

Atlantic States Marine Fisheries Commission

Atlantic Striped Bass Management Board

February 4, 2020
11:15 a.m. – 3:00 p.m.
Arlington, Virginia

Draft Agenda

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

1. Welcome/Call to Order (*D. Borden*) 11:15 a.m.
2. Board Consent 11:15 a.m.
 - Approval of Agenda
 - Approval of Proceedings from October 2019
3. Public Comment 11:20 a.m.
4. Consider Addendum VI State Implementation Plans and Conservation Equivalency Proposals **Final Action** 11:30 a.m.
 - Review of Implementation Plans and Conservation Equivalency Proposals (*M. Appelman*)
 - Technical Committee Report (*N. Lengyel Costa*)
 - Law Enforcement Committee Report (*M. Appelman*)
 - Consider Approval of State Implementation Plans and Conservation Equivalency Proposals
5. Lunch Break 12:30 p.m.
6. Consider Approval of State Implementation Plans and Conservation Equivalency Proposals, *continued* 1:00 p.m.
7. Review and Populate Advisory Panel Membership (*T. Berger*) **Action** 2:50 p.m.
8. Other Business/Adjourn 3:00 p.m.

The meeting will be held at the Westin Crystal City; 1800 S. Eads Street, Arlington, Virginia 22202; 703.486.1111

MEETING OVERVIEW
Atlantic Striped Bass Management Board Meeting

February 4, 2020
11:15 a.m. – 3:00 p.m.
Arlington, Virginia

Chair: David Borden (RI) Assumed Chairmanship: 02/20	Technical Committee Chair: Nicole Lengyel (RI)	Law Enforcement Committee Rep: Kurt Blanchard (RI)
Vice Chair: Vacant	Advisory Panel Chair: Louis Bassano (NJ)	Previous Board Meeting: October 30, 2019
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 2019

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. Consider Addendum VI State Implementation Plans and Conservation Equivalency Proposals (11:30 – 2:50 p.m.) Final Action

Background

- Addendum VI was approved in October 2019. The Addendum reduces all state commercial quotas by 18%, and implements a 1 fish at 28” to less than 35” recreational slot limit for ocean fisheries and a 1 fish at 18” minimum size limit for Chesapeake Bay recreational fisheries. The Addendum also requires the mandatory use of circle hooks when fishing with bait to reduce discard mortality in the recreational sector.
- States may submit alternative regulations through conservation equivalency (CE) to achieve an 18% reduction in total removals relative to 2017 levels.
- State implementation plans, including CE proposals, were due November 30th and available in **Briefing Materials**.
- The Technical Committee met to review implementation plans based on technical merit. A TC memo with comments on specific implementation plans, analytical uncertainties, and caveats will be available in **Supplemental Materials**.
- The Law Enforcement Committee meets January 23rd to review state implementation plans and provide comment for Board consideration (**Supplemental Materials**).

Presentations

- Review of implementation plans and CE proposals by M. Appelman
- Review Technical Committee report by N. Lengyel Costa

- Review Law Enforcement Committee Report by M. Appelman

Board Actions for Consideration

- Approve state implementation plans and conservation equivalency proposals

5. Lunch Break (12:30 p.m. – 1:00 p.m.)**6. Consider Addendum VI State Implementation Plans and Conservation Equivalency Proposals, continued (1:00 p.m. – 2:50 p.m.)****7. Review and Populate Advisory Panel Membership (2:50 p.m. – 3:00 p.m.)****Background**

- Bob Humphrey from Maine has been nominated to the Striped Bass Advisory Panel (**Briefing Materials**).

Board Actions for Consideration

- Approve Advisory Panel nomination

8. 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

- SAS/TC – various taskings relating to management response to 2018 benchmark
- TC – June 15th: Annual compliance reports due

TC Members: Nicole Lengyel (RI, TC Chair), Kevin Sullivan (NH, Vice Chair), Alex Aspinwall (VA), Alexei Sharov (MD), Carol Hoffman (NY), Charlton Godwin (NC), Ellen Cosby (PRFC), Gail Wippelhauser (ME), Gary Nelson (MA), Heather Corbett (NJ), Jeremy McCargo (NC), Jason Boucher (DE), Kurt Gottschall (CT), Luke Lyon (DC), Michael Kaufmann (PA), Peter Schuhmann (UNCW), Winnie Ryan, Gary Shepherd (NMFS), Steve Minkkinen (USFWS), John Ellis (USFWS), Katie Drew (ASMFC), Max Appelman (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), Max Appelman (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), Max Appelman (ASMFC)

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

Wentworth by the Sea
New Castle, New Hampshire
October 30, 2019

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

Draft Proceedings of the Atlantic Striped Bass Management Board Meeting
October 2019

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The Board will review the minutes during its next meeting.

INDEX OF MOTIONS

1. **Approval of agenda** by consent (Page 1).
2. **Move to approve proceedings from August 2019** by consent (Page 1).
3. **Main Motion**
Move to approve Option 2 under Section 3.1 for equal percent reductions (Page 20). Motion by Pat Keliher; second by Ritchie White.

Motion to Table
Move to table the motion to discuss the TC memo for conservation equivalency criteria (Page 24). Motion by Adam Nowalsky; second by Eric Reid. Motion fails (Page 25).

Main Motion
Move to approve Option 2 under Section 3.1 for equal percent reductions.

Motion to Substitute
Move to substitute to approve Option 3 under Section 3.1 for unequal percent reductions (Page 25). Motion by Eric Reid; second by John Clark. Motion fails (Page 30).

Main Motion
Move to approve Option 2 under Section 3.1 for equal percent reductions. Motion by Pat Keliher; second by Ritchie White. Motion carried (Page 31).
4. **Main Motion**
Move to approve Sub-Option 2-A2 1 fish at 28-35 inches for Section 3.1 for the ocean fishery (Page 31). Motion by Justin Davis; second by Mike Luisi

Motion to Amend
Move to amend to include a conservation equivalency proposal to achieve an 18% reduction in total removals relative to 2017 (Page 35). Motion by Adam Nowalsky; second by Chris Batsavage. Motion carried (Page 37)

Main Motion as Amended
Move to approve Sub-Option 2-A2 1 fish at 28-35 inches for Section 3.1 for the ocean fishery. Conservation equivalency proposals are required to achieve an 18% reduction in total removals relative to 2017. Motion carried (Page 37).
5. **Move to approve Sub-Option 2-B1 1 fish at 18 inch minimum for Section 3.1 for Chesapeake Bay. Conservation equivalency proposals are required to achieve an 18% reduction in total removals relative to 2017** (Page 37). Motion by Pat Geer; second by Martin Gary. Motion carried (Page 38).
6. **Move to approve Option B, requiring mandatory circle hook regulations for Section 3.2** (Page 38). Motion by Ritchie White; second by Sen. Miramant. Motion carried (Page 41).
7. **Main Motion**
Move that states submit implementation plans by November 30, 2019. The Board will take action on implementation plans in February, 2020. All provisions of Addendum VI must be implemented by April 1, 2020 (Page 42). Motion by Andy Shiels; second by Ritchie White.

INDEX OF MOTIONS (continued)

Motion to Amend

Move to amend to have the circle hook requirements implemented by January 1, 2021 (Page 44).
Motion by Jim Gilmore; second by John Clark. Motion carried (Page 45).

Main Motion as Amended

Move that states submit implementation plans by November 30, 2019. The Board will take action on implementation plans in February, 2020. Circle hook requirements must be implemented by January 1, 2021. All other provisions of Addendum VI must be implemented by April 1, 2020.
Motion carried (Page 45).

8. **Move to approve Addendum VI to Amendment 6 to the Atlantic Striped Bass FMP as amended today (Page 47).** Motion by Cheri Patterson; second by David Borden. Motion carried (Page 47).
9. **Move to adjourn by consent (Page 48).**

ATTENDANCE

Board Members

Patrick Keliher, ME (AA)	Heather Corbett, NJ, Administrative proxy
Steve Train, ME (GA)	Tom Fote, NJ (GA)
Cheri Patterson, NH, proxy for D. Grout (AA)	Adam Nowalsky, NJ, proxy for Sen. Andrzejczak (LA)
Ritchie White, NH (GA)	Andy Shiels, PA, proxy for T. Schaeffer (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Loren Lustig, PA (GA)
Mike Armstrong, MA, Chair	John Clark, DE, proxy for D. Saveikis (AA)
Raymond Kane, MA (GA)	Roy Miller, DE (GA)
Rep. Sarah Peake, MA (LA)	Mike Luisi, MD, proxy for B. Anderson (AA)
Jason McNamee, RI (AA)	Russell Dize, MD (GA)
David Borden, RI (GA)	Phil Langley, MD, proxy for Del. Stein (LA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Steve Bowman, VA (AA)
Justin Davis, CT (AA)	Pat Geer, VA, Administrative proxy
Bill Hyatt, CT (GA)	Bryan Plumlee, VA (GA)
Sen. Craig Miner, CT (LA)	Chris Batsavage, NC, proxy for S. Murphey (AA)
John McMurray, NY, proxy for Sen. Kaminsky (LA)	Jerry Mannen, NC (GA)
Jim Gilmore, NY (AA)	Mike Blanton, NC, proxy for Rep. Steinberg (LA)
Maureen Davidson, NY, Administrative proxy	Marty Gary, PRFC
Emerson Hasbrouck, NY (GA)	Derek Orner, NMFS
Joe Cimino, NJ (AA)	Mike Millard, USFWS

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

Ex-Officio Members

Nicole Lengyel, Technical Committee Chair	Kurt Blanchard, Law Enforcement Representative
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Staff

Robert Beal	Katie Drew
Toni Kerns	Mike Schmidtke
Caitlin Starks	Maya Drzewicki

Guests

Sen. Thad Altman, FL (LA)	Doug Grout, NH (AA)	Alesia Reed, NMFS
Peter Anderson, Windham, NH	Joe Gugino, Winthrop, MA	William Rice, PRFC
Robert Atwood, NH F&G	Doug Haymans, GA (AA)	Zak Robinson, Portsmouth, NH
Sue Berditine, ASGA	Peter Jenkins, Saltwater Edge	Cody Rubner, Acton, MA
Delores Bodhdan, Hamilton, MA	Scott Klase, Bedford, NH	John Satterly, VSSA
Kalil Boghdan, MA DMF	Aaron Kornbluth PET Trusts	Kyle Schaeffer, ASGA
Ellen Bolen, VMRC	Kris Kuhn, PA Fish & Boat	Mike Spinner, Strippers Forever
Robert T. Brown, MWA	Arnold Leo, E. Hampton, NY	Lauren Staples, NH F7G
Victoria M. Brown, MWA	Carl LoBue, TNC	Michael Toole, Stratham, NH
Thomas Candee, Exeter, NH	Charles Lynch, NOAA	Jack Travelstead, CCA
Cliff Chadwick, Hampton Falls, NH	Tom McKelvey, Floral Park, NY	Karen Villone, NH F&G
Brian Coombs, Medford, MA	Nichola Meserve, MA DMF	Mike Waine, ASA
Roy Crabtree, NMFS	Chris Moore, CBF	Jenni Wallace, NOAA
Kelly Denit, NMFS	Glenn Normandeau, NH F&G	Megan Ware, ME DMR
Paul Diggins, SB CBA	Conor O'Donnell, NH F&G	Robert Weathersby, NH
Lynn Fegley, MD DNR	Patrick Paquette, MSBA	Peter Whelan, CCA
Zack Greenberg, PEW Trusts	Dale Pike, CCA	Chris Wright, NMFS
Bob Groskin, Teaneck NJ	Nick Popoff, USFWS	

Draft Proceedings of the Atlantic Striped Bass Management Board Meeting
October 2019

The Atlantic Striped Bass Management Board of the Atlantic States Marine Fisheries Commission convened in the Wentworth Ballroom of the Wentworth by the Sea Hotel, New Castle, New Hampshire; Thursday, October 30, 2019, and was called to order at 2:35 o'clock p.m. by Chairman Michael Armstrong.

CALL TO ORDER

CHAIRMAN MICHAEL ARMSTRONG: Good afternoon folks, I would like to call to order the Atlantic Striped Bass Management Board. I'm Mike Armstrong from Massachusetts, your Chair. Sort of how I would like to run it today, as we know there is only really one agenda item, so we should be done in half an hour, hourish.

APPROVAL OF AGENDA

CHAIRMAN ARMSTRONG: My intent is I would like to keep the discussion on point, very heavily on point. Speaking multiple times may not be possible. We'll do it that way. You have the agenda. Are there any changes that people would like to see, additions? Seeing none, we approve it by consent.

APPROVAL OF PROCEEDINGS

CHAIRMAN ARMSTRONG: You have the proceedings from August, 2019, any amendments, changes, edits? Seeing none, we approve that by consent.

PUBLIC COMMENT

CHAIRMAN ARMSTRONG: At this point we have public comment. I can't stress enough that again, we are going to use up every minute of the time we have, likely. I would like to keep public comments to no more than one minute, and remember it is about things that are not being discussed today, okay? Robert Brown.

MR. ROBERT T. BROWN: My name is Robert T. Brown, President of Maryland Watermen's Association. Thank you for giving me a chance

to speak amongst this Committee. First of all I want to state that nobody has done nothing wrong recreational or commercial to get us in this problem with these dead discards.

However, I want to speak to you a second about MRIP, and the data collection they have. You know the sports fishermen or recreational fishermen are counting how many fish they've got in their cooler. But when they're catching fish they are not counting how many discards they have, and keeping an accurate count on them.

If they don't have an accurate count on it they could throw some of this off. Back in 2014, we had a reduction of 25 percent on the ocean, and 20.5 percent on the Bay. This was to rebuild our spawning stock biomass, but yet we're still having a downward trend. Why? Well you know we had more spawning stock there than what we did in 1982. It is conditions in the water more than likely, you know it could be the temperature, it could be the water quality. That is the reason why that is not working. Also, we didn't have a dominant year in 2012, 2013 to 2014 recruitment. Without that recruitment it's going to be less coming to the spawning reaches. To get those spawning stock back up, what we have is they adjusted the 2015. The final dominant class we have is only like four years old now, and at four years old it is just starting to get on our spawning ground. It will be three or four years before a majority of them are there.

We need to give a time for them to come of spawning maturity. I have one good news is on the Chesapeake Bay and on the Potomac River and all the rivers. We have a large amount of small fish. We have them anywhere from 6 inches on up to 23-24 inches, and a lot of those will be migrating to the ocean this year to help with that spawning stock. Mr. Chairman, I done as quick as I could for you.

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CHAIRMAN ARMSTRONG: One minute, 42 seconds. But who's counting? Me. Mr. Weathersby, Robert Weathersby. Robert, you have written down you're talking about conservation equivalency, which is something we're going to talk about. If your comments are very general in nature, we would be happy to take them.

MR. ROBERT WEATHERSBY: Just so I'm clear, Sir. Should any comments regarding conservation equivalency be held until that portion of this meeting?

CHAIRMAN ARMSTRONG: If you think it's towards what we're going to be discussing that would be appreciated.

MR. WEATHERSBY: With that I'll hold my slot until that time, Sir.

CHAIRMAN ARMSTRONG: Eighteen seconds, thank you. Zak Robinson.

MR. ZAK ROBINSON: My name is Zak Robinson; I'm a guide here in the waters just outside the hotel actually, this is my home. My business is Rising Tide Anglers, I've been on this water for 17 years, and I built my business on catch and release. I know it can be done. I'm here to voice my concerns about a few things that were not included in this agenda. Conservation equivalency is in part, but I would like to see it eliminated.

A unified coastwide fishery management plan for striped bass would eliminate the guesswork in the lawmakers and the fisheries management efforts, and allow our stocks to rebuild. All states one rule. Something needs to be done about release mortality. Circle hooks are going to help. They will help. We need a really intense education for the public, not on just circle hooks, but also on fish handling and proper release techniques. Thank you for hearing my comments.

CHAIRMAN ARMSTRONG. Thank you very much. Peter Jenkins.

MR. PETER JENKINS: Hello, my name is Peter Jenkins, and I'm the owner of the Salt Water Edge in Newport, Rhode Island, and Chairman of the American Saltwater Guide Association. We are an association of guides, small business owners, and recreational anglers who believe abundance drives participation, and participation drives sales. The Association hosted a raffle to encourage the public to send in written comments. We didn't have to agree with opposition, just participate. We were shocked by the disappointing number of comments we received, and tried to explain why. We started late, we didn't communicate effectively, and fisheries policy is complex. When I saw the supplemental materials for this meeting, I saw you received just over twice as many comments as we did. That begged another question. The ASGA surveyed its audience to understand why the apathy of recreational anglers with regard to Atlantic States Marine Fisheries and striped bass.

Their concerns came back loud and clear, and boil down to a lack of trust. Comments like the process is broken, only listen to special interest, and waste of time. This was sobering, given the striped bass is the most important recreational gamefish on the east coast, and they represent over 9 percent of the fishing effort overall in the United States. In short, millions of anglers pursue striped bass, yet something like 1,037 took the time to comment.

Like many of you I was in Mystic, Connecticut five years ago tomorrow, and most of us thought we set stripers on the road to recovery. Since that day both the striped bass and public confidence in United States Marine Fisheries has declined. We regularly hear for the lack of funding for better science that I think of all the time and money spent over the last five years on meetings like this, and going on the road to solicit public comments.

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All this for the results we have today. As you can see in the supplemental materials, a very clear message from the recreational community as the vast majority voted for very specific options, the possibility of misinterpreting the public's desires and the facts outlined in your own document. Today, any other outcome than those documented in the supplemental documents, would serve you to track as correct. Thank you for your time.

CHAIRMAN ARMSTRONG: Thank you, Sir. Kyle Schaefer.

MR. KYLE SCHAEFER: Hello, my name is Kyle Schaefer. I'm a fly fishing guide here in Kittery Point, just a little bit north of where we are today, also a board member for the American Saltwater Guide's Association. I'll be quick. You know it feels that we've managed striped bass for extraction, where we are now left with a stock that it's incredibly hard to make a living.

As somebody that's in this industry trying to make a living doing so, not to mention the recreational anglers that are now losing the opportunity to spend money up and down the east coast to pursue this fish. You know my point is concise that I would love to see this fishery managed for abundance, where all the stakeholders are kept in mind, and we are not managing this fishery to a point where we can no longer access it and use the resource. Thank you.

CHAIRMAN ARMSTRONG: Thank you. William Rice.

MR. WILLIAM RICE: Thank you, Mr. Chairman, William Rice; I'm senior member of Potomac River Fisheries Commission. I would like to be brief, but I want to speak to you about accountability in the Chesapeake Bay Region. We have made strides by leaps and bounds since we entered back into the striped bass fishery off the moratorium in this field.

We are totally accountable, totally transparent, and we can pretty much document each fish almost as it comes out of the water. This is something that we're extremely proud of. In the past 47 years I've been involved with fisheries management, going back into the early and mid-1970s, where maybe our resources didn't get the respect that they needed, and maybe we didn't have the capabilities of the managing tools that we have before us today. It would behoove us now, setting around the table, knowing how we can identify our problems, especially one as such an importance as the striped bass, not to move away and maybe do something not as sensible, but to attack the problem head on.

Even though it might not be the most popular thing to do everywhere, but our fishery is extremely important to everybody, the commercial people, the recreational people, and even the folks that don't even own a boat that expect to go to the grocery store and buy a fresh striped bass fillet. I thank you very much.

CHAIRMAN ARMSTRONG: Thank you. That concludes our public comment.

CONSIDERATION OF ADDENDUM VI FOR FINAL APPROVAL

REVIEW OF OPTIONS AND PUBLIC COMMENT SUMMARY

CHAIRMAN ARMSTRONG: Let's move into Consideration of Addendum VI for Final Approval. The first item will be handled by Max for Review of the Options and the Public Comment Summary.

MR. MAX APPELMAN: We had a little correction in Table 1 of the document. The recreational harvest column in Table 1, some of those numbers were incorrect. Those have been corrected, and in the version that's in meeting materials it's corrected in there, but if you're looking at an older version of the

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October 2019

document those numbers are reported incorrectly.

I have a presentation of the Addendum itself and the public comment summary, and I broke it off into two parts. I'll start with a very broad overview of the document itself and the options, and then if it's okay with the Board Chair we can pause then, take any questions on the document itself, before I move into the comment summary.

But as a reminder, I'll also be giving the Advisory Panel report. Then we have Officer Kurt Blanchard with us from Rhode Island, the representative for LEC for striped bass. He'll be going over the LEC report, and then the Board will be taking final action. A quick overview of how we got here and what this Addendum aims to do.

Remember the 2018 benchmark stock assessment came out earlier this year, and the results indicate the stock is overfished and experiencing overfishing, which triggered two different actions. This draft addendum, Draft Addendum VI was initiated to address overfishing, and to reduce fishing mortality to the target in 2020.

The other trigger, just a reminder that there is a motion that comes back to this board in February that would consider an amendment that could address a rebuilding plan, as well as a number of other potential issues that are on the table. That will be back to the Board in February. Back to Draft Addendum VI, specifically the Addendum aims to reduce removals that being total numbers of fish by 18 percent relative to 2017 levels.

To achieve that it's proposing reductions to the commercial quotas, as well as changes in recreational bag limits and size limits. Also because recreational release mortality is such a big component of total mortality, the Addendum is also proposing the mandatory use

of circle hooks when fishing with bait. This is a figure showing spawning stock biomass relative to the reference points. The solid black line is the threshold, the dash line being the target. Also on this figure is the recruitment values, those are in millions of Age 1 fish on the right hand axis. The take home here is that SSB reached a peak in 2003, and it has been on this downward trajectory since then.

Dropping below the threshold in 2013, and the decline has been a little more steep in the later part of the time series, in part due to fishing rates, which I'll show you in the next slide, but definitely also attributed to the poor recruitment that the stock has experienced over the last decade or so.

But also of note there are some strong year classes, lately 2011 year class everyone is aware of, and then the 2015 and 2016 recruitment estimates were also very high, or above average I should say. There is a lot of small fish out there. This is the figures showing fishing mortality, again relative to the reference points.

We have the black line again being the threshold, and the dash line being the target. The take home is that the F rate has been above the threshold for a number of years, and this Addendum is trying to bring that rate down to the dash line, down to the target 0.20. Here we're showing the contributions of the different sectors to total removals.

This is all in millions of fish. The bottom two colors there, the blue is commercial harvest, the red is the commercial dead discards, and then in the green we have recreational harvest, and the purple or whatever color that is, is recreational release mortality or dead releases. Again that's the fraction of all the released fish, the live releases that are assumed to die.

The assessment uses a 9 percent value there to calculate that release mortality. The big take home is that this is predominantly a

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recreational fishery. In 2017, about 90 percent of total removals came from the recreational sector, also highlighting that the commercial sector those landings have been rather stable from year to year, largely from the quota system that's in place.

Now I'm honing in on the recreational release component of mortality. This figure is showing total catch from year to year, and that is all in tens of millions of fish on the left hand side, and then the red line going across the top of the figure is the proportion of those fish that are thrown back. The take home is that this is predominantly a catch and release fishery as well.

It's no surprise really that so much of the mortality is coming from recreational releases. To put some context to this, in 2017 it was an estimated 38 million striped bass were released alive, which resulted in 3.4 million dead releases, or 48 percent of total removals in 2017. Now I know I went through that pretty quickly, but now we're moving into the management program options themselves.

This is really the first decision that the Board will have today, and that's to decide on Options 1, 2 or 3. The first option is status quo. By selecting this option fisheries will continue to operate under the provisions of Addendum IV, keeping in mind that Addendum IV is not designed to achieve an 18 percent reduction, relative to 2017 levels. Options 2 and 3 are designed to achieve that reduction. They apply the reductions somewhat differently, depending on which option you select, and you can see commercial quotas tied to those, as well as a suite of bag and size limit combinations for the ocean and for Chesapeake Bay, which I'll dive into a little in my next few slides. This is Option 2. This is what we've been calling the equal percent reduction. Here both sectors are reduced by 18 percent, so in proportion to what the landings were, what the removals were in 2017.

On the commercial side we achieve that 18 percent reduction in numbers of fish by reducing the quota by 18 percent. That is an 18 percent reduction from the Addendum IV quotas, the baseline quotas in that document. On the recreational side there is a suite, as I said, of bag limits and size limit combinations that achieve at least an 18 percent reduction in total removals.

That's accounting for harvest, your release mortality in order to achieve that overall reduction. You can see the overall reduction percentages on the right hand side there. I do want to remind the Board that these were developed on a coastwide or Bay-wide scale, and I also wanted to make a clarification.

Getting a lot of questions, doing all the hearings, and then the comments, what it means for a 28 to 35 inch slot limit for example if we look at Option 2. What that means is all fish below 28 inches would have to be thrown back, and all fish 35 inches or greater would have to be thrown back. The point being that a 35 inch fish would have to be released, and that has to do with how the MRIP link data is binned together.

Also highlighting that there are some asterisks tied to these, those are indicating further restrictions to the existing trophy fish seasons that were in place in 2017. If there are any specific questions about those I am happy to take them after the presentation. I'm going to move a little quicker now.

Again, all these options are designed in the exact same way. The big difference with Option 3 is that the allocation of the reductions is applied a little bit differently. Here the commercial quota is reduced by 1.8 percent, which means the recreational sector takes a 20 percent reduction in order to make up that difference.

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The big difference with the recreational suboptions here is they're all designed to achieve at least a 20 percent reduction. Notice that some of them do achieve slightly more than that. You saw that on the previous slide as well. But the same rules apply, they are developed on a coastwide level or a Bay wide level, and the slot limits were all developed in the same way.

When we look at all those slot limits and bag limits, the recreational options, we need to keep in mind that there is a fair amount of uncertainty with these types of analyses. You know changes in effort, how anglers will respond to the approved measure, changes in the availability of fish; the size, the age structure of that population, and the distribution of those fish up and down the coast and in the respective regions.

These have very large impacts on what catch will be in a given year. Also pointing out again that these were designed to limit harvest, they are not designed to reduce release mortality simultaneously. The best way to really do that is to reduce your effort, reduce the amount of trips that are encountering striped bass, which brings me to conservation equivalency. This is a reminder that Addendum IV does maintain flexibility for states to pursue conservation equivalency to implement something different than the standard, while still achieving that same level of conservation.

The Technical Committee did develop criteria for CE proposals with Addendum VI. Our TC Chair is here, she'll go over that in the next agenda item. Also of note here, some of those suboptions that you saw, they do achieve more than the target percent reduction under that primary option.

That brings the question of what percentage will states be held to if they pursue conservation equivalency. We will need the Board to make that distinction today. Moving

to the circle hook provision, again release mortality is such a big component of total mortality. That is why the Board is considering the use of circle hooks to address that.

There are three primary options here. Option A is status quo, so here there is no change to the provision. It maintains the recommendation that exists in Amendment 6, to continue to promote the use of circle hooks to anglers. Option B would be a requirement to implement regulations that require the use of circle hooks when fishing with bait in the recreational sector. The Plan Development Team did standardize the definition for circle hooks here.

We pulled that from a Commission document, but other parts of language, parts of the regulation that is left up to the state to work that out with its constituents to find something that works. I'm making note of that because if Option B is selected we will need some discussion, some guidance from the Board to the Plan Review Team when they're looking at implementation plans; to make sure that it's meeting the intent of the provision, also highlighting that the education component is certainly a part of Option B as well.

Option C would require states to promote the use of circle hooks, so as with Option A it is merely a recommendation. This would require it. This would make it a compliance requirement. Again intent there, the Plan Review Team would need some guidance from the Board on that if Option C was selected.

I think it's important to keep in mind there are a number of other factors other than hook type that can also affect release mortality, water temperature, air temperature, where the fish is hooked, how it's handled and things of that nature. It's also unclear how many anglers are already using circle hooks.

Quantifying those savings would definitely be difficult. It's hard to ignore the enforceability

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and compliance concerns with a mandatory circle hook requirement, who it would apply to, where would it apply, and when. Perhaps Kurt can go into a little more depth on that in the next presentation. Okay wrapping up with compliance schedules.

The Board will need to determine an effective date for these measures, keeping in mind that the next time this Board will meet will be in February of 2020. That is the earliest that the Board could review and approve implementation plans. Working backwards from there, if to be considered for approval at that meeting states would have to submit those programs, including conservation equivalency proposals by November 30th, and that is per the criteria laid out in the conservation equivalency guidance document, so keeping that in mind when the Board selects an implementation date.

Lastly, I just wanted to provide an overview of all the action items before the Board today. The way I see this going is the Board would first identify the primary option that being Option 1, 2, or 3, and then after that is decided moving into the recreational suboptions that are tied to that primary option. Note that there are no suboptions for the commercial quotas.

By selecting the primary option you are thereby selecting what the quota would be. Again regarding conservation equivalency, the Board will have to determine what percentage states will be held to. That will be another action item. Circle hooks again an action item; there might be a need for additional guidance there.

Then with the implementation date keeping the submission timeline for conservation equivalency and implementation plans in mind. That is the first part of my presentation, Mr. Chair. I don't know if you want to pause for questions on the document, or continue with the public comment summary.

CHAIRMAN ARMSTRONG: No let's questions on what you've seen so far. Mike Luisi.

MR. MICHAEL LUISI: Max, could you go back to either one of the slides that had under Option 2 or 3 the recreational measures? Yes that is good, thank you. I just want to make sure it's clear for the record and for the audience. It was presented in the Addendum, but it's not presented on this slide.

It has to do with the effect of each of those suboptions on release mortality. I wonder if you can just speak briefly to what each one of those options in both Option 2 and Option 3 suboptions. What effect on release mortality is there if any of those are selected?

MR. APPELMAN: Yes, it really would have cluttered up the slides, so I kind of left some parts out, but point taken. As I was saying, all of these are designed to limit harvest and limit total removals. They are not designed to reduce release mortality.

Under each of these options release mortality is projected to increase on the order of 3 to 4 percent for each of these options, which means there are bigger reductions in harvest that have to be taken in order to make up for that increase. But the math works out as such to achieve these total reductions. Those are the percentages that are up on the screen.

CHAIRMAN ARMSTRONG: I had, was it Pat? Did you have your hand up or Steve? Oh, Marty Gary.

MR. MARTIN GARY: That previous question covered mine, thank you.

CHAIRMAN ARMSTRONG: Jim.

MR. JAMES J. GILMORE: Max, essentially the implementation date, do we have to do all parts of this for the same implementation date? For instance, we pick one of the options or

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whatever, but I'm specifically looking at the circle hook. If we decided we had to implement whatever those measures were by hypothetically April 1, but the circle hook provision was something we wanted to delay. Is that possible under the Addendum?

MR. APPELMAN: That is absolutely within the purview of this Board, yes.

CHAIRMAN ARMSTRONG: Adam Nowalsky.

MR. ADAM NOWALSKY: This is a good slide to keep up for discussion. This slide highlights total removals according to the ocean fishery or the Chesapeake Bay fishery, but it doesn't detail what these removals reductions would mean to each individual state. Can you talk about what these options would mean, in terms of being disparate with regards to affecting different states differently, and how the justification is for that wide range of difference of impacts?

MR. APPELMAN: I'll just reiterate that they were developed on a coastwide level or a Bay wide level. The intent is that all states would implement the selected suboption, in order to achieve the projected reduction that is on the screen. Recognizing that the fisheries in the states contribute different levels towards that total reduction, so some will achieve less, some will achieve more. But if all states were to implement it, it would project to achieve that percentage up on the screen.

CHAIRMAN ARMSTRONG: Follow up, Adam?

MR. NOWALSKY: Are you able to provide for the Board and the audience what those different impacts would be on a state-by-state basis here today?

MR. APPELMAN: We have not done that analysis to show on a state-by-state level what each of these options would result in by state, no.

CHAIRMAN ARMSTRONG: Tom Fote, then Ritchie.

MR. THOMAS P. FOTE: I was under the understanding that we did do the numbers on what they would mean for each state. This reminds me of what happened years ago when we basically took on summer flounder when we first put the plans in place. All of a sudden we put a 14 inch size limit, so New Jersey and New York had to do nothing.

We rode on the backs of North Carolina, Virginia, and Maryland for a bunch of years. I want to know who's backs we're riding on, who is going to suffer the pain this time, and what states will not suffer the pain? Because it is very obvious that that is going to happen, and some of the data I've heard it's dramatically going to happen. I would like to have that information.

CHAIRMAN ARMSTRONG: Ritchie White.

MR. G. RITCHIE WHITE: Max, these figures were developed the same as any previous addendum on striped bass, so there is no difference in figuring out and coming up with these numbers as to how each state is impacted. This is done exactly like we've been managing striped bass from Day 1 of a coastal fishery. We look at the total coastal fishery as one entity, is that correct?

MR. APPELMAN: Yes, the methodology is the exact same as what has been used in the past.

CHAIRMAN ARMSTRONG: Phil Langley.

MR. PHIL LANGLEY: Yes, thank you Mr. Chair. My question was, I was curious. Was there any type of economic impact study done with any of these options?

MR. APPELMAN: There was no specific economic study done for this Draft Addendum.

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CHAIRMAN ARMSTRONG: Dennis Abbott.

MR. DENNIS ABBOTT: Regarding Adam and Tom's point. Wouldn't there be probably quite a difference depending on what our choice was as to what the figures would be, how each state would be impacted? Wouldn't it be further the case that when the conservation equivalencies arrive at our door that again there would be varied impacts for all the states?

MR. APPELMAN: Yes. Each of these options is projected to achieve something different, and the impacts on a state-specific level would change, depending on which option you select. Some states have already done that homework themselves, and may have shared that with Commissioners around the table, but our Technical Committee has not gone down the path to see how that shakes out on a state-by-state level for each of these options. It's a coastwide FMP. That is why it proposes coastwide options.

CHAIRMAN ARMSTRONG: Loren Lustig.

MR. LOREN W. LUSTIG: Thank you Max for an excellent report. I did take note during your comments the use of the word uncertainty. I was hoping that you would describe for us the probability of success for these various options, success meaning of course achieving the desired goal as prescribed.

MR. APPELMAN: I'm going to let Katie Drew tackle that one.

DR. KATIE DREW: There are two components here. If we achieve the 18 percent reduction coastwide, then we'll have basically a 50 percent chance of achieving the target, which means that there will be a distribution of F rates around the target. We'll have basically over a 90 percent chance of being below the threshold, so we'll have a very high chance of overfishing and most likely achieve the F target

and have a 50 percent chance of being at or below the F target.

However, when it comes to whether these specific measures will get you to that 18 percent reduction. That is not something we can quantify, in terms of how certain or uncertain are we, because we can't predict how angler behavior will change in response to these regulations, how other economic environmental factors will drive changes in effort next year. We saw basically a 20 percent reduction in catch from one year to the next under the same management regulations from 2017 to 2018.

If the fishery performs the same as it did before, we will achieve the reduction that we're looking for, and we'll have a very good chance of being below the threshold and a very good chance of being at the F target. However, what is the fishery going to perform the same way that it did in 2017 and 2016, sort of our baseline years? We can't quantify that uncertainty, and that is really what is driving our uncertainty about our management regulations here.

CHAIRMAN ARMSTRONG: Tom Fote.

MR. FOTE: Listening to your statement, Max. This is not the same as we usually do things. Some of the calculations were the same as we go forward, but every amendment I've been sitting here, when we come up with saying we're going to do an 18 percent reduction or a 25 percent reduction like the last time.

We took states and let them go from what their state had caught previously the year before, and took a 25 percent reduction off that states fishery. This is not what we're doing this time; it's a whole different ballgame of what you're doing. What you're saying is you are not going to look at states, so each state takes a 25 percent reduction, as a matter of fact some states will take a 40 percent reduction.

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Some states will take an 88 percent reduction, or some states will take an 8 percent reduction. That's when the problem comes whether it's fair and equitable up and down the coast. You seem to be skirting that issue, and you say you don't have the information. Somehow I got some of the information. I'm just not happy that we're not putting it out there.

CHAIRMAN ARMSTRONG: Oh remind the Board that one of the goals that we voted on in Amendment 6 is uniform rules along the coast, and to have each state craft their own rules would be against what we voted for in the last amendment. This is just for your consideration as we go through. Any more questions, yes John McMurray.

MR. JOHN McMURRAY: Thank you for remembering my name, Mr. Chairman. Max, was there any effort to determine what year classes fall within these coastal slot limit options? I was asked that earlier, I didn't know the answer.

MR. APPELMAN: Again, I'm going to pass off the year class question to our science over here.

DR. DREW: We didn't look specifically at what year classes represent these slot limits in that sense, but we picked specifically the data to do this analysis on the basis of the 2011 year class. We know '14 and '15 were relatively strong year classes, and therefore we picked '16 and '17 as our reference years for these analyses, because the 2011 year class would be basically that age, were the same age that we expect the '14 and '15 to be in 2020. Using sort of the 2011 length frequency at that same age as they would be in 2020 as a proxy for the '14 and '15 year classes, which we did not have available to us when we did the 2015 measures. Did that make sense?

CHAIRMAN ARMSTRONG: All right Max, let's move on to your next section, which is the Public Comment Summary.

MR. APPELMAN: We did receive a lot of comments, a lot of unique comments, a whole plethora of alternative regulations that might work better for a particular state or region, more for the coast, a number of remedies for improving our law enforcement or better ways to address release mortality, improving data, and things of that nature.

I just want to point out that this overview is really to hone in on support for specific suboptions, the primary options and suboptions that were provided for public comment in the Draft Addendum, so just giving that overview of this document. I also want to really give a shout out to our newest colleague over here, Maya Drzewicki; she really did a great job tracking all the comments coming in, written through e-mail while I was out on the hearings. Thank you, Maya.

As far as the hearings go there were 21 different hearings held in all 14 jurisdictions. That would include D.C and Potomac River Fisheries Commission as well. Approximately 888 individuals attended those hearings, and you can see the breakout by region. As far as written comment, we had about 5,500 comments come in, 4,500 of those were received through seven different form letters.

Clearly a majority of those were from the form letters, and we also had 45 different organizations submit comment on Draft Addendum VI, which gives a remaining balance of about 1,000 individuals speaking out on the Addendum, ranging from recreational and commercial fishermen to general concerned citizens.

Regarding the primary options, Option 1 that was the status quo option that was the least supported. Some of the common themes there were that stock status in the fishery is really driven by environmental factors, that things like predation or forage or poor habitat should be

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addressed rather than fishing effort, or fishing I'm sorry.

That the issue is really the release mortality component and that can be addressed through education alone. Not supporting any of the options, because they all increase release mortality. Also noting that harvest did drop in 2018 and just a general distrust in the science as well. Option 2 was the most supported of the three options.

Some common themes there were that all sectors sort of benefit from this resource regardless of the disposition, so all sectors should share the responsibility of rebuilding and ending overfishing, identifying it as the most equitable way to implement the reductions, and pointing at Option 3 as an unbalanced approach to reduce removals.

Option 3, this was where the reductions are applied a little differently to the two sectors. This was the second most supported option. Reasons being there that there is already some high accountability and monitoring for the commercial sector, and I should have pointed out on the last slide that those that spoke in favor of Option 2 were predominantly from the recreational sectors, and those that spoke in favor of Option 3 were predominantly from the commercial sector. Again, pointing out that the commercial quotas there is high accountability there, there is high monitoring, there are payback provisions, and 18 percent reduction from a small component of overall removals won't do too much.

The fishery and stock status again is driven by recreational removals, and the last point being that to share the burden equally does not necessarily mean an equal percentage. Regarding the recreational suboptions, there were very few cases of consensus, if any, among sectors within a state, within a region, and certainly not across the entire coast.

That being said there were some commonalities of those that supported the higher minimum sizes versus the slot limits. Those in support of a higher minimum pointed out that past history similar size limit was used to rebuild the fishery, also the belief that this would lead to reduced effort, so it would do more to rebuild the stock as well.

Also highlighting or identifying the slot limits may put too much pressure on one or a few year classes, and that those impacts on the future population are somewhat unclear. Whereas, on the other side of the spectrum those that favored a slot size limit felt that this protected the larger females. It gave a small fish a chance to spawn as well, while still allowing some harvest.

Then a lot of voice from the party and charter sector, saying that a higher minimum size would be very difficult for business, particularly in regions where there aren't many large fish available. Having said all that, for completeness I will point out which options did get the most support. I know this table is probably hard to see. It is probably a lot easier to see in the summary in your meeting materials.

But these are the suboptions under Option 2, again Option 2 got the most support, and Option 2-A1 that is 1 fish at 35 inches, received the most support for the ocean fishery. Whereas Option 2-B1 that being 1 fish at 18 inches received the most support for the Chesapeake Bay. Then again for completeness, these are the suboptions under Option 3.

Again, because so much of the commercial sector was coming out and voicing support for Option 3 that is sort of where the comments ended, they didn't really provide much on the recreational suboptions there, but for completeness again, we had Options 3-A1 and 3-A2 sort of fizzle up to the top for the ocean, and then Options 3-B1, 3-B2, and 3-B4 sort of getting the same support for Chesapeake Bay.

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Moving to the circle hook provision, there were three options here, again Option A would be the status quo. This received the least support.

