

Atlantic States Marine Fisheries Commission

Atlantic Striped Bass Management Board

February 3, 2021
1:45 p.m. – 5:00 p.m.
Webinar

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.

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|---|-----------|
| 1. Welcome/Call to Order (<i>D. Borden</i>) | 1:45 p.m. |
| 2. Board Consent <ul style="list-style-type: none">• Approval of Agenda• Approval of Proceedings from October 2020 | 1:45 p.m. |
| 3. Public Comment | 1:50 p.m. |
| 4. Review Technical Committee Report on Release Mortality Sensitivity Runs (<i>K. Sullivan</i>) | 2:00 p.m. |
| 5. Consider Stock Assessment Update Timeline (<i>K. Drew</i>) Action | 2:20 p.m. |
| 6. Discuss Circle Hook Implementation (<i>T. Kerns</i>) Possible Final Action | 2:35 p.m. |
| 7. Consider Draft Amendment 7 Public Information Document for Public Comment (<i>T. Kerns</i>) Action | 3:35 p.m. |
| 8. Review and Populate Advisory Panel Membership (<i>T. Berger</i>) Action | 4:55 p.m. |
| 9. Other Business/Adjourn | 5:00 p.m. |

MEETING OVERVIEW

Atlantic Striped Bass Management Board
Wednesday, February 3, 2021
1:45 p.m. – 5:00 p.m.
Webinar

Chair: David Borden (RI) Assumed Chairmanship: 02/20	Technical Committee Chair: Kevin Sullivan (NH)	Law Enforcement Committee Rep: Kurt Blanchard (RI)
Vice Chair: Martin Gary (PRFC)	Advisory Panel Chair: Louis Bassano (NJ)	Previous Board Meeting: October 21, 2020
Voting Members: ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, DC, PRFC, VA, NC, NMFS, USFWS (16 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from October 2020

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 Technical Committee Report on Release Mortality Sensitivity Runs (2:00 – 2:20 p.m.)

Background

- The Technical Committee (TC) estimates that 9% of all recreationally caught striped bass that are released alive die as a result of that fishing interaction, commonly referred to as release mortality or discard mortality.
- At their October 2020 meeting, the Board reviewed a TC report on release mortality that highlighted how recreational release mortality is calculated for stock assessments, the data and modeling factors limiting the accuracy of those estimates, as well as potential management actions the Board could pursue to reduce release mortality in the fishery.
- Following review, the Board tasked the TC to explore the relative impact of different release mortality rate estimates on stock status (**Briefing Materials**).

Presentations

- TC report by K. Sullivan

5. Consider Stock Assessment Update Timeline (2:20 – 2:35 p.m.) Action

Background

- The next striped bass stock assessment update is scheduled for 2021.
- 2020 is the first year that Addendum VI measures were implemented and 2020 recreational catch data and 2020 state survey data may be highly uncertain due to impacts from COVID-19.

Presentations

- Update by K. Drew

Board Actions for Consideration

- Recommend postponing the next striped bass stock assessment update to 2022 or later.

6. Discuss Circle Hook Implementation (2:35 – 3:35 p.m.) Possible Final Action

Background

- The Commission and several states have received request to consider exemptions for tube rig gear (**Briefing Materials**).
- Addendum VI requires the mandatory use of circle hooks when fishing for striped bass with bait to reduce discard mortality in recreational striped bass fisheries.
- At their October 2020 meeting, the Board approved Addendum VI state implementation plans for circle hook requirements with the caveat that no exemptions to mandatory circle hook requirements will be permitted.
- Maine and Massachusetts are submitting a proposal to study the tube rig fishery for Board consideration. The proposal requests an exemption to the circle hook requirement for tube rig gear for the duration of a study that will collect information on the tube rig fishery, including the size of the fishing population that uses this terminal gear and where tube gear hooks on a fish (**Supplemental Materials**).

Presentations

- Update on circle hook correspondence and by T. Kerns and presentation of ME/MA proposal study by M. Ware

Board Actions for Consideration

- Consider approval of the Maine and Massachusetts proposal To Study the Tube Rig Fishery and Consider Its Exemption from the Circle Hook Provision

7. Consider Draft Amendment 7 Public Information Document for Public Comment (3:35 – 4:55 p.m.) Action

Background

- The status and understanding of the striped bass stock and fishery has changed considerably since implementation of Amendment 6 in 2003, which has raised concerns that the existing management program may no longer reflect current fishery needs and priorities.
- Accordingly, the Board initiated development of Draft Amendment 7 to consider addressing a number of important issues that have been facing striped bass management for a long time.
- The Plan Development Team developed the Draft Amendment 7 Public Information Document (PID) which is a broad scoping document intended to focus public input and inform development of the Draft Amendment.

- The Board reviewed the first draft of the PID at their October 2020 meeting and offered a number of edits, which have been incorporated into the updated draft PID (**Briefing Materials**).

Presentations

- Draft Amendment 7 Public Information Document by T. Kerns

Board Actions for Consideration

- Consider approving the PID for public comment

8. Review and Populate Advisory Panel Membership (4:55-5:00 p.m.) Action**Background**

- There are three new nominations to the Atlantic Striped Bass Advisory Panel – Andrew Dangelo, with the RI for-hire industry; Michael Plaia, a RI commercial fisherman, recreational angler and for-hire operator; and Dennis Fleming, a commercial fisherman and recreational fishing guide representing the Potomac River Fisheries Commission (**Briefing Materials**).

Presentations

- Nominations by T. Berger

Board Actions for Consideration

- Approve Atlantic Striped Bass Advisory Panel nominations

9. Other Business/Adjourn

Atlantic Striped Bass

Activity level: High

Committee Overlap Score: Medium (TC/SAS/TSC overlaps with BERP, Atlantic menhaden, American eel, horseshoe crab, shad/river herring)

Committee Task List

- PDT – develop all documentation for the development of Draft Amendment 7
- SAS/TC – various tasks in response to the 2018 benchmark assessment and relating to development of Draft Amendment 7
- TC – June 15th: Annual compliance reports due

TC Members: Kevin Sullivan (NH, chair), Jason Boucher (DE, vice chair), Nicole Lengyel Costa (RI), Olivia Phillips (VA), Alexei Sharov (MD), Carol Hoffman (NY), Charlton Godwin (NC), Ellen Cosby (PRFC), Gail Wippelhauser (ME), Gary Nelson (MA), Brendan Harrison (NJ), Jeremy McCargo (NC), Kurt Gottschall (CT), Luke Lyon (DC), Bryan Chikotas (PA), Peter Schuhmann (UNCW), Gary Shepherd (NMFS), Steve Minkkinen (USFWS), John Ellis (USFWS), Katie Drew (ASMFC), Emilie Franke (ASMFC)

SAS Members: Gary Nelson (MA), Alexei Sharov (MD), Hank Liao (ODU), Justin Davis (CT), Michael Celestino (NJ, Chair), John Sweka (USFWS), Gary Shepherd (NMFS), Katie Drew (ASMFC), Emilie Franke (ASMFC)

PDT Members: Nichola Meserve (MA), Nicole Lengyel Costa (RI), Brendan Harrison (NJ), Olivia Phillips (VA), Simon Brown (MD), Jason Boucher (DE), Derek Orner (NMFS), Greg Wojcik (CT), Emilie Franke (ASMFC)

Tagging Subcommittee (TSC) Members: Stuart Welsh (WVU, Chair), Heather Corbett (NJ, Vice Chair), Angela Giuliano (MD), Beth Versak (MD), Chris Bonzak (VIMS), Gary Nelson (MA), Ian Park (DE), Jessica Best (NY), Carol Hoffman (NY), Gary Shepherd (NMFS), Josh Newhard (USFWS), Wilson Laney (USFWS), Katie Drew (ASMFC), Emilie Franke (ASMFC)

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
ATLANTIC STRIPED BASS MANAGEMENT BOARD**

**Webinar
October 21, 2020**

TABLE OF CONTENTS

Call to Order, Chair David V. Borden 1

Approval of Agenda 1

Approval of Proceedings from August 2020..... 1

Public Comment..... 1

**Consider Approval of State Implementation Plans for Addendum VI Mandatory
Circle Hook Requirements.....1**

Technical Committee Report on Factors Limiting Recreational Release Mortality Estimates..... 19

Consider Draft Amendment 7 Public Information Document for Public Comment 26

Other Business..... 51

Adjournment 51

INDEX OF MOTIONS

1. **Approval of agenda** by consent (Page 1).
2. **Move to approve proceedings from August 2020** by consent (Page 1).
3. **Main Motion:**
Move to not exempt any state from putting in place the circle hook rules for bait fishing as specified in Addendum VI (Page 9). Motion by Tom Fote; second by Dennis Abbott.

Motion to substitute:
Move to substitute to approve the Addendum VI state implementation plans for circle hooks with the exception of the Massachusetts for-hire exemption (Page 10). Motion by Megan Ware, second by Justin Davis. Motion fails (Page 17).

Main Motion:
Move to not exempt any state from putting in place the circle hook rules for bait fishing as specified in Addendum VI. Motion carried (Page 19).
4. **Move to nominate to the Atlantic Striped Bass Advisory Panel Bob Danielson from New York** (Page 51). Motion by Maureen Davidson; second by Tom Fote. Motion carried (Page 51).

ATTENDANCE

Board Members

Megan Ware, ME, proxy for P. Keliher (AA)	Kris Kuhn, PA, proxy for T. Schaeffer (AA)
Sen. David Miramant, ME (LA)	Loren Lustig, PA (GA)
Cheri Patterson, NH (AA)	John Clark, DE, proxy for D. Saveikis (AA)
Ritchie White, NH (GA)	Roy Miller, DE (GA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
Mike Armstrong, MA, proxy for D. McKiernan (AA)	Mike Luisi, MD, proxy for B. Anderson (AA)
Raymond Kane, MA (GA)	Russell Dize, MD (GA)
Jason McNamee, RI (AA)	Phil Langley, MD, proxy for Del. Stein (LA)
David Borden, RI (GA)	Pat Geer, VA, proxy for S. Bowman (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Bryan Plumlee, VA (GA)
Justin Davis, CT (AA)	Sen. Monty Mason, VA (LA)
Bill Hyatt, CT (GA)	Chris Batsavage, NC, proxy for S. Murphey (AA)
Maureen Davidson, NY, proxy for J. Gilmore (AA)	Jerry Mannen, NC (GA)
Emerson Hasbrouck, NY (GA)	Bill Gorham, NC, Proxy for Sen. Steinburg (LA)
John McMurray, NY, proxy for Sen. Kaminsky (LA)	Bryan King, DC
Joe Cimino, NJ (AA)	Marty Gary, PRFC
Tom Fote, NJ (GA)	Derek Orner, NMFS
Adam Nowalsky, NJ, proxy for Asm. Houghtaling (LA)	Mike Millard, USFWS

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

Ex-Officio Members

Kevin Sullivan, Technical Committee Chair	Kurt Blanchard, Law Enforcement Representative
Mike Celestino, SAS Chair	

Staff

Robert Beal	Jeff Kipp
Toni Kerns	Laura Leach
Max Appelman	Savannah Lewis
Kristen Anstead	Sarah Murray
Pat Campfield	Caitlin Starks
Maya Drzewicki	Deke Tompkins
Chris Jacobs	Geoff White

Guests

Rob Allen	Liam Brouillette
Bill Anderson, MD (AA)	Simon Brown, MD DNR
Gerald Audet	Jeff Brust, NJ DEP
Pat Augustine, Coram, NY	Erik Christiansen
Richard Balouskus, RI DEM	Matt Cieri, ME DMR
Peter Benoit, Ofc. Sen King, ME	Allison Colden, CBF
Jessica Best, NYS DEC	Heather Corbett, NJ DEP
Alan Bianchi, NC DNR	Jessica Daher, NJ DEP
Ellen Bolen, VMRC	Monty Deihl, Ocean Fleet Svcs.
Jason Boucher, DE DFW	Greg DiDomenico, Garden State Seafood
Dick Brame, CCA	Russell Dunn, NOAA

Guests (Continued)

Eric Durell, MD DNR	Pat Moran, MA DMF
Wes Eakin, NYS DEC	Jerry Morgan, Madison, CT
Mark Eustis, Grey Owl Analytics	Brandon Muffley, MAFMC
Peter Fallon, Maine Stripers	Allison Murphy, NOAA
Lynn Fegley, MD DNR	Brian Neilan, NJ DEP
Cynthia Ferrio, NOAA	Ken Neill, Yorktown, VA
Tony Friedrich, SGA	Robert Newberry
Thomas Fuda	Josh Newhard, FL FWS
Jim Gilmore, NY (AA)	Patrick Paquette, MA SBA
Lewis Gillingham, VMRC	Rep. Sarah Peake, MA (LA)
Angela Giuliano, MD DNR	Rich Pendleton, NYS,DEC
Willy Goldsmith, SGA	Wesley Phillips
Bob Groskin, Teaneck, NJ	Chris Piatek
Carol Hoffman, NYS DEC	Paul Piavis, MD DNR
Pete Himchak	Nicholas Pieper, NOAA
Jeffrey Horne, MD DNR	Michael Pierdinock
Harry Hornick, MD DNR	Daniel Pillitteri
Kyle Horrocks	Nicholas Popoff, US FWS
Stephen Jackson, USFWS	Courtney Roberts, Lake Regions Schools
James Jewkes	Tim Sartwell, NOAA
Pat Keliher, ME (AA)	McLean Seward, NC DENR
Dale Kirkendall	David Sikorski, CCA
Adrienne Kotula, CBF	Somers Smott, VMRC
Nicole Lengyel Costa, RI DEM	Ross Squire
Chip Lynch, NOAA	Helen Takade-Heumacher, FL FWS
Pam Lyons Gromen, Wild Oceans	Taylor Vavra, Stripers Forever
Conor MacWilliams	Beth Versak, MD DNR
Shanna Madsen, VMRC	Mike Waine, ASA
John Maniscalco, NYS DEC	Timothy Wheeler, <i>Bay Journal</i>
Genine McClair, MD DNR	Kate Wilke, TNC
Dan McKiernan, MA (AA)	Angel Willey, MD DNR
Conor McManus, RI DEM	John Page Williams
Sean Mendyk	Charles Witek, W. Babylon, NY
Stephanie Merhoff, DE DFW	Spud Woodward, GA (GA)
Nichola Meserve, MA DMF	Christopher Wright, NOAA
Steve Minkinen, US FWS	Erik Zlokovitz, MD DNR
Chris Moore, CBF	Rene Zobel, NH F&G

The Atlantic Striped Bass Management Board of the Atlantic States Marine Fisheries Commission convened via webinar; Wednesday, October 21, 2020, and was called to order at 1:30 p.m. by Chair David V. Borden.

CALL TO ORDER

CHAIR DAVID V. BORDEN: Good afternoon, all! My name is David Borden, I am the Governor's Appointee from Rhode Island, and I'm also the Board Chair for this meeting. We've distributed an agenda that includes three major items for discussion, and potentially action. We also have an AP nomination that we need to deal with.

APPROVAL OF AGENDA

CHAIR DAVID V. BORDEN: In regards to the agenda, are there any additions, deletions or modifications to the agenda? I see no hands up. Toni, do we have any hands up?

MS. TONI KERNS: I do not, David.

CHAIR BORDEN: Okay, so the agenda stands approved as distributed.

APPROVAL OF PROCEEDINGS

CHAIR DAVID V. BORDEN: We'll move on to the proceedings from the August meeting. In a similar vein, are there any additions, deletions or corrections to the proceedings? Please raise your hand if you want to comment. I see no hands up, so the proceedings stand approved by unanimous consent.

PUBLIC COMMENT

CHAIR DAVID V. BORDEN: Public comment, we always allow the public to comment on proposals that are not part of the agenda.

We normally limit the opportunities to a minute or so. Are there any members of the public that would like to comment on the subject of striped bass? I see no hands up. I would just ask, Toni, if I somehow miss a hand, please correct me and note it. There are no public comments.

CONSIDER APPROVAL OF STATE IMPLEMENTATION PLANS FOR ADDENDUM VI MANDATORY CIRCLE HOOK REQUIREMENTS

CHAIR DAVID V. BORDEN: so we'll take the first item on the agenda, which deals with circle hooks. This is Addendum VI. It is scheduled for final action today, if possible, so I'll turn it over to Max.

MR. MAX APPELMAN: Good afternoon everyone. Give us a second to switch over controls and get our presentation up on the screen. Okay, so the Plan Review Team met in early September to review state implementation plans for Addendum VI, the circle hook requirements, and to develop some comments and recommendations for the Board to consider today, a report from that PRT meeting was included in your meeting materials. But really quick, just a little bit of background before we get into it.

Addendum VI was approved back in October, 2019. That Addendum changed commercial and recreational measures across the coast, and also required the mandatory use of circle hooks, when fishing with bait to reduce the release mortality rate in recreational striped bass fisheries. In addition to that, although not a requirement, the Addendum strongly encourages states to develop public education and outreach materials to garner support and compliance with this requirement, and just promote the general benefits of circle hooks. States are required to implement these requirements by January 1st. Back in December of 2019, when implementation plans were due for all the provisions in Addendum VI, the TC reviewed those state plans, and noted that a number of states were unable to provide sufficient information regarding the circle hook requirements at that time.

A lot of states were still going through scoping to craft regulatory language, and were unable to provide those types of details back in December. The TC recommended that states resubmit implementation plans later in the year, go out in time for scoping to play out, and some of these regulatory processes to play out a bit.

With that the Board reestablished August 15 as the new deadline for circle hook implementation plans. That's how we came to today. As far as requirements in the Addendum, there is a definition for circle hook, a non-offset hook, where the point is pointed perpendicularly back towards the shank, and the term non-offset is defined as when the point and barb are in the same plane as the shank.

Meaning that when the hook is laying on a flat surface, the entire hook and barb also lay flat. Aside from those two definitions, the states have flexibility to specify other details of the regulation to address any specific needs of the state fishery. For implementation plans states were asked to include a copy of final or proposed regulatory language.

In that language there should be a definition of circle hook that is comparable to that cited in Addendum VI, as well as an implementation date, no later than January 1. If any exemptions were proposed, the state was asked to include justification, quantitative data if possible, to justify that exemption, and also to include a description of any outreach materials that are being developed or have been developed to promote the use of circle hooks.

Again, the PRT met in September to review those circle hook plans, and as far as regulatory language, the PRT determined that all state proposals do require anglers to use circle hooks when fishing with bait to target striped bass. As far as circle hook definitions, all those regulations did include a definition of circle hook that is comparable to that cited in Addendum VI.

That said, the PRT noted a lot of variation among states, and that regulatory language as you can see in Table 1, which was provided in the report. You can see from that table that almost every state wrote something different for those requirements, although they all

essentially say the same thing. Some states apply the restrictions to all directed fisheries, recreational fisheries, regardless of target species, and not just when targeting striped bass a little bit beyond the requirements of the Addendum.

Also notice that these states are requiring the use of corrodible hooks, and a few PRT members noted that that particular requirement may be inadvertently limiting the size of hooks that can be used in the fishery. The note there is that some of these PRT members found that their own scoping processes that not all companies, tackle companies, make corrodible hooks for all hook types and sizes, so there may be some inadvertent limitations in those types of requirements. With all that variation, the comment from the PRT is largely reiterating comments that we've heard from the Law Enforcement Committee on the importance of jurisdictions agreeing on standardized regulatory language, how that could help with enforceability and compliance, especially where states share common borders and fishing areas. Just reiterating some of those concerns that have been raised by the LEC in the past regarding the variation in language between states.

As far as exemptions, there were three exemptions included in Implementation Plan at the time that the Review Team met to review them. First is with Maine. Maine has had circle hook requirements on the book since 2013 when targeting striped bass. There is an exemption there for anglers using rubber or latex tube rigs.

There was not much data in the Implementation Plan to support that, but these regulations have been on the books since 2013. For Massachusetts, those regulations were put in place earlier this year. It is my understanding a couple exemptions here. The first is for anglers aboard for-hire vessels, and to justify that exemption there is data from MRIP data to support that exemption, essentially that the less than 2 percent of the releases in that state are coming from the for-hire vessels, using data from 2016 and 2017.

Then the second exemption is for anglers using artificial lures designed to be trolled, cast and retrieved, or vertically jigged with natural bait. The third exemption is from the Potomac River Fisheries Commission. In here the circle hooks were not required prior to May 1. During the catch and release season of note, barbless hooks are required during that time of year. That has been a requirement since the late 1990s.

But since the implementation plans were submitted, PRFC has proposed to extend mandatory circle hook requirements to the catch and release season, so extending it year-round. Implementation there is expected before January 1, so this is no longer considered an exemption from PRFC.

I will note that the PRFC had a difficult time discussing these exemptions, and whether they meet the intent of the provision. As I mentioned earlier, Addendum VI does provide states flexibility to specify exemptions. However, there is no guidance to determine which exemptions are acceptable and which aren't.

There is no definition of flexibility from the Addendum or from the Board. Unfortunately, the Review Team could not make a definitive recommendation to the Board regarding these proposed exemptions. That aside, the PRT again discussed some of the general challenges with enforcing these circle hook regulations, which the Board has been aware of for some time, and the added challenges of inconsistent regulations between states has been raised again by the Law Enforcement Committee, again here by the PRT.

Particularly within these shared water bodies and between fishing modes within a state, so reiterating those concerns again. The PRT also discussed that while the proportion of effort or releases coming from a sector within a state may be small, that doesn't necessarily make it a

small number, in terms of numbers of fish. In the report is an example comparing the for-hire sector releases in Massachusetts to the entire state of Delaware, just for comparison. That is about the same amount of fish. Looking at it from that perspective that raised some other questions among the PRT about intent, and how you define flexibility here. The last note is that the PRT saw that not all of these regulations have gone through the formal regulatory process. There is potential for changes to happen before their implementation deadline.

The recommendation here is that if any of these proposed measures do change, that they be resubmitted to the Plan Review Team for review, and that the Board had a chance to review those proposals as well. Regarding public education and outreach. Again, this is not a direct requirement of Addendum VI.

It is a strong recommendation, but the Review Team was very happy to see that all states have or are developing public education outreach campaigns to garner support and compliance with circle hook measures. Some states are doing more than others, but it was clear that all states had invested time and resources to spread the word about this new requirement, to raise awareness to shed some light on the benefits of circle hooks, and promote best practices in the fishery.

Some examples there are developing web content specific to circle hooks or safe fish handling techniques was a common theme. Distributing materials at different trade-show events, backside at bait and tackle shops and so on. A lot of e-mail blasting to constituents, providing education materials to law enforcement officers to hand out as pamphlets.

We saw partnering with nonprofits. It appears that the American Sportfishing Association has partnered with a number of states already to help develop state-specific web content and other outreach materials. Also seeing states taking out ads in local newspapers, magazines, and so on. You

can see that there has been a lot of work here to spread the word about these new requirements, and some of the benefits of circle hooks.

We did see that some of these efforts were held back or delayed in 2020, due to COVID, but there has been a general intent to ramp up efforts in 2021, particularly upon the adoption of final regulation. That concludes this report, Mr. Chair, I'm happy to take any questions or turn the discussion back over to the Board.

CHAIR BORDEN: Thank you very much, Max. I've got questions. I've got Ritchie White, and then John McMurray.

MR. G. RITCHIE WHITE: Two issues I would like to discuss, first being the corrodible hook availability. Everything I see in the tackle shops, New Hampshire, southern Maine, and northern Mass, it's just the opposite, that the stainless-steel hooks are the ones that are limited in sizes and quantity, and the overwhelming amount of hooks available are corrodible. I don't see that, in this part of New England, I don't see that as an issue at all.

Second issue is Massachusetts exemption for charter boats. I think this sends the wrong message to the recreational sector. I think it sends the wrong message to the charterboat sector, and it clearly goes against this issue that we're trying to tackle to limit recreational discards. I think that it sets a precedent for other states to follow, and I don't think it's an acceptable exemption. I don't know if that would require a motion to not accept that. I will leave that to you, Mr. Chair, but I would certainly make that motion if that is applicable.

CHAIR BORDEN: Ritchie, I apologize to you. I should have said at the beginning that I would like to take questions first, and then we'll get into actually statements on the policy and suggestions on how to remedy that. I apologize

for that. I've got John McMurray and then John Clark.

MR. JOHN G. McMURRAY: I have a question about the Mass exemption also. I guess I would like to hear more about the rationale, because I don't really understand why that state wants, or why they should get an exemption. I understand that they account for a small amount of discards. But I guess I'm more curious as to why the charter industry doesn't want to use them. I mean they are easy to use, they work, and they reduce discard mortality. I guess I'm also curious as why is this specific to Mass? Why didn't we see anything similar from other states?

CHAIR BORDEN: Max, have you got a response?

MR. APPELMAN: Yes, I mean I can try to dig out some information from Massachusetts implementation plan, but not to put Massachusetts on the spot, I think that question is best responded to by the state.

CHAIR BORDEN: Does somebody in Massachusetts want to answer or respond to that question?

DR. MIKE ARMSTRONG: Yes, Mr. Chairman, happy to do it. As you know, we went to public hearing a year ago with this, and we got some pushback from the for-hire fleet. They simply asked for more flexibility in what they used for terminal tackle. We looked at the percentage that they were of the fishery, and you know we just decided to give them that flexibility. We'll leave it up to the judgment of this Board. We do notice that no other state asked for it. But we were simply providing flexibility for our fleet.

CHAIR BORDEN: Thank you, Mike. Next on the list I've got William Hyatt, and then Martin Gary.

MR. WILLIAM HYATT: I would just like to go back to a discussion that was held at this meeting. I think it was a full year ago. It had to do with discussions of the report from the Law Enforcement Committee on how difficult it was to use intent in these types

of regulations, as reflected by the fishing for a cause that is in so many of these.

I think I would like, if possible to just hear from Law Enforcement whether or not they are comfortable with the variety of regulations that have been put forth here, and if they still feel that those regulations that are reflected that don't require interpretation of intent in the field, are better designed and more accurately reflect the requirements and the intents than those that have language that do require an interpretation of intent.

MS. KERNS: Mr. Chairman, Kurt is on the phone, just as an FYI.

CHAIR BORDEN: Martin.

MR. MARTIN GARY: Max, could you go back to the exemption slide, I just had a question about Massachusetts. Okay, so two questions if we could, if it isn't too much. It really isn't a critique, so much as helping me get educated. Mike, maybe you could answer it if you're comfortable. I was just curious, as a follow to the previous inquiry about the exemption for the for-hire sector. If they are not using circle hooks, do you know whether they are using Jays, or are they using trebles, or is it a combination of the two?

That's one. Then the second one is really just educate me on why the artificial lures troll cast or you can vertically jig with vertical bait. I'm fairly familiar with the folks in the Chesapeake that utilize this strategy, and they generally don't, as far as I know, use natural bait, but maybe that is something specific to fishing up there. I'm just curious about that as well, if you can.

CHAIR BORDEN: Mike, do want to respond you can have somebody else on your delegation respond?

DR. ARMSTRONG: No, I'll go ahead and respond. I believe they are mostly using J-hooks. They are concerned about losing fish, which it does happen when you have circle hooks. Most of them said, as soon as we catch a fish, we'll switch over to circle hooks. I don't know, their argument wasn't that complicated for us. For the artificial lures, so this is mainly the tube and worm, so Maine has the same thing.

I assume other states. I don't know that that is unique to Massachusetts. The tube and worm, it doesn't work without putting a worm on it, so it needs to be circled by this. But because it's trolled, you just never, ever deep hook with it, same as fishing with an artificial. We thought that should be examined.

We do have, you know there is some wire lining that goes on, and they will put a piece of pork rind on it, so technically that is a natural bait. We just wanted to cover it. I suspect other states have niche little fisheries, where people throw pieces of natural bait on to do certain things. We were just looking to cover the bases on that one. It's really the tube and bore, the tube in one that they're interested in.

MR. GARY: Thank you, Mike, and thank you, Mr. Chairman, it was really just a curiosity on my behalf, thank you.

MS. KERNS: David, I just wanted to let you know that Kurt Blanchard is on the phone, and he is the LEC representative for striped bass. I think he would be able to answer Bill Hyatt's questions, if you wanted to give Kurt the floor.

CHAIR BORDEN: Kurt.

MR. KURT D. BLANCHARD: Hey David. I think that was Bill talking about the intent, the intent of prospective fishing. We've spoken on that in the past, and made it quite clear that we do not favor circle hooks to this level. We fully support it in the educational component, to make it mandatory we're kind of spooked. We're on the opposite side

of the final decision, and we are in support of it, because we support the program. Whenever you create these situations where you start to create these small exemptions for niche fisheries or whatever, it just completely diminishes the intent of what this plan is all about, and the difficulty in enforcing it. If Massachusetts, for example, starts to have these handful of exemptions, I'm sure the folks in Rhode Island and adjoining states are going to want the same exemptions.

It just waters down the whole intent of what I felt, or believe the Board was trying to get to with their aggressiveness toward making circle hooks mandatory. I think it was pretty clear how they wanted this implemented, you folks wanted this implemented, as far as the design, the use, things like that that were identified and supported. I am concerned at some of these proposals, and how they may be implemented to the respective states, and then what that does to the officers out in the field trying to enforce them.

CHAIR BORDEN: Thank you, Kurt, I've got Bill Gorham please, and then William Hyatt.

MR. BILL GORHAM: Has anybody worked with the manufacturers and regional distributors, to ensure that these specific hoops are going to be able to be supplied to tackle shops at a time that this is to be implemented? I only bring that up, because I know there is regional, and if I'm not mistaken national shortages of all fishing supplies.

I'm a manufacturer myself, and it's really a struggle for us to get hooks, and then tackle shops they are really having a hard time getting any type of hook, rod, reels. I'm just wondering if anybody has reached out to see if this is going to be possible this year.

CHAIR BORDEN: Does anyone on staff want to respond to that?

MR. APPELMAN: I can give it a shot, Dave. I mean certainly no Commission staff have reached out to tackle shops or those that produce these types of hooks across the coast. I think the expectation is that through the individual state scoping processes, or our regulatory processes, they would ask these questions. Unless there are any Board members that want to weigh in here, I don't have much to offer from a Commission staff perspective.

CHAIR BORDEN: Do folks want to respond to that? If you would raise your hand. I don't see any hands up.

MS. KERNS: David, you have a bunch of hands.

CHAIR BORDEN: Tom Fote, you're up first, Tom, but I'll recognize you now.

MR. THOMAS P. FOTE: Yes, I mean any tackle store you go in that is a worthwhile tackle store is carrying circle hooks. Circle hooks have been used on striped bass for the last 25 years, from everybody that is concerned about striped bass. There is no shortage of circle hooks around, and unlike regular J-hooks, circle hooks. I don't even remember seeing any stainless-steel, because the circle hooks are sharper, and the way the bend is, they basically use it like that. I'll wait until a motion or something, when this comes up to a vote, but there is no shortage of circle hooks. The manufacturer will get all the circle hooks you want. If you go to any show that's all you see. And when you look at whether it's any of the good hook manufacturers, from Mustad to, I can't think of them right now, because I'm getting old. But yes, I mean I have a full bunch of circle hooks downstairs, even including 10 circle hooks.

CHAIR BORDEN: Thanks, Tom. I've also seen on a list; the new hand is Mike Wayne. Mike, do you want to respond to that question? If you want to speak, I'll recognize you later on, but if you want to answer that question for the Board, I think that would be helpful.

MR. MIKE WAYNE: Thank you, Mike Wayne from the American Sportfishing Association. The tackle manufacturers are part of our membership of our association, so in advance of this requirement we made sure that our membership was aware that this circle hook was going to be a requirement in the striped bass fishery.

We did try to give them a heads up. The hook manufacturers specifically, that this fishery was headed towards requiring the use of circle hooks when fishing with bait. We did extend that to our membership, just to allow them the opportunity to prepare for a higher demand as a result of this regulation. Thanks, Mr. Chairman, for giving me the opportunity to clarify that.

CHAIR BORDEN: I'm going to go back through the list. I've got Mike Luisi, Justin Davis, and then Chris Batsavage.

MR. MICHAEL LUISI: I just have another question for Massachusetts and the exemption, and I just want to make sure that I'm clear. I understand the part of the exemption that refers to anglers using an artificial lure tipped with some form of bait, or some form of natural bait attached.

What I'm not clear about is, if a charterboat is fishing solely with bait, if they're live lining or chumming, or chunking in some way, just straight bait with no artificial lure attached. Are they included in that exemption? Are the anglers aboard their vessel who are fishing solely with bait with no artificial lure attached, are they included in this exemption? I just want to make sure I'm crystal clear as to what this exemption applies to.

CHAIR BORDEN: Thanks Mike. Mike.

DR. ARMSTRONG: Yes, the exemption applies to any manner of fishing onboard a for-hire vessel.

MR. LUISI: Okay, thank you, Mike.

CHAIR BORDEN: Okay, I've got Justin Davis, and then Chris Batsavage.

DR. JUSTIN DAVIS: I have another question for Massachusetts, although before I ask my question, I do just want to point out. If memory serves, I think Massachusetts implemented their circle hook regulation well prior to the mandate that came from Addendum VI, as we started working on the Addendum VI process and it became apparent what a challenge discard mortality was for this fishery. Massachusetts was proactive, and enacted that circle hook regulation very early on. I would just like to applaud them for that and for their proactive approach to this. My question has to do with the process by which Massachusetts implements regulations. You know the process that all of us use in our various states to get regulations on the books can vary quite a bit.

In Connecticut I'm sometimes very envious of other states who are really nimble and flexible in this regard. In Connecticut I always tell people, it takes somewhere between 6 months and 15 years to get a regulation on the books. My question for Massachusetts is, if they were to decide to change their existing circle hook regulation, what would be the timeline on that? Is that something that they could accomplish relatively quickly, in a matter of weeks or months, or is that something that would take much longer?

CHAIR BORDEN: Mike Armstrong.

DR. ARMSTRONG: Yes, that would be just a regulation change for us, so we would bring it to public hearing within a couple of months, and then bring it to our Board. We can probably get it done in three or four months.

CHAIR BORDEN: Justin, do you need to finish, or do you have something else?

DR. DAVIS: No, that was great, thank you.

CHAIR BORDEN: I'm going to move on, I've got Chris Batsavage, and then Dennis Abbott.

MR. CHRIS BATSAVAGE: This question might be more for our Law Enforcement representative. Based on the law enforcement concerns over targeting and intent, which I know isn't easy to enforce. What we did in North Carolina was we also required the fishermen who keep striped bass using natural bait, to be using a circle hook at the time to try to combine, maybe to incentivize the use of circle hooks.

