybody around the table would acknowledge that there are issues with American eel, and it needs some attention.

But I think everybody would also acknowledge, particularly in light of Option 2, that we are in a state right now where carrying capacity has changed. There are so many factors around us, particularly for American eel. Everything from habitat degradation, fish passage, climate change, that I just don't even know that it is realistic to think that we're going to get back to 1999. If I could get back to where I was when I graduated from high school, in a lot of ways I would be really excited about that. But it is not going to happen, and I don't mean to make light of it. But I think it's really important to, if we're going to take action on this animal, to set our goals in a reasonable way that are attainable, particularly because with this method, we really don't know that these catch targets are going to get us to where we want to go.

I think the I-TARGET is clever, but at the end of the day we're arguing over about 400,000 pounds of eel, and there are a lot of places where we could focus our attention, and maybe make a difference. I think it's also worth noting. You know one of my

issues also is that the terminal year for this is 2019, so we're in 2024.

We have basically been sort of doing this moratorium experiment for the last three years. You know we've been fishing at very low levels, and frankly I would like to see what those catch targets would look like. I would like to see the indices in the last three years, and see what those look like.

To just bring a finer point on it, that terminal year seems to coincide very well, coincidently, with when the market fell out. That is really hard for our commercial fishermen in Maryland to wrap their heads around. You know this is a group of people who voluntarily took action a number of years ago, to curtail Maryland's harvest, to make sure that we were not going to exceed the cap.

I mean they really care about this resource. They are not catching the eels right now, so really, we're talking about removing opportunity more than revenue. But I'm a little uncomfortable. I fear that this sort of management that is a little bit nonsensical from the ground. I oppose this motion, thank you for hearing me out.

CHAIR KUHN: I saw Shanna Madsen.

MS. MADSEN: I'm going to kind of discuss both motions now they are up there. I would not support either of these motions. I was looking for a motion on Option 3. I believe that Option 3 affords us a lot of flexibility that the SAS and the Peer Reviewers actually allowed. In going back to the reports, the Peer Reviewers and the SAS noted that they really did not know what level to set the threshold at.

They begged us to keep the reference period, and they begged us to keep the multiplier. But they said, you can vary the threshold, because we don't know exactly what that threshold should be. For me, I would prefer to go with a less conservative threshold, which gives a nod to my compatriots a little bit north of me, in that we're saying, we recognize this is a depleted stock, it is not an overfished stock. I understand the difference there, Mr. Jacobson, I see you over there.

But I think that setting to a higher threshold still curtails what the opportunity might look like. I also think that with any fishery you have that uncertainty of not knowing whether or not the actions that you take are going to result in an actual change in the index or in the fishery. But that doesn't mean we don't do them. With a stock that is depleted, I would have to say that I would support Option 3, just to kind of try to find some sort of balance in here and still have an I-TARGET that was recommended by the SAS and the Peer Reviewers. Thanks.

CHAIR KUHN: Thanks for that, Shanna. We've heard two in opposition, the maker and seconder provided rationale for the motion. At this point I think we're ready to call the question. Is there a need to caucus? All right, two minutes for caucus. Okay, two minutes are up. Where we are in the agenda right now is that I am not going to accept public comment on this motion at this time. We had a hearing on it, and we received public comments in written format. I would like to call the question**. All those in favor raise your hands.**

MS. TONI KERNS: Connecticut, U.S. Fish and Wildlife Service.

CHAIR KUHN: All those opposed.

MS. KERNS: Sorry, and NOAA Fisheries. For opposed it is Rhode Island, Massachusetts, New York, New Jersey, Pennsylvania, Florida, Georgia, South Carolina, North Carolina, Virginia, District of Colombia, Maryland, Delaware, Maine, New Hampshire. Plus PRFC, sorry.

CHAIR KUHN: Any null votes? Abstentions? The motion fails 3 to 16, so now we're back to the main motion. Shanna Madsen.

MS. MADSEN: I would like to make another motion to substitute. **Motion to substitute to replace**

under Section 3.1, Issue 1, Option 3, the coastwide cap being set at 518,281.

CHAIR KUHN: Do we have a second? Dan McKiernan. Okay, Shanna, would you like to provide some rationale in addition to what you had already provided on previous comments.

MS. MADSEN: Yes, I'm going to keep it short, since I already spoke to this. Again, I think that it is really important for us to be listening to the staff and the TC here. They have an entire section in one of the documents that they asked for from us regarding the fact that this is not how we normally respond to a stock being depleted.

Most of our depleted stocks actually have a moratorium. But again, recognizing that we're in a place where there has been some question about what the fishery is doing. I am comfortable with varying the threshold, which is what the SAS and the Peer Reviewers recommended if we wanted some flexibility.

CHAIR KUHN: Dan, any additional rationale? No, okay, discussion on the motion. Yes, Steve Train.

MR. STEPHEN TRAIN: I can reluctantly support this motion. I would rather have seen the original or Option 5, and let me explain this. It's not the eels I'm worried about it's the fishermen. I am a commercial fisherman; I understand fisheries behavior. Fishermen worry that they are being punished for not catching eels.

If this quota gets dropped too low versus staying where it was. If it stayed where it was, they would continue to fish to what the market needed. We might not land much. If they are worried, they are going to lose quota because they didn't land enough eels, they will catch 519,000 pounds. If it were 700,000 or 900,000, they might only catch 3. I worry that if you really want to protect the eels, you don't want to cut it low enough that they max it out. If this is what we're going to get to allow this fishery to proceed I could support it, but I'm worried it's going to backfire.

CHAIR KUHN: Lynn Fegley.

MS. FEGLEY: I just didn't quite get my hand up fast enough. I would actually speak in opposition of this motion, mainly because, and I understand the reference period. But I have absolute concern. I would prefer to use the same criteria for I-TARGET, and set the reference period to that more recent reference period, because I believe it more reflects the ecological state of our world, and it's a more realistic goal, and that would be Option 5. I feel like that is something we can set our sights on.

Dr. Davis made the point that it formalizes our goal, it formalizes where we want to get to. It accommodates Mr. Train's comment about really treating this carefully. You know again, we're talking about opportunity, we're not talking about catch right now, and the perception that it is penalizing commercial fishermen for a catch, and this sort of disconnect in the life cycle of the animal. I would really like to see us get a handle on glass eels, and finally, I would really like to see the index of results for the last three years before it moved off the quota beyond that Option 5.

CHAIR KUHN: I saw a hand from Joe Cimino.