Some of the comments we saw there were that circle hooks were sort of selected arbitrarily. There are a number of other terminal gear types, hook modifications, or fishing methods that could have been considered as well, pointing out that the benefits are hard to quantify, and that mandating the use of circle hooks is an overreach of authority. Those that came out in support of Option B, the mandatory requirement, generally felt that there is very little doubt in the science that circle hooks save fish.

Acknowledging that there are some enforcement challenges there, but there is a number of, you know we like to think there are a lot of law abiding citizens out there, so you put out a circle hook requirement most folks would follow suit. Also pointing out that some states already have these circle hooks on the books, and so other states should follow suit. A notion that if this is selected the Board should consider a phased in implementation timeline to allow tackle shops to go through inventory. I'm sure there are other circumstances to consider.

Option B would be requiring that education component, and those that came out in support of Option C, which was the second most supported – I don't know if I mentioned it, but Option B was the most supported – was really recognizing those enforcement and compliance challenges that we would encounter, recognizing the benefits there and the notion that education is really the answer here.

Again, we received a lot of comments, and we tried to group them and categorize some of those comments, find some common themes there, and 6 major categories filtered out. The first one was regarding conservation equivalency. There was a lot of support for

conservation equivalency, the emphasis there being when used appropriately, and there was a lot of negative support on CE that it's not being used right, and that a lot of negative comments towards our Technical Committee and the process that they allow, the review process not being measurable.

Accountability is lacking from this. There is a lot of negative comment there. The second category was regarding poor data. There is a very low confidence in MRIP data and how it's used in the benchmark assessment, little support or confidence in the results coming out of that assessment, things with the release mortality rates.

Also pointing at the commercial discards that those are underestimates, and also pointing at the options in the document, a lot of belief that the recreational release mortality would actually be much higher than what is predicted. Regarding angler education, this received a lot of comments as well. There was a lot of support for angler education, not just on the circle hook component, but also on size limits in general, any regulations that are on the book, educating anglers of those.

Then also about proper fish handling that was a very common comment as well. Also comments regarding trophy fish and protecting those trophy fish, and these were really tailored towards the trophy fish season that exists in Chesapeake Bay, and any state that has regulations where a second large fish can be harvested.

There were a lot of concerns about law enforcement as well, and that there is a fair amount of poaching that is going on both in state waters and in the exclusive economic zone in federal waters. There are weak penalties in place for those violations, and just a general need for more officers out there, more funding so these guys and gals can do their jobs.

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Then the last one being about gear restrictions, just pointing out that there are other restrictions that can be considered that also address release mortality and hooking mortality. Treble hooks came up a lot, banning gaffing, trolling, or even exploring barbless hooks. That was my last slide, so I'm happy to take any questions on the public comment summary as well.

CHAIRMAN ARMSTRONG: Questions. Tom Fote.

MR. FOTE: Could you put up the slide on participation at the public hearings, the numbers? I'm trying to figure out why we only had 888 people show up at the public hearings. I've seen this dramatic drop over the years. I know the Executive Committee was talking about it this morning, of how do we get the word out?

During the last 2015 Amendment we basically had at least, with three public hearings we had about 180 or 200 people show up. This time around I had less than 80. If I think about where we're going next year maybe for the annual meeting, we had a hearing there we had 1,100 people. We are miscommunicating with a lot of people that are not getting the measures, and I always basically attribute that to the newspapers.

There are no newspapers out there anymore, the people don't read them, and there are no fishing columns. They fired all the outdoor writers. It's very hard getting really to the common man that doesn't want to look at a smart phone all the time, or like me still has a flip phone, to get the message by not going on the internet and the hearings.

We're missing a lot of the people that used to show up to hearings that don't show up that particular segment of the anglers that fish from jetties, piers, and not looking at the internet in there. I don't know how we basically get back.

Are you looking into the problem why the dramatic change?

I mean we used to have hearings in New Jersey when we did Amendment 4 that I had 1,300 people in three hearings. We're not just seeing those numbers. We're not seeing people get involved. I think part of it is they're also disgusted too with the whole process, because of summer flounder, black sea bass and a few others. But we really have a problem here.

CHAIRMAN ARMSTRONG: Mike Luisi.

MR. LUISI: A question, Max. The statement of the problem in this Addendum in my mind addressees, there are two parts to it. The one is the stock status, which you know overfishing is occurring stock is overfished. The other piece to the statement of the problem, which you go into some detail here, has to do with the magnitude of the release mortality in the recreational fishery.

With the exception of the circle hook discussion in this addendum, I'm wondering if you received any feedback from the public at any of these hearings about the issue of dead releases, and maybe questioned why this Addendum didn't take it the next step further to try to address that problem.

I'm just curious to hear whether or not the focus was solely on the options and the alternatives, or did you get any additional feedback about that dead discard problem, because we've discussed it at length here at the Board, just curious as to what you may have heard out there.

MR. APPELMAN: Yes. I'll say that we got a lot of people speaking out, not happy to see release mortality such a big part of the total. Part of it was just not understanding that catch and release fishing does contribute to deaths. That was definitely there. Then it always bled

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into the conversation of how we reduce release mortality.

That's when season closure would come up, and then getting into a discussion of why wasn't season closures part of this addendum, and you know how states can pursue that to reduce release mortality in their fisheries. Again, coastwide program, a coastwide season is very difficult to garner any support for. That is largely why we don't see it in these types of proposals. That is another big reason why conservation equivalency can be so effective.

CHAIRMAN ARMSTRONG: Jim Gilmore.

MR. GILMORE: Just for the record, I think Max enjoyed a rather robust turnout in New York after he left New Jersey, because we had quite a large group. I just mention that because as much as there was a significant number that came to that what we heard at the hearings, we actually held a second one up in the Hudson River. We got 40 individual on that which was a good turnout relatively to the size of that fishery.

However, the information we got is although there was a large number of it, after you started looking at the factor that we've got maybe 4,000 commercial fishermen in New York, we've got several hundred thousand recreational fishermen. Trying to normalize that input, boy it was difficult. For the record, or what we found out last week was we had a local council meeting, which is balanced between recreational and commercial fishermen.

When they decided to look at Option 2 versus Option 3, they tied. The commercial guys want Option 3; the recreational guys wanted Option 2. Sometimes the input, even though it's voluminous or it gets more voluminous, it may not be as more helpful now. Saying that I agree, and Tom was right.

This morning we talked about different ways of getting some more information through maybe surveys or things that will help us make our decisions, and remind everyone that this is a tool to help us make a decision, it is not the decision. I know some people at our hearing said, well if we all vote for this option we're good, right, and I said this isn't a vote. This is a public process that we're trying help guide our decision.

CHAIRMAN ARMSTRONG: I have John, Loren, and then Adam. John McMurray.

MR. McMURRAY: Given total written comment was over 5,000, it seems like we had comparatively few responses for the bag and size limit options. Do you have any understanding of why that happened?

MR. APPELMAN: I don't have a great answer there other than these commenters provided support for a particular primary option, and that's where the comment ended. If you'll look, some of those form letters with the big numbers of signatures didn't provide any indication of a particular suboption there. Again from the commercial side, you know that is sort of where we saw comment end as well with the primary option, and then not much for the recreational suboptions there.

CHAIRMAN ARMSTRONG: Mike to that point.

MR. LUISI: John, just to give you some perspective as to why what you stated may have happened. In Maryland we after reviewing the subalternatives, we're not confident that any of those subalternatives would work for us. We were very open at our hearings. We had 60, 70, 80 people at each one of them, but we were open up front that conservation equivalency was something that we were seriously considering. We focused the intent of those hearings just on the Options 1, 2, and 3 themselves and then kind of let it rest from there.

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CHAIRMAN ARMSTRONG: Loren Lustig.

MR. LUSTIG: Again thank you, Max for your report. During your summary of public feedback, I found some very intriguing things to ponder. First of all I made note of you saying that some of the public feedback said that mandatory use of circle hooks is an overreach of authority. I would be delighted to know what the rationale is for anyone making that statement. In other words, is there any legal basis for that? I also took note that you said that some of the comments said that it would be difficult to enforce. I would be delighted to hear from our Law Enforcement Committee about that.

MR. APPELMAN: I can't really elaborate too much more on the overreach of authority. These were viewpoints and comments from those individuals that for the Board to come in and put a mandatory circle hook requirement on the books is simply an overreach of authority. I didn't catch the second part of your question though.

MR. LUSTIG: I agree with you by the way. I was struggling to figure out why a person would say that it was an overreach of authority, and I could not figure it out, personally how they could come to that conclusion. The second part of my question related to that it would be difficult to enforce. I'm wondering if our Law Enforcement Committee would agree with that. I tend to think that it would be pretty straightforward to enforce.

CHAIRMAN ARMSTRONG: I'm sure that will be brought up during your report.

MR. APPELMAN: I didn't want to give away too much, but I think LEC will agree with you.

CHAIRMAN ARMSTRONG: Adam Nowalsky.

MR. NOWALSKY: In the answer to my last question you made it clear that you're not able

to provide us today with what those impacts are on a state-by-state basis of the varying options. But you did indicate that we knew that this was a total reduction, so we knew there would be different impacts on a state-by-state basis. Was that information given to the public at the public hearings?

MR. APPELMAN: Yes, I touched on that point at every hearing that I presented at.

CHAIRMAN ARMSTRONG: Go ahead, Adam.

MR. NOWALSKY: And for the hearings that you weren't at, was that included in the presentation that was given to states to present themselves with the explicit instruction to tell them to disseminate that information to the public?

MR. APPELMAN: All my PowerPoint's had a slide that these were developed on a coastwide level, and that all states were intended to implement that selected measure to achieve that reduction. I didn't attend the hearings that I didn't present at, so I don't know exactly how it was presented, but that material was standardized in my PowerPoint.

CHAIRMAN ARMSTRONG: Further questions about public comments. Tom Fote.

MR. FOTE: Yes I was at all the three hearings in New Jersey, and you put the slide up that said coastwide, but I assumed coastwide, I assumed that we were doing what we do all the time that we go back to the 18 percent and we do it state by state. I should not have been confused; I was confused on that because I didn't realize at that point the disparity that was going to go on between states.

Maybe it was naïve of me, but I did not. I don't think the public at my hearings had that idea to know they could possibly take a much greater reduction than the 18 percent. I think they assumed, because of the way it was presented

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that they were going to take an 18 percent reduction on their catch.

CHAIRMAN ARMSTRONG: I believe our TC Chair would like to respond.

MS. NICOLE LENGYEL: I just wanted to clarify for the Board that the procedure and the analyses conducted for Addendum VI were exactly the same as was done for Addendum IV. It was a coastwide analysis targeting one coastwide reduction. I think there might be some confusion, because when the implementation plans came along, because of the timeline and the quick timeline for turnaround, states were still going through their regulatory process.

They put forward implementation plans that had a variety of options, options that were in Addendum IV, conservation equivalency. That might be where the confusion is, but we followed the same procedure for this Addendum as Addendum IV. The other thing you might be thinking of is we did a performance of Addendum IV. That is where we broke out the percentage that each state ended up realizing after they implemented measures in 2015.

CHAIRMAN ARMSTRONG: Thank you Nicole.

ADVISORY PANEL REPORT

CHAIRMAN ARMSTRONG: We need to move on. If we could go on to the Advisory Panel report, Max.

MR. APPELMAN: While Maya brings that up on the screen, you know the AP met on October 16 near Baltimore. It was an in-person meeting. We had a fairly decent turnout, 10 individuals showed up; you can see them up on the screen there, the state that they represent and the sector that they represent. A pretty good spread across the coast. We had three individuals representing the commercial sector, seven representing the recreational sector. As

far as the comments, it really echoes the broader public comment summary that I just went over. But for completeness regarding Option 1 there was no comment from the AP in support of Option 1, and the AP did not reach consensus in support of either Option 2 or Option 3. We had the commercial representatives in support of Option 3, and the recreational representatives in support of Option 2.

Regarding the recreational suboptions, they did not identify one strongly over the others, again because there is such little agreement among the different recreational sectors within a given state, within a region. Having said all that and sorry I have Option 3 up here first. As I was saying, the commercial representatives they support Option 3.

A lot of similar comments that we heard from the public comment summary, there is already strict quota monitoring and enforcement in place, the accountability is there, an 18 percent reduction in commercial quota would cause some serious hardship to these individual fishermen. Another notion that when the commercial sector takes a cut in quota harvest generally comes down to that quota level, until the management program is adjusted again.

But on the recreational sector those reductions don't necessarily stay at that level, they continue to bounce around even without management action. Then lastly from those representatives, the recreational sector wouldn't be expected to take cuts for overages from the commercial. Summary of the comment that we received from the recreational representatives was that the FMP doesn't distinguish commercial versus recreational fishing mortality.

The equal reduction approach is the most appropriate. Also recognizing that 18 percent reduction from the recreational fishery is a much bigger volume of fish, so it is an equitable

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approach. That Option 3 would be more of an allocation question, and this Addendum is not focusing on allocations, and again that the AP doesn't support any one particular suboption strongly over the others, because of that lack of agreement.

Having said that some representatives did speak in favor of Option 2-A1 for the coast, there were others that supported Option 2-A3, but in general there wasn't really any strong push for either of the options or any of the suboptions, because of the statement that I said previously. Chesapeake Bay representatives didn't comment on the suboptions at all, again supporting the Bay jurisdictions to pursue conservation equivalency for the Bay.

The AP generally does support conservation equivalency when used appropriately. There was some discussion about support on some regional consistency there, particularly from the for-hire representatives in a multispecies context that different regulations across species complexes, but neighboring jurisdictions would make things very difficult. Regarding the circle hook provision, there was consensus here in support of Option B.

The AP generally recognizes the benefits of using circle hooks, recognizes the enforcement challenges there, but believes that circle hooks are a good thing. They do recommend that states collaborate when drafting language that they shouldn't be made in a bubble, if you will, within each state, then really focusing on that education component. They do believe that there should be a push for enforcement, if that strong enforcement effort isn't there the fear that anglers would revert back to non-circle hooks. A couple other general comments, one being that the Board should focus on the overall objective here to reduce fishing mortality down to the target. Looking for some better accounting for the commercial discards. I would like to see more discussion on season closures rather than just the bag and size limit

options in the Addendum to achieve those reductions, also considering other terminal gear configurations to address discard mortality.

Noting that constant reductions, so this is referring to Addendum IV a few years back, now with this draft document and then with the potential amendment down the road makes it very difficult for business planning, and then also noting the proactive steps that Virginia has taken this year. That is it for my AP Summary Report on behalf of the AP, thank you.

CHAIRMAN ARMSTRONG: Questions for Max regarding the AP report. Pat Keliher.

MR. PATRICK C. KELIHER: Max, under the recreational comments I think it said there was a question of a reallocation between Option 2 and Option 3, a comment around that. Could you expand on that?

MR. APPELMAN: I think some of the representatives looked at this Addendum as a whole as an allocation question that Option 2 was equal taking the reductions and allocating them equally to both sectors proportionately, based on their landings in 2017, and Option 3 was changing that being a different allocation of the reductions to the different sectors.

LAW ENFORCEMENT COMMITTEE REPORT

CHAIRMAN ARMSTRONG: Further questions, seeing none, Law Enforcement Committee, correct? Could you supply us with your report?

MR. KURT BLANCHARD: The Law Enforcement Committee of the Atlantic States Marine Fisheries Commission convened a teleconference on September 20, 2019, to review and provide comments on proposed regulations regarding the recreational harvest of striped bass in state waters.

The following were in attendance, representatives from the United States Coast Guard, the state of South Carolina, Delaware,

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Massachusetts, Florida, New Jersey, and North Carolina, as well as participants from NOAA HMS, as well as staff from ASMFC. We took up two issues specifically, circle hooks and size and possession limits.

To the circle hook discussion, during this teleconference the LEC reviewed and commented extensively on the potential requirement for use of circle hooks in the coastal shark fishery. Subsequent to that discussion staff asked if the same comments and concerns would apply to similar provisions for the Atlantic striped bass draft addendum. The LEC members affirmed that their concerns apply equally to striped bass as follows.

The LEC reiterated the position, despite their recognized potential value of circle hook requirements to reduce release mortality in the recreational fishery, strict enforcement of the rule that depends on proving targeting or intent to catch striped bass with prohibited gear would be very difficult at best. Unlike in the shark fishery, gear and techniques for catching striped bass would be difficult to distinguish from that of other species. Implementation of a regulatory approach, such that is employed for shark fishing in Florida, would be much less effective. Therefore, if the Board were to implement such a requirement, the LEC emphasized the importance of using intensive education and outreach to garner support for the circle hook regulation.

If states are required to implement regulations regarding the mandatory use of circle hooks, the LEC recommends adopting standard definition of a circle hook, for example a definition as follows. A non stainless steel circle hook, a person targeting or harvesting sharks from Florida waters must use non stainless steel circle hooks when fishing with live or dead natural bait. Circle hooks mean a fishing hook designed and manufactured so that the point is not offset, and is turned perpendicular back to

the shank to form a general circular or oval shape.

The LEC stresses the importance of all jurisdictions agreeing on standardized regulatory language, especially where states share common borders and fishing areas. To the discussion of size and bag limits, staff reviewed the various options for size and bag limits in the Draft Addendum.

The LEC concurred with previous written comments provided in the memorandum dated January 26, 2015, among the points reiterated by the LEC were; a single size bag limit would apply for all recreational sectors, i.e. private anglers as well as for-hire sector. This will ensure the greatest enforceability on the water, dockside, or on land.

It was pointed out that it is common to have these two sectors comingling at boat ramps, docks, and marinas. Slot limits and trophy fish provisions are enforceable, but may raise unintentional violations. LEC members on the teleconference pointed out that there are relatively wide slot limits being proposed in Draft Addendum VI would help reduce unintentional violations.

Enforcement of bag and size limits as closely adjoining states would be greatly enhanced, if regulations are consistent across jurisdictions. The LEC appreciates the opportunity to review the proposals of the Atlantic Striped Bass Management Board, and to provide ongoing enforcement advice. Just in addition to this, this report was reviewed again yesterday, before the Full LEC, and the position still holds with the Full Committee reviewing it. Thank you.

MR. APPELMAN: I want to add quickly that we also had a back and forth via e-mail after the LEC webinar about the definition of circle hook that were used. The PDT used a definition slightly different than the example that was

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talked about in the LEC, but Kurt and I concur that it essentially means the same thing.

CHAIRMAN ARMSTRONG: Ritchie White.

MR. WHITE: Not a question but a comment. I attended the Law Enforcement meeting, and it was extremely helpful for me, because they discussed the number of scenarios that I would have thought would have resulted in an arrest, and they described how it would not have, and why. This does not change my support for mandatory circle hooks, but it certainly brings in expectations that you would have as to how aggressive it could be prosecuted. It was very helpful, and I thank Kurt for that.

CHAIRMAN ARMSTRONG: Bill Hyatt.

MR. WILLIAM HYATT: Kurt, I understand that your Committee would have concerns in cases where in the field you have to determine intent, and you stated that very, very clearly with regard to circle hooks. My question is if a circle hook regulation were applied more broadly, would those concerns disappear?

As an example I'll give, in cases where circle hooks are required for any bait fishermen using hooks larger than a certain size, i.e. a regulation that would remove the discretion, but still would make use of circle hooks under certain situations mandatory. Would those concerns disappear?

MR. BLANCHARD: We discussed several different scenarios, and how the circle hook provision could be enforced, and what would make our ability to prosecute cases more consistent. To your point, we discussed where it would apply to different fisheries, and one example we used was in the reef fisheries down in the Gulf.

You're dealing with a variety of different species, but in area fisheries and specific to a certain region, i.e. the reef. Something like that

is enforceable, and the feedback from our Gulf partners, as well as the state of Florida with our group confirmed that. They felt very strong about that and that it's very enforceable.

When you start to bring that fishery up the coast, and you say specifically to one species that is where the difficulty comes in, because we cannot prove that you're targeting striped bass versus bluefish or another species. I know up in the northeast we definitely have that problem. We were trying to come up with a solution to help support this, and prove that or support the element or the assumption that the position is to have a standardized rule to elevate the use of circle hooks, versus the educational component.

We continue to fall back on the educational component. We feel pretty strongly about that and even from our position some of the data that we're seeing, and I use the example that Max presented in the public hearing comments. There were over 4,000 people that supported the rule making process to have a standardized law to support circle hook use.

What I deciphered from that, was you had two other areas where there was minimal response or belief. That tells me that the majority of folks are using circle hooks already, so the buy in to that is already there. I think a push on the educational, and I would hope it would get this to the level that we need to reach our benchmarks.

CHAIRMAN ARMSTRONG: Go ahead, Bill.

MR. HYATT: Just a follow up to make sure I've got you clear. You're saying education is paramount, but if a rule could be applied more uniformly across species, as opposed to targeting certain species, it could be acceptable.

MR. BLANCHARD: It would probably be better accepted. You're still running the situations, for example just because you have a species on board, we would have to prove before a court

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that you used that device to catch that fish. Was it a treble hook, were you using artificial worms or whatever? How do we prove that unless observed? The manpower or the time that goes into those observations, and let's face it it's not going to be a mock patrol boat out there making these observations, it's going to be covert capacity, which is manpower intensive to support this.

Then you take it to the next level, and you need to prosecute this. What we learned up and down the coast is the majority of our recreational fisheries and commercial fisheries are going before our district courts, so there is a criminal standard there. You're presenting a case on a circle hook into a district court, the same judge is hearing cases of domestic violence, larceny, DOUIs, and oh by the way this gentleman is here or this gal is here for a circle hook violation. Those are some of the hurdles that we need to get over to support this.

CHAIRMAN ARMSTRONG: Tom, I saw your hand up but I'm going to reserve comment until we come back to circle hook discussion.

CONSIDER FINAL APPROVAL OF ADDENDUM VI

CHAIRMAN ARMSTRONG: We have about an hour and a half left, which is pretty daunting. It is show time; we are back to the Addendum. Is that where we're at, Max? We need to do this in a very orderly process, or we're not going to get out of here in time.

We've broken it down. There will probably be six motions that we need possible amendments and such. The first one we need a motion on the primary option, which are we going to take, 1, 2, or 3? Then according to whatever we decide then, and they're mutually exclusive. We then have to go to the suboptions, one for the ocean in a motion, Chesapeake Bay separate.

Then we need to talk about conservation equivalency and what standards we're going to

hold that may or may not need a motion, probably will need a motion. Then we need to talk about circle hooks, and then we need to talk about the implementation dates. There are the six motions there and we'll try and blast through. Let's open up discussion. The main motion that starts this off will be which option? Pat Keliher.

MR. KELIHER: Under Section 3.1 Proposed Management Options, I would move Option 2 for equal percentage reductions.

CHAIRMAN ARMSTRONG: Second by Ritchie White. In discussion we will very orderly, we're going to limit multiple comments from individuals, we simply have to do that. Would you like to speak to the motion, Pat?

MR. KELIHER: Yes. There was a point that Max reiterated for me that was brought up by the AP in regard to non-equal reductions as it pertains to allocation, and I think there is a fairness issue, and I know everybody we're not going to have full support for this. But I think there is a fairness issue that needs to be dealt with here, and Option 2 certainly does that. It also gives flexibility to develop alternative regulations through conservation equivalencies, including allocation between sectors. I think states and jurisdictions have that ability.

CHAIRMAN ARMSTRONG: Did I see Ritchie? Steve Train.

MR. STEPHEN TRAIN: Could I ask is it possible while I say I oppose this to get Figure 3 up on the screen, while I explain why I oppose this motion from our data. From the Addendum, Figure 3 that was in the data today, he just had it. Figure 3 pretty much explains why I will probably oppose any motion that starts with Option 2. Most of the removals and most of the discards, most of the mortality is not coming out of the commercial sector, and hasn't for a long time. I would oppose this motion, and probably any other under an equity scenario

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that starts with Option 2. As a disclaimer, we do not have a commercial fishery in Maine.

CHAIRMAN ARMSTRONG: Further comment. Adam Nowalsky.

MR. NOWALSKY: The difficulty I have right now is that this motion in particular uses the phrase equal percent reductions. I understand that as it pertains to Section 3.1 that relates specifically to recreational and commercial. I understand that. But if that is the sentiment that we're going to pursue, equal percent reductions, it is difficult for me to know how to move forward with this motion and a number of other motions, if we're not going to have the conservation equivalency discussion sooner versus later.

I would ask the Chair for some direction here, perhaps we could have that discussion now. As I understand the analysis that we've done in New Jersey, the majority of the recreational options in the document are going to provide a significantly higher percent reduction for New Jersey than other states.

Now that may be how it's been done in the past, but that doesn't mean we need to continue doing that and we can't do better now. I would ask for some direction here. What can we do to resolve the question about how states will need to take reductions under conservation equivalency? I appreciate the guidance.

CHAIRMAN ARMSTRONG: Essentially changing the agenda and that is the will of the Board, but before we take comment on that I would like to know what happens to this motion if we go into a different conversation?

MS. TONI KERNS: You can table this motion and take up the motion on conservation equivalency, if that is what you want to do, or take up a discussion on conservation equivalency, and then come back to this

motion, which will require a vote of the Board to table, either consent of the Board.

If there is no objection you could table the motion until after a discussion on conservation equivalency. If you need to vote on it then the only thing that would be debatable is the timeframe, after conservation equivalency is discussed, and then you would just come back to this motion, if that is the intent of the Board.

CHAIRMAN ARMSTRONG: Pat Geer.

MR. PAT GEER: I want to agree with what Adam was saying, because I think everything we're doing here revolves around the conservation equivalency. If we're going to create a vote, I mean in Virginia we've already put several recreational actions in play. We did that last month. We need to know what we're going to be able to do conservation wise. We want to be able to use those measures to adjust our commercial catch as well. In our state it's about 62 percent recreational, 38 percent commercial. We would like to almost a modification of 18 percent, where our recreational not taking 1.8, but we're taking a higher amount but not 18 percent. Higher than 1.8, but not 18 percent, because of what we've done recreationally. I really think we need to have this discussion first.

CHAIRMAN ARMSTRONG: Further discussion, John Clark.

MR. JOHN CLARK: I'm just a little confused here. Are we saying that through conservation equivalency Options 2 and 3 don't really matter, it's going to be up to each state to decide how they want to divvy up the reduction, because that's not what we took out to the public? The public heard Option 2, which were equal percent reductions to each sector. Option 3 was proportional reductions to each sector. Now we're making it sound like these options are no longer in play.

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CHAIRMAN ARMSTRONG: Correct me if I'm wrong, Max. The original intent of this particular item is the Technical Committee wants guidance. Many of these options as you see were targeting either 18 or 20, but the actual results, in the Bay if you go from 2 to 1 fish it's 29. The question is when a state crafts its conservation equivalency does it have to match the option that's picked at 29 percent, or do you go with the 18 percent? Is that correct, Max?

MR. APPELMAN: I think there is a couple moving parts here now.

CHAIRMAN ARMSTRONG: But I understand that it seems like some people are not talking that.

MR. APPELMAN: I'll confirm that yes. We definitely, I mean my vision was that after the options were selected we would then know which percentage we were talking about, which ones we would be choosing from that we would hold states to for conservation equivalency. The other part, John is that the Board did approve language at the last Board meeting to include a blanket statement that the allocation of the reduction between the sectors could be changed through conservation equivalency, so that is built in there under both Options 2 and Options 3.

MR. CLARK: Yes I understand that Max. But I'm just saying that it just seems like at that point then Options 2 and Options 3 are identical when you get to a conservation equivalency for a state. Is that actually what we're looking at here, because both options are getting the same reduction overall, it's just different how they divide it between the sectors? These are like defaults, and then each state can say, well we'll take our conservation equivalency reduction mostly out of the recreational side, or mostly out of the commercial side, depending on the state.

MR. APPELMAN: Essentially yes. Options 2 and 3 are both designed to get us to the same spot.

CHAIRMAN ARMSTRONG: Mike Luisi.

MR. LUISI: I agree that we need to have the discussion regarding conservation equivalency, and the way I see it it's that we need to know as states what that ultimate target is, as far as what the total removals need to be in a conservation equivalency proposal. The way that I read the addendum, it states that we need to achieve an 18 percent reduction in total removals.

I'm not sure why we're even having the discussion. The goal is to achieve an 18 percent reduction in total removals. How a state chooses to do that may require more burden to the recreational fishery, and less to the commercial fishery. But at the end of the day at the bottom of the spreadsheet, the total removals have to be reduced from the 2017 baseline.

Now, I've heard something just this morning that has really upset me, and that has to do with what Adam brought up before about the effect of a coastwide regulation to each state that there would even be a consideration that a state as Mr. Nowalsky stated, would have to craft measures under conservation equivalency to achieve a 40 percent reduction, while others would achieve an 8 percent reduction.

It isn't something that I think this Board needs to even discuss at this point. The FMP coordinator stated that the analysis hasn't even been done, so how are we as states expected to have a discussion on something where I have no idea what a slot limit or a minimum size requirement would have as an effect to our current regulation in Maryland. It could be 80 percent change, for all I know.

The analysis isn't done. But that would mean that I would have to go home and craft

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measures on a conservation equivalency program to achieve an 80 percent reduction. That should be off the table. What we should focus on is whether or not this Board wants to make the target 18 percent of total removals, or should it be the target that is part of the line that you select when you pick your suboption.

If the suboption achieves a 21 percent reduction, but we're striving for 20 on the recreational fishery under Option 3, do we have to go to 21 now, or do we use 18 percent total removals as the baseline for all of these conservation equivalency programs? That would be my opinion, Mr. Chairman that we keep it simple to those two points, and then we can move on from there.

CHAIRMAN ARMSTRONG: Toni.

MS. KERNS: Just to help the Board along hopefully, maybe. For each of the motions that you make, I would say that conservation equivalency is allowed under that motion, unless the Board specifically says it is not allowed. The Plan will allow you to do that. I think that helps you with this first one.

For the second one when you get to the individual options, the Board should state in their motion so that as you debate the motion if it is a 20 percent reduction for the option that you choose then you could say under conservation equivalency the plans have to reach a 20 percent reduction. If you want it to have to just stick to the coastwide 18, then say it needs to stick to the coastwide 18.

CHAIRMAN ARMSTRONG: That is actually very helpful. Andy Shiels.

MR. ANDREW SHIELS: I'm glad John Clark raised this question, because I was thinking the same thing, and although I heard compelling discussion since, I'm very concerned about the public side of this. When we have our meeting we were the first state to hold a meeting, and I

have the decision tree that Max had on the board, it was the handout.

The very first decision we need to make today, and we're stumbling over the very first decision. The way that I understood that this was presented was that it was Option 1, keep it the same, Option 2, split between the sectors, or Option 3, have a different choice. When this was presented, it was not presented with oh, and there is this thing called conservation equivalence. It's really detailed and we have to take our time to explain it, and every state could be different.

What I thought we were deciding, and what the public reflected was 50 percent commercial, 50 percent recreational. We're going to share the burden percentage wise. I thought that is what we were telling the public and what they commented on. We have heard very quickly that a conservation equivalent can be done state by state, and the state can decide to split the sectors.

I didn't understand that. I need conservation equivalence for Pennsylvania to make our regulations work for us, so I'm not against that. But what I'm against is I think we promoted to the public, you had a two-tiered, two-headed decision to make. The majority of people chose Option 2, and I think they believe that that meant commercial and recreational were both coming down at equal percentage, even though the total numbers of fish would be different. Hearing the conservation equivalent fine tuning means that is not in actuality what is going to happen.

I would like to know is that what the public believes they heard, and is that legit, considering that is what we went out to them with? Did all the extra fine details about conservation equivalence get explained like I think I'm explaining them now, and I think what I heard, so they can make the public opinions that they have? I'm not picking on any of the

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groups, I'm just trying to get to the point that what did the public understand we were doing here?

CHAIRMAN ARMSTRONG: Adam, clear this up for us.

MR. NOWALSKY: No, I'm not going to be able to do that Mr. Chairman, as much as I would love to. It seems to me that by consent we've gone down the road of having discussion about conservation equivalency, so I guess we don't need a motion to table this at this point to take up the discussion. If that is in fact there we are, I would like to have the TC go through their memo, and explain to us what each of these items means, and if we have to accept this memo as policy.

If you don't feel we can just do that now by request, then I will make a motion to table the motion that's before us in order to get us specifically to that memo. To the point that we've heard here, Number 5 in the memo under recreational options, states may allocate the total required reduction differently between regions and sectors.

It's clear in the memo what we're talking about. That is the TCs recommended proposal. I think we now need to as a Board know whether we're going to accept that. Mr. Chairman, I would like to see us get to the discussion of the memo. If we're there, please tell us. If not then I will make the motion to table to get us there.

CHAIRMAN ARMSTRONG: Yes, Dennis Abbott.

MR. ABBOTT: At the moment we do have a motion on the board and that's what we're discussing, and if Adam wants to stop us from at this point to get into a technical discussion, we need to table this right now. If we don't want to table it, we have to move on with our business.

MR. APPELMAN: I just want to pause for a second, because I don't think the criteria that we would go over in the TC memo really gets to what you're asking for, Adam, and that is for an answer to what percentage states are going to be held to for conservation equivalency before we start selecting these options. What they're going to go through is what kind of data you can use and things like that. We need the guidance from the Board beforehand.

CHAIRMAN ARMSTRONG: It's clear we need to table this or not that is the will of the Board, we either do it by consensus. Is there an objection to tabling this and moving to? I see objections, we need a motion. Adam Nowalsky.

MR. NOWALSKY: Move to table the motion to discuss the Technical Committee memo for criteria for conservation equivalency.

CHAIRMAN ARMSTRONG: Is there a second? Eric Reid seconds it. Discussion, Adam.

MR. NOWALSKY: As a point of order Mr. Chairman, I don't believe there is any discussion on a motion to table.

CHAIRMAN ARMSTRONG: Thank you. Do we need to caucus? Two minutes.

MR. ABBOTT: Request a roll call vote.

CHAIRMAN ARMSTRONG: A roll call vote has been requested. Prepare for a roll call vote.

MR. APPELMAN: Okay, Maine.

MR. KELIHER: No.

MR. APPELMAN: New Hampshire.

MR. WHITE: No.

MR. APPELMAN: Massachusetts.

MR. RAYMOND W. KANE: No.

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MR. APPELMAN: Rhode Island.

U.S. Fish & Wildlife Service: Abstain.

MR. REID: No.

CHAIRMAN ARMSTRONG: The motion fails, 5 in favor, 8 opposed, 2 abstentions brings us back to the motion, discussion Eric Reid.

MR. APPELMAN: Connecticut.

DR. JUSTIN DAVIS: No.

MR. REID: Do you want me to apologize in advance? I probably should. Given the discussion that we just had, and you know I'm hearing very different things about what may happen within each state, and they are not equal percent reductions. **I'm going to make a motion to substitute. Move to approve Option 3 under Section 3.1 for unequal percentages reductions.**

MR. APPELMAN: New York.

MR. GILMORE: No.

MR. APPELMAN: New Jersey.

MR. JOE CIMINO: Yes.

MR. APPELMAN: Pennsylvania.

The reason for that I mean normally I would have different rationale, but my rationale is in order to accomplish conservation equivalency in the discussion we just had, the discussion is about unequal percentages, or not necessarily the ones that are in the document, but unequal percentages in general. My opinion would be that if we were to approve the first motion that would be off the table, so that is why I'm making this motion.

MR. SHIELS: No.

MR. APPELMAN: Delaware.

MR. CLARK: No.

MR. APPELMAN: Maryland.

MR. LUISI: Yes.

CHAIRMAN ARMSTRONG: Do we have a second, point of information?

MR. APPELMAN: District of Columbia is not present, Potomac River Fisheries Commission.

MR. MARTY GARY: Yes.

MR. GEER: Point of information. I'm wondering if we should have something in there as long as the total reductions are equal to 18 percent.

MR. APPELMAN: Virginia:

MR. APPELMAN: That's how the calculations were done, so total reductions needed 18 percent across both sectors. That is factored in to both of these options.

MR. GEER: Yes.

MR. APPELMAN: North Carolina.

MR. CHRIS BATSAVAGE: Yes.

MR. GEER: Okay.

MR. APPELMAN: National Marine Fisheries Service.

CHAIRMAN ARMSTRONG: Essentially as I read it we're just substituting Option 3 for Option 2, is there a second? John Clark, discussion, John McMurray.

MR. DEREK ORNER: Abstain.

MR. APPELMAN: U.S. Fish and Wildlife Service.

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MR. McMURRAY: Option 3 would place 99 percent of the conservation burden on a sector that accounts for only 90 percent of the mortality. There is something not right about that. This is a shared resource; all sectors should share in the burden to end overfishing. As Pat mentioned, I think this is ineffectively an allocation reallocation based on one year of data.

That is not the way to make an allocation decision. I would also point out that the commercial reductions are based on quota, not harvest, and so could on the water actually result in an increase. The entire point of this Addendum is to decrease fishing mortality. Lastly by this reasoning and we started to get into it. You could require states that don't account for a lot of fishing mortality to take smaller reductions, and I don't think we want to go down that road.

CHAIRMAN ARMSTRONG: Further discussion. Mike Luisi.

MR. LUISI: I support the substitute motion to approve Option 3, and the reason that I do is that while I understand the concept of equal in Option 2, when it really boils down to it, the effect of the alternatives when applied are very much different to the actual individual within the different sectors. Yes, the equity in Option 2 is only a number, but the effect is much different. As an example, the difference on the coastal recreational measure between Option 2 and Option 3 is a 1 inch difference in the minimum size. It's also a 1 inch difference in the top maximum size limit in the slot, when that provision is applied to a recreational angler, whether that angler is a catch-and-release angler or somebody who may want to harvest a fish to eat. That 1 inch difference means so very little to the ability of that angler to have access to that fishery, and to go on a fishing trip. Charterboats, I can't imagine would be affected by a 1 inch difference.

They're still going to be able to sell the trips, whether it's 35 or 36 inch minimums, or if it's a slot the 1 inch difference in the slot, I can't imagine that it's going to make a difference on selling trips. Now on the other hand you spin it over to the commercial side. There is very much a difference to the individual fisherman when you apply either a 1.8 or an 18 percent reduction to that individual. In the state of Maryland we have an ITQ fishery.

Each one of our thousand permit holders had an individual quota that is essentially theirs. Quota right now, a pound of striped bass quota is selling on the market through the transfer process, for between \$18.00 and \$20.00 a pound for the permanent transfer of striped bass quota from one individual to the other.

I know a great many individuals that have spent thousands if not tens of thousands of dollars to acquire quota for their business to support their families, and to make a living on the water. There is a much bigger difference in taking 1.8 percent from that person and taking 18 percent of their quota from that person. They are not equal, and that's why I support Option 3, and I hope the rest of you can as well.

CHAIRMAN ARMSTRONG: Ritchie White.

MR. WHITE: I need clarification on Option 2, because I was under the understanding that Maryland, and they let us know this that they were going to sign the total mortality reduction to the recreational fleet and not the commercial fleet. I wasn't aware that they were not able to do that under Option 2. Is that the case? I don't think it's a question for Maryland. Would this Addendum allow Maryland under a conservation equivalency, Option 2, to have them take the full reduction in mortality on the recreational sector along?

MR. APPELMAN: Yes, Option 2 or Option 3.

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MR. WHITE: Follow up. Then I don't understand the problem of why we have to go to Option 3. If most of us want to have an equal reduction, we pass that and any state that wants to adjust that has the ability to do that under conservation equivalency. I don't understand all of a sudden this move to Option 3.

CHAIRMAN ARMSTRONG: To that point Mike, briefly.

MR. LUISI: I'll be very brief. Ritchie, we've been very open in the fact that we would like to implement a conservation equivalency, but we are limited to that conservation equivalency to the Chesapeake Bay. We don't have the information available to us on the coast. We have a coastal and a Chesapeake Bay commercial fishery. In order for us to minimize the impact to the commercial fishermen, Option 3 is our only way to achieving that on the coast, because if Option 2 is selected then we would need to take an 18 percent reduction on our coastal ITQ permit holders. I will say, on the flip side of all of this, a state could decide if Option 3 is selected that they would prefer to do it the way Option 2 is laid out. But the impact on us with Option 2 is more than what we can – I would rather have a starting point of Option 3 – and then if a state wants to reduce its commercial harvest equal to that of its recreational harvest they have every right to do so, as long as they achieve an 18 percent reduction in total removals.

CHAIRMAN ARMSTRONG: Pat Keliher then John Clark.

MR. KELIHER: Mr. Chairman, two of the three people I'm going to dinner tonight have either spoken against my motion or made a motion to substitute, so if you would like to go to dinner tonight.

CHAIRMAN ARMSTRONG: Via the bar.

MR. KELIHER: I do have the red bull, because it may be long here today. In all seriousness, I'm trying to understand the motion to substitute. I'm not sure I agree with Mike. If Option B is chosen a state can still choose to reallocate their 18 percent between sectors. I feel like those flexibilities are in place for both Option 2 and Option 3, and as such I'm going to be voting against the motion to substitute.

CHAIRMAN ARMSTRONG: John Clark.