They think they have a chance of catching striped bass while out fishing, and because it's very likely that anglers in our state can claim, probably rightfully so, that they were targeting some other species, where circle hooks aren't needed while catching striped bass. I didn't know if any of the states had those kinds of discussions. Also, would a provision like that from a law enforcement perspective make this easier to enforce?

CHAIR BORDEN: Comments on that? Someone on staff or enforcement?

MR. BLANCHARD: David, Kurt Blanchard, I can respond to that if you would like.

CHAIR BORDEN: Please.

MR. BLANCHARD: The consensus of the Law Enforcement Committee was one of the discussion points that we had in these earlier discussions on circle hooks. Across the board we had difficulty identifying intent on the use of the hooks. If we get in the situations, and I'll just again use Rhode Island for an example. If I've got folks out blue fishing, and they are using J-hooks and catching striped bass. Without a long-term surveillance on that vessel, and wait for it to leave the area and then intercept. It just takes a lot of time to enforce and to make those types of cases; very, very difficult for us.

I'm hoping that responds to Chris's point. I guess if you would have tried to implement a regulation to prohibit J-hooks period, I'm not sure how that would play out for other species in other fisheries, just not to have them onboard, or not to have them accessible. It gets very complicated. Thank you.

CHAIR BORDEN: Thanks, Kurt. On the list I've got Dennis Abbott next, and then Mike Armstrong. You know what I think we would do is move on to how we handle this issue, whether or not we approve it, set a deadline for implementation, whatever the options are. Dennis Abbott.

MR. DENNIS ABBOTT: Keeping Massachusetts right in the barrel right now. The use of artificial lures designed to be trolled cast and retrieved. We've gone to great extent to describe what a circle hook is. For law enforcement, probably to Kurt would be how would you identify an artificial lure designed to be trolled, cast, or retrieved? To me that could be anything from a little spinner to whatever, so from a law enforcement point of view, wouldn't you think this would be a difficult thing to enforce?

CHAIR BORDEN: Kurt, I think that is a question for you.

MR. BLANCHARD: Yes, Mr. Chair. Yes, it would be very difficult. What ends up happening on a law enforcement case, and trying to make a case like this. We would have to get into a situation of defining, and maybe looking back at manufacturers definitions, and things like that to see how each and every one of these types of devices are defined.

The regulation was very, very clear, artificial bait, natural bait, artificial bait, and how it was described in the plan. That was enforceable. It was difficult, but it was enforceable. Again, each time we enter into these intricate type definitions or pieces of equipment, and things like that. It gets very, very complicated, and it waters down and diminishes the plan.

CHAIR BORDEN: Next on the list, I've got Mike Armstrong, and then I'm going to move to how we handle that and ask for comments. Mike.

DR. ARMSTRONG: Mr. Chairman, I'm going to defer for a minute or two. Thank you.

CHAIR BORDEN: Early on, Ritchie White got into the issue of opinions. Does anyone else have suggestions on how we handle this? It is scheduled for action, but obviously there is a range of alternatives that we can use. Comments on how we handle this. I've got Roy Miller and Tom Fote.

MR. ROY W. MILLER: I'm wondering if we could compromise a bit here, with regard to Massachusetts. In other words, could we approve the circle hook document, the Addendum VI, with the caveat that Massachusetts, and give Massachusetts an opportunity to change their circle hook requirements. I gather that the two exemptions they proposed are not already on the books, so maybe they are maybe they aren't. But it would be cleaner if they were on the books, to have them rescinded and new circle hook regulations put in place. Could we approve the document with the caveat that Massachusetts would have a set amount of time to come into compliance with the circle hook requirements, in the absence of their two proposed exemptions?

CHAIR BORDEN: Does staff want to comment on that, either Max or Toni?

MR. APPELMAN: Sure. Well, it is really the purview of the Board as to how they want to handle these implementation plans. If there are parts of Massachusetts regulations that the Board is not comfortable with, I think explicit guidance to Massachusetts as to what you expect will be needed for sure. But how the Board wants to direct Massachusetts is up to you guys.

CHAIR BORDEN: All right thanks, Max. I've got Tom Fote, and then I would like to go back to Roy's suggestion.

MR. FOTE: I'm ready to make a motion that we don't accept exemptions from recreational fishing using bait, unless you use circle hooks. If I get a second to the motion I'll basically explain why.

CHAIR BORDEN: Tom, have you got this written out, so you could make it so it's clear to everybody what's your proposal?

MR. APPELMAN: Dave, just give us one second. Maya will take back control of the PowerPoint, and we'll get blank slate up on the screen, and Tom, go ahead and make your motion.

MR. FOTE: Motion to not exempt any state from putting in place the circle hook rules for bait fishing. If I get a second to that I'll clarify.

MR. ABBOTT: I'll second that.

CHAIR BORDEN: We have a motion by Tom Fote, seconded by Mr. Abbott, discussion on the motion.

MR. FOTE: Yes, I'll go back and explain. When we talk about, I mean I've been fishing stripers for 50 or 60 years now, and we know that this is between bait and non-bait. Bucktails, when you tip them with pork rind, pork rind is a process that is actually an artificial lure. The same thing when you use tubes.

Yes, in a worm fishery, basically they like to put worms on hooks, but that is also a bigger opportunity to basically gut hook a fish. We are in this process to basically reduce the 52 percent of the recreational mortality or the 48 percent of the overall mortality that is caused by hook and release. We would be negligent if we did not enforce a rule like this. I mean this is a long time coming. I don't understand it, because most of the party boats and charter boats that I know of basically adopted this 10 or 15 years ago, when we first started promoting it, and that actually anybody that fishes circle hooks

were using bait in striped bass realized that as a better opportunity of basically catching striped bass and holding onto them, because it basically hooks them in the right place, not in the gut or not in the mouth, but right in the corner of the mouth where it's supposed to be.

As a matter of fact, if I was really going to do this, and to make it easy for law enforcement, we ought to include bluefish. Again, we don't want fish swallowing hooks so we gut hook them, because when we hook them in the mouth and we release them, we have a better event, and that's my comment on this.

CHAIR BORDEN: Mr. Abbott, do you want to comment as the seconder?

MR. ABBOTT: Only to say that keep it simple. When you get into exemptions you are just looking for trouble, and it's not good for the fishery to allow exemptions, in the long run.

CHAIR BORDEN: All right, thank you, Dennis. Next on the list I have Mike Armstrong and then John McMurray.

DR. ARMSTRONG: I certainly agree with the sentiment, which is why we put in circle hook mandatory gear ahead of everyone else. But I disagree that an artificial lure, fish like an artificial lure, which has a mouth tag. Putting some bait on it to make it more attractive, for whatever reason, I don't think. I think those in Maine for tubes and worms is reasonable.

I appreciate the pushback against the charter, and I appreciate the wisdom of the Board. I do think there are certain exemptions, as spelled out in the Addendum we passed, for small little niche things like that. I wouldn't be proposing if I didn't feel that these artificial lures are going to hook up in the mouth, whether they have bait on it or not. That's all.

CHAIR BORDEN: I've got John McMurray, and then Megan Ware.

MR. McMURRAY: I was going to say something very similar to what Mike said. I support the motion, and I don't think charter boats should have an exemption, but the tube and worm thing is justified. It is basically a very long hook with a tube over it, and it gets trawled. It's very unusual to gut hook a fish on that rig, and I understand why people want to use worms on the end of it, and not have to use circle hooks. That part of it makes sense to me. But I do support not giving the charter boats an exemption.

CHAIR BORDEN: Megan, and then Justin Davis.

MS. MEGAN WARE: Yes, I guess the conversation has been interesting. I agree I'm not comfortable with the Massachusetts charter exemption, but I do believe that the tube rig exemption in Maine, and it sounds like that is what Massachusetts is also trying to get at with their lure exemption. I do think that warrants the exemption, so I'm going to make a motion to substitute. I'm sorry to do this on the fly, Maya. **I'm going to substitute to approve the states implementation plan for circle hooks with the exception of the Massachusetts for-hire exemption.** If I get a second, I think it might be helpful maybe to just talk a little bit about Maine's history with the circle hook requirement.

CHAIR BORDEN: A new motion by Megan Ware. Is there a second?

MS. KERNS: Justin Davis, are you seconding that?

DR. DAVIS: Yes, I am.

CHAIR BORDEN: Megan, you said you wanted to comment further.

MS. WARE: Yes, that's thoughtful, thank you, Justin. Just a little bit of history, at least I can speak to the treble hook exemption in Maine. We've had a circle hook requirement since 2013, and the exemption went into place at the same time. A lot of people have talked about the tube rig, and how this type of gear tends to be more actively fished, and I think there are certainly observations out

there that this has a very low incident of gut hooking.

Unfortunately, we didn't have data on the number of anglers that use this type of terminal gear, but just anecdotally in the fishery here in Maine, we think it's a very small population. Given that, and the fact that it has a low incidence of gut hooking, when the circle hook requirement went into place in Maine, we didn't feel like this exemption was undermining the conservation goals that we were trying to achieve.

You know as I mentioned, this is I think our eighth year now under the circle hook requirements, and with this exemption. I think certainly anglers in Maine and Marine Patrol are used to this exemption at this point. You know I think we've tried to overcome some of the enforcement challenges that have been brought up. I'll also note that we do require circle hooks for bluefish, so I think that that will also be important to our success here in Maine.

CHAIR BORDEN: Thanks, Megan. Dr. Davis, do you want to talk as seconder?

DR. DAVIS: I prefer the substitute motion to the original motion. I certainly appreciate the intent of the original motion of trying to strive for uniformity across states, and the regulations that we're exempting, and to try to stick to the intent of this mandate of providing as much reduction in discard mortality as possible.

I was also not comfortable with the for-hire exemption in Massachusetts, and I think we've had a pretty robust discussion about that, and I won't rehash the reasons why I didn't necessarily feel good about that exemption. However, I personally don't have as much of a problem with the exemptions around use of artificial lures that have sort of bait on the hook, or involved in the lure.

I've heard from constituents in our state who frequently fish a tube and worm rig, so that is the exemption that is built into Maine's plan. Also, people who fish rigged eels. The way those artificial lures are fished, they don't tend to result in gut hooking the same way a bait fished on the bottom stationary would with a J-hook. I'm pretty confident that by allowing an exemption for those types of artificial lures that we're not significantly undermining the conservation benefit of the circle-hook mandate. I also prefer the substitute motion, because to me this leaves us in a much clearer place, if we approve this as to what's actually happening here. We are approving all the state implementation plans, with the exception of Massachusetts. Those states can either implement those regulations or leave them on the books as is, if they are already on the books.

As I interpret this, we're essentially saying to Massachusetts, you will need to change your existing circle-hook regulation to remove the for-hire exemption. I do think we should possibly discuss whether we need to provide some more language in here that might sort of require Massachusetts to submit a new implementation plan by some date certain. But overall, much more comfortable with this substitute motion, and that's why I support it.

CHAIR BORDEN: Megan, is it your intent, I just want to be clear on the record. If this motion were to pass, is it your intent that Massachusetts would be responsible for coming back to the Board and reporting at the next meeting how they intend to handle it, or have you got another course of action with your position?

MS. WARE: Hi Mr. Chairman, yes. I think that sounds like a good plan to me. I don't know if Max wants to weigh in, if that is necessary or not. But I certainly think that might provide a level of comfort to this Board, just knowing how much this progresses based on this motion. I would support having them come back with just a brief update at our next meeting to fill us in.

CHAIR BORDEN: Mike, do you want to comment from the process perspective?

DR. ARMSTRONG: Sure. Yes, I mean we can give you a good faith declaration that we will move on, and immediately. I honestly don't think you need to put it in writing. We have an omnibus public hearing coming up in a month or so. We'll put it on that. You know our fishing season doesn't start until May, so we'll have it changed by May, no question about it.

CHAIR BORDEN: Other questions, I've got Martin Gary, Tom Fote your hand is up also. Martin.

MR. GARY: Thanks Mr. Chairman, and thanks everyone for the education on the tube and worm gear update. Thanks, John for your comments. I really appreciate that. I know you're out there a lot and understand what's happening. I guess the question is for the maker of the motion, for Megan.

I'm just wondering, so it sounds like that is a rig that it's already preprocessed with a J-hook attached to it, and it would have to be retrofitted, which might be unreasonable. Is that kind of part of the logic in promoting this exemption? Is that correct, or if anybody else has some perspective on that. But I'll put it to Megan first.

CHAIR BORDEN: Megan.

MS. WARE: I actually might have to pass that question on to someone else who would know if it comes pre manufactured like that. But I can say that we don't allow treble hooks on the tube rig, if that's kind of what you're getting at, Marty.

MR. GARY: No, I was really thinking, you know is this something the people buy that is premanufactured, and it's just unreasonable to retrofit it with a circle hook. I guess that's where I was going with it.

CHAIR BORDEN: On the list I've got Tom Fote, your hand is up.

MR. FOTE: Yes, my hand is up. Can I speak now, Mr. Chairman?

CHAIR BORDEN: Yes, please.

MR. FOTE: I'm sitting here listening to why we need to exempt for tube. You can fish a long tube without a piece of bait. That has been done before. We have now changed a whole section of the community to recreational fish for striped bass, and had no problem doing that. By eliminating the big fish, we basically took away a lot of tournaments that was around for a hundred years.

We basically said that is no problem, you need to find something else to do. Don't have tournaments, don't raise money for your groups like that, or for the charities. We also told people they can't take a fish they've been taking home forever, with the opportunity to basically catch a world record. That's a decision we made, so we imposed that on a lot of recreational fishermen, and gave them no exemptions.

You can fish a long tube without putting bait on the back of it. I mean that is the way you can fish it. That's the way I always fished it. Yes, maybe the bait gives you more confidence that you're hook something, but it doesn't have to be on the back of that rig to basically work. We're here to make decisions on how we rebuild this stock. This is a concern.

The states that are asking for the exemptions are the ones that really were pushing for us to basically cut back on what we're doing. I'm trying to do what they basically asked us to do, is to basically take and get rid of as much of the circle release mortality that makes up a bigger percentage.

Once you do exemptions, I'm telling you I'm going to hear from other people, well I need to put a worm on it, so they're going to be asking for an exemption in New Jersey, in Rhode Island, and all

the way down the coast basically saying, well maybe that worm helps me catch more fish. That is not what we're asking people to do, to catch more fish.

We're asking them to catch fish in a safe manner, what is best for the fish, and using circle hooks when you have bait is the best way of doing that. Yes, I would support doing this for bluefish, if we're so far because we're worried about bluefish actually being overfished. I mean I'll leave it at that. That is my comment.

CHAIR BORDEN: We've had a robust discussion on this. Does anyone care to make a point that has not been made before? I'm going to take one comment from a member of the audience, who has had his hand up on this. I've got Joe Cimino and Bill Gorham.

MR. JOE CIMINO: I appreciate the chance here. You know I'm curious if there is truly large, broad consent by the Board that they feel comfortable with this type of exemption. You know a lot of states were not pursuing this, but I'm wondering. Can we adopt this language to say that any state that wanted to use this type of gear can have the exemptions? Is there a way to do that today?

CHAIR BORDEN: Staff, Max or Toni.

MR. APPELMAN: Yes, I'm thinking through this a little bit. As you specified in this motion, the exemption that you're not allowing for a state. I suspect you could do a similar language in the motion to allow any state to exempt a certain, you know fishing technique. I don't know why you couldn't do that in a motion. You would have to be very specific though, of course, is what it sounds like here. You're holding on a very specific technique, and making sure that is clear in the motion what you are exempting for this provision.

CHAIR BORDEN: Bill Gorham, please.

MR. GORHAM: In regards to the tube, bait or lure manufacturer have made tube rigs in the past, and you can probably put a circle hook in the back. But if there was more than one hook, installing a circle hook in the midsection would be difficult. But you would definitely have to provide notice enough for them to be manufactured with different hooks.

I really appreciate the gentleman from the ASA commenting, and I would ask him to please reach back out to the manufacturers, as I've been talking to tackle shops, even five minutes ago, and they are still having major problems with supplies. Thank you.

CHAIR BORDEN: Thanks, Bill, I've got a couple of hands up. I've got Ritchie White, Mike Luisi, and Roy Miller.

MR. WHITE: Thank you, Mr. Chair. After listening to how this may open up, I was going to support the substitute, but now I am not. I think we're headed down the wrong road on this thing. We've got to rein it in. We have to stick with the original intent, which was to try to lessen release mortality on striped bass. The more exemptions and if all the states adopt these, we're going down the wrong road. As far as enforceability. There has been a number of questions and discussions about that.

I've followed the LEC meetings for 15 years. Kurt, you can correct me if I'm wrong, but over the years I've heard numerous times that regulations that are difficult to enforce, that they feel that compliance by the majority of the public, and they talked in the 90 percent plus do what is right. It's a tiny, small minority that are the lawbreakers. If these are not totally enforceable, we still gain a tremendous amount by the majority of the public adopting and using circle hooks.

CHAIR BORDEN: Mike Luisi, and then Roy Miller.

MR. LUISI: I just have another point of clarification from the maker of the substitute motion, and then I guess depending on the answer, I may have just a quick follow up comment. To Megan, your motion

here, it speaks directly to the Massachusetts for-hire exemption. Focusing on Massachusetts, would it still allow for artificial lures to be used that are tipped with some form of bait? It would still allow for that provision in the Massachusetts proposal?

MS. WARE: Mr. Chair, if I can. Yes, Mike. I think that is correct. My understanding is that the Massachusetts provision is targeted at the tube in one rig. If I'm wrong, Mike Armstrong, please correct me. Mike Luisi, this would just be not approving the for-hire exemption.

MR. LUISI: Okay, and if I may, Mr. Chairman, just a quick comment. Just to that, and I'm going to need a minute at the time when we need to vote here for a quick caucus with my other Commission members. For a state like ours, who has enforced and put forth circle hook requirements for the last few years.

I can understand a desire and a need for some form of evolution to the process. I understand why this tube and worm rig, you know it is something that has been used, and could be considered more of a mobile gear. I think my focus right now would be more on a strictly a bait gear, you know a bait method of fishing, as far as making sure that that is what is being enforced.

But I do understand. I'm not sure yet where Maryland will stand on this substitute, but I just wanted to put it out there for the record that being in the seat that implementing circle hook requirements in Maryland over the last few years has been an evolution in the making. I could see perhaps supporting the substitute, in the hope that over time we can get to a place where all forms of fishing with the intent to fish for striped bass using bait would be prohibited.

CHAIR BORDEN: Roy Miller. We may have temporarily lost him.

MR. MILLER: I temporarily muted myself. Let me start again. Not to belabor this discussion, but I'm thinking about something in regard to the substitute motion, a practice that I've never done, but I understand it is popular in some areas, and that is to take a treble hook and attach it to a 10 squid or a weight, and jig through schools of pogies to snag a menhaden to use as striped bass bait.

There is a possible exemption that could be allowed if the substitute motion were to pass. With that caveat, I find myself going back to the original motion to not exempt by Tom Fote and Dennis Abbott. The only thing I would add to that is make it clear that we'll refine to the circle hook as defined in Addendum VI.

CHAIR BORDEN: There are a number of hands going up at this point. What I would prefer to do at this point is actually call the question on this, and then we will deal with the results, depending upon where it is. I've got a question for Toni Kerns. I think it is Megan's intent to basically approve the Addendum VI, and Megan, you can correct me if I'm misinterpreting you, with the exception of Massachusetts for-hire exemption. Megan, is that what your intent is?

MS. WARE: Yes, I guess the understanding for our action today is that we need to approve the implementation plan, so I'm hoping that the substitute motion tries to do that with the exception of the for-hire exemption. That part of the Massachusetts plan would not be approved by the Board, if the substitute motion passes.

MR. ABBOTT: To interrupt, Mr. Chair. Could we go back and see the exemption list that shows Maine and Massachusetts?

MS. KERNS: While Maya is pulling that up, Mr. Chairman, if Megan is comfortable with it, we could say, move to approve the Addendum VI state implementation plan, if that makes it clearer for everybody of what's going on. We can certainly do that if that is okay with Ms. Ware.

MS. WARE: Yes, that's a fine perfection, thank you, Toni.

CHAIR BORDEN: Okay, can we get that revised perfected motion on the table, please?

MS. KERNS: We will, David, it's just Dennis asked to see this proposed exemption, so we wanted to show that to you all first really quick, if that is all right.

CHAIR BORDEN: Thank you.

MS. KERNS: Dennis, when you're good then we'll go back to the motion.

MR. ABBOTT: Yes, I just wanted to let everyone understand what they're voting for. Maine obviously has an interest in the rubber and tube rigs. Massachusetts has artificial lures designed to be trolled, dah, dah, dah, dah, dah, dah, and there are two big differences there. I just wanted everyone to be aware if they support this motion, what they are going to be supporting.

CHAIR BORDEN: All right, can we go back to the motion, please?

MS. KERNS: Maya, for here if you could just say, move to approve the Addendum VI state implementation plan. Just add Addendum VI after the. Thank you so much, Maya.

CHAIR BORDEN: Okay, as I indicated before, I have one member of the public who has had his hand up consistently, Patrick Paquette. Patrick, if you would like to address the Board, and then I'm going to call the question.

MR. PATRICK PAQUETTE: Thank you, Patrick Paquette, recreational member of the Advisory Panel and Government Affairs Office of the Massachusetts Striped Bass Association. I very much appreciate the discussion that you guys are having regarding these exemptions for our

state. There was a lot of, I wanted to answer a question from an expertise.

I both charter fish in Boston as a Captain for quite a few years, and now live on Cape Cod and haven't operated in a while. But the use I'm aware, and still in the network. The use of treble hooks in a live bait fishery in Massachusetts in the for-hire fleet still happens. The Massachusetts Striped Bass Association was against exempting charter boats from the circle hook regulation, for the simple fact that we want to reduce mortality across the board. Our charter boat fleet is significant here. We're opposed to that part of the exemption. Regarding the second discussion you guys have been having about the gear, and you're at the top of what is a massive number of exemptions et cetera. Somebody just brought up snag and drop. Good luck when you have that discussion as well.

But regarding the tube and worm, the one point that hasn't been brought up is regarding things like tube and worm, et cetera. Circle hooks are not designed to be trolled. This is really supposed to be about discard mortality. If you make things like the jig at the end of a wire line, you cannot tip that with anything. There are plenty of artificial items that are also sold to do that tipping as well, which won't change the actual behavior at all.

All you're going to do is force people to use something per the tackle shop. The Gulf Corporation makes an artificial worm that is scented just like a regular worm, and all that does is make the money go to the Gulf Corporation, as opposed to the worm digger in Maine. But that being said, in either case you are not necessarily going to be gut hooking fish, fishing tube and worm. But if you render some of these different pieces of tackle that are purchased and that there are hundreds of thousands of in each of our states.

You are going to be creating an economic input that is not something that I believe that you guys have intended to. There is an economic impact to the anglers who have tackle boxes in sheds and boats full of some of this gear, that really needs to be

considered. It's not now just changing hooks, and although hooks are expensive, I understand why we're doing it. But there is really no conservation benefit to eliminating the current way that tube and worms are used.

CHAIR BORDEN: Patrick, can you close, please?

MR. PAQUETTE: Yes. I just wanted to make sure that you were thinking about that. We absolutely in Massachusetts, some of the big organizations supported getting rid of this exemption for our for-hire fleet. We want the conservation benefits to work.

CHAIR BORDEN: Thank you, Patrick. We'll take a three-minute pause, and then I'm going to call the question.

MR. ABBOTT: Can we have a roll call vote?

MS. KERNS: Dennis, we can by default, because I save how each state votes, you end up with a roll call.

MR. ABBOTT: Fine.

CHAIR BORDEN: Are you ready for the question? Does anyone object to doing this, all in favor of the motion. Let me read the motion. Motion to substitute to approve the Addendum VI state implementation plan for circle hooks with the exception of the Massachusetts for-hire exemption. Motion by Megan Ware, seconded by Dr. Davis. Everyone in support of that motion, please raise your hand.

MS. KERNS: I have Rhode Island, Maine, Maryland, Delaware, and North Carolina.

CHAIR BORDEN: Okay, so how many is that, Toni?

MR. LUISI: Mr. Chairman, this is Mike Luisi. I heard Maryland. I did not have my hand up in support of the substitute. Toni may have misread that.

MS. KERNS: Okay, just as an FYI, Mike. Your hand is up right now. Now it is down.

MR. LUISI: Yes, I put it up so I could talk, so I could speak up. I'm going to put it down.

MS. KERNS: Okay, sorry about that.

CHAIR BORDEN: Okay, let's go back and do this again so that the record is clear. All of those in favor of the substitute motion please raise your hand.

MS. KERNS: I have Rhode Island, Maine, Massachusetts, and North Carolina, and Mike Luisi, your microphone is open.

CHAIR BORDEN: Take those hands down, please and then opposed, raise your hand.

MS. KERNS: I have District of Columbia, Pennsylvania, New Jersey, Virginia, Massachusetts. Mike, your hand was up before. New Hampshire, New York, Maryland, and PRFC. I'm going to ask the state of Massachusetts to clarify their vote, please.

MR. ARMSTRONG: I'm being ambiguous, how about that? Just kidding. I don't know how my hand got up, no I was a yes.

MS. KERNS: Okay, so Max, please do not include Massachusetts in the no count.

CHAIR BORDEN: The count is?

MR. APPELMAN: Null votes and abstentions, Dave.

MS. KERNS: I'm going to put the hands down now for everyone.

CHAIR BORDEN: All right, so any abstentions?

MS. KERNS: For abstentions I have NOAA Fisheries and U.S. Fish and Wildlife Service.

CHAIR BORDEN: Any null votes, that's two.

MS. KERNS: Mr. Chairman, if you could just let me get the hands down before you ask for the null votes. If you can ask for the null votes now that is helpful. Null votes, please raise your hand. One from Connecticut.

CHAIR BORDEN: The final vote tally was?

MR. APPELMAN: I missed a vote from Delaware. If Delaware could come on the record and tell us how you're voting.

MS. KERNS: Max, I believe Delaware in the comments said they were voting in favor.

MR. JOHN CLARK: That is correct. Yes, I tried to get my hand up to vote in favor. My thing seemed to be freezing up there, so Delaware votes in favor.

CHAIR BORDEN: Can the staff read the record of the actual vote? At my end the names are changing pretty quickly.

MR. APPELMAN: Yes, I have the vote. It's 5 in favor, 8 opposed, 2 abstentions, 1 null vote.

CHAIR BORDEN: The motion fails, so we're back to the main motion. Any further discussion that hasn't taken place here, something new? We have two hands up, Roy Miller and Justin Davis.

MR. MILLER: Mr. Chairman, I would just add to the end of the motion that we're about to vote on, as specified in Addendum VI, so we're clear what we're talking about.

CHAIR BORDEN: Thanks, Roy.

MR. FOTE: I was going to make that request on my motion.

MR. APPELMAN: Maya, at the end of the main motion, could you add as specified in Addendum VI? Thank you.

CHAIR BORDEN: Tom, is that reflective of your thinking?

MR. FOTE: Yes, David.

CHAIR BORDEN: Okay, so the maker of the motion has agreed to that perfection. I've got Justin Davis.

DR. DAVIS: I just want to be clear on what it would mean if the Board passes this motion. As I interpret it, it would mean that all of the implementation plans as presented today would be approved, with the exception of the Massachusetts and the Maine implementation plans. Because we're not approving those implementation plans, and are stating that no state can have any exemptions for a use of circle hooks when bait fishing.

Maine and Massachusetts would be required to either change their existing regulations on the book, or change their plan to implement regulations, such that those exemptions were no longer on the books, and then would be required to report back to the Board at some point in the future, to assure the Board that they have taken those steps. Is that correct? I guess I would actually direct that to the maker of the motion, to see if that is the intent.

CHAIR BORDEN: Tom Fote, is that your intent?

MR. FOTE: Yes, that is my intent.

CHAIR BORDEN: Okay, does the seconder of the motion agree with that intent?

MR. ABBOTT: Yes.

CHAIR BORDEN: Mr. Abbott has said yes. All right, further discussion on the motion, and I intend to call this pretty quickly, because we've got a lot of good input into it. Anyone else? Any other Commissioners want to speak to this? Toni, have you got any hands up?

MS. KERNS: Just have a member of the public that's all.

CHAIR BORDEN: As I did before, I'll take one comment from one member of the public, and then I'm going to go back to Megan Ware, and then I'm going to call the question. We'll provide a two-minute break to caucus. Robert Groskin.

MR. ROBERT GROSKIN: I want to commend the Commission for their action on the circle hook issue. Would it be possible to also include some best practices for handling caught and to be released fish? As a veterinarian who actually treated fish, I can really attest to the trauma and potential increased mortality due to mishandling of these caught fish. If you reduce the mortality with the circle hook initiative, unless you also accompany it with some sort of best practices, you are kind of defeating the purpose.

I was also wondering, if the circle hook manufacturing companies and packaging companies could include some wording that would indicate that these hooks are conservation enhancing hooks. Maybe create some sort of a special logo for these hooks, possibly do the printing in green, to distinguish them from other hooks, and to emphasize the importance of conservation issues in fishing. Thank you.

CHAIR BORDEN: Thank you, Robert. We'll take those recommendations under advisement, maybe talk to some of the people who are actually involved in this call from the industry. Last comment is Megan Ware.

MS. WARE: I just have two questions on kind of implications of this, since it was like Maine may have to change the regulations. My first would be to the maker of the motion. I just want to be clear that the intent here is that any trolled worm can't have bait unless it has a circle hook. Is that I guess kind of the output of this first motion.

Then, I don't know if it's a question for staff, but just around timing of the new implementation plans for Maine and Massachusetts, should this pass. As I mentioned, I think we'll have to go to rulemaking on this. I'm not sure if we would have time to get this done by the start of the season or not, so I'm just trying to understand timing.

CHAIR BORDEN: We're going to take a two-minute break, and then I'm going to come back and if staff wants to address any of the issues if they're called, I'll recognize them. Other than that, I am going to call the question. Two-minute break.

MR. APPELMAN: I'm happy to address the staff part of that question, Megan, when we come back from the break.

MS. WARE: Thank you, Max.

MR. APPELMAN: It's 3:02 right now, we'll come back at 3:04. Mr. Chair, showing 3:04. Megan, just a quick response there. The Addendum does have an implementation deadline for January 1, so if Maine is unlikely to hit that deadline if this motion were to pass, and we would have to go back to the books. I think just giving the Board an idea of what a new reasonable deadline would be for Maine would be appropriate, and making sure that the Board is okay with that new deadline for Maine. The same would go for Massachusetts.

CHAIR BORDEN: Megan, does that answer your question?

MS. WARE: Yes. I mean I think we'll just have to go back and look at our regulatory schedule, and see what we can get done. I think it will be a stretch to get it done by January 1st, but we can provide an update to the Board, obviously depending on how all this.

CHAIR BORDEN: Okay, so does staff have any perfections to the motion, changes?

MS. KERNS: David, it's not a perfection, maybe it is. Justin already went over this, and Tom and Dennis

did agree that this motion is approving the implementation plans, with the exception of the exemptions. I don't know if we need to put that in a parenthetical, just so it's very clear to everybody what they are voting on.

MR. FOTE: Toni, I have no problem putting that in the motion.

MR. ABBOTT: Good with me also.

CHAIR BORDEN: That is the intent, and I would ask that that intent be reflected in the minutes. Is everyone ready for a vote on this? If not, raise your hand. Okay, so all in favor.

MR. APPELMAN: Megan Ware has her hand up.

CHAIR BORDEN: Megan.

MS. WARE: I'm so sorry. I just asked a question to the maker of the motion, and I think we were going to get back to it after break. I just want to clarify that this is saying any troller can't have bait unless it has a circle hook. I'm just trying to see if that is the output kind of this main motion.

CHAIR BORDEN: Tom.

MR. FOTE: Yes, I guess the motion says exactly what it says.

MR. ABBOTT: Yes, I mean this was decided some time ago. To use live bait, you had to use a circle hook. I mean that's already in my opinion law.

CHAIR BORDEN: All those in favor of the motion please signify by raising a hand.

MS. KERNS: Hey David, I have District of Columbia, NOAA Fisheries, Pennsylvania, New Jersey, Virginia, U.S. Fish and Wildlife Service, Rhode Island, Maine, Massachusetts, New Hampshire, Delaware, New York, North Carolina, Maryland, and Potomac River

Fisheries Commission. I will put everyone's hand down.

CHAIR BORDEN: Okay, all those opposed to the motion, please raise your hand.

MS. KERNS: I have Connecticut.

CHAIR BORDEN: Connecticut is opposed. Do we have null votes? Any null votes?

MS. KERNS: No hands are raised.

CHAIR BORDEN: Any abstentions? No hands are raised. The motion passes. Toni, would you give me the count, put the count in the actual vote count?

MR. APPELMAN: The count is 15 in favor, 1 opposed.

CHAIR BORDEN: My only suggestion here is it got a little tiny bit chaotic there at the end, in terms of the exemptions, Mike. My suggestion is that the Executive Director send a letter to the two states, basically that are affected by this. Notify them that they need to change their rules, and put in some of the reasons that would be reflective of the discussion. Does anybody have an objection to doing that? If not, we'll do that.

TECHNICAL COMMITTEE REPORT ON FACTORS LIMITING RECREATIONAL RELEASE MORTALITY ESTIMATES

CHAIR BORDEN: I was going to take a five-minute break here, but we're so far behind schedule, I think I'm going to keep going. The next item on the agenda is a report from the Technical Committee, in regards to the factors limiting recreational release mortality. We've got Kevin Sullivan who is going to give the report. Kevin.

MR. KEVIN SULLIVAN: Like I said, thank you very much, Mr. Chairman. I'm Kevin Sullivan. I actually serve as the Chair of the Striped Bass Technical Committee, and today I would like to present the TCs review of Factors Limiting Recreational and

Release Mortality Calculations for Assessments in the Striped Bass Fishery. As background, with the initiation of the development of Amendment 7 this past August, the Board identified a need to review factors limiting the accuracy of release mortality estimates for stock assessment purposes, and to identify potential actions that could improve understanding, or help reduce release mortality in the fishery. That was tasked to the TC, and the TC met on September 17 to address it.

Today we're going to cover the review of the release mortality estimates used in the assessment previously, how release mortality rates can be linked to MRIP estimates of live releases by year and state, and the recommendations the TC had for actions that could improve our understanding of release mortality rates, or reduce the number of releases in the fishery.

We'll start with the review of the existing information on striped bass release mortality rates. During the assessment process a literature review of the available information on release mortality of striped bass was conducted by the TC staff. The TC to this point has compiled a list of many studies across varying conditions of temperature, salinity, fish size, gear type, et cetera.