MR. CIMINO: I'm going to speak in favor of the motion. You know this is, I think a species with a life cycle that makes this tough to manage. But some of the comments around the table have really concerned me. We've all sat through the very important Climate Scenario Planning, and moving into greater uncertainty is very likely the future of fisheries management.

We're going to have to make tough decisions, and I think this is one where we're trusting the folks that have spent the most time looking at this, and giving the best available science and advice that they can on this, while still balancing the socioeconomic issues. I mean some of the conversations around the table sound like people are ready to hang up

their spurs and just give up, because we don't have great information.

But unfortunately, if we're going to sit around this table, we're going to have to make these tough decisions. I think this is the best balance, and the reason why I'm really supporting it is because I am trusting the folks that put in so much time and effort on this, and trying to support them and where they think we should go.

CHAIR KUHN: I saw a hand from Jesse Hornstein.

MR. JESSE HORNSTEIN: I want to speak in support of this motion. I think this is the right balance for this option. You know currently commercial harvest is about 350,000 pounds, so this option allows the commercial fishery to grow, should market conditions improve in the future. But it sets the cap at a level that is not three times or greater than what is recommended in the assessment, so it's a nice balance between the two. Option 2 would potentially shut down the fishery, and I think Option 5 or the status quo option would just potentially put the stock at further risk of depletion if those options were selected.

CHAIR KUHN: John Clark.

MR. CLARK: I'm opposed to this motion. Obviously, I spoke in favor of status quo. One of the things we keep talking about, best available science, one of the things I find extremely frustrating is that I've been either on the TC or on the management board on eels since 1997. Every time an assessment comes up it's like, okay, well we don't have data to say more than this limited amount about it.

We have these surveys, these fishery independent surveys, most of them which are not designed to catch eels, and they are limited in their appropriateness for using for eels, I think. You know every time it's like, well states need to go out and get more data. It doesn't happen and we end up in this feedback loop where it's depleted.

We should do something. I mean we did something with the cap, which was based on the empirical data that we had from the fishery itself. We have taken actions based on the coastwide cap we have in place. I think if states are really that concerned about eels, they should look into doing more work on this.

I mean we're one of the few states that has consistently gone out and gotten otoliths from eels, gone to the commercial fishermen and seen what they are doing and gotten their samples of eels to get the data that is needed for these things. It's not done throughout the range. As I have said before, I think right now we have almost two different populations of eels.

I think eels, especially the further they get from the coast, these eels are having very huge difficulties. I mean as we've seen what has happened in Lake Ontario, whereas in the estuaries, especially the two where they are probably the biggest eel fisheries in the Delaware Bay and the Chesapeake Bay. The eels seem to be doing fine.

Now again, is that something that would allow us to just keep fishing the way we've been fishing? I think so, at the current levels that we're seeing, even up to the cap. I don't think that is going to be a problem. But that is my opinion, and I just wanted to weigh in that I'm just a little, to say that this is the best science when we just have five more years of the same stuff every time the assessment takes place.

CHAIR KUHN: We've had considerable discussion on this motion. Is there a need to caucus before we call the question? Seeing none; **we'll go ahead and call the question. All those in favor.**

MS. KERNS: Rhode Island, Massachusetts, Connecticut, New York, New Jersey, U.S. Fish and Wildlife Service, Pennsylvania, North Carolina, Virginia, District of Colombia, New Hampshire and NOAA Fisheries.

CHAIR KUHN: All those opposed.

MS. KERNS: Florida, Georgia, South Carolina, Potomac River Fisheries Commission, Maryland, Delaware, Maine.

CHAIR KUHN: Any null votes, abstentions? The motion passes 12 to 7, so the motion now becomes the main motion. We've had considerable discussion on this, is there a need for any additional discussion or a need for caucus, before we decide upon this motion that is on the board now? Lynn Fegley.

MS. FEGLEY: I'm just going to try it. I'm going **to move to substitute the main motion for Option 5**.

CHAIR KUHN: I'm sorry, I couldn't hear that, was that Option 5?

MS. FEGLEY: Yes, I second guessed myself, but yes, Option 5.

CHAIR KUHN: Do we have a second? Steve Train. Lynn, do you want to provide additional rationale from what you've already provided for your support for Option 5?

MS. FEGLEY: No, thank you, Mr. Chair, I've said all I can say.

CHAIR KUHN: Mr. Train.

MR. TRAIN: I think I explained my rationale for that on the last one.

CHAIR KUHN: Any discussion on the substitute motion? Adam Nowalsky.

MR. ADAM NOWALSKY: I would like to add that while I disagree with my state commissioners to my left on the last motion. I completely agree with the comments that Mr. Cimino made that we should listen to the people that know the most about this resource. I say that without any disrespect to the hundreds or thousands of hours of research, model work that has gone into this, because they are doing the absolute best that they can.

But I can say this with almost 100 percent certainty, that the two people sitting around this table that know the most about the health of this resource, Mr. Pugh and Mr. Dize. I have no qualms sitting here today saying that to make a management decision based on industry making sacrifices on their own in the past.

Having their bait taken away from them, having their market taken away from them, and for us to respond to that by further punishing them and taking away opportunity, sends a completely wrong message of everything that we are here to do, in terms of both managing the resource, as well as being good stewards of the public that we are sent here to represent.

CHAIR KUHN: Any additional discussion on the substitute motion? Any need to caucus before we call the question? Seeing none; we'll get right to it**. All those in favor, please raise your hands.**

MS. KERNS: New Jersey, Georgia, South Carolina, Potomac River Fisheries Commission, Maryland, Delaware, Maine.

CHAIR KUHN: All those opposed.

MS. KERNS: NOAA Fisheries, Rhode Island, Massachusetts, Connecticut, New York, Fish and Wildlife Service, Pennsylvania, Florida, North Carolina, Virginia, District of Colombia, and New Hampshire.

CHAIR KUHN: Any null votes, abstentions? The motion fails 7 to 12. Now we're going to go back to the underlying motion, which is Option 3. Do we have a need for any discussion? Caucus? Seeing none; **we'll go ahead and call the question for Option 3. Have that up on the board. Okay, all those in favor for the motion up on the board, Option 3, raise your hands.**

MS. KERNS: NOAA Fisheries, Rhode Island, Massachusetts, Connecticut, New York, New

Jersey, Fish and Wildlife Service, Pennsylvania, Georgia, South Carolina, North Carolina, Virginia, District of Colombia, Maine, New Hampshire.

CHAIR KUHN: All those opposed.

MS. KERNS: Delaware, Maryland, Potomac River Fisheries Commission, Florida.