MR. CLARK: I seconded this motion. I would have preferred calling it sector proportional percent reductions, but a lot of the reasons that are brought up by Mike Luisi, we have an ITQ fishery in Delaware, and it's a small commercial fishery. We catch the quota every year, and beyond just the commercial fishermen we have a lot of people in Delaware who are not represented here that like to eat striped bass.

In particular I know our commercial fishermen really target Easter week as a big market for striped bass. That is another factor to consider in this of course, but I think getting back to the options. I know from this conversation we've had here it seems that a lot of states are planning to just no matter what option is chosen, divvy the reductions up between sectors how they see fit. But for a lot of states I know I was looking at this more as more simple that we choose an option, and I wouldn't have to go back and come up with a conservation equivalency.

That is one of the reasons I think for many states that Option 3, or if they prefer Option 2 would work, because they wouldn't have to now go back and start looking at all the different numbers and say, "Well this is how we get to 18 percent for our state." Plus, it gets us further and further away from one of the stated goals, which was to have uniform regulations up and down the coast. Anyhow that is my reason for supporting 3.

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CHAIRMAN ARMSTRONG: Marty Gary.

MR. GARY: A question for the maker of the motion. Eric is the motion meant to read that it is Option 3, meaning a 20 percent reduction to the recreational sector and 1.8 to the commercial? The way that could be interpreted is it could be anything that's unequal. I'm just looking for clarification. Is that actually the way? Is your intent that it was supposed to be the 20 and 1.8 as it's listed in the Addendum?

MR. REID: No actually my intent was to provide the flexibility to the states should they do something under CE. I think I said that. But that is my point. Option 2 says equal percent reductions. That's what it says. My opinion is if in fact states want to use CE, then you have to have a motion that says you can do that. The original motion from my ex dinner companion doesn't do that. It doesn't do that. That is why I did it. I appreciate that.

MR. APPELMAN: I want to clear the air a little bit here. That flexibility exists under both Option 2 and Option 3. The Board had approved adding that language at the August meeting to both options.

CHAIRMAN ARMSTRONG: Senator Miramant.

SENATOR DAVID MIRAMANT: I wasn't clear on why Maryland believes it can't use the CE on both the coastal and Bay that they believe there is a restriction. I don't get that. Could you please clear it up if you can?

CHAIRMAN ARMSTRONG: Mike.

MR. LUISI: Let me see if I can. I'm not much on the technical side of things. However, the coastal fishery, if a recreational regulation is selected for the coastal fishery and we want to create. We would have to do two conservation equivalency programs; one for the Chesapeake Bay and one for the coastal fishery, given that there are two separate commercial quotas.

If we decide to deviate from an equal percent reduction, we would have to describe how our recreational measures were going to account for that difference. We don't have any information in Maryland. It's such a small recreational fishery on the coast that we're unable to use our own Maryland data to craft a conservation equivalency measure on the coast.

We can do it in the Bay, because we have all kind of information on catch in the Bay, but our catch has been so low recently on the coast, we don't have any information to provide to change the rule so that it accounts for. We can go to the Technical Committee and say, our change to the recreational measures accounts for the difference in that reduction on the commercial side.

The only way for us to be able to go home and apply a lesser reduction to the commercial fisherman, which is what our intent is, not zero but a smaller reduction, is to start as a base as with Option 3. Then if the state wants to do more than that they have the flexibility to add more reduction to the commercial fishery if they choose to. It's the only place we can start, which is why I've supported the motion. I hope that helped.

CHAIRMAN ARMSTRONG: Roy Miller.

MR. ROY W. MILLER: I hearken back to comments made by Andy Shiels earlier that when this went to public hearing in our state the options I thought were fairly cut and dried. Option 2 was 18 percent for both sectors. Option 3 was 20 percent for the recreational sector, 1.8 percent reduction for the commercial sector. Somehow we have evolved this afternoon along different lines, and I'll tell you what I don't like about it. If this motion were to pass as Max characterized it and others have characterized it that throws a ball back in Delaware's court.

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In other words, we're going to have to have that discussion at home, how we divide the striped bass reductions among the commercial and the recreational sectors, and honestly I don't want to have to have that discussion, pitting our commercial fishermen against our recreational fishermen.

Our laws are designed around implementing the management plans approved by the Atlantic States Marine Fisheries Commission. That is the regulatory authority we were given. If we don't get guidance from ASMFC, we're on shaky ground legally in our state when we go to public hearing.

CHAIRMAN ARMSTRONG: We need to move on this question. There have been great comments on both sides. Are there any further comments that can solidify last comments? Joe Cimino.

MR. CIMINO: I think something important here, because either of these options, we keep talking about conservation equivalency. My understanding is one thing that the Technical Committee through a couple of the meetings on this have come up with is what states do not have enough data to do conservation equivalency, and if that is true can we hear what states those are, because they're going to be impacted by either of these options.

MR. APPELMAN: It's kind of hard to answer that question, I think. I mean there is data that exists to do these types of reductions for every state.

CHAIRMAN ARMSTRONG: All right I'm going to call the question.

MR. NOWALSKY: Point of order, Mr. Chairman.

CHAIRMAN ARMSTRONG: I'm sorry where did that come from? Adam Nowalsky.

MR. NOWALSKY: This was one of the major topics under public comment, and I would ask that we hear from the public before this question is voted on around the table.

CHAIRMAN ARMSTRONG: It's the pleasure of the Board. As Chair, we have 6,000 comments on this already, point of order, Dennis Abbott.

MR. ABBOTT: Yes it's a simple one. Some of us don't hear so well, and maybe the audience also might be having difficulty. I would like to hear everyone's comments. John McMurray you're a low talker, Joe Cimino, you're a low talker if you don't have the microphone close. I would ask everybody; get closer to the microphone so everyone can hear you, because we do want to hear what you have to say. I do, and I'm sure everyone else does.

CHAIRMAN ARMSTRONG: Mr. Leo, I will take one brief, because I don't want you to have a stroke.

MR. ARNOLD LEO: Thanks. The point has been made pretty clear that Option 2, reducing the commercial landings by 18 percent does very little to help solve the problem of overfishing, the commercial landings being only 10 percent of the total landings. However, that 18 percent applied to the commercial fishery in New York State has a very significant impact. Presently a commercial striped bass fisherman in New York State gets about 220 tags. Each tag allows a striped bass to go to market.

You're going to take away one-fifth of his quota, one-fifth of his tags that actually equals in monetary terms between \$2,400.00 and \$3,000.00. Now that is about what he has to pay to make his installment payments on his truck. I would consider that to be a very significant impact, whereas I think as Mr. Luisi has made the point, the impact on the recreational fisherman's actual ability to go out and catch a fish or two fish is very little

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impacted, whether he gets an 18 or a 20 percent reduction.

CHAIRMAN ARMSTRONG: Thank you, Mr. Leo. I prefer to call the question. Seeing heads nod. Let's caucus.

MR. WHITE: Roll call vote requested.

CHAIRMAN ARMSTRONG: We have a roll call vote requested. On the motion to substitute, Max a roll call, please.

MR. APPELMAN: Maine.

MR. KELIHER: No.

MR. APPELMAN: New Hampshire.

MS. CHERI PATTERSON: No.

MR. APPELMAN: Massachusetts.

MR. KANE: No.

MR. APPELMAN: Rhode Island.

MR. REID: No.

MR. APPELMAN: Connecticut.

DR. DAVIS: No.

MR. APPELMAN: New York.

MR. GILMORE: Yes.

MR. APPELMAN: New Jersey.

MR. CIMINO: No.

MR. APPELMAN: Pennsylvania.

MR. SHIELS: No.

MR. APPELMAN: Delaware.

MR. CLARK: Yes.

MR. APPELMAN: Maryland.

MR. LUISI: Yes.

MR. APPELMAN: Potomac River Fisheries Commission.

MR. GARY: Yes.

MR. APPELMAN: Virginia.

MR. GEER: No.

MR. APPELMAN: North Carolina.

MR. BATSAVAGE: Null.

MR. APPELMAN: National Marine Fisheries Service.

MR. ORNER: Abstain.

MR. APPELMAN: U.S. Fish and Wildlife Service.

U.S. Fish and Wildlife Service: Abstain.

MR. APPELMAN: North Carolina was that a null or a no?

MR. BATSAVAGE: That was null, N-U-L-L.

CHAIRMAN ARMSTRONG: The motion fails, 4 yes, 8 noes, 2 abstentions, 1 null, back to the main motion. Brief discussion, all right let's go to a vote. All in favor raise your right hand.

MR. ABBOTT: A roll call vote, please.

CHAIRMAN ARMSTRONG: There has been a call for roll call. A minute for caucus, I'm sorry there was a nature break needed by the roll caller. All right prepare to roll call.

DR. DREW: Maine.

MR. KELIHER: Yes.

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DR. DREW: New Hampshire.

DR. DREW: National Marine Fishery Service.

MS. PATTERSON: Yes.

MR. ORNER: Yes.

DR. DREW: Massachusetts.

DR. DREW: U.S. Fish and Wildlife Service.

MR. KANE: Yes.

U.S. FISH AND WILDLIFE SERVICE: Yes.

DR. DREW: Rhode Island.

CHAIRMAN ARMSTRONG: The motion passes 11 to 4. All right let's move quickly that is Motion 1 of 6 needed. It brings us to the suboptions that we need to move to. We would like to go with the ocean first. Justin.

MR. REID: Yes.

DR. DREW: Connecticut.

DR. DAVIS: I move to approve Sub-Option 2-A2 under Section 3.1, 28-35 inch slot limit for the ocean recreational fishery.

DR. DAVIS: Yes.

DR. DREW: New York.

CHAIRMAN ARMSTRONG: Second. I'm sorry where was the second, Mike Luisi? Would the motioner like to discuss?

MR. EMERSON C. HASBROUCK: No.

DR. DREW: New Jersey.

MR. CIMINO: Yes.

DR. DAVIS: I'll start off by acknowledging that I think everybody around this table recognizes we've gotten a very strong signal from the public they want us to take strong conservation action on striped bass. I think I'm probably in the same boat as everyone around the table that I got more e-mails and calls about this than I've gotten about just about anything, since I've been involved on the Commission.

DR. DREW: Pennsylvania.

MR. SHIELS: Yes.

DR. DREW: Delaware.

MR. CLARK: No.

DR. DREW: Maryland.

I think we need to acknowledge that any of the options we're looking at in this document, whether they be the slot limit options or the minimum length options across Option 2 or 3, all call for anywhere from a 43 to a 52 percent reduction in harvest. To me that is a substantial course correction to make in one year to essentially cut harvest in half in a fishery. I think whatever option we go with, we're meeting the mandate we've gotten from the public to engage in a substantial course correction for this fishery.

MR. LUISI: No.

DR. DREW: PRFC.

MR. GARY: No.

DR. DREW: Virginia.

MR. GEER: Yes.

DR. DREW: North Carolina.

Given that all these options will sort of provide an equivalent, more or less reduction in

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harvest, I think it's left to this Board to decide which one of these options best fits the fishery we have right now, or the status of the stock provides the best way forward or the best management philosophy. I remember being shocked when one of my staff members who were working on the PDT brought it to my attention that an 18 percent reduction in removals for the stock was going to equate to a 50 percent reduction in harvest. At first I thought that couldn't be right, and made him rerun the numbers. But really I think it underscores one of the major challenges we're facing in this fishery, which is discard mortality. We should acknowledge that none of these options we're about to talk about deal with that issue.

I think that is a major issue that this Board has to deal with. The circle hook requirement could be a good start, but I would like to see the Board give this more thought down the road potentially in an Amendment process. I have real concerns that a high minimum length limit is only going to increase the level of discarding and the amount of discard mortality we're experiencing for the stock.

I know that on paper all of the options will provide sort of a about equivalent increase in release mortality, anywhere from 3 to 5 percent. But I have concerns, and I've put this on the record before at a previous meeting that the size structure data that was used to formulate these options, the 2016-'17 data, while it does capture the strong 2011 year class.

We're in a situation now where we have two strong year classes starting to recruit into the fishery. I think that we're sort of underestimating the catch of smaller fish that we're going to experience in coming years, and so I think we're underestimating the amount of release mortality we might be adding with a high minimum length limit. That is one of my concerns.

Another is I guess what seems to be an emerging theme today, which is disproportionate impacts on different sectors or different states. We're treating the fishery as sort of this one consistent fishery across the whole coast, for the purpose of formulating these reductions, but I think we know that size structure of fish can vary, availability can vary across the coast year to year, and that also sort of be motivation to fish for different sectors within the fishery is tied more to harvest for some fishermen than others.

We've heard a pretty clear signal from the for-hire sector, from some other recreational anglers that the opportunity to harvest fish is still important to them. They recognize we need strong conservation, but they want us to still provide some reasonable opportunity for harvest. I think that the slot limit option provides that.

I'm concerned that a high minimum length limit will just be too exclusionary for certain sectors, or certain regions, depending on the availability of fish in their area. Finally I'll just close with, you know I think from a fishery management sort of philosophy standpoint, just stepping back and not thinking about the percentages in the table.

Really what we're sort of doing next year is we're asking anglers to release half the fish they would have otherwise kept. We have to make a decision; do we want them to release the large fish over 35 inches or the fish between 28 and 35 inches? I feel like from a fisheries management standpoint there is abundant evidence out there that older, larger fish are really important to the productivity of the stock.

It's those fish which are most desirable for anglers; it's also those fish that comprise the spawning stock biomass, the depleted state of which is our main concern here. I think from a philosophy standpoint it really behooves this Board to send a signal to the angling public that

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it's important to return those large fish to the water and protect those older, larger fish. Those are all the reasons that I support a slot limit for the ocean recreational fishery. I recognize that a high minimum length limit would also provide substantial conservation for the stock, but I just feel like the slot limit is the best way forward at this point.

CHAIRMAN ARMSTRONG: Ritchie White then Tom Fote then Mike Luisi.

MR. WHITE: I'm going to oppose this motion. I'm going to support the motion that had the most public input, both throughout all the public opinion, and also state of New Hampshire, and I'm going to be supporting A1.

CHAIRMAN ARMSTRONG: Tom Fote.

MR. FOTE: We said it this morning or at lunch. I'm going to give you a little bit of a history lesson again. When we basically in the original plan to rebuild this stock, what we basically did was protect the '82 year class until it spawned, because it was a big year class until it went through the system, because I know, because every year I had to go to Trenton and get a bill passed, because we did it by legislation back then, and raise it up another inch or two inches at a time.

We basically didn't open the fishery until almost 95 percent of those females had been the size to where they could spawn. Well right now we're doing just the opposite. We hammered the 2011 year class before they got out of the Bay. It was a misappropriation; we didn't realize the catch was going to be big. We did it. We are now hammering the 2011 year class, and this is in place for two or three years, the 2015 year class. The two year classes we're depending on to go up, to basically come up into the maturity.

Again, my science that I've looked at over the year says that the big fish don't go in every year, and there is always a disagreement

whether the young females that are 34 or between those size limits are actually more productive in the fishery, because their eggs survive better, because they have less PCBs in them.

It's always a controversy, which is better at more producing fish. I don't like either one of the options to tell you the truth, because then we're going to be hammering the big fish. But what are we doing? Are we protecting the year classes as they moved along that actually did rebuild the stock, or are we trying a new plan that I think is just going to have the opposite effect? I can't support this motion.

CHAIRMAN ARMSTRONG: Mike Luisi.

MR. LUISI: Justin Davis, he basically said everything that I had planned to say regarding this alternative for the slot option. All things considered here, we have two ways to go. They both really accomplish the same thing, and the conservation effort is extreme based on how much reduction in harvest that we're looking at. I'm supportive of one of these tools being implemented, I just can't. By going with the 35 inch minimum size limit in the state of Maryland on our coast, which our fishery in the ocean is almost nonexistent, the only fishery we have left is a small fishery in our back Bays area behind our Barrier Islands. The only thing that would allow for any harvest at all and that 28 inch minimum size limit in the Bay is almost impossible to catch. To allow for any harvest at all and to allow for any charterboat operation in our coastal fishery to continue fishing, the only choices we have is the 28 inch minimum size to the 35 inch slot, so I'm going to support this.

CHAIRMAN ARMSTRONG: John McMurray.

MR. McMURRAY: Dennis, is this sufficient? Good. Again I want to point out that overall public comment was 2-1 in favor of 35 inches, and I would point out that the TC does acknowledge discards, and it was listed out with

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each option even though it wasn't on the slide, and it was anywhere from 4-6.

I think one of them was 7 percent, but the TC has been very clear from the beginning that that large size limit far outweighs that 4-6 percent total reduction in fishing mortality. What this does is this targets a very narrow band of year classes, 7 or 8 inch. Part of my question earlier was and I have to be honest, I didn't understand your answer.

What I was getting at was what year classes are going to fall within this slot limit, because that is significant. I mean we're running the risk of putting a lot of pressure on the 2011s or the 2015s, and that is really what we're trying to protect. I can't look at this option and seriously believe that it's going to reduce fishing mortality, because you're going to have a whole lot of guys focusing effort on this 28 to 35 inch fish.

I understand the rationale, and I understand the part of the public that supported this. They want to have the opportunity to take home a fish, and I get that. But the entire reason that we're doing this, Addendum is to keep people from taking home as many fish as they had. This doesn't really achieve the objective that we're trying to achieve here. I'll leave it at that for now.

CHAIRMAN ARMSTRONG: Jim Gilmore.

MR. GILMORE: I'm not going to go into a lot of the comments I've heard made. The one thing I will say is that I didn't get any clear signal on this thing, because we got a lot of conflicting signals on it. But I'll just give you my perception on this. Right now the one thing that we did hear and this is up and down the coast that there was a success story years ago, and we raised the size limit, and it worked. Everything else is sort of a maybe it will go, maybe it won't. But raising the size limit to a higher level with one fish worked. The stock

came back and it came back like gang busters. That is what rings in my head as being a place to be going. On top of that remember if we go to that larger fish, it's different up and down each one of the states, but in New York we are leaning more towards that larger fish, because it worked.

Secondly, because we're going to do conservation equivalency to take care of some of those smaller sectors. The Hudson River Fishery is small. We have a mode split, and we think we can maybe use that larger size limit, but still accommodate those parts of the fishery. We do both. We maybe don't have a big economic impact, but we also rebuild the stock as quickly as we can. At this point I'm opposed to the motion.

CHAIRMAN ARMSTRONG: Adam Nowalsky.

MR. NOWALSKY: For states that choose to pursue conservation equivalency with this option, what will the TC review the proposal and come to their recommendation for the Board whether to approve it or not? Will it be that their CE proposal achieves the percent reduction in harvest that's in the table? Will it be that the state achieves the percent reduction in removals, or will it be that the state achieves the percent reduction in harvest or removals that we don't know the answer is to, based on some analysis of what their percentage is of the coast?

MS. LENGYEL: That is guidance that the TC is looking for the Board to. We would like an answer from the Board as to what percent conservation equivalency proposals will be held to.

MR. NOWALSKY: When are we going to have that discussion, Mr. Chairman?

CHAIRMAN ARMSTRONG: It's been suggested that you make a motion to amend and insert

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that percentage into this motion. Go ahead, Toni.

MS. KERNS: It's the pleasure of the Board on how we would like to take this up. You can either add it to this motion or you can take it up in a separate motion after it's been finalized, but either way we do need to give direction to the TC.

CHAIRMAN ARMSTRONG: Nicole, could you clarify what the options would be right now?

MS. LENGYEL: There are several options. As Mr. Nowalsky pointed out the overall coastwide reduction needed to get F back to the target in 2020 is 18 percent. The option in the motion that is up on the screen has a projected reduction of 19 percent, and there is also an additional option that has been discussed here at the Board that under each selected option a state's individual reduction will vary state to state.

As has been pointed out, the Board does not have those individual reductions in front of them at this time. If the Board chose to go with that route and have states held to whatever reduction their state would have had under the selected option, the states would have to go back and calculate what that reduction would be, and then submit a proposal that met that reduction.

CHAIRMAN ARMSTRONG: Is that clear to everyone? That is the discussion we need to have or we include an explicit option into this. Adam.

MR. NOWALSKY: I will move to amend to include or a CE proposal to achieve an 18 percent removal.

CHAIRMAN ARMSTRONG: Is there a second, second by Chris Batsavage? Let's get it up on the board.

MR. APPELMAN: Adam, can I look for a little bit more clarification that we're talking about an 18 percent reduction in total removals relative to 2017?

MR. NOWALSKY: Yes. I didn't even think that was an option for discussion. I thought the document was pretty clear we were doing all of our evaluation on 2017, whether we agree with that at this point, I felt that decision was made. Yes that is what I think we would be looking at.

CHAIRMAN ARMSTRONG: We have a second by Chris Batsavage. Would you like to speak to the motion, Mr. Nowalsky? Adam, did you want to speak to this?

MR. NOWALSKY: I think it's pretty clear what we're trying to make clear here.

CHAIRMAN ARMSTRONG: Joe, I had you on the list. Have things changed? You're all set. Steve Bowman. We're going to speed things up.

MR. CIMINO: As Jim Gilmore pointed out, you know for some of the states it wasn't clear exactly what the preferred option. But it was clear in New Jersey that no one liked any of these options. These options are going for a reduction in F, and I'm surprised my low talking fellow Commissioner didn't get to the point where we need to be looking at rebuilding this fishery.

Whatever option we chose, I hope that we're having a very quick discussion and a motion on getting that Amendment back, because we don't know really what these options are doing for spawning potential. I'm concerned that because we were only shooting for 18 percent, we're talking about several year classes in this slide that can be vulnerable for quite some time if we don't really reevaluate this soon. I'll leave it at that.

CHAIRMAN ARMSTRONG: I have Steve Bowman.

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MR. STEVEN G. BOWMAN: Mr. Chair, all I had was a point of order, and if it's okay it's fine. Normally when you get a move to amend it's an amendment that's accepted by the maker of the motion. If the rules are a little bit different here and I misunderstood that that's fine.

I just want to make sure when this motion goes through, as much conversation we've had on it, it's made in a correct form. I don't know if this should be a substitute motion, or move to amend with a second based on the existing motion is appropriate. That was just my concern. That's all it is, and if it's good to go according to parliamentary procedures it's good to go.

CHAIRMAN ARMSTRONG: I'm getting the nod that it's okay in this form. Mike Luisi.

MR. LUISI: I'll be very brief. I support the motion. I think of the three options that Nicole referred to, I think this is the only really viable option. I actually presented at one of the hearings, and spent no time discussing that the total removals in the table would be something that we would have to achieve if that selection was made in a conservation equivalency proposal.

But the public in Maryland did not hear that nor would I feel comfortable in suggesting an option where an analysis hasn't even been completed yet. I think this is what we have. I think it's clear it is part of the discussion at the background information and the statement of the problem in the Addendum, and I think this is what we need to support.

CHAIRMAN ARMSTRONG: I may have missed someone, but I've got Jay McNamee next.

DR. JASON McNAMEE: I'll start off by saying with the conservation equivalency approach here for striped bass; we've got a mathematical issue. Conservation equivalency you're either all in or you're all out. You can't piece it out

when we went in with a coastwide calculation. That being said, I think Commissioner Luisi is right in that we don't have any other information to go by. Because of that I'll support the amended part of the motion.

I do also agree with I think it was Commissioner Cimino who said this needs to be added to the Amendment discussion, because conservation equivalency can't work like this. We are not going to achieve our goals. I'll acquiesce, because I think we need to take action and move this Addendum. I don't want it to get stalled because of a technicality at this point.

But I think it's an important discussion that we need to have. We either want to go to some state-by-state management system for striped bass, or we are going to do coastwide management, and it can't be somewhere in between. Then one final thing, Mr. Chair, I do support the original motion as well made by Commissioner Davis.

You know I think we talk about slot limits and protecting spawners all the time, in particular with this fishery I think we have an opportunity to test that here. I liked the fact that in Rhode Island we got a lot of support for the slot limit, and there wasn't watering down of that slot limit with plus a trophy or plus some other measure. I liked it.

I would like to see it pass. However, I could be okay with either the slot limit or the minimum size, but I'll just offer that there is a cohort issue whether you jack the minimum size, fish continue to grow. You're going to have to deal with it at some point. These are dynamic systems. You may have bought another year or two with the 35, but you're going to run into the same problem that folks have been talking about with the slot limit, with the minimum size at some point as well.

CHAIRMAN ARMSTRONG: I hope we all note that we could have avoided a lot of heartburn

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that we're having right now if we had fully defined how we do conservation engineering. I guess that is for the next amendment. Further comments on the motion to amend, seeing none, let's go to the vote, caucus for a minute.

Are we ready to vote? All in favor raise your hand, opposed, abstention, and null. The motion passes 11 in favor, 2 opposed, 2 abstentions. We will amend the main motion. Let me read the newly amended motion into the record. Move to approve Sub-Option 2-A2, 1 fish at 28-35 inches for Section 3.1 for the ocean fishery.

Conservation equivalency proposals are required to achieve an 18 percent reduction in total removals relative to 2017. Are we ready to vote? Do we need to caucus, no? All in favor raise your hand, opposed, abstention, and null. The motion passes 12 in favor, 1 opposed, 2 abstentions. Moving on to Chesapeake Bay, would anyone care to put a motion for Chesapeake Bay? Pat Geer.

MR. GEER: Here we go let's make this quick. Move to approve Sub-Option 2-B1, 1 fish 18 inch minimum for the Chesapeake Bay Fishery. I wanted to do the same verbiage for the conservation that was up there, if we can get that in there as well.

CHAIRMAN ARMSTRONG: Is there a second, Marty Gary, discussion, Pat Geer?

MR. GEER: We kind of took a very proactive approach in our state. We've been working since March to try to look at this. We actually approved a 1-fish bag limit with a 36-inch maximum, so we've done away with our trophy fish. We've already instilled this in our state. It gave us the greatest savings. Everything else would have had to be cobbled together with multiple items. With discussions with our Secretary and our Commission and all our staff, we felt it was hard. But as Justin pointed out, we had to make hard decisions and

we decided that we were going to go with the 1-fish bag limit. It gave us a substantial savings.

CHAIRMAN ARMSTRONG: Further comment, Mike Luisi.

MR. LUISI: This one is kind of awkward for me, in the fact that for the last few years we have worked in Maryland extremely hard to implement measures that reduce discard mortality. We've reduced our minimum size by an inch, and we implemented mandatory circle hook requirements with chumming and live lining.

It's very difficult for me then to support an option, although we hope not to have to implement this option. I've been clear that conservation equivalency is something that we're strongly considering using seasonal closures as a mechanism for achieving a desired result. It's very difficult for me to say yes, this is a great one.

We're going to have a 1 fish at 18 inch limit that if we have to implement it, will eliminate our charterboat fleet in the Chesapeake Bay. They can't sell trips for 1 small fish. Also, this option increases the release mortality by 4 percent. It goes against the grain of what our state has been preaching and working really hard on.

I'm not sure what I'll do when it's time to vote, but I would say that we could support it, because Virginia has also been working really hard, and this really is the only option of the four that could even possibly work. I may have to abstain on this vote. I just put that on the record, given the awkwardness of the application of this measure in our state.

CHAIRMAN ARMSTRONG: Further discussion. Seeing none let's vote. All in favor raise your hand, please. Sorry, caucus two minutes. **All right let's vote. All in favor raise your hand, please, opposed, abstentions, and null. The motion passes 12 in favor, 3 abstentions.** Now

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the next consideration is the discussion we were supposed to have of conservation equivalency by incorporating it into the prior two motions we have addressed the concerns of the TC. We of course will want to bring it up under the Amendment talk in the next coming meetings. We can bypass this discussion right now, which brings us to circle hooks. Does anybody want to start the discussion or make a motion? Tom Fote.

MR. FOTE: I need to get close so you can actually hear me. I guess it might be a problem hearing me. Circle hooks, they work. You don't gut hook fish with circle hooks. It should be anywhere we can get catch and release fishermen, even the regular fishermen that use them is productive. It's going to save a lot of fish.

How do we go about it that's the problem? I spent a lot of time trying to talk to Kurt. I spent a lot of time talking to my law enforcement, even gone to the point of thinking if we can't force this because they could be fishing for something else, then why don't we just since bluefish are overfished, since weakfish are in the crapper, and we just say if you're fishing for any of those three and using bait, you need to do it.

Again he says, well I'm fishing actually for menhaden, and I want to pull him in. But that is how the judge will basically look at it, and it's just complicated. I think we go as far as we can. I would make it mandatory, but I know it's going to be a problem. That's why I'm debating, but I would support mandatory.

I also find it really one of the things that was disheartening at my public hearing is the guys that want us to go to, because they are all catch and release fishermen the ones that were speaking, they wanted me to go to about 45 percent reduction, because they need more catch and release fish. But they also did not

want circle hooks, because they want to snag and drop.

I said, "Wait a minute, you're going to want to snag and drop?" For people that don't know what I'm talking about. If the bunks are sitting about 100 feet, 200 feet off there they take the rod, put a bunker snag on, throw it out as far as they can, snag a bunker with a treble hook with a piece of led in it, and then let it sit out there, the striped bass will get it. I say unlike what I used to do is pull them in and basically put a circle hook, and then put them back out again.

But that's what they're doing. I say how can you do something like that? It was different when you were basically taking one of those fish home to eat, because if you had a gut hooked fish you would take that and then quit doing it that way. But that's not what they're doing. It was disheartening for me to hear that at my public hearing. Yes, I support mandatory. I don't know if somebody wants to make a motion. I'll let more conversation before I make a motion.

CHAIRMAN ARMSTRONG: Ritchie White.

MR. WHITE: Move to approve Option B.

CHAIRMAN ARMSTRONG: Second by Senator Miramant.

MR. WHITE: I'll speak to it if I may.

CHAIRMAN ARMSTRONG: Go ahead Ritch.

MR. WHITE: As I said there was extensive discussion in Law Enforcement, and I think Kurt talked about benefits, even though enforcement is going to be extremely difficult, but he talked about the benefits of having it in law, because 90 percent of the people if it's in law will do it. It's the small percent that create problems, probably regardless if it's in the law or not. Please correct me if I'm wrong, Kurt.

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MR. BLANCHARD: That was the discussion.

MR. WHITE: That's the basis of this. It is hard to enforce, but if we can get most people to abiding by it then we've done our job.

CHAIRMAN ARMSTRONG: Pat Keliher.

MR. KELIHER: I support the motion. I think Deputy Chief Blanchard really stated it well yesterday about the compliance issues. Maine has had mandatory circle hooks for several years now. We have a very high compliance rate. When we're not seeing compliance, we're usually dealing with it from an educational standpoint.

The officers are, and occasionally writing a warning and then changing behaviors that way, without writing tickets and dealing with the challenges that Kurt spoke to earlier with the courts. I think beyond this conversation, somebody ought to talk to the incoming Chairman about a broader conversation about circle hooks across the board. We're talking about them everywhere now, and maybe we need to have that broader conversation.

CHAIRMAN ARMSTRONG: Justin Davis.

DR. DAVIS: I'll also speak in support of the motion. Certainly as I mentioned earlier, I'm concerned about the issue of discard mortality of this stock. I think this is a good first step, hopefully one of many. I'm wondering if we need to consider an implementation deadline for this, because I don't believe, certainly from Connecticut's standpoint.

We could probably not craft regulations and implement them on the same timeline that we're going to be required to implement the other regulations we're going to adopt pursuant to this Addendum. I guess I'm looking for some direction from the folks up front there if we should consider an implementation deadline.

MR. APPELMAN: Yes I think Jim asked a similar question earlier. It is up to the Board if they want to have the same implementation timeline for all the measures approved today, or separate timelines, implementation dates for different pieces of the Addendum, this would be a good candidate for a second timeline.

CHAIRMAN ARMSTRONG: Yes, we put in circle hooks and we shoved it off a year for all the reasons we all know. Bait and tackle shops need to get rid of current stock, et cetera. We need to educate the public, so that is a reasonable thing to add. Jim Gilmore.

MR. GILMORE: That was my question was the same issue, the implementation date on the circle hooks. To your point, Mr. Chairman, I think giving some time to implement this. I think Kurt said yesterday, I was listening also, was that the majority of the fishermen if they know it's a rule will abide by it, and you get some just voluntary compliance just because they know it's the rule.

If we phase that in I think probably more protection of the resource while we're letting the for-hire industry get rid of their stock or whatever. Whatever we need to do, I think we need to identify a date, but is that something that we need to today or is that something that we can push off until the February meeting?

MR. APPELMAN: My goal is to get that today. We will have to set implementation date after we deal with circle hooks, and that is when that can come up again. But yes I would like to get that today.

CHAIRMAN ARMSTRONG: Okay and we don't need to put that as an amendment now, we can talk about it as part of the implementation schedule at the end, five minutes from now. Representative Peake.

REPRESENTATIVE SARAH PEAKE: A question about Option B. In the middle of the paragraph

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is says states have the flexibility to develop regulations that address specific needs of their fisheries. I guess my question is will that allow states the flexibility to exempt certain sectors from the circle hook requirement?

MR. APPELMAN: When the PDT put this measure together in the document that was one of the struggles that we had. We learned from other states going through this process that it's very difficult to get a blanket statement there to apply to all anglers, and the PDT there was no way we were going to be able to create that language ourselves.

Because of that that is why you see that flexibility in there. If this option were to pass, we would need some guidance, the Plan Review Team, on where those exemptions could apply, what fraction of total catch you are addressing with your circle hook provision, something that we can use to say yes this meets the intent of the provision.

REPRESENTATIVE PEAKE: Thank you and I don't mean to imply that I'm not supportive of circle hooks, but there may be in very small well defined sectors for a variety of reasons we might want to take a look at. I want to make sure we have that flexibility within this option.

MR. APPELMAN: Yes again the intent is to allow. We standardized the definition of circle hooks that's about as much as the Plan Development Team could do; allowing states flexibility to work with their anglers, work with their sectors to craft a language, a regulation that would work for the majority of anglers out there targeting stripers.

CHAIRMAN ARMSTRONG: John McMurray.

MR. McMURRAY: Yes I support the motion. I think it's a no brainer, with the understanding that this will not help discard mortality on paper. We're stuck with a 9 percent regardless. But it's the right thing to do, and I think it will

have a real effect on the water in reducing discards. I do understand the compliance concerns, but say what you want about Mike in Maryland, but they did show us that high level of compliance can be achieved, and I think with the right educational component here we will have a high level of compliance.

CHAIRMAN ARMSTRONG: Joe Cimino.

MR. CIMINO: I think that's a good time to follow up. I also support this, and I think one of the main reasons for me is that it will get this information out into the public better than anything else we can do. But reading the option it mentions educational stuff is encouraged. Max's presentation sort of suggested that there will be an educational component to it, so I'm just trying to get some clarity. Does Option B have any educational requirements, and if so what would states be held to for that?

MR. APPELMAN: As far as a compliance criteria, no. It is encouraging anglers to use that provision. I think the intent is that if a state is going to put a regulation on the book, there would have to be some sort of education criteria there already. By default states would be doing that.

CHAIRMAN ARMSTRONG: Mike Luisi.

MR. LUISI: I just want to speak to the point of flexibility. I'm glad it came up and it was discussed, because as you all know we implemented mandatory measures a few years ago for circle hooks, and we found challenges in that. We found challenges in trying to get a circle hook regulation put through our process with bait as a general term, due to how many other fisheries are happening in our area of the Bay with bait.

What we did was we made an attempt to try to achieve, you know let's try to hit 95 percent of those people fishing during a certain time of

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year with a certain method. I would hope that as it has been discussed and written, it is more important I think to get the regulations on your books, and be able to be flexible around how that rule applies.

Then through the Amendment perhaps we can tighten that up. Maybe it could be more broadly applied to all bait fisheries. But I think right away if we had trouble, I'm sure other states are going to have trouble with that too. Flexibility is a key here for the first few years of mandating this hook.

CHAIRMAN ARMSTRONG: Senator Miramant, final word.

SENATOR MIRAMANT: That was part of what I wanted to say was the getting it on the books is an education, because 99 percent of the people I know check the regulations for the New Year, because they know something will change. They noted that it's in place, but I think that the, I didn't say this just because of this, but I think there is a real bait and switch issue going on with giving a year to keep selling something that will be illegal if you give a year. You're saying here, come buy all these hooks up to benefit the sellers, so you have something that you have to throw away in a year, or be tempted to use and break the law. I don't think it should be delayed. It should go on the books right away, and that will be an education.

CHAIRMAN ARMSTRONG: Let's move the question. We're ready to vote. All in favor of the motion raise your hand. Thank you, opposed, abstention, and null, the motion passes unanimously. Okay one more item.

MR. APPELMAN: Before we leave this topic, I do want to say. You know we've been talking about this flexibility, and again the Plan Review Team is going to review these proposals, implementation plans, and have to make a call on whether it meets the intent of this. I would

like to have some sort of consensus around this table.

It could be as simple as any regulation on the book would meet the intent here, no matter who it applies to or as complex as you want to make it, but can we just have a minute of discussion giving some guidance to the Plan Review Team about intent for these circle hook provisions.

CHAIRMAN ARMSTRONG: Roy Miller.

MR. MILLER: Mr. Chairman, to provide some guidance I would just direct us to Paragraph 3 of Section 3.2, Circle Hook Provisions. I think that says a lot of what we need to specify in the way of intent.

CHAIRMAN ARMSTRONG: Pat Keliher.

MR. KELIHER: Yes I agree. I think Section 3.2 overall gives very good guidance. This is about circle hooks for the use of bait, both cut and live. There needs to be an educational component to this from a timing standpoint. I think the biggest issue is when we're going to initiate overall. I differ a little bit from my seatmate on the timing, but I'm not sure what more you would need based on what are under 3.2. I think it's pretty comprehensive.

MR. APPELMAN: I'm just going to probably end this conversation pretty quickly. You got some guidance from Toni in the idea that we'll look at these implementation proposals for the circle hooks provisions and come back in February, recognizing that there is probably going to be, perhaps there might be a delayed implementation with that. We can get some more feedback from the Board at that time.

CHAIRMAN ARMSTRONG: Let's go to implementation schedule. I think there are two parts; one is the whole Addendum, and then one for the circle hooks. Max, what feedback do you need for that?

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MR. APPELMAN: We need specific dates for when implementation plans will be due, recognizing that the conservation equivalency Guidance Document specifies a period. We've sort of put that in there as default, it would be November 30, but that needs to be in a motion. Also, when the Board would review implementation plans. Again, the intent has been for February, 2020. We would need that in a motion. Then the date by which these measures would become effective, the date that states need to implement those measures. That date also needs to be in a motion.

CHAIRMAN ARMSTRONG: In addition to the circle hook implementation. If the Board feels it should be a different time than the main implementation. We will help you craft that motion, would anyone like to throw their hand up? Andy, thank you.

MR. SHIELS: Let start with the plans. I think you said November 30th. I make the motion that the plans are due November 30, and you can Wordsmith the rest of it.

CHAIRMAN ARMSTRONG: I'll wait until it's up there to ask for a second. We have a second, Ritchie White, sight unseen, awesome. Andy you said and the other language that we talked about, correct?

MR. SHIELS: Yes I did.

CHAIRMAN ARMSTRONG: Do you have a comment on the circle hook implementation part?

MR. SHIELS: For Pennsylvania it was interesting, because our anglers were volunteering to do circle hooks, even if we didn't require it. In order for us to take action on this, it would be much simpler for Pennsylvania to roll everything that we talked about today into a single action. We're prepared to do circle hooks for 2020.

I'm looking at this; our season is going to be open depending on the conservation equivalence, the months of April and May. Typically March is when striped bass are on the move, so I'm hoping we can get things done in February, and everybody gets their stuff in order by March. That would be what I would be thinking, but I certainly would listen to others on that.

MR. APPELMAN: Andy I'm sorry, was the implementation date in there as well?

MR. SHIELS: I was looking for an implementation. I was asked specifically about circle hooks. I would like that to be in 2020. I don't know what month that needs to be, but I would rather it be in 2020 than 2021.

CHAIRMAN ARMSTRONG: I believe your intent was to include an implementation date for the entire Addendum of March 1, 2020? That is what Max had mentioned.

MR. SHIELS: Yes, in order to catch that fishery before things start happening up and down the coast.

MR. APPELMAN: Andy, are you good with the wording up there?

MR. SHIELS: Not quite. My intent, and certainly this will be debated I'm guessing, but my intent was that the circle hook requirement is implemented beginning in the 2020 fishing season, not at the end of the 2020 fishing season, March 1. Obviously that is going to be an administrative challenge for many, but that is the motion, and I expect that somebody might want to change that.

MR. APPELMAN: Could I make a suggestion that you're looking to fully implement the provisions of Addendum IV by March 1, or whatever that March date was.

MR. SHIELS: When you say fully implement.

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MR. APPELMAN: I'm sorry; I'm trying to squeeze in the last bit of this implementation motion, which is for all the other measures that have been approved today, or selected, also need an implementation date. If you're looking for early 2020, by 2020 I would assume you meant for all the provisions as well.

MR. SHIELS: I'll ask for clarification. Since my understanding was when we started this whole process many months ago that adjustments to everything had to be done in the year 2020. Changes had to be made in the year 2020 in order to affect the change that needed to be done. I don't know if that needs to be the beginning of 2020, the end of 2020.