But the primary studies that the TC and the SAS have used are those listed here, Diodati & Richards, Caruso, Millard et al, RMC, and Lukacovic & Uphoff. Across all the studies there is a similar range in the estimates produced for studies that were conducted in brackish to salt water, as opposed to fresh water, which had different ranges.

Under the best conditions the mortality was as low as 2 to 3 percent, which was lower than the 9 percent value that had been used in the assessment, and in worse conditions they were as high as 27 percent, which is clearly much higher than the 9 percent that had been used.

In these studies, many factors are examined, including temperature, salinity, hook type, angler experience, hooking location, and injury.

In the TCs decision to use the Diodati & Richards '96 value, it considered the fact that it was conducted in salt water, which was appropriate because most releases in the fishery occur in the ocean, as opposed to in the Chesapeake Bay or the Hudson River. The TC considered the fact that the study incorporated a range of angler experience levels, which is probably representative of the MRIP sample of the general angling population, and the fact that the mortality estimate of Diodati & Richards was in a similar range to the other studies in salt water and brackish water.

During the exercise Dr. Drew had previously looked at a regression approach, which she presented to the TC. The approach had potential to apply a finer scale estimate to the fishery than those previously used for single line stock. But the difficulty was in the ability to apply the various factors, such as temperature, salinity, hook type, angler experience to the subsets of MRIP estimates that could be created using the information that is currently collected by the MRIP.

The TC came to the conclusion that only temperature and salinity can be linked back to MRIP estimates. In this tree diagram, looking at the temperatures and salinities it showed that the highest mortality occurred at the lowest salinities, with an apparent breakpoint threshold of a 7.9 salinity, with the highest mortality occurring below salinities of 7.9.

Similarly, for water temperature, the breakpoint appeared to be at about 25.65 degrees in high salinity water. Release mortality was the lowest in high salinity waters with cooler temperatures below that 25.65-degree threshold. When applying that tree of finer scale release mortalities, the average temperatures for state waters by wave and average, mid-Bay salinities by wave to get the finest scale estimates of release mortality it was found that it didn't make a difference. The takeaway from the

TC for this examination was that there is a disconnect between the finer scale of factors collected in the release mortality studies, compared to the scale of data collected by the MRIP.

The various studies included many different factors but the datasets that apply them to like MRIP don't collect those factors, such as MRIP using two-month waves, using very large nonspecific areas fished, and no incorporation of angler experience, fish injury, circle hook vs J-hook use, or days when hot air temperatures were present.

This was done, a review by data sources looking at a glimpse in the range of temperatures and salinities in relation to the breakpoint that we just talked about. It was found that the temperature, which is the figure on the left, only crossed the critical value once. I think that was the Chesapeake Bay, and the salinity never fell below the critical value, 7.9.

In conclusion, for this part of the TC task, the TC did not pursue the regression analysis approach that Dr. Drew presented, due to the uncertainties in scaling the studies to the MRIP estimates of live releases, and it was the opinion of the TC that the 9 percent coastwide estimate that was used is consistent with the results of this exercise.

All right, the second part of our task was to look at how live releases contribute to the striped bass fishery as a whole, along the coast. This figure shows the percent of striped bass released alive by year. Both the calibrated and the uncalibrated MRIP estimates, and the similarity between the two would indicate that the levels are not a function of the new, revised MRIP numbers.

Just to point out in the figure, there is a noticeable decline around 2006 onward, which probably shows several weak year classes worked their way through the population, with

less small fish available to the fishery. Then you can see percent release rebound as the strong 2011, '14 and '15-year classes entered the population right after that.

This figure like the last one showed the percent release, but it breaks it out by region. Chesapeake Bay, Mid-Atlantic and north Atlantic, and a lot of the regions do show differences in the percent of striped bass released alive, with the north Atlantic consistently releasing a higher percentage of striped bass than those released in the Mid-Atlantic or Chesapeake Bay.

Since 1990 the percentage released is consistently high overall in all regions. You can also see that the release rates dropped off in the Bay a few years sooner than on the coast. Like if you look at 2005 to 2007, and then rebounded sooner in the Bay if you look at 2010 and 2012. Those are also likely the effects of a weak and strong year classes being seen earlier in the Bay.

This figure is looking at the number in millions of striped bass released alive between 2015 and '19, and you can see from this that the highest F with number of released fish occurs in Maryland, Massachusetts, New York, and Connecticut. Similarly, to the last figure, but now this is in percentages instead of absolute number of fish released. You can see that Maryland, New Jersey, and New York released the lowest percentage of striped bass caught, meaning they retain a higher proportion of their catch.

But again, the percentage released is still high across all states. After that exercise of reviewing those aspects of the fishery, the TC discussed what actions they thought the Board could possibly take to get a better understanding of discard mortality or reduce the total mortality in the fishery, due to the high number of releases.

The TC identified three possible actions, all with varying levels of time and resource required. The three actions that are presented on the following slides are ranked according to time and resources

required from low to high, not in order of priority. The first action the TC identified was the potential to conduct a sensitivity run on the current stock assessment model, using varying release mortality estimates to examine the impacts of more refined release mortality estimates.

The TC thinks this would be a short-term time requirement, and if the Board did want to pursue this it would be accomplished and presented within one or two Board meetings from now, or it could be completed as part of the next benchmark assessment. This task would require only a moderate amount of resources, such as TC member time.

The second possible action the TC had was to refine the regression approach that Dr. Drew presented to the TC, incorporating finer scale release mortality estimates. The TC felt this was also a moderate term action, possibly done as part of the next benchmark assessment, which although not formally scheduled would be either 2024 or 2025, and this task would also require only a moderate resource by TC members during the next benchmark.

Finally, to get a better estimate of release mortality, factors that are able to be linked back to the scale of the MRIP estimates. The Board could take action to coordinate or fund a comprehensive striped bass release mortality study along the coast. The details of this study were not delved into during the meeting, but it is thought it would require considerable amount of planning and study design, making it a much longer-term action and highly resource intensive, including the time of TC members, research partners, and potentially funding the study.

Of the three actions that I just mentioned, the first two will improve understanding of how the issue affects the assessment, but it won't actually reduce the release mortality in practice. Third action of conducting a study could provide

better information, but the TC agreed it is unclear whether a comprehensive study would really reveal anything new that we didn't already have. A point of discussion amongst the TC is that there are two components to reduce total discards, dead discard, discard mortality.

The first is reduce the release mortality rate itself, so more of the fish released survive, but the second component, which was discussed less but is also present, is using management options to try to reduce the total number of striped bass release that are caught and released. For reducing the rates of a fishery, the TC identified possible angler education and outreach on best practices, as well as requiring best practices through regulations such as circle hook requirements that we just spoke about. Then for reducing the number of striped bass that are caught and released, the TC felt that would require regulations to reduce overall effort, such as seasonal closures. Then again, outreach and education explain to the angling public the potential risk of releasing so many fish alive.

After these actions what are the next steps, the TC asked. Should the TC work on Action 1, which was conducting the sensitivity analysis of differing mortality rates in the third model, and should it be done before or during part of the next assessment? Question two, does the Board want to prioritize a larger comprehensive coastwide study, including identifying funding sources and beginning to develop a study design?

Then this is just some questions that the TC discussed during this exercise that are for the Board to consider. They raised the following questions. What are the management objectives in the fishery? Specifically, is a high release rate a bad thing for a predominantly recreational fishery? Two, do we really want to convert dead discards into harvest?

Does the Board want to reduce dead releases at the cost of reducing effort and trips, which is what would likely occur if seasonal closures were put into place? How does the Board want to allocate and

manage those total removals between harvest and release mortalities as a move into the process of initiating Amendment 7? Thank you that's it, so I'll take any questions you might have.

CHAIR BORDEN: All right, questions for Kevin. While I've got my microphone open, thank you very much to you and the members of the TC for following up on this. For questions I've got Tom Fote he has his hand up.

MR. FOTE: Yes, thank you for the report, it really was interesting to me, because I know a lot of these studies depended on water temperature, and as you pointed out it affected the hook and release mortality. It's interesting, because instead of having lunch today, I went back on my MAFAC meeting.

There was a presentation by Dr. Warner, we started talking the same way we did yesterday with Chris Oliver, when he was on the line about hot water and how it's affecting the fish, and how it's affecting migration, how it's affecting nearshore and offshore. Now when I just thought of that, we get all these studies based on what we assumed back 20 years ago was water temperature.

Now with the water temperature changing, now the Bay is a lot hotter, longer periods of time. The Bays and even the Gulf of Maine. I looked at these heat events and I couldn't believe it, how much the Gulf of Maine and New Jersey were affected, and the New York Bight was affected. Is that going to have an effect on the hook and release mortality, since we estimated that we did a lot of this recreational fishing when the water was cool.

I always said, we could fish in November and December, and basically hook and release, and we wouldn't have high mortality. But as we find November is when the water temperature is still 60 degrees off New Jersey and New York, and we're basically increasing that hook and

release mortality or 50 degrees. That's something that I don't know if the TC had looked at all. I also asked Dr. Warner if he can make a presentation to the Commission, because I just found the whole study fascinating.

MR. SULLIVAN: This is Kevin. I'm not sure if that was a question, but you definitely made some good points. The TC discussed that from the spreadsheet and studies that we have, the range of mortality rates, including the factors, stretch the whole gamut. We do realize that a higher water temperature the mortality rate is considerably higher. But like we said, the problem for us was trying to link it back to MRIP data that was on a fine enough scale to put temperatures to the catch. But a comprehensive study might be able to find ways to include that.

MR. FOTE: Yes, because looking at the charts that they basically presented today that we know what the water temperature is, and we know what people are fishing, and we could basically look at the water temperature and collate those factors. That was my question is whether you looked at it or not. Yes, you did look at it, thank you.

CHAIR BORDEN: Thanks Tom, I've got Jason McNamee and then John McMurray.

DR. McNAMEE: Thanks Kevin, thanks for walking us through that. It was pretty cool stuff. I have maybe a quick, I missed one detail on the regression tree. What was the data used? Was it raw data from all of the individual studies, or was it from one particular study? I missed what you used in the regression tree.

MR. SULLIVAN: I think Dr. Drew is on. She is probably better suited to answer that.

DR. KATIE DREW: Sure. Thanks, Jason, good question. What we did is we had a number of the different studies, and each of the studies reported a release rate for a specific condition. They would be like, this was the condition where the average

salinity was this, and the release rate and the mortality rate were this.

We didn't use the raw data, but we used those point estimates for the different conditions from the different studies that we looked at to come up with this approach. I think obviously it would be better if we had the raw data to really dig into this, but it was really more of a meta-analysis, with the separate individual conditions and the release rates associated with those conditions.

DR. McNAMEE: Thanks for that, Katie. Yes, that makes sense. I have another comment that I'll park it and let others have a chance, and I'll raise my hand again in a couple minutes.

CHAIR BORDEN: Jason, if you want to keep going, I've only got one name on the list, so just ask your question at this point and then I'll move on to the next person.

DR. McNAMEE: My follow up then is kind of getting at the next steps. I almost wonder if they are related. You know I think the ideal would be to do kind of a coastwide study where we're collecting all of these rows of information, and so we have a really robust and succinct dataset with all of the information that we need, so we can kind of reanalyze that. But that's expensive, and so I almost wonder if your first proposal that you made with doing some sensitivity analyses to see what it would actually. You know you could get a sense of the tradeoff. If you did the sensitivity analyses first, and maybe you find that it doesn't matter, or maybe you find that it matters a lot. From that you could then have a little bit more information to move forward with. Yes, this is a significant enough impact to warrant a big expensive coastwide study. It sounded like a comment, but I'll turn it into a question, and that is, did you guys talk about sequencing these, or the interaction of these three next steps done that you proposed at all? Is there some logical sequence to them?

MR. SULLIVAN: Sure Jason, thank you. We didn't really talk about the sequence. We basically ordered them in terms of what was achievable first. Obviously, the easiest one was the exercise of the stock. Should we look at the sensitivity analysis, and there was going to be an attempt to try to get it done, but we didn't have enough time.

That would be the easiest, and I think you made a great point in showing us that that might kind of help us figure out if there is a need to move on for further action. But the second one was, I think we just said that generally a part of the assessment process anyway, so we would just incorporate that as one of their components.

But then I think like you said, the last one, the comprehensive plan, everybody we had some discussion, but realized that it would be a very complicated program, which would require a lot of design to make sure it incorporated the factors that we do see in the fishery, and then also try to incorporate ways that we want to get information that we can use, because there are a lot of studies out there that have factors.

But we have not way to relate to the catch data that we have. I think the progression would be the first one that is on there now, the sensitivity runs, and we could do that fairly easily, and then from that we would feel out how much more work we should put our time and energy into. Does that answer it?

DR. McNAMEE: Yes, that was perfect, Kevin, thank you.

CHAIR BORDEN: I've got John McMurray.

MR. McMURRAY: I'm not clear of what the goal of all of this is. What do we want to achieve with all this work we would be tasking the TC to do? I mean there is always going to be discards in this fishery, because it is primarily a sport fishery. That is not likely to change. While we may get a different percentage of dead discards, I'm pretty certain it's going to be right around that 10 percent number, you know give or take a few points. I think it's going

to be very difficult if not impossible to reduce it. My question is, what is the goal? What do we want to get out of this?

MR. APPELMAN: Mr. Chair, this is Max. If I could offer a response. I think John, coming out of the 2018 benchmark assessment, there was a lot of attention drawn in this sector of the fishery the catch and release component that the contribution of mortality to total mortality was a shocker to a lot of people. I think there was just a general misunderstanding around the Board table, and among some of the public of you know, why is it so high, how is release mortality estimated in the assessment? Where does the 9 percent come from? I think a lot of this task, and I don't mean to put words in the Board's mouth, was just to take another opportunity to explain where that number comes from, how it is calculated, what are the limitations for doing it differently, and things of that nature.

I think this was just an information exchange. I would point out that discard mortality, release mortality was highlighted as a major issue for the next amendment, so there will be plenty of opportunity in the amendment process to discuss about possible actions to address release mortality.

MR. McMURRAY: Thanks, that's a good clarification. I just think that there is a simple expectation that we're somehow going to address this work, and that doesn't seem to be the case, from my perspective anyway. But thank you for your answer, nonetheless.

CHAIR BORDEN: I have no further hands up, so Kevin, if you proceed with a sensitivity analysis, what would be a reasonable time for the Board to expect a report on that?

MR. SULLIVAN: I think the consensus of the TC, and there were some members that were interested in it. We could possibly get it done within one meeting, which I'm not sure, is that

February, and if not by two meetings we could definitely have it for the Board, you know in time for the second meeting.

CHAIR BORDEN: Thank you very much for that. It sounds like there is some merit in doing this. It doesn't sound like it's a huge hurdle for the TC to do this. Does anyone object to doing this, taking that first step? I would point out that while I'm talking about this point. This is one of the issues that is kind of imbedded in the PID.

What we're going to have is a great deal more information directly from a constituent that are most affected by it at some point in the future. I think the key would be to bring these two sources of information together, and then decide on if we need to do something differently, and what we need to do. Are there any objections to asking the TC to proceed with the first step, which is a sensitivity analysis? There are no hands up, so without objection, Kevin you've got a new task.

MR. SULLIVAN: Sounds good. We're excited. Thank you.

CHAIR BORDEN: Once again, thank you for your work on this, and thank you for all the work of the TC members. The next item on the agenda is the PID, and I just point out as background. This issue came up a number of meetings ago. The Commission basically decided to put together a workgroup. The workgroup identified a number of issues that they thought needed additional work.

Then at the last meeting we basically agreed that we shouldn't prioritize these, that we should take all of the issues out to the public, and the Plan Development Team then took that off the desk into a PID document. Now, the one point I would like to emphasize on this is the Public Information Document. It does not commit the Commission to any particular course of action. These types of documents are almost by their origin necessarily somewhat vague, at least. You don't get into all of the new shift, because what we're doing is really looking for public input on the issue. I would just

factor that into your comments and suggestions. The only suggestions that I've heard, and I don't know whether I'm up to date on any suggested changes.

But the state of Delaware has raised some concerns about the language in one of the sections, and when we get to that I am going to recognize John or anyone else from the Delaware delegation to comment on that, so that they can bring people up to speed on their concerns. I'm also aware that they have suggested and put forth some alternative language to modify that section in some manner.

With that is just a little bit of information. I would like Max to introduce the document. I would just state for members of the public again, that this does not commit the Commission to any particular course of action. You would need to come back at the next meeting, or a subsequent meeting, and basically put together a prioritized list of issues that we want to fold into an amendment.

Keeping in mind that the last amendment was in 2003, and there have been significant changes both in the fishery and the science since that. Just factor that into your thinking Max, if you would. Would you go through each of the issues, and I ask you to introduce, take it section by section? That way we won't cobble together points on different sections. We'll take the first item in the PID, and then I'll take questions and I'll move on the numbers. Max.

MR. APPELMAN: Yes, I think I follow. I'll go one issue at a time, and pause in between each issue and bring it back to the Board. Is that correct?

CHAIR BORDEN: Yes.

CONSIDER DRAFT AMENDMENT 7 PUBLIC INFORMATION DOCUMENT FOR PUBLIC COMMENT

MR. APPELMAN: I do want to first thank the Plan Development Team for their work over the last six weeks or so. This was a pretty big task; time was definitely not on our side. Luckily, we had nine development team members, and it was great to have that many folks involved. Typically, we have about five or six.

Everyone was able to pitch in and write a piece of this, and get this document done in time. But it definitely made it a challenge near the end to give the document a cohesive narrative, a single voice. But that said, I'm very impressed with how much ground has been covered in such a short amount of time.

This is a reminder about the process, and Chairman already went over this a little bit, but the PID is really the first step here. It's a broad scoping document. It announces the Commission's intent to gather information on the striped bass resource and fishery. It provides opportunity for the public to weigh in on which issues are important, and identify any management alternatives.

Typically, PIDs do not provide any specific alternatives, instead it asks questions to garner that sort of feedback. The next step would be the draft amendment, which is much more focused and narrower in scope. It does include specific options designed to address the issues that are moved forward. Again, there is another opportunity for the public to weigh in and provide comment on preferred options. As far as the timeline, the timeline up on the screen shows final action would occur at this time next year. I recognize that to some Board members this might seem like an aggressive timeline.

There actually is a bit of a buffer worked in here for the draft amendment phase, an extra Board meeting to provide additional feedback to the Development Team. But you know this is sort of

viewed as the shortest timeline to completion. Again, we're talking about approving the draft Amendment 7 PID for public comment today.

As the Chair pointed out, the Board has already identified nine separate issues that are the highlight of this PID. These issues are very complex. There is a lot of moving parts. It's very challenging at times to state the concerns or challenges in a simple way. They are also very much overlapping in nature.

It was not easy to find the right balance of information for this document, considering the intent of the document, a scoping document. The Development Team thought it would be most constructive to try to isolate these issues as best as possible, which I'm sure you've seen wasn't always possible to do.

I'm just really focusing on the underlying challenges and concerns. We'll take these one by one. I'm not going to provide much of the background information, I'm going to assume the Board is aware of previous background material for each of these issues, just focusing on the statement of a problem. The types of questions that are being asked of the public, the focus, feedback.

I will note that the AP did meet in September to provide feedback on the development of this document, and I'll point out as we go through, you know particular areas where the AP was focused, and how those comments were either addressed into this document, or were reiterated. Again, after we get through each of these, I'm really looking for feedback on any of the core issues that might have been left out or overlooked, or anyway that these topics have been mischaracterized.

But I don't think that needs small editorial changes to be discussed today. If there is any small wordsmithing, grammar and things like that, just shoot me an e-mail or tell me, and we can work that into the document. Okay, first

issue is goals and objectives. I think the general concerns and challenges here are fairly straightforward, as the Chairman said.

The last comprehensive amendment for striped bass was in 2003. The goals and objectives for this fishery are detailed in that amendment, Amendment 6 that are described in the PID. The general concern here is that these goals and objectives may be outdated, no longer reflecting the current needs and priorities of the fishery.

This is really an appropriate time to revisit those goals and objectives, and ensure their consistent with current fishery needs. As far as public comment questions, we're looking as are the existing goal and objectives of Amendment 6 still in line with the current needs and priorities. Which specific priorities are missing from the goal and objectives? Which of the existing objectives should be removed or refined, and do the existing objectives balance the need for management stability, flexibility, and regulatory consistency? Recall that those were the three themes that the Board identified through the workgroup to help guide future management for striped bass. I'll pause that Mr. Chair, and hand it to you.

CHAIR BORDEN: On Question 4, Max, any questions, any hands up? It not, we'll just assume that we won't make any changes to this, so I have no hands up. Max, you can move on to Issue 2.

MR. APPELMAN: I see one hand by Ritchie, but he just put it back down. I guess I'll continue on to the next issue. Issue 2 is biological reference points. This was definitely a bigger topic for the development team, a tough one to approach. It is very closely tied to some of the other issues in the management document during the PID, regional management in particular, also the management triggers, which are tied to the reference points.

The direction that all the team took with the RPs is really focused on metrics that Amendment 6 uses, as well as previous management documents have used to determine stock status. How overfishing

and overfished status is defined. There is not much reference about the use of other fishing mortality rates to craft individual programs. That is reserved for the regional management section.

We're really focused on metrics used to determine stock status. As a reminder, the current reference points are based on female spawning stock biomass in 1995. That serves as the threshold. The target biomass level is 125 percent of the threshold, and then the fishing mortality rate target and threshold are designed to achieve those SSB targets and thresholds over the long term.

These reference points have been rooted in this 1995 estimate since 2003. At that time the stock was thought to be well above the target level of the latest assessment information available at the time of the development of Amendment 6 showed that the stock was above the target. The primary concern we've been hearing is that the perception of stock performance has changed considerably over time, with each iteration of the stock assessment model.

Those changes are more pronounced with each benchmark assessment when there is new data involved, in some cases better data is incorporated. Advancements in modeling are incorporated into the management framework. We're trying to show that story a little bit in this figure. This is the last four benchmark stock assessments, going back to 2002, which was the assessment that informed the development of Amendment 6.

The values of that 1995 value has changed over time, the magnitude of that value. The perception of where the stock was in 1995 relative to our current understanding of the reference points has all changed, and so raises the question of, if this really is still an appropriate benchmark for the species.

The PID then goes into the types of alternatives that are available to the Board now versus down below. You've heard a lot about this two-stock model that was developed as part of the last benchmark assessment. One of the goals of that model is to develop stock-specific reference points for the Chesapeake Bay, and for the ocean region, which includes the other stock components. Well, that model is not available for management use right now. It did not pass peer review. That is still under development, and the SAS and the TC, we'll all continue to work on that model, but it's not ready for management use at the moment.

Unfortunately, model-based reference points aren't really available to the Board right now either. The current assessment model produces unreliable estimates for SPR, although there was some evidence with the two-stock model that that could work there, but again the two-stock model is not available. The Board is somewhat limited to other empirical-based reference points for the near term.

You know is there a better reference here other than 1995? Is there a better buffer for the target, something other than 25 percent, or is there some entirely different empirical approach that the Board should consider, which brings me into the public comment questions? Is the 1995 estimate still appropriate?

Is there a better empirical reference year or approach that should be considered? Is there a different buffer that should be considered for the target? Should the Board continue to prioritize development of model-based reference points or stock-specific reference points, and lastly what stock characteristics should the BRPs attempt to achieve? That is all I have for reference points, Mr. Chair.

CHAIR BORDEN: All right, thank you, Max. Questions, Mike Luisi.

MR. LUISI: Not necessarily a question, but just maybe a suggestion. Max, in the document there is a reference to a possible adjustment to reference

points. I think the example you used was based on, you know 1993 being set as the threshold, rather than 1995. I wonder if there may be another example that you could consider adding, which would be instead of starting at the threshold and working up to the target.

Perhaps you start at a level for which the public wants to see the target set, and come up with a different strategy on where that threshold might fall, based on some other formula or some other calculation based on where the target would begin. You know as an example, if you set the target and then, you know one half of the target would be considered the threshold, as in other fisheries. Maybe that is just something to think about. It could be another example to put into the document to give people a little bit more to stew on. That's all, thank you.

CHAIR BORDEN: I've got John Clark.

MR. CLARK: Thank you, Max. I'm glad you have that graph up there showing how the perception of SSB is determined by the reference points has changed over time. During the early 2000s the general consensus was the striped bass population was at a historic high, and yet as that SSB graph shows. Going by the reference points it went from being well above the target to above the target to under the latest assessment, during that period where the stock was just huge, it didn't even reach the target. If there was just a sentence in there just to kind of put that into perspective how that changes, I think it might be helpful to the public, to help them understand how these reference points affect our perception of the stock, and how they change with different assessments.

CHAIR BORDEN: Does anyone object to doing that? What I would suggest for simplicity's sake is that we put together a list of these types of perfections, and then kind of circulate them to make sure they are reflective of the comments the Board members have made. Any objections

to that? I see Adam Nowalsky. Adam, do you want to object?

MR. ADAM NOWALSKY: No, that was not an objection. That was going to bring up another comment.

CHAIR BORDEN: Okay, so I have no objection to that, so the staff will add that to the list, and kind of circulate that following this discussion. Adam, you're up.

MR. NOWALSKY: Yes, thanks. I was wondering what staff's thoughts were about being able to take this Figure 2 that talks about the F, and being able to elaborate in a little bit more detail in the document about the contributions of discards more recently. I know we've got discussion in here about discards in other places.

But specifically, with regards to the F here, clearly, we think we know that a large contribution of the recent F is coming from discards. I'm just thinking it might be appropriate to either try to break that down as part of that fear, or at least allude to it, even though I know we've got more of a discussion about release mortality later in the document.

MR. APPELMAN: Yes, I was trying to highlight that in the beginning. The PDT really tried to isolate these issues as best as possible. I think the general magnitude of release mortality is discussed at length under that section. You know I think we made an effort to isolate that and just focus on what the reference points are, how they're used, and how they've been used in some other examples of reference points for this section.

CHAIR BORDEN: Adam, would it be all right to include that when we get to the release mortality section? Does that satisfy your suggestion?

MR. NOWALSKY: I don't recall that Section 7, and I'm just trying to refresh myself here, had a percentage of F from discards relative to harvest. I think that if staff feels there is enough discussion about it in Issue 7, I would suggest that perhaps we

just reference that discussion that is in greater detail.

In Section 2 we talk about Issue 7 has more information about the contribution of discards to F. Then when we get down to Issue 7, if we don't think the contribution of discards as a percentage of F are discussed enough, then I would suggest we add more detail about it to Issue 7.

MR. APPELMAN: If I could just jump in again. Yes, I see what you're saying now, Adam. I'll just offer, and Katie can correct me if I'm wrong. I don't think we can break out fishing mortality by the release mortality component. I think we can provide those in numbers of fish, which we do in a lot of documents. I think there is a table at the end of the PID that shows that. But as far as a proportion of fishing mortality, I don't think our model produces that.

DR. DREW: Yes, this is Katie. Max is correct. We don't have fishing mortality from the release of the discards versus fishing mortality from harvest. We just have it by the Bay versus the ocean region. But the numbers of fish from each source could be considered a proxy for that kind of information, and that is included as a figure in that section. But I think we would be hesitant to say this is X percent of the total fishing mortality. We could definitely say it is X percent of the total removals though.

CHAIR BORDEN: Adam, is that acceptable?

MR. NOWALSKY: I think that the most recent comments highlight that staff understands what I'm asking for and if they think there is something, they can add to the document to help get that information for the public, great. If they feel they've done the best job they can, then I'll say thank you at that point.

CHAIR BORDEN: Max, do you want to move on to Issue 3, please?

MR. APPELMAN: Sure. Issue 3 and Issue 4 have actually been combined together here. That is the management triggers and the stock rebuilding target and timeline. The decision to do that is you know they are so closely intertwined and linked together, that the stock rebuilding target and timeline are essentially the artifact of the triggers themselves.

You know this was also a tricky topic to approach. A lot of the concerns with how the management triggers are set up, are also an artifact of how our perception of stock performance has changed over time. First, I'll just say that the triggers are outlined in the PID. They are tied to the reference points and there is a recruitment-based trigger as well.

One of the concerns that we've heard is that the triggers require action on different timelines. That comment usually is referred to the reference point-based triggers. For example, the fishing mortality triggers require quick, corrective action. There is a one-year timeline there, because F can be reduced quickly by reducing total removals in the fishery.

However, the spawning stock biomass triggers allow changes to occur over a longer period of time, up to ten years reflecting the biology of the species, long-lived, late to mature, so effects of rebuilding plans aren't often realized until that protected year class or classes grow into the spawning stock.

Just to add to this conversation, the recruitment-based triggers are tripped when an individual JAI or juvenile abundance index shows three consecutive years of recruitment failure. There is a three-year review cycle associated with the recruitment triggers. The concern here is that these are all speaking on different timelines.

There is some conflict there about management stability, when action can be required so quickly. The other shortfalls of how the triggers are designed are really tied to the changes in perception of stock performance over time. Again, these triggers were developed in 2003, at a time when spawning stock biomass was thought to be at

record high levels, you know well above the target. During that same time period, the early 2000s, the reference points for fishing mortality were also calculated differently.

The resulting time series from those failure assessments in the 2000s, showed that fishing mortality was well below the target consistently. We're trying to show that same story in these fishing mortality plots on the right side of the screen. Fast track to the 2013 benchmark assessment. We have new fishing mortality reference points now; they are linked to the spawning stock biomass reference points.

They're speaking on the same page that we now see that they have not been, the F time series have not been below the target like we previously thought. Instead, it's been bounding around the target, and then even most recently it has been above the target for most of the time series. Since 2013, or I should say from the initial years of Amendment 6 until 2013, the Amendment was sort of coasting along, and these triggers were never tripped.

Now, with our new understanding of stock performance, our new understanding of where the fishing mortality rate has been relative to the reference points, we're in this period where there is a constant need for action. To that end, the Board is sometimes criticized for reacting off of this variable single-point estimate of fishing mortality. Knowing that that is a variable estimate, it's still responding off of the single-point estimate there. Also, not allowing enough time for the stock to respond to the most recent actions.

Then this other bullet up on the screen. This was raised by a few Advisory Panel members, really keen on the period of variable, but below average recruitment that the stock experienced in the early 2000s, and that perhaps if this recruitment-based trigger were designed differently, the Board could have responded to

that low period of recruitment and acted on it, and perhaps the stock would be in a different place.

The comment here is that perhaps the recruitment-based trigger is not designed appropriately as well. As far as questions to the public. We're asking which management triggers should be revisited, what is an appropriate timeframe to respond to overfishing or overfished determinations?

Should the F-based triggers account for that annual variability in fishing mortality, and what is more important, rebuilding the stock quickly or mitigating impacts to fisheries? In other words, do you prefer significant changes to rebuild the stock quickly in a short amount of time, or smaller incremental changes over a gradual, longer period of time to rebuild the stock? That's it for management triggers and stock rebuilding.

CHAIR BORDEN: Questions. Jason McNamee.

DR. McNAMEE: Yes, Mr. Chair. I wonder if an additional question might be appropriate, and that is are triggers needed if the assessment is being done every two years? You know if there were big gaps between runs of the assessment, I understand the desire to have these triggers. I do agree with the Review Team and the comments that you made, Max. They are hard to pick. You know you want to strike a balance between having something that is constantly triggered, and something that never gets triggered. It's hard. We did this with menhaden for years. I don't know.

I wonder if adding a question that asks about the need for triggers, given that I think the assessment is getting done like every two years at this point, or something like that. I guess, you could check me on that comment, how often the assessment is getting done, and then the rest of it kind of falls from that.

CHAIR BORDEN: Max or Katie, do you want to comment on the assessment schedule?

MR. APPELMAN: Over the recent history the assessment has been updated at least every two

years, and sometimes every year. But about every two years, and there is a benchmark every five or so. No more than a two, three-year gap in between assessments. I think that is a fair question to add, definitely. I should have mentioned that these triggers are not just associated with the reference point threshold, but also the target and threshold, so for those that aren't familiar with the triggers, they are tied to target and threshold. I think that is a fair question.

CHAIR BORDEN: All right, Jason made that suggestion. Does anybody object to adding a question like that? I don't see any hands up. Other points on this section before I move on? There are no hands up. Let's move on to Section 5.

MR. APPELMAN: Sure. Okay, Issue 5 is regional management. As I said, you know this was a very challenging topic to address. There are a lot of different ways to think about regional management. The concepts there overlap with other issues in the document, like reference points, conservation equivalency, and a recreational accountability, which we'll get into later in the document.

All of those topics, issues, have questions about being done coastwide or at the regional level. The PID really discusses regional management in a historic context of how regional management has been done under Amendment 6, and in previous management documents. It focuses on that underlying challenge that the stock is managed on a coastwide basis, but fisheries operate very differently throughout the species range, due to the size and availability of fish, and the wide range of fishing cultures and priorities.

Under Amendment 6, which was an extension of previous management documents, the amendment allowed certain regions to manage their fisheries independently under a different F rate than the rest of the coast. Chesapeake Bay

and the Albemarle, Roanoke System in North Carolina. Under Amendment 6 we're operating under a different F rate, and allowed those areas to implement different size limits, seasons, harvest limits, et cetera.

There was data in modeling techniques to support development of these different management programs under separate F rates. Enter Addendum 4 in 2014, now all these areas including the rest of the coast, are managed under the same F rate, the coastwide fishing mortality reference points. We're now back to this coastwide management framework, and there is again the PID talks about the two-stock model that is under development, brings that back into discussion here. One of the intended goals of that model is to develop separate F rates for the Chesapeake Bay stock, and the ocean region, which includes all those other stock components. But again, that model is not available for management use.

That said, there are assessment tools available for the Board to use now, to pursue separate management programs for Chesapeake Bay and the ocean region. The current stock assessment model does model removals into two separate fleets, the Chesapeake Bay and the ocean region, and although the F reference points would still be set for the entire coastwide complex, the Board could allocate this total F to those two regions.

In a way the Board is already doing this, however implicitly. The current management programs, for example. If you think about the measures that are in place in Chesapeake Bay, we'll call that the Bay program. That produces a certain level of fishing mortality, or a proportion of the total mortality

The Board could determine what that proportion of total mortality should be, and then you would work backwards to craft a management program that achieves that allocation of F. Of course, that raises other questions about what is the appropriate allocation of F between the two regions, or how would accountability for that sort of management framework look, which brings us into some of the

public comment questions? Should separate regional management programs be pursued for the Chesapeake Bay and the ocean region?