CHAIR KUHN: Null votes. Abstentions. The motion passes 15 to 4. Okay, so we still have a number of decision points that we have to come here to today, regarding the items that were covered in the presentation. I'm going to get right to asking for if anybody has any motions regarding the management response to exceeding the coastwide cap.

The timeframe for how long the selected coastwide cap would remain in place, annual young of year abundance survey requirements, catch and effort monitoring requirements and American eel de minimis criteria. Feel free to wrap some of those into a single motion if you so choose. Yes, Lynn Fegley.

MS. FEGLEY: I have a motion, and I'm going to grab two issues together, one is a little bit out of order, but they both apply a little bit to the status quo issue, so the **motion is to approve for Section 3.1, Issue 2, Option 1, which is the status quo that states over 1 percent of the coastwide landings will participate in the reduction, and then also to approve for Section 3.5, Option 2, which is that we will use the 3-year landings average for de minimis**.

CHAIR KUHN: Do we have a second? John Clark. Lynn, would you like to speak to that motion?

MS. FEGLEY: Just these are consistent with the Commission's de minimis policy. I think they're clear, I don't have a lot to say, except that they are straightforward and seem appropriate.

CHAIR KUHN: John Clark as seconder.

MR. CLARK: What Lynn said.

CHAIR KUHN: Okay, any discussion on the motion? Yes.

THAD ALTMAN: Our fishery is very market driven and quite variable, so with the reduction with this motion if it should pass, reducing the catch we feel like might be more appropriate to increase, instead of going to the greater than 1 percent the 5 percent, so Florida would be opposed to this.

CHAIR KUHN: Any additional discussion? Yes, Chris Batsavage.

MR. CHRIS BATSAVAGE: North Carolina is in a very similar situation with Florida regarding the 1 percent threshold.

CHAIR KUHN: Further discussion? Okay seeing none; is there a need to caucus? Seeing none; **go ahead and call the vote. All those in favor.**

MS. KERNS: Rhode Island, Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Georgia, South Carolina, Virginia, District of Colombia, Potomac River Fisheries Commission, Maryland, Delaware, Maine, New Hampshire.

CHAIR KUHN: All those opposed.

MS. KERNS: Florida, North Carolina.

CHAIR KUHN: Null votes, abstentions.

MS. KERNS: NOAA Fisheries and Fish and Wildlife Service.

CHAIR KUHN: The motion passes 15 to 2 to 0 to 2. We still have a few items here to deal with, the timeframe on how long the selected coastwide cap would remain in place, as well as annual young of year abundance and catch and effort monitoring requirements. I see Shanna Madsen; do you have a motion?

MS. MADSEN: I do. I have **move to approve under Section 3.2, Option 1, a 3-year coastwide cap duration.**

CHAIR KUHN: Do we have a second? John Clark. Shanna, rationale.

MS. MADSEN: My rationale here is three years was kind of deemed appropriate by the SAS as a time for us to come back to the table and reassess what is going on with this stock. They didn't want anything shorter. But this tells us, I think an appropriate amount of time whether we have good news or bad news. I think it is important for us to have that check in every three years.

CHAIR KUHN: John.

MR. CLARK: Yes, I agree that the sooner we can check this again the better.

CHAIR KUHN: Any discussion on the motion? Is there a need to caucus? Okay, again seeing none, we'll go ahead and call the question**. All those in favor, please raise your hands.**

MS. KERNS: NOAA Fisheries, Rhode Island, Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Florida, Georgia, South Carolina, North Carolina, Virginia, Potomac River Fisheries Commission, D.C., Maryland, Delaware, Maine, New Hampshire.

CHAIR KUHN: All those opposed. Are there any abstentions?

MS. KERNS: Fish and Wildlife Service.

CHAIR KUHN: The motion passes 18 to 0 with 1 abstention. Okay, so we're getting there. We still need to address the annual young of year abundance and survey requirements, as well as catch and effort monitoring requirements. Jeff Kaelin.

MR. JEFFREY KAELIN: I would **move to approve for Section 3.3, Option 1 and for Section 3.4, Option 1, status quo.**

CHAIR KUHN: Do we have a second? Lynn Fegley. Jeff, would you like to speak to that?

MR. KAELIN: Well, we're clearly in a very data poor situation with this fishery, and I can't see relaxing the requirements to continue to bring information to the table, particularly from the fishery dependent side of the equation. That is my rationale.

CHAIR KUHN: Lynn, no follow up? Okay, I see John Clark's hand up.

MR. CLARK: Yes, I would just like to make **a motion to amend on Section 3.3. I think at this point we can go with Option 2**. I know from doing much of the pigmentation staging and the sampling of glass eels over the year, it's pretty much the same thing year in year out sampling. I think we've got plenty of data from that. I don't think we need to do that, whereas I fully agree with Section 3.4 that we want to keep getting the catch per unit effort data. If I can get a second on that.

CHAIR KUHN: We have a **motion to amend the substitute**, second from Doug Grout. John, would you like to provide some rationale?

MR. CLARK: I think I jumped the gun and just did.

CHAIR KUHN: Additional rationale we'll say. None. Doug. Okay. Any need for discussion on the substitute motion or the motion to amend the substitute, rather. Okay, seeing none need to caucus? Okay we'll go ahead and call the question. **All those in favor raise your hands. All those opposed, abstentions. Any null votes? The motion passes 14 to 2 to 1 to 0, sorry with 1 abstention. Emerson.**

MR. EMERSON HASBROUCK: Yes, we had our hand up late here, because we were still caucusing, so where did you have New York on this?

CHAIR KUHN: Just go ahead and tell us what your vote is. We didn't capture that.

MR. HASBROUCK: We would be in favor of it.

CHAIR KUHN: The motion passes 15 to 2 with 1 abstention. Okay, bear with us, we have a slight correction to the tally, so it's 16 to 2 with 1 abstention. Motion passes. Okay, so now we're at, this becomes the main motion. Chris Batsavage.

MR. BATSAVAGE: I'm not going to offer a motion to amend or substitute, so they didn't count the votes in my head, but to speak in opposition to Option 1 for Section 3.4. We would prefer it be voluntary collection of fisheries dependent CPUE information as it was stated in the document that this has not been used really for any of the assessments. I think it does help inform management in some states, and those states can certainly continue to collect that information.

Just speaking from North Carolina's perspective. We do collect that information, it's probably more trouble than it is worth, quite frankly, in terms of just the administrative work to collect this information from what is left of our eel fishery. It would definitely speed up the process for our staff to get compliance reports in and other things like that. But yes, at least voice my opposition. I don't think other people will feel the same way as us, but at least get it on the record. Thanks.