To be true in the spirit of what the guidance was for the striped bass fishery, because it was overfished and overfishing was occurring, I'm trying to get some dates up front, to make sure we don't slip. But if you tell me that we're all good some time in 2020 that the group can agree that they can make, because that is true to the spirit of what we are charged with. I'm open to that.

MR. APPELMAN: The way I've been explaining this is that it has been the intent of the Board that these measures would become effective January of 2020. That has been the intent of the Board. Now it's time for the Board to specify a date. Whether that changes a few weeks or months to accommodate processes that have to play out that is up to you guys to decide. But we need a specific date now.

MR. SHIELS: That being the case, given what I had said previously and the fact that February, 2020 is in there. I would suggest that March 1st be the date.

MR. APPELMAN: I just want to get it clear on the record. You're not just referring to the circle hook provision; you are referring to all the provisions that have been selected in this document.

MR. SHIELS: Yes, and you promised me you would write all this language if I raised my hand.

MR. APPELMAN: I made no such promise.

CHAIRMAN ARMSTRONG: I promised, I did, and they didn't do it. Has it evolved okay with you, Ritchie? Jason McNamee.

DR. McNAMEE: We're talking about the motion here, Mr. Chair?

CHAIRMAN ARMSTRONG: Yes, I believe we have a finely crafted motion now.

DR. McNAMEE: Okay so March 1st I think would be a little tight for Rhode Island, and I would prefer it to be April 1st. Would that be an amendment that I would be offering?

CHAIRMAN ARMSTRONG: Don't ask me. I got in trouble earlier today about this.

MR. SHIELS: I haven't read this into the record yet, so it's not really a motion, right? I am happy with April 1st, I can certainly agree to that.

CHAIRMAN ARMSTRONG: That would be fine by my rules.

MR. SHIELS: I can agree to that.

CHAIRMAN ARMSTRONG: Yes. Do you have a suggested?

MR. McNAMEE: April 1st.

CHAIRMAN ARMSTRONG: Jim Gilmore.

MR. GILMORE: Mr. Chairman for the circle hook provision, I would like to amend to have that date be January 1, 2021.

CHAIRMAN ARMSTRONG: Is there a second to that? John Clark. Would you care to speak to that?

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MR. GILMORE: Again, we've heard very clearly from, and this was one of the clear things we did hear at the hearings was that we have bait and tackle industry, we have the party boat whatever, and they essentially need to get up to speed on this. Mike Luisi put it clear that this is not as simple as writing some new rules and throwing them out there.

Kurt again had said at the meeting is that if you put it in that this is a requirement, you're going to start getting compliance gradually. It's an educational thing that we were going to do. Remember, one of the options was just to make this as an advisory thing or an optional thing, just that we would recommend it. This is doing both. It is kind of phasing it in so that it will be a requirement, but it gives industry or whatever the opportunity to do that over a one year period.

CHAIRMAN ARMSTRONG: Further discussion. Who do we have, Joe Cimino and then Mike.

MR. CIMINO: To just the Senator's concerns, there are other reasons for this. For a state like New Jersey, what we have authority to do by notice is different than some of these things, like the circle hook requirement. It would be set on a different timeline for us as a regulatory change. This I think gives us the flexibility to make sure we're in compliance.

CHAIRMAN ARMSTRONG: Mike Luisi.

MR. LUISI: I'll support the circle hook piece, but I also wanted to speak to when Addendum VI must be implemented by April 1st. Based on what our intent will be, and hopefully the approval of a conservation equivalency proposal in February. Those actions that we're going to be suggesting will not be able to be in place by April 1st. It will most likely be more like midsummer. I'll say that but I'll also state that the early season actions that we're going to put in that proposal, we've already begun the process of implementing those now.

Our spring trophy fishery will be taken care of. The reductions that we're recommending will be done already. But I just would hope that the Board would allow for, as long as we're actively working to get rules in place by April 1st. I think that has always been kind of the common theme that the rules don't have to be on your books, as long as you're trying to get there through whatever process the state uses. I would hope that if we can clarify that I can support the motion.

CHAIRMAN ARMSTRONG: The Chair is thankful you are not amending the Amendment. John Clark.

MR. CLARK: I just wanted a clarification. Now the implementation plan by November 30th that includes conservation equivalency proposals, some of the things that were talked about earlier like changing the percentages? I'm not saying we're going to do that but that is a very aggressive timeline to not just come up with different proposals, but to actually look at how it would affect different sectors of the fishery. I'm just curious. That's mighty fast.

CHAIRMAN ARMSTRONG: Further discussion. Senator Miramant.

SENATOR MIRAMANT: When any of these are short term, it's just like the states having a law that they put on right away and then they don't write tickets, they let a year go where they're just issuing warnings or watching progress. It seems like the Board would be watching that same for a state that is trying to get the information, trying to work on it, misses the date a little bit. We're not going to convene the ASMFC to sanction a state that's working towards the goal and misses by a little, correct or not?

CHAIRMAN ARMSTRONG: Toni.

MS. KERNS: I mean that's the prerogative of the Board. I think there are parts of this such as

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the submission of the implementation plans, meaning the conservation equivalency proposals have a timeline, because the TC has to review that information in order to provide you guidance for the February Board meeting.

Some of these timelines are very definitive and hard, in order to give the amount of time that's needed to do a thorough review of these proposals. We recognize that this is going to be a quick turnaround, and will be difficult for the states. But in order to have regulations implemented by the beginning of next year, or the beginning of next year's fishery, it's the way we need to make it be.

CHAIRMAN ARMSTRONG: Okay, I think we can vote on this. Let's vote on the motion to amend the circle hook implementation date to a year later. All in favor okay opposed, abstention, and null. The motion passes 11 in favor, 2 opposed, 2 abstentions.

CHAIRMAN ARMSTRONG: Back to the main motion, are we ready to vote as amended? Let's amend it up there first, I guess. I need to read this into the record, I believe. Move that states submit implementation plans by November 30, 2019. The Board will take action on implementation plans in February, 2020. Circle hook requirements must be implemented by January 1, 2021.

All other provisions of Addendum VI must be implemented by April 1, 2020. Are we ready to vote on this motion? Do you need to caucus? **No. All in favor raise your hand, opposed, abstention, and null. The motion passes unanimously.** We have one final motion we need, is that correct, to accept the entire Addendum as amended, as approved sorry. John Clark.

MR. CLARK: I just had one thing to bring up. It's an issue that affects Delaware that came up at the last Board meeting, where there was language that was in the Draft to exempt a few

small recreational fisheries from conservation equivalency, because they were not included in the calculations to develop the 18 percent reduction scenarios. I know that that was changed at the last meeting.

This raises a very strange situation for us now, because we're being asked to do conservation equivalency about fish that have already been counted by the PDT in the calculations to develop the options that we just voted for. This will lead to double counting the same fish. I'm just saying I understand why the Board did what it did at the last meeting, but I just think that looking at this rationally, it's a very small fishery.

It's ridiculous to ask us to do conservation equivalency for striped bass that have already been accounted for by all the calculations that were done to develop these options. I just wanted to put that out there as we go ahead with this, because I think that is something that would be contrary to the ISFMP Charter there, because it's not fair to ask a state to double count a fish. I just wanted to put that out there before we finalize this.

CHAIRMAN ARMSTRONG: They're conferring. Is this to this point, Cheri? Thank you.

MR. APPELMAN: I think the Board made a clear decision that even though those calculations did account for those smaller fish still being harvested that it decided that all states on the recreational sector would have to come forward with conservation equivalency if they didn't want to implement the selected suboption. The calculation, Delaware would still have to submit a proposal to achieve that selected reduction in that particular fishery.

MR. CLARK: If I could just follow up on that Max. If we accept the option that was chosen, with Option 2, you know the slot that was just put forward. Our summer slot fishery has already been accounted for in the calculations.

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Draft Proceedings of the Atlantic Striped Bass Management Board Meeting
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What would we have to do then? Are you saying we would have to calculate everything back out again?

Yet like I said, those fish have already been accounted for. As far as I'm concerned, if we accept the slot limit provision that was approved right now, and we keep the summer slot fishery, we are still within the provisions of the plan in terms of what we would actually be harvesting in our state.

MR. APPELMAN: Yes I understand what you're getting at. The assumption of, it was a noncompliance assumption really. I mean when this was done back in Addendum IV, the assumption was that there would be a hundred percent compliance. This time the PDT went the other route and said that is probably not a fair assumption.

We're going to assume the same level of noncompliance, meaning all fish not just in Delaware, up and down the coast that were below the minimum size that that harvest would still occur. It's not secluding just the fish from Delaware; it's really all those fish across the coast.

MR. CLARK: Oh I understand that but I'm just saying that the reason it was put in, and as an explanation in the previous Draft that was presented to the Board before the August meeting, was because those fish were accounted for. As I've said, I've seen the calculations and all that. We did all the work done to justify that fishery back in, what was that 2008, Roy, 2009?

We have continued to document that it is a resonant male fishery in Delaware Bay. It's a small fishery, and as I said I'm just saying in this case to do a conservation equivalency for those fish just seems like adding needless work to our state and to the Technical Committee.

DR. DREW: I think the Board, so from the TCs perspective yes. The TC said technically those fish are sort of already accounted for in the calculations of the coastwide level, and that was why we put that forward the way it was. The Board had already decided they don't like that justification and that rationale, and so have said that you guys have to submit a conservation equivalency plan if you want to keep that small summer slot.

If you want to bring that decision back up to the Board, now potentially would be a time to do it. If you want to try this in February, you can try it then. If you want to submit a conservation equivalency plan for that small slot limit, and say it's not going to change the harvest beyond what you would expect under the 28 to 35 inches, you can submit that. But the TCs hands are tied in how we would interpret this by the direction of the Board. If the Board wants to come back on that issue they can.

MR. CLARK: In that case may I ask the Board. I understand why the motion was made as it was. But I think it was a one-size-fits-all. The entire noncompliant fishery removals that were projected forward were about 5 percent, right? Out of that the summer slot fishery we have is probably maybe 10 percent of that 5 percent. We're talking a small fishery, but in Delaware Bay in the summer as we've talked about with the weakfish.

They're not there anymore. We have these small resident striped bass, and as I said before that was taken out of the Draft Addendum that would have just gone forward. I'm just looking for the Board here. If there is support for us to continue that given how minor it is, I would be fine to make a motion right now to do that, but if the Board would rather wait until the next meeting that is fine also.

CHAIRMAN ARMSTRONG: Given the hour is it possible to wait until February?

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MR. CLARK: Yes I just wanted to bring it up before everything was finalized, just to let everybody know that this I think is an unintended consequence of what was done with this Addendum. Thanks.

CHAIRMAN ARMSTRONG: Thank you for that. Cheri Patterson.

MS. PATTERSON: Yes, I would like to make a motion to have the Board approve Addendum VI to Amendment 6 to the Interstate Fishery Management Plan for Atlantic Striped Bass as amended today.

CHAIRMAN ARMSTRONG: Got it, do we have a second? Who wants to be the second, David Borden? It's about time you raised your hand. Is there any objection to this motion? Seeing none, Addendum VI is approved. I'm sorry, hold on. No objection, it passes without a roll call vote. Is there any business additionally to come before this Board? Tom Fote.

MR. FOTE: I was serious before when I said that maybe we should be doing the circle hooks for bluefish. When I go to my Marine Fisheries Council, I'm actually going to make a proposal that we basically put it in for bluefish, weakfish, and striped bass; mainly because bluefish the chucking fishery a lot used to be there, and it would be much better off with circle hooks so we wouldn't be gut hooking the bluefish.

Since bluefish is actually in a worst case scenario than I think striped bass is right now, we should be protecting them and weakfish is down the tubes altogether. This way it will make it easier for enforcing, maybe not perfect, but at least it can't say they are fishing either one of those three species, they all require circle hooks if you're fishing bait.

REVIEW CRITERIA FOR DEVELOPMENT OF CONSERVATION EQUIVALENCY PROPOSALS

CHAIRMAN ARMSTRONG: I guess we're not done with conservation equivalency. We have a very brief item here, at least a presentation.

MS. LENGYEL: I will be presenting the TC criteria for conservation equivalency for Addendum VI. I will just add as a brief background, conservation equivalency allows states to develop alternative measures to address specific state or regional differences, while still achieving the same level of conservation for the resource.

Currently several states implement CE programs. Draft Addendum VI maintains this flexibility. The Board has had discussions about this already today. All CE proposals are subject to TC review and Board approval, so these will be going to the TC in the next couple of months, and then for Board approval in February.

Who needs to submit a CE proposal? For recreational measures if you're deviating from any of the Board's selected suboptions, states must submit a state-specific analysis using state-specific data, demonstrating the proposal meets the required reduction relative to 2017 levels, which the Board has decided is 18 percent.

Data sources, the TC has said that MRIP data will be the default data source to be used for any CE proposal, and that the years to be used will be 2016 and '17 for all size-related analyses, and 2015 to 2018 for any seasonal and mode-based analyses. Analyses to be used shall follow the standard procedures for size and bag limit analyses that the TC has used in developing Addendum VI options. Other analyses will be reviewed on a case-by-case basis, and confidence intervals may be considered by the TC.

However, the TC generally requires point estimates to be at or above the required

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reduction, and the TC has recommended that any state that comes forward with a proposal with confidence intervals, come forward with a second proposal based on point estimates, in case the first proposal is not endorsed by the TC.

For noncompliance, the TC has set to assume the same level of noncompliance that occurred in the data years will occur in 2020. For post release mortality, CE proposals are to use 9 percent as a default, and if states use alternative estimates for CE savings it has to be supported by the scientific literature, although the use of circle hooks would not allow for extra savings through conservation equivalency, as the Board has just made that a mandatory requirement.

For closed seasons, using closed seasons to achieve the required reductions will be evaluated on a case-by-case basis. The TC has commented that seasonal closures less than two weeks are unlikely to be effective, but didn't specify any minimum closures as criteria. For commercial measures Draft Addendum VI accounts for previously implemented commercial CE proposals, therefore states do not need to resubmit if maintaining current commercial size limits.

Only if a state chooses to modify its existing commercial size limits would it need to submit a state-specific analysis, and adjust its quota relative to the new Addendum VI baseline quota. States may allocate the total required reduction differently between regions and sectors, as long as the total statewide reduction is at least equal to the total required reduction. Again, this is not a TC criteria, this is set in Addendum VI. With that we can take any questions.

CHAIRMAN ARMSTRONG: Any questions for Nicole? To be clear, these are the criteria that you can pass on to your TC folks. Jason McNamee.

DR. McNAMEE: Maybe not a question about the information. I supported all of it, and so I wonder is that what we need to do is just say that we support the criteria that were developed by the TC?

MR. APPELMAN: Yes this was just information. I had a feeling that some folks would have some questions about this stuff, but we had pretty lengthy conversations about conservation equivalency already, and I think that cleared the air about a lot of it. This is just informational.

MS. KERNS: It would be good to get concurrence by the Board. It doesn't need to be a motion, but just that the Board is agreeing, as outlined in the guidelines in the Conservation Equivalency Proposal the TC can set or can give guidance to the Board for how the data should be supplied in conservation equivalency proposals, and we just want to have concurrence from the Board on what the TC has outlined.

CHAIRMAN ARMSTRONG: Okay, so is everyone clear on that? The TC has given us the criteria that they will use to evaluate proposals, and hopefully we can have consensus that this is good. Emerson.

MR. HASBROUCK: I think we all concur.

ADJOURNMENT

CHAIRMAN ARMSTRONG: Do we concur with the concurrence? Heads are nodding. We are at the point of is there any other business, please. We are adjourned.

(Whereupon the recording ended at 6:12 o'clock p.m. on October 30, 2019)

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Atlantic States Marine Fisheries Commission

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MEMORANDUM

January 22, 2020

To: Atlantic Striped Bass Management Board (Board)
From: Max Appelman, Fishery Management Plan Coordinator
RE: State Implementation Plans and Conservation Equivalency Proposals with Addendum VI to Amendment 6 to the Interstate Fishery Management Plan

Addendum VI to Amendment 6 was approved in October 2019. The Addendum reduces all state commercial quotas by 18%, and implements a 1 fish at 28" to less than 35" recreational slot limit for ocean fisheries and a 1 fish at 18" minimum size limit for Chesapeake Bay recreational fisheries. States may pursue alternative regulations through Conservation Equivalency (CE) to achieve an 18% reduction in total removals relative to 2017 levels. Addendum VI also requires the mandatory use of circle hooks when fishing recreationally for striped bass with bait to reduce release mortality in recreational striped bass fisheries. States and jurisdictions were required to submit implementation plans, including any CE proposals, by November 30 for technical review.

The Technical Committee (TC) met December 17-18, 2019, in Arlington, Virginia, to review technical merit of state implementation plans and develop consensus recommendations for Board consideration. Some follow-up work was requested and reviewed via conference call on January 15, 2020. A summary of proposed state measures that were accepted by the TC based on technical merit are provided in the following tables. This is followed by each state implementation plan ordered from north to south. To avoid duplication, only the revised state implementation plan is included if a state needed to resubmit its proposal following TC review.

A TC memo outlining analytical uncertainties and caveats, as well as providing specific comments on each state's proposed measures, will be included in Supplemental Materials.

M20-005

Table 1. Proposed 2020 recreational fishery regulations for Atlantic striped bass by state. No predicted reduction calculated if implementing the Addendum VI measure. Numbering of options matches the convention used in state implementation plans for cross referencing, when possible.

Option	Predicted Reduction	Mode/Region	Size Limit	Bag Limit	Open Season	Other
Maine						
ME-1	Add VI	All	28" to < 35"	1	All Year	
New Hampshire						
NH-1	Add VI	All	28" to < 35"	1	All Year	
Massachusetts						
MA-1	Add VI	All	28" to < 35"	1	All Year	
Regional Proposal (Rhode Island/Connecticut/New York)						
REG-A	-20.9%	All	28" to < 35"	1	All Year	Predicted reductions account for Hudson/Delaware River removals from New York.
REG-B	-20.1%	All	30" to < 40"	1	All Year	
REG-C	-20.0%	Private/Shore	30" to < 40"	1	All Year	
		For Hire	28" to < 37"	1	All Year	
Rhode Island						
RI-A	Add VI	All	28" to < 35"	1	All Year	
RI-B	-25.7%	All	32" to < 40"	1	All Year	
RI-C	-19.0%	Private/Shore	32" to < 40"	1	All Year	
		For Hire	30" to < 40"	1	All Year	
Connecticut						
CT-A	Add VI	All	28" to < 35"	1	All Year	

Table 1, continued. Proposed 2020 recreational fishery regulations for Atlantic striped bass by state.

* NY-8 is any of NY-1 – 7 with a 31" min size for the for-hire sector where captain and crew may no longer keep a fish.

^ NJ-R1 and NJ-R2 achieve at least a 35.9% and 34.9% reduction depending on which bonus program measure is selected. Additional closure days added for Raritan Bay to achieve required reduction in some cases (see New Jersey proposal for details).

Option	Predicted Reduction	Mode/Region	Size Limit	Bag Limit	Open Season	Other
* New York Ocean						
NY-1	Add VI	All	28" to < 35"	1	5.1 - 11.30	Predicted reductions account for Hudson/Delaware River removals. Also considering options 1-8 with no season change (4.15 – 12.15). This results in slightly smaller predicted reductions.
NY-2	-21.0%	All	28" to < 38"	1	5.1 - 11.30	
NY-3	-25.5%	All	30" to < 40"	1	5.1 - 11.30	
NY-4	-20.0%	All	30" to < 42"	1	5.1 - 11.30	
NY-5	-21.7%	All	32" to < 44"	1	5.1 - 11.30	
NY-6	-20.3%	All	28" to < 35" or > 44"	1	5.1 - 11.30	
NY-7	-19.9%	All	34" min	1	5.1 - 11.30	
NY-8	-18.7%	For Hire	31" min	1	5.1 - 11.30	
New York Hudson River - North of George Washington Bridge (River Mile 12)						
NYH-1	-5.2%	Hudson River	18" to < 28"	1	4.1 - 11.30	Achieves at least 18% reduction when combined with any ocean measure
NYH-2	-6.6%	Hudson River	18" to < 28" or > 44"	1	4.1 - 9.30	
NYH-3	-6.7%	Hudson River	18" to < 28"	1	4.1 - 9.30	
New York Delaware River						
NYD-1	-	Delaware River	28" to < 35"	1	All Year	See note above
^ New Jersey						
NJ-R1	-35.9%	All	24" to < 28"	1	All Year^	Closed 1.1 - 2.28 in all waters except Atlantic Ocean and 4.1 - 5.31 in the lower DE River and tributaries
NJ-R2	-34.9%	All	24" to < 29"	1	All Year^	
NJ-R3	Add VI	All	28" to < 35"	1	All Year	
NJ-R4	-46.0%	All	28" to < 34"	1	All Year	
NJ-R5	-27.0%	All	35" min	1	All Year	
Pennsylvania - Delaware Estuary and River						
PA-1	Add VI	DE Estuary	28" to < 35"	1	1.1 - 3.31, 6.1 - 12.31	
	-19.0%	DE Estuary	21" to < 24"	2	4.1 - 5.31	
	Add VI	DE River (Non Tidal)	28" to < 35"	1	All Year	

Table 1, continued. Proposed 2020 recreational fishery regulations for Atlantic striped bass by state.

† Charter captains cannot keep a fish for personal consumption under all of Maryland’s proposed measures.

Option	Predicted Reduction	Mode/Region	Size Limit	Bag Limit	Open Season	Other
Delaware						
DE-1	-18.0%	Ocean	28" to < 38"	1	All Year	Catch and release only on spawning grounds 4.1 -5.31
DE-2	-20.0%	Ocean	28" to < 35"	1	All Year	
DBAY-1	-	Bay, River, Tribs	20" to < 25"	1	7.1 - 8.31	
Maryland Ocean						
MD-1	Add VI	Ocean, All	28" to < 35"	1	All Year	Achieves required reduction when combined with any Chesapeake Bay option
† Maryland Chesapeake Bay						
MD-2a	-20.8%	All	35" min	1	5.1 - 5.15	No targeting March - April and during July closure
		All	19" min; only 1 fish > 28"	2	5.16 - 7.4 and 9.1 - 12.6	
		All	19" min	1	8.1 - 8.31	
MD-2b	-20.6%	All	35" min	1	5.1 - 5.15	No targeting during July closure
		All	19" min; only 1 fish > 28"	2	5.16 - 7.4 and 9.1 – 11.30	
		All	19" min	1	8.1 - 8.31	
MD-2c	-20.7%	All	35" min	1	5.1 - 5.15	No targeting April and during July closure
		All	19" min; only 1 fish > 28"	2	5.16 - 7.9 and 10.1 - 12.6	
		All	19" min	1	8.1 - 9.30	
MD-2d	-20.7%	All	35" min	1	5.1 - 5.15	No targeting April and during August closure
		Private/Shore	19" min	1	5.16 - 8.16 and 9.1 - 12.10	
		For-hire	19" min; only 1 fish > 28"	2		

Table 1, continued. Proposed 2020 recreational fishery regulations for Atlantic striped bass by state.

Option	Predicted Reduction	Mode/Region	Size Limit	Bag Limit	Open Season	Other
District of Columbia						
1	Add VI	All	18" min	1	5.16 - 12.31	
Potomac River Fisheries Commission						
TROPHY-1	20.5%	Spring	35" min	1	5.1 - 5.15	Downstream of Rt. 301 bridge
PRFC-1	20.5%	Fall	20" min	2	5.16 - 7.6 and 8.21 - 12.31	No direct targeting during closed July and August closure
PRFC-2	20.5%	Fall	20" min	2	5.16 - 6.30 and 9.1 - 12.31	
PRFC-3	20.5%	Fall	20" min	2	8.8 - 12.31	
PRFC-4	20.5%	Fall	20" min	2	5.16 - 6.6 and 11.18 - 12.31	
Virginia						
VA-1	-23.4%	Ocean	28" to <= 36"	1	1.1 - 3.31 and 5.16 - 12.31	Also considering allowing 1 fish/ person/year @ >36" in all areas (does not affect calculations).
		Bay	20" to <= 36"	1	5.16 - 6.15 and 10.4 - 12.31	
North Carolina						
NC-1	Add VI	Ocean	28" to < 35"	1	All Year	

Table 2. Proposed 2020 commercial ocean fishery regulations for Atlantic striped bass by state. Numbering of options matches the convention used in state implementation plans for cross referencing, when possible. H&L = hook and line; GC = general category; FFT = floating fish trap.

Option	Proposed Change in Quota	Gear/Region	Size Limit	Quota (pounds)	Open Season	Other
Maine, New Hampshire, Connecticut, Pennsylvania, District of Columbia						
No commercial fishery, no reallocation of commercial quota						
Massachusetts						
MA-2a	Add VI	H&L	34" min	713,246	6.23 - 12.31 or until quota reached. Mon and Thurs only. 2-fish or 15-fish limit depending on permit.	
MA-2c-1(a)	-18%	H&L	28" min	658,260		
MA-2c-2(a)	-18%	H&L	35" min	735,240		
MA-2c-3(a)	-18%	H&L	28" to < 35"	454,027		
Rhode Island						
A	-18%	GC	34" min	90,822	5.20 - 6.30, 7.1 - 12.31	61% of state quota
		FFT	26" min	58,067	4.1 - 12.31	39% of state quota
New York						
NY-A	Add VI	All	28" to < 38"	652,552	6.1 - 12.15 or until quota reached. Limited entry permit only. 6-8" stretched mesh for GN	
NY-D1	-18%	All	24" to < 36"	622,122		
NY-D2	-18%	All	26" to < 38"	640,718		
New Jersey (no commercial fishery, reallocate quota to recreational sector)						
NJ-C1	0%	H&L	24" to < 28"	215,912	1 fish/person/day. Opening 5.15 or 9.1. Limited number of permits issued to ensure quota not exceeded	
NJ-C2	0%	H&L	24" to < 29"	218,464		
NJ-C3	0%	H&L	35" min size	459,898		
NJ-C4	0%	H&L	24" to < 28" OR >= 43"	215,912		500 trophy permits
NJ-C5	0%	H&L	24" to < 28" OR >= 43"	215,912		1000 trophy permits
NJ-C6	0%	H&L	24" to < 29" OR >= 43"	218,464		500 trophy permits
NJ-C7	0%	H&L	24" to < 29" OR >= 43"	218,464		1000 trophy permits

Table 2, continued. Proposed 2020 commercial ocean fishery regulations for Atlantic striped bass by state. H&L = hook and line; GN = gill net; TRL = trawl.

Option	Proposed Change in Quota	Gear/Region	Size Limit	Quota (pounds)	Open Season	Other
Delaware						
DE-1	-18%	GN	28" min	113,021	2.15 - 5.31 (Nanticoke River closes 3.30), 11.15 - 12.31	Drift nets only 2.15 - 2.28, 5.1 - 5.31; no fixed nets in DE River. No trip limit.
		GN (Spring)	20" min			
		H&L	28" min	5,948	4.1 - 12.31	
DE-2	-1.8%	GN	28" min	135,350	2.15 - 5.31 (Nanticoke River closes 3.30), 11.15 - 12.31	Drift nets only 2.15 - 2.28, 5.1 - 5.31; no fixed nets in DE River. No trip limit.
		GN (Spring)	20" min			
		H&L	28" min	7,124	4.1 - 12.31	
Maryland						
MD-3a	-1.8%	TRL, GN	24" min	89,094	1.1 - 5.31, 10.1 - 12.31	
Virginia						
VA-1	-9.8%	Ocean	28" min	125,034	1.16 - 12.31	9" max mesh size for GN
North Carolina						
NC-1	-18%	Ocean	28" min	295,495	12.1 - 11.30	

Table 3. Proposed 2020 commercial Chesapeake Bay fishery regulations for Atlantic striped bass by state. When possible, numbering of options matches the convention used in state implementation plans for cross referencing. H&L = hook and line; GN = gill net; HS = haul seine; PN = pound net.

Option	Proposed Change in Quota	Gear/Region	Size Limit	Quota (pounds)	Open Season	Other
Maryland Chesapeake Bay						
MD-4a	-1.8%	GN	18" to < 36"	1,445,394	1.1 - 2.29, 12.1 - 12.31	
		H&L, HS			6.1 - 11.30	
		PN			6.1 - 12.31	
Potomac River Fisheries Commission						
PRFC-1	-1.8%	GN	18" min	349,405	1.1 - 3.25, 9.9 - 12.31	36" max, 2.15 - 3.25
		PN		127,748	2.15 -3.25, 6.1 - 12.15	
		H&L		81,959	1.1 - 3.25. 6.1 - 12.31	
		Misc.		13,749	2.15 -3.25, 6.1 - 12.15	
Virginia Chesapeake Bay						
VA-1	-7.7%		18" min	983,393	1.16 - 12.31 (28" max 3.15 - 6.15)	7" max mesh size for GN

Atlantic Striped Bass Addendum VI Implementation Plan Template

Implementation Plans are due November 30, 2019

Summary of Proposed Measures

Recreational Fishery

State	Size Limits	Bag Limits	Other	Open Season
Maine	28" minimum to less than 35" total length	1 fish		Status quo (see language in Section 1)

Commercial Fishery

State	Size Limits	Seasonal Quota	Open Season
Maine	NA	NA	NA

Section 1: Coastal Recreational Fishery

Maine intends to maintain current striped bass closed areas and seasons. Language from Maine’s regulations regarding seasons are included below and a full copy of the state’s regulations are appended to this implementation plan.

42.03 Striped Bass - Closed Area and Closed Season

A. Except as provided in 42.03 (B), from the 1st day of December to June 30, inclusive, it is unlawful for any person to take and retain any striped bass from the tidal waters of the Kennebec River inside and upstream of a line drawn from the outer extremity of Cape Small to the outer extremity of Salter Island, thence to the outer extremity of Cape Newagen and including Merrymeeting Bay and tributaries, the tidal waters of the Sheepscot River, Androscoggin River, Sasanoa River, and all other tidal tributaries of the Kennebec River. From July 1 through November 30, statewide regulations apply to this area.

B. Special Hook and Release Season/Area. From May 1 to June 30, it shall be lawful to fish for striped bass in the waters described in 42.03(A) with a hook and line and single hooked artificial lures. Any striped bass caught during this special season/area fishery shall be immediately released and returned alive, without further injury, to the waters from which they were taken.

C. Waters Seasonally Closed to the Use of Bait. From May 1 to June 30, inclusive, it is unlawful to possess or use bait while hook and line fishing for any finfish species in waters described in 42.03(A). During this closed season (May 1 to June 30), possession of hook and line fishing gear and bait on waters described in 42.03(A) is prima facie evidence of violating this regulation. For purposes of this section, "bait" is defined as any live or dead marine organism, or part thereof.

Section 2: Chesapeake Bay Recreational Fishery (MD, VA, PRFC, DC)

NA

Section 3: Coastal Commercial Fishery

Maine does not have a commercial striped bass fishery.

Section 4: Chesapeake Bay Commercial Fishery (MD, VA, PRFC)

NA

Section 5: Circle Hook Requirements

Maine already requires the use of circle hooks when using bait to fish for striped bass. The language specific to circle hooks is below and a full copy of the state's striped bass regulations are appended to this implementation plan.

1. Method of Taking

C. It is unlawful to use any hook other than a circle hook when using bait. For purposes of this chapter the definition of circle hook means "a non-offset hook with a point that points 90° back toward the shaft of the hook".

Exception: Rubber or latex tube rigs will be exempt from the circle hook restriction as long as they conform with the following: the lure must consist of a minimum of 8" of latex or rubber tubing with a single hook protruding from the end portion of the tubing where bait may be attached. Use of treble hooks is not allowed with these rigs.

Section 6: Timeline for Implementation

It is expected that new striped regulations needed to come into compliance with Addendum VI will be implemented in mid-March 2020. More specifically, Maine DMR plans to notice a proposed rule change for striped bass recreational measures in early January. Approval of the proposed regulations by the DMR Advisory Council will occur in early March 2020. DMR will then file the final rule immediately after the Advisory Council meeting. New regulations are effective 5 days after the Department's filing. This timeline will meet the April 1, 2020 compliance date set by the Striped Bass Board and will ensure new regulations are in place ahead of the Maine recreational fishery. Circle hook requirements for striped bass are already codified in Maine regulations.

CHAPTER 42
STRIPED BASS
TITLE INDEX

- 42.01 Statewide Striped Bass Size Restrictions, Harvest Methods
- 42.02 Striped Bass - Limits, Personal Use
- 42.03 Striped Bass - Closed Area and Closed Season

DEPARTMENT OF MARINE RESOURCES

Chapter 42 - Striped Bass

42.01 Statewide Striped Bass Size Restrictions, Harvest Methods

1. Method of Taking.

- A. It is unlawful to fish for or take striped bass in territorial waters, except by hook and line. It is unlawful to use a gaff to land any striped bass.
- B. It is unlawful to use multiple (more than two) barbed or barbless treble hooks on any artificial lure or flies while fishing for striped bass in territorial waters.
- C. It is unlawful to use treble hooks when using bait.
The following becomes effective January 1, 2013:
It is unlawful to use any hook other than a circle hook when using bait. For purposes of this chapter the definition of circle hook means "a non-offset hook with a point that points 90° back toward the shaft of the hook".

Exception: Rubber or latex tube rigs will be exempt from the circle hook restriction as long as they conform with the following: the lure must consist of a minimum of 8" of latex or rubber tubing with a single hook protruding from the end portion of the tubing where bait may be attached. Use of treble hooks is not allowed with these rigs.
- D. Any striped bass legally taken from the territorial waters shall be immediately released alive into the water from which it was taken, or killed at once. Any striped bass killed becomes part of the daily bag limit in accordance with Chapter 42.02.

2. Size Restrictions.

It is unlawful to take or possess striped bass which are less than 28 inches long total length. It is unlawful to possess striped bass unless the fish are whole with head on and are 28 inches or greater.

42.02 Striped Bass - Limits, Personal Use

It is unlawful for any person to fish for, take or possess striped bass in or from territorial waters, except for personal use. The sale of wild striped bass caught for personal use or by commercial fisheries in other States or jurisdictions is prohibited in the State of Maine.

It is unlawful for any person to take or possess more than one (1) striped bass each day which may be 28 inches in total length or greater.

Exception for Hybrid Striped Bass:

This Section shall not apply to the possession and sale of hybrid striped bass under the following conditions:

- 1. Hybrids (*Morone saxatilis* x *Morone chrysops*). Whole aquaculture raised striped bass shall have a tag or label affixed to each fish container holding fish.
- 2. Fillets. Fillets from aquaculture-raised hybrid striped bass shall have the skin attached.
- 3. Tags and Labels. All tags and labels affixed to containers of whole aquaculture-raised hybrid striped bass and filets from aquaculture-raised hybrid striped bass shall be clearly marked "Hybrid Striped Bass" and provide the following information:

- a. State of origin
 - b. Name and address of shipping and receiving dealers
 - c. Permit number of shipping and receiving dealers
 - d. Date shipped
 - e. Net weight of container
4. Nomenclature. It is unlawful for any person to market, promote, advertise, or sell whole hybrid striped bass or hybrid striped bass fillets as "striped bass." Only the term "hybrid striped bass" shall be used when marketing, promoting, advertising, or selling at retail hybrid striped bass and hybrid striped bass fillets.

42.03 Striped Bass - Closed Area and Closed Season

- A. Except as provided in 42.03 (B), from the 1st day of December to June 30, inclusive, it is unlawful for any person to take and retain any striped bass from the tidal waters of the Kennebec River inside and upstream of a line drawn from the outer extremity of Cape Small to the outer extremity of Salter Island, thence to the outer extremity of Cape Newagen and including Merrymeeting Bay and tributaries, the tidal waters of the Sheepscot River, Androscoggin River, Sasanoa River, and all other tidal tributaries of the Kennebec River. From July 1 through November 30, statewide regulations apply to this area.
- B. Special Hook and Release Season/Area. From May 1 to June 30, it shall be lawful to fish for striped bass in the waters described in 42.03(A) with a hook and line and single hooked artificial lures. Any striped bass caught during this special season/area fishery shall be immediately released and returned alive, without further injury, to the waters from which they were taken.
- C. Waters Seasonally Closed to the Use of Bait. From May 1 to June 30, inclusive, it is unlawful to possess or use bait while hook and line fishing for any finfish species in waters described in 42.03(A). During this closed season (May 1 to June 30), possession of hook and line fishing gear and bait on waters described in 42.03(A) is prima facie evidence of violating this regulation. For purposes of this section, "bait" is defined as any live or dead marine organism, or part thereof.

CHAPTER 42
STRIPED BASS
INDEX

EFFECTIVE DATE:
May 15, 1989

AMENDED:
June 11, 1990
May 10, 1992 – Section 1 and 3
May 25, 1994 – Section 3
August 9, 1995 – Section 2
April 21, 1997 – Section 1 and 2
September 15, 1997 – Section 1 and 3
April 23, 2000 – Sections 1, 2 and 3
December 20, 2010 – Sections 01 and 02
April 16, 2013 – Section 01 (1)(C)
May 13, 2015 – Section 01 (2); 2

Atlantic Striped Bass Addendum VI Implementation Plan for New Hampshire

Summary of Proposed Measures

Recreational Fishery

State	Size Limits	Bag Limits	Other	Open Season
NH	28"-35"	1	Gaffing and culling are prohibited	Jan 1 – Dec 31

Commercial Fishery

State	Size Limits	Seasonal Quota	Open Season
NH	NA	NA	No Commercial Fishery

Section 1: Coastal Recreational Fishery

“Option 1a.) A one fish bag limit and a slot size limit of 28” minimum size to less than 35” total length may be implemented for the ocean fishery without further analysis. The same fishing seasons as in 2017 is required.”

New Hampshire will be modifying current recreational striped bass fishing rules to meet Option 1a’s requirements for all state waters by May 1, 2020 (see proposed rules):

- One fish per day (current rule)
- No closed season (current rule and no variation from 2017)
- Length limit of greater than 28” and less than 35” (current rule minimum of 28” in length).

Section 2: Chesapeake Bay Recreational Fishery (MD, VA, PRFC, DC)

[Not Applicable]

Section 3: Coastal Commercial Fishery

“Option 2a.) Implementation of an 18% reduction from the Addendum IV quotas. The reduced quotas in Addendum VI account for previously approved CE programs, therefore, states do not need to submit for CE if they choose to maintain 2017 size limits in its commercial fisheries. “

Current New Hampshire rules prohibit the sale of striped bass regardless of origin (See current rules, Fis 603.08) and does not currently utilize any of its allocated commercial quota for striped bass. These rules will remain unchanged for the 2020 fishing year, and the reserved allocated quota will reflect the 18% reduction.

Section 4: Chesapeake Bay Commercial Fishery (MD, VA, PRFC)

[Not Applicable]

Section 5: Circle Hook Requirements

The New Hampshire Fish and Game Department will begin the process of implementing rules requiring the use of circle hooks if fishing with bait in the striped bass fishery in state waters (see proposed rules). The rulemaking process in New Hampshire will be initiated in December and should be in place prior to the beginning of the 2020 fishing season (April 1, 2020).

As a part of public education and outreach campaigns, the New Hampshire Fish and Game Department has in recent years distributed informational brochures about the benefits of the use of circle hooks to recreational anglers along with a packet of circle hooks. It is our intent to continue to distribute these brochures and hooks in 2020 and we will provide access to digital copies of the brochure on our website, at public events, and at the Region 3 Office.

Section 6: Timeline for Implementation

The New Hampshire Fish and Game Department has initiated new rules (see proposed rules) in the striped bass fishery in state waters; 1 fish daily bag limit, slot size limit of 28"-35", and mandatory use of circle hooks, if fishing with bait. The rules should be in place by April 1, 2020, prior to the beginning of the NH's striped bass fishing season (approximately May 1, 2020).

Current rules:

Fis 603.08 Striped Bass.

(a) No person shall take, possess, or transport striped bass less than 28 inches in total length. Striped bass shall have head and tail intact while on or leaving the waters or shores of the state except as follows:

(1) A person may possess up to 2 striped bass fillets so long as they also possess the fish rack that the fillets came from with the head and tail intact and the rack measures at least 28 inches in total length;

(2) A person may possess up to 2 striped bass fillets without the fish rack that the fillets came from so long as each fillet measures at least 28 inches in length; and

(3) Any striped bass fillet shall have the skin still attached for the purpose of identification of the fillet as striped bass.

(b) No person shall possess more than the daily creel limit of 1 fish.

(c) There shall be no closed season for the taking of striped bass.

(d) The sale of striped bass shall be prohibited regardless of origin.

(e) The taking of striped bass shall be prohibited by netting in any form except that striped bass may be landed by the use of a hand held dip net.

(f) The taking of striped bass by gaffing shall be prohibited.

(g) No person shall cull any striped bass taken from or while on the waters under the jurisdiction of the state.

Proposed rules:

PART Fis 601 CHAPTER DEFINITIONS

Adopt Fis 601.041, to read as follows:

Fis 601.041 “Non-offset circle hook” means a hook used for angling with bait where the point and barb are turned perpendicularly back to the shank to form a circular shape. If this hook is laid on a flat surface, all parts of the hook lie flat on the surface, rather than the point and barb being angled away from the shank in either direction.