Again, those are the tools that are available now. If so, how should the Board determine the appropriate allocation of fishing mortality between these regions, and three, should development of similar assessment tools be prioritized to support regional management for other areas of the coast? Essentially exploring adding new fleets, other fleets to the current model. There is also an implication here to ask if they will continue working on the two-stock model. That is it for regional management, Mr. Chair.

CHAIR BORDEN: Questions. Does anyone have a question for Max? I've got John Clark, John.

MR. CLARK: Just because it's an issue that will come up under several of these things. When you talk about regional management, if it could just be made a little more clear that we don't see Delaware Bay as part of a Delaware Bay/Hudson complex. I understand for the two-fleet model, but if it could just be made clearer that regional management could be expanded to include, going back to the terminology of Amendment 5, producer areas such as the Delaware.

CHAIR BORDEN: Max.

MR. APPELMAN: Yes, thanks, John. I know this is definitely a part of the other concerns Delaware has had with this document. I just wanted to I guess reiterate that the Development Team really tried to focus on the way different F rates were used to manage particular regions, and then highlighting similar tools that are available to the Board now, versus I'll call them research priorities to create those similar assessment tools to support the development of regional management programs for other areas like the Delaware Bay System, for example. I think this section does a

good job of isolating that out. When it comes to the term producer areas, the PDT was pretty deliberate about not using the term producer area, because it has been used inconsistently in previous management documents, and was largely absent from Amendment 6.

Instead, calling areas by their name instead of lumping them under a term producer area. The PDT decided not to use that term. However, if the Board is able to provide a clearer definition, if you will, of what is a producer area for this document, I think we could fold that in. I have no problems talking about producer areas in a historic context, but to continue to use that term, we decided not to for those reasons.

MR. CLARK: I understand that Max, and thank you for that explanation. It's more just a sense that with just putting it always the Delaware/Hudson Complex as part of the ocean, it doesn't really show that there would be any possibility to do anything different. You know it really doesn't need much change, I just thought there might be a little contradiction between some of these issues, and as you know the issue that I was going to bring up under Issue 9. That's all.

CHAIR BORDEN: John, my suggestion is, I know you want to bring this up under Item 9. If we visit it at that point and see whether or not you're satisfied with the resolution of it or not at that point. Is that okay?

MR. CLARK: Sure, that's fine.

CHAIR BORDEN: Let's see, I've got Tom Fote.

MR. FOTE: I had the same concerns with John Clark. If we're going to address it in Issue 9, I'll wait until then.

CHAIR BORDEN: All right thanks, Tom. I have no other hands up, so I'll move on to Number 6.

MR. APPELMAN: Next issue, conservation equivalency, another challenging topic, as you all

are aware. Again, very closely tied to regional management and other concepts. The concerns and challenges of regional management are very similar with conservation equivalency. There is also a significant amount of overlap with recreational release mortality and accountability, which we'll get into the next few issues.

Conservation equivalency, CE, has received a lot of attention lately, as we know, particularly following the Addendum IV process in the Chesapeake Bay, and then most recently with the Addendum VI process. As I mentioned, you know striped bass are managed on a coastwide basis. However, we know fisheries operate very differently throughout the range.

It makes it very hard to develop these one-size-fits-all measures for the entire fishery. That is where the value of conservation equivalency comes in for striped bass. It's been an integral part of this program for decades. It's used in a number of other Commission managed fisheries as well. The general intent and application of CE is detailed in the Commission's CE Guidance Document and Policy Document. As a reminder, as far as process. States are required to develop a proposal that details how the proposed measures are equivalent to the standards in the FMP that proposal is then submitted for technical review. There is subsequent Board approval before it is implemented, and then following a year of implementation, the Plan Review Team reviews the effectiveness of those proposals or of that program.

You know there is definitely a value in CE, but there are a number of concerns and challenges that arise with this type of flexibility, particularly during periods of low stock size. The AP was particularly keen on conservation equivalency and the concerns and challenges. One of the first conflicts here is that it creates inconsistencies between neighboring states and within shared water bodies.

A concern that we have heard repeatedly by law enforcement it makes it more challenging to enforce, and compliance is improved when measures are consistent across states, and within the same fishing areas. One of the other concerns or challenges is after a CE program has been implemented.

It is very difficult to evaluate the effectiveness of that program, particularly the recreational CE programs, because of the impacts that angler effort, angler behavior, the different cultures there, the availability of fish can have on catch rates, particularly as a release component. Again, those are sort of precursors to Issue 7 and 8, but that is an underlying concern with effectively implementing and then reviewing conservation equivalency proposals.

Another concern that has been raised is the data that is used for crafting CE proposals, again particularly recreational proposals. They rely heavily on state level data, MRIP data which are less precise, higher PSEs than regional or coastwide estimates. There is concerns about that imprecision and how it's being used to craft these measures.

We've also heard that although there is guidance for how and when CE programs should be pursued or can be pursued, but perhaps there should be a little bit more guidance in there around stock status considerations, or the number of proposals that can be submitted. As we saw with Addendum VI, there were upwards of 100 different CE proposals, which made it very cumbersome for the Technical Committee to review in an effective and efficient manner.

It also made it difficult for the Board to make decisions on those proposals. Then the last bullet on the screen here is, and if there isn't a consistent definition for equivalency, these decisions are often made on an ad hoc basis. As we saw with Addendum VI, the coastwide measures were designed to achieve an 18 percent reduction collectively along the coast.

We know that states were going to feel different impacts. However, the Board decided to allow conservation equivalency, as long as the state could show an 18 percent reduction at the state level, which may not be equal to the reduction it would have achieved under the coastwide measures. That leads into some of the questions here.

Should CE be part of the striped bass FMP? Should the Board restrict the use of CE, based on stock status information, based on data usage, or the differences in regulations across neighboring states? Should more quantitatively rigorous and defined data requirements for proposals be required? Should the Board provide a strict definition for equivalency, a consistent definition? Should there be limitations to how many CE proposals a state can submit? I'll pause there, Mr. Chair.

CHAIR BORDEN: Tom Fote, your hand is still up, and I've got John McMurray. Tom first and then John.

MR. FOTE: People forget that one of the reasons we started using CE was because it was disproportionately affecting different states in different ways with rules and regulations. We used summer flounder as a perfect example. When we implemented the summer flounder plan originally, the southern states were taking all kinds of restriction and all kinds of reduction.

States like New Jersey, New York, Massachusetts, Connecticut and Rhode Island were really doing nothing, because we were riding on the backs of the conservation of the southern states. I've always objected to it over the years. On striped bass when we looked at what the reduction was, some states were only taking a small reduction, and they were riding on the backs of other states that were taking a drastic reduction in the fisheries in their states.

Conservation equivalency was basically to allow a state to take the reduction that other states

were supposed to take and didn't take. I mean if we just put in and said every state has to reduce their catch by 18 percent of the catch to do this. That would be uniform regulations, but that is not what the Board does.

The Board puts a coastwide regulation in that basically effects each state differently, and some states take 25 or 40 or 50 percent reduction, while other states take a minute reduction. Now that is not fair and equitable either, and that's why conservation equivalency was put in, to basically ride over those points. I'll leave it at that.

CHAIR BORDEN: Tom, this is just a question to you. Are you satisfied with this list of questions?

MR. FOTE: I think we need to put a history of why conservation equivalency was put in there in the first place, to basically address these kinds of problems. When we look at one state and it's taking a 50 percent reduction, the state next to them, because of different regulations, because of the impacts on their fishery is only taking a 10 percent.

Now that's not fair, and that's not how we should regulate. We're all going to take 18 percent reduction, then that is fine, everybody takes an 18 percent reduction. Not one state taking a 25 percent, some states taking 3 percent. That needs to be addressed in here, and put out as one of the reasons why we use conservation equivalency.

CHAIR BORDEN: I've got John McMurray and then Ritchie White.

MR. APPELMAN: I wonder if I could just jump in really quick, Mr. Chair. I just wanted to respond briefly to Tom. There is a good amount of background information in the PID about conservation equivalency, which I did not spend much time on in these slides. But if there is anything you would like to add to that section, you know feel free to shoot me an e-mail, and we can work in some extra wording to address your concerns in the background.

MR. FOTE: I will do that, thank you.

CHAIR BORDEN: Okay next I've got John McMurray and then Ritchie White.

MR. McMURRAY: There is nothing in this section about the question of accountability for states who use conservation equivalency and have subsequently large overages. This is an issue that has been talked about a lot. It is clearly a concern of the public. There is a perception that conservation equivalency is used to game the system, and develop regulations that look good on paper but don't actually do much to achieve goals of the management action.

There was a motion to this affect back in August, although it was specific to Amendment 6. I would like to see a question about an accountability requirement added to the document before it goes to the public, because it is something the public is concerned about.

CHAIR BORDEN: Comment on that suggestion from anybody?

MR. APPELMAN: As I've started explaining every single section here, it is really hard for us to separate out these issues, and we tried the best we could. Of course, there is unavoidable overlap, and I think the point of accountability is one of those that we as a PDT sort of reserved for the recreational accountability section.

I understand the comment coming from Mr. McMurray that if a separate accountability question for conservation equivalency, and I think we tried to highlight the difficulties of evaluating conservation equivalency programs after they've been implemented. For recreational programs, because of that variable, because of how variable catch can be from year to year, and isolating the effects of the program on that catch.

It's very difficult. We didn't pose the question about accountability, but I think we highlighted clearly of why reviewing the effectiveness of these programs is such a challenge. I don't know if that is sufficient for you, John, or if you want to add a separate question in here.

MR. McMURRAY: It should be articulated, the difficulty of year-by-year data. But for scoping, I think that question needs to be in there. If you don't put it in there, people are going to comment on it in any case. I think it would benefit in particular by getting in front of it and putting it out there. That is my opinion, I would like to hear what some of the other Board members think.

CHAIR BORDEN: Let me just suggest this on the issue that John raises. I think Max offered to let John kind of frame a question. But then there is a separate issue of whether or not you include it in the recreational accountability section, or whether you would have it just on a section on accountability. Until we know what the actual question is, I don't think we can figure out where it goes. My suggestion for the Board is let John submit his question, and let the staff compile that as they are going to do all the perfections with this document, and then circulate it so everybody has this full transparency on the issue. Then if we don't get objections, then we'll figure out where it goes appropriately in the document. Does anybody object to doing that? I've got two hands up, but they have been up for quite a while.

I've got Ritchie White and Joe Cimino. I don't know do you guys want to comment on this issue? If not, I'll come back to you once we dispense with John McMurray's suggestion. Let me just open it. If Joe Cimino or Ritchie White want to comment on this suggestion, either one of you can go ahead.

MR. WHITE: Yes, I would support John's question, so I would support adding that in. Then I also have another issue that you can come back to me on.

CHAIR BORDEN: Okay thanks, Ritchie. Joe, do you want to comment on John McMurray's suggestion?

MR. CIMINO: I do, Mr. Chair, thank you. You know what bothered me about it at the time, and still bothers me now, at the time when a Board motion was made on this, is that you have a stock that seems to be in trouble. There is no consideration for evaluating the coastwide measure, it seems more punitive against states that did CE. You know why wouldn't we be looking at all the measures put in place for how they perform?

MS. KERNS: David, I don't know if you're talking, but you are muted.

CHAIR BORDEN: Oh, sorry about that. I have an index finger that has its own mind. I don't have a response for Joe. But does someone on the staff want to offer a response?

MR. APPELMAN: Yes, I would just offer that, you know I think crafting a question about how to hold states accountable for CE programs, or how a CE program should be evaluated perhaps is a good question. We're just focusing on the intent of this document. It's trying to solicit feedback from the public, or try to focus feedback from the public on the issues, and just keeping that in mind as we talk through these.

CHAIR BORDEN: Why don't you just go back to what I suggested before, and we basically allow John, John spurred this discussion. You had a couple of positive comments. Let John work with the others that have commented positively on it, frame up the question, whether it's a narrow question or a broad question, and send it to the staff. Then I would like the staff to circulate it to the Commission, so we all get to comment on it. Any objections to doing that? I want to go back to Ritchie White, who has another point to make on this issue.

MR. WHITE: I would like to add an additional question in, and I'm adding this because I believe we're going to hear a lot of public input to do away with conservation equivalency. I think there is a need for it, but I think it needs

to be reigned in substantially. The question I would add, and I had trouble with the wording, and I'll explain what I'm trying to accomplish, because I'm not sure. I had Megan Ware help me, because I just couldn't come up with the right terminology. But it would be, should the Board limit conservation equivalency to unique ecological areas. What I'm trying to accomplish is what conservation equivalency was years ago, which is more substantially in recent years, was an example of when striped bass started to recover, Maine had a lot of small fish, but they didn't have large fish. They did a conservation equivalency to do a slot limit of smaller fish.

They took a season to accommodate that. Another conservation equivalency I remember was Maryland, anglers not having access to large fish, so they asked for a short season on the spawning grounds of larger fish, and it was limited to an exact number of fish, so when they had tags and when those fish were caught the season was shut down.

I think those are what historically conservation equivalency has been, and it's only in recent times that states are looking to on the coastal regulations, is to find a way for their anglers to harvest more fish. In the past early on, we would have a coastal regulation, and it would be for all states.

All states would have the same coastal regulation, and that is how we managed striped bass. We didn't manage striped bass on an individual state, on what their mortality rate that that individual state was creating. I would like to have that question added if possible, because I think the public might accept that as opposed to eliminating all conservation equivalencies, which I believe we're going to hear in a strong voice.

CHAIR BORDEN: Ritchie, are you offering to work with the staff to kind of frame that question and then circulate it to the Board?

MR. WHITE: Yes, absolutely, because there may be better wordage that describes what I'm trying to accomplish.

CHAIR BORDEN: All right, does anybody object to that? Seeing no objections, I've got a couple of additional hands up on this point. I've got Adam Nowalsky and Chris Batsavage.

MR. NOWALSKY: I know there is going to be a lot of conversation from the public about this. In the vein of the last few speakers and the question that John is going to look to put together, Joe's comments, concerns about the question, staff doing the work. In going through this section, I get the sense from reading this section.

I think we know that we're asking about conservation equivalency, because there are concerns that conservation equivalency has a negative impact on the stock. But Joe brought up the point that in some instances the coastwide measure that was implemented in individual states, actually performed worse than the CE.

If John is going to develop a question, staff is going to take a look at it. One of the things I'll be looking for, so I'll ask in advance, for John to give consideration to it as well as staff, to think about how they would address it, and/or by adding a couple of sentences to this document that explicitly highlight that CE regulations do not necessarily mean that they perform worse, and in some cases states have performed worse relative to a reduction or a liberalization that was allowed, or reduction required, than CE regulations did in other states. That would be my request. I don't see that in this right now. If we added nothing else, I would ask for some addition to this that does identify that CE proposals don't always perform worse, and if that is implemented in conjunction with John's additional question, then I'm fine with that also.

CHAIR BORDEN: Adam, do you want to work with the staff on that language?

MR. NOWALSKY: I think I'll be happy to do so. Would your preference be that I wait to see

John's question first, and give him and staff a chance to add something, or do you prefer me to work independently, submit something, and allow staff to find a way to consolidate before sending it around to the Board for consideration?

CHAIR BORDEN: I think so we don't duplicate time, I suggest you let John and staff work on their portion on it, and then if you're not satisfied you can take a shot at it. Is that all right?

MR. NOWALSKY: That would be more than reasonable, and I appreciate that opportunity, thank you very much.

CHAIR BORDEN: I've got Chris Batsavage.

MR. BATSAVAGE: Yes, the last comments by the Board members are all good. When it comes to conservation equivalencies, it takes on a lot of different forms, you know with striped bass and other species. You know just kind of thinking about this as a whole, based on all the comments I've heard.

It almost seems, like with the first question, and I'm not objecting to the other questions that have come in, but it almost seems like in the first question, you put should CE be part of the striped bass FMP, and if so, how? Thinking about how it has been done for summer flounder, where it's all or nothing.

You go with coastwide regulations, or you go with conservational equivalency, to make sure that you're meeting, at least calculating the required reduction for the entire stock, or if you go with conservational equivalency, you know with the data limitations listed in some of these other questions. Should there be some sort of, I guess management uncertainty buffer added to those proposals, where, you know if you need a 20 percent reduction you go 25.

I think we've done that on an ad hoc basis with conservation equivalency proposals with summer flounder in the past. Yet again, not sure how that fits into all of this, but just think about all the years

that myself and others have dealt with summer flounder conservation equivalency and what we're dealing with now. I'm wondering if that might be another way of getting input from the public.

CHAIR BORDEN: I've got Justin Davis, then I have no other hands beyond that. Justin.

DR. DAVIS: I apologize for dragging out this discussion, but I did not want to make two quick points. One was that while I agree with Adam's suggestion of adding that component to the discussion, about conservation equivalent regulations not always necessarily leading to an undermining of conservation goals. I fully appreciate that and think that is true. I do think there are other concerns with conservation equivalency beyond just that sort of perception, you know conservation equivalency can lead to greater difference in regulations between neighboring states, which creates enforcement challenges, and you know challenges for our anglers.

I think also states having different regulations undermine sort of public understanding and trust in how we're managing the stock. I think, while I definitely support Adam's suggestion, I would not support framing the argument as the only concern with conservation equivalency is that the regulations developed under conservation equivalency don't perform as well as the coastwide regulations.

I also just wanted to push back really quickly on the idea that was advanced earlier that the goal of conservation equivalency is to find a way for every state to take an equivalent percent of proportional reduction under a coastwide management scheme. I don't think that is the intent of conservation equivalency in this FMP.

The intent of conservation equivalency is to allow states to tailor their regulations to achieve a similar or the same level of reduction in harvest, but that doesn't necessarily mean

that every state then ends up taking the same percent reduction that is not a characteristic of the coastwide management scheme. I just wanted to throw those ideas out there, thank you.

CHAIR BORDEN: There have been a lot of different suggestions here. Obviously, it's going to take a little bit of time for the Board members to submit language and so forth. Now it will be circulated to the Board. My suggestion is anybody that wants to comment on this section that hasn't spoken.

If you want to submit some additional comments on it, try to keep them brief, to the point, and submit to the staff, and the staff will try to factor that into the points that have been made, or at least consider those points, see whether or not we can wordsmith it to address some of these concerns. Did I have any other hands up on this issue? If not, I'm going to move on. The next issue is 7. Max.

MR. APPELMAN: Issue 7 is recreational release mortality, which we discussed in the previous agenda item, so I'll try to be brief here. Again, being a lot of attention coming out of the 2018 benchmark, showing that the catch and release fishery does contribute a significant amount of mortality to total mortality.

That is essentially an artifact of this fishery being a predominant recreational, and actually 90 percent of the catch is released alive, so we know not all those fish survive. The assessment uses a 9 percent release mortality rate. The challenge here is that the current management program uses bag limits and size limits, which are an effective way to control harvest, the number of fish that are coming home.

But they are not designed to control the number of fish that are caught and released, and susceptible to, you know release mortality. I will note that some states do use closed seasons, closed areas. Ritchie brought this up. You know those time area closures are designed to reduce effort, or protect striped bass when they are most vulnerable or susceptible to mortality from the fishing interaction. But those time area closures are not explicitly set by

the FMP. Those are done on a state by state basis. As we discussed, you know there are a number of ways the Board could try to address or reduce release mortality in the fishery.

Additional gear restrictions similar to the circle hooks, including awareness of the concern. Angler education, these types of efforts are targeting, you know reducing the rate at which fish die after being released, or to focus on effort controls, season closures, area closures to reduce the number of striped bass trips that are interacting with striped bass, so reducing the number of fish that are released.

Of course, there is a value in the catch and release fishery. We've been talking about it a lot. There is not much quantitative data out there, which the AP was very focused on trying to come up with some economics on the catch and release component. You know there is some data out there on the recreational component as a whole. But the value of the catch and release sector, if you will, there is not much quantitative information out there on the perceived value there.

But you know, with that aside, talking about mortality to the stock, it doesn't really matter what that source of fishing mortality is, whether it's harvest or release mortality. As long as overall mortality is sustainable. It really comes down to what is the acceptable level of release mortality for this stock, which is ultimately a management decision, and should reflect the objectives of the fishery. How important are high catch rates?

How important is this harvest in this fishery? Does the size of fish, for example, matter, things of that nature, which brings us into some of the public comment questions regarding release mortality? Should management focus on measures to reduce the rate at which fish die after being released alive? Should management focus on reducing effort in the fishery, trying to reduce the number of striped

bass that are caught and released? What are some ways to improve awareness and stewardship of the resource? That is Issue 7.

CHAIR BORDEN: All right, questions. I've got Ritchie White. Ritchie.

MR. WHITE: What management measures could we implement to reduce the rate fish die after being released? I don't know what management measures we could do. Secondly, the question about should management focus on reducing effort in the fishery, in order to reduce total numbers of striped bass caught and released. Added to that should be seasonal closures. That is the only way you're going to reduce, is to stop people from fishing. The people should know when they are answering that question what the only option is to achieve that.

CHAIR BORDEN: Ritchie, are you suggesting in the second point that we simply put, add a few words to the end of that, for instance, implement seasonal closure? Is that all you are recommending?

MR WHITE: Yes. I don't see any other. Unless there is something else that I'm missing, I don't think there is anything else that is going to reduce that.

CHAIR BORDEN: Okay, Max on the first point then.

MR. APPELMAN: Yes, I picked up on what Ritchie was offering, and we can add in that caveat, that clause to that second sentence. I just wanted to respond to that first part of your question, Ritchie. You know the first question here reducing the rate at which fish die. In essence that is what the circle hook provision is trying to do.

It's trying to increase the survival of a fish once you release it, avoiding the gut hook, being hooked in the mouth. That increases the chance of survival, so that is targeting that 9 percent release mortality rate that we used, trying to lower that number. Similar actions to that, other gear restrictions, improving awareness, promoting good fish handling

techniques. Those are all actions that can increase the survival of a fish once you release it.

CHAIR BORDEN: Ritchie, have you got a follow up?

MR. WHITE: Well, I guess we're asking a question, but we've already implemented circle hooks. I guess I'm not sure what other measures we can take, other than education, and the last question does that. I'm just not sure what there is in that first question that we could get anything from the public that would be helpful.

MR. APPELMAN: I guess I'll ask, are you suggesting we remove that question? Folks could provide other examples, banning treble hooks or something along those lines. I know there are other examples of similar actions that could be offered. But if you don't find utility in this question, we can remove it.

MR. WHITE: Yes, I guess we could ask are there any other measures that the public can see that would do this. We're saying it like, should we focus on measures that we know about, the way I read that.

CHAIR BORDEN: Max, this is a fairly simple change, you're just going to reframe the question, Max?

MR. APPELMAN: Yes, sounds good.

CHAIR BORDEN: I've got three or four hands up. I'm going to take them just in order. Adam, you can go next, and then I've got Cheri.

MR. NOWALSKY: I agree with the bullet that has come up here on the screen on the previous slide, as well as the statement that is in the section that it doesn't matter what the source of mortality is relative to the health of the stock. But where the source of the mortality is

very important, is what it does in terms of redefining access to the fishery.

When we're taking a fishery, and turning it into almost an exclusively release fishery, that provides entrance for a number of people that may not pursue the fishery, because they are interested in being able to take some fish home. I'm wondering if this is the right place to be asking the question, specifically about what are the impacts of increased release mortality through discards on the shape of the fishery, in terms of participation, would be how I would phrase that question, or if staff and the Board thinks there is a better way or better place to encompass that question, about what release mortality is doing in shaping the fishery and affecting participation.

CHAIR BORDEN: Any comments?

MR. APPELMAN: I was more focused on writing down what you were saying, Adam, then I was in absorbing what you were saying. You were looking at adding a question here about how release mortality affects other participation in this fishery?

MR. NOWALSKY: Correct, and how it affects what the fishery looks like. My concern is that as written, the focus of this section is going to be on the bullet point on the slide, and on the sentence in this statement in this section that the source of mortality doesn't matter to the health of the resource. The takeaway from that could be, if people don't read into it deeper, is that the source of mortality doesn't matter in the fishery.

That statement, again the statement of the source of mortality doesn't matter to the health of the resource is 100 percent true. The statement that the source of mortality doesn't matter to the fishery is not a true statement. I don't want that one statement that is in here about contributing to the health of the resource.

I don't want to lose sight of the fact that the release mortality shapes the fishery with regards to participation, discourages participation from certain

groups if they don't have access to harvest a fish, or multiple fish, whatever they're looking to pursue. I think that is important, and again that sentence just jumped out at me as needing to reinforce the fact that the discards, the source of mortality doesn't matter to the resource, but it matters a whole bunch to the fishery.

MR. APPELMAN: I would just offer, so of course the way it is written in the document is very different than how I tried to summarize it in a few bullets on a slide. Adam, I would offer, read the section in the document and if that statement, that bullet in your opinion, has too much weight in the document. Let us know, and offer some suggested edits there, or offer a question that we can add to the public comment questions. I personally don't think that that statement is taking up or consuming the dialogue in this section.

MR. NOWALSKY: No, and if I may respond once more, Mr. Chairman.

CHAIR BORDEN: Yes.

MR. NOWALSKY: The specific suggestion, I agree with you that it is not dominating this presentation, nor is it dominating the document. I agree with that perception. My specific recommendation would be in the statement of the problem, where you have the sentence, "the source of mortality does not matter to the health of the stock."

I would add a follow-up sentence about the source of mortality may shape the fishery, in terms of participation, something along those lines. I would add as another sentence there. Then I would add as another public comment question, with regards to what impact on how the fishery looks does management focusing on a primarily release fishery have on the shape of the fishery. That would be my specific way to address the document for my concern. That

would be my request, if there is no objection from the other Board members. Thank you.

CHAIR BORDEN: My suggestion is, you've heard Max's suggestion. Adam is willing to frame the issue, I think with the staff. Is there any objection to those two working together to try to address his concern? Then we'll circulate for other language they agree to. There are no hands up. Okay, so Adam, you've got another task to work on.

MR. NOWALSKY: I am gracious, thank you very much.

CHAIR BORDEN: Next person on the list, Roy Miller.

MR. MILLER: In regard to Ritchie's comment under that first bullet that appears before us, that circle hooks are really the only way that we focused on to reduce the rate at which fish die after being released alive. There are other ways, some of which would be very innovative. For instance, Florida has a regulation with tarpon that if you pull a tarpon out of the water and pose for a picture with it, it counts as a killed fish, a dead fish.

Something similar for large striped bass would be very protective. People would make a huge effort to not bring the fish out of the water, but release it alive over the side of the boat. Rubber nets, banning gaffs, all those things are measures that could be employed to reduce the rate at which fish die. I would like to hear what the public might contribute, so I would leave this particular bullet point in. I think the public can suggest some innovative things to us.

CHAIR BORDEN: I've got Cheri and then Tom Fote, and Cheri I apologize, I should have taken you first before Roy.

MS. CHERI PATTERSON: No problem. Thank you, Mr. Chair. I agree with Roy. I think that there are several measures that can be included in reducing effort in the fishery other than the circle hook scenario, and I could think of things that happened in other countries also. Maybe it would behoove us

to, when this goes out in the PID, to indicate what is being conducted now in reducing effort, and ask for additional suggestions other than what is currently being done to reduce effort.

CHAIR BORDEN: Tom Fote.

MR. FOTE: Yes, a couple of points. We're not sure whether it is easier and more survivable on a small fish when you release it or on the big fish. Some of them assume because of the size of the fish, how it fights harder and it takes longer to get through, and builds up maybe more lactic acid. Maybe that is a greater risk fishing on big fish.

If you want to basically protect the fish you shouldn't be fishing on big fish, maybe only small fish. I can't make that statement until I know the facts of who has a better chance of surviving hook and release fishing when you do that. Those are the questions we really need. When I went out to the public, I wanted to know, you know we've all been on the fleets and watch when it's lined up and a full blitz is going on in striped bass, and guys dragging fish in, and seeing how fast they can release them or kick them in, to get another fish on the line. That's where it is an education process, because it's not the number of fish. It used to be the number of fish you put on the dock, and now it's the number of fish you can say you caught and released on Facebook.

It all has its consequences. You want to go out and catch 100 fish in a day, or 50 fish when the schools hit. Maybe you should stop fishing after you catch 15 and release. There was a conversation I had many years ago with one of our David Hart winners, who basically said he was upset with the charterboat fleet for being allowed to catch two fish in New York. I said well, he killed so many fish in a year, maybe this one guy going fishing.

I said maybe you should stop fishing for striped bass, after you killed the same amount of fish,

because you're fishing every day and you're catch and releasing, and you have the same consequences on your overall stock as he does. Those are the things we should be talking about in catch and release, that it does contribute, and it also effects the way we fish for it.

We've are allowed 2-fish at 28 inches for years. With the greater increase in the hook and release mortality and everything else, we've basically affected how people take fish home to eat, or basically fish for that, fish for their table. As Adam was basically pointing out, we're trying to turn this into a completely catch and release fishery.

I'm not 100 percent that's the way I want to go. I mean our people should be able to use the public resource, is it more healthy for us to basically throw them back and them die, or we could basically take them home to eat? There should be compromise in the middle. That is how we have to deal with it.

CHAIR BORDEN: We've had a lot of discussion on this issue. Is there anyone that wants to raise an aspect that has not been covered by somebody else? There are no hands up, so Max, if you will move on to the next issue.

MR. APPELMAN: Moving on to recreational accountability. Again, this has come up a little bit already, tied to concerns and challenges with release mortality, which we just talked about. Certainly, the conservation equivalency. There has been a lot of conversation, I think lately, on the equality between the recreational and commercial sectors.

The relative proportion of mortality coming from the commercial sector perhaps might not be in line with the type of restrictions that are in place. As far as the recreational side, you know the primary challenge here is that it's not managed by a quota system like the commercial fishery. There is no recreational harvest limit like we see with some of the federally managed species.

There is a potential for harvest and catch to fluctuate considerably from year to year, which makes it difficult to evaluate if removals from the recreational sector are too high, and by how much. Again, a lot of variability in the catch, due to factors that are largely out of our control. Changes in angler behavior, year class strength, the availability of fish and distribution of fish up and down the coast in a given year has big impacts on harvest and catch and release. Some other concerns are that that annual variability under recreational quota leads to changes in regulations each year, which is another concern that has been raised, particularly in conflict if one of the stated objectives of regulatory consistency in this fishery. Which leads into some of the public comment questions. Should the Board consider implementing an RHL or quota for the recreational fishery.

How should overages or underages be addressed? Should stock status be considered when addressing overages and underages? Are there other measures the Board should consider for managing the recreational striped bass fishery, other than the current tools in the toolbox? That is it for recreational accountability.

CHAIR BORDEN: You've heard Max on the subject. Tom Fote, your hand is up. Do you want to speak on that or is that a remnant from the last time?

MR. FOTE: I accidentally left it open, but while we're looking at this. I think one of the things we should discuss in this is the fact that, you know we just went through a major MRIP, MRFSS basically changeover, and the consequence of that was dramatic. We're not even sure how valid those numbers are. We seem to think they're valid, but it was just a complete difference.

Every time we do that, you know we always say that it's going to be your state's turn next on

when it comes to summer flounder, because no matter what you did, you followed all the rules and regulations. One year you're 25 percent under, and the next year you're 25 percent over. There are so many viability factors in there. It has nothing to do with fishermen and fishing pressure, but just what happens with your numbers. I always worry about accountability, and how we basically have that put into place.

CHAIR BORDEN: I've got Megan Ware and then Mike Luisi.

MS. WARE: I first just wanted to take a second to kind of complement the PDT on the PID. I know we're providing a lot of suggestions now. But I do think that the PDT did a pretty good job of trying to balance a lot of different perspectives, and some pretty controversial topics in a short document. I wanted to give you guys some kudos for that.

For recreational accountability, I think one of the major questions, if the Board chooses to pursue this is, kind of what scale that accountability is, whether it is at the state level, a regional level, or a coastwide level. Particularly, how that jives with greater uncertainty in MRIP data at the smaller scale. It seems kind of just reading through this that the focus is mostly on an RHL, so I don't know if that was intentional by the PDT to focus on more of a coastwide accountability approach. I guess that would be a question for you, Max, if that was intentional.

But either way, I think it might just be helpful to clarify that the RHL is a coastwide accountability measure, and that we all kind of rise and fall into one. I think some members of the public may not be as familiar with the federal system, particularly up here where we're not dealing with black sea bass or summer flounder or some of these other species that have RHLs. Just adding even a few words that this is a coastwide accountability measure that is given as an example, I think would be helpful.

CHAIR BORDEN: Max, you've heard the suggestion. Is that a problem?

MR. APPELMAN: No. Not a problem. I think we can fold that in. I think our focus of really trying to isolate the underlying concerns and challenges with recreational accountability is showing some examples of how it is done in some other FMPs is just sort of an artifact of that narrow scope we were trying to have with these issues, Megan. But point taken. I think there is definitely a few places in the background, and perhaps a question we can pose about implementing accountability on a regional or coastwide level.

CHAIR BORDEN: Mike Luisi.

MR. LUISI: I'll certainly agree with Megan's points regarding scale. I guess to her point, the focus on the RHL and maybe that being a way forward with striped bass. I would just caution. Well, maybe I won't caution moving forward with that as something to consider. But I think what needs to be addressed in this document are some of the challenges that we have faced with the federal program through our black sea bass and the flounder, scup, and bluefish fishery management plans.

We have faced incredible challenges using the RHL, and having an annual payback provision on recreational fisheries. It has created such chaos in some ways that members of this Commission and the Mid-Atlantic Council have worked over the past two years to develop a document that we refer to as the Recreational Reform Initiative, which takes a different approach at managing recreational fisheries. It's more than just accountability.

Accountability is part of it, but you know we are at the point at the federal level where we are trying to find a way out of the box. Then here we are talking about taking a system like the striped bass fishery, and throwing it right back in that box with this RHL concept. I think the language is there in this Recreational Reform Initiative document that expresses the problem statement, and the work that's been done to try

to put together an approach that may be different from this RHL concept.

I think it would be good for this document to express some concerns, at least identify some of the areas of concern, or some of the ways that under the federal system fisheries have been constrained during times of increased biomass, due to the lack of the ability of a state to constrain harvest. I just wanted to make that point, and address that recreational reform initiative topic. Thanks, Mr. Chairman.

CHAIR BORDEN: I see no other hands up.

MR. APPELMAN: May I jump in really quick, Mr. Chair.

CHAIR BORDEN: Max.