CHAIR KUHN: Dan McKiernan

MR. McKIERNAN: I would like to speak in favor of the motion, specifically reflecting the report that Caitlin gave yesterday about horseshoe crab use in some of these fisheries. I think it's important for us as fisheries managers to understand the waxing and waning effort levels in fisheries that use horseshoe crabs. That's why I would like to support this.

CHAIR KUHN: Okay, moving this along. Is there a need to caucus before we call the question? Okay, I think we're ready to do so. **All those in favor, please raise your hands. You may lower your hands. All those opposed. Any abstentions? Null votes, no, so the motion passes 18 to 1**. Okay, just checking with Caitlin and Kristen.

I think we've covered everything we needed to. Is there anything there before we get the final approval? We've covered what we need to do, so at this time we're ready to consider final approval of Addendum VII. Is there anyone willing to make a motion for that? Emerson Hasbrouck. Do we have a second? Roy Miller. Emerson, would you like to speak to the motion?

MR. HASBROUCK: I'll read it into the record first. **Move to approve Addendum VII to the American Eel FMP, as modified today**. I don't have anything to add, other than all the discussion that we've had this afternoon around this. I think we ended up in a compromised position.

CHAIR KUHN: Roy Miller. Any comments?

MR. ROY W. MILLER: Nothing further.

CHAIR KUHN: Yes, Doug Grout.

MR GROUT: Just a question. Do we have to put in some dates for compliance at all, or does that come after we approve this?

MS. STARKS: You could do it as part of the same motion or afterwards.

CHAIR KUHN: Is there a need to caucus? Seeing no need to caucus, **is there any opposition to the motion? Okay, seeing none, the motion passes by Board consent**. We now need to set implementation dates. Is there anyone willing to make a motion regarding implementation dates? Lynn Fegley.

MS. FEGLEY: Just at the risk of maybe being a little tired at the end of the day, I'm just curious how we implement something that isn't actually happening.

But it's because we're not catching, we're not coming close to the cap. I guess it wouldn't be reasonable to implement it for the next fishing year.

MS. STARKS: I think I can try to help. If you were to make it effective immediately, I think that would mean this year you would have to have that cap in place, and then if you want to have it for the following fishing year, I think you would want it to be in place for January 1.

MS. KERNS: I guess you all can also consider that if the quota is going to be effective for next year you would say January 1 for the quota provisions, and if you wanted the sampling provisions to be effective for this year, then you could say those would be effective immediately.

CHAIR KUHN: In light of the guidance provided by Caitlin and Toni, is there a motion to set implementation dates? John Clark.

MR. CLARK: I would prefer to **set the implementation date as January 1, 2029, I mean 2025**.

CHAIR KUHN: Do we have a second? Joe Cimino. Any discussion on the motion? We'll give it a minute until it comes up on the board. Okay, the motion is up on the board, which is **Move to approve an implementation date of January 1, 2025**. Motion made by Mr. Clark, seconded by Mr. Cimino. **Is there any opposition to the motion? Okay, seeing none; the motion passes by Board consent**.

MS. KERNS: Chris, do you have your hand up in objection?

MR. CHRIS WRIGHT: Yes, I think it should be implemented this year, so I vote no.

MS. KERNS: Okay, thank you.

CHAIR KUHN: Okay, since we have opposition, I'm going to ask for a raise of hands of everyone that is in favor of the motion. Please raise your hand. Okay, motion passes 18 to 1. Bear with us, I think we're getting there. Caitlin would like to make one point of clarification before we move on.

MS. STARKS: I just want to make it clear that with this implementation date that means we will provide an updated cap for consideration before 2028. In 2027, we will rerun it with the three years of data that we have additional, and then provide a recommendation for 2028.

CHAIR KUHN: Okay, moving on.

ELECT VICE-CHAIR

CHAIR KUHN: The next item on the agenda is to elect the Vice-Chair for the American Eel Management Board. Do I have any nominations? Joe Cimino.

MR. JOE CIMINO: I would like to **nominate Jesse Hornstein from New York for the American Eel Management Board Vice-Chair**.

CHAIR KUHN: Do I have a second? Lynn Fegley. Any discussion around the motion? Is **there any opposition to the motion? The motion passes by Board consent**, so welcome Jesse Hornstein.

OTHER BUSINESS

CHAIR KUHN: At this point we're ready to entertain any other new business. Toni Kerns.

CITES UPDATE

MS. KERNS: I think it was Russel earlier that had asked the question about the glass eels that are showing up in Hong Kong. I just wanted to let the Board know that Caitlin and I provide information for CITES reports that do go out. We provide the information on what the U.S. landings are. But in those CITES reports, oftentimes the United States gets accounted for a higher value of landings than what is actually coming out of the U.S.

It's just that because the eel transfer through a flight through the United States, sometimes we get

credited for those landings, even though they may be coming from Haiti or Costa Rica or the Dominican Republic, or anywhere else. We keep making recommendations that there is a start to finish tracking of where those eels are coming from to CITES.

We don't sit on CITES as the Commission. NOAA Fisheries does for the U.S. Government, I believe it is NOAA that does. We make those recommendations and we will keep doing so, but just to clarify some information on where those yellow eel are coming from. Those reports do come out of CITES, or glass eel, sorry. That's all.

CHAIR KUHN: Thank you for that, Toni. Roy Miller.

MR. MILLER: Mr. Chairman, I noticed when going through the meeting materials that there was a publication called Early Warning of an Upsurge in International Trade in the American Eel by Shiraishi and Kaifu, a publication that I found an apparent mistake in the first paragraph, because it says American eel, A rostrata are classified as endangered. To the best of my knowledge, they have never been classified as endangered. I just wanted to point that out, thank you.

CHAIR KUHN: Yes, thank you for that point of clarification, and Caitlin has a response to that as well.

MS. STARKS: In that article it is referring to the IUCN classification, it is not classified that way in the United States, but IUCN does classify it that way.

ADJOURNMENT

CHAIR KUHN: Okay, I think that gets us to the end of our business. I appreciate everyone's participation this afternoon. Do we have a motion to adjourn? Second. This meeting is adjourned, thank you.