PART Fis 603 RULES FOR CERTAIN FIN FISH SPECIES

Readopt with amendment Fis 603.08, eff 11-1-18 (Doc #12655, EXEMPT) to read as follows:

Fis 603.08 Striped Bass.

(a) No person shall take, possess, or transport striped bass unless the fish is at least 28 inches in total length and less than 35 inches in total length. Striped bass shall have head and tail intact while on or leaving the waters or shores of the state except as follows:

- (1) A person may possess up to 2 striped bass fillets so long as they also possess the fish rack that the fillets came from with the head and tail intact and the rack measures at least 28 inches in total length and less than 35 inches in total length;
 - (2) ~~A person may possess up to 2 striped bass fillets without the fish rack that the fillets came from so long as each fillet measures at least 28 inches in length; and~~
 - ~~(3) Any striped bass fillet shall have the skin still attached for the purpose of identification of the fillet as striped bass.~~
- (b) No person shall possess more than the daily creel limit of 1 fish.
 - (c) There shall be no closed season for the taking of striped bass.
 - (d) The sale of striped bass shall be prohibited regardless of origin.
 - (e) The taking of striped bass shall be prohibited by netting in any form except that striped bass may be landed by the use of a hand held dip net.
 - (f) The taking of striped bass by gaffing shall be prohibited.

(g) No person shall cull any striped bass taken from or while on the waters under the jurisdiction of the state.

(h) Any person taking striped bass with bait from the waters of the state by angling shall only use corrodible non-offset circle hooks.



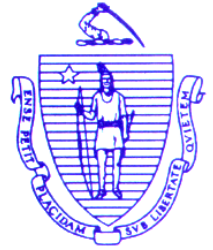
Daniel J. McKiernan
Acting Director

Commonwealth of Massachusetts

Division of Marine Fisheries

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Karyn E. Polito
Lieutenant Governor
Kathleen Theoharides
Secretary
Ronald S. Amidon
Commissioner
Mary-Lee King
Deputy Commissioner

MEMORANDUM

TO: Max Appelman, ASMFC Striped Bass Plan Coordinator

FROM: Daniel McKiernan, Acting Director

DATE: November 29, 2019

SUBJECT: **Massachusetts Atlantic Striped Bass Addendum VI Implementation Plan**

This memorandum serves to provide you with the Division of Marine Fisheries' plan to implement the mandatory provisions of Addendum VI to Amendment 6 of the Interstate Fishery Management Plan for Atlantic Striped Bass. The Division will adopt Addendum VI's slot limit for the recreational fishery, presents a number of options for the commercial fishery's 18% quota reduction, and has a pre-existing circle hook requirement that will be amended if the requested variances are not approved. Regarding the commercial fishery, because the Technical Committee has not yet decided if conservation equivalency should maintain SPR or F, we have provided both analyses where appropriate. The data used in the analyses are presented at the end of this memo. Please contact Dr. Michael Armstrong with any questions.

Section 1: Coastal Recreational Fishery

Massachusetts' current regulations include a one fish/person/day bag limit, 28" minimum size in total length (TL), and year-round season throughout the state's marine waters.

Option 1a: Implement a slot limit of 28" minimum to less than 35" TL (and maintain all other measures).

No additional analysis is needed.

Section 2: Coastal Commercial Fishery

The options below consider changes to Massachusetts' annual quota and size limit only, currently 869,812 pounds and 34" minimum in TL.

Additional rules include but are not limited to a hook & line only requirement, open fishing days of Monday and Thursday beginning on the first open fishing day on or after June 23 until the quota is taken (otherwise December 31), and a 2-fish or 15-fish possession limit depending on the type of permit held. DMF may consider revision to the season, open days, and possession limits for 2020 to better utilize our quota; such revisions to these non-compliance measures are outside the scope of this implementation plan.

Option 2a: Reduce Massachusetts quota by 18% (and maintain the 34" TL minimum size limit).

No additional analyses required. 2020 quota = $869,812 * 0.82 = 713,246$ pounds.

Option 2b: Reduce Massachusetts quota by 18% and amend the size limit assuming the baseline quota represents landings for a minimum size of 28" TL.

Justification: Under Amendment 6, the quotas listed in Table 10 were developed assuming a 28" size limit. Massachusetts' quota was 1.159 million pounds. When adopting that quota, Massachusetts did not move to the smaller size limit but has maintained a 34" minimum size limit since 1996. Under the larger size limit, more quota should have been assigned; thus, Massachusetts has been far more conservative than required over time. The unrealized quota is calculated below using SPR, YPR (see Appendix 1) and the F_{target} of 0.30 from Amendment 6. Massachusetts believes we should be able to revert to the FMP standard of 28" without taking additional reductions because we were overly conservative. Implementing more conservative regulations on an optional basis should not negatively affect a state in the future.

Option 2	Size Limit	F	Age Range	Plus Group	Oldest	SPR	%SPR	YPR	Base Quota
Amend 6	Min 28 TL	0.3	1-15	Yes	100	1.579	20.23	0.459	1,159,750
34" Option	Min 34	0.483	1-15	Yes	100	1.579	20.23	0.490	1,238,077
								Difference	78,327

Option 2b-1: 28" minimum size limit TL

For 2020, the quota at 28" minimum size would be: $1,159,750 * 0.75 * 0.82 = 713,246$ pounds (Amendment 6 quota * Addendum IV reduction * Addendum VI reduction).

Option 2b-2: 35" minimum size limit TL

This increase in the commercial size would create distinct commercial (35"+) and recreational (28–35") fisheries separated by size, facilitating enforcement efforts.

If the goal of conservation equivalency is to maintain the same spawning potential as the baseline case, then increasing the size limit to 35" would allow Massachusetts to increase its quota from the 2020 baseline at 28" (713,246 pounds) because the stock could be fished at a higher rate to achieve the same SPR.

Option 2b-2	Size Limit	F	Age Range	Plus Group	Oldest	SPR	%SPR	YPR	Base Quota
Base (2020)	28"	0.197	1-15	Yes	100	2.299	29.44	0.445	713,246
	35"	0.34	1-15	Yes	100	2.299	29.45	0.492	788,578

If the goal is to maintain the target F of 0.197, then the quota would increase slightly from the baseline, and there would be an increase in SPR:

Option 2b-2	Size Limit	F	Age Range	Plus Group	Oldest	SPR	%SPR	YPR	Base Quota
Base (2020)	28"	0.197	1-15	Yes	100	2.299	29.44	0.445	713,246
	35"	0.197	1-15	Yes	100	3.205	41.04	0.451	722,863

Option 2b-3: 28" minimum to less than 35" slot limit TL

If the goal of conservation equivalency is to maintain the same spawning potential as the baseline case, then moving to a 28–35" slot would decrease quota because the stock could be fished at a higher rate but within a smaller slot:

Option 2b-3	Size Limit	F	Age Range	Plus Group	Oldest	SPR	%SPR	YPR	Base Quota
Base (2020)	28"	0.197	1-15	Yes	100	2.299	29.44	0.445	713,246
	28-35"	0.45	1-15	Yes	100	2.298	29.42	0.321	514,499

If the goal is to maintain the target F of 0.197, then moving to a 28–35” slot limit would decrease considerably the quota within a smaller slot, and SPR would increase:

Option 2b-3	Size Limit	F	Age Range	Plus Group	Oldest	SPR	%SPR	YPR	Base Quota
Base (2020)	28"	0.197	1-15	Yes	100	2.299	29.44	0.445	713,246
	28-35"	0.197	1-15	Yes	100	4.492	57.52	0.201	322,163

Options 2c: Reduce Massachusetts quota by 18% and amend the size limit assuming the baseline quota represents landings for a minimum size of 34” TL.

If Massachusetts cannot revert to the FMP standard of 28” without penalty for being more conservative and must assume the baseline quota represents landings at the state’s current minimum size, the above options are recreated below starting from a 34” minimum size.

Option 2c-1: 28” minimum size limit TL

If the goal of conservation equivalency is to maintain the same spawning potential as the baseline case, then decreasing the size limit to a 28” minimum would decrease the quota to 658,260 pounds.

Option 2c-1	Size Limit	F	Age Range	Plus Group	Oldest	SPR	%SPR	YPR	Base Quota
Base (2020)	34"	0.197	1-15	Yes	100	2.905	37.208	0.454	713,246
	28"	0.146	1-15	Yes	100	2.907	37.22	0.419	658,260

If the goal is to maintain the target F of 0.197, then the quota would decrease slightly from the baseline, and there would be a decrease in SPR:

Option 2c-1	Size Limit	F	Age Range	Plus Group	Oldest	SPR	%SPR	YPR	Base Quota
Base (2020)	34"	0.197	1-15	Yes	100	2.905	37.208	0.454	713,246
	28"	0.197	1-15	Yes	100	2.299	29.44	0.445	699,107

Option 2c-2: 35” minimum size limit TL

This increase in the commercial size would create distinct commercial (35”+) and recreational (28–35”) fisheries separated by size, facilitating enforcement efforts.

If the goal of conservation equivalency is to maintain the same spawning potential as the baseline case, then increasing the size limit to 35” would allow Massachusetts to increase slightly its quota from the 2020 baseline at 34” (713,246 pounds) because the stock could be fished at a higher rate to achieve the same SPR.

The quota calculations are shown below:

Option 2c-2	Size Limit	F	Age Range	Plus Group	Oldest	SPR	%SPR	YPR	Quota
Base (2020)	34"	0.197	1-15	Yes	100	2.905	37.20	0.454	713,246
	35"	0.234	1-15	Yes	100	2.904	37.19	0.468	735,240

If the goal is to maintain the target F of 0.197, then the quota would decrease slightly from the baseline, and there would be an increase in SPR:

Option 2c-2	Size Limit	F	Age Range	Plus Group	Oldest	SPR	%SPR	YPR	Quota
Base (2020)	34"	0.197	1-15	Yes	100	2.905	37.20	0.454	713,246
	35"	0.197	1-15	Yes	100	3.206	41.05	0.451	708,533

Option 2c-3: 28" minimum to less than 35" slot limit TL

If the goal of conservation equivalency is to maintain the same spawning potential as the 34" minimum size baseline case, then moving to a 28–35" slot would decrease quota because the stock could be fished at a higher rate within the smaller slot:

Option 2c-3	Size Limit	F	Age Range	Plus Group	Oldest	SPR	%SPR	YPR	Base Quota
Base (2020)	34"	0.197	1-15	Yes	100	2.905	37.208	0.454	713,246
	28-35"	0.359	1-15	Yes	100	2.907	37.21	0.289	454,027

If the goal is to maintain the target F of 0.197, then moving to a 28–35" would decrease considerably the quota within the smaller slot, and SPR would increase:

Option 2c-3	Size Limit	F	Age Range	Plus Group	Oldest	SPR	%SPR	YPR	Base Quota
Base (2020)	34"	0.197	1-15	Yes	100	2.905	37.208	0.454	713,246
	28-35"	0.197	1-15	Yes	100	4.492	57.52	0.201	315,776

Section 3: Circle Hook Requirements

Massachusetts has already adopted regulations that mandate the use of circle hooks in the recreational striped bass fishery effective January 1, 2020 (see below). The definition of circle hook is consistent with Addendum VI. However, our requirement provides exceptions for anglers fishing aboard for-hire vessels, or when using an artificial lure or weighted treble hook designed to be trolled, cast and retrieved, or vertically jigged with natural bait attached.

Per the language of Addendum VI granting states “flexibility to further specify details of the regulation to address specific needs of the state fishery,” DMF requests approval to maintain these exemptions. The exception for anglers fishing aboard for-hire vessels reflects their minimal contribution to the total recreational catch of striped bass in Massachusetts (<2.5% in each year of 2014–2018 according to MRIP data) and their higher retention rate of caught fish (29% on average for 2014–2018 compared to 6% for private anglers). The gear exemptions maintain allowance for commonly used techniques like tube and worm and snag and drop, which generally do not result in gut-hooked striped bass. (Due to timing, DMF will propose the elimination of these exemptions at public hearing this winter in the event they are not approved by ASMFC, or if DMF opts to roll any of them back.)

Current Regulatory Language

322 CMR 6.07: Striped Bass

(2) Definitions.

Circle Hook is defined as a fishing hook designed and manufactured so that the barb of the hook is not offset from the plane of the shank and bend and is turned perpendicularly back towards the shank to form a circular or oval shape.

(5) Recreational Management Measures.

(f) Mandatory Use of Circle Hooks. Effective January 1, 2020, private recreational anglers fishing for striped bass or in possession of striped bass shall use circle hooks with whole or natural baits. This shall not apply to any artificial lure or weighted treble hook designed to be trolled, cast and retrieved, or vertically jigged with natural bait attached.

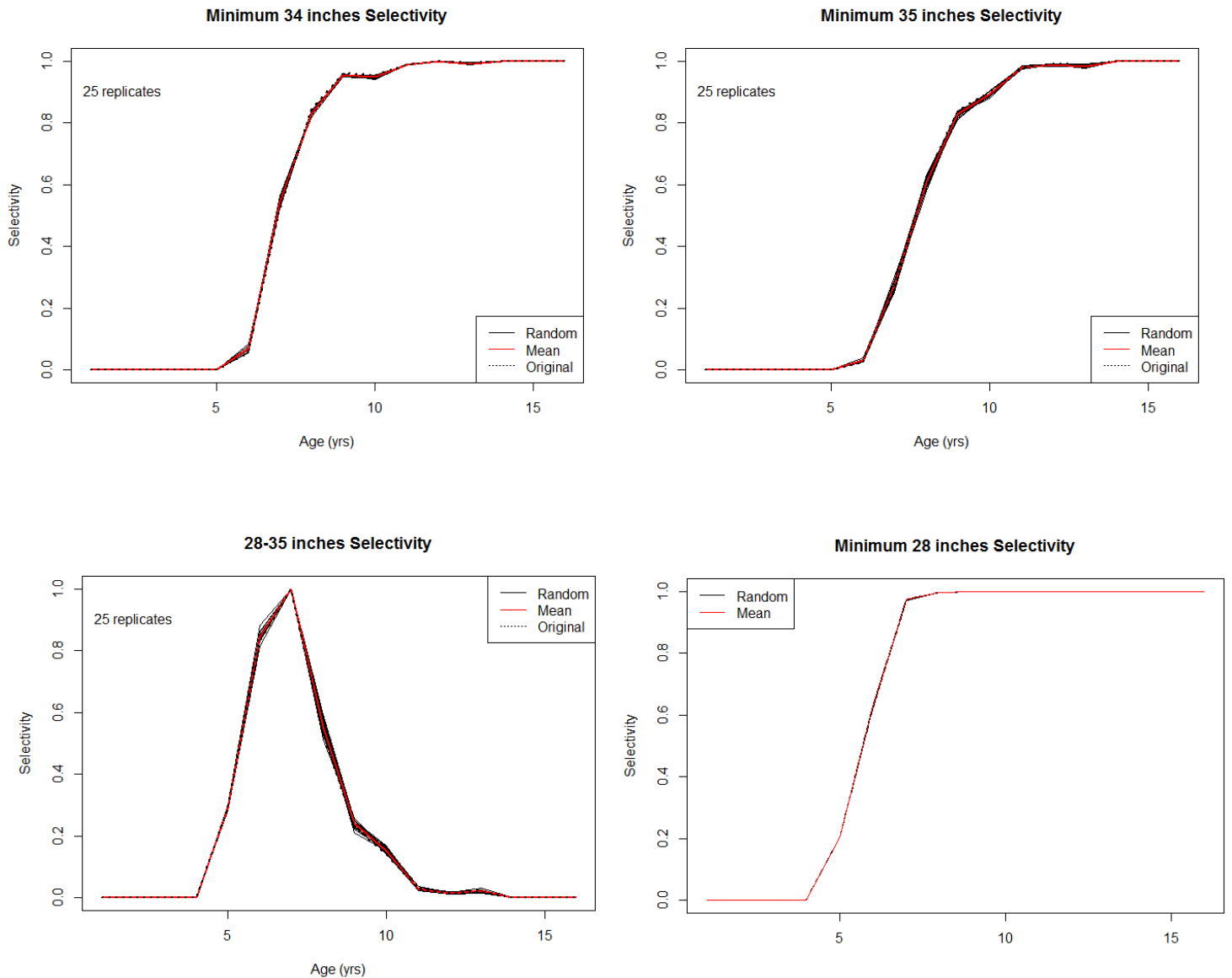
DMF promotes responsible angling techniques, including the use of circle hooks, in print and online media, including our annual saltwater fishing guide, DMF website, and educational pamphlets. Our fishing clinics use circle hooks exclusively and each participant takes home a mini tackle kits which included circle hooks. Educational materials are distributed at various trade shows, seasonal fairs, and fishing clinics throughout the year. A new striped bass circle hook card promotion began in 2019 in which size 8.0 Offshore Angler hooks were attached to informational cards and distributed at these types of public events.

Section 4: Timeline for Implementation

DMF will present a suite of proposed options to comply with Addendum VI to the state's Marine Fisheries Advisory Commission (MFAC) in December. These options are expected to go to public hearing in late winter. The Division's recommendations will be presented to the MFAC for approval by late March. All rule changes are expected to take effect by early spring of 2020, prior to the start of the fishing seasons in Massachusetts, with one possible exception: if the circle hook requirement is to apply to all recreational anglers, the effective date will be January 1, 2021.

Because the large sample sizes can shift the proportions within an age to those sizes with the higher sample sizes, I reduced the numbers within the length intervals by randomly selecting individual data until the average number of samples (43) for length intervals 13-32" was reached. This was repeated 25 times and average selectivity across the 25 replicates were used in the quota calculations. The select curves are shown below in Appendix Figure 1.

Appendix Figure 1. Selectivity patterns from random sampling of number in length interls 33-42" (black) and mean selectivity of 25 replicates (red).



The data series used for the spawning stock biomass-per-recruit and yield-per-recruit analyses were taken from the 2018 benchmark assessment:

age	M	femal	emat	propfemal	e
1	1.13	0.00	0.00	0.53	
2	0.68	0.00	0.00	0.56	
3	0.45	0.00	0.00	0.56	
4	0.33	0.09	0.00	0.52	
5	0.25	0.32	0.00	0.57	
6	0.19	0.45	0.00	0.65	
7	0.15	0.84	0.00	0.73	
8	0.15	0.89	0.00	0.81	
9	0.15	1.00	0.00	0.88	
10	0.15	1.00	0.00	0.92	
11	0.15	1.00	0.00	0.95	
12	0.15	1.00	0.00	0.97	
13	0.15	1.00	0.00	1.00	
14	0.15	1.00	0.00	1.00	
15+	0.15	1.00	0.00	1.00	

Catch weights used in the YPR analysis were the geometric mean of 2016-2017 weights-at-age through 15+, and SSB weights used in the SPR analysis were the geometric mean of 2016-2017 adjusted rivard weights-at-age through 15+.

For the SPR and YPR analyses, ages 1-15+ were modeled but it was assumed that the oldest age was 100. In this case, the weights-at-age were assumed equal to the weight of the age 15+ group. For the SPR analysis, the fraction of F before spawning was assumed to be 0.1 and fraction of M before spawning was assumed to be 0.333 (taken from 2018 benchmark assessment).

The *sbpr* and *ypr* function in R package fishmethods were used.

To calculate the quota for a new size regulation, the baseline quota is multiplied by the ratio of YPR under the proposed change divided the YPR value for the baseline case (YPR change/ YPR Base) .

Atlantic Striped Bass Addendum VI Implementation Plan
Regional – (Rhode Island, Connecticut, and New York)

Introduction

The states of Rhode Island, Connecticut and New York are submitting a regional conservation equivalency (CE) proposal in the interest of maintaining regional consistency for recreational striped bass regulations. This regional proposal is only relative to the recreational sector. Each states combined reduction (all sectors combined) will meet the 18% threshold since Rhode Island and New York commercial measures are implementing an 18% reduction from approved CE Addendum IV quotas. Connecticut is suspending its bonus striped bass program indefinitely and therefore will not use its commercial quota. Implicit with this proposal is that all three states will implement identical size and bag limits (the same option) for the recreational sector.

Summary of Proposed Measures

1. Recreational Fishery

State	Size Limits	Bag Limits	Other	Open Season
Regional: RI/CT/NY – A	28” – 35”	1	All modes	1/1 – 12/31*
Regional: RI/CT/NY – B	30” – 40”	1	All modes	1/1 – 12/31*
Regional: RI/CT/NY – C	30” – 40”	1	Private/Shore	1/1 – 12/31*
Regional: RI/CT/NY – C	28” – 37”	1	For-Hire	1/1 – 12/31*

* States maintain closed season if the state currently has a closure.

2. Commercial Fishery

Rhode Island:

Rhode Island will implement an 18% reduction from approved CE Addendum IV quota and maintain 2017 size limits in commercial fisheries (see proposed state implementation plan).

Connecticut:

Commercial harvest of striped bass is banned by state statute in Connecticut. Since 2011, Connecticut has used the commercial quota and conservation equivalency to implement a bonus striped bass harvest program. Connecticut has decided to suspend the bonus striped bass program indefinitely, and is therefore not submitting a conservation equivalency proposal relative to commercial quota at this time (see proposed state implementation plan).

New York:

New York will implement an 18% reduction from approved CE Addendum IV quota. NY’s current regulation is a 795,795 lb. quota with a slot limit of 28-38”. An 18% reduction in quota would result in a new quota limit of 652,552 lbs, with no change in slot size. Other slot options that maintain at least an 18% reduction from approved CE Addendum IV quota are presented in the proposed New York implementation plan.

Section 1: Regional Options – Rhode Island, Connecticut and New York Recreational Fishery

1A.) A one fish bag limit and a slot size limit of 28" minimum size to less than 35" total length may be implemented for state (and Regional RI/CT/NY) recreational fishery (all modes) without further analysis. The same fishing seasons as 2017 will be maintained.

- No further analyses is required because this is equivalent with the selected recreational management measure in Addendum IV. However, a three state regional analysis was performed and included here as a baseline, see Table 1.

OR

1B.) A CE proposal using a regional approach including three states; Rhode Island, Connecticut and New York, implementing a one fish bag limit and a slot size limit of 30" minimum size to less than 40" total length may be implemented for the recreational fishery (all modes) on a regional bases, i.e. all three states must implement this option to be considered.

- Our proposal meets the standards as established by the Technical Committee (TC) in the TC memo (M19-084).
- Our analysis uses pooled 2016-2017 Marine Recreational Information Program (MRIP) data. Data were compiled from the raw 2016-2017 size.csv MRIP data files and consisted of 1,940 records of data.
- To address concerns with MRIP B2 estimates in Connecticut from the shore and private modes a Modified Thompsons Tau and Winzorization was performed to first identify outliers for the Connecticut 2016-2017 B2 MRIP data by mode and wave, and then apply the smoothing. The same approach and methodology was recently used and subsequently approved by the black sea bass TC. The methods previously used for black sea bass were repeated here as these have already been vetted and approved for identifying outliers and smoothing data.
- A Hudson and Delaware River adjustment was applied to the regional analyses for additional removals estimated in 2017. This adjustment of 11,384 fish (9,222 fish from Hudson R. and 2,162 fish from Delaware R.) for the regional tristate analysis resulted in about a 1% impact on the final three options presented here.
- NY Hudson River removals (9,222 fish) were a 5.23% reduction in estimated 2017 total removals (9,731 fish). This represents the lowest estimated percent reduction (and greatest number of removals) of the three proposed NY CE options for 2020 Hudson River regulatory changes (option HR1- see State Report). NY Hudson River Options HR2 and HR3 would result in 137 and 146 fewer 2020 total removals, respectively, than NY Option HR1.
- NY Delaware River removals were the estimated total removals in 2017 (2,162 fish), if NY were to do no regulatory change in 2020. Actual removals due to NY's proposed regulatory change in 2020 (1 fish @ 28-35") are expected to be lower (achieving a greater percentage reduction). We used the 2,162 fish as a worst case scenario, since an exact number of expected 2020 removals could not be calculated at this time.
- Any shortening of NY fishing season, or more restrictive regulations, such as not allowing party/charter boat captain and crew to retain a fish, would result in greater percentage regional reductions

- Our proposal achieves at least a 20% reduction in removals after smoothing for outliers (Table 2). Without applying the smoothing our proposal meets at least a 19% reduction in total removals (see workbook).
- The size limit analysis used follows the standard procedure used for Draft Addendum VI using the methods outline in Greg Wojcik's spreadsheet.
- The same level of non-compliance that occurred in 2016-2017 was assumed to occur in 2020.
- A post-release mortality rate of 9% was used.

OR

1C.) A CE proposal using a regional approach including three states; Rhode Island, Connecticut and New York, implementing a one fish bag limit for all modes, a slot size limit of 30" minimum size to less than 40" total length for the private and shore modes, and a slot size limit of 28" minimum size to less than 37" total length for the for-hire modes may be implemented for the Regional recreational fishery (all three states must implement this option to be considered).

- Our proposal meets the standards as established by the TC in the TC memo (M19-084).
- Our analysis uses pooled 2016-2017 Marine Recreational Information Program (MRIP) data. Data were compiled from the raw 2016-2017 size.csv MRIP data files and consisted of 1,940 records of data.
- To address concerns with MRIP B2 estimates in Connecticut from the shore and private modes a Modified Thompsons Tau and Winzoration was performed to first identify outliers for the Connecticut 2016-2017 B2 MRIP data by mode and wave, and then apply the smoothing. The same approach and methodology was recently used and subsequently approved by the black sea bass TC. The methods previously used for black sea bass were repeated here as these have already been vetted and approved for identifying outliers and smoothing data.
- A Hudson and Delaware River adjustment was applied to the regional analyses for additional removals estimated in 2017. This adjustment of 11,384 fish (9,222 fish from Hudson R. and 2,162 fish from Delaware R.) for the regional tristate analysis resulted in about a 1% impact on the final three options presented here.
- NY Hudson River removals (9,222 fish) were a 5.23% reduction in estimated 2017 total removals (9,731 fish). This represents the lowest estimated percent reduction (and greatest number of removals) of the three proposed NY CE options for 2020 Hudson River regulatory changes (option HR1- see State Report). NY Hudson River Options HR2 and HR3 would result in 137 and 146 fewer 2020 total removals, respectively, than NY Option HR1.
- NY Delaware River removals were the estimated total removals in 2017 (2,162 fish), if NY were to do no regulatory change in 2020. Actual removals due to NY's proposed regulatory change in 2020 (1 fish @ 28-35") are expected to be lower (achieving a greater percentage reduction). We used the 2,162 fish as a worst case scenario, since an exact number of expected 2020 removals could not be calculated at this time.
- Any shortening of NY fishing season, or more restrictive regulations, such as not allowing party/charter boat captain and crew to retain a fish, would result in greater percentage regional reductions

- Mode-specific data analysis demonstrates that our proposal achieves at least a total reduction of 20% in removals after smoothing for outliers (Table 3). Without applying the smoothing our proposal meets at least a 19% reduction in total removals (see workbook).
- The size limit analysis used follows the standard procedure used for Draft Addendum VI using the methods outline in Greg Wojcik's spreadsheet.
- The same level of non-compliance that occurred in 2016-2017 was assumed to occur in 2020.
- A post-release mortality rate of 9% was used.

Section 3: Coastal Commercial Fishery

See individual state implementation plans for details.

Section 5: Circle Hook Requirements

See individual state implementation plans for details.

Section 6: Timeline for Implementation

See individual state implementation plans for details.

Table 1. Results from regional size limit analysis to implement 1 fish at a 28" – 35" slot limit for all modes (coastwide standard). Pooled 2016-2017 MRIP data for Rhode Island, Connecticut and New York were used.

Slot (Coastwide standard) (Option A)	28-35		
	SH/PR	PC	Total
New Harvest including Non-Comp	758,027	51,521	809,548
New non Comp Harvest	62,292	7,108	69,400
New Dead Discards	51,446	5,871	57,317
Old Dead Removals (WINZ)	1,124,088	13,867	1,137,955
Removals (WINZ)	1,995,854	78,366	2,074,220
Removal Reduction (WINZ)	20.67%	43.10%	21.84%
Adding Hudon and Delaware River Fish Back in.			20.89%

Table 2. Results from regional size limit analysis to implement 1 fish at a 30" – 40" slot limit for all modes. Pooled 2016-2017 MRIP data for Rhode Island, Connecticut and New York were used.

Slot - 30-40 (All Modes) (Option B)	30-40		
	SH/PR	PC	Total
New Harvest including Non-Comp	776,552	57,077	833,629
New non Comp Harvest	60,471	6,562	67,033
New Dead Discards	49,943	5,420	55,362
Old Dead Removals (WINZ)	1,124,088	13,867	1,137,955
Removals (WINZ)	2,011,055	82,925	2,093,980
Removal Reduction (WINZ)	20.07%	39.79%	21.09%
Adding Hudon and Delaware River Fish Back in.			20.14%

Table 3. Results from regional mode-specific size limit analysis to implement a 30" – 40" slot limit for private and shore modes, and a 28" – 37" slot limit for for-hire modes. Pooled 2016-2017 MRIP data for Rhode Island, Connecticut and New York were used.

Slot, Split Modes - SH/PR 30-40, PC 28-37 (Option C)	30-40	28-37	Total
	SH/PR	PC	
New Harvest including Non-Comp	776,552	61,368	837,920
New non Comp Harvest	60,471	6,141	66,612
New Dead Discards	49,943	5,071	55,014
Old Dead Removals (WINZ)	1,124,088	13,867	1,137,955
Removals (WINZ)	2,011,055	86,446	2,097,501
Removal Reduction (WINZ)	20.07%	37.23%	20.96%
Adding Hudon and Delaware River Fish Back in.			20.01%

Atlantic Striped Bass Addendum VI Implementation Plan – Rhode Island

Summary of Proposed Measures

1. Recreational Fishery

State	Size Limits	Bag Limits	Other	Open Season
Rhode Island – A	28” – 35”	1	All modes	1/1 – 12/31
Rhode Island – B	32” – 40”	1	All modes	1/1 – 12/31
Rhode Island – C	32” – 40”	1	Private/Shore	1/1 – 12/31
Rhode Island – C	30” – 40”	1	For-Hire	1/1 – 12/31

2. Commercial Fishery

State	Size Limits	Seasonal Quota	Open Season
Rhode Island – General category – A	34”	90,822 lbs*	5/20 – 6/30; 7/1 – 12/31**
Rhode Island – Floating fish trap – A	26”	58,067 lbs*	4/1 – 12/31**

* Based on 39/61 split between the floating fish traps and general category respectively. This may be re-visited in 2020 through RI Regulatory Process.

**2019 open seasons (RIMF Part 3 - Finfish, 2019). 2020 open seasons will be determined through RI Regulatory Process in early 2020.

Section 1: Rhode Island Recreational Fishery

1A.) A one fish bag limit and a slot size limit of 28” minimum size to less than 35” total length may be implemented for the RI recreational fishery (all modes) without further analysis. The same fishing seasons as 2017 will be maintained.

- No further analyses needed because this is equivalent with the selected recreational management measure in Addendum IV.

OR

1B.) A conservation equivalency (CE) proposal implementing a one fish bag limit and a slot size limit of 32” minimum size to less than 40” total length may be implemented for the RI recreational fishery (all modes).

- Our proposal meets the standards as established by the TC in the TC memo (M19-084).
- Our analysis uses pooled 2016-2017 Marine Recreational Information Program (MRIP) data. Data were compiled from the raw 2016-2017 size.csv MRIP data files and consisted of 811 records of data.
- Our proposal achieves at least a 25% reduction in removals.
- The size limit analysis used follows the standard procedure used for Draft Addendum VI using the methods outline in Greg Wojcik’s spreadsheet.
- The same level of non-compliance that occurred in 2016-2017 was assumed to occur in 2020.
- A post-release mortality rate of 9% was used.

OR

1C.) A conservation equivalency (CE) proposal implementing a one fish bag limit for all modes, a slot size limit of 32” minimum size to less than 40” total length for the private and shore modes,

and a slot size limit of 30" minimum size to less than 40" total length for the for-hire modes may be implemented for the RI recreational fishery (all modes).

- Our proposal meets the standards as established by the TC in the TC memo (M19-084).
- Our mode-specific analysis uses pooled 2015-2018 Marine Recreational Information Program (MRIP) data. Data were compiled from the raw 2015-2018 size.csv MRIP data files and consisted of 1,519 records of data.
- Mode-specific data analysis demonstrates that our proposal achieves at least a total state-wide reduction of 19% in removals.
- The size limit analysis used follows the standard procedure used for Draft Addendum VI using the methods outline in Greg Wojcik's spreadsheet.
- The same level of non-compliance that occurred in 2016-2017 was assumed to occur in 2020.
- A post-release mortality rate of 9% was used.

Section 3: Coastal Commercial Fishery

2A.) Rhode Island will implement an 18% reduction from our approved CE Addendum IV quota and maintain 2017 size limits in our commercial fisheries.

Section 5: Circle Hook Requirements

Rhode Island will be holding a public workshop on striped bass regulations in January of 2020 to discuss the implementation of Addendum VI. At that time, we will work with industry to develop draft language for a circle hook requirement. Proposed regulatory changes will go forward to a public hearing in February and a Rhode Island Marine Fisheries Council meeting in March. The Director will then make a decision on the provision and these regulations could be implemented as early as April 1, 2020. If it is deemed necessary to conduct additional workshops and/or outreach on circle hook provisions in 2020, Rhode Island may opt to hold off implementation until January 1, 2021.

Section 6: Timeline for Implementation

Rhode Island will be holding a public workshop on striped bass regulations in January of 2020 to discuss the implementation of Addendum VI. Proposed regulatory changes will go forward to a public hearing in February and a Rhode Island Marine Fisheries Council meeting in March. The Director will then make a decision on the proposed regulatory changes and these regulations will be implemented on April 1, 2020. If it is deemed necessary to conduct additional workshops and/or outreach on circle hook provisions in 2020, Rhode Island may opt to hold off implementation until January 1, 2021.

Table 1. Results from size limit analysis to implement 1 fish at a 32" – 40" slot limit for all modes. Pooled 2016-2017 MRIP data were used.

Slot	ALL 32-40
New Harvest	59369.05
New non Comp Harvest	171.73
New Dead Discards	11555.51
Old Dead Removals	266347.26
New Removals	337443.54
Old Removals	454283.26
% Reduction	25.72%

Table 1. Results from mode-specific size limit analysis to implement a 32" – 40" slot limit for private and shore modes, and a 30" – 40" slot limit for for-hire modes. Pooled 2015-2018 MRIP data were used.

Slot	For-Hire	Shore & Private/Rental	TOTAL
	30-40	32-40	
New Harvest	4863.99	99981.30	104845.29
New non Comp Harvest	21.07	141.07	162.14
New Dead Discards	1954.10	15067.94	17022.04
Old Dead Removals	2098.89	609250.59	611349.48
New Removals	8938.06	724440.89	733378.95
Old Removals	28695.89	876794.59	905490.48
% Reduction			19.01%

Atlantic Striped Bass Addendum VI Implementation Plan - Connecticut

Summary of Proposed Measures

Recreational Fishery

State	Size Limits	Bag Limits	Other	Open Season
Connecticut - A	28 – 35"	1	All modes	1/1 – 12/31
Connecticut - B	30 – 38"	1	All modes	1/1 – 12/31
Connecticut - C	32 – 40"	1	All modes	1/1 – 12/31
Connecticut - D	28 – 35"	1	Private/Shore	1/1 – 12/31
	30 – 38"	1	For-Hire	1/1 – 12/31
Connecticut - E	30 – 38"	1	Private/Shore	1/1 – 12/31
	32 – 40"	1	For-Hire	1/1 – 12/31
Connecticut - F	30 – 38"	1	Private/Shore	1/1 – 12/31
	28 – 35"	1	For-Hire	1/1 – 12/31
Connecticut - G	32 – 40"	1	Private/Shore	1/1 – 12/31
	30 – 40"	1	For-Hire	1/1 – 12/31
Connecticut - H	32 – 40"	1	Private/Shore	1/1 – 12/31
	28 – 35"	1	For-Hire	1/1 – 12/31

Commercial Fishery

State	Size Limits	Seasonal Quota	Open Season
Connecticut	N/A	N/A	N/A

Section 1: Coastal Recreational Fishery

1a.) A one fish bag limit and a slot size limit of 28" minimum size to less than 35" total length may be implemented for the ocean fishery without further analysis. The same fishing seasons as in 2017 is required.

OR

1b.) A conservation equivalency (CE) proposal that achieves at least an 18% reduction from 2017 total recreational removals following the criteria established by the TC (see TC memo). If selecting this option, further analysis is required.

If submitting CE, please address the following questions,

- What is your state proposing for a conservation equivalency measure?
 - Connecticut prefers to implement the coastal recreational fishery measure approved in Addendum VI (28 – 35" slot) but is proposing seven alternate regulation options (B – H) to provide opportunity to implement regulations as consistent as possible with New York and Rhode Island should those states choose to implement a measure other than the approved Addendum VI measure. The 28 – 35" slot limit (A) will produce an estimated 8.17% (based on 2016-17 MRIP data) or 7.95% (based on 2015-18 MRIP data) reduction in removals for Connecticut. Although none of the alternate regulation options (B – H) proposed by Connecticut produce ≥18% estimated reductions in removals, they are all more conservative than the 28 – 35"

slot, meaning that Connecticut would accomplish greater conservation than achieved under the approved Addendum VI measure by implementing any of the alternative proposed measures.

The relatively low reductions in removals achieved in Connecticut under the approved Addendum VI measure as well as the suite of alternative measures proposed here is largely related to what Connecticut views as spuriously large recreational discard estimates from 2017-18 MRIP Wave 2 and 6 data. For example: MRIP estimated Connecticut Wave 6 striped bass discards (B2) in 2014-16 averaged 233,456 fish; MRIP estimated Connecticut Wave 6 striped bass discards in 2017 and 2018 were approximately 2.9 million and 5.4 million fish, respectively (total estimated coast-wide striped bass discards in 2017-18 were approximately 42 and 33 million fish, respectively). These spuriously large discard estimates and attendant spurious estimates of dead recreational discards “swamp out” the harvest reductions achieved by size limit changes in calculations of overall removal reductions.

- Does your proposal meet the data standards established by the TC?
 - Connecticut’s proposal meets the standards as established by the TC in the TC memo.
- What data sources are used in the analysis (include mode or season specific if applicable)?
 - Connecticut’s analysis uses pooled 2016-17 Marine Recreational Information Program (MRIP) data for analyses of alternative measures that encompassed all modes, and pooled 2015-18 MRIP data for analyses of alternative measures that included mode splits.
- Sample size summary by mode, season, or state and/or data source as applicable.
 - Data were compiled from the raw 2015-18 size.sas MRIP data files and consisted of 385 (2016-17) or 641 (2015-18) data records. The sample sizes for 2015-18 for-hire and shore/private modes was 272 and 369 data records, respectively.
- Describe in one sentence how you did the analysis (e.g., used methods outlined in Greg Wojcik’s spreadsheet, used SAS code provided by Mike Celestino, alternative analysis described briefly).
 - Connecticut’s analysis used the methods outlined in Greg Wojcik’s spreadsheet.
- Provide a table of results as presented in Greg Wojcik’s spreadsheet or equivalent spreadsheet that is comparable with your analysis.
 - See Table 1-2 below
- Clearly identify that at least an 18% reduction in total removals is achieved from pooled 2016-2017 for all size-related analysis or pooled 2015-2018 data for seasonal and mode-based analyses.
 - As noted above, none of the alternative measures (B-H) achieve $\geq 18\%$ reductions in removals, but all alternative measures are more conservative than the Addendum VI approved measure (28 – 35” slot).

Section 3: Coastal Commercial Fishery

- Commercial harvest of striped bass is banned by state statute in Connecticut. In previous years (2011-19), Connecticut used conservation equivalency to implement a bonus striped bass harvest program, under which the state's commercial striped bass quota could be utilized by recreational fishers, subject to reporting requirements and a limit on the number of bonus striped bass tags distributed annually. Connecticut has decided to suspend the bonus striped bass program indefinitely, and is therefore not submitting a conservation equivalency proposal relative to commercial quota at this time. Should Connecticut choose to re-visit the bonus striped bass program at some time in the future, it will base any conservation equivalency proposal on an 18% reduction in commercial quota as prescribed by Addendum VI, provided that Addendum VI has not been superseded by a subsequent management action.

Section 5: Circle Hook Requirements

- Connecticut will undertake a regulations process in 2020 to develop and implement the Addendum VI circle hook requirement (CT DEEP cannot use our more expedient declaration process to implement the circle hook requirement as our declaration authority does not allow for implementation of terminal tackle requirements/restrictions). Connecticut's regulation process is complex and lengthy, typically requiring 6-8 months. It is unlikely that Connecticut will implement the circle hook requirement before January 1, 2021. Connecticut has already begun outreach and education efforts in 2019, distributing circle hooks and informational cards to the public in a variety of venues. We anticipate enhancing education and outreach efforts in 2020.