MR. APPELMAN: Yes Mike, thanks for that. I just wanted to maybe offer. I think some of the text in the PID does highlight the pitfalls that you've been talking about with the RHL. But if you have any specific language to perhaps beef up those concerns. Please shoot me an e-mail and we can fold that in.

MR. LUISI: Okay. Will do.

CHAIR BORDEN: Any other items under this issue? There are no hands up, so let's take up the last issue, and I as I announced at the start of the meeting. When we get after the presentation, I'm going to recognize Delaware, whoever wants to speak on behalf of Delaware, and let them raise one of the concerns that they've raised. Max.

MR. APPELMAN: Coastal Commercial Allocation is Issue 9. Again, focusing on the primary concerns and challenges that have been brought up. The first is that the basis for the current allocation scheme is from landings, harvest data from 1972 to 1979. There has been concerns raised that is not new to the Board that data from that time period may be outdated. There was a number of data quality issues. Harvester reporting was not required.

There were sales of fish across state lines at that time that may be adding to these inaccuracies in data.

Perhaps there is a better timeframe to use for quota allocations into the future. One of the other concerns is that state-by-state quotas for this program are fixed in pounds, and are only changed really through adaptive management, in response to overfishing or overfished determinations, which is different from other species, where we set the quota you know every year or every few years, in response to changes in biomass or updated information on biomass.

The states are allocated a percentage of that changing quota. Those are the primary concerns that are highlighted in the PID, and the questions to the public are, is this 1970s landings period still an appropriate baseline for the coastal commercial allocation? Should other allocation approaches be considered?

Should the coastwide quota be explicitly set on an annual basis, or following updated stock assessment or benchmark? As a precursor to, I'll dive in a little bit for a second on some of the background information here. The earlier versions of Amendment 6 did allow certain areas to operate under a different F rate, Chesapeake Bay and the Albemarle Roanoke system in North Carolina.

Now as an artifact of that they were able to implement a different harvest strategy at our harvest control rule for the commercial quota, so those earlier years under Amendment 6, Chesapeake Bay in particular was able to change its quota from year to year, and their FMP moved away from that with the implementation of Addendum IV in 2015. Some questions about whether we should revert back to a similar process for the Bay, or for the coastwide allocations. That is it for me, Mr. Chair.

CHAIR BORDEN: Would a representative of the Delaware delegation want to speak to the concerns that they have on this issue? John or someone else?

MR. CLARK: Yes, I will do that. First, thank you Max and the PDT for an excellent document. We just had a couple of concerns. Instead of reading, I can read through and one of the changes we made was just to the actual text in the background. We did want to add in the fact that Delaware's quota under Amendment 5 was based on Delaware having producer area status, so it's only in the background that we bring up the term producer area status, and we just in an extra sentence describe. Well, I'll tell you what. I can read you what's in the original, and just tell you what the difference is.

The BIB right now says, "Of note, Delaware's quota was held at its 2002 level under Amendment 6, due to evidence that F was too high in Delaware Bay at the time." We would like that changed to Addendum III to Amendment 5, also grant the producer area status to the Delaware River and Bay, which allowed its commercial quota to be managed under a harvest control rule similar to that used in the Chesapeake Bay.

Of Amendment 6, the quotas were increased to 100 percent of the base period, with some exceptions, and producer area status was rescinded. Of note, Delaware's quota was held at its last producer area level under Amendment 6. The change, it's small, but it just gives a little more of the nuance of what actually happened back then.

Delaware did not get a windfall going into Amendment 6. We had been managed differently. Then the only other thing I would like to bring up. I know everybody has had enough of this, and as Napoleon would say, I'll be short. We wanted to add in the public comment questions, should regions with the necessary data, such as the Chesapeake Bay and Delaware Bay systems be able to transition back to a harvest control rule, where commercial quotas are set annually based on supportable biomass?

That is the extent of the changes we would like to make, and then we just added a little more explanation about the fact that striped bass right now is using the oldest data of any other species under ASMFC management for managing its commercial quota. That was pretty much it, Mr. Chair, thank you.

CHAIR BORDEN: My understanding, John, correct me if this is not appropriate, is that you've already submitted written comments, which I don't think has been distributed to the Board, so the staff is going to review those and then I'm sure there will be some back and forth between you and staff about what actually gets included in this document. This is kind of a work in progress, and you and the staff are working on this in a similar vein to the other individuals who basically agreed. Is that an accurate understanding?

MR. CLARK: Exactly, Mr. Chair, I think we're just a little further ahead. I submitted a rough draft to Bob, Pat Keliher, and Megan Ware, and Megan, she did a great job of revising my revisions and suggestions, and that document is now with Max and Toni, and with ASMFC. Yes, so they will get back to me with any questions, problems with it. Thanks.

CHAIR BORDEN: What my suggestion is, we just let that process continue to play out. Then once the staff is kind of comfortable with this language, they'll circulate the language in a manner similar to all the other issues that come up. Does anyone object to that? Emerson, I've got your hand up, but are you objecting to that? Oh, it just went down.

MR. EMERSON C. HASBROUCK: No, I'm not objecting, but I had my hand up because I wanted to comment on Issue 9.

CHAIR BORDEN: Okay, so I'll come right back to you. Any objection to handling the Delaware concern the way we are? If not, it looks like John Clark has a work in progress. Emerson.

MR. HASBROUCK: At our last Board meeting I voiced my concern about keeping this issue within this Amendment. I think it's just going to slow us down. It's going to keep us from the timeline of all the other issues in this Amendment. I'm drawing on our recent experience with summer flounder.

It took us five years to resolve that. I'm concerned about even keeping this in this document. Now, I know I made a motion that was seconded at our last Board meeting, but it failed for lack of majority. But I would like to see added in here a question. Does the Board even need to address quota allocation at this time?

The questions that are there for the public comment are very leading, and assume that we will change the allocation method. I would like to see that added in there. I've been hearing from the public that you know, going down this road is just going to slow down, well slow down, delay and side rail all the other issues that we really need to deal with in this Amendment.

CHAIR BORDEN: Emerson, you're just suggesting the addition of one question. Does anyone object to having Emerson work on that question with Max, and try to flesh that out, and then circulate it? No hands up. Okay, so Max, what else have you got?

MR. APPELMAN: Just one more slide, and that is to, you know in the spirit of the PID, which asks the overarching question, "How would you like management of the Atlantic striped bass fishery to look in the future?" There is this other issue section, an opportunity for stakeholders to raise any other issues that might not be covered by the nine that we already went through.

Advisory Panel members teed up this list a little bit. They gave some examples of other issues, impacts due to climate change, impacts from habitat, from habitat degradation, resources or sufficient resources for law enforcement, perhaps some research priorities we should be focusing on.

The important part of this section is that we ask stakeholders to, if they are going to raise other issues that they provide some suggestions or comment on actions managers can take to address the concerns that they bring up under this section. With that, that is the last slide I had for the PID.

CHAIR BORDEN: Comments? There are no hands up. Let's see, Maureen.

MS. MAUREEN DAVIDSON: Since we've come to the end of the document, I wanted to add something that is not necessarily a question with public, but in light of the fact that we are now managing menhaden using our ERPs, which are also related to the biomass of striped bass. Is there any place in this document where we can add that we are now moving towards ecosystem-based management, and the role that menhaden has on striped bass? I'm not necessarily saying that it should be, it's not one of the things that we're trying to change, but I believe this is the first amendment since we did make that change last year, I mean obviously.

Is there just somewhere in the document where we could show the public that yes, we are moving toward EBM, our first step was with menhaden, because we know how important it is to striped bass, and we even use striped bass biomass to sort of define some of the reference points for menhaden.

This is just to show that yes, we are moving towards this. This is the first step that we've taken, and how it relates, and how important striped bass is. Even yesterday in our discussion about the striped bass, we talked about the fact that the stock is so low. It really is not going to affect menhaden biomass, in terms of predation.

We do keep tying them together, and I think this is an opportunity for the Commission to show the public yes, this is the direction we're moving in as we deal with these other issues for

striped bass. I know this document is very single-species oriented, but I think it is important at this time that we say look at the direction we are going to go in. Thank you.

CHAIR BORDEN: Any comments on that? There are no hands up that I can see.

MR. APPELMAN: If I could just offer a quick response, Dave. I'll say that the Development Team definitely talked about that concept, for sure. I think we ended up compromising on adding some language in the background, so at the end of the document there is some background information on the management of the stocks and additional information, if you didn't get enough in the initial 9 issues, there is a little bit more for the readers.

I hope I'm not mistaken, but I think there is a little context in there about ERPs. If not, I would offer that that might be a good place to introduce everything you were saying about ERPs and the relationship with striped bass and menhaden management. Take a look at those background sections at the end of the document. If there is some text you would like to offer, feel free to pass that on.

MS. DAVIDSON: Okay, thank you, Max.

CHAIR BORDEN: Maureen, are you willing to do that?

MS. DAVIDSON: Absolutely.

CHAIR BORDEN: Okay, so we'll just add that to the list. Are there any other comments on this section? Jason McNamee.

DR. McNAMEE: I'll be really quick. I just wanted to support, I really liked everything that Maureen just said, and it sounds like you have a good plan there. I was just going to offer, at the very least maybe it could be one of the items put into this "other issues," just to offer a chance to the public to kind of let us know what they're interested in seeing on that with regard to striped bass. Just to offer an

alternative, but I really like the exchange that Maureen and Max just had as well.

MR. APPELMAN: I'm sure you're speaking, Dave, but we can't hear you.

CHAIR BORDEN: Okay, I'll repeat myself, sorry about that. We've had a number of suggestions from different individuals on changes that I kind of view as relatively quick fixes. A number of people, members of the Board have volunteered to work with the staff on offering the language that then can be circulated to the rest of the Board.

My suggestion is we allow those individuals a couple of weeks to work with the staff on perfecting the language, and then circulate the language to the Board, all the members of the Board. Just to change language, it doesn't require Board members to hunt through the document to find out what has been changed.

Then my suggestion is, once that process has been circulated, we'll no doubt get comments from other Board members. But once that process concludes, then there are a couple of ways of handling this. We can put off the formal approval of the PID until the next meeting, or we could for instance do a mail ballot, once everybody has the precise language.

Does anybody have any preferences on how we handle that? No hands up, so my suggestion as Chair is, we allow that process to play out, and hopefully that will all be concluded in the next two to four weeks. You'll have a final document, and then we do a mail ballot to approve it for hearings. Are there any objections?

MR. APPELMAN: I'm going to jump in here, and see if Bob shot his hand up in the air. Bob, I can defer to you or attack it.

EXECUTIVE DIRECTOR ROBERT E. BEAL: I can comment, Mr. Chairman, if you're comfortable with that.

CHAIR BORDEN: Okay, that's fine, Bob.

EXECUTIVE DIRECTOR BEAL: I guess from a staff perspective, you know if it does take two to four weeks to sort of get this document polished up, and then reviewed and approved by the Board. That puts us pretty late into November, and you know since this is an Amendment, we've got some public comment constraints.

The document has to be out 14 days before the first hearing, and 30 days public comment has to be opened after, or maybe it's even 30 days. Where I'm going is, if we wait or if it takes them about two to four weeks to wrap this up, we won't be able to get the public hearings in with holidays and other things, prior to the winter meeting.

We could start the hearings and they may straddle the winter meeting, but we just wouldn't have time to get this completed before the winter meeting. You know, I guess it's up to the Board on, would you prefer to handle the edits as best we can, as quick as we can now? But as you were saying, Mr. Chairman, wait until the February meeting. That gives people a little bit more time to be deliberate and not hurry through these changes, and come back in February, then we can have hearings, you know in the spring. Who knows what the spring is going to hold, as far as being able to meet in person or virtually? But getting this wrapped up and done before the February meeting is very unlikely, I guess is the best way to put it.

MS. KERNS: Bob, if I could just fill in a little. I would prefer to try to tackle these edits somewhat quickly, and not drag them out for four weeks, just so that it is still fresh in everybody's mind, and we can turn that around, regardless of when we decide to approve this document for public hearing. I don't want to drag out those edits for too long, being that I'll be the staff person filling in on this species. I

don't want to dump us into too many holidays or other Council meetings.

CHAIR BORDEN: Bob, thank you very much for that comment. I guess my own reaction to it. If we need to move the comment period, in other words the period of time that the Board members have to work with the staff to perfect the language pops, so it takes place in the next week. I think that is desirable. I would be a little bit concerned that if we wait until the February meeting, then that just starts the clock at that point.

Then, I would rather have a longer period of time to spread the public hearings out, because I think there are going to be lots of public hearings. If we accelerated the work at the schedule that I had forwarded. I think it would leave a longer period for states to have actual hearings on it, and then we could report with the idea that we would report the results at the spring meeting. That was my suggestion. I've got a couple of hands up, Ritchie White, do you want to talk?

MR. WHITE: Yes, I guess I would lean towards Bob's suggestion. When we started this process there was a lot of discussion about not rushing it. We take our time, get it right, these are big issues, this is important stuff. I don't feel the need to be rushing. I guess I would choose the February meeting to review this, and then send it out after that.

CHAIR BORDEN: Okay, I've got a couple of other people. I think in the interest of time, since we're way over, we just say kind of limit your comments to deal with it at the February meeting or not. That would be helpful. I've got Tom Fote and then Dennis Abbott.

MR. FOTE: I agree with Ritchie.

CHAIR BORDEN: Okay, thank you, Dennis Abbott.

MR. ABBOTT: Yes, thank you, Mr. Chairman. Again, I agree with Ritchie. Those are my thoughts. We need to do this deliberately, and with the timeline that was offered, if we miss any of the milestones it puts us into the next calendar year, so by the time we got an amendment approved we would be looking at the year following.

By delaying, not delaying, but it taking an extra meeting or so, we're looking at finishing this in 2022, and implementation in 2023. Again, we said we should be deliberate. This is probably one of the biggest undertakings that we've had in some years is coming up with a new striped bass amendment. I think we should go about things. As the last thing, while I've got the microphone. We're also losing Max here in another week, so that is going to bog this down, knowing that Max is heading out the door.

But what I would like to say is that I would like to thank Max, not for all the fine work that he's done, but for being a very pleasant, enjoyable, and intelligent person to work with for these past five and a half years, and we will all miss Max and wish him well in his new job. I'm sure you were going to say the same thing, David.

CHAIR BORDEN: Thanks, Dennis, I have Mike Luisi and then I'm going to just offer a suggestion. Mike.

MR. LUISI: Yes, I just wanted to add that I think, I don't see any harm in taking the edits from today, working them through the different Board members, giving people some time, and then reviewing this in February. You know we would have a much more clean version with comments from Board members at that time, and then we can put it out to the public for the spring.

Honestly, as much as I would like to stick by this timeline, I think given what Dennis just said with losing Max, and with other things that are going to come up during our discussions. I don't think the October 2021 is going to be something, I think we're going to be into 2022 when this finalizes, and I'm okay with that. I don't feel the need to rush, so

I'll go and say I would support the delay. Let's get this right. Let's make sure this document is ready, and ready for the streets when it hits the streets in the spring. Thank you.

CHAIR BORDEN: All right, so it sounds like we've got a consensus. I would like the individuals per Toni's request to formalize their suggestions and get those in to the staff within the next week, by next Friday of next week, and then the staff will work on the language and circulate it. Is there any other business under this issue? Max.

MS. KERNS: David, before you go to Max. Just to request that when folks send us their language, they could send us tracked changes. In order to get us tracked changes, if you need us to send you a Word version of the document, please just reach out and we'll do that. But I think that is the easiest way for us to incorporate your edits.

CHAIR BORDEN: All right, Max, have you got anything else under this issue? If not, we're going to move on. Did you get the issue of AP nomination? New York made a suggestion. Maureen, do you want to introduce your suggestion?

MS. DAVIDSON: Yes. What I would like to do is appoint someone to the Atlantic Striped Bass Advisory Panel from New York. I'm ready to make the motion. Are you guys ready for me to start talking? Hello.

MR. APPELMAN: We hear you. Give us one second to transfer control of the webinar back to Maya, and she'll pull up the motion you have prepared.

MS. DAVIDSON: Do you want me to read it?
Move to nominate to the Atlantic Striped Bass Advisory Panel Bob Danielson from New York.

CHAIR BORDEN: Do we have a second?

MS. KERNS: Tom Fote is seconding that.

CHAIR BORDEN: You heard the suggestion by Maureen. Are there any objections to this suggestion? **I see no hands up, and it's adopted by consent.** Thank you, Maureen.

MS. DAVIDSON: Okay, thank you.

OTHER BUSINESS

CHAIR BORDEN: I'm under Other Business. Is there any other business? I've got one item, and that simply is to thank Max for all his hard work on behalf of the Commission. He's been a wonderful guy to work with as the Board Chair. He's great, and he does things promptly.

I'm sorry to see him go off to NOAA, but I'll look forward to working with him in his new capacity, and I hope some of his new capacity involves the Commission. Thank you very much, Max.

ADJOURNMENT

CHAIR BORDEN: Any other business to come before the Commission? If not, I see no hands up, the meeting is adjourned.

(Whereupon the meeting adjourned at 5:52 p.m. on
October 21, 2020.)



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MEMORANDUM

January 11, 2021

TO: Atlantic Striped Bass Management Board
FROM: Atlantic Striped Bass Technical Committee
SUBJECT: Release Mortality Sensitivity Runs

At its 2020 Annual Meeting, the Atlantic Striped Bass Management Board (Board) tasked the Atlantic Striped Bass Technical Committee (TC) with conducting additional runs of the striped bass stock assessment model using different assumptions about the mortality rate on fish released alive by the recreational fishery, as a way to explore the sensitivity of the model to this assumption.

The stock assessment currently assumes that 9% of all striped bass released alive from the recreational fishery die as a result of being caught and released based on a study by Diodati and Richards (1996). The range of estimates from Diodati and Richards (1996) are consistent with estimates from other studies, which have found that factors like temperature, salinity, gear type, angler experience level, and others have an effect on the release mortality rate for striped bass. The TC discussed a range of scenarios to explore for this analysis, including using different release mortality rates for different seasons, regions, and years. The TC had previously developed catch-at-age matrices for the recreational release mortalities by year, region (Bay vs. Ocean), and season (January – February, March – June, and July – December) in order to parameterize the two-stock model. Applying different release mortality rates to these matrices would be straightforward and require minimal additional work, but applying different release mortality rates at a finer scale (such as by month or state) would require significant effort and time. The TC selected four alternative release mortality scenarios to take advantage of the existing catch-at-age matrices and provide reasonable bounds on the problem. Those scenarios are:

- **Base case:** 9% release mortality rate for all regions and seasons
- **Low release rate:** 3% for all regions and seasons (best case scenario rate in Diodati & Richards (1996))
- **High release:** 26% for all regions and seasons (worst case scenario rates in Diodati & Richards (1996))
- **Seasonal release mortality rates:** 5% for January – June, 12% for July – December for both regions (based on regression tree analysis from the 2013 benchmark and other studies)

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- **Regional release mortality rates:** 16% for the Chesapeake Bay, 9% for the ocean for all seasons (based on Lukacovic and Uphoff (2007) for the Bay and Diodati & Richards (1996) for the ocean)

For each scenario, the total catch and the catch-at-age were recalculated based on the new release mortality rate assumption, and the current stock assessment model was run with the new catch data. The SSB threshold (the 1995 estimate of female SSB) and the F threshold (the F that will maintain the population at the SSB threshold in the long-term) were recalculated for each scenario based on the results of that run. The TC compared estimates of SSB, F , recruitment, selectivity patterns, and stock status to determine how sensitive the model was to the release mortality rate assumption.

Results

Overall, changing the release mortality rate assumption changed the scale of the estimates of female spawning stock biomass (SSB), F , and recruitment but did not change the overall trend, or change stock status in 2017.

The low and high release mortality rate scenarios had the largest impact on total removals (Figure 1) and therefore on estimates of SSB (Figure 2), F (Figure 3), and recruitment (Figure 4). The lower release mortality rate resulted in lower estimates of SSB and recruitment and higher estimates of F , while the higher release mortality rate resulted in higher estimates of SSB and recruitment and lower estimates of F (Figures 2-4). The seasonal and regional estimates of release mortality, had a smaller effect on total removals (Figure 1), and therefore resulted in smaller changes in SSB, F , and recruitment. Estimates of SSB, F , and recruitment from the seasonal and regional scenarios were very similar to the base case (Figure 2-4).

The low and high release mortality scenarios also had an effect on selectivity estimates for the fishery. Because fish that are released alive tend to be smaller and younger than fish that are harvested, a higher recreational release mortality rate results in higher selectivity at age for younger fish, while a lower release mortality rate results in lower selectivity-at-age for younger fish (Figure 5). The selectivity patterns estimated for the seasonal and regional scenarios were very similar to the base case selectivity curve. These differences in selectivity were incorporated into the calculations for the F threshold, resulting in a lower F threshold for the high release mortality scenario, a higher F threshold for the low release mortality scenario, and F threshold estimates that were very similar to the base case for the seasonal and regional scenarios (Table 1).

Despite the differences in scale across the different scenario, the overall trends were very similar and stock status was the same in all scenarios, with striped bass being overfished and experiencing overfishing in 2017 (Figure 6, Table 1).

Discussion

Significant changes to the release mortality rate (i.e., going from 9% to 3% or 26%) resulted in significant changes to the scale of the population, but did not affect the final stock status determination. The higher release mortality rate did result in a stock trajectory where striped

bass became overfished earlier in the time series than the other scenarios, but the 2017 stock status was consistent across all scenarios. The seasonal and regional release mortality rates, which the TC felt were the more realistic scenarios, had minimal impacts on the estimates of SSB, F , and recruitment, and minimal impacts on stock status. Therefore, the TC concludes that the model is somewhat sensitive to major misspecification of release mortality rate, but less sensitive to smaller scale misspecifications. Refining the overall coastwide estimate to reflect regional and/or seasonal differences can be pursued for the next benchmark assessment; it would likely not result in significant changes to population estimates or stock status, but could produce minor improvements in the estimates.

The TC stressed that although refining the estimate of the release mortality rate is not expected to have a significant effect on stock status from the assessment model, it does not mean that release mortality is not significant itself. Reducing release mortality through management measures and angler education and outreach – either by reducing the total number of fish caught and released, or by reducing the percent of fish that die as a result of being caught and released through better angling practices – is still important for the recovery of the stock.

The TC noted the limitations of this analysis. First, the different release mortality rates were assumed constant over time. If release mortality rates have been changing over time – for example, increasing due to warming water temperatures, or decreasing due to increased circle hook use or changes in angler behavior – then the impact on population trends and stock status in recent years may be more significant. The TC discussed developing a scenario with a trend in the release mortality rate, but the work to develop a realistic trend tied to temperature or other factors was beyond the scope of this task. Similarly, the release mortality rates explored are the same for all size/age classes of striped bass. There is some limited evidence that release mortality rates may vary by size, but not enough to parameterize a reasonable alternative scenario for this task. These are scenarios that can be explored in more depth for the next benchmark.

Literature Cited

- Diodati, P.J. and R.A. Richards. 1996. Mortality of Striped Bass Hooked and Released in Salt Water. *Transactions of the American Fisheries Society* 125:300-307.
- Lukacovic, R. and J. Uphoff. 2007. Recreational Catch-and-Release Mortality of Striped Bass Caught with Bait in Chesapeake Bay. FISHERIES TECHNICAL REPORT SERIES No. 50. Maryland DNR Fisheries Service. Annapolis, Maryland. 21 pp.

Table 1. Comparison of reference points, 2017 estimates, and probability that SSB in 2017 is below the SSB threshold for the base case and the four release mortality scenarios explored.

Scenario	SSB threshold	SSB₂₀₁₇	P(SSB₂₀₁₇<SSB_{threshold})	F threshold	F₂₀₁₇
Base Case	91,633	68,141	99.9%	0.24	0.31
Low Mortality	86,231	62,699	99.9%	0.28	0.30
High Mortality	130,783	93,755	99.9%	0.21	0.29
Seasonal	93,469	68,080	99.9%	0.24	0.31
Regional	91,555	66,802	99.9%	0.25	0.32

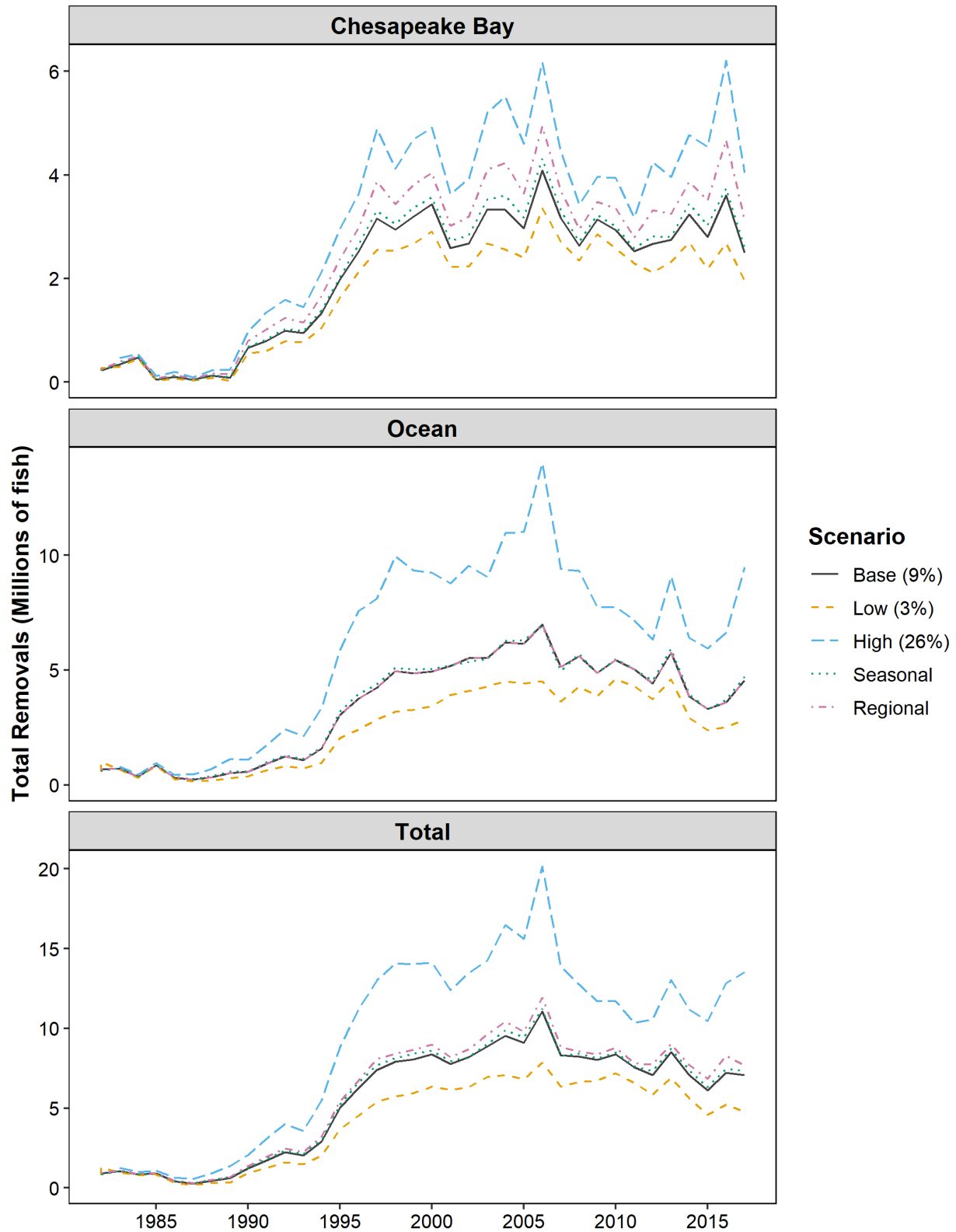


Figure 1. Estimates of total removals by region (top and middle panels) and for the coast (bottom) under different release mortality rate scenarios. Note the difference in scale for the y-axes on each panel.

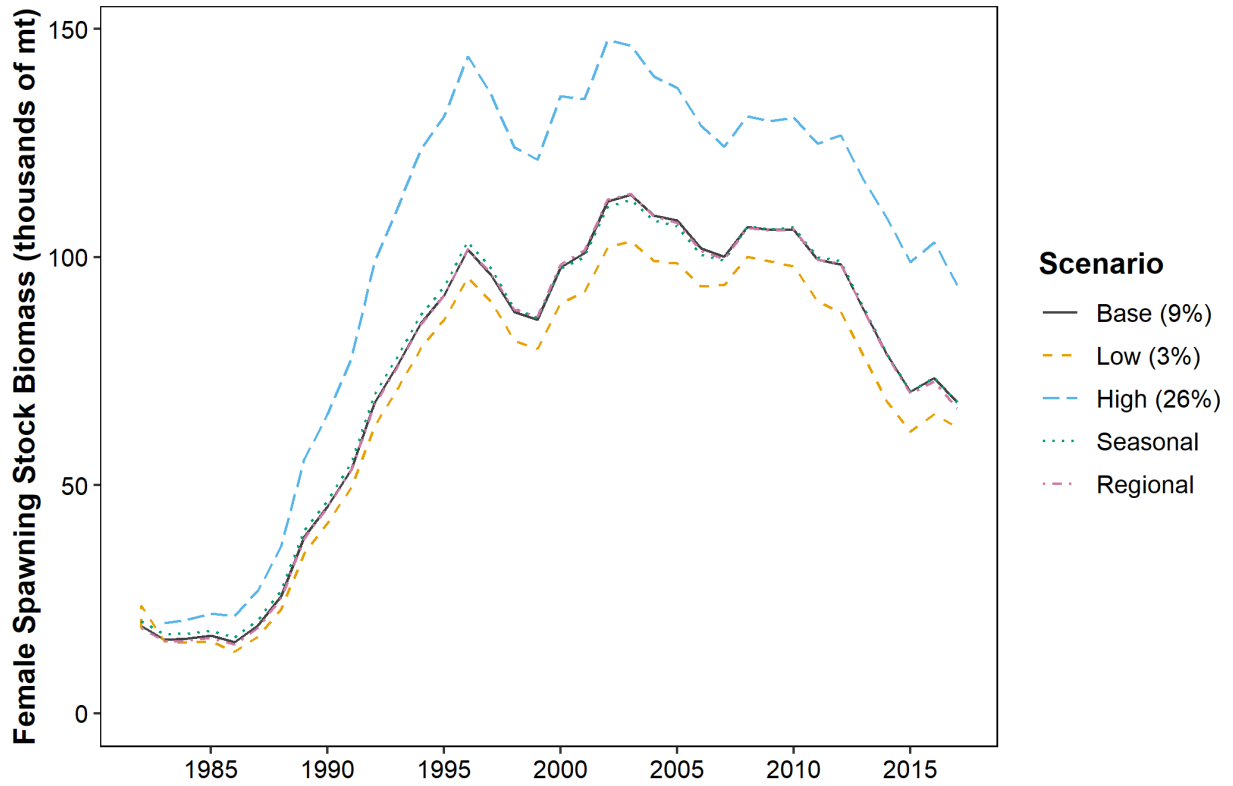


Figure 2. Female spawning stock biomass estimates under different release mortality rate scenarios.

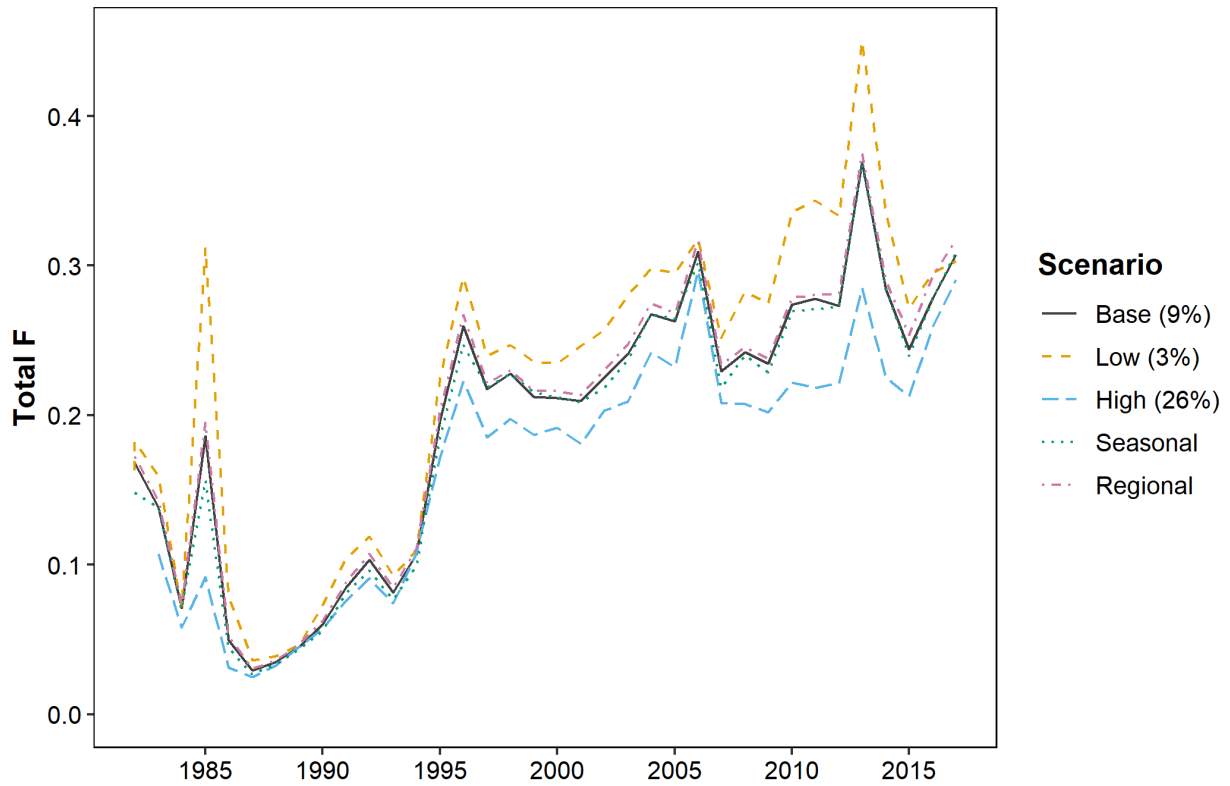


Figure 3. Fishing mortality estimates under different release mortality rate scenarios.