(Whereupon the meeting adjourned at 5:00 p.m. on Wednesday, May 1, 2024)

ATLANTIC STATES MARINE FISHERIES COMMISSION

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

AMERICAN EEL
(Anguilla rostrata)

2023 FISHING YEAR

Prepared by the American Eel Plan Review Team

October 2024

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

REVIEW OF THE ASMFC FISHERY MANAGEMENT PLAN AND STATE COMPLIANCE FOR AMERICAN EEL *(Anguilla rostrata)* FOR THE 2023 FISHERY

Management Summary

Date of FMP approval:	November 1999
Addenda:	Addendum I (February 2006) Addendum II (October 2008) Addendum III (August 2013) Addendum IV (October 2014) Addendum V (August 2018)
Management unit:	Migratory stocks of American Eel from Maine through Florida
States with a declared interest:	Maine through Florida, including the District of Columbia and the Potomac River Fisheries Commission
Active committees:	American Eel Management Board, Plan Review Team, Technical Committee, Stock Assessment Subcommittee, and Advisory Panel

I. Status of the Fishery Management Plan

The ASMFC American Eel Management Board (Board) first convened in November 1995 and finalized the Fishery Management Plan (FMP) for American Eel in November 1999 (ASMFC 2000).

GOAL

The goal of the FMP is 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.

OBJECTIVES

1. Improve knowledge of eel utilization at all life stages through mandatory reporting of harvest and effort by commercial fishers and dealers, and enhanced recreational fisheries monitoring.
2. Increase understanding of factors affecting eel population dynamics and life history through increased research and monitoring.
3. Protect and enhance American eel abundance in all watersheds where eel now occur.
4. Where practical, restore American eel to those waters where they had historical abundance but may now be absent by providing access to inland waters for glass eel, elvers, and yellow eel and adequate escapement to the ocean for pre-spawning adult eel.
5. Investigate the abundance level of eel at the various life stages, necessary to provide adequate forage for natural predators and support ecosystem health and food chain structure.

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. In addition, the FMP requires a minimum recreational size, a possession limit and a state license for recreational fishermen 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.

The FMP has been adapted through the following addenda:

Addendum I (February 2006)
Addendum I establishes a mandatory catch and effort monitoring program for American eel.

Addendum II (October 2008)
Addendum II placed increased emphasis on improving the upstream and downstream passage of American eel with the goal of increasing escapement of silver eels to spawning grounds. The Board chose to delay action on management measures in order to incorporate the results of the 2012 stock assessment.

Addendum III (August 2013)
Addendum III was initiated in response to the findings of the 2012 Benchmark Stock Assessment, which declared American eel stock along the US East Coast depleted. Addendum III aimed to reduce mortality on all life stages of American eel. It required states to reduce the yellow eel recreational possession limit to 25 eel/person/day, with the option to allow an exception of 50 eel/person/day for party/charter employees for bait purposes. The recreational and commercial size limit increased to a minimum of 9 inches. Eel pots are required to be ½ by ½ inch minimum mesh size. The glass eel fishery is required to implement a maximum tolerance of 25 pigmented eels per pound of glass eel catch. The silver eel fishery is prohibited to take eels from September 1st to December 31st from any gear type other than baited traps/pots or spears. The Addendum also set minimum monitoring standards for states and required dealer and harvester reporting in the commercial fishery.

Addendum IV (October 2014)
Addendum IV was also initiated in response to the 2012 American Eel Benchmark Stock Assessment and the need to reduce mortality on all life stages. 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 for the 2015 fishing year and established two management triggers: (1) if the cap is exceeded by more than 10% in a given year, or (2) the 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 allocation based on average landings from 2011-2013. The addendum also requires any state or jurisdiction with a commercial glass eel fishery to implement a fishery independent life cycle survey covering glass, yellow, and silver eels within at least one river system.

Addendum V (August 2018)

Addendum V increases the yellow eel coastwide cap starting in 2019 to 916,473 pounds to reflect a correction in the historical harvest data. Further, the Addendum adjusts the method (management trigger) to reduce total landings to the coastwide cap when the cap has been exceeded, and removes the implementation of state-by-state allocations if the management trigger is met. Management action will now be initiated if the yellow eel coastwide cap is exceeded by 10% in two consecutive years. If the management trigger is exceeded, only those states accounting for more than 1% of the total yellow eel landings will be responsible for adjusting their measures. A workgroup was formed to define the process to equitably reduce landings among the affected states when the management trigger has been met (see appendix, approved October 2019). Additionally, the Addendum maintains Maine's glass eel quota of 9,688 pounds. The Board also slightly modified the glass eel aquaculture provisions, maintaining the 200-pound limit for glass eel harvest, but adjusting the criteria for evaluating the proposed harvest area's contribution to the overall population consistent with the recommendations of the Technical Committee.

Addendum VI (May 2024)

Addendum VI maintains Maine's glass eel quota of 9,688 pounds originally established under Addendum IV, to remain in place for 3 years (2025-2027) and be reviewed prior to the 2028 fishing year.

Addendum VII (May 2024)

Addendum VII responds to the 2023 stock assessment findings that the American eel stock is depleted and the yellow eel population has continued to decline. Addendum VII set the coastwide yellow eel harvest cap to 518,281 pounds using an index-based method that provides management advice based on abundance indices and catch information, as well as management goals specified by the Board. The cap can be updated after three years with additional years of data. Addendum VII also removes the requirement for collecting individual lengths and pigment stage during the annual YOY surveys, and changes the *de minimis* policy to use a three-year average of landings to evaluate *de minimis* status.

II. Status of the Stock

The first benchmark stock assessment for American eel was peer reviewed in March 2012 and was approved for management use in May 2012 (ASMFC 2012). Due to biological data limitations and the extremely complex life history of American eel, traditional stock assessment models could not be developed and several data-poor methods were used to assess the American eel resource. The stock status was determined to be depleted, and overfishing and overfished status could not be determined with confidence.

The 2017 American Eel Stock Assessment Update updated the 2012 American Eel Benchmark Stock Assessment with data from 2010-2016. The trend analysis results in this stock assessment update were consistent with the 2012 results, with few exceptions. Despite downward trends

in the indices, commercial yellow American eel landings were shown to be stable in the decades leading up to the assessment, but landings still remained much lower than historical levels. The conclusion of the assessment update was that the American eel population in the assessment range remains depleted (ASMFC 2017).

The most recent benchmark stock assessment was peer reviewed in late 2022 and accepted for management use in 2023. The 2023 assessment concludes that the stock is depleted at or near historically low levels due to a combination of historical overfishing, habitat loss, food web alterations, predation, turbine mortality, environmental changes, toxins and contaminants, and disease. Despite exploring additional approaches for assessing American eel that were suggested in past stock assessments including a delay-difference model, traffic light analysis and surplus production models, and developing an egg-per-recruit model, overfished and overfishing determinations still could not be made due to data limitations. However, the 2023 stock assessment found that the yellow eel population has declined since the previous assessment, and yellow eel harvest should be decreased.