Section 6: Timeline for Implementation

- Depending on the outcome of the February Striped Bass Management Board meeting, Connecticut may hold public meetings in February or early March to gather further public input on recreational management measures. CT DEEP can enact size limit changes via declaration, which is a relatively simple and expedient process. We therefore anticipate that recreational measures for the 2020 season will be enacted by April 1, 2020. As noted above, circle hook regulations will likely not be implemented until January 1, 2021.

Table 1. Results from size limit analyses for coastal recreational measure approved in Addendum VI (A) and two alternative regulations (B-C) that encompass all modes (analyses used 2016-17 pooled MRIP data).

Slot	28-35 (A)	30-38 (B)	32-40 (C)
New Harvest	87,188	81,263	66,276
New non Comp Harvest	6,409	6,946	8,305
New Dead Discards	5,785	6,269	7,496
Old Dead Removals	558,123	558,123	558,123
New Removals	657,505	652,602	640,200
Old Removals	715,993	715,993	715,993
Removal Reduction	8.17%	8.85%	10.59%

Table 2. Results from size limit analyses for coastal recreational measure approved in Addendum VI (A) and five alternative regulations (D-H) that utilize mode splits (analyses used 2015-18 pooled MRIP data).

Slot	28-35 (A)			28-35 (D)			30-38 (E)		
Mode	Shore/Private	For-Hire	Total	Shore/Private	For-Hire	Total	Shore/Private	For-Hire	Total
New Harvest	194,874	26,233	221,106	194,874	25,621	220,495	189,893	25,435	215,328
New non Comp Harvest	6,958	864	7,822	6,958	893	7,851	7,197	902	8,099
New Dead Discards	12,425	1,543	13,967	12,425	1,595	14,020	12,851	1,611	14,462
Old Dead Removals	1,381,257	11,625	1,392,882	1,381,257	11,625	1,392,882	1,381,257	11,625	1,392,882
New Removals	1,595,514	40,264	1,635,777	1,595,514	39,734	1,635,247	1,591,199	39,573	1,630,771
Old Removals	1,721,141	55,861	1,777,001	1,721,141	55,861	1,777,001	1,721,141	55,861	1,777,001
Removal Reduction	7.30%	27.92%	7.95%	7.30%	28.87%	7.98%	7.55%	29.16%	8.23%

Slot	30-38 (F)			32-40 (G)			32-40 (H)		
Mode	Shore/Private	For-Hire	Total	Shore/Private	For-Hire	Total	Shore/Private	For-Hire	Total
New Harvest	189,893	26,233	216,126	148,406	32,529	180,936	148,406	26,233	174,639
New non Comp Harvest	7,197	864	8,061	9,188	562	9,749	9,188	864	10,051
New Dead Discards	12,851	1,543	14,394	16,406	1,003	17,409	16,406	1,543	17,949
Old Dead Removals	1,381,257	11,625	1,392,882	1,381,257	11,625	1,392,882	1,381,257	11,625	1,392,882
New Removals	1,591,199	40,264	1,631,462	1,555,257	45,719	1,600,976	1,555,257	40,264	1,595,521
Old Removals	1,721,141	55,861	1,777,001	1,721,141	55,861	1,777,001	1,721,141	55,861	1,777,001
Removal Reduction	7.55%	27.92%	8.19%	9.64%	18.16%	9.91%	9.64%	27.92%	10.21%

New York Addendum VI Implementation Plan for Atlantic Striped Bass

Current Management Regulations:

Current Coastal Marine Recreational Fishery

State	Season	Bag Limit	Minimum Size	Special Conditions	License
NY	Marine: April 15-Dec 15	1	28"	Angling only. Spearing permitted in ocean waters. Catch and release only during closed season.	Marine angler registry

Current Commercial Fishery (Marine District only)

State	Season	Annual Quota	Trip Limit	Minimum Size	Reporting Requirements	# of Participants
NY	May 15– Dec 15	795,795 lbs.	Season may close if projected quota is exceeded	28"-38" minimum size	Trip reports	439

Summary of Proposed Measures – Marine Recreational Options:

Section 1 : Coastal Marine Recreational Fishery:

No Change in Coastal Season

		Coastal		with Hudson/DE	
		% Reduction from 2017 Coastal	#fish	% Reduction from 2017 Total	#fish
slot	28-35"	25.4%	537,558	23.8%	548,942
	30-40"	23.8%	549,135	22.2%	560,519
	32-40"	28.6%	514,802	27.0%	526,186
Minimum Size	35"	21.3%	567,288	19.7%	578,672

- All Bag Limits are for 1 fish.
- New York State will meet the 18% reduction in total removals from 2017 levels required by Addendum VI by following the criteria set by the Technical Committee in Memo M19-084. The reduction will be accomplished by different regulation changes in the Marine and Coastal District, the Hudson River management area, and the Delaware River Management area. The total coastal, Hudson River, and Delaware River removals combined result in a reduction of at least 18% statewide.
- Total combined Hudson/Delaware River removals were 11,384 fish. Tables show removals and percentage reductions for the coast vs. combined NY coast/Delaware River/Hudson River.

- NY may implement changes in size limits, with no change in current season (April 15 – December 15), but will probably implement seasonal changes for all modes.
- Alternatively, NY may close the April and December fishing season, thus changing the 2020 season to May 1– Nov. 30. Closing fishing in April would allow fish to spawn before being caught for the season, and may provide consistent regulations with neighboring State’s proposals.
- All proposals meet the standards established in ASMFC memo (M19-084).
- All analyses use length frequency proportions compiled from pooled 2016 - 2017 MRIP data,
- Removals for “no seasonal change” options were calculated from 2017 MRIP data.
- Removals for “seasonal change” options were calculated from pooled 2015-2018 MRIP data.
- A 9% post release mortality rate was calculated for all options.
- All size limit analyses follow procedures used for Draft Addendum VI, and spreadsheet.
- The same level of “non-compliance” in 2016-2017 was assumed to occur in 2020. (i.e. proportion of fish harvested that were < 28” TL). This results in a non-compliance factor of 0.11 for NY (vs. 0.055 in the ASMFC spreadsheet for the total coast), and the 0.11 value was used in all NY “new non-compliance harvest” calculations.
- This may represent a worst-case scenario. MRIP measurements are taken in fork length (in mm), and were converted to TL for the addendum. So, for example, a fish in the 27” bin may either represent an undersized fish that was caught; or it may have been 28” but was put in the 27” bin, due to rounding errors, etc.
- It should also be noted that MRIP also covers the Hudson River in NY, from Hudson rm 0 at the Battery, to rm 45 in Peekskill. The marine coastal regulations for striped bass end at the George Washington Bridge (rm 12), but MRIP codes fish taken up to the Tappan Zee (Mario Cuomo) Bridge (rm 28) as a Hudson/Raritan “estuary” fish (D). Thus, a fish that was legally caught under Hudson River regulations (18-28” TL) may be present in the MRIP age-length key.
- For CE options, NY must demonstrate a reduction of at least 18% in total removals from 2017 levels.
- All CE options for proposed NY “seasonal changes” represent a reduction of at least 18%.

	2017	Recreational Coast- all modes
Harvest		472,321
Discards		2,760,839
Dead Discards		248,476
Total removals		720,797

An 18% reduction in total coastal recreational removals, compared to 2017, would result in 129,743 fewer fish; or 591,053 total removals. (i.e., coastal total removals must be less than or equal to 591,053 fish to achieve an 18% reduction).

- 2017 coastal for hire modes comprise 7.5% of total coastal recreational removals (53,795 fish). An 18% reduction in for-hire removals would result in 9,683 fewer fish; or 44,112 total removals.

2017 - for hire	
Harvest	48,978
Discards	53,523
Dead Discards	4,817
Total removals	53,795

- 2017 coastal private modes comprise 92.5% of total recreational removals (667,001 fish).

An 18% reduction in private mode removals would result in 120,060 fewer fish; or 546,941 removals.

2017- private modes	
Harvest	423,343
Discards	2,707,316
Dead Discards	243,658
Total removals	667,001

ALL Coastal Modes Same Regulation-Season Change

		Coastal			
		May 1 - Nov 30 (No April or Dec)	Only	With Hudson/DE	
TL		% Reduction from Coastal total	#fish	% Reduction from total	#fish
slot	28-35"	28.10%	518,066	26.5%	529,450
	28-38"	22.50%	558,266	21.0%	569,650
	30-40"	27.10%	525,480	25.5%	536,864
	30-42"	21.60%	565,222	20.0%	576,606
	32-44"	23.30%	552,903	21.7%	564,287
slot or Trophy	28-35 or >44"	21.90%	562,868	20.3%	574,252
Minimum Size	34"	21.50%	565,936	19.9%	577,320

- Delaware River fish that are not sampled in MRIP were reported to represent an average 0.3% bias in total MRIP removals (SAW 66 benchmark striped bass stock assessment). A 0.3% bias in MRIP estimates would result in an additional 2,162 total removals for NY in 2017. NY Delaware River removals shown in the Tables were the estimated Total Removals in 2017 (2,162 fish), if NY were to do no regulatory change in 2020. (See Section 4 of this report). Actual removals due to NY’s proposed regulatory change in 2020 (1 fish @ 28-35”) are expected to be lower (achieving a greater percentage reduction). We used the 2,162 fish as a worst-case scenario, since an exact number of expected 2020 removals could not be calculated at this time.
- Hudson River fish that are not sampled in MRIP, were reported to represent an average 1.35% bias in total NY MRIP removals. (SAW 66 benchmark striped bass stock assessment). A 1.35% bias in MRIP estimates would result in an additional 9,731 total removals for NY in 2017. NY Hudson River removals (9,222 fish) were a 5.23% reduction in estimated 2017 total removals (9,731 fish). This represents the lowest estimated percent reduction (and greatest number of removals) of the three proposed NY CE options for 2020 Hudson River regulatory changes. (option HR1-). NY Hudson River Options HR2 and HR3 would result in 137 and 146 fewer 2020 total removals, respectively, than NY Option HR1 (see Section 5 of this report).
- NY may implement a season change (no April or December), with the same options as above for the coastal private/shore modes; but a 31” minimum for party/charter boats. Additionally, party/charter boat captain and crew would no longer be able to keep a fish. (see Table below).

Split Coastal Private Vs. Party/Charter Regulations - Season Change								
May 1 - Nov 30 (No April or Dec)			Private May 1 - Nov 30 (No April or Dec)			Total- Split Regulations Coastal 31" for hire		
						With Hudson/DE		
TL	% Reduction from hire	#fish	% Reduction from private	#fish	Total % Reduction	Total #fish	Total % Reduction	Total #fish
28-35"			28.0%	480,108	27.3%	523,842	25.7%	535,226
28-38"			22.7%	515,392	22.4%	559,126	20.9%	570,510
30-40"			27.0%	486,616	26.4%	530,350	24.8%	541,734
30-42"			21.8%	521,497	21.6%	565,231	20.0%	576,615
32-44"			23.4%	510,685	23.1%	554,419	21.5%	565,803
28-35 or >44"			22.1%	519,432	21.9%	563,166	20.3%	574,550
34"			21.7%	522,125	21.5%	565,859	19.9%	577,243
31" (party/charter)	18.70%	43,734						

- Alternatively, RI/CT/NY may choose a Regional coastal plan. The options would be :

State	Size Limits	Bag Limits	Other
Regional: RI/CT/NY – A	28" – 35"	1	All modes
Regional: RI/CT/NY – B	30" – 40"	1	All modes
Regional: RI/CT/NY – C	30" – 40"	1	Private/Shore
Regional: RI/CT/NY – C	28" – 37"	1	For-Hire

Details are provided in a separate report.

- In summary, all proposed options achieve a greater than 18% reduction on total recreational removals for the entire state.

Section 2 : Proposed. Coastal Marine Commercial Fishery Options:

	Slot Size
Current Regulation	28-38" TL
18% reduction	28-38" TL
	24-36" TL
	26-38" TL

Analysis:

- NY's current regulation is a 795,795 lb. quota with a slot limit of 28-38". An 18% reduction in quota would result in a new quota limit of 652,552 lbs, with no change in slot size, as per Addendum VI. No additional analysis is required, but results are included in the following Tables, for comparison to the other two options.
- CE Analysis :** YPR/SPR analysis:
 - Analyses were performed using the Yield Per Recruit (YPR) version 3.3 program from the NOAA Fisheries Toolbox. ($F_s = 0.1$, $M_s = 0.33$). M , Maturity, and Weights were derived from the 2018 Striped Bass Benchmark Stock Assessment Report (SAW 66). Analyses used an age range of 1 - 13+, with maximum age in cohort calculation = 100. Selectivity curves were derived from 2016-2017 NY age-length keys.

- For SPR = 28-38” SPR:

size	F	SPR	YPR	%MSP	Quota
28-38	0.197	2.73	0.386	39.23	652,552
26-38	0.165	2.73	0.379	39.20	640,718
24-36	0.192	2.73	0.368	39.30	622,122

- Results for 26-38”TL, 2.73 SPR:

28-38 quota	652,552
reduction = YPR26-38/YPR28-38	0.98
Resulting quota at 26-38"	640,718

- Results for 24-36”TL, 2.73 SPR:

28-38" Quota	652,552
reduction = YPR24-36/YPR28-38	0.95
Resulting quota at 24-36"	622,122

Section 3: Circle Hook Requirements

To improve post release survival of striped bass and comply with Addendum VI, circle hooks will be a required gear to be used when fishing with natural bait for striped bass beginning January 1, 2021. The circle hook will adhere to the definition put forth in Addendum VI as “a non-offset hook where the point is pointed perpendicularly back towards the shank”. “The term “non-offset” means the point and barb are in the same plane as the shank (e.g. when the hook is laying on a flat surface, the entire hook and barb also lay flat).” NY will develop public education and outreach campaigns on the benefits of using circle hooks with natural bait as well as best handling practices, covering both the marine district as well as inland waters.

Timeline for Implementation:

NYS DEC held a Marine Resources Advisory Council (MRAC) meeting in November to discuss commercial and recreational striped bass regulatory options. Another MRAC meeting is scheduled for mid-January. The Hudson River Estuary Management Advisory Committee (HREMAC) will also be consulted for feedback. There will also be opportunities for public comment prior to implementing new regulations in 2020. Regulations are expected to be implemented prior to the start of the Hudson River Recreational fishing season on April 1, 2020. Marine recreational striped bass season starts April 15, and commercial season starts on June 1. The circle hook provisions of Addendum VI will be implemented before January 1, 2021.

Proposed Inland Fishery Regulations: Recreational options only are presented; commercial fisheries for striped bass are closed in inland waters.

Section 4: Delaware River (Inland) Fishery:

Current Delaware River Recreational Fishery Management Regulations:

State	Size Limits	Bag Limit	Other	Open Season	License
NY Delaware River	28 inches TL	1		All year	Marine Angler Registry

Summary of Proposed Measures:

Proposed Delaware River Recreational Fishery:

State	Size Limits	Bag Limit	Other	Open Season	License
NY Delaware River	28 to <35" TL	1		All year	Marine Angler Registry

- NY proposes to implement a 1 fish at 28 to less than 35 inch TL size limit for the Delaware River recreational fishery as stated in Addendum VI.
- Delaware River fish that are not sampled in MRIP were reported to represent an average 0.3% bias in total MRIP removals (SAW 66 benchmark striped bass stock assessment). A 0.3% bias in MRIP estimates would result in an additional 2,162 total removals for NY in 2017. An 18% reduction of those 2,162 fish would result in 389 fewer fish; or 1,773 total removals. It is unknown what the percentage reduction of Delaware River striped bass will be under this proposed regulation. NY Delaware River removals shown in the Tables in Section 1 of this report (showing total NY recreational reductions) were the estimated Delaware River Total Removals in 2017 (2,162 fish), if NY were to do no regulatory change in 2020. Actual removals due to NY's proposed regulatory change in 2020 (1 fish @ 28-35") are expected to be lower (achieving a greater percentage reduction). We used the 2,162 fish as a worst-case scenario, since an exact number of expected 2020 removals could not be calculated at this time.

Delaware R	Options	% reduction	total removals	Diff from 18% (# fish)
No Reg. Change		0	2,162	-389
18% Delaware R Reduction		18.0%	1,773	0
Addendum VI	28 - 35"	unknown		

Section 5: Hudson River (Inland) Fishery:

Current Hudson River Recreational Fishery Regulation:

State	Size Limits	Bag Limit	Other	Open Season	License
NY Hudson	18-28 inches OR >40 inches TL	1		Apr 1 – Nov 30	Marine Angler Registry

Summary of Proposed Recreational Fishery Options: ALL options are for 1 fish per day bag limit for the Hudson River and Tributaries, North of the George Washington Bridge (river mile 12)

Option	Description	Size limit	Season	Other	C&R* mort. rate	% reduction
HR1.	Slot w/ no trophy	18-28 inches	Apr 1-Nov 30	No trophy	9%	5.2%
HR2.	Increase in slot restriction, season ends Sep 30 th	18-28 inches or > 44 inches	Apr 1-Sep 30	Larger trophy, season ends early	9%	6.6%
HR3.	Slot w/ no trophy, season ends Sep 30 th	18-28 inches	Apr 1-Sep 30	No trophy, season ends early	9%	6.7%

Dates are approximate for season ending.

*C&R: Catch and release mortality; based on standard default mortality rate as specified by ASMFC memorandum (M19-084).

Overview of data used for all Hudson River options:

New York state will meet the 18% reduction in total removals from 2017 levels required by Addendum VI by following the criteria set by the Technical Committee in Memo M19-084. The reduction will be accomplished by different regulation changes in the Marine and Coastal District, the Hudson River management area, and the Delaware River Management area. The total coastal, Hudson River, and Delaware River removals combined will result in a reduction of at least 18% statewide.

Hudson Options

	Options	% reduction	total removals	Diff from 2017 (#)	Diff from 18%(#)
No Reg. Change		0	9,731	0	-1,752
18% Hudson Reduction		18.0%	7,979	1,752	0
same season; no trophy	HR1	5.2%	9,222	509	-1,243
shorter season; larger trophy	HR2	6.6%	9,085	646	-1,105
shorter season; no trophy	HR3	6.7%	9,076	655	-1,097

- Hudson River fish that are not sampled in MRIP were reported to represent an average 1.35% bias in total NY MRIP removals. (SAW 66 benchmark striped bass stock assessment). A 1.35% bias in MRIP estimates would result in an additional 9,731 total removals for NY in 2017. An 18% reduction in those 9,731 fish would result in 1,752 fewer fish; or 7,979 fewer total removals. NY Hudson River removals (9,222 fish) shown in Section 1 Tables of this report (showing total NY recreational reductions) were a 5.23% reduction in estimated 2017 total removals (9,731 fish). This represents the lowest estimated percent reduction (and greatest number of removals) of the three proposed NY CE options for 2020 Hudson River regulatory changes. (option HR1). NY Hudson River Options HR2 and HR3 would result in 137 and 146 fewer 2020 total removals, respectively, than NY Option HR1.

- The Hudson River is a small component of New York state Striped Bass harvest. Estimates of total removals from inland waters not represented by MRFSS/MRIP were generated in the 2019 Benchmark Stock Assessment to examine the potential magnitude of recreational total removals (i.e. harvest and dead discards) occurring in the inland portion of the Hudson River relative to total removals in New York marine waters. Data from two previous river-wide creel surveys conducted by Normandeau in 2001 and 2005 (NAI 2003 and 2007) were compared to estimates of harvest and discard loss from MRFSS/MRIP for the equivalent years. The analysis indicated that Hudson River composed 1.7% and 1.0% of the statewide removals in 2001 and 2005, respectively.
- Our proposal meets the standards as established by the ASMFC Technical Committee in the TC memo (M19-084).
- National Marine Fisheries Service MRIP (Marine Recreational Information Program) data are not available for the Hudson River north of Peekskill. Our proposed reductions are based on data obtained from a Hudson River Cooperative Angler logbook (CAP) program run by the DEC, pooling data from 2016-2017 for size analyses and pooling data from 2015-2018 for seasonal analyses, and on data from two previous river-wide creel surveys run by Normandeau in 2001 and 2005. The two Normandeau creel surveys were extensive river-wide surveys. The data from the Normandeau creels were used as a comparison to the CAP data in the Addendum IV implementation plan. Recorded sizes of fish caught and harvested under the current CAP program continue to be very similar to what was recorded by Normandeau.
- Catch and harvest numbers from the 2001 Normandeau creel survey were used to estimate reduction for seasonal analyses. The 2005 Normandeau creel survey was only concentrated on the spring and so was not used in our seasonal analysis.
- CAP data were subset to include the spring season (April 1 to June 15) (Table 1). The size analyses were based on averages of the 2016-2017 CAP data, using a total of 1,751 trips and a catch of 7,286 fish for the two years (Table 1).
- We used the methods as provided by Dr. G. Nelson that were used for Addendum IV coastal size and bag limit reduction analyses.
- For Addendum VI, we used the default 9% mortality rate, like all other jurisdictions on the coast, as specified by the Technical Committee memorandum (M19-084) on conservation equivalency.

Hudson River Recreational Option 1: One fish @ 18-28" TL slot limit.

- Option HR1 proposes to implement a 1 fish @ 18-28 inch TL slot limit for the Hudson River recreational fishery.
 - Table 3 provides expected reductions for Option 1 for Hudson River removals, under assumption of 9% catch and release mortality rate. For HR Option 1: 1 fish at 18-28 inch slot limit with a 9% C&R rate would produce a 5.23% reduction from average 2017 Hudson River total removals. This option would be eliminating the harvest and targeting of all fish over 28". This option would protect the size of fish that in the Hudson River spawning stock data are entirely female and the additional savings in terms of biomass and reproductive potential is closer to 11.34%. There is an added benefit of eliminating the trophy fishery through changing trip pressure and angler behavior, although the exact savings cannot be calculated.

Hudson River Recreational Option 2: One fish @ 18-28" or >44" TL slot limit and season begins on April 1 and closes on September 30th.

- Option HR2 proposes to implement a 1 fish @ 18-28 or >44 inch TL slot limit for the Hudson River recreational fishery in addition to ending the fishing season early on September 30th.
 - Table 4 provides expected reductions for Option 2 for Hudson River removals, under assumption of 9% catch and release mortality rate. For HR Option 2: 1 fish at 18-28 or >44 inch slot limit with a 9% C&R rate and would produce a 6.64% reduction from average 2017 Hudson River total removals. This option would be extending the upper bounds of the size of fish that are protected from harvest in the Hudson River. Currently the minimum size for a trophy fish is 40" and if it were moved to 44", it would protect the majority of spawning females in the Hudson while still allowing for the harvest of a trophy fish above 44". Based on the 2016-17 CAP data, fish that were harvested and larger than 44" accounted for 0.12% of total harvest. Changing the fishing season end date will result in a reduction of 25% of the fishing season on the Hudson. Targeting striped bass (catch and release) out of season in the Hudson is not allowed and so would not only result in less harvested, but also would reduce catch and release mortality.

Hudson River Recreational Option 3: One fish @ 18-28" TL slot limit and season begins on April 1 and closes on September 30th.

- Option HR3 proposes to implement a 1 fish at 18-28 TL slot limit for the Hudson River recreational fishery in addition to ending the fishing season early on September 30th.
 - Table 5 provides expected reductions for Option 3 for Hudson River removals, under assumption of 9% catch and release mortality rate. For HR Option 3: 1 fish at 18-28 inch slot limit until September 30 with a 9% C&R rate would produce an 6.73% reduction from average 2017 Hudson River total removals. This option would be eliminating the harvest and targeting of fish over 28". The fish in this size range from Hudson River spawning stock data are entirely female and the savings in terms of biomass and reproductive potential is closer to 11.34% and coupled with a shortened season, approximately an 12.8% reduction. There is an added benefit of eliminating the trophy fishery through changing trip pressure and angler behavior, although the exact savings cannot be calculated. Changing the fishing season end date will result in a reduction of 25% of the fishing season on the Hudson. Targeting striped bass out of season in the Hudson is not allowed and so would not only result in less harvested, but also would reduce catch and release mortality.

Table 1. NYSDEC cooperative angler diary program statistics. Size related analyses used averages of the 2016-2017 data and seasonal analyses used averages of the 2015-2018 data.

April 1-June15 only					
Year	N Participants	N Trips	N s. bass caught*	N Anglers	Angler Hours
2006	20	263	624	590	3425
2007	26	330	1118	740	3607
2008	38	459	2577	1014	5518
2009	39	498	1678	1195	6654
2010	52	529	1962	1198	6807
2011	83	840	1970	1797	8829
2012	66	745	2576	1617	8834
2013	56	604	1786	1305	6961
2014	47	512	1267	1136	5409
2015	60	554	1549	1320	7750
2016	76	965	3830	2160	11286
2017	65	684	3281	1559	8454
2018	96	974	3451	2050	10072
2016-2017 sum	141	1649	7111	3719	19740
2016-2017 avg	71	825	3556	1860	9870
2015-2018 sum	297	3177	12111	7089	37562
2015-2018 avg	74	794	3028	1772	9390
"All year" data					
2015	62	571	1559	1324	7764
2016	76	1030	3916	2204	11397
2017	65	721	3370	1592	8511
2018	96	1029	3480	2088	10145
2016-2017 sum	141	1751	7286	3796	19908
2015-2018 sum	299	3351	12325	7208	37817
*Not all fish caught are measured					

Table 2. Numbers and proportion at length for Hudson River recreational size limit analysis using cooperative angler logbook data; percent averaged from 2016-2017 and 2015-2018.

	Total catch				Harvested				% harvested		% harvested	
	2015	2016	2017	2018	2015	2016	2017	2018	2016-17	cumulative	2015-18	cumulative
7-7.9	3	6							0.00	0.00	0.00	0.00
8-8.9	1	27	4	3					0.00	0.00	0.00	0.00
9-9.9	2	19		1					0.00	0.00	0.00	0.00
10-10.9	2	41	9	7					0.00	0.00	0.00	0.00
11-11.9	1	15	6	3					0.00	0.00	0.00	0.00
12-12.9	10	83	66	31					0.00	0.00	0.00	0.00
13-13.9	11	48	27	26					0.00	0.00	0.00	0.00
14-14.9	14	130	129	73					0.00	0.00	0.00	0.00
15-15.9	13	91	99	148					0.00	0.00	0.00	0.00
16-16.9	32	139	170	248					0.00	0.00	0.00	0.00
17-17.9	59	102	159	278					0.00	0.00	0.00	0.00
18-18.9	78	114	161	303	3	6	16	25	0.03	0.03	0.04	0.04
19-19.9	55	85	70	229	4	13	17	30	0.04	0.07	0.04	0.08
20-20.9	84	132	118	262	6	14	11	24	0.03	0.10	0.04	0.12
21-21.9	108	119	73	174	19	18	16	34	0.04	0.15	0.07	0.19
22-22.9	116	168	94	137	18	28	30	37	0.08	0.22	0.08	0.27
23-23.9	57	137	66	90	19	48	32	40	0.10	0.32	0.10	0.37
24-24.9	96	286	113	121	22	74	34	46	0.13	0.45	0.12	0.49
25-25.9	62	173	84	75	35	67	36	30	0.13	0.58	0.13	0.62
26-26.9	55	202	103	76	20	72	39	24	0.13	0.71	0.11	0.73
27-27.9	56	180	109	89	30	106	60	51	0.20	0.91	0.17	0.90
28-28.9	54	111	69	70	20	29	18	31	0.06	0.97	0.07	0.97
29-29.9	39	67	51	46					0.00	0.97	0.00	0.97
30-30.9	37	88	49	56	1		1		0.00	0.97	0.00	0.97
31-31.9	39	38	36	53					0.00	0.97	0.00	0.97
32-32.9	54	75	43	50					0.00	0.97	0.00	0.97
33-33.9	42	71	27	56			1		0.00	0.98	0.00	0.97
34-34.9	44	94	33	32					0.00	0.98	0.00	0.97
35-35.9	37	60	20	27					0.00	0.98	0.00	0.97
36-36.9	35	87	25	38					0.00	0.98	0.00	0.97
37-37.9	24	63	18	19					0.00	0.98	0.00	0.97
38-38.9	23	43	8	16					0.00	0.98	0.00	0.97
39-39.9	13	21	3	21					0.00	0.98	0.00	0.97
40-40.9		16	7	15		8		3	0.01	0.98	0.01	0.98
41-41.9	4	11	1	3	3	9	1	2	0.01	0.99	0.01	0.99
42-42.9		6	3	5		2		2	0.00	1.00	0.00	0.99
43-43.9	2	2	1	2		1	1	1	0.00	1.00	0.00	0.99
44-44.9	1		2	3			1	2	0.00	1.00	0.00	1.00
45-45.9	3				3				0.00	1.00	0.00	1.00
46-46.9		1		1					0.00	1.00	0.00	1.00
47-47.9	2								0.00	1.00	0.00	1.00
48-48.9									0.00	1.00	0.00	1.00
Total	1368	3151	2056	2887	203	495	314	382	1	24	1	24

Table 3. Reduction achieved when implementing HR Option 1: 1 fish at 18 to 28 inch TL slot limit for the Hudson River in-river recreational fishery. Reduction based on an average from 2016 to 2017 cooperative angler data.

		Option HR1
New SLOT Size Limit	no trophy 18-28	
Prop Har Reduction		0.09
New Harvest		287
New Dead Rel09		2
Old Dead Rel		157
Total Removal		446
% Total Reduct		-5.23

Table 4. Reduction achieved when implementing HR Option 2: 1 fish at either an 18-28” slot or a trophy fish at >44 inches TL for the Hudson River in-river recreational fishery starting April 1 and ending September 30. Reduction based on an average from 2016 to 2017 cooperative angler data as well as 2001 creel data.

				Option HR2
New SLOT Size Limit	+>44 18-28	early season closure		
Prop Har Reduction	0.08	0.006363259		
New Harvest	287	7183		
New Dead Rel09	2	0		
Old Dead Rel	157	3,338	combined	
Total Removal	447	10,521	reduction	
% Total Reduct	-5.13	-1.59		6.64%

Table 5. Reductions achieved from Hudson River recreational fishery Option 3: 1 fish at 18 to 28 inch TL slot limit for the Hudson River in-river recreational fishery starting April 1 and ending September 30. Reduction based on an average from 2016 to 2017 cooperative angler data as well as 2001 creel data.

			Option HR3
New SLOT Size Limit	no trophy 18-28	early season closure	
Prop Har Reduction	0.09	0.00636	
New Harvest	287	7183	
New Dead Rel09	2	0	
Old Dead Rel	157	3338	combined
Total Removal	446	10521	reduction
% Total Reduct	-5.227	-1.5862	6.73%

References:

1. Normandeau, 2003. Assessment of Hudson River Recreational Fisheries. Normandeau Associates under contract to NYSDEC (Contract C004005).
2. Normandeau, 2007. Assessment of Spring 2005 Hudson River Recreational Fisheries. Normandeau Associates under contract to NYSDEC (Contract C005100).
3. NESC Document 19-08. 2019. 66th Northeast Regional Stock Assessment Workshop(66th SAW) Stock Assessment Report. (Striped Bass Benchmark Stock Assessment). pp 457 - 1175.

New Jersey Atlantic Striped Bass Addendum VI Implementation Plan

Implementation Plans are due November 30, 2019

Please use the following template when submitting implementation plans. Please be as concise as possible and use bullets to ensure inclusion of all important information. This template references data standards established by the Technical Committee (TC) and detailed in the TC memo (M19-084).

Summary of Proposed Measures

Recreational Fishery

	State	Size Limits	Bag Limits	Other	Open Season
R1	NJ	1 @ 24" to < 28"	1	Raritan Bay closure. Earliest open date: <ul style="list-style-type: none"> - March 8 with C1 - March 1 with C3 - March 8 with C4 - March 8 with C5 	1/1 – 12/31*^
R2	NJ	1 @ 24" to < 29"	1	Raritan Bay closure. Earliest open date: <ul style="list-style-type: none"> - April 3 with C2 - March 24 with C3 - April 3 with C6 - April 3 with C7 	1/1 – 12/31*^
R3	NJ	1 @ 28" to < 35"	1		1/1 – 12/31*^
R4	NJ	1 @ 28" to < 34"	1		1/1 – 12/31*^
R5	NJ	1 fish ≥ 35"	1		1/1 – 12/31*^

*Closed January 1 to February 28 in all waters except Atlantic Ocean and April 1 to May 31 in the lower Delaware River and tributaries (spawning ground closure)

^New Jersey may consider closing Raritan Bay beyond dates listed in table above but until no later than May 1

Commercial Fishery – Striped Bass Bonus Program

	State	Size Limits	Seasonal Quota	Open Season
C1	New Jersey	1 @ 24" to < 28"	215,912	5/15 – 12/31 or 9/1 – 12/31
C2	New Jersey	1 @ 24" to < 29"	218,464	5/15 – 12/31 or 9/1 – 12/31
C3	New Jersey	1 fish ≥ 35"	459,898	5/15 – 12/31 or 9/1 – 12/31

C4	New Jersey	1 @ 24 to < 28" or 1 fish ≥ 43" (500 trophy permits)	215,912	5/15 – 12/31 or 9/1 – 12/31
C5	New Jersey	1 @ 24 to < 28" or 1 fish ≥ 43" (1000 trophy permits)	215,912	5/15 – 12/31 or 9/1 – 12/31
C6	New Jersey	1 @ 24 to < 29" or 1 fish ≥ 43" (500 trophy permits)	218,464	5/15 – 12/31 or 9/1 – 12/31
C7	New Jersey	1 @ 24 to < 29" or 1 fish ≥ 43" (1000 trophy permits)	218,464	5/15 – 12/31 or 9/1 – 12/31

Section 1: Coastal Recreational Fishery

1a.) A one fish bag limit and a slot size limit of 28" minimum size to less than 35" total length may be implemented for the ocean fishery without further analysis. The same fishing seasons as in 2017 is required.

OR

1b.) A conservation equivalency (CE) proposal that achieves at least an 18% reduction from 2017 total recreational removals following the criteria established by the TC (see TC memo). If selecting this option, further analysis is required.

If submitting CE, please address the following questions,

- What is your state proposing for a conservation equivalency measure?
 - New Jersey currently has no preferred option but is considering the options summarized in table above under Recreational Fishery.
- Does your proposal meet the data standards established by the TC?
 - New Jersey’s proposal meets the standards as established by the TC detailed in the TC memo (M19-084)
- What data sources are used in the analysis (include mode or season specific if applicable)?
 - Data sources include: NJ MRIP and NJ Striped Bass angler logs
 - See also Appendix A.
- Sample size summary by mode, season, or state and/or data source as applicable.
 - Sample sizes by data source are provided in Table 1
- Describe in one sentence how you did the analysis (e.g., used methods outlined in Greg Wojcik’s spreadsheet, used SAS code provided by Mike Celestino, alternative analysis described briefly).
 - For proposed measures R1-R2, we used trip-level data from NJ’s 2016-2017 Striped Bass logbooks from individual anglers. See Appendix_A_rev_sb2019 for more details. See worksheet ‘options R1 and R2’ in attached spreadsheet newJersey_revJan2020.xlsx.

- For proposed measures R3, R4, and R5, New Jersey’s analysis used the spreadsheet methods used to develop coastal recreational sub-options for Addendum VI. See worksheet ‘options R3, R4, R5’ in attached spreadsheet newJersey_revJan2020.xlsx.
- Provide a table of results as presented in Greg Wojcik’s spreadsheet or equivalent spreadsheet that is comparable with your analysis.
 - Calculations and detailed results presented in spreadsheet newJersey_revJan2020.xlsx
 - Summary of results are presented in Table 2
- Clearly identify that at least an 18% reduction in total removals is achieved from pooled 2016-2017 for all size-related analysis or pooled 2015-2018 data for seasonal and mode-based analyses.
 - New Jersey’s 18% reduction in total removals (commercial and recreational) is achieved entirely through options presented for the recreational fishery. Total required reductions were calculated for each pair of proposed recreational and commercial options. For recreational options R1 and R2, an additional TC-required reduction was needed to account for the loss in yield per recruit from a sub-28” option. To account for the additional reduction, Raritan Bay seasonal closure was added to meet the total required reduction. See Appendix_A_rev_sb2019 and attached spreadsheet newJersey_revJan2020xlsx.

Note: Whether implementing 1a or 1b, please indicate the open and close dates of a season. Also specify if regulations are different by geographical area if applicable (e.g., ocean, bay, river) and the specific season dates of those areas. Also, more conservative regulations may be implemented without pursuing CE. Please contact Max Appelman mappelman@asmfc.org to confirm that proposed measures are more conservative.

Section 2: Chesapeake Bay Recreational Fishery (MD, VA, PRFC, DC)

Not applicable for New Jersey.

Section 3: Coastal Commercial Fishery

2a.) Implementation of an 18% reduction from the Addendum IV quotas. The reduced quotas in Addendum VI account for previously approved CE programs, therefore, states do not need to submit for CE if they choose to maintain 2017 size limits in its commercial fisheries.

OR

2b.) If a state chooses to modify 2017 size limits, the state needs to submit a CE proposal adjusting its quota relative to the new Addendum VI quota baseline (i.e., 18% reduction from the quota as listed in Addendum IV).

New Jersey is once again proposing to reallocate its commercial quota to the recreational fishery through conservation equivalency by implementing one of the options above under Commercial Fishery – **Striped Bass Bonus Program:**

- Does your proposal meet the data standards established by the TC?
 - New Jersey’s proposal meets the standards as established by the TC detailed in the TC memo (M19-084)

- What data sources are used in the analysis (include mode or season specific if applicable)?
 - For the yield per recruit/spawning potential ratio analysis we used data from the coastwide assessment: natural mortality, female maturity, and weights at age (catch wts = geometric mean of catch wts from 2016-2017), SS Bets – geometric mean of 2016-2017 adjusted Rivard wts). We assumed max age in cohort = 100 and 15 ages in the population (with a plus group). We estimated selectivity using age length keys from 2016 and 2017 (age data are from a variety of NJ fishery-independent and -dependent sampling programs including Del Bay tagging, Del River seine survey, Atlantic Herring surveys, Ocean Trawl, party/charter boat sampling, and fishing tournaments); where max selectivity < 1, we scaled the entire selectivity vector to its maximum value.
- Sample size summary by mode, season, or state and/or data source as applicable.
 - Our composite age length key (2016 and 2017) was comprised of 777 aged fish.
- Describe in one sentence how you did the analysis (e.g., used methods outlined in Greg Wojcik’s spreadsheet, used SAS code provided by Mike Celestino, alternative analysis described briefly).
 - New Jersey followed the methods of Lee (2007)¹ using NOAA’s Yield Per Recruit Version 3.3²
- Provide a table of results as presented in Greg Wojcik’s spreadsheet or equivalent spreadsheet that is comparable with your analysis.
 - Calculations detailed results presented in spreadsheet newJersey_revJan2020.xlsx
 - Results are presented in Table 2
- Clearly identify that at least an 18% reduction in total removals is achieved from pooled 2016-2017 for all size-related analysis or pooled 2015-2018 data for seasonal and mode-based analyses.
 - New Jersey’s 18% reduction in total removals (commercial and recreational) is achieved entirely through options presented for the recreational fishery. Total required reductions were calculated for each pair of proposed recreational and commercial options. See Appendix_A_rev_sb2019 and attached spreadsheet newJersey_revJan2020.xlsx.
- Striped Bass Bonus Program details for Options C4 through C7:
 - Under options C4 to C7, the Striped Bass Bonus Program will consist of two segments: Slot Size (24” to <28”(or <29”) and Trophy (43+”)
 - Each segment will issue a different colored permit “tag” to distinguish between segments and aid with enforcement and compliance. The segment name (“Slot” or “Trophy”) will be printed on the permit/tag as well.
 - A limited number of permits will be issued to ensure the quota is not exceeded. NJ calculates the total number of issuable permits by converting the quota to number of fish based on mean weight for each size class (slot and trophy).
 - Participants must apply and specify permit type (Slot or Trophy).

¹ Lee, L. 2007. Proposal for conservation equivalency in Rhode Island’s commercial trap net fishery for Striped Bass. Report to the ASMFC Striped Bass Technical Committee. 9 pp.

² <https://www.nefsc.noaa.gov/nft/YPR.html>

- Reporting Bonus Harvest is mandatory and is monitored daily.

Note: Whether implementing 2a or 2b, please include a list of commercial fishery management measures being implemented (including but not limited to size limits, seasons by gear type). Also, please be brief when submitting commercial fishery CE proposals and follow a similar outline as described in Section 1.

Section 4: Chesapeake Bay Commercial Fishery (MD, VA, PRFC)

Not applicable for New Jersey.