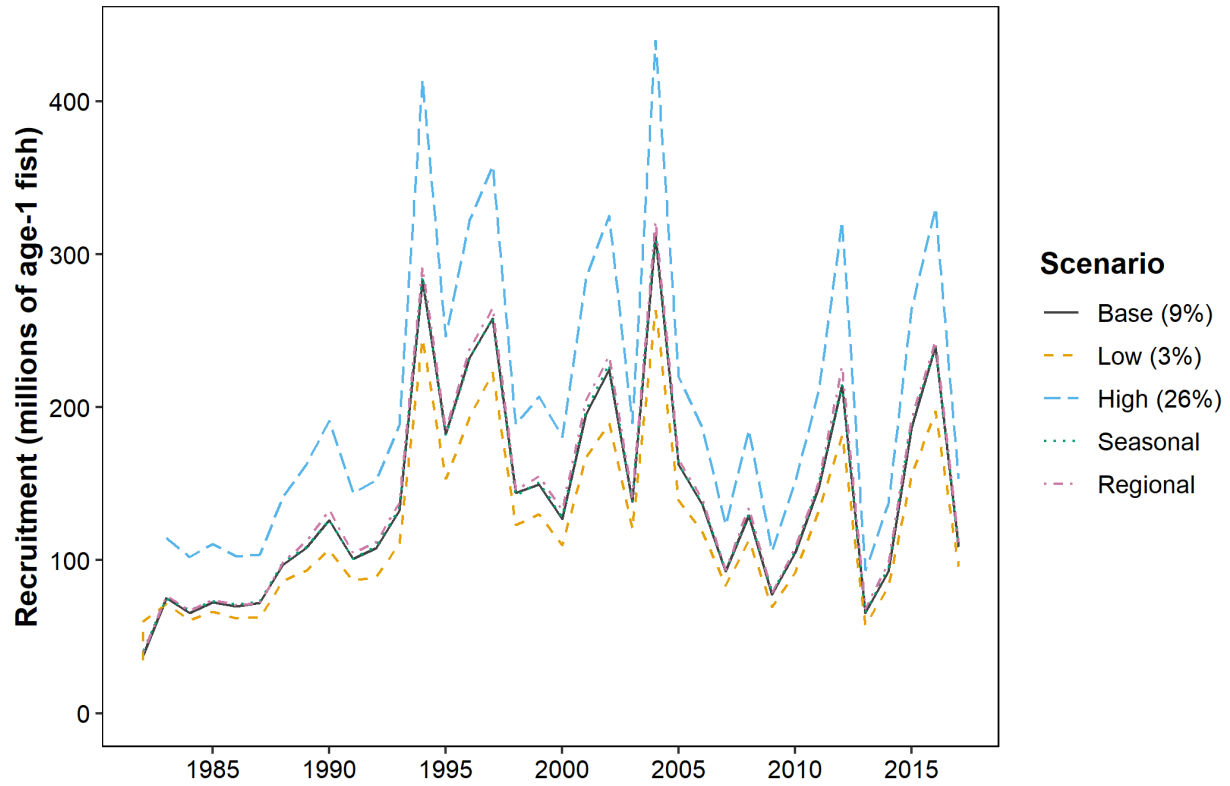


Figure 4. Recruitment estimates under different release mortality rate scenarios.

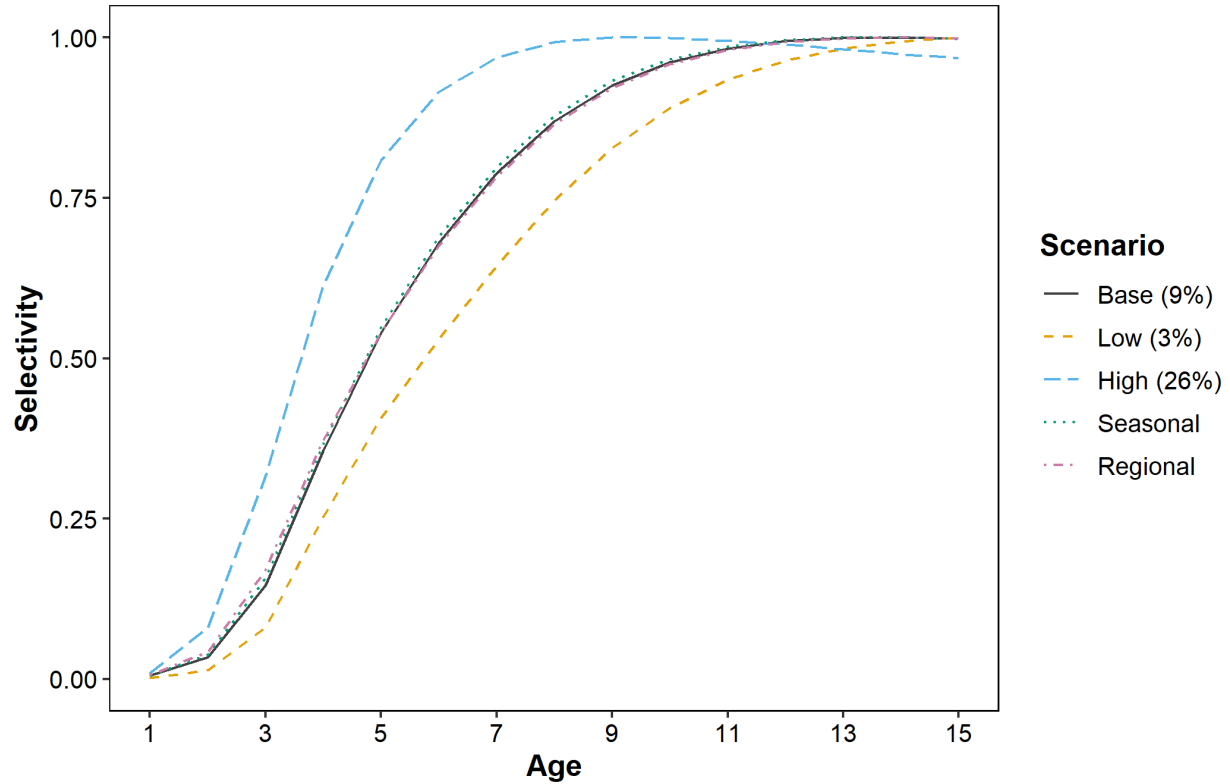


Figure 5. Estimated fishery selectivity patterns under different release mortality rate scenarios.

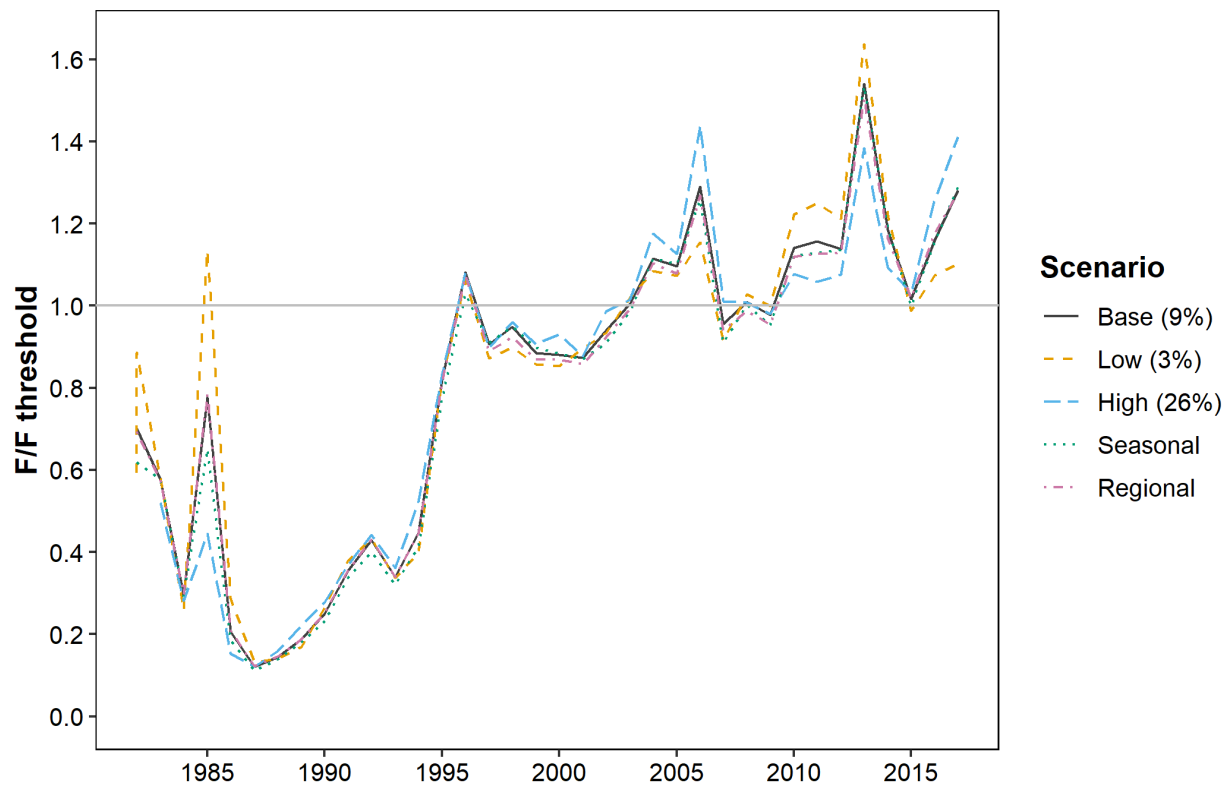
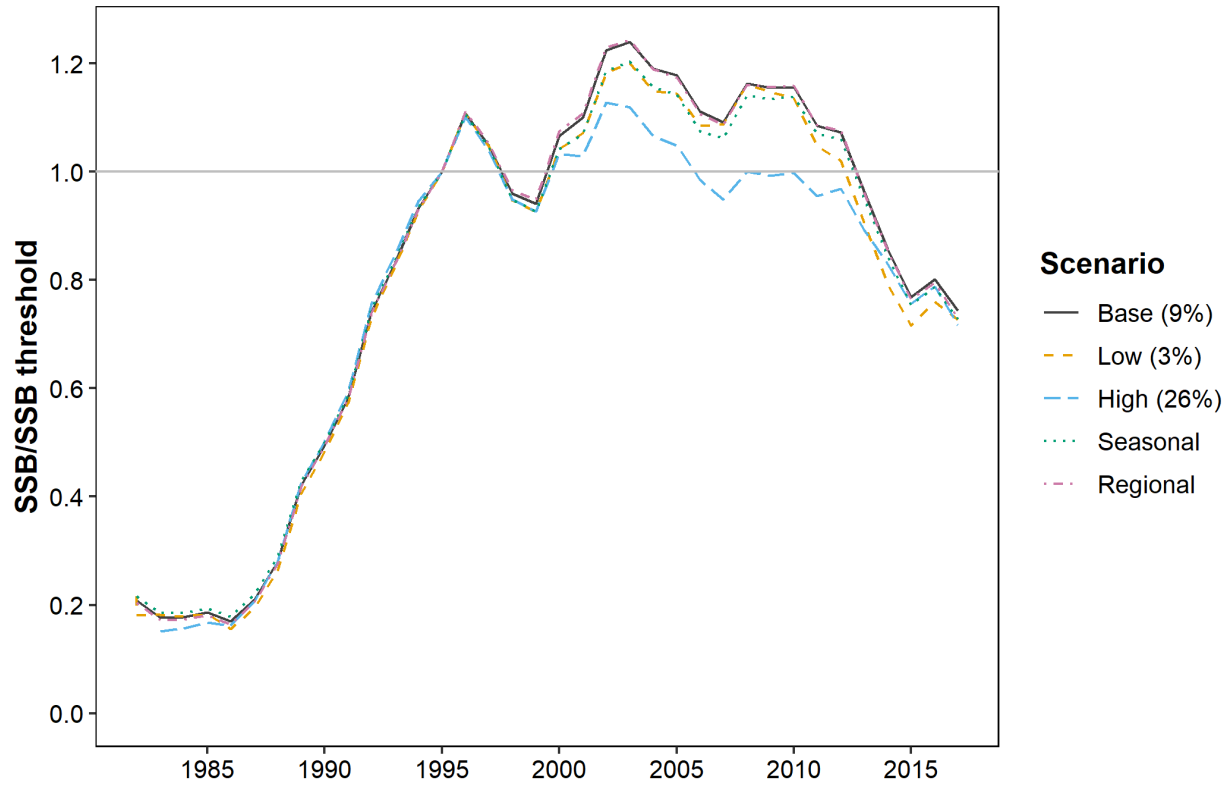


Figure 6. Overfished status (SSB relative to the SSB threshold, top) and overfishing status (F relative to the F threshold, bottom) under different release mortality rate scenarios.



December 30, 2020

Mr. David Borden, Chairman
ASMFC Striped Bass Board
1050 N. Highland Street, Suite 200 A-N
Arlington, Virginia 22201

RE: Reconsideration of the Use of J Hooks with Tube Lures/Jigs when Trolling for Striped Bass

Dear Mr. Borden:

On behalf of recreational striped bass anglers, the for hire fleet and associations that represent them, detailed in this correspondence from Maine to New Jersey, we respectfully ask you to reconsider the recent decision to eliminate all exemptions from the Addendum VI requirement for anglers using in-line circle hooks with natural bait when targeting striped bass. Specifically, we seek to maintain an exemption from this requirement for the trolling of a tube-and-worm rig and jig with a J hook for catching striped bass that has a negligible chance of deep-hooking fish. A tube and worm exemption was proposed by the states of Massachusetts and Maine, which have both been proactive in requiring the use of circle hooks with natural bait prior to the requirements of Addendum VI.

We are fully supportive of the intent of Addendum VI's circle hook provision, which is to reduce the post-release mortality of striped bass in the recreational fishery. We understand the concern of some Striped Bass Board members that providing any exemptions to the circle hook requirement could provide loopholes in certain circumstance that could be exploited by anglers. That being said, we believe that a narrowly-constructed, clearly articulated exemption for the trolling of a tube-and-worm and jig is in the spirit of Addendum VI (reducing discard mortality) while allowing anglers to continue employing a traditional and effective technique.

The tube-and-worm rig consists of a long latex or rubber tube with a single J-hook protruding from the end, which is baited with a large seaworm/sand worm (*Nereis virens*). The rig is trolled slowly behind a moving vessel with the reel engaged (i.e., not in free-spool). Because the boat is moving, the reel is engaged, and the latex/rubber of the tube extends to or beyond the hook gap, the tube-and-worm rig rarely results in the gut-hooking of striped bass.¹ One can conclude the

¹ Daniel McKiernan, Director, MA DMF. MA Implementation Plan for Striped Bass Addendum VI Circle Hook Requirement. Memorandum to Max Appelman, ASMFC Striped Bass Plan Coordinator, dated August 14, 2020.

same utilizing the similar trolling method with jig and associated J hook that generally does not result in the gut-hooking of striped bass.

The use of a J hook when trolling with artificial lures (tube and worm/eel skin, jigs with pork rinds, etc.) with live or dead bait is a reliable method to reduce post release mortality, in most cases the striped bass is hooked in the jaw and not deep in the throat or gut. Furthermore, a circle hook used with trolled a tube or jig will not effectively catch fish because circle hooks are not designed for this. The use of these methods with a J hook is effective, straightforward, and reduces post release mortality.

It should be noted the NMFS HMS FMP requires, when fishing for shortfin mako, the use of circle hooks with an exemption for artificial lures or flies. We recommend you refer to this measure as well as the State of Maine requirements noted below for use of tube and worm with a J hook as a baseline or criteria to utilize when fishing for striped bass.

Our recreational fishery suffers from a reduction in younger anglers entering the fishery. These simple, straight-forward trolling methods often result in the first fish caught by young anglers, and to limit such will negatively impact the entrance of young anglers into the fishery. In addition, conservation measures that do not make sense to fisherman or do not effectively reduce post release mortality could diminish buy-in for new regulations and reduce compliance with the circle hook mandate. Ultimately, many recreational fishers want to do the right thing to help striped bass, but we feel these measures will cause more harm than good.

The ban on use of worms while striped bass fishing will have a negative economic impact on coastal tackle shops and worm diggers from Maine. Many for hire-boats spend \$2,000 per year annually on worms (tube and worm) purchased from their local tackle shops. Mr. Peter Santini of Fishing Finatics, a tackle shop in Everett, MA, purchases more wholesale Maine seaworms than any other shop in the Boston area. He told us that 75% of the worms he sells annually is for tube and worm rigs, along with thousands of dollars' worth of tubes. That's a big part of his market, which is now closed off to him, and that reduction, multiplied by all the coastal tackle shops in the Northeast, will certainly negatively impact the Maine worm diggers as well. In addition, when anglers enter a tackle shop to purchase worms, they often buy other tackle items as well. To remove such will result in decreased sales and/or revenue. The impact to tackle manufacturers, tackle shops and the hard working worm diggers from Maine will be significant, especially during these tough economic times as a result of COVID.

To allow for the use of the techniques noted above, we propose a very specific coast-wide exemption that allows the use of the tube-and-worm rig with a J-hook when trolling and using natural bait. If a coast-wide exemption is not feasible, we would ask that individual states be allowed to include such an exemption in their regulations. We support the wording that Maine's Department of Marine Resources has used for tube and worm, below:

- It is unlawful to use any hook other than a non-offset circle hook when using bait.
- **Exception:**

- Rubber or latex tube lures may be used without a circle hook as long as they are a minimum of 8 inches long and have a single hook protruding from the end portion of the tubing where bait may be attached.²

We further request that jigs (lead-head style, dressed with natural or synthetic hair) also be exempted from the circle hook requirement, as long as the jig has a single fixed hook protruding from the end portion where bait may be attached. Exempting pork rind attached to a trolled lure should also be considered.

As the Striped Bass Management Board prepares to release a Public Information Document as part of the Amendment 7 process, stakeholder engagement will be critical. Implementation of an exemption to the Addendum VI circle hook requirement for the tube-and-worm rig and jig with a J hook will demonstrate to the recreational community the Board's willingness to listen to and work with anglers to promote striped bass conservation while avoiding undue burdens. Such a demonstration of good faith will only serve to benefit both fishermen and the resource as we collectively work to improve striped bass management and rebuild the stock. Based on the lines of evidence detailed above, we hope you will reconsider and retract the ban on use of J hooks with live or dead bait while trolling via tube and worm or a jig when fishing for striped bass.

Thank you for your consideration of this important matter.

Very truly yours,

Mike Pierdinock

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² Maine Department of Marine Resources. 2020 Maine Striped Bass Regulations.
https://www.maine.gov/dmr/recreational-fishing/regs-tips/documents/2020_stripped_bass_regs.pdf.

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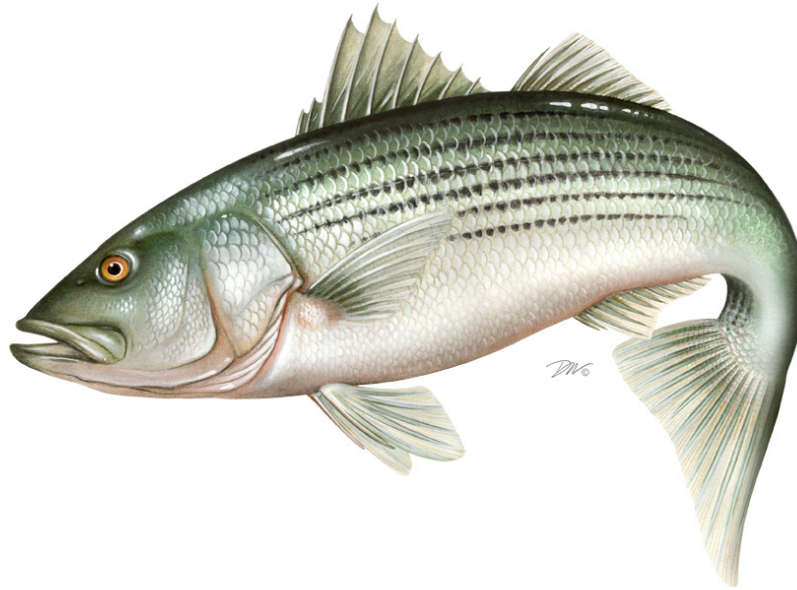
Capt. John Lewis, President
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Atlantic States Marine Fisheries Commission

PUBLIC INFORMATION DOCUMENT

**For Amendment 7 to the
Interstate Fishery Management Plan For**

ATLANTIC STRIPED BASS



February 2021

Sustainable and Cooperative Management of Atlantic Coastal Fisheries



This draft document was developed for Management Board review and discussion. This document is not intended to solicit public comment as part of the Commission/State formal public input process. Comments on this draft document may be given at the appropriate time on the agenda during the scheduled meeting. If approved, a public comment period will be established to solicit input on the issues contained in this document.

The Atlantic States Marine Fisheries Commission seeks your input on the initiation of Amendment 7 to the Atlantic Striped Bass Fishery Management Plan

The public is encouraged to submit comments regarding this document during the public comment period. Comments must be received **by 5:00 PM (EST) on Month Day, 2021**. Regardless of when they were sent, comments received after that time will not be included in the official record. The Atlantic Striped Bass Management Board will consider public comment on this document when developing the first draft of Amendment 7.

You may submit public comment in one or more of the following ways:

1. Attend public hearings held in your state or jurisdiction, if applicable.
2. Refer comments to your state's members on the Atlantic Striped Bass Board or Atlantic Striped Bass Advisory Panel, if applicable.
3. Mail, fax, or email written comments to the following address:

Emilie Franke
Fishery Management Plan Coordinator
Atlantic States Marine Fisheries Commission
1050 North Highland Street, Suite 200A-N
Arlington, Virginia 22201
Fax: 703.842.0741
comments@asmfc.org (subject line: Striped Bass PID)

If you have any questions please call Emilie Franke at 703.842.0740.

**YOUR
COMMENTS ARE
INVITED**

The Atlantic States Marine Fisheries Commission (Commission) is developing an amendment to revise the Interstate Fishery Management Plan (FMP) for Atlantic striped bass. The Commission is responsible for developing fishery management plans for Atlantic striped bass which are based on the best available science and promote the conservation of the stock throughout its range. The states and jurisdictions of Maine through North Carolina, including Pennsylvania, the District of Columbia, and the Potomac River Fisheries Commission, participate in the management of this species as part of the Commission's Atlantic Striped Bass Management Board (Board).

This is your opportunity to inform the Commission about changes observed in the fishery, actions you feel should or should not be taken in terms of management, regulation, enforcement, and research, and any other concerns you have about the resource or the fishery, as well as the reasons for your concerns.

**WHY IS THE
ASMFC
PROPOSING THIS
ACTION?**

The last time a new plan amendment to the Atlantic Striped Bass FMP was adopted was in 2003 (Amendment 6). Since then, the status and understanding of the striped bass stock and fishery has changed considerably which raises concern that the current management program no longer reflects current fishery needs and priorities. The results of the 2018 Benchmark Stock Assessment in particular led the Board to discuss a number of significant issues facing striped bass management. Consequently, in August 2020, the Board passed the following motion:

“Move to initiate an Amendment to the Atlantic Striped Bass Fishery Management Plan focused on the following management topics: (1) fishery goals and objectives; (2) stock rebuilding/timeframe; (3) management triggers; (4) biological reference points; (5) regional management (recreational measures, coastal and producer areas, regional reference points); (6) recreational discard mortality; (7) conservation equivalency; (8) recreational accountability; and (9) coastal commercial quota allocation.

Each of these topics will be presented in a Public Information Document in order to solicit stakeholder comment focused on prioritizing the importance of each topic for continued development and inclusion in the Amendment.”

**WHAT IS THE
PROCESS FOR
DEVELOPING AN
AMENDMENT?**

The publication of this document is the first step of the Commission's formal amendment process. Following this initial phase of information gathering and public comment, the Commission will evaluate potential management alternatives. The Board will select the range of issues to be addressed through this Amendment, and identify potential management options; other issues not addressed here can be addressed through a subsequent management

document. The Commission will then develop Draft Amendment 7, incorporating the identified management options, for public review. Following that review and public comment, the Commission will specify the management measures to be included in Amendment 7, as well as a timeline for implementation. In addition to issues identified in this Public Information Document (PID), Draft Amendment 7 may include issues identified during the public comment period of the PID.

The timeline for completion of Amendment 7 is as follows. Please note that the timeline is subject to change per the direction of the Board:

February 2021	Board reviews Draft PID and considers approving for public comment <i>Current Step</i>
February - April 2021	Public comment on PID
May 2021	Board reviews public comment; directs Plan Development Team to develop Draft Amendment
May - September 2021	Preparation of Draft Amendment with input from Technical Committee and Advisory Panel
October 2021	Board reviews Draft Amendment and considers approving for public comment
November 2021- January 2022	Public comment on Draft Amendment
February 2022	Board reviews public comment and selects final measures for the Amendment; Policy Board and Commission approve the Amendment

WHAT IS THE PURPOSE OF THIS DOCUMENT?

The purpose of this document is to inform the public of the Commission’s intent to gather information concerning Atlantic striped bass and to provide an opportunity for the public to identify major issues and alternatives relative to the management of this species. Input received at the start of the amendment process can have a major influence in the final outcome of the amendment. This document is intended to solicit observations and suggestions from commercial and recreational anglers, the public, and other interested parties, as well as any supporting documentation and additional data sources.

To facilitate public input, this document provides a broad overview of the issues already identified for consideration in the amendment; background information on the Atlantic striped bass population, fisheries, and management; and a series of questions for the public to consider about the management of the

species. In general, the primary question on which the Commission is seeking public comment is: **“How would you like management of the Atlantic striped bass fishery to look in the future?”**

**WHAT
ISSUES WILL
BE
ADDRESSED?**

The primary issues considered in the PID are:

1. Fishery Goals and Objectives
2. Biological Reference Points
3. Management Triggers
4. Stock Rebuilding Targets and Schedule
5. Regional Management
6. Management Program Equivalency (Conservation Equivalency)
7. Recreational Release Mortality
8. Recreational Accountability
9. Coastal Commercial Allocation
10. Any other issues concerning the management of Atlantic striped bass

**ISSUE 1:
Fishery Goals
and Objectives**

Background: The current goal and objectives of the Atlantic Striped Bass FMP were established in 2003 in Amendment 6. They are:

GOAL

“To perpetuate, through cooperative interstate fishery management, migratory stocks of striped bass; to allow commercial and recreational fisheries consistent with the long-term maintenance of a broad age structure, a self-sustaining spawning stock; and also to provide for the restoration and maintenance of their essential habitat.”

OBJECTIVES

- Manage striped bass fisheries under a control rule designed to maintain stock size at or above the target female spawning stock biomass level and a level of fishing mortality at or below the target exploitation rate.
- Manage fishing mortality to maintain an age structure that provides adequate spawning potential to sustain long-term abundance of striped bass populations.
- Provide a management plan that strives, to the extent practical, to maintain coastwide consistency of implemented measures, while allowing the States defined flexibility to implement alternative strategies that accomplish the objectives of the FMP.
- Foster quality and economically viable recreational, for-hire, and commercial fisheries.
- Maximize cost effectiveness of current information gathering and prioritize state obligations in order to minimize costs of monitoring and management.

- Adopt a long-term management regime that minimizes or eliminates the need to make annual changes or modifications to management measures.
- Establish a fishing mortality target that will result in a net increase in the abundance (pounds) of age 15 and older striped bass in the population, relative to the 2000 estimate.

Statement of the Problem: The status and understanding of the striped bass stock and fishery has changed considerably since implementation of Amendment 6 in 2003. As a result, both managers and stakeholders have expressed concern that the existing goals and objectives of this management program may be outdated, and no longer fully reflect current fishery needs and priorities. Some of the objectives may need to be refined, while other priorities may be missing entirely. The Board identified management stability, flexibility, and regulatory consistency as guiding themes for future striped bass management, and discussed the desire to balance these principles to the extent practical.

Public Comment Questions: Are the existing goal and objectives of Amendment 6 still in line with current fishery needs and priorities? Which specific priorities (if any) are missing from the existing goal or objectives? Which of the existing objectives (if any) should be removed or refined? Do the existing objectives balance the need for management stability, flexibility, and regulatory consistency? Which of these three themes do you value most?

**ISSUE 2:
Biological
Reference
Points**

Background: Biological reference points (BRPs) are used in fisheries management to measure stock status and evaluate management plan effectiveness. The current BRPs for striped bass are coastwide in nature and based on historical stock performance, and given in terms of threshold and target levels of female spawning stock biomass (SSB) and fishing mortality (F). Specifically, the 1995 estimate of female SSB is used as the SSB threshold, with the SSB target set at 125% of the threshold. When female SSB is below the threshold level, the stock is declared overfished. The F target and threshold are the values of F estimated to achieve the respective SSB target and threshold over the long-term. When F is above the threshold, the stock is experiencing overfishing. The current SSB and F target and threshold values are based on results of the 2018 Benchmark Stock Assessment, which represents the best available science on the coastwide stock (NEFSC 2018a and 2018b; Table 1). The FMP manages towards the target levels, providing an additional buffer to help achieve the management plan's objectives.

Table 1. Current female spawning stock biomass (SSB) and fishing mortality (F) target and threshold reference points for Atlantic striped bass based on results of the 2018 benchmark assessment.

	Female SSB	F
Threshold	SSB ₁₉₉₅ = 91,436 mt (202 million lbs)	0.24
Target	SSB _{threshold} X 1.25 = 114,295 mt (252 million lbs)	0.20

The female SSB threshold and target were first implemented through Amendment 6 in 2003. Model-based reference points, such as the biomass needed to achieve maximum sustainable yield (MSY), were uncertain, resulting in reliance on empirical-based reference points. The SSB in 1995 was selected as the threshold because that was the year the Commission declared the stock recovered from its depleted status in the 1980s, and many desirable stock characteristics were achieved, such as an expanded age structure. The additional 25% buffer for the target was an ad hoc decision to account for uncertainty in the SSB estimates, and also produced a target value comparable to those observed prior to the stock's collapse in the 1970's. The current F reference points were implemented in 2014 through Addendum IV to Amendment 6 and are linked to the SSB reference points. The previous F reference points were calculated independently of the SSB reference points and were based on MSY. The 2013 Benchmark Stock Assessment moved away from that approach primarily due to uncertainty in the F_{MSY} estimates because of difficulty fitting a stock-recruit relationship and the inconsistency between the F_{MSY} reference point and the empirical SSB reference points.

While the definitions for the SSB threshold and target have remained unchanged since 2003, the estimated female SSB time series (values and trajectories) has changed with each new stock assessment. Those changes are often more pronounced in a benchmark assessment as new or improved data and advancements in population modeling are incorporated. As a result, the female SSB reference point values, and the Commission's understanding of stock performance has changed over time.

Figure 1 shows results of the last four benchmark stock assessments for striped bass (2002, 2007, 2013, and 2018 benchmarks) which demonstrate how the Commission's understanding of stock condition in 1995 has changed over time. Note that in 2003, when the SSB reference points were established, the most recent assessment information indicated the stock was above the SSB target. Also, while the general pattern of SSB is consistent across the assessments, the magnitude of the estimates and trajectories have changed. For example, the 2007 and 2013 benchmark assessments indicated female SSB was above the SSB target for a period of time during the early 2000s. This fits our

understanding of striped bass population dynamics, as the population was considered to be at a historically high level during that time period, but the 2018 benchmark shows the SSB target has not been reached at any point during the 1982-2017 time series. It is worth noting, however, the 2018 benchmark also indicates F has consistently exceeded the F associated with achieving the SSB target since 1996 (Figure 2). Given the 2018 benchmark assessment found overfishing was occurring and the SSB was below the target even during those years that the striped bass population was at a historically high level, the current reference points may be unattainable.

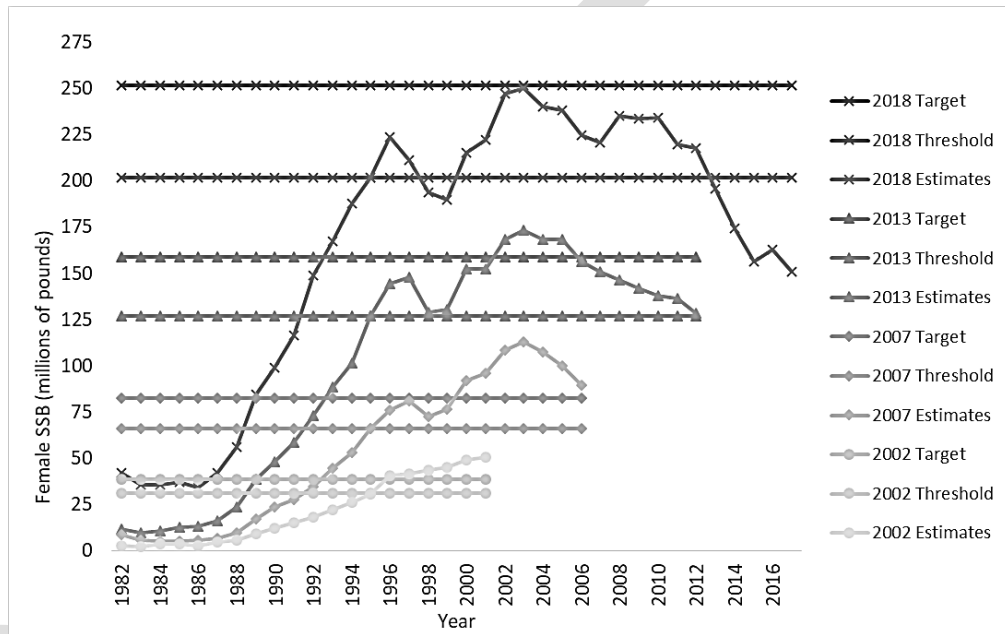


Figure 1. Historical perspective of Atlantic striped bass female spawning stock biomass (SSB) estimates and resulting SSB target and threshold since implementation of Amendment 6 in 2003. The SSB threshold and target are based on the estimate of female SSB in 1995 which has changed over time with improved data and modeling techniques. Source: ASMFC.