III. Status of the Fishery

Commercial fisheries for American eel occur throughout their range in North America, with the most significant of those fisheries occurring in the US Mid-Atlantic region and Canada. These fisheries are executed in riverine, estuarine, and ocean waters. In the US, commercial fisheries for glass eel/elvers only exist in Maine and South Carolina, a silver eel weir fishery exists in New York's Delaware River, and yellow eel fisheries exist in all states and jurisdictions except Pennsylvania and the District of Columbia.

Although eel have been continuously harvested over the last century, consistent data on harvest has not always been available. Harvest data from the Atlantic coastal states (Maine to Florida) indicate that the harvest fluctuated widely between 1970 and 1980, but showed an increasing trend that peaked in 1979 at 3,951,936 pounds. From then landings declined to a low of 641,000 pounds in 2002, recovered steadily to exceed one million pounds on average from 2010-2014, and have since experienced a general downward trend, reaching a time series low in 2020. Because fishing effort data are unavailable for the entire time series, finding a correlation between population numbers and landings data is difficult.

The Advisory Panel (AP) has provided feedback that recent low landings have primarily been related to market demand; demand for wild-caught American eels from the US for European food markets has decreased in recent years due to increased aquaculture in Europe. Demand for domestic bait decreased from 2019 to 2020 due in part to COVID-19 restrictions. A smaller proportion of landings traditionally goes to the domestic bait market, and the AP indicated that it does not anticipate landings to increase significantly from current levels in the near future.

Commercial Fishery

State reported commercial landings of yellow/silver eels in 2023 totaled approximately 295,934

Pounds (Table 1, Figure 1), which represents a 10% decrease in landings from 2022 (327,206) pounds). Yellow eel landings increased in five states and jurisdictions, while decreasing in six. In 2023, state reported landings from Maryland, Virginia, and New Jersey together accounted for 80% of the coastwide commercial total landings. Glass eel landings reported from Maine totaled 9,510 pounds; South Carolina's glass eel landings are confidential.

Table 1. Preliminary 2023 Commercial Landings (in pounds) by State and Life Stage

State/Jurisdiction	Glass	Yellow
Maine	9,510	3,522
New Hampshire	No Fishery	0
Massachusetts	No Fishery	*Confidential*
Rhode Island	No Fishery	2,559
Connecticut	No Fishery	2,899
New York	No Fishery	14,331
New Jersey	No Fishery	48,681
Pennsylvania	No Fishery	0
Delaware	No Fishery	11,090
Maryland	No Fishery	137,684
D.C.	No Fishery	0
PRFC	No Fishery	20,229
Virginia	No Fishery	50,970
North Carolina	No Fishery	1,109
South Carolina	Confidential (<750 pounds)	0
Georgia	No Fishery	0
Florida	No Fishery	2,860
Total	**Glass: Approx 9,510 Elver: 0**	**295,934**

Maine's glass eel aquaculture proposal for the 2023 season was approved and 200 pounds were harvested for aquaculture grow out. Maine submitted a similar proposal for the 2024 fishing season that was also approved. For both years, the approved proposals allow for 200 pounds of glass eels to be harvested for aquaculture in addition to Maine's glass eel quota of 9,688 pounds.

Table 2. State commercial regulations for the 2023 fishing year.*

State	Min Size	License/Permit	Other
ME	Glass: No minimum size	Daily dealer reports/swipe card program; monthly harvester report of daily landings. Tribal permit system in place for some Native American groups.	In 2017, the Legislature authorized the DMR commissioner to adopt rules to implement the elver fishing license lottery, including provisions for the method and administration of the lottery.

State	Min Size	License/Permit	Other
	Yellow: 9”	Harvester/dealer license and monthly reporting. Tribal permit system in place for some Native American groups.	Seasonal closures. Gear restrictions. Weekly closures. Mesh size restrictions on eel pots.
NH	9”	Commercial saltwater license and wholesaler license and harvest permit. No dealer reports. Monthly harvester reporting includes dealer information.	Gear restrictions in freshwater. Mesh size restrictions on eel pots.
MA	9"	Commercial permit with annual catch report requirement. Registration for dealers with purchase record requirement. Dealer/harvester reporting.	Traps, pots, spears, and angling only. Mesh size restrictions on eel pots.
RI	9"	Commercial fishing license. Dealer/harvester reporting.	Seasonal gear restrictions. Mesh size restrictions on eel pots.
CT	9"	Commercial license (not required for personal use). Dealer/harvester reporting.	Gear restrictions. Mesh size restrictions on eel pots.
NY	9"	Harvester/dealer license and monthly reporting.	Gear restrictions. Maximum limit of 14” in some rivers. Mesh size restrictions on eel pots.
NJ	9"	License required. No dealer reports. Monthly harvester reporting includes dealer information.	Gear restrictions. Mesh size restrictions on eel pots.
PA	NO COMMERCIAL FISHERY		
DE	9"	Harvester reporting, no dealer reporting. License required.	Commercial fishing in tidal waters only. Gear restrictions. Mesh size restrictions on eel pots.
MD	9"	Dealer/harvester license and monthly reporting. Limited entry.	Prohibited in non-tidal waters. Gear restrictions. Commercial crabbers may fish 50 pots per day, must submit catch reports. Mesh size restrictions on eel pots.
DC	NO COMMERCIAL FISHERY		
PRFC	9"	Harvester license and reporting. No dealer reporting.	Seasonal gear restrictions. Mesh size restrictions on eel pots.
VA	9"	Harvester license/eel buyer permit required. Dealer/harvester monthly reporting.	Mesh size restrictions on eel pots. Seasonal closures.
NC	9"	Standard Commercial Fishing License for all commercial fishing. Dealer/harvester monthly combined reports on trip ticket.	Mesh size restrictions on eel pots. Seasonal closures. No commercial harvest in inland waters.
SC	Glass No minimum size	Dealer/harvester monthly combined reports on trip ticket. License and gear permits required.	Max 10 individuals. Gear and area restrictions. Fyke and dip net only

State	Min Size	License/Permit	Other
			permitted. Mesh size restrictions on eel pots.
	Yellow 9"	Dealer/harvester monthly combined reports on trip ticket. License and gear permits required.	Pots and traps permitted only. Gear restrictions. Mesh size restrictions on eel pots.
GA	9"	Personal commercial fishing license and commercial fishing boat license. Dealer/harvester monthly combined reports on trip ticket.	Gear restrictions on traps and pots. Area restrictions. Mesh size restrictions on eel pots.
FL	9"	Permits and licenses. Harvester reporting. No dealer reporting.	Gear restrictions. Mesh size restrictions on eel pots.