Section 5: Circle Hook Requirements

New Jersey is drafting regulatory language to require the mandatory use of circle hooks when fishing with bait to reduce release mortality in recreational striped bass fisheries. New Jersey will consider the Law Enforcement Committee's recommendation to adopt a standard definition of a circle hook and to standardize regulatory language with other jurisdictions. New Jersey will develop a public education and outreach campaign to promote awareness and assure compliance with the circle hook regulation. New Jersey is considering (but not limited to) implementing the following options through the public education campaign:

- Develop an outreach presentation to educate anglers on the benefits of circle hooks and to promote proper fish handling techniques to reduce release mortality. Target audiences include fishing clubs, fishing tournament Captain's meetings, fishing seminars, Division outreach events, for-hire organizations
- Develop brochures/hand-outs to distribute at fishing tournaments, outreach events, fishing clubs, marinas, and to SBBP participants
- Develop a webpage on the Division website with information on circle hooks and proper fish handling techniques. In addition, send out emails to Marine Fisheries/Wildlife email lists with a link to the webpage
- Buy and distribute circle hooks to anglers
- Work cooperatively with the Rutgers University Cooperative Extension to help spread awareness of circle hooks and fish handling practices
- Develop a Striped Bass Fishing Advisory System (similar to MD) to advise anglers when temperatures are extreme and could increase release mortality. This is not designed to address the circle hook requirement but would be an additional measure aimed to reduce striped bass release mortality during the summer months.

Section 6: Timeline for Implementation

New Jersey plans to begin implementing parts of its circle hook public education & outreach campaign immediately, with full implementation of the campaign including circle hook regulations by January 1, 2021. All other provisions of Addendum VI including recreational measures and Striped Bass Bonus Program regulations will be implemented by April 1, 2020.

Table 1. Sample sizes by data source (2016-2017).

Data source	Disposition	Trips	Fish
MRIP (NJ)	Kept	145	196
NJ SBBP logs	Kept	4,215	4,720
NJ SBBP logs (all fish)	Kept & released	7,946	23,085

Table 2. Results of analysis used to develop recreational and paired SBBP options for Addendum VI.

Summary				total req	predicted	predicted	min	RB	
Rec option		Paired with	commercial' option:	reduction	reduction	reduction	closure	earliest	Actual RB open date
				comm red = 0%	w/o seasons	w/ season closure	length	open date	
R1	[24,28]	C1	[24,28]	35.9%	34.6%	35.9%	7	March 8	March 15, April 1, April 15, or May 1
R1	[24,28]	C3	[35+]	35.7%	36.0%	36.0%	0	March 1	March 1, March 15, April 1, April 15, or May 1
R1	[24,28]	C4	[24,28] or [43+; 500 tags]	35.9%	34.6%	35.9%	7	March 8	March 15, April 1, April 15, or May 1
R1	[24,28]	C5	[24,28] or [43+; 1000 tags]	35.9%	34.6%	35.9%	7	March 8	March 15, April 1, April 15, or May 1
R2	[24,29]	C2	[24,29]	35.1%	28.8%	35.1%	33	April 3	April 15 or May 1
R2	[24,29]	C3	[35+]	34.9%	30.6%	34.9%	23	March 24	April 1, April 15, or May 1
R2	[24,29]	C6	[24,29] or [43+; 500 tags]	35.1%	28.8%	35.1%	33	April 3	April 15 or May 1
R2	[24,29]	C7	[24,29] or [43+; 1000 tags]	35.0%	28.8%	35.0%	33	April 3	April 15 or May 1
R3	[28,35]	C1	[24,28]	18.7%	42%				
R3	[28,35]	C3	[35+]	18.4%	42%				
R3	[28,35]	C4	[24,28] or [43+; 500 tags]	18.6%	42%				
R3	[28,35]	C5	[24,28] or [43+; 1000 tags]	18.6%	42%				
R4	[28,34]	C1	[24,28]	18.7%	46%				
R4	[28,34]	C3	[35+]	18.4%	46%				
R4	[28,34]	C4	[24,28] or [43+; 500 tags]	18.6%	46%				
R4	[28,34]	C5	[24,28] or [43+; 1000 tags]	18.6%	46%				
R5	[35+]	C1	[24,28]	18.7%	27%				
R5	[35+]	C2	[24,29]	18.7%	27%				
R5	[35+]	C3	[35+]	18.4%	27%				
R5	[35+]	C4	[24,28] or [43+; 500 tags]	18.6%	27%				
R5	[35+]	C5	[24,28] or [43+; 1000 tags]	18.6%	27%				
R5	[35+]	C6	[24,29] or [43+; 500 tags]	18.7%	27%				
R5	[35+]	C7	[24,29] or [43+; 1000 tags]	18.6%	27%				

Table 3. Results (and inputs) of YPR analysis showing quota changes for each of our “commercial” options

		Bonus program							
		Regulation	F	%MSP	YPR	Change	Quota		
Base (current 'commercial' reg)	[24,28)		0.197	52.36	0.0846	-	215,912	Adj Ad IV quota	
	[24,28)		0.197	52.36	0.0846	0.0%	215,912	Addendum VI quota	
	[24,29)		0.208	52.43	0.0856	1.2%	218,464	Addendum VI quota	
	[35+		0.018	52.47	0.1802	113.0%	459,898	Addendum VI quota	
	* [43+		0.335	52.39	0.2081	146.0%	531,103	Addendum VI quota	
		* Implemented as [24,28) OR [43+							

Appendix A (revised). Supplemental information regarding recreational measure of 1 fish between 24” to less than 28” (option R1) or < 29” (Option R2).

Appendix A revised. Supplemental information regarding recreational measure of 1 fish between 24" to less than 28" (option R1) or 29" (Option R2).

Input received during NJ's public hearings suggested that there was interest in a recreational regulation similar to our 2019 Striped Bass bonus program regulation (1 fish at 24" to less than 28"). As noted in the Striped Bass Technical Committee's (TC) October 22nd memorandum to the Management Board, The TC does not have a standard methodology for pursuing lower minimum sizes (e.g., < 28"), therefore, alternative methods to the coastwide analysis may be used and will be reviewed on a case by case basis. To that end, we mimicked methods used for a summer flounder conservation equivalency proposal from ~2014.

Specifically, we used NJ's Striped Bass log book program from individual anglers' trip-level data from 2016-2017. In our December 2019 analyses, we removed bonus fish from the dataset prior to analyses, but discussion and supplemental analyses from a December 2019 Technical Committee meeting suggested concerns with this approach for a number of reasons including that the results were sensitive to the decision. There was interest from the TC in having NJ make an attempt to make the logbook length frequency data as similar to MRIP as possible. To this end, we reasoned that the performance of the NJ implementation plan for recreational measures (and for all coastal states) will be judged by MRIP estimates (2017 total rec removals vs 2020 total rec removals) and NJ's bonus program fish are captured by MRIP. We therefore retained all bonus fish in the dataset. There are 621 bonus fish with associated length records in our dataset. In 2017, 2161 bonus fish were reported as harvested. The discrepancy between the number of bonus fish length records (621 in 2016 and 2017) and reported harvest of bonus fish in 2017 (2161) results from a number of factors. Logbook data and harvest data are reported separately and housed in different databases: harvested bonus fish must be reported within 24 hours of harvest (and is how we monitor our quota), while logbook data (which may or may not contain bonus fish) must be reported by the end of the calendar year in which fishing took place; not all anglers submit logbooks at the end of the year; some logbook entries are not entered into the length database if the log is filled out insufficiently (e.g., rather than providing individual lengths, an angler instead provides a length range). Finally, some bonus fish are reported by party/charter boat (PCBT) captains on behalf of their customers. For this analysis we chose not to use data from PCBT captains because that would allow for the potential of duplicate records (e.g., if a PCBT captain reports fish from all anglers in his/her daily log, and individual anglers on the same PCBT trip also report their fish in their individual logs, we would have duplicate records). Length frequency data below suggest that individual logs are capturing a representative fraction of for-hire catch and harvest (and areas fished, etc.) compared to MRIP (see results and discussion below).

For our updated analysis, for each angler trip in which a bonus fish was not harvested, one fish between 24" to less than 28" (or < 29" for option R2) was considered harvested when caught on a trip, and all other fish caught on the trip would be released (and 9% mortality would be applied; Figure 1). To account for non-compliance, we included additional harvest using the non-compliance rate (1.4%) from worksheet 'options R3, R4, R5' in spreadsheet newJersey_revJan2020.xlsx. We calculated the following:

- Original total removals = all harvested fish + 9% of all releases under 2019 regulations
- New harvest = fish harvested under new regulation [one fish [24",28") or [24",29")]
- New releases = fish released under new regulation
- New non-compliant harvest = (original harvest – new harvest) * noncompliance rate

- New dead releases = (new releases – new noncompliant harvest) * 9%
- New total removals = new harvest + new noncompliant harvest + new dead releases
- Reduction = (new total removals / original total removals) - 1

For trips in which a bonus fish was harvested in 2016 or 2017 see Figure 2. Briefly, in an effort to retain bonus fish in the dataset, and as a simplifying assumption, if a trip in 2016 or 2017 harvested a bonus fish we assumed that same trip would have been available to harvest a bonus fish under the new 2020 bonus regulations (similar to the conservation equivalency assumptions we make in general, we are assuming that the observed trip-level past behavior and length frequency is the best predictor of future behavior, with the standard set of caveats the TC has discussed). Our CE calculations shift recreational fish (non-bonus fish) into kept or released dispositions based on 2020 recreational regulations (i.e., [24,28) or [24,29)), and, because expected recreational reductions (as will be calculated from MRIP estimates) will depend on 2020 bonus program regulations (since bonus program fish are captured by MRIP), we also move bonus fish into kept or released dispositions based on 2020 bonus program regulations (i.e., [24,28), [24,29), [35+, [24,28) or [43+, and/or [24,29) or [43+ options; see Figures 1 and 2).

The 22 October 2019 TC memorandum indicates that Marine Recreational Information Program (MRIP) are the standard data set for analyses, but that alternative data may be used to supplement or replace MRIP data, provided justification, a source description, and its applicability to the analysis conducted are provided. Regarding justification and applicability, since there are few fish < 28" harvested in the MRIP dataset, and MRIP release data are very sparse, MRIP data are not well suited for an analysis that assumes fish < 28" will be harvested (or more broadly, that fish will be harvested outside of current legal-size limits). NJ's Striped Bass log book program data are currently used to characterize NJ's catch at age (harvest and releases) in the coastwide assessment and include many fish <28" in the catch, and therefore seemed to be a justifiable dataset for the proposed analyses.

Regarding the data source description – participants in the Bonus program must apply (so total participation is known). There is mandatory reporting of length information and voluntary reporting of weight data from harvested fish for individual anglers. Individuals are required to report Bonus Harvest within 24 hours (and are eligible for a second permit after reporting harvest of initial permit). Participants are asked to submit their personal logbooks at end of year for striped bass fishing trips from September 1st through December 31st and are encouraged to record and submit trips from the entire year. Comparisons of NJ's log book data with MRIP data are provided in Figures 3-8. Sample sizes are provided in Table 1. Since all NJ log book data are from individual anglers, they are compared with MRIP data where all fish were caught by an individual (F_BY_P=1) unless otherwise indicated.

Table 1 indicates that NJ's log book program reports approximately 24 times more harvested fish than MRIP, from approximately 29 times more trips than MRIP. In 2016 and 2017, of the 196 fish reported as harvested by MRIP, 5 were bonus fish (~3% of total harvest), whereas of the 4720 fish reported as harvested in our NJ log book program, 621 were bonus fish (~13% of total harvest). It is not surprising that the logbook program contains a higher percentage of bonus fish in the harvest given the requirements of the program (see above). Nevertheless, our December 2019 analysis indicated that removing bonus fish from analyses results in less conservative estimated recreational reductions relative

to when bonus fish remain in the dataset (Table 2 vs Table 3); consequently, a higher percentage of bonus fish in our dataset (relative to, for example, MRIP) should result in conservative estimated reductions.

The percent of harvest by seasons is similar between MRIP and NJ's log books with most harvest occurring in the fall (Figure 3); addition of bonus fish had no observable effect on Figure 3. Harvest to catch ratios are likewise similar (Figure 4); addition of bonus fish brought the NJ logbook harvest ratios a little closer to MRIP harvest ratios (compare tables at bottom of Figure 4). Length frequencies of harvested fish from 2016, 2017, and 2016+2017 combined are provided in Figure 5 and suggest that length frequencies between MRIP and NJ's log books are similar; the differences between the two data sources in 2017 may result from a more complete length frequency in the NJ log book program in that year. The length frequency of NJ logbook bonus sized fish ([24,28]) more closely matches MRIP in 2017 than 2016 (Figure 5). Figure 6 illustrates the fraction of harvest by mode by data source; this figure suggests that the for-hire sector, as characterized by MRIP, accounts for approximately 40% of the harvest, whereas the for-hire sector as characterized by NJ logbooks accounts for approximately 10% of harvest. Those differences notwithstanding, NJ's log book data suggest that length frequencies of harvest from the for-hire and private modes are very similar (Figure 7a); the length frequency of released fish differs somewhat between the two modes (Figure 7b), but the fraction of fish within the slot limit we are proposing (24" to less than 28" or 29") are very similar (option R1: for-hire = 20%, private = 17%; option R2: for-hire = 25%, private = 19%). When comparing the length frequency of harvested fish by mode between MRIP and NJ's log program, the for-hire sector length frequencies are very similar (Figure 7c); length frequencies of the private mode are not too dissimilar (Figure 7d), and it is not known whether differences result from sample size differences (Table 1) or other issues (behavior, availability, etc.). Finally, Figure 8 illustrates the fraction of harvest by area (ocean vs inland) and suggests the two data sources are very similar. Overall, inclusion of bonus fish in these diagnostic figures in some cases made our data more similar to features of MRIP (e.g., Figure 4), in some cases less similar (e.g., 2016 in Figure 5a vs 5b), but in most cases resulted in little change. As we note above, given that MRIP has and will continue to capture bonus fish, we now feel that inclusion of bonus fish in our logbook dataset, combined with our treatment of those fish in determining predicted total recreational reductions (e.g., Figure 2), are the best way to proceed with these data. From our comparisons we concluded that data from the NJ logbook program were robust (large sample sizes) and were sufficiently similar to data from MRIP to conduct analyses using our logbook data. In the future, this data set (and analysis) can be useful in exploring additional recreational options (e.g., harvest of fish outside of a [28",35") slot limit).

Results from this analysis are provided in Table 3 (see also worksheet 'options R1 and R2' in spreadsheet newJersey_revJan2020.xlsx) and show that options R1 and R2 achieve predicted recreational reductions of 29-37%. Since we are proposing a 'commercial' regulation (bonus program option) of [24,28) or [43+ we explored a scenario where all bonus permits were allocated to 43" or greater fish; this results in the greatest possible recreational reductions of the scenarios we explored (Table 3). Given the unknown participation rate in such a program, for purposes of predicted reductions we are assuming that the predicted reduction for this program would be equal to that from allocating all permits to fish in the [24,28) or [24,29) slot, which is the most conservative of our predicted reductions.

Worksheet 'final' in spreadsheet newJersey_revJan2020.xlsx show the reductions necessary for NJ to allocate its entire required reduction (commercial + recreational) to the recreational sector; in addition, the TC required NJ to take an additional reduction for options R1 and R2 to account for the loss in yield per recruit from a sub-28" option, and those calculations are also provided in the same worksheet. In order to achieve the reduction required for our 'commercial' sector to take no reduction for options R1 and R2, we need to implement season closures in Raritan Bay. See worksheets 'seasons and areas - NJ' and 'final' in spreadsheet newJersey_revJan2020.xlsx for details.

Table 1. Sample sizes by data source (2016-2017).

Data source	Disposition	Trips	Fish
MRIP (NJ)	Kept	145	196
NJ SBBP logs	Kept	4,215	4,720
NJ SBBP logs (all fish)	Kept & released	7,946	23,085

Table 2. Results of analyses using data from NJ’s logbook program where bonus fish were removed from dataset (December 2019 results). Total removals in 2016 and 2017 using NJ’s logbook data were 5,752 fish (4,099 fish were harvested).

Option	from min size	to less than	new harvest (# kept)	new releases (# released)	new non-comp harvest	new dead releases	new total removals	reduction	non-compliance rate	non-compliance rate
R1	24"	28"	1,641	20,823	34	1,871	3,546	-38%	NJ	NJ 1.014
R2	24"	29"	2,054	20,410	29	1,834	3,917	-32%	NJ	

Table 3. Results of analyses using data from NJ’s logbook program where bonus fish were retained in the dataset (January 2020 results). Total removals in 2016 and 2017 using NJ’s logbook data were 6,373 fish (4,720 fish were harvested; see worksheet ‘options R1 and R2’ in spreadsheet newJersey_revJan2020.xlsx).

Recreational option	from min size	to less than	Paired with bonus program option:	new harvest (# kept)	new releases (# released)	new non-comp harvest	new dead releases	new total removals	reduction	non-compliance rate
R1	24"	28"	[24,28]	2,262	20,823	34	1,871	4,167	-34.6%	NJ 1.014
	24"	28"	[35+]	2,161	20,924	36	1,880	4,077	-36.0%	
	24"	28"	[43+]	2,093	20,992	37	1,886	4,016	-37.0%	
Recreational option	from min size	to less than	Paired with bonus program option:	new harvest (# kept)	new releases (# released)	new non-comp harvest	new dead releases	new total removals	reduction	non-compliance rate
R2	24"	29"	[24,29]	2,675	20,410	29	1,834	4,538	-28.8%	NJ 1.014
	24"	29"	[35+]	2,550	20,535	30	1,845	4,426	-30.6%	
	24"	29"	[43+]	2,482	20,603	31	1,851	4,365	-31.5%	

Figure 1. Flow chart for trips in which a bonus fish was not harvested in 2016 or 2017.

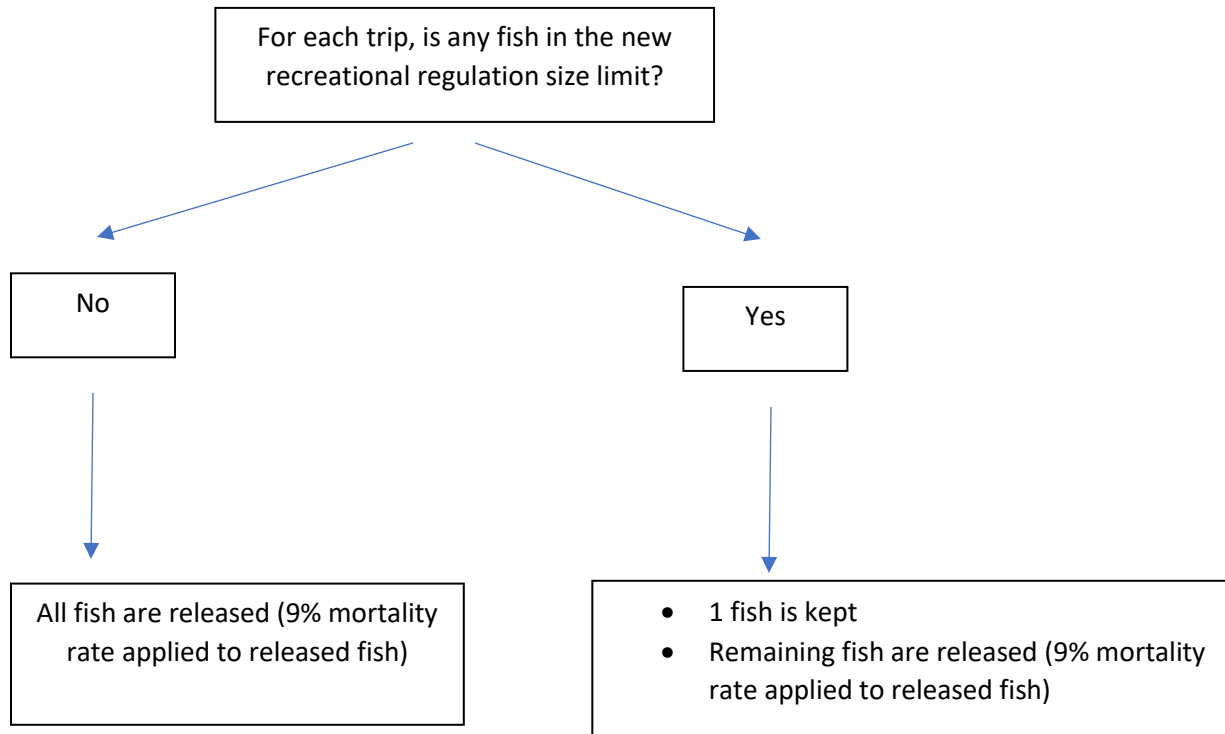


Figure 2. Flow chart for trips in which a bonus fish was harvested in 2016 or 2017.

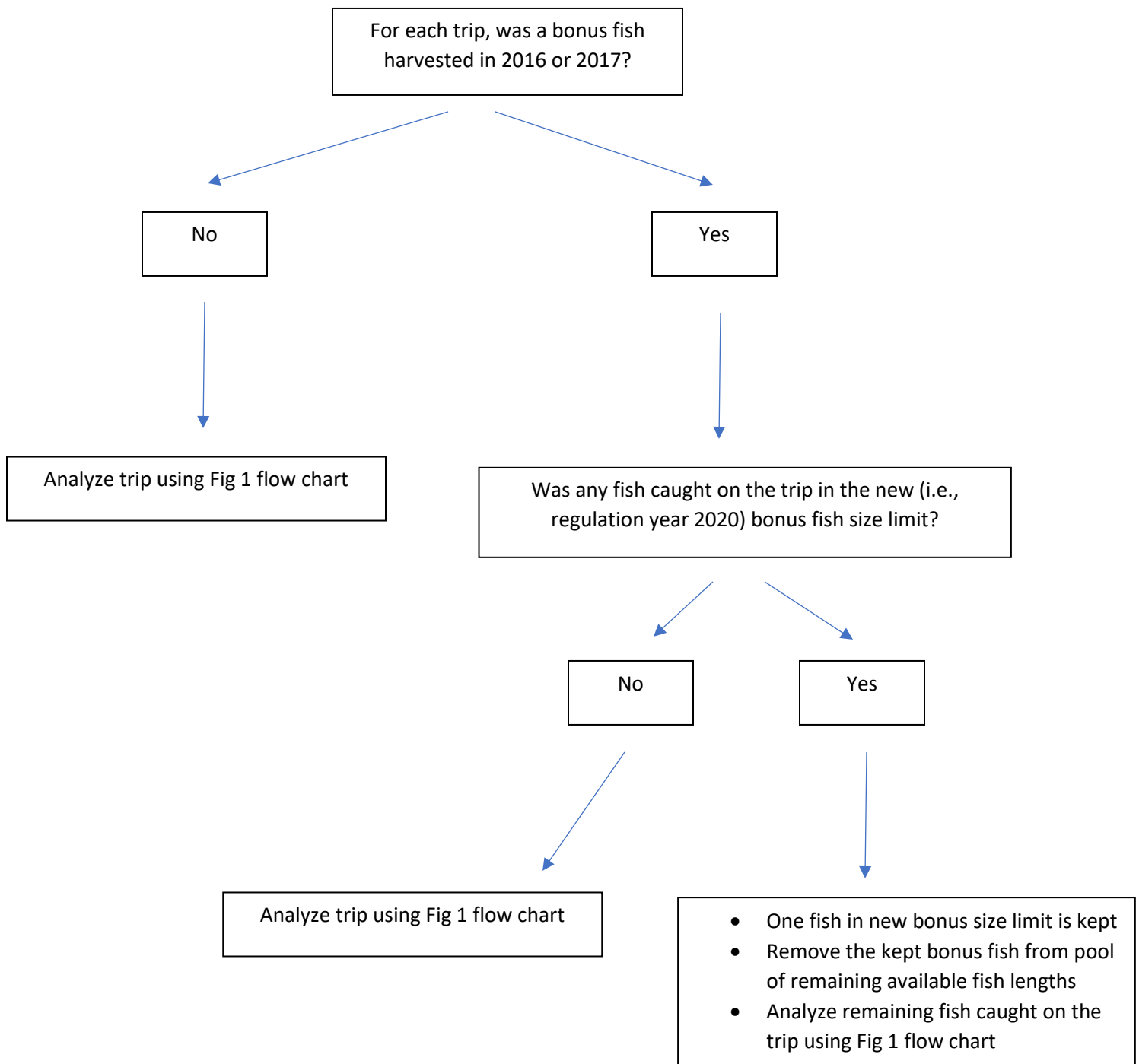


Figure 3. Percent of harvest landed by season.

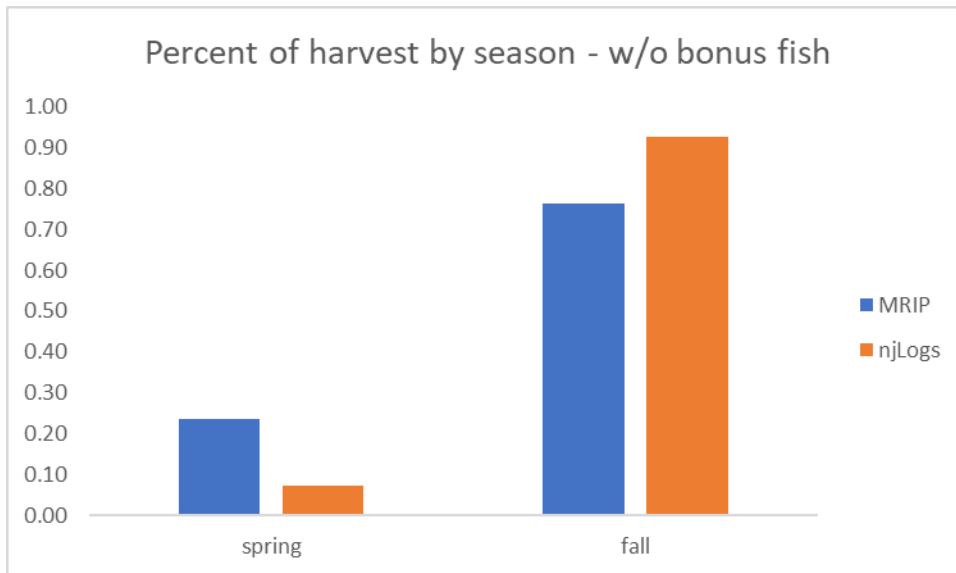
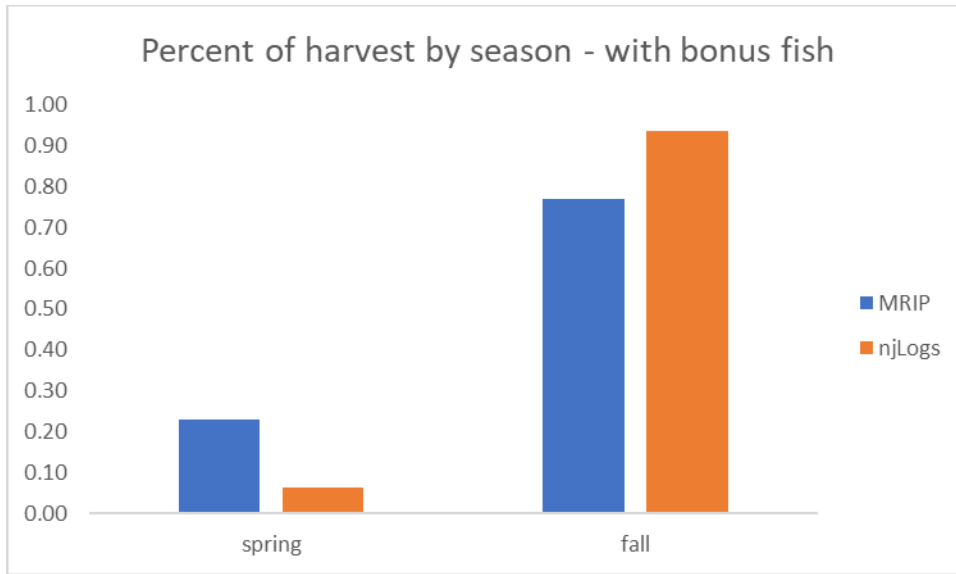
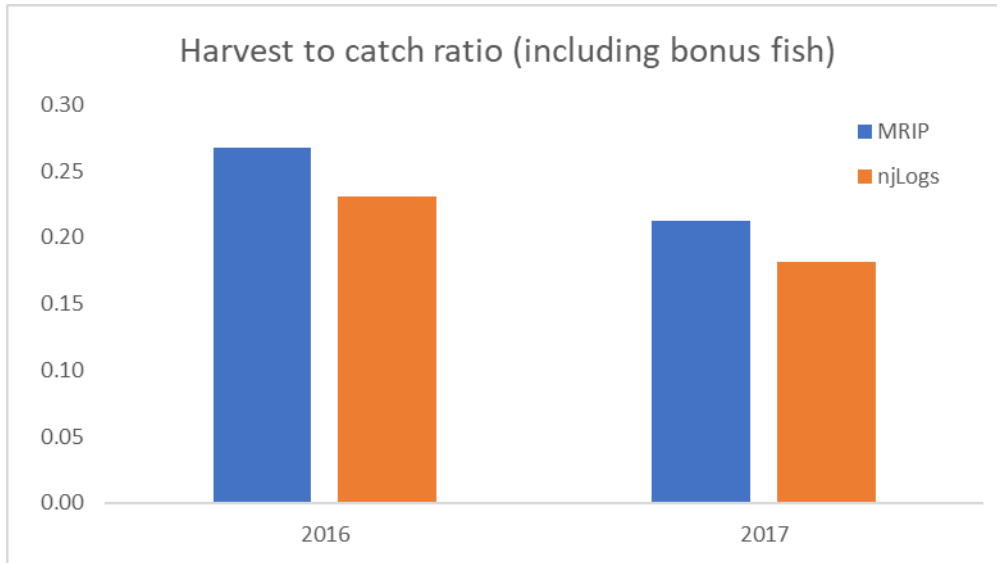


Figure 4. Harvest to catch ratios. Note: to make comparison of catch with njLogs, expanded MRIP estimates of catch were queried from MRIP website (all catch).



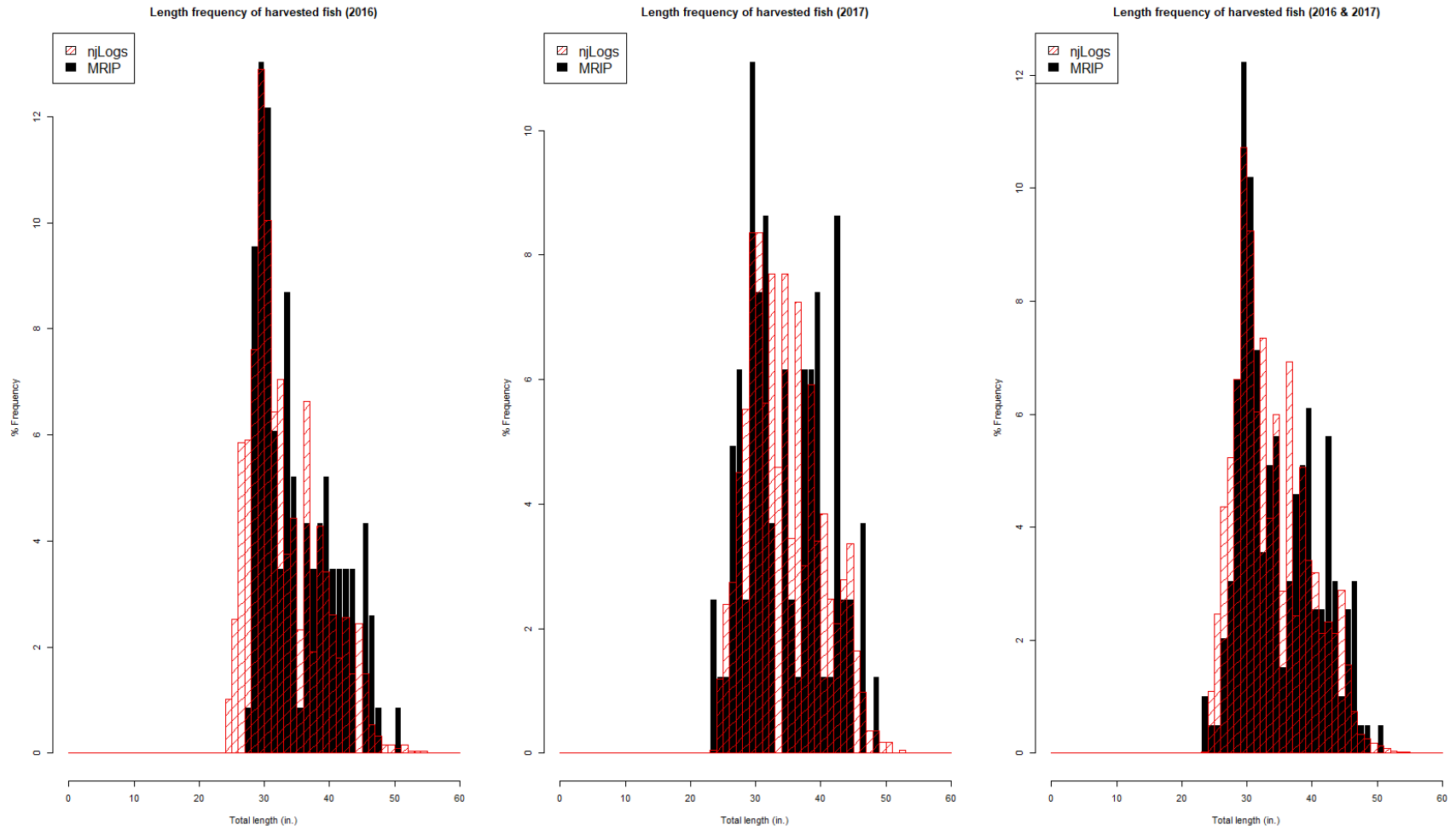
Including bonus fish						
	Total catch		Harvest		Harvest ratio	
	MRIP	njLogs	MRIP	njLogs	MRIP	njLogs
2016	2,467,743	10,639	659,575	2,458	0.27	0.23
2017	2,942,274	12,446	625,909	2,262	0.21	0.18
Combined	5,410,017	23,085	1,285,484	4,720	0.24	0.20

Not including bonus fish:

	Total catch		Harvest		Harvest ratio	
	MRIP	njLogs	MRIP	njLogs	MRIP	njLogs
2016	2,467,743	10,263	659,575	2,082	0.27	0.20
2017	2,942,274	12,201	625,909	2,017	0.21	0.17
Combined	5,410,017	22,464	1,285,484	4,099	0.24	0.18

Figure 5. Length frequency of harvested Striped Bass by data source. A) including bonus fish, B) excluding bonus fish.

A) including bonus fish



B) without bonus fish

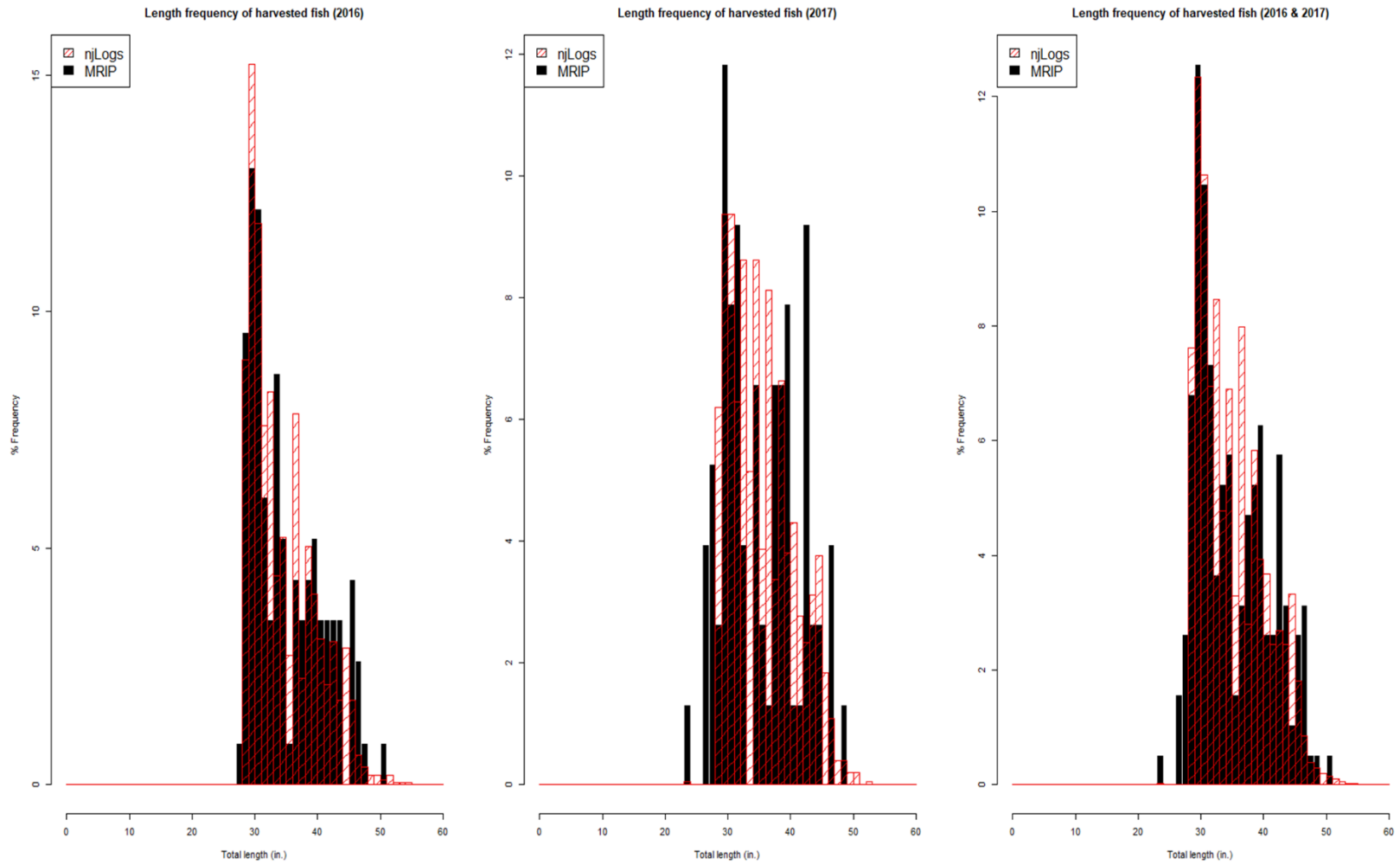
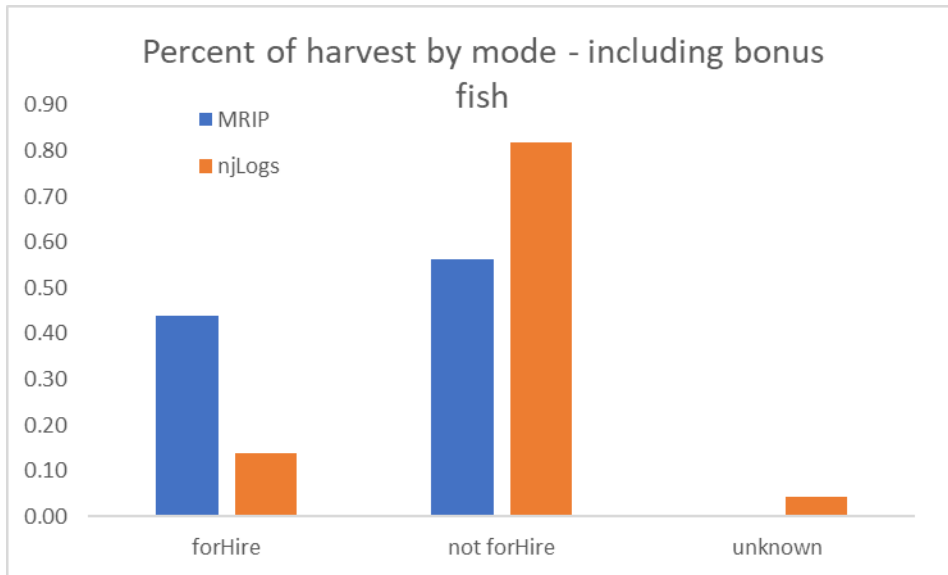


Figure 6. Percent of harvest by mode.