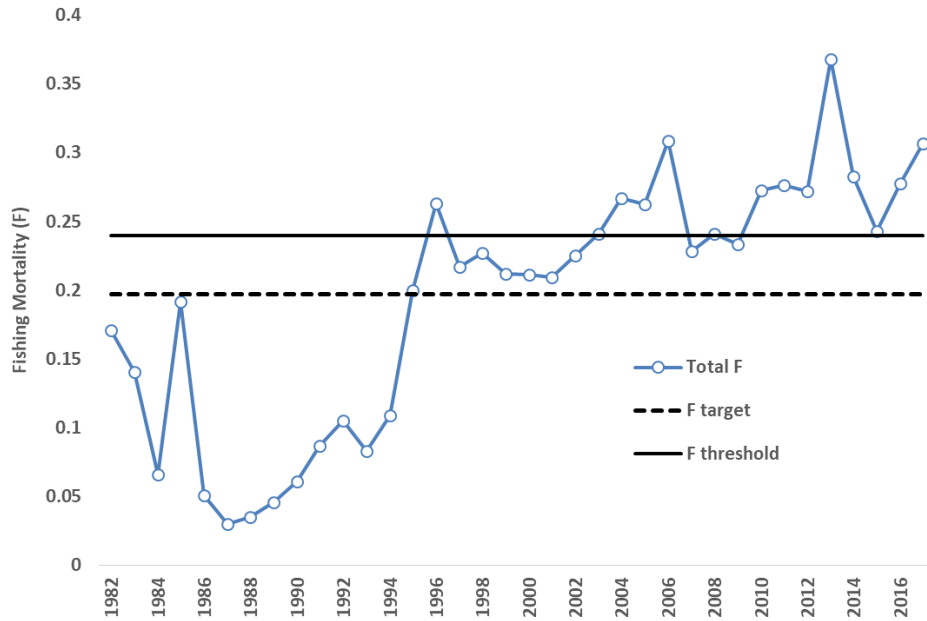


Figure 2. Current estimates of fishing mortality (F) relative to the F target and threshold, 1982-2017. Source: NEFSC 2018a.

Potential alternatives to the current reference points are restricted by data and modeling limitations. Unfortunately, the statistical-catch-at-age (SCAA) model currently used in striped bass stock assessment is unable to produce reasonable estimates for model-based reference points, such as MSY or SPR (spawning potential ratio). The Technical Committee (TC) has made considerable progress on a two-stock SCAA model which may be able to produce reasonable SPR-based reference points in the future, but the model needs more work and is not available for management use at this time. However, other empirical-based reference points could be considered, such as the estimate of SSB in a year other than 1995 as the SSB threshold, or a percentage other than 125% for the SSB target. For example, the TC discussed 1993 as a possible alternative proxy year because SSB was lower than in 1995 but still produced a strong year-class (Figure 3).

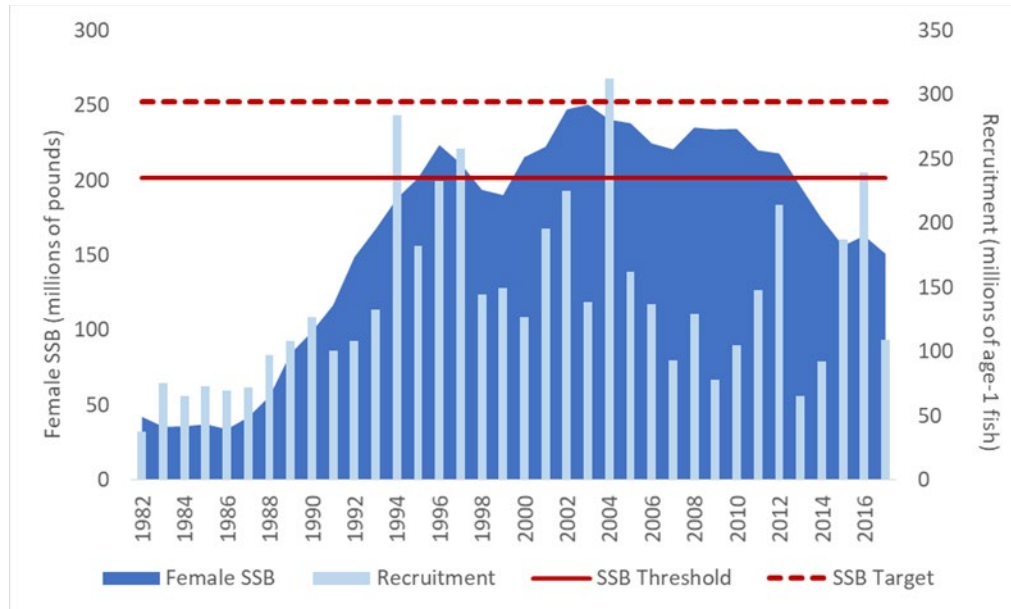


Figure 3. Current estimates of female spawning stock biomass (SSB) relative to the SSB target and threshold, and recruitment (age-1 fish), 1982-2017. The 1994 recruitment estimate, which represents the 1993 year-class, was the first large recruitment event in the time series. Source: NEFSC 2018a.

The Atlantic Striped Bass FMP has also managed specific areas of the fishery with different F rates (i.e., the Chesapeake Bay, and the Albemarle Sound/Roanoke River (A/R) management area in North Carolina), although these F rates were not used to determine overall stock status and are not considered BRPs in the context of this section. The Board has expressed interest in establishing separate reference points for the primary stocks that contribute to the coastwide migratory population, but the current SCAA model does not allow for this. The two-stock SCAA model that is under development has the potential to produce a set of reference points for the Chesapeake Bay stock and for the ocean region (which includes the Delaware Bay/Hudson River stock complex), but this remains a long-term objective. However, the current SCAA model does separate fishery removals into two fleets or regions, and these fleet components could be used to explore regional management programs which is discussed in Issue 5: Regional Management (page 13).

Statement of the Problem: It's approaching two decades since the 1995 estimate of female SSB was selected as the basis for BRPs for striped bass. However, improved data and advancements in assessment modeling have changed our understanding of historical stock performance since the stock was declared restored. This is an appropriate time to revisit the BRPs to ensure they are reliable indicators of stock performance and are properly aligned with the FMP's goal and objectives.

Public Comment Questions: Is the 1995 estimate of female SSB still an appropriate benchmark for determining stock status? Is there a better empirical reference year or other empirical approach that should be considered? Is a 25% buffer appropriate for the SSB target? Should the Board prioritize development of model-based reference points and/or stock-specific reference points for the Chesapeake Bay and other stock components? What stock characteristics (abundance of large fish available to anglers, diverse age structure, etc.) should the BRPs attempt to achieve to balance the needs of diverse striped bass fisheries and the state of the resource?

**ISSUE 3:
Management
Triggers**

&

**ISSUE 4:
Stock Rebuilding
Target and
Schedule**

Background: Amendment 6 includes a series of management triggers to prevent overfishing the striped bass resource. The triggers are based on the BRPs and juvenile recruitment indices, and are paraphrased below. Management measures implemented by the Board are to be held in place for at least three years, unless a trigger or threshold is violated (although CE has allowed for exceptions to this 3-year timeframe; see Issue 6 on page 15). Upon reaching any (or all) of these triggers, the Board is required to modify the management program to ensure the goal and objectives of Amendment 6 are achieved.

Management triggers established in Amendment 6 are:

- 1) If the F threshold is exceeded in any year, the striped bass management program must be adjusted to reduce the F to a level that is at or below the target within one year.
- 2) If female SSB falls below the threshold, the striped bass management program must be adjusted to rebuild the biomass to the target level within an established timeframe [not to exceed 10-years].
- 3) If the F target is exceeded in two consecutive years and the female SSB falls below the target within either of those years, the striped bass management program must be adjusted to reduce the F to a level that is at or below the target within one year.
- 4) If female SSB falls below the target for two consecutive years and the fishing mortality rate exceeds the target in either of those years, the striped bass management program must be adjusted to rebuild the biomass to a level that is at or above the target within an established timeframe [not to exceed 10-years].
- 5) If any Juvenile Abundance Index shows recruitment failure (i.e., an index value lower than 75% of all other values in the dataset) for three consecutive years, then the Board will review the cause of recruitment failure (e.g., fishing mortality, environmental conditions, and disease) and determine the appropriate management action.

The BRP-based management triggers require action on different timelines. When the F-based triggers are met, corrective action is required quickly, as management action can reduce F immediately by reducing total removals. When the SSB-based triggers are met, changes to the management program can occur gradually over a long period of time (up to 10-years); this is in recognition of the fact that striped bass are slow to mature, with 100% of females reaching maturity by age 9, and as a result, the impact of management action on SSB will not be fully realized until the protected age classes are mature. This also provides stability for the fishery while rebuilding the stock. The latest science also indicates that the SSB target has never been reached which raises questions that it may be an unreasonably high management target given current objects for fishery performance and changing or altered ecosystem conditions (e.g., climate change, and changes in other predator and prey population abundance). Meanwhile, the recruitment-based trigger is evaluated on a 3-year cycle and has not been triggered since it was established, even though the stock experienced a period of variable, but below average recruitment from about 2005-2014 which contributed to stock declines in recent years.

Of note, the BRP-based management triggers are based on the most recent estimate of F and/or SSB. While significant changes in SSB tend to occur slowly over time due to the biology of the species (i.e., long lived and late to mature), F is a measure of fishing pressure which is variable from year-to-year. As a result, the Board is sometimes criticized for having 'knee-jerk' reactions when responding to a single point estimate of F. Additionally, development of both short- and long-term rebuilding programs are informed by simulations of stock performance in the future based on assumptions of F, recruitment, and other variables. As a result, these stock projections are inherently uncertain, particularly the further out they project.

Statement of the Problem: The management triggers are intended to keep the Board accountable and were developed at a time when the stock was thought to be at historic high abundance and well above the SSB target. However, as perceptions of stock status and fishery performance have changed, shortfalls with how the management triggers are designed have emerged. When SSB is below the target level, the variable nature of F can result in a continued need to for management action. Additionally, the shorter timetables for corrective action are in conflict with the desire for management stability, and the use of point estimates introduces an inherent level of uncertainty in decision making. Furthermore, the Board is sometimes criticized for considering changes to the management program before the stock has a chance to respond to the most recent set of management changes. Lastly, the observed long period of below average recruitment which contributed to recent declines in biomass has raised

questions about the recruitment-based trigger and whether it is designed appropriately.

Public Comment Questions: Which management triggers (if any) should be revisited? What is an appropriate timeframe to respond to overfishing or overfished determinations? Should the F-based triggers account for annual variability in fishing mortality? What is more important, rebuilding the stock quickly, or mitigating impacts to fisheries? In other words, do you prefer significant changes to rebuild the stock quickly, or smaller incremental changes over time to gradually rebuild the stock?

**ISSUE 5:
Regional
Management**

Background: The Atlantic striped bass population is assessed and managed on a coastwide basis. However, the population is actually comprised of several stocks each with unique contributions to the coastwide population. Striped bass fisheries are conducted very differently throughout the species range due to the size and availability of fish in those areas (and other cultural differences), although there are some regional similarities.

To address this, previous striped bass management programs have managed specific regions of the fishery differently. Under Amendment 5 (1995), fisheries in the Chesapeake Bay and A/R were managed under a lower F rate than the rest of the coast which allowed these regions to implement different harvest strategies including size limits, bag limits, and catch quotas. Fisheries included in the ocean region, like in the Delaware Bay and River, and the Hudson River, were also able to implement lower size limits during certain seasons, although this was accomplished through management program equivalency (see Issue 6 on page 15). This regional management approach for the Chesapeake Bay and the A/R was maintained in Amendment 6. However, with implementation of Addendum IV to Amendment 6 in 2015, the entire striped bass population is once again managed under the same F rate (i.e., the coastwide F reference points). Addendum IV also formally defers management of the A/R stock to the state of North Carolina (under the auspices of the Commission) based on evidence that the stock contributes minimally to the coastwide population.

Although the coastwide F reference points include the effects of harvesting smaller striped bass in the Chesapeake Bay (and in other areas like the Delaware Bay and Hudson River), they do not reflect the heavily male-skewed sex ratio in the Chesapeake Bay catch. During the 2018 benchmark assessment, the current single-stock SCAA model was modified into a competing two-stock SCAA model; a Chesapeake Bay stock and a mixed ocean stock which included all other stock components of the population. The intent of the two-stock model approach was to develop separate reference points for the Chesapeake Bay stock and the ocean region (which includes the Delaware Bay/Hudson River

stock complex), however, this model requires further testing and is not ready for management at this time.

There are stock assessment tools available now that the Board could use to pursue a different management program for the Chesapeake Bay region. The current single-stock SCAA model separates fishery removals into an ocean fleet and a Chesapeake Bay fleet, and these fleet components can be used to explore different management programs for the two regions. This approach would be unique in the Commission framework and would raise a number of questions about implementation. In this scenario, the F target and threshold would be set for the entire coastwide stock complex, and the Chesapeake Bay region and the ocean region would be allocated a proportion of the overall F to manage towards. With further model development, additional regions could be added. The Board would decide how to allocate total F to each region, which could be based on historical performance of each fishery or other management objectives. The Board would also have to decide how to implement accountability for each region. Currently, if total removals have to be reduced to bring the overall coastwide F down to the F target, both regions take an equal percent cut. With a regional F management program, the reduction could be based on whether a region has exceeded its allocation of F and by how much. The Board would also have to consider whether a region would have to reduce harvest if it exceeds its regional F allocation, but the overall F for the stock was not exceeded.

Statement of the Problem: An ongoing objective of the Atlantic Striped Bass FMP is to provide regional flexibility while maintaining coastwide regulatory consistency to the extent practical. Previous striped bass management regimes have allowed specific regions to manage their fisheries independently (under a different F rate than the rest of the coast) to balance these competing priorities. While the development of stock-specific reference points has been identified as a research priority, there are tools available now that the Board could use to pursue different management programs for the Chesapeake Bay and ocean regions. However, the appropriate allocation of F between these two regions is ultimately a policy decision, and must be considered carefully along with other management implications.

Public Comment Questions: Should separate regional management programs be pursued for the Chesapeake Bay and the ocean region, which includes the Delaware Bay/Hudson River stock complex? If so, how should the Board determine the appropriate allocation of F between the two regions? Should the Board consider any other areas (e.g. Delaware River or Hudson River) for separate regional management programs? If so, what level of data should support additional regional separation? Should development of similar

assessment tools be prioritized to support regional management programs for other areas of the coast?

ISSUE 6
Management
Program
Equivalency
(Conservation
Equivalency)

Background: Management program equivalency (hereafter referred to as ‘conservation equivalency’ or CE) has been an explicit component of the striped bass management program since the stock was declared rebuilt in 1995. The Atlantic Striped Bass FMP (and Commission’s ISFMP Charter) employs CE to provide states and jurisdictions (hereafter states) flexibility to develop alternative regulations that achieve the same quantified level of conservation for the resource as the FMP standards. Allowing states to tailor their management programs in this way avoids the unequal impacts that result from implementing one set of management measures for all states.

The striped bass population is managed on a coastwide basis, although the fisheries are executed very differently due to size and availability of fish and a wide range of fishing cultures and priorities. This makes it difficult to develop a ‘one-size-fits-all’ regulation for the entire fishery. Early striped bass CE programs addressed areas where only a portion of the stock was available, e.g. areas were approved to have smaller size limits because large fish were not available during the summer. The primary motivation for more recent CE programs has been for states to propose alternative measures to ameliorate social and economic impacts of actions to reduce harvest. States typically pursue CE to adjust commercial size limits and quotas, or to implement different recreational bag limits, size limits, and seasons.

The process and application of CE is detailed in the Commission’s [Conservation Equivalency Policy and Technical Guidance Document](#). To implement CE, states must develop a CE proposal demonstrating, through quantitative analysis, how the proposed regulations are equivalent to the FMP standards. Guidance regarding data use and methods that states should follow when developing CE proposals are typically provided by the TC, while the Board determines what constitutes equivalency on an ad hoc basis (e.g., the level of harvest (or reduction) that proposed measures must achieve). All CE proposals are subject to technical review and Board approval before the state can implement a CE program, as well as a post-implementation review of effectiveness. However, it is challenging to evaluate the effectiveness or success of CE programs once implemented because of the difficulty in separating the effects of the CE program from other factors like angler behavior and availability of fish that determine the amount of catch and release (see Issue 7 and Issue 8 on page 16 and 19, respectively) that occurs. As a result, CE programs, once implemented, typically become the new baseline for future regulatory changes for that state and fishery. Furthermore, CE proposals for the recreational fishery generally rely on state-level catch and effort data estimated by the Marine Recreational

Information Program (MRIP) which are less precise than regional or coast-wide estimates.

The fundamental conflict between allowing flexibility through CE and achieving regulatory consistency among states escalated recently with the implementation of Addendum VI. For the recreational fishery, the Addendum implemented a 1-fish bag limit and a 28 inch to less than 35 inch slot limit for the ocean region and a 1-fish bag limit and an 18 inch minimum size limit for the Chesapeake Bay in order to reduce recreational removals by 18% coastwide. However, at the state-level, some states were predicted to reduce removals by more than 18% (and some by less) due to varying contributions of each state's fishery to the total, and states needed to only demonstrate an 18% reduction at the state-level in CE proposals, which could result in falling short of overall target reductions. Also, majority of states pursued CE and submitted a very large number of options for TC review, which raised questions for additional guidelines regarding the submission of CE proposals.

Statement of the Problem: There is an essential tension between managing the striped bass fishery on a coastwide basis while allowing states to deviate from the coastwide standard, and thus creating regulatory inconsistency among states and within shared waterbodies. However, there is perceived value in allowing states to implement alternative regulations tailored to the needs of their fisheries, even though it is difficult to evaluate the effectiveness of CE programs once implemented. Both CE programs and coastwide measures have variable levels of effectiveness. A CE program may provide a higher level of conservation than the coastwide measure in a state. However, it is difficult to determine if a coastwide measure or a CE program has performed better or worse due to the challenge of separating the performance of the measure and outside variables, particularly on a state level when more than one state implements a CE program. There is limited guidance on how and when CE should be pursued, particularly when the stock is overfished and rebuilding is required, and how 'equivalency' is defined.

Public Comment Questions: Should CE be part of the Striped Bass FMP? Should the Board restrict the use of CE based on stock status, data restrictions, differences from neighboring state, and/or any other potential issues? Should the Board provide a strict definition for 'equivalency' (e.g., equal to the level of harvest the fishery would have achieved under the standard measure)? Should more quantitatively rigorous and clearly defined data requirements be required as a pre-requisite for CE proposals to be considered? Should there be limitations to how many CE proposals a state can submit? Should CE be limited to time and areas with unique ecological characteristics (e.g., presence of smaller striped bass)? Given state-level MRIP estimates are often less precise than regional or coastwide estimates, are these data used appropriately to

develop CE proposals? Given the variability in recreational catch and harvest from year-to-year, how do you evaluate effectiveness of CE programs following implementation?

ISSUE 7
Recreational
Release
Mortality

Background: Recreational releases are fish caught and released alive during recreational fishing trips. A proportion of releases die as a result of that fishing interaction, which is referred to as release mortality (or dead releases).

The number of striped bass harvested recreationally, as well as those caught and released alive, are estimated by MRIP. The number of striped bass that die after being caught and released is estimated by multiplying the total number of live releases by an estimated rate of hooking mortality. The stock assessment currently applies a 9% hooking mortality rate to all recreationally released striped bass. This does not mean that every time a fish is released alive it has a 9% chance of dying. Under some conditions, the released fish has a higher or lower probability of dying, but overall, coastwide, it is assumed that 9% of all striped bass released alive die.

This 9% hooking mortality rate estimate is from a study by Diodati and Richards (1996) which took place in a saltwater environment and encompassed a range of variables including hook types, hooking locations, and angler experience levels. The TC conducted a meta-analysis of other striped bass release mortality studies which confirmed that an overall 9% discard mortality rate accounts for the variation in conditions and factors that attribute to release mortality coastwide. Applying this hooking mortality rate to the estimated number of striped bass caught and released from 2015 to 2019 results in an annual average of 2.8 million dead releases per year.

Since 1990, roughly 90% of all striped bass caught recreationally were released alive (Figure 4) either due to cultural preferences (i.e., fishing with the intent to catch and release striped bass) or regulation (e.g., the fish is not of legal size, was caught out of season, or the angler already caught the bag limit).

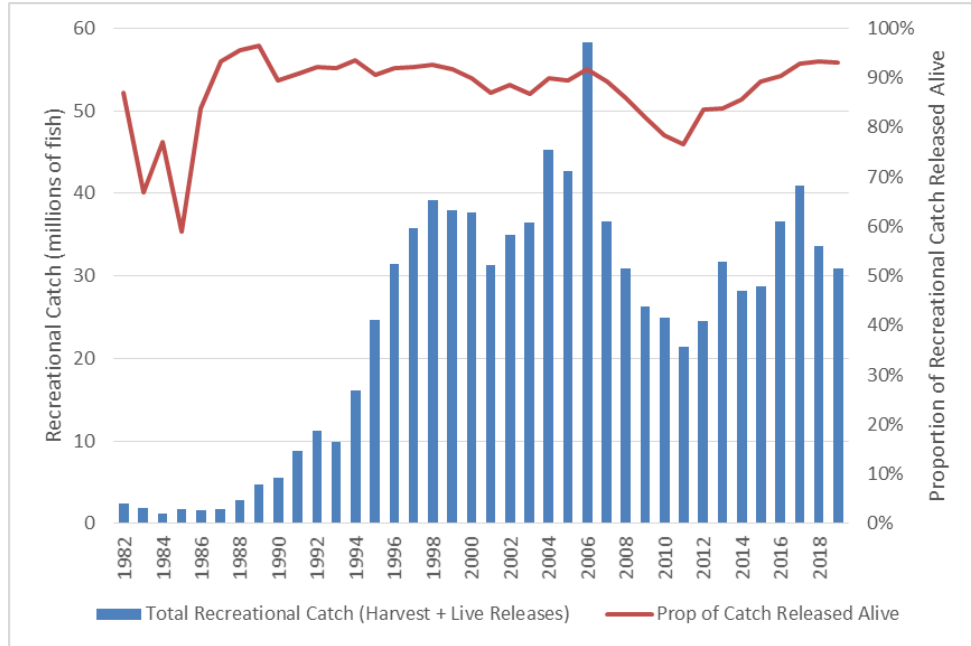


Figure 4. Total recreational catch (harvest + live releases) and the proportion of catch released alive, 1982-2019. Source: MRIP; excludes inshore estimates from A/R in North Carolina.

In 2019, more fish were estimated to have died from catch and release fishing than were harvested by the recreational fishery (2.59 million fish and 2.15 million fish, respectively; Figure 5). Because release mortality accounts for a significant proportion of total fishing mortality, Addendum VI sought to lower the rate at which fish die after being released by requiring the use of non-offset circle hooks when fishing for striped bass with bait (circle hooks have been proven to help reduce rates of gut-hooking when fished correctly). In addition to hook type, studies have shown other factors influence release mortality including environmental conditions (e.g., salinity, air and water temperatures), angler experience, and angler behavior (e.g., how fish are handled). Addendum VI also encourages states to develop education campaigns to increase compliance with circle hook regulations and to encourage responsible angler behavior. If management action is taken to influence where mortality (harvest vs discard) is coming from, managers will have to consider the impacts those actions will have on the fishery. For example, management measures focusing on reducing discards could discourage participation from anglers that value food fish and negatively impacts the industry which caters to those anglers.

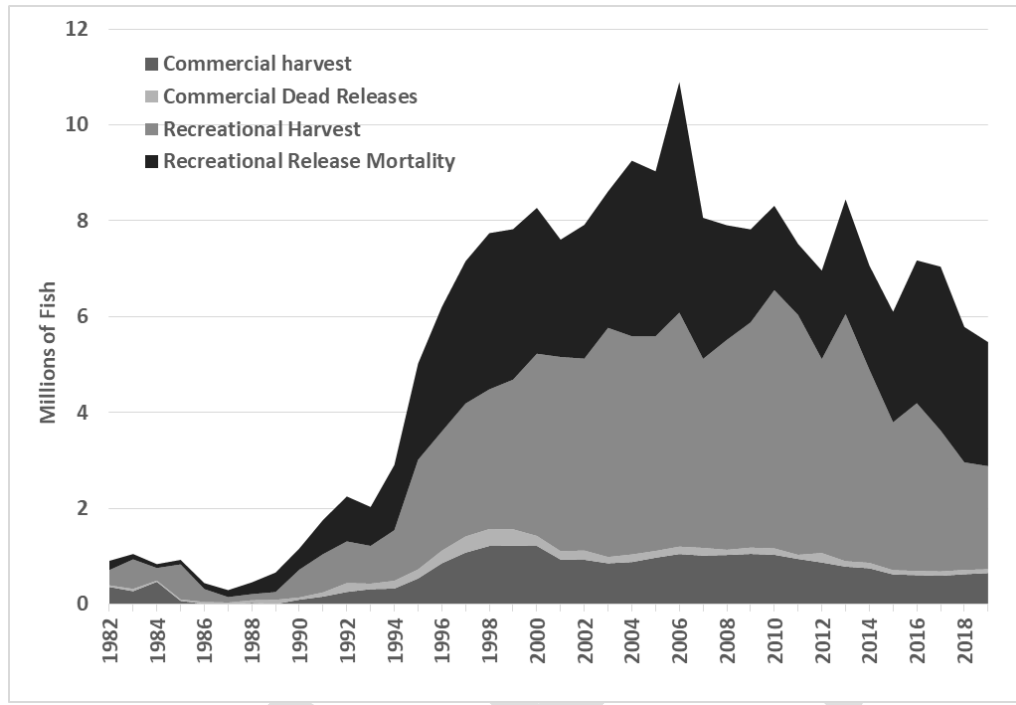


Figure 5. Total striped bass removals by sector in numbers of fish, 1982-2019. Note: Harvest is from ACCSP/MRIP, commercial discards and recreational release mortality is from ASMFC. Estimates exclude inshore harvest from A/R in North Carolina.

Statement of the Problem: Recreational release mortality constitutes such a large component of annual fishing mortality because the striped bass fishery is predominantly recreational and an overwhelming majority of the catch is released alive. The source of mortality does not matter to the health of the stock, as long as the overall fishing mortality is below the threshold. The current management program, which primarily uses bag limits and size limits to control harvest, is not designed to control the catch and release fishery which makes it difficult to control overall fishing mortality. Some stakeholders value the ability to harvest striped bass, either commercially or recreationally, while others value the experience of fishing for striped bass regardless of whether they are able to retain fish. The acceptable proportion of release mortality in total removals should reflect the management objectives for the fishery. Nonetheless, in order to better control all sources of fishing mortality, managers could consider additional gear restrictions to help increase the chance of survival after being released, or additional effort controls (i.e., time and area closures) to reduce the number of trips interacting with striped bass and thus the overall number of striped bass released alive.

Public Comment Questions: Should management focus on reducing the rate at which fish die after being released alive through additional gear restrictions similar to recent actions regarding the use of circle hooks (e.g., banning gaffing or the use

of treble hooks)? Should management focus on reducing effort in the fishery in order to reduce the total number of striped bass caught and released? **Should management consider seasonal closures when environmental conditions are unfavorable to striped bass survival when released?** What are some ways to improve awareness and stewardship of the resource?

ISSUE 8: **Recreational Accountability** Background: The striped bass resource currently supports commercial fisheries in eight jurisdictions and recreational fisheries in 14 jurisdictions along the Atlantic coast. The commercial fishery is regulated through Addendum VI with state-by-state commercial quota allocations and size limits (see Issue 9 on page 20 for more information about the striped bass commercial quota). Many jurisdictions have imposed additional management measures, including time and area closures, and gear restrictions, which are designed to control effort and the size of fish in the catch. Quotas are allocated to the states on an annual basis. If a state exceeds its quota in a given year, the state's quota is reduced by the amount of the overage the following year on a pound-for-pound basis. States are able to monitor the commercial quota closely throughout the year via landings and dealer reports which are typically required on a daily or weekly basis depending on the state. The state closes the fishery when its quota (or a percentage of the quota) is projected to be landed.

Unlike the commercial sector, the recreational striped bass fishery is not managed by a quota system; instead, the fishery is managed with size limits and bag limits (and with seasons in some states). As a result, recreational removals (combined harvest and release mortality) fluctuate from year-to-year with changes in angler effort and changes in the size, age structure, and distribution of the population throughout its range. Additionally, recreational catch and effort data are estimated in two-month intervals, called 'waves', via angler intercept and mail-based surveys administered by MRIP. These estimates are generally available six weeks after the end of a wave, which limits manager's ability to monitor the fishery during the season.

Some recreational fisheries, such as summer flounder and black sea bass, are managed by an annual recreational harvest limit (RHL) due to federal mandates. In the federal process, stock projections, estimates of release mortality, and management uncertainty are considered when setting the RHL for a species. Management measures (e.g., bag limits, size limits, and seasons) are implemented at the state, regional, or coastwide level, to collectively achieve the RHL. If the RHL is projected to be exceeded in a given year, the states may be required to adjust measures prior to that season to address potential for overharvest. Conversely, if recreational removals are projected to be less than the RHL, the states may be allowed to liberalize measures to fully utilize the RHL. While this approach allows for recreational accountability, it can also lead to frequent annual regulatory changes.

Statement of the Problem: The Atlantic Striped Bass FMP does not use an RHL or quota to manage the recreational fishery, which makes it difficult to evaluate whether removals from the sector are too high and to implement accountability measures. The use of RHLs is an effective way to implement accountability, however, recreational removals are inherently variable from year-to-year and MRIP data can have high levels of uncertainty (particularly at the state-level). Furthermore, a quota-based management approach conflicts with the stated objective of management stability for the fishery.

Public Comment Questions: Should the Board consider implementing an RHL for recreational striped bass management? How should an RHL overage or underage be addressed? Should stock status be considered when handling an RHL overage or underage? Are there additional accountability measures the Board should consider for managing the recreational striped bass fishery?

**ISSUE 9:
Coastal
Commercial
Quota
Allocation**

Background: Some species management boards (e.g. the Summer Flounder, Scup, and Black Sea Bass Board) are emphasizing the need to update commercial allocations to reflect recent catch and population distribution data. The Atlantic Striped Bass FMP uses a quota system to manage the commercial fishery. Each state from Maine to North Carolina is allocated a commercial quota in pounds of fish for harvest in the ocean region. A separate Chesapeake Bay commercial quota is allocated to Maryland, Virginia, and the Potomac River Fisheries Commission per the state/jurisdiction's mutual agreement. Quota overages are paid back the following season on a pound-for-pound basis, while the transfer of quota between states and rollover of unused quota from one year to the next is not permitted. Commercial harvest in the A/R is managed separately by the state of North Carolina with Commission oversight.

In general, the coastal commercial quota allocation is based on average landings during 1972-1979 and assuming a 28" minimum size limit. This historical base period was first used for management in 1989 when Amendment 4 required closed seasons in order to reduce commercial harvest to 20% of the base period. State-specific quotas were first implemented under Amendment 5 (1995) when the Commission declared the stock fully rebuilt; states were allocated 70% of their average landings during the 1972-1979 base period. Addendum III to Amendment 5 also granted producer-area status to the Delaware River and Bay, which allowed its commercial quota to be managed under a harvest-control model similar to that used in the Chesapeake Bay. Under Amendment 6 (2003), the quotas were increased to 100% of the base period, with some exceptions (see page 57 of [Amendment 6, Appendix 3](#) for details) and producer-areas were no longer used as a management tool. Of note, Delaware's quota was held at its last producer-area level under Amendment 6. The Amendment 6 quota allocations have since been reduced by 25% in 2015 (Addendum IV) and by an additional 18% in 2020

(Addendum VI) in response to declining stock status (Table 2). Throughout quota management, states have used CE to implement different commercial size limits resulting in changes to respective quota amounts.

Table 2. Changes in base quotas for Atlantic striped bass commercial fisheries by state and region since implementation of Amendment 6 in 2003. All quota amounts are in pounds.

State	Reference Period	Amendment 6		
	1972-1979 Average	Amend 6 † (2003)	Adden IV ° (2015)	Adden VI ^ (2020)
Maine	250	250	188	154
New Hampshire	5,750	5,750	4,313	3,537
Massachusetts	1,159,750	1,159,750	869,813	713,247
Rhode Island	243,625	243,625	182,719	148,889
Connecticut	23,750	23,750	17,813	14,607
New York	1,059,875	1,061,060	795,795	652,552
New Jersey	321,750	321,750	241,313	197,877
Delaware *	169,125	193,447	145,085	118,970
Maryland	131,560	131,560	98,670	74,396
Virginia	184,853	184,853	138,640	113,685
North Carolina	480,480	480,480	360,360	295,495
Maryland (Chesapeake Bay)		Set annually based on fishing mortality rate of F=0.27	3,120,247	2,588,603
PRFC (Chesapeake Bay)				
Virginia (Chesapeake Bay)				

*Quota combined for Delaware Bay and ocean region

†Beginning in 2003, quota reduced through CE for NY (892,293) and MD (126,396). Beginning in 2007, quota reduced through CE for RI (239,963)

°Addendum IV quota changed through CE for MD (90,727), RI (181,572), NJ (215,912)

^Addendum VI quota changed through CE MA (735,240), NY (640,718), NJ (215,912), DE (142,474), MD (ocean: 89,094; bay: 1,445,394), PRFC (572,861), VA (ocean: 125,034; bay: 983,393)

Under Amendment 5, the Chesapeake Bay quota was also based on average landings during the 1972-1979 base period, and split among the three jurisdictions based on their percent contribution to the 1994 harvest: Maryland = 52.359%, PRFC = 15.226%, and Virginia = 32.414%. Under Amendment 6, management in the Chesapeake Bay transitioned to a harvest control model where the commercial quota changed annually with exploitable biomass (Table 2). However, under Addendum IV the Chesapeake Bay quota was made static again and reduced to its 2012 harvest level minus 20.5%. Addendum VI further reduced the Chesapeake Bay commercial quota by 18%, although states pursued CE to lessen the impact of further cuts to the quota.

Unlike the commercial fishery in Chesapeake Bay, the ocean region regularly underutilizes the quota. The ocean quota underage is mainly attributed to designated game fish status in several states including Maine, New Hampshire, Connecticut, and New Jersey which collectively share about 10% of the commercial quota in the ocean region. Furthermore, the underage has increased in recent years since migratory striped bass have not been available to the ocean fishery in North Carolina resulting in zero harvest since 2012 (North Carolina holds 13% of the ocean quota) and raising questions about altered migratory pathways or preferred foraging areas as a result of climate change.

Statement of the Problem: For decades, the striped bass commercial quota allocation has been based on harvest data from the 1970s which may, or may not be an appropriate baseline. Harvester reporting during that time was not required and there is evidence that harvesters would sell fish in other states resulting in further inaccuracies in state estimates. No other ASMFC-managed species is managed with harvest data as old as that used for striped bass allocation. Additionally, the coastal commercial quota is not set annually based on changes in available biomass, but rather state-specific quotas are fixed in terms of pounds of fish until an assessment indicates removals need to be adjusted. Furthermore, within Chesapeake Bay there is an increasing disconnect from the 1970s base period over the years with the continued use of CE and other management actions that have occurred there.