* For specifics on licenses, gear restrictions, and area restrictions, please contact the individual state.

Recreational Fishery

Available information indicates that few recreational anglers directly target American eel. For the most part, hook-and-line fishermen catch eel incidentally when fishing for other species. American eel are often purchased by recreational fishermen for use as bait for larger gamefish such as striped bass, cobia, and catfish. Some recreational fishermen may catch their own to use as bait.

Despite the incidental nature of hook-and-line eel catches, the National Marine Fisheries Service (NMFS) Marine Recreational Information Program (MRIP) does encounter enough observations to indicate widespread and common presence as a bycatch species. However, there is low precision associated with the recreational fishery statistics for American eel due to the limited numbers that have been encountered during surveys of recreational anglers along the Atlantic coast. These limited numbers are partly due to the design of the MRIP survey, which does not sample from the areas and gears assumed to be responsible for the majority of recreational fishing for American eels. As such, the recreational fishery statistics for American eels provided by MRIP should be interpreted with caution.

MRIP shows a declining trend in the coastwide recreational eel catch starting in the 1980s, but the total annual harvest values are highly uncertain. As of 2009, MRIP no longer provides recreational data for American eel due to the survey design being unsuitable for sampling targeted eel fishing. At the state level, only New Hampshire and Georgia collect recreational data for American eel outside of MRIP.

Table 3. State recreational regulations for the 2023 fishing year.*

State	Min Size	Daily Possession Limit	Other

ME	9"	25	Gear restrictions. License requirement and seasonal closures (inland waters only). Bait limit of 50 eels/day for party/charter boat captain and crew.
NH	9"	25	Coastal harvest permit needed if taking eels other than by angling. Gear restrictions in freshwater.
MA	9"	25	Nets, pots, traps, spears, and angling only; seasonal gear restrictions and mesh requirements. Bait limit of 50 eels/day for party/charter boat captain and crew.
RI	9"	25	Bait limit of 50 eels/day for party/charter boat captain and crew.
CT	9"	25	
NY	9”	25	Maximum limit of 14” in some rivers. Bait limit of 50 eels/day for party/charter boat captain and crew.
NJ	9"	25	Bait limit of 50 eels/day for party/charter boat captain and crew. Mesh size restriction on pots.
PA	9"	25	Gear restrictions.
DE	9"	25	Two pot limit/person.
MD	9"	25	Gear restrictions.
DC	9"	10	
PRFC	9"	25	
VA	9"	25	Recreational license. Two pot limit. Mandatory monthly catch report. Gear restrictions. Bait limit of 50 eels/day for party/charter boat captain and crew.
NC	9"	25	Gear restrictions. Non-commercial special device license. Two eel pots allowed under Recreational Commercial Gear license. Bait limit of 50 eels/day for party/charter boat captain and crew.
SC	9"	25	Gear restrictions. Permits and licenses. Two-pot limit.
GA	9"	25	
FL	9"	25	Gear restrictions. Wholesale/retail purchase exemption applies to possession limit for bait.

* For specifics on licenses, gear restrictions, and area restrictions, please contact the individual state.

IV. Status of Research and Monitoring

The FMP requires states and jurisdictions with a declared interest in the species to conduct an annual YOY survey to monitor annual recruitment of each year’s cohort. Some states conduct yellow eel surveys as well.

In 2023, the states and jurisdictions of Maine, New Hampshire, Massachusetts (Wankinco River), Connecticut (Lamprey River), New York, New Jersey, the Potomac River Fisheries Commission, and South Carolina all observed relatively high YOY counts. The catch in Maine was the third largest in the time series, and the yellow eel catch was the largest in the time series. The Lamprey River catch and CPUE of YOY eel in New Hampshire were also the second largest in the time series. The Connecticut YOY CPUE for 2023 was lower than last year and the

third-highest value in the time series. In the New York glass eel survey the geometric mean catch of glass eels in 2023 was the highest catch rate in the time series. The New Jersey YOY CPUE was higher than the time series average but lower than the last two years. The PRFC relative abundance index for glass eels was the highest ever observed at Gardy's Millpond in 2023, exceeding the previous record set in 2022, and the elver index was also well above average.

All other YOY surveys in 2023 (Massachusetts, Rhode Island, Pennsylvania, Delaware Maryland, North Carolina, and Florida) had at or below average survey counts. The Massachusetts YOY index from the Jones River remains below average, but has been increasing for three years in a row. In Delaware the YOY catch was the seventh lowest annual geometric mean catch for the 24-year time series. In Maryland, the total number of glass eels captured and CPUE in 2023 ranked fifth lowest and third lowest over the full time series, respectively. Maryland's 2023 Sassafras River yellow eel pot survey CPUE was lower than last year, but the CPUE shows an overall increasing trend since 2006. In 2023, American eel relative abundance in the North Carolina YOY survey remained below the time-series average for the third year. The catch rates in the Goose Creek YOY survey in South Carolina decreased to time-series lows after an increase in 2022. Relative abundance of American Eel in the SCDNR Electrofishing Survey in 2023 was 5th lowest in time series, but increased from 2022. Catch at Florida's Guana River Dam remained at the lowest level in the time series.

Pennsylvania, D.C., and Georgia do not have YOY surveys, but instead have yellow eel surveys. Pennsylvania's 2023 survey catch was below average, and D.C. saw increased catch in their backpack electrofishing survey but very low catch in their boat-based electrofishing survey. New Jersey additionally developed and implemented a fishery-independent eel pot survey to collect abundance data of yellow American eels within nursery grounds. This survey, which began in 2015, supplements the current glass eel survey by sampling more life stages and will allow biologists to collect additional biological samples (age-length-weight data). The 2023 yellow eel CPUE in New Jersey was the highest in the time series.

As required by Addendum IV, Maine continued the fishery independent life cycle survey of glass, yellow, and silver eels within at least one river system (West Harbor Pond) in 2023. This site was changed from Cobboseecontee Stream to West Harbor Pond to improve collection of eels at all life stages by Maine Department of Marine Resources staff starting in 2019.

V. Research Needs

The FMP does not require any other research initiatives for participating states and jurisdictions. Nonetheless, the American Eel Technical Committee (TC) has identified several research topics to further understanding of the species' life history, behavior, and biology. Research recommendations from ASMFC (2012, 2017) remain important, but the following list was provided in the 2023 benchmark stock assessment, and is specific to what the Stock

Assessment Subcommittee thinks could improve the next stock assessment. Research needs for American eel identified by the TC include:

Future Research and Data Collection

- Improve upstream and downstream passage for all life stages of American eels.
- Continue to improve the accuracy of commercial catch and effort data through ACCSP and state partners
- Characterize the length, weight, age, and sex structure of commercially harvested American eels along the Atlantic coast over time.
- Research coastwide prevalence of the swim bladder parasite *Anguillacolla crassus* and its effects on the American eel's growth and maturation, migration to the Sargasso Sea, and spawning potential.
- Improve understanding of the spawning contribution of unexploited portions of the stock (i.e., freshwater areas of coastal US).
- Characterize the length, weight, and sex structure in unharvestable habitats.
- Conduct a tagging study throughout the species range.
- Quantify recreational removals in marine and freshwater habitats and characterize length, weight, and sex structure.
- Evaluate the passage/passage efficiency of American eels though existing fishways at dams/barriers and evaluate barrier physical attributes (height, material) that can be passed by eel without fishways.
- Evaluate the use vs. availability of habitat in the inland portion of the species range, and how habitat availability has changed through time, including opening of habitat from recent dam and barrier removals. This could and should include assisted migration by trucking around dams.
- To the extent that the data allows, account for the proportion of the population (yellow, silver phase) represented by the inland portion of the species range.
- Evaluate the relative impact that commercial harvest has on population status versus the accessibility to inland habitats.

Assessment Methods

- Develop methods to assess spawner escapement and biological information pertinent to silver eels in major river basins.
- Perform a range-wide American eel assessment with various countries and agencies (e.g., Canada DFO, ASMFC, USFWS, Caribbean, US Gulf and inland states).
- Explore methods to characterize data by sex to support a female-only delay-difference model.

VI. Status of Management Measures

The FMP requires that all states and jurisdictions implement an annual YOY abundance survey in order to monitor annual recruitment of each year's cohort. Addendum III requires a 9-inch

minimum size restriction in the commercial and recreational yellow eel fisheries, as well as a minimum mesh size of ½ by ½ inch in the commercial yellow eel pot fishery. The recreational bag limit is 25 fish/angler/day, and the silver eel fishery is restricted, as is the development of pigmented eel fisheries.

VII. Current State-by-State Implementation of FMP Compliance Requirements

The PRT reviewed the state compliance reports for the 2023 fishing year. The PRT notes the following issues with state implementation of the required provisions of the American Eel FMP:

Yellow Eel Measures

- New York's regulations for minimum mesh size do not meet the requirements of the FMP. Addendum III requires states and jurisdictions to implement a ½ by ½ inch minimum on the mesh size used in commercial yellow eel pots. New York's regulation is as follows: "Minimum mesh size must be one inch by one-half inch, unless such pots contain an escape panel that is at least four inches square with a mesh size of one inch by one-half inch located so that the panel is on a side, but not at the bottom of a pot." Addendum III allowed states to use a 4 by 4 inch escape panel constructed of a mesh size of at least ½ by ½ inch mesh in order to reduce the financial burden of gear changes on the fishery for three years (until January 1, 2017). Because this provision has expired, New York should require the minimum mesh size for all yellow eel pots, regardless of the presence of an escape panel.
    - New York Regulations are currently being updated to remove the escape panel exemption and change the minimum mesh size requirements to 1/2" by 1/2". The regulations should be adopted in late 2024.

Silver Eel Fishery Measures:

- Delaware has not implemented regulations preventing harvest of eels from pound nets from September 1 through December 31. No pound net landings have been reported in the state in over 50 years. Delaware will address this issue as part of any future changes to the eel regulations.
- Florida does not have a regulation preventing harvest of eels from pound nets from September 1 through December 31, but the state is unaware of any active pound net fishery in the past 10-15 years.

Reporting Measures:

- The following jurisdictions do not have dealer reporting:
    - New Hampshire and New Jersey do not have dealer reporting (there are no permitted eel dealers for either state), but harvesters report some information on dealers.
    - Delaware (no permitted eel dealers)
    - Potomac River Fisheries Commission (jurisdiction reports harvest, not landings)

    - Florida (considered a freshwater species and there is dealer reporting for freshwater species)
- Many states have been unable to provide information on the percent of commercial harvest sold as food versus bait; only Maine, New York, New Jersey, Delaware, and Florida provided this information for 2023.

Addendum VII to the American Eel FMP stipulates that a state may apply for *de minimis* status for each life stage if (given the availability of data), for the preceding three years, its average commercial landings (by weight) of that life stage constitute less than 1% of the coastwide commercial landings for that life stage for the same three-year period. States meeting this criterion are exempted from having to adopt commercial and recreational fishery regulations for a particular life stage listed in the FMP under Section 4 and any fishery-dependent monitoring elements for that life stage listed in Section 3.4.1.

Qualification for *de minimis* is determined from state-reported landings found in annual compliance reports. New Hampshire, Massachusetts, Pennsylvania, District of Columbia, Georgia, and Florida have requested continued *de minimis* status for their yellow eel fisheries. Florida does not qualify as the average state landings for 2021-2023 exceed 1% of the average coastwide yellow eel landings for 2021-2023. All other states that applied for *de minimis* of the yellow eel fishery meet the *de minimis* criteria.

VIII. Recommendations/Findings of the Plan Review Team

1. The PRT recommends the Board consider state compliance notes as detailed in Section VII.

2. The PRT recommends de minimis be granted to Massachusetts, New Hampshire, Pennsylvania, District of Columbia, and Georgia for their yellow eel fisheries.

3. The PRT had previously requested that the Board reevaluate the requirement that states provide estimates of the percent of harvest going to food versus bait, as there is a high level of uncertainty and subjectivity inherent in the data. Additionally, the PRT notes that this information does currently impact regulations and is unclear of the benefit for management.

4. The PRT requests again that the Board consider tasking the Committee on Economic and Social Sciences to conduct an analysis of the market demand for all life stages of eel, specific to food vs bait markets, as well as international market demand.

5. The PRT recommends that the Commission and USFWS work together to annually compare domestic landings data to export data for American eel across all life stages.

IX. References

Atlantic States Marine Fisheries Commission (ASMFC). 1998. Interstate Fishery Management Plan for American Eel (*Anguilla rostrata*). Washington D.C. NOAA Oceanic and Atmospheric

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