Public Comment Questions: Should this Amendment address commercial allocation or be considered in a future management action? Is the 1972-1979 landings period still an appropriate baseline for the coastal commercial allocation? Should other allocation approaches be considered? Should the coastwide quota be explicitly set on an annual basis, or following an updated stock assessment or benchmark? Should regions with the necessary data be able to use a harvest control rule where commercial quotas are set annually based on exploitable biomass?

Background: The intent of this document is to solicit feedback on a broad range of issues for consideration in the next amendment for Atlantic striped bass.

ISSUE 10:
Other Issues

Stakeholder feedback should generally focus on **“How would you like management of the Atlantic striped bass fishery to look in the future?”**

After reading the above issues, are there any other topics that should be addressed in Amendment 7? Some examples may include:

- Impacts due to climate change, including possible loss of prey due to changing environmental conditions;
- Habitat degradation;
- Limited resources for law enforcement; and

- Research priorities

When providing comment on other management issues, it's important to indicate how the issue can be addressed through Board action.

**BACKGROUND
INFORMATION
ON THE MGMT
& STOCK
STATUS OF
ATLANTIC
STRIPED BASS**

Summary of Fishery Management

Atlantic striped bass (*Morone saxatilis*) have supported valuable commercial and recreational fisheries on the U.S. Atlantic coast for centuries. The Commission coordinates interstate management of the species in state waters (0-3 miles from shore), while management authority in the exclusive economic zone (3-200 miles) lies with NOAA Fisheries. The first Interstate FMP for the species was approved in 1981 in response to declining juvenile recruitment and depressed landings throughout the coast from Maine through North Carolina. The FMP and subsequent amendments and addenda focused on addressing the depleted spawning stock and recruitment failure. Despite these management efforts, the Atlantic striped bass stock continued to decline prompting many states (beginning with Maryland in 1985) to impose a complete harvest moratorium for several years until recruitment improved. State fisheries reopened in 1990 under Amendment 4 which aimed to rebuild the resource rather than maximize yield. The stock was ultimately declared rebuilt in 1995 and as a result, Amendment 5 to the Atlantic Striped Bass FMP was adopted which relaxed both recreational and commercial regulations along the coast.

The Atlantic striped bass fishery is currently managed through Amendment 6 to the FMP, which was implemented in 2003. Amendment 6 modified the BRPs, and established a list of management triggers based on the BRPs and juvenile recruitment. The coastal commercial quotas were restored to 100% of the states' average landings during the 1972-1979 historical base period at a 28" minimum size, with few exceptions (see Issue 9 on page 20). In the recreational fisheries, all states were required to implement a two-fish bag limit with a minimum size limit of 28 inches except for states with approved CE programs (see Issue 6 on page 15). The Chesapeake Bay and A/R regulatory programs were managed by a lower F target than the ocean region, which allowed these jurisdictions to implement separate seasons, harvest caps, and size and bag limits as long as they remain under that F target. No minimum size limit can be less than 18 inches under Amendment 6.

Five addenda to Amendment 6 have been implemented. Addendum I, approved in 2007, recommended research and angler education programs to address bycatch and release mortality. Addendum II, approved in 2010, modified the definition of recruitment failure so that each juvenile abundance index would have a fixed threshold for determining recruitment failure. Addendum III, approved in 2012,

requires all states with a commercial striped bass fishery to implement a uniform commercial harvest tagging program to improve compliance and enforcement.

Addendum IV, approved in 2014, established new coastwide F reference points as recommended by the 2013 benchmark, eliminated the separate F rates used to manage the Chesapeake Bay and A/R regions, and changed commercial and recreational measures to reduce F to the new F target. To achieve this, the Addendum implemented a 25% reduction to coastal commercial quotas, a 1-fish bag limit and 28" minimum size limit in recreational ocean fisheries (equivalent to a 25% reduction in removals), and 20.5% reductions in the Chesapeake Bay commercial and recreational fisheries. Addendum VI, approved in 2019 in response to the 2018 benchmark assessment, implemented additional 18% reductions to fishery removals to end overfishing and again try to reduce F to the target. This required an 18% reduction to all commercial quotas (ocean and Chesapeake Bay), a 1-fish bag limit and 28" to less than 35" slot limit for ocean recreational fisheries, and a 1-fish bag limit and 18" minimum size limit for Chesapeake Bay recreational fisheries beginning in 2020. For 2021, the addendum also requires mandatory use of circle hooks while recreationally fishing with bait. CE was employed by some states to implement alternative recreational or commercial measures from the Addendum IV and Addendum VI standards described above. There is no Addendum V; an action was initiated under this title in 2017 to consider liberalizing regulations, but the action was postponed and ultimately replaced by the development of Addendum VI.

The EEZ has been closed to the harvest, possession, and targeting of striped bass since 1990, with the exception of a defined route to and from Block Island in Rhode Island to allow for the transit of vessels in possession of striped bass legally harvested in adjacent state waters. In addition, an Executive Order issued in 2017 prohibits the sale of striped bass from the EEZ. In 2018, the Consolidated Appropriations Act directed NOAA Fisheries (in consultation with ASMFC) to review the federal moratorium once the 2018 benchmark was completed, and consider lifting the ban, however, there has not been any movement by NOAA on this directive as of late.

Summary of Stock Status

The 2018 Benchmark Stock Assessment for Atlantic striped bass is the latest and best information available on the status of the coastwide striped bass stock for use in fisheries management. The assessment was peer-reviewed at the 66th Northeast Regional Stock Assessment Review Committee (SARC) meeting in November 2018. The accepted assessment model is a forward projecting statistical catch-at-age (SCA) model which uses catch-at-age data and fishery-dependent and -independent survey indices to produce annual estimates of female SSB, F, and recruitment. Notably, the 2018 benchmark was the first assessment for striped bass to use the improved MRIP survey methods to estimate

recreational fishery catches. The new time series of recreational catch estimates is on average 2.3 times higher than the values used in previous stock assessments, resulting in higher estimates of stock size.

The reference points currently used for management are based on stock conditions in 1995, the year the stock was declared rebuilt (see Issue 2 on page 6). The biomass threshold is the level of SSB in 1995, the biomass target is 125% of the threshold, and the F threshold and target are the levels of F projected to achieve the biomass reference points over the long-term, respectively. The specific values of these reference points have been updated after each benchmark stock assessment based on the time series of SSB estimates.

The results of the 2018 benchmark indicate that the Atlantic striped bass stock is overfished and overfishing is occurring. Female SSB in 2017 was estimated at 68,576 metric tons (151 million pounds), which is below the SSB threshold of 91,436 metric tons (202 million pounds) (Figure 3). Female SSB peaked in 2003 and has been declining since then; SSB has been below the threshold level since 2013. Total F in 2017 was estimated at 0.31, which is above the F threshold of 0.24 (Figure 2). Total F has been at or above the threshold in 13 of the last 15 years of the assessment (2003-2017). Striped bass experienced a period of lower recruitment from 2005-2011 (Figure 3) which contributed to the steep decline in SSB that the stock has experienced since 2010. Recruitment was high in 2012, 2015, and 2016 (corresponding to strong 2011, 2014, and 2015 year classes), but estimates of age-1 striped bass were below average in 2013, 2014, and 2017.

Ecological Reference Points

In August 2020, the Atlantic Menhaden Management Board approved the use of ecological reference points (ERP) for menhaden management. The ERP assessment uses the Northwest Atlantic Coastal Shelf Model of Intermediate Complexity for Ecosystems (NWACS-MICE) to develop Atlantic menhaden ERPs that account for Atlantic menhaden's role as a forage fish. NWACS-MICE is an ecosystem model that focuses on four key predator species (striped bass, bluefish, weakfish, and spiny dogfish) and three key prey species (Atlantic menhaden, Atlantic herring, and bay anchovy). These species were chosen because diet data indicate they are top predators of Atlantic menhaden or are key alternate prey species for those predators. The tool allows managers to evaluate the tradeoffs between Atlantic menhaden harvest and predator abundance to set reference points that take into account menhaden's role as a forage fish. ERPs for the management of Atlantic menhaden are as follows:

ERP target: The maximum fishing mortality rate (F) on Atlantic menhaden that sustains Atlantic striped bass at their biomass target when striped bass are fished at their F target

ERP threshold: The maximum F on Atlantic menhaden that keeps Atlantic striped bass at their biomass threshold when striped bass are fished at their F target.

Atlantic striped bass is the focal species for the ERP definitions because it is the most sensitive predator fish species to Atlantic menhaden harvest in the model, so an ERP target and threshold that sustained striped bass would likely provide sufficient forage for other predators under current ecosystem conditions.

Summary of the Fishery

The Atlantic striped bass fishery is predominantly recreational with the sector accounting for 88% of total harvest by weight since 2005 and 82% in terms of numbers of fish (Table 3 and Table 4). In 2019, total removals (commercial and recreational combined, including harvest and dead releases) was estimated at 5.47 million fish; the recreational sector accounted for 87% of total removals by number.

Commercial Fishery

The commercial fishery is managed via a quota system resulting in relatively stable landings since implementation of Amendment 6 in 2003 (see Issue 9 on page X). From 2004 to 2014, coastwide commercial harvest averaged 6.8 million pounds (1 million fish) annually (Table 3 and Table 4). From 2015-2019, commercial landings decreased to an average of 4.7 million pounds (619,279 fish) due to implementation of Addendum IV and a reduction in the commercial quota. Commercial discards are estimated to account for <2% of total removals per year since 2004 (Table 3 and Table 4).

There are two sets of quota allocations; one to all states (Maine through North Carolina, excluding Pennsylvania) for harvest in the ocean, and a second allocation to Maryland, PRFC, and Virginia for harvest in Chesapeake Bay. Although the regional allocations are about equal, the majority of commercial harvest comes from Chesapeake Bay; roughly 60% by weight and 80% in numbers of fish since 1990. The differences between landings in weight and in numbers of fish is primarily attributed to the availability of smaller fish and lower size limits in Chesapeake Bay relative to the ocean fishery. Additionally, the ocean fishery tends to underutilize its allocations due to lack of availability in state waters (particularly off of North Carolina) and designated game fish status in some states (Maine, New Hampshire, Connecticut and New Jersey).

Recreational Fishery

The recreational fishery is managed via bag and size limits and therefore recreational catch and harvest vary from year to year with changes in angler effort and the size and availability of fish. From 2004-2014, recreational harvest averaged 54.8 million pounds (4.6 million fish) annually (Table 3 and Table 4).

From 2015-2019, recreational harvest averaged 33.6 million pounds (2.8 million fish) in part due to declining biomass and implementation of Addendum IV.

The vast majority of recreational striped bass catch is released alive either due to angler preference or regulation; roughly 90% annually since 1990. Based on peer reviewed literature, a 9% release mortality rate is used to estimate the number of fish that die as a consequence of being caught and released. Despite this low rate, the popularity of striped bass as a targeted recreational species means that catch and release fishing contributes a significant source of mortality to the stock each year. In 2019, recreational anglers caught and released an estimated 28.8 million fish, of which 2.60 million are assumed to have died which represents 47% of total striped bass removals in 2019 (Table 3).

A large proportion of recreational harvest comes from Chesapeake Bay. From 2004-2014, 33% of recreational harvest in numbers of fish came from Chesapeake Bay. From 2015-2018, that percentage increased to 45%, likely as a result of the strong 2011, 2014, and 2015 year classes moving through the fishery. The majority of recreational harvest in the ocean fishery comes from Massachusetts, New York, and New Jersey.

References

- Diodati, P.J. and R.A. Richards. 1996. Mortality of Striped Bass Hooked and Released in Salt Water. *Transactions of the American Fisheries Society* 125:300-307.
- Northeast Fisheries Science Center (NEFSC). 2018a. 66th Northeast Regional Stock Assessment Workshop (66th SAW) Assessment Report. US Dept Commer. Northeast Fish Sci Cent Ref Doc. 19-08; 719 p.
- Northeast Fisheries Science Center (NEFSC). 2018b. 66th Northeast Regional Stock Assessment Workshop (66th SAW) Assessment Summary Report. US Dept Commer. Northeast Fish Sci Cent Ref Doc. 19-01; 45 p.

Tables

Table 3. Total striped bass removals (harvest plus release mortality) by sector in numbers of fish, 1990-2019. Note: Harvest is from ACCSP/MRIP, release mortality is from ASMFC. Estimates exclude inshore harvest from North Carolina.

Year	Commercial		Recreational		Total Removals
	Harvest	Release Mortality	Harvest	Release Mortality	
1990	93,888	46,912	578,897	442,811	1,162,508
1991	158,491	88,486	798,260	715,478	1,760,714
1992	256,476	184,638	869,779	937,611	2,248,505
1993	314,483	113,410	789,037	812,404	2,029,333
1994	325,401	162,970	1,055,523	1,360,872	2,904,765
1995	537,412	189,819	2,287,578	2,010,689	5,025,498
1996	854,094	263,510	2,487,422	2,600,526	6,205,552
1997	1,076,460	337,085	2,774,981	2,969,781	7,158,307
1998	1,215,219	353,224	2,915,390	3,259,133	7,742,966
1999	1,223,572	339,103	3,123,496	3,140,905	7,827,075
2000	1,216,812	208,415	3,802,477	3,044,203	8,271,906
2001	931,412	175,656	4,052,474	2,449,599	7,609,141
2002	928,085	191,561	4,005,084	2,792,200	7,916,931
2003	854,326	130,646	4,781,402	2,848,445	8,614,819
2004	879,768	158,311	4,553,027	3,665,234	9,256,339
2005	970,403	141,415	4,480,802	3,441,928	9,034,549
2006	1,047,648	153,276	4,883,961	4,812,332	10,897,218
2007	1,015,226	159,830	3,944,679	2,944,253	8,063,988
2008	1,027,837	107,778	4,381,186	2,391,200	7,908,000
2009	1,049,959	130,819	4,700,222	1,942,061	7,823,061
2010	1,031,430	133,970	5,388,440	1,760,759	8,314,599
2011	944,777	85,848	5,006,358	1,482,029	7,519,013
2012	870,606	197,412	4,046,299	1,847,880	6,962,196
2013	784,379	111,580	5,157,760	2,393,425	8,447,144
2014	750,263	113,080	4,033,746	2,172,342	7,069,431
2015	621,952	88,497	3,085,725	2,307,133	6,103,307
2016	606,087	87,827	3,500,434	2,981,430	7,175,777
2017	592,670	91,338	2,939,777	3,420,645	7,044,430
2018	625,177	90,092	2,244,766	2,826,667	5,786,702
2019	650,511	78,990	2,150,935	2,589,045	5,469,481

Table 4. Total recreational and commercial striped bass harvest by sector in pounds and numbers of fish, 1990-2019. Note: Harvest is from ACCSP/MRIP. Estimates exclude inshore harvest from North Carolina.

Year	Numbers of Fish			Pounds		
	Commercial	Recreational	Total	Commercial	Recreational	Total
1990	93,888	578,897	672,785	715,902	8,207,515	8,923,417
1991	158,491	798,260	956,751	966,096	10,640,601	11,606,697
1992	256,476	869,779	1,126,255	1,508,064	11,921,967	13,430,031
1993	314,483	789,037	1,103,520	1,800,176	10,163,767	11,963,943
1994	325,401	1,055,523	1,380,924	1,877,197	14,737,911	16,615,108
1995	537,412	2,287,578	2,824,990	3,775,586	27,072,321	30,847,907
1996	854,094	2,487,422	3,341,516	4,822,874	28,625,685	33,448,559
1997	1,076,460	2,774,981	3,851,441	6,077,751	30,616,093	36,693,844
1998	1,215,219	2,915,390	4,130,609	6,552,111	29,603,199	36,155,310
1999	1,223,572	3,123,496	4,347,068	6,474,290	33,564,988	40,039,278
2000	1,216,812	3,802,477	5,019,289	6,719,521	34,050,817	40,770,338
2001	931,412	4,052,474	4,983,886	6,266,769	39,263,154	45,529,923
2002	928,085	4,005,084	4,933,169	6,138,180	41,840,025	47,978,205
2003	854,326	4,781,402	5,635,728	6,750,491	54,091,836	60,842,327
2004	879,768	4,553,027	5,432,795	7,317,897	53,031,074	60,348,971
2005	970,403	4,480,802	5,451,205	7,121,492	57,421,174	64,542,666
2006	1,047,648	4,883,961	5,931,609	6,568,970	50,674,431	57,243,401
2007	1,015,226	3,944,679	4,959,905	7,047,179	42,823,614	49,870,793
2008	1,027,837	4,381,186	5,409,023	7,190,701	56,665,318	63,856,019
2009	1,049,959	4,700,222	5,750,181	7,216,792	54,411,389	61,628,181
2010	1,031,430	5,388,440	6,419,870	6,996,713	61,431,360	68,428,073
2011	944,777	5,006,358	5,951,135	6,789,792	59,592,092	66,381,884
2012	870,606	4,046,299	4,916,905	6,516,868	53,256,619	59,773,487
2013	784,379	5,157,760	5,942,139	5,819,678	65,057,289	70,876,967
2014	750,263	4,033,746	4,784,009	5,937,949	47,948,610	53,886,559
2015	621,952	3,085,725	3,707,677	4,829,997	39,898,799	44,728,796
2016	606,087	3,500,434	4,106,521	4,831,442	43,671,532	48,502,974
2017	592,670	2,939,777	3,532,447	4,816,395	37,961,037	42,777,432
2018	625,177	2,244,766	2,869,943	4,770,463	23,069,028	27,839,491
2019	650,511	2,150,935	2,801,446	4,199,502	23,556,287	27,755,789



Atlantic States Marine Fisheries Commission

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

MEMORANDUM

January 12, 2021

To: Atlantic Striped Bass Management Board

From: Tina Berger, Director of Communications

RE: Advisory Panel Nominations

Please find attached three new nominations to the Atlantic Striped Bass Advisory Panel – Andrew Dangelo, with the RI for-hire industry; Michael Plaia, a RI commercial fisherman, recreational angler and for-hire operator; and Dennis Fleming, a commercial fisherman and recreational fishing guide representing the Potomac River Fisheries Commission. Please review these nominations for action at the next Board meeting.

If you have any questions, please feel free to contact me at (703) 842-0749 or tberger@asmfc.org.

Enc.

cc: Emilie Franke

M21-06

ATLANTIC STRIPED BASS ADVISORY PANEL

Bolded names await approval by the Atlantic Striped Bass Management Board

January 14, 2021

Maine

Vice-Chair - David Pecci (rec)

144 Whiskeag Road

Bath, ME 04530

Phone (o): (207) 442-8581

Phone (c): (207) 841-1444

FAX: (207) 442-8581

dave@obsessioncharters.com

Appt. Confirmed 5/23/02

Appt Reconfirmed 5/10

Bob Humphrey (comm. rod and reel/for-hire)

727 Poland Range Road

Pownal, ME 04069

Phone (day): 207.688.4966

Phone (eve): 207.688.4854

bob@bobhumphrey.com

Appt. Confirmed 2/18/20

New Hampshire

Peter Whelan (rec)

100 Gates Street

Portsmouth, NH 03801

Phone (o): (603) 205-5318

Phone (h): (603) 427-0401

pawhelan@comcast.net

Appt. Confirmed 2/24/03

Appt Reconfirmed 5/10

Massachusetts

Douglas M. Amorello (comm. rod & reel)

68 Standish Street

Pembroke, MA 02359

Cell: (774)766-8781

sashamysportfishing@gmail.com

Appt. Confirmed 3/23/11

Appt. Reconfirmed 8/18

Patrick Paquette (rec/for-hire/comm)

61 Maple Street

Hyannis, MA 02601

Phone: (781)771.8374

Email: basicpatrick@aol.com

Appt. Confirmed 8/16

Rhode Island

Andrew J. Dangelo (for-hire)

1035 Liberty Lane

West Kingston, RI 02892

Phone: 401.788.6012

Maridee2@gmail.com

Michael Plaia (comm/rec/for-hire)

119 Currituck Road

Newtown, CT 06470

Phone: 203.512.4280

Makomike3333@yahoo.com

Connecticut

Kyle Douton (rec/tackle shop owner)

5 Rockwell Street

Niantic, CT 06357

Phone (day): (860)739-7419

Phone (eve): (860)739-8899

FAX: (860)739-9208

kyle@jbtackle.com

Appt. Confirmed 5/13/14

Vacancy (rec)

New York

Bob Danielson (rec)

86 Balin Avenue

South Setauket, NY 11720

Phone: 631.974.8774

BDan93@optonline.net

Appt. Confirmed 10/22/20

Vacancy (comm)

New Jersey

C. Louis Bassano, Chair

1725 West Central Avenue

Ortley Beach, New Jersey 08751

Phone (c): (908) 241-4852

FAX: (908) 241-6628

lbassano@comcast.net

Appt. Confirmed 10/15/01

Appt. Reconfirmed 2/9/06; 5/17/10; 4/14/14

Capt. Al Ristori (charterboat)
1552 Osprey Court
Manasquan Park, NJ 08736
Phone: (732) 223-5729
FAX: (732) 528-1056
cristori@aol.com
Appt. Confirmed 10/17/94
Appt. Reconfirmed 9/15/98; 9/15/02; 2/9/06;
5/17/10

Pennsylvania

John Pedrick (rec)
936 Langstroth Lane
Bensalem, PA 19020
Phone: (215) 633-6777
jjpedrick@verizon.net
Appt Confirmed 3/23/11

Delaware

Leonard Voss, Jr. (com)
2854 Big Oak Road
Smyrna, DE 19977
Phone: (302) 653-7999
Appt. Confirmed 4/21/94
Appt. Reconfirmed 7/27/99; 7/03 and 7/07

Steven Smith (rec)
59 Burnham Lane
Dover, DE 19901
Phone (day): (302)744-9140
Phone (eve): (302)674-5186
smithbait@verizon.net
Appt. Confirmed 10/23/18

Maryland

Vacancy – for-hire

David Sikorski (rec)
4637 Willowgrove Drive
Ellicot City, MD 21042
Phone: (443) 621-9186
FAX: (410) 772-5805
Dauidsikorski@mac.com
Appt Confirmed 3/23/11

Virginia

Kelly Place (comm)
213 Waller Mill Road
Williamsburg, VA 23185

Phone (h): (757) 220-8801
Phone (c): (757) 897-1009
FAX: (757) 259-9669
kelltron@aol.com
Appt. Confirmed 5/23/02
Appt Reconfirmed 5/06 and 5/10

William Edward Hall Jr. (rec)
PO Box 235
26367 Shoremain Drive
Bloxom, VA 23308
Phone (day): (757)854-1519
Phone (eve): (757)894-0416
FAX: (757)854-0698
esangler@verizon.net
Appt. Confirmed 5/13/14

North Carolina

Riley W. Williams (com)
336 Selwin Road
Belvidere, NC 27919
Phone: (252) 312-8457
Appt. Confirmed 11/10/04
Appt Reconfirmed 11/08; 8/18

Bill Gorham (rec)
25 12th Avenue
Southern Shores, NC 27949
Phone: 703.919.0886
Getbowedup40@gmail.com
Appt. Confirmed 2/18/20

District of Columbia

Joe Fletcher (rec)
1445 Pathfinder Lane
McLean, VA 22101
Phone: (703) 356-9106
Email: jmfletcher@verizon.net
Appt. Confirmed 10/30/95
Appt. Reconfirmed 9/15/99; 9/03 and 9/07

Potomac Fisheries River Comm.

Dennis Fleming (comm/for-hire)
P.O. Box 283
Newburg, MD 20664
Phone: 240.538.1260
captaindennisf@gmail.com



ATLANTIC STATES MARINE FISHERIES COMMISSION

Advisory Panel Nomination Form

This form is designed to help nominate Advisors to the Commission's Species Advisory Panels. The information on the returned form will be provided to the Commission's relevant species management board or section. Please answer the questions in the categories (All Nominees, Commercial Fisherman, Charter/Headboat Captain, Recreational Fisherman, Dealer/Processor, or Other Interested Parties) that pertain to the nominee's experience. If the nominee fits into more than one category, answer the questions for all categories that fit the situation. **Also, please fill in the sections which pertain to All Nominees (pages 1 and 2).** In addition, nominee signatures are required to verify the provided information (page 4), and Commissioner signatures are requested to verify Commissioner consensus (page 4). Please print and use a black pen.

Form submitted by: _____ State: _____
(your name)

Name of Nominee: Andrew J. Dangelo

Address: 1035 Liberty Lane

City, State, Zip: W. Kingston RI 02892

Please provide the appropriate numbers where the nominee can be reached:

Phone (day): 401 7886012 Phone (evening): 7886012 (401)

FAX: _____ Email: maridee2@gmail.com

FOR ALL NOMINEES:

1. Please list, in order of preference, the Advisory Panel for which you are nominating the above person.

1. Striped Bass
2. _____
3. _____
4. _____

2. Has the nominee been found in violation of criminal or civil federal fishery law or regulation or convicted of any felony or crime over the last three years?

yes _____ no

3. Is the nominee a member of any fishermen's organizations or clubs?

yes no _____

If "yes," please list them below by name.

RI Party and Charterboat Assoc. → Treasurer
RI marine Fisheries Council

4. What kinds (species) of fish and/or shellfish has the nominee fished for during the past year?

All species of blackfish striped bass
finfish - tuna sharks porgies bonita codfish
bluefish sea bass

5. What kinds (species) of fish and/or shellfish has the nominee fished for in the past?

Same as above

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? _____ years
2. Is the nominee employed only in commercial fishing? yes _____ no _____
3. What is the predominant gear type used by the nominee? _____
4. What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)? _____

FOR CHARTER/HEADBOAT CAPTAINS:

1. How long has the nominee been employed in the charter/headboat business? 51 years
2. Is the nominee employed only in the charter/headboat industry? yes no _____
If "no," please list other type(s) of business(es) and/occupation(s): _____

3. How many years has the nominee lived in the home port community? 51 years
If less than five years, please indicate the nominee's previous home port community.

FOR RECREATIONAL FISHERMEN:

1. How long has the nominee engaged in recreational fishing? 51+ years
2. Is the nominee working, or has the nominee ever worked in any area related to the fishing industry? yes no

If "yes," please explain.

operate Maridee inc. - a sportfishing charter
business since 1982

FOR SEAFOOD PROCESSORS & DEALERS:

1. How long has the nominee been employed in the business of seafood processing/dealing? _____ years
2. Is the nominee employed only in the business of seafood processing/dealing?
yes _____ no _____ If "no," please list other type(s) of business(es) and/or occupation(s):

3. How many years has the nominee lived in the home port community? _____ years
- If less than five years, please indicate the nominee's previous home port community.

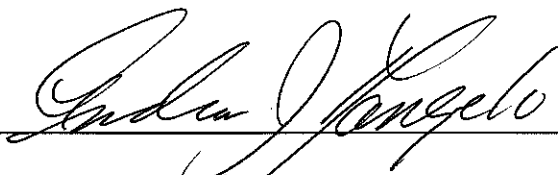
FOR OTHER INTERESTED PARTIES:

1. How long has the nominee been interested in fishing and/or fisheries management? _____ years
2. Is the nominee employed in the fishing business or the field of fisheries management?
yes _____ no _____

If "no," please list other type(s) of business(es) and/or occupation(s):

FOR ALL NOMINEES:

In the space provided below, please provide the Commission with any additional information which you feel would assist us in making choosing new Advisors. You may use as many pages as needed.

Nominee Signature: 

Date: 11/15/20

Name: Andrew J. Dangelo
(please print)

COMMISSIONERS SIGN-OFF (not required for non-traditional stakeholders)

State Director

State Legislator

Governor's Appointee



ATLANTIC STATES MARINE FISHERIES COMMISSION

Advisory Panel Nomination Form

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Form submitted by: Michael C. Plaia State: RI
(your name)

Name of Nominee: Michael C. Plaia
119 Currituck Road
Address: _____
Newtown, CT 06470
City, State, Zip: _____

Please provide the appropriate numbers where the nominee can be reached:
Phone (day): 203-512-4280 Phone (evening): 203-512-4280
FAX: _____ Email: mkomike3333@yahoo.com

.....
FOR ALL NOMINEES:

1. Please list, in order of preference, the Advisory Panel for which you are nominating the above person.
Striped bass
1. _____
2. _____
3. _____
4. _____
2. Has the nominee been found in violation of criminal or civil federal fishery law or regulation or convicted of any felony or crime over the last three years?
yes _____ no _____
3. Is the nominee a member of any fishermen's organizations or clubs?
X
yes _____ no _____

If "yes," please list them below by name.

Friends that fish

Hook it up

4. What kinds (species) of fish and/or shellfish has the nominee fished for during the past year?
All locally available

5. What kinds (species) of fish and/or shellfish has the nominee fished for in the past?
All locally available

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? _____ 50 years
2. Is the nominee employed only in commercial fishing? yes _____ no _____
Rod & reel
3. What is the predominant gear type used by the nominee? _____
4. What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)? Inshore

FOR CHARTER/HEADBOAT CAPTAINS:

1. How long has the nominee been employed in the charter/headboat business? _____ 50 years
2. Is the nominee employed only in the charter/headboat industry? yes _____ no _____
If "no," please list other type(s)of business(es) and/occupation(s): _____
Commercial Fishing
3. How many years has the nominee lived in the home port community? _____ 10 years
If less than five years, please indicate the nominee's previous home port community.

FOR RECREATIONAL FISHERMEN:

1. How long has the nominee engaged in recreational fishing? 70 years
2. Is the nominee working, or has the nominee ever worked in any area related to the fishing industry? yes no

If "yes," please explain.

Licensed 6 pack charter captain, licensed commercial fisherman

FOR SEAFOOD PROCESSORS & DEALERS:

1. How long has the nominee been employed in the business of seafood processing/dealing? 50 years
2. Is the nominee employed only in the business of seafood processing/dealing?

yes no If "no," please list other type(s) of business(es) and/or occupation(s):

3. How many years has the nominee lived in the home port community? years

If less than five years, please indicate the nominee's previous home port community.

FOR OTHER INTERESTED PARTIES:

1. How long has the nominee been interested in fishing and/or fisheries management? 20 years
2. Is the nominee employed in the fishing business or the field of fisheries management? yes no

If "no," please list other type(s) of business(es) and/or occupation(s):

FOR ALL NOMINEES:

In the space provided below, please provide the Commission with any additional information which you feel would assist us in making choosing new Advisors. You may use as many pages as needed.

Currently an advisor to both the ASMFC and MAFMC for summer flounder, scup and black sea bass. Currently an advisor to the NEFMC on the recreational advisory Panel. Been doing both for over ten years.

Nominee Signature: Michael C. Plaia

Date:

Michael C. Plaia

Name: _____
(please print)

COMMISSIONERS SIGN-OFF (not required for non-traditional stakeholders)

State Director

State Legislator

Governor's Appointee



ATLANTIC STATES MARINE FISHERIES COMMISSION

Advisory Panel Nomination Form

This form is designed to help nominate Advisors to the Commission's Species Advisory Panels. The information on the returned form will be provided to the Commission's relevant species management board or section. Please answer the questions in the categories (All Nominees, Commercial Fisherman, Charter/Headboat Captain, Recreational Fisherman, Dealer/Processor, or Other Interested Parties) that pertain to the nominee's experience. If the nominee fits into more than one category, answer the questions for all categories that fit the situation. **Also, please fill in the sections which pertain to All Nominees (pages 1 and 2).** In addition, nominee signatures are required to verify the provided information (page 4), and Commissioner signatures are requested to verify Commissioner consensus (page 4). Please print and use a black pen.

Form submitted by: Dennis Fleming State: Maryland
(your name)

Name of Nominee: Dennis Fleming

Address: P.O. Box 283

City, State, Zip: Newburg, MD 20664

Please provide the appropriate numbers where the nominee can be reached:

Phone (day): 240-538-1260

Phone (evening): 240-538-1260

FAX: _____

Email: captaindennisf@gmail.com

FOR ALL NOMINEES:

1. Please list, in order of preference, the Advisory Panel for which you are nominating the above person.

1. Striped Bass Advisory Panel
2. _____
3. _____
4. _____

2. Has the nominee been found in violation of criminal or civil federal fishery law or regulation or convicted of any felony or crime over the last three years?

yes _____ no X

3. Is the nominee a member of any fishermen's organizations or clubs?

yes X no _____

If "yes," please list them below by name.

Southern MD Recreational Fishing Org.

Coastal Conservation Association

4. What kinds (species) of fish and/or shellfish has the nominee fished for during the past year?

N/A

5. What kinds (species) of fish and/or shellfish has the nominee fished for in the past?

N/A

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? 13 years
2. Is the nominee employed only in commercial fishing? yes _____ no _____
3. What is the predominant gear type used by the nominee? _____
4. What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)? _____

FOR CHARTER/HEADBOAT CAPTAINS:

1. How long has the nominee been employed in the charter/headboat business? 13 years
2. Is the nominee employed only in the charter/headboat industry? yes _____ no X

If "no," please list other type(s) of business(es) and/occupation(s): _____

Property Management

3. How many years has the nominee lived in the home port community? 1 years

If less than five years, please indicate the nominee's previous home port community.

Mechanicsville, MD

FOR RECREATIONAL FISHERMEN:

1. How long has the nominee engaged in recreational fishing? _____ years
2. Is the nominee working, or has the nominee ever worked in any area related to the fishing industry? yes _____ no X _____

If "yes," please explain.

FOR SEAFOOD PROCESSORS & DEALERS:

1. How long has the nominee been employed in the business of seafood processing/dealing?
13 _____ years

2. Is the nominee employed only in the business of seafood processing/dealing?

yes _____ no _____ If "no," please list other type(s) of business(es) and/or occupation(s):

3. How many years has the nominee lived in the home port community? _____ years

If less than five years, please indicate the nominee's previous home port community.

FOR OTHER INTERESTED PARTIES:

1. How long has the nominee been interested in fishing and/or fisheries management? 15 _____ years
2. Is the nominee employed in the fishing business or the field of fisheries management?
yes _____ no X _____

If "no," please list other type(s) of business(es) and/or occupation(s):

FOR ALL NOMINEES:

In the space provided below, please provide the Commission with any additional information which you feel would assist us in making choosing new Advisors. You may use as many pages as needed.

I am uniquely qualified having been a striped bass fisherman since 1972, a fishing guide for 13 years, a ^{COMMISSIONER!} member of the Potomac River Fisheries Commission for 12 years and have attended several AS.MFC meetings during my tenure.

Prior to retirement I spent 27 years in local government, serving as an executive manager and quite familiar with various committees, commissions and board meetings representing Charles County Commission

Nominee Signature: 

Date: 1/7/21

Name: DENNIS FLEMING
(please print)

COMMISSIONERS SIGN-OFF (not required for non-traditional stakeholders)


State Director

State Legislator

Governor's Appointee