Excluding bonus fish:

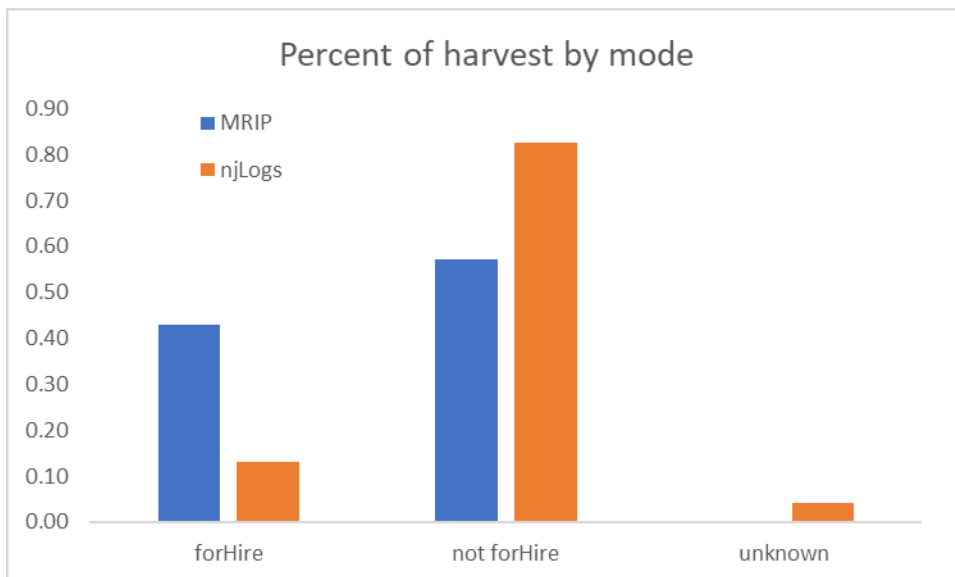
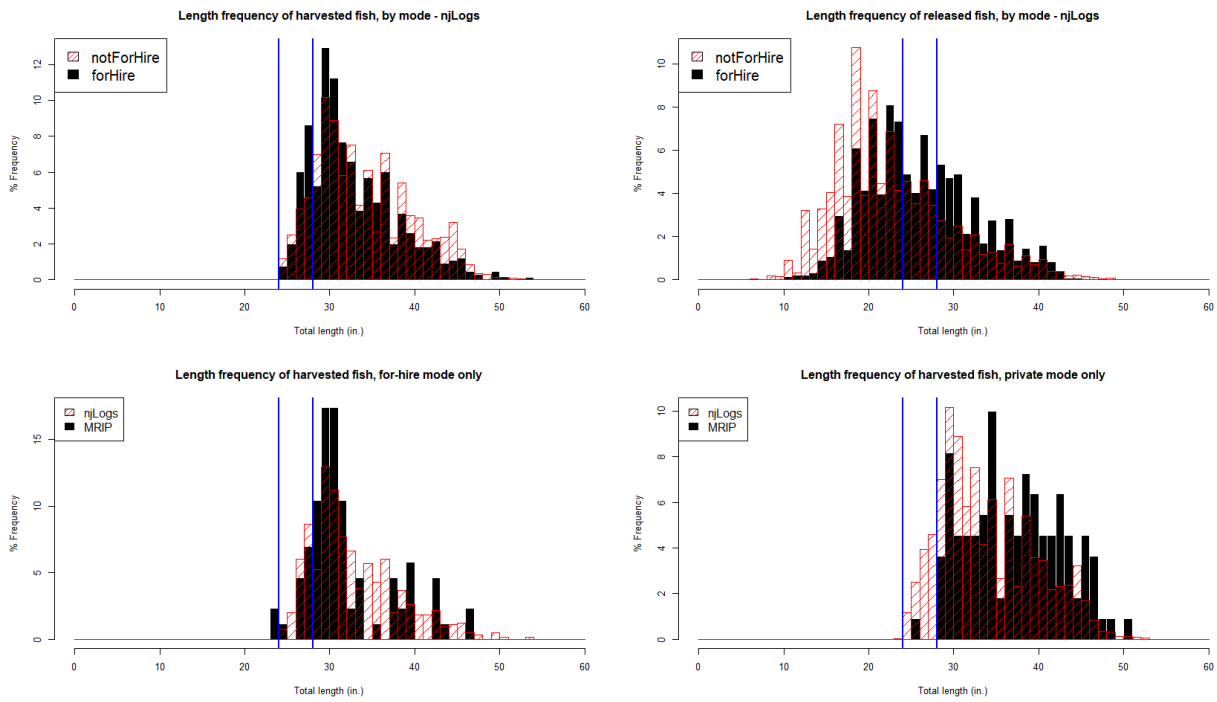


Figure 7. Length frequency of harvested (and released, for NJ's log program) fish by mode from MRIP and NJ's log program. Blue vertical lines are added at 24 and 28 inches. A) including bonus fish; B) without bonus fish.

A) including bonus fish



B) without bonus fish

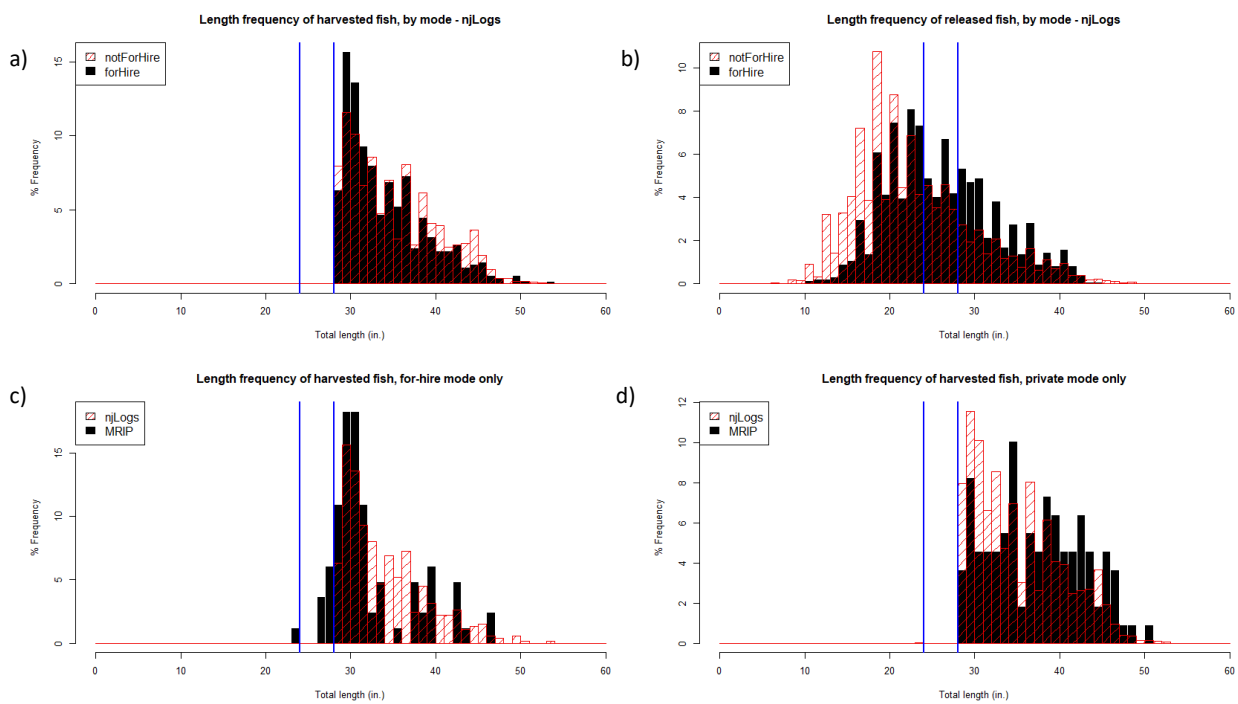
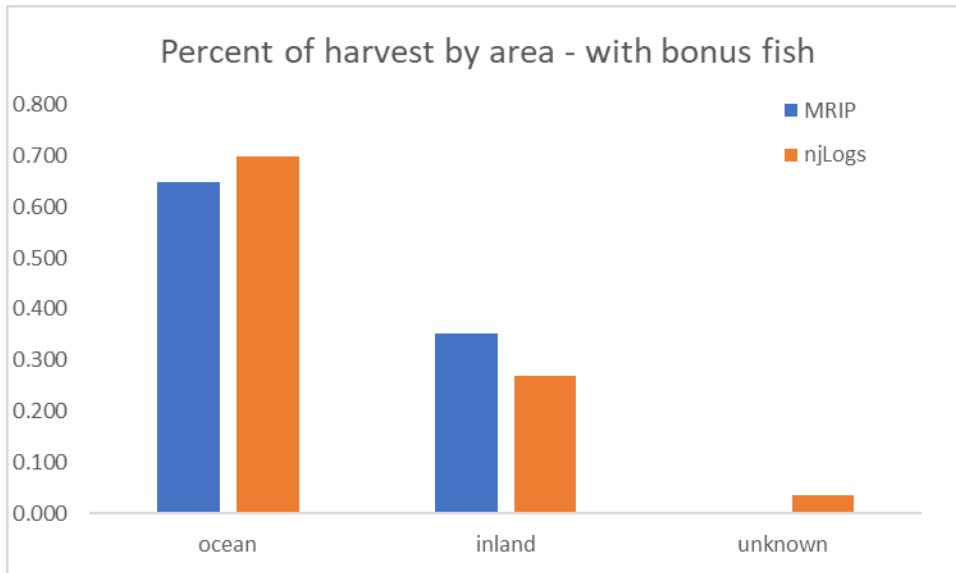
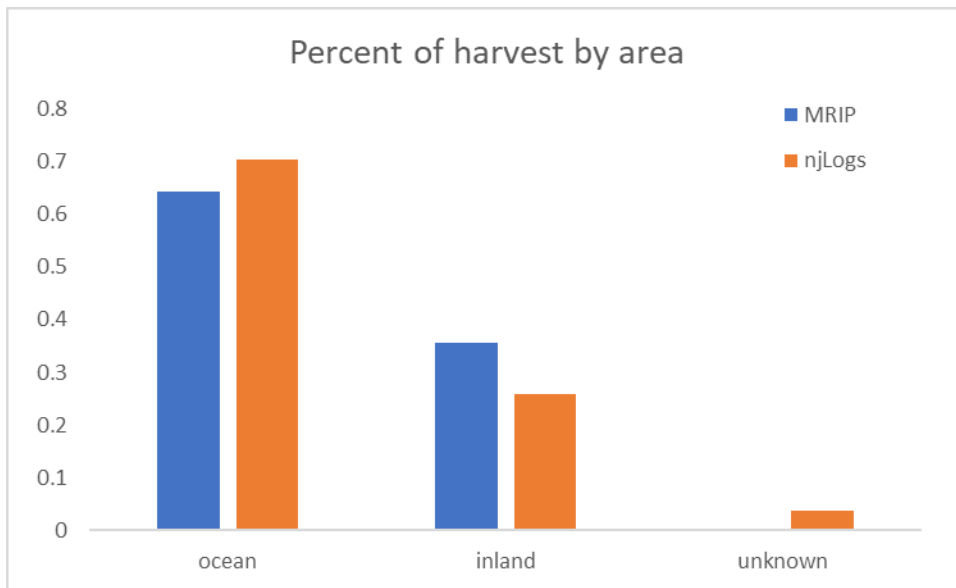


Figure 8. Percent of harvest by area.



Without bonus fish:



Pennsylvania’s Atlantic Striped Bass Addendum VI Implementation Plan

Summary of Proposed Measures

Recreational Fishery

State	Size Limits		Bag Limits	Other	Open Season
Pennsylvania Delaware Estuary <i>PA/DE state line upriver to Calhoun St. Bridge at Morrisville, PA (56 river-miles)</i>	Slot Limit	21” to less than 24”	2	Non-offset circle hooks required when fishing with bait	4/1-5/31
	2-A2	28” to less than 35”	1	Non-offset circle hooks required when fishing with bait	1/1-3/31, 6/1-12/31
Pennsylvania Delaware River (non-tidal) <i>Calhoun St. Bridge upriver (196 river-miles)</i>	2-A2	28” to less than 35”	1	Non-offset circle hooks recommended when fishing with bait*	1/1-12/31

*Non-tidal reach supports a limited Striped Bass fishery.

Commercial Fishery

State	Size Limits	Seasonal Quota	Open Season
Not applicable to Pennsylvania (no commercial fishery)			

Section 1: Coastal Recreational Fishery

1b.) Conservation equivalency proposal (CE)

- Pennsylvania proposes to implement the following slot limit for its CE measure:
 - Slot Limit (21” to less than 24”, 2 fish, 4/1-5/31)
- This proposal meets the data standards established by the Technical Committee (TC) and detailed in the TC memo (M19-084) to the extent practical given that Pennsylvania is not covered by the Marine Recreational Information Program (MRIP).
- The size and season limit analysis used the proportion at length of slot size Striped Bass on the Delaware River spawning grounds determined by the Pennsylvania Fish and Boat Commission’s (PFBC) fishery independent spawning stock electrofishing surveys conducted annually in May (Appendix A). Data used in the analysis were collected during survey years 2015 through 2018.
- Slot Limit
 - Data were pooled from 2015 to 2018 and adjusted using the post release mortality rate of 9%. One-inch increments were then removed from the upper end of current slot limit regulation (21” to less than 25”) until a reduction of at least of 18% was achieved.
 - Removing one inch from the upper end of Pennsylvania’s current slot limit would result in an estimated reduction in harvest of 19.1% (Table 1).
 - Additionally, approximately 32% of fish within the current 21” to less than 25” slot limit are mature females and roughly 21% of those females would be protected from harvest by narrowing the current slot limit to 21” to less than 24”.

Sections 2, 3, and 4 are not applicable to Pennsylvania

Section 5: Circle Hook Requirements

Pennsylvania’s portion of the Delaware River Estuary (PA/DE state line upriver to Calhoun St. Bridge at Morrisville, PA; 56 river-miles), including tidal reaches of numerous tributaries, supports a multi-use urban

fishery where adult Striped Bass are primarily targeted by recreational anglers during the April and May spawning period. During summer, when most adult Striped Bass have migrated to coastal estuaries or the ocean, juvenile Striped Bass are often caught as bycatch from bait use in other recreational fisheries (i.e., catfish species, White Perch). Pennsylvania is committed to protecting Striped Bass; therefore, the non-offset circle hook requirement applied to the use of bait when fishing for Striped Bass should also apply to the use of bait in other referenced fisheries. As such, Pennsylvania will enact a year-round mandatory non-offset circle hook regulation in the tidal portion of the Delaware River Estuary by April 1, 2020, for any species targeted with bait. This approach provides added protection to Striped Bass captured by bait anglers targeting other species.

Upon implementation of the circle hook requirement in 2020, an education and outreach campaign will be initiated by the PFBC. The campaign will utilize a variety of education and outreach techniques and will be disseminated to target audiences through a wide range of marketing campaigns and media outlets.

Section 6: Timeline for Implementation

Pennsylvania will begin the process to change Striped Bass regulations in February 2020 following the winter Atlantic States Marine Fisheries Commission meeting. To enact the new slot limit regulations and non-offset circle hook requirements by April 1, 2020, PFBC's Executive Director will implement a temporary modification to the current regulations under 58 PA Code §65.25. To finalize these changes, they will then require publication in the *Pennsylvania Bulletin* as notices of proposed rulemaking. The publications could occur shortly after the April 2020 quarterly meeting of PFBC's Board of Commissioners. Public comments will be accepted for 30 days after the official publication of the notices, and the Commission will consider the proposal for final rulemaking at either the July or October 2020 quarterly meeting.

Table 1. Length frequency distribution of slot size Striped Bass on the Delaware River spawning grounds as determined by the Pennsylvania Fish and Boat Commission's spawning stock electrofishing survey conducted annually in May. Data were pooled from 2015 to 2018 and adjusted for post release mortality.

TL (in)	<i>N</i>	<i>% of fish</i>	Slot Option 1 % of fish <i>Adjusted for default post release mortality rate (9%)</i>
21	65	23.9	21.7%
22	75	27.6	25.1%
23	75	27.6	25.1%
24	57	21.0	19.1%
Total	272	100.0	91%

Appendix A

PA FISH AND BOAT COMMISSION
COMMENTS AND RECOMMENDATIONS

June 6, 2019

WATER: Delaware Estuary - Sections 02, 03, and 04

EXAMINED: May 8 – June 1, 2018

BY: B. Chikotas, J. Buzzar, and M. Kaufmann

Report Approved: _____ Date: _____

AREA COMMENTS:

As required by the Atlantic States Marine Fisheries Commission (ASMFC), the Pennsylvania Fish and Boat Commission (PFBC) began annual sampling of the Delaware River Striped Bass spawning stock in 1992. This was done in conjunction with sampling efforts by the states of Delaware and New Jersey as part of the overall monitoring of the Striped Bass population recovery along the East Coast. Potential electrofishing index sites were evaluated by the PFBC in 1994 and 1995, with 21 sites established in 1995. In 1997, the Delaware River Basin Fish and Wildlife Cooperative Technical Committee and ASMFC declared the Delaware River Striped Bass stock restored to historical population levels based on high juvenile recruitment, high spawning stock biomass, and low fishing mortality rates. In spring, 2018, 21 electrofishing index sites were sampled to assess the Striped Bass spawning stock that utilize the portion of the Delaware Estuary bordering Pennsylvania and New Jersey, and to tag Striped Bass in conjunction with the coast-wide cooperative tagging program managed by the U.S. Fish and Wildlife Service for exploitation and migration studies conducted by the ASMFC.

A total of 176 Striped Bass were captured from the 21 index sites in 2018. An additional 170 Striped Bass were captured during supplemental sampling conducted to tag additional fish. Mean catch rates from the 21 index sites for total catch, fish ≥ 300 mm total length (TL), and fish ≥ 700 mm TL were 9.3 fish/hr (95% CI=5.1-14.6 fish/hr; n=176), 7.5 fish/hr (95% CI=4.2-11.7 fish/hr; n=140), and 1.4 fish/hr (95% CI=0.7–2.3 fish/hr; n=33), respectively. The corresponding long-term average catch rates for total catch, fish ≥ 300 mm TL, and fish ≥ 700 mm TL were 20.0 fish/hr, 12.4 fish/hr, and 2.2 fish/hr, respectively. Regression analyses did not demonstrate a temporal trend between year and mean catch rate for total catch ($F_{1,21}=0.39$; $p=0.54$). A declining temporal trend was observed for fish ≥ 300 mm TL ($F_{1,21}=5.48$; $p=0.03$) and for fish ≥ 700 mm TL ($F_{1,21}=9.57$; $p=0.005$). Total catch was buffered from the declining trends in other segments of the population by the frequently abundant age-1 and/ or age-2 fish, which did not contribute to the other catch-per-unit-effort indices.

A total of 211 Striped Bass were tagged by the PFBC in 2018. The tagged fish ranged from 404 to 1,090 mm TL and 3 to 13 years of age. Males, females, and fish of unknown sex comprised 47% (n=99), 21% (n=44), and 32% (n=68) of the tagged fish, respectively.

The PFBC tagged a total of 5,295 Striped Bass in the Delaware Estuary since 1995. Sixteen percent (n=845) of the 5,295 Striped Bass were recaptured and 16 fish were recaptured twice. Recreational anglers, including those on charter boats, accounted for 89% (n=754) of the tag returns, while commercial fishermen accounted for only 7% (n=59). Four percent (n=32) of the tag returns were associated with other collections; mainly scientific research. Fifty-one percent of the recaptured fish were released; 48% were harvested; and 1% were accidentally killed, found dead, or were used for scientific research. Recreational and commercial fishermen harvested 47% and 78% of their respective Striped Bass catches.

Throughout the years of tagging, 75.4% of the tagged Striped Bass were recaptured in New Jersey (42.0%), Maryland (18.0%), and Delaware (15.4%), while the remaining 24.6% were recaptured in Pennsylvania (7.6%), Massachusetts (5.3%), New York (3.3%), Virginia (3.0%), Rhode Island (2.7%), North Carolina (0.8%), Connecticut (0.7%), and Maine (0.1%). Recapture location was not reported for 1.1% of the tag returns. There was no measurable increase in the number of tag returns from Pennsylvania since implementation of Pennsylvania's slot limit regulation on the Delaware Estuary in 2009.

AREA RECOMMENDATIONS:

1. Continue to monitor the Striped Bass spawning stock at the 21 index sites extending from Rancocas Creek (RM 109.76) downriver to Raccoon Creek (RM 80.66) in 2019.
2. Continue supplemental tagging efforts as time allows at Trenton Falls, the head-of-tide, to increase the number of Striped Bass tagged in 2019.
3. Continue to assess potential high catch sampling areas for potential replacement of the Upper Navy Yard (STB23) index site that will be lost due to the container ship terminal development project, known as the Southport Project, inland construction of which was underway during the 2018 survey.

This work made possible by funding from the Sport Fish Restoration Act Project F-57-R Fisheries Management

**Pennsylvania Fish and Boat Commission
Bureau of Fisheries
Fisheries Management Division**

Delaware Estuary

Rancocas Creek (RM 109.76) downriver to Raccoon Creek (RM 80.66)

Striped Bass Spawning Stock Survey - 2018

Prepared by
B. Chikotas

Fisheries Management Database Name: Delaware Estuary
Lat/Lon: 39°48'00"/75°25'00"

Survey Period: May 9 – June 1, 2018

Prepared: February 2019

Introduction

As required by the Atlantic States Marine Fisheries Commission (ASMFC), the Pennsylvania Fish and Boat Commission (PFBC) began annual sampling of the Delaware River Striped Bass *Morone saxatilis* spawning stock in 1992. This was done in conjunction with sampling efforts by the states of Delaware and New Jersey as part of the overall monitoring of the Striped Bass population recovery along the East Coast. Potential electrofishing index sites were evaluated by the PFBC in 1994 and 1995, with 21 sites established in 1995. In 1997, the Delaware River Basin Fish and Wildlife Cooperative Technical Committee and ASMFC declared the Delaware River Striped Bass stock restored to historical population levels based on high juvenile recruitment, high spawning stock biomass, and low fishing mortality rates. In spring, 2018, 21 electrofishing index sites were sampled to assess the Striped Bass spawning stock that utilize the portion of the Delaware Estuary bordering Pennsylvania and New Jersey, to tag Striped Bass in conjunction with the coast-wide cooperative tagging program managed by the U.S. Fish and Wildlife Service (USFWS) for exploitation and migration studies conducted by the ASMFC.

Methods

Daytime boat electrofishing was conducted at 21 index sites in the Delaware Estuary between the mouth of Rancocas Creek in Burlington County, New Jersey (RM 109.76) and the mouth of Raccoon Creek in Gloucester County, New Jersey (RM 80.66) to develop an index of Striped Bass spawning stock abundance (Figure 1). In Pennsylvania, this reach approximated the estuary segment between the Philadelphia-Bucks County line and Trainer, Delaware County. Sampling occurred between May 8 and June 1, 2018. Each index site was sampled twice, which represented a return to the original sampling design in which the 21 index sites were sampled twice (1995-2003, 2005, 2007, 2009-2017), and a departure from the sampling design in which each index site was sampled only once (2004, 2006, 2008). This was done to reduce high variability in catch rates when each site was sampled only once (Hosack and Kaufmann 2008).

Since 1995, five of 21 index sites have been permanently replaced for logistical reasons (1 site) or a consistent paucity of Striped Bass (4 sites), defined as the capture of two or less Striped Bass during multiple years. In 1998, the most upriver index site near Neshaminy Creek was relocated 9.7 km (6.0 mi) downriver near Rancocas Creek, which improved the efficiency of the survey and provided similar catches. In 2002, following three years of low catches, the index site along the northwestern side of Chester Island was moved upriver 1.0 km (0.62 mi) to the breakwater between Chester and Monds Islands. In 2003, following five years of low catches, the index site directly downriver from Pennypack Creek was moved upriver 3.0 km (1.86 mi) near Rancocas Creek. In 2007, following six consecutive years of low catches, the index site at Woodbury Creek was moved downriver 5.4 km (3.4 mi) to a large, shallow shoal extending upriver from Little Tinicum Island (RM 87.58). In 2008, a near-by site along an unnamed island off the mouth of the Schuylkill River temporarily replaced the Big Timber Creek index site. This site was equally unproductive as the Big Timber Creek site had usually been since the outset of this survey. No fish were captured along the island and sampling returned to the Big Timber Creek index site. In 2010, following four years of low catches, the most downriver sampling location near the Commodore Barry Bridge was shifted downriver 1.9 km (1.24 mi) to the mouth of Raccoon Creek.

The electrofishing boat was outfitted with a pair of fixed boom electrodes. Each boom supported six dropper-style stainless steel cable anodes suspended in a circular array. The electrical power source was a 5,000-watt Honda generator combined with a Smith-Root model GPP 5.0 electrofishing unit. The electrofishing unit was operated between 6.5 and 7.5 amps of pulsed direct current in water depths ranging from 0.6 to 3.7 m (2 to 12 ft). Generally, the targeted maximum depth was 2.4 m (8 ft.). Electrofishing was conducted by traveling in a sinuous pattern with the direction of tidal current.

The 21 index sites were sampled twice for 1,000 seconds per site as recorded on the electrofishing unit, which represented the time period that electric current passed through the water column. The total effort for the index sites was 11.67 hours. Several supplemental surveys were conducted for tagging purposes. All catch rates were calculated based on the 1,000 second index sites and did not include supplemental surveys conducted for tagging.

Captured Striped Bass were processed and released. The total length (TL) of each fish was measured to the nearest millimeter (mm). Scale samples were taken from mid-way between the lateral line and juncture of the hard and soft dorsal fins for subsequent age and growth analysis. Striped Bass ≥ 400 mm TL and in good condition were tagged with USFWS anchor tags of appropriate size. Fish 400 to 599 mm TL were implanted with small tags (19 mm oval insert), while fish ≥ 600 mm TL were implanted with large tags (29 mm oval insert).

Descriptive age and growth statistics for the Striped Bass spawning population were determined using scales. In preparation for age estimation, scales were cleaned if necessary and pressed on warm acetate slides using an Anne Arbor Rolling Press Model 110. Scale impressions were projected using a Bausch and Lomb microprojector for evaluation. Annuli were determined using the standard criteria described by Lagler (1956). Unaged fish were assigned ages based on 25 mm length groups using an age-length key developed from the 2018 data set. Ages were assigned based on the discrete probability distributions derived from the age-length key for fish that corresponded to 25 mm length groups where multiple ages were collected.

A square root transformation was used to calculate mean catch rates and associated 95% confidence intervals (CI) according to the procedure described by Sokal and Rohlf (1969). Mean catch rates and CI's were back-transformed to a linear scale. Additional details on the statistical procedures used to assess Striped Bass catch rates were presented in Kaufmann and Soldo (1995). Simple linear regression analyses ($\alpha=0.05$) were used to analyze catch rates for temporal trends and for comparisons to the New Jersey Division of Fish and Wildlife's (NJDFW) juvenile Striped Bass index.

Results and Discussion

A total of 176 Striped Bass were captured at the 21 index sites in 2018. An additional 170 Striped Bass were captured during supplemental sampling for tagging purposes. Males, females, and fish of unknown sex comprised 66% ($n=116$), 20% ($n=36$), and 14% ($n=24$) of the total catch from the index sites, respectively. The inability to determine sex was primarily due to the collection of small, immature fish.

Index Sites

Mean catch rates for total catch, fish ≥ 300 mm TL, and fish ≥ 700 mm TL were 9.3 fish/hr (95% CI=5.1–14.6 fish/hr; $n=176$), 7.5 fish/hr (95% CI=4.2–11.7 fish/hr; $n=140$), and 1.4 fish/hr (95% CI=0.7–2.3 fish/hr; $n=33$), respectively (Figure 2). The corresponding long-term average catch rates for total catch, fish ≥ 300 mm TL, and fish ≥ 700 mm TL were 20.0 fish/hr, 12.4 fish/hr, and 2.2 fish/hr, respectively. Regression analyses did not demonstrate a temporal trend between year and mean catch rate for total catch ($F_{1,21}=0.39$; $p=0.54$); however, declining temporal trends were observed for fish ≥ 300 mm TL ($F_{1,21}=5.48$; $p=0.03$) and fish ≥ 700 mm TL ($F_{1,21}=9.57$; $p=0.005$). A declining temporal trend was observed for fish ≥ 300 mm TL ($F_{1,21}=5.48$; $p=0.03$) and for fish ≥ 700 mm TL ($F_{1,21}=9.57$; $p=0.005$). Total catch was buffered from the declining trends in other segments of the population by the frequently abundant age-1 and/or age-2 fish, which did not contribute to the other catch-per-unit effort indices.

Male Striped Bass consistently accounted for most of the catch on the spawning grounds. Males were captured at a mean rate of 4.0 fish/hr (95% CI=1.3–7.8 fish/hr) and accounted for 66% of the total catch in 2018. Males ranged from 210 to 915 mm TL (Figure 3) and 1 to 10 years of age in 2018 (Table 1). The 2014 and 2015 year classes were captured at the highest rates (Tables 1 and 2).

Female Striped Bass were captured at a mean rate of 1.7 fish/hr (95% CI=0.8–3.0 fish/hr) and comprised 20% of the total catch in 2018. Female Striped Bass ranged from 556 to 1,090 mm TL (Figure 3) and 5 to 13 years of age in 2018 (Table 1). The 2010 and 2011 year classes were captured at the highest rates (Tables 1 and 2). Females age-7 and older accounted for 86% ($n=31$) of the females collected in 2018, which represented an increase from their composition (57%) in 2017. Berlinsky et al. (1995) determined that the maturity schedule for female Striped Bass was 12% at age-4, 34% at age-5, 77% at age-6, and 100% at age-7.

There was no relationship ($F_{1,5}=0.32$; $p=0.60$) between the NJDFW's juvenile Striped Bass index and the PFBC's 2018 Striped Bass spawning stock survey (Tables 1 and 3). In the 1990's, the spawning stock survey affirmed the juvenile index with high seine catches of age-0 Striped Bass which corresponded to high catches of adult Striped Bass from the same cohort in subsequent survey years; however, this trend demonstrated little consistency since that time.

Tagging Program

The PFBC tagged 211 Striped Bass in the Delaware Estuary in 2018. The tagged fish ranged from 404 to 1,090 mm TL and 3 to 13 years of age. Males, females, and fish of unknown sex comprised 47% (n=99), 21% (n=44), and 32% (n=68) of the tagged fish, respectively.

A total of 5,295 Striped Bass were tagged by the PFBC since 1995. Of those, 5,181 fish (3,670 males, 1,231 females, and 280 sex unknown) were tagged in the tidal Delaware River; 111 fish (37 males, 61 females, and 13 sex unknown) were tagged in the tidal Schuylkill River; and three females were tagged in the non-tidal Delaware River.

Sixteen percent (n=845) of the 5,295 Striped Bass tagged by the PFBC were recaptured and 16 fish were recaptured twice. Forty-eight percent (n=402) of the recaptured Striped Bass were harvested and 51% (n=430) were released. The disposition of the remaining one percent has varied (*e.g.*, accidentally killed, found dead, or used for scientific research). Recreational anglers, including those on charter boats, accounted for 89% (n=754) of the tag returns and 88% (n=354) of the total harvest. Commercial fishermen accounted for 7% (n=59) of the tag returns and 11% (n=46) of the total harvest. However, underreporting by commercial fishermen is a known problem. Four percent (n=32) of the tag returns were credited to other collections, primarily scientific research (n=23). Recreational anglers and commercial fishermen harvested 47% and 78% of their respective Striped Bass catches.

Males, females, and fish of unknown sex comprised 66% (n=555), 29% (n=242), and 5% (n=48) of the total tag returns, respectively. Tag return rates for male and female Striped Bass were 15% and 20%, respectively. Additionally, 41% of recreational anglers who returned tags from males and 62% who returned tags from females harvested the fish. Recreational and commercial fishermen combined selectively harvested female over male Striped Bass at a ratio of approximately 1.5 to 1.0, which indicates the potential for disproportionate fishing mortality on the female segment of the population. This ratio is likely influenced by the large number of tagged males that are smaller than legal length in many fisheries along the Atlantic Coast, which would prohibit their harvest.

Throughout the years of tagging, 75.4% of the tagged Striped Bass were recaptured in New Jersey (42.0%), Maryland (18.0%), and Delaware (15.4%), while the remaining 24.6% were recaptured in Pennsylvania (7.6%), Massachusetts (5.3%), New York (3.3%), Virginia (3.0%), Rhode Island (2.7%), North Carolina (0.8%), Connecticut (0.7%), and Maine (0.1%). Recapture location was not been reported for 1.1% of the tag returns (Figure 4). There was no measurable increase in the number of tag returns from Pennsylvania since implementation of Pennsylvania's harvestable slot limit regulation on the Delaware Estuary in 2009.

Of the Striped Bass tagged by the PFBC, there were 113 tag returns since 2009 for fish of slot size at the time of recapture. Eighty-eight percent (n=100) of those fish were recaptured outside of Pennsylvania's allowable harvest area and/or outside of Pennsylvania's permitted harvest period for slot size fish (April 1 to May 31). The remaining 13 fish (12%; 8 males, 2 females, and 3 sex unknown) were recaptured by recreational anglers within the allowable harvest area and harvest period in Pennsylvania. Three (23%) of those fish were harvested. For comparison, 31 of the 113 tag returns (27%) were reported catch in the Chesapeake Bay and 26 (84%) were harvested.

To better characterize Pennsylvania's slot fishery for Striped Bass, tag returns to all states participating in the USFWS's coast-wide cooperative tagging program were analyzed. Considering these data, there were 43 tag returns since 2009 for fish that were within the slot limit at the time of recapture and were caught from Pennsylvania's allowable harvest area during the permitted harvest period. Fourteen (33%) of those fish were harvested, suggesting with limited data that the harvest rate during Pennsylvania's slot season is 33% of the captured slot size fish. Males (n=10) and fish of unknown sex (n=3) comprised 71% and 21% of the harvested slot size fish, respectively.

Management Recommendations

1. Continue to monitor the Striped Bass spawning stock at the 21 index sites extending from Rancocas Creek (RM 109.76) downriver to Raccoon Creek (RM 80.66) in 2019.
2. Continue supplemental tagging efforts as time allows at Trenton Falls, the head-of-tide, to increase the number of Striped Bass tagged in 2019.
3. Continue to assess potential high catch sampling areas for potential replacement of the Upper Navy Yard (STB23) index site that will be lost due to the container ship terminal development project, known as the Southport Project, inland construction of which was underway during the 2018 survey.

Literature Cited

- Berlinsky, D.L., M.C. Fabrizo, J.F. O'Brien, and J.L. Specker. 1995. Age-at-maturity estimates for Atlantic coast female Striped Bass. *Transactions of the American Fisheries Society* 124:207-215.
- Hosack, M.H. and M.L. Kaufmann. 2008. Delaware Estuary Striped Bass study report. Pennsylvania Fish and Boat Commission, Bureau of Fisheries. Harrisburg, Pennsylvania.
- Kaufmann, M.L. and J.B. Soldo. 1995. Delaware Estuary Striped Bass study report. Pennsylvania Fish and Boat Commission, Harrisburg, Pennsylvania.
- Lagler, K.F. 1956. *Freshwater fisheries biology*. Second edition. Wm. C. Brown Company, Dubuque, IA.
- Sokal, R.R. and F.J. Rohlf. 1969. *Biometry. The principles and practice of statistics in biological research*. W.H. Freeman and Company, San Francisco, CA. pp. 384-385.

Table 1. Mean catch rates (fish/hr) and associated 95% confidence intervals (CI) for male and female Striped Bass captured at the 21 index sites on the Delaware Estuary between May 8 and 25, 2018. Fish of unknown sex were not included in this table.

Age	Year Class	Mean Catch Rate (fish/hr) and 95% CI		
		Male	Female	Sexes Combined
1	2017	0.05 (0.00 - 0.14)	-	0.05 (0.00 - 0.14)
2	2016	0.28 (0.03 - 0.57)	-	0.28 (0.03 - 0.57)
3	2015	1.56 (0.25 - 3.51)	-	1.56 (0.25 - 3.51)
4	2014	1.13 (0.26 - 2.31)	-	1.13 (0.26 - 2.31)
5	2013	0.51 (0.11 - 1.02)	0.05 (0.00 - 0.14)	0.58 (0.15 - 1.11)
6	2012	0.05 (0.00 - 0.14)	0.17 (0.00 - 0.40)	0.22 (0.00 - 0.49)
7	2011	0.14 (0.00 - 0.32)	0.62 (0.20 - 1.14)	0.79 (0.31 - 1.40)
8	2010	0.14 (0.00 - 0.39)	0.31 (0.03 - 0.64)	0.46 (0.08 - 0.94)
9	2009	-	0.19 (0.00 - 0.41)	0.19 (0.00 - 0.41)
10	2008	0.05 (0.00 - 0.14)	0.09 (0.00 - 0.24)	0.14 (0.00 - 0.32)
11	2007	-	0.19 (0.00 - 0.24)	0.19 (0.00 - 0.24)
12	2006	-	0.09 (0.00 - 0.24)	0.09 (0.00 - 0.24)
13	2005	-	0.05 (0.00 - 0.14)	0.05 (0.00 - 0.14)

Table 2. Age frequency distribution and mean total length (mm) at capture for male and female Striped Bass captured at the 21 index sites on the Delaware Estuary between May 8 and 25, 2018. Fish of unknown sex were not included in this table.

Age	Year Class	No. Fish Collected		Percent	Mean Total Length at Capture (mm)	
		Male	Female		Male	Female
1	2017	1	-	0.7%	210	-
2	2016	6	-	3.9%	238	-
3	2015	56	-	36.8%	340	-
4	2014	32	-	21.1%	414	-
5	2013	12	1	8.6%	455	556
6	2012	1	4	3.3%	508	678
7	2011	3	13	10.5%	679	681
8	2010	4	7	7.2%	701	775
9	2009	-	4	2.6%	-	913
10	2008	1	2	2.0%	915	811
11	2007	-	2	1.3%	-	990
12	2006	-	2	1.3%	-	1,045
13	2005	-	1	0.7%	-	1,080

Table 3. Juvenile index of relative abundance for age-0 Striped Bass captured from the tidal Delaware River by the New Jersey Division of Fish and Wildlife from 1980 to 2018.

Year	No. of Seine Hauls	No. of Age-0 Striped Bass Collected	Arithmetic Mean	Proportion of Postive Hauls	Geometric Mean	SE	Lower 95% CI	Upper 95% CI	RANGE
1980	20	2	0.10	0.100	0.07	0.05	-0.03	0.18	0 - 1
1981	13	0	0.00	0.000	0.00	0.00	0.00	0.00	0 - 0
1982	26	4	0.15	0.115	0.10	0.05	-0.01	0.23	0 - 2
1983	22	2	0.09	0.091	0.07	0.04	-0.02	0.16	0 - 1
1984	29	18	0.62	0.345	0.37	0.10	0.14	0.65	0 - 5
1985	56	5	0.09	0.018	0.03	0.03	-0.03	0.10	0 - 5
1986	46	23	0.50	0.304	0.32	0.07	0.16	0.51	0 - 4
1987	96	150	1.56	0.281	0.53	0.08	0.30	0.78	0 - 32
1988	96	60	0.63	0.292	0.35	0.05	0.21	0.49	0 - 11
1989	96	321	3.34	0.531	1.07	0.09	0.73	1.48	0 - 125
1990	96	218	2.27	0.552	1.05	0.08	0.74	1.41	0 - 43
1991	256	270	1.05	0.301	0.47	0.04	0.35	0.59	0 - 22
1992	258	985	3.82	0.500	1.18	0.06	0.93	1.46	0 - 94
1993	204	1,183	5.80	0.603	1.78	0.08	1.39	2.23	0 - 185
1994	204	473	2.32	0.520	0.96	0.06	0.74	1.19	0 - 35
1995	204	1,552	7.61	0.613	1.98	0.08	1.54	2.50	0 - 211
1996	204	892	4.37	0.583	1.70	0.08	1.34	2.12	0 - 67
1997	205	461	2.25	0.512	1.01	0.06	0.79	1.25	0 - 34
1998	166	582	3.51	0.536	1.31	0.08	1.00	1.67	0 - 108
1999	192	932	4.85	0.630	1.90	0.08	1.51	2.36	0 - 130
2000	192	1,164	6.06	0.573	1.78	0.08	1.36	2.26	0 - 113
2001	192	511	2.66	0.557	1.20	0.06	0.95	1.49	0 - 55
2002	192	249	1.30	0.354	0.53	0.05	0.39	0.69	0 - 27
2003	192	1,670	8.70	0.656	2.47	0.09	1.93	3.11	0 - 277
2004	192	573	2.98	0.443	1.13	0.07	0.86	1.45	0 - 32
2005	190	474	2.49	0.584	1.22	0.06	0.97	1.51	0 - 26
2006	192	246	1.28	0.427	0.67	0.05	0.52	0.84	0 - 16
2007	192	520	2.71	0.630	1.41	0.06	1.14	1.72	0 - 36
2008	160	395	2.47	0.563	1.26	0.07	0.98	1.58	0 - 31
2009	192	1,101	5.73	0.615	1.92	0.08	1.50	2.42	0 - 146
2010	192	487	2.54	0.604	1.30	0.06	1.04	1.59	0 - 28
2011	173	707	4.09	0.526	1.41	0.08	1.08	1.79	0 - 96
2012	192	117	0.61	0.307	0.34	0.04	0.24	0.44	0-17
2013	190	363	1.91	0.510	0.90	0.06	0.70	1.12	0-30
2014	189	667	3.53	0.651	1.65	0.07	1.33	2.02	0-72
2015	192	390	2.03	0.516	0.94	0.06	0.73	1.17	0-25
2016	190	588	3.09	0.568	1.41	0.07	1.12	1.75	0-77
2017	191	451	2.36	0.560	1.18	0.06	0.94	1.45	0-39
2018	190	640	3.37	0.489	1.2	0.07	0.91	1.53	0-58
Long-Term Means (1980-2018):			2.69	-	1.03	0.06	0.78	1.32	-

Source: H. Corbett, New Jersey Division of Fish and Wildlife

1980-1990: Fixed station design with replicate sets; second half of July through first half of November (bi-monthly sampling)

1991-1997: Fixed and random station design with no replicate sets; August through October (bi-monthly sampling)

1998-2015: Fixed station design with no replicates; August through October (bi-monthly sampling)

2012: Sampling impacted by Hurricane Sandy; catches not high before hurricane but decreased substantially afterwards; a few weeks of sampling were lost. CI = Confidence interval SE = Standard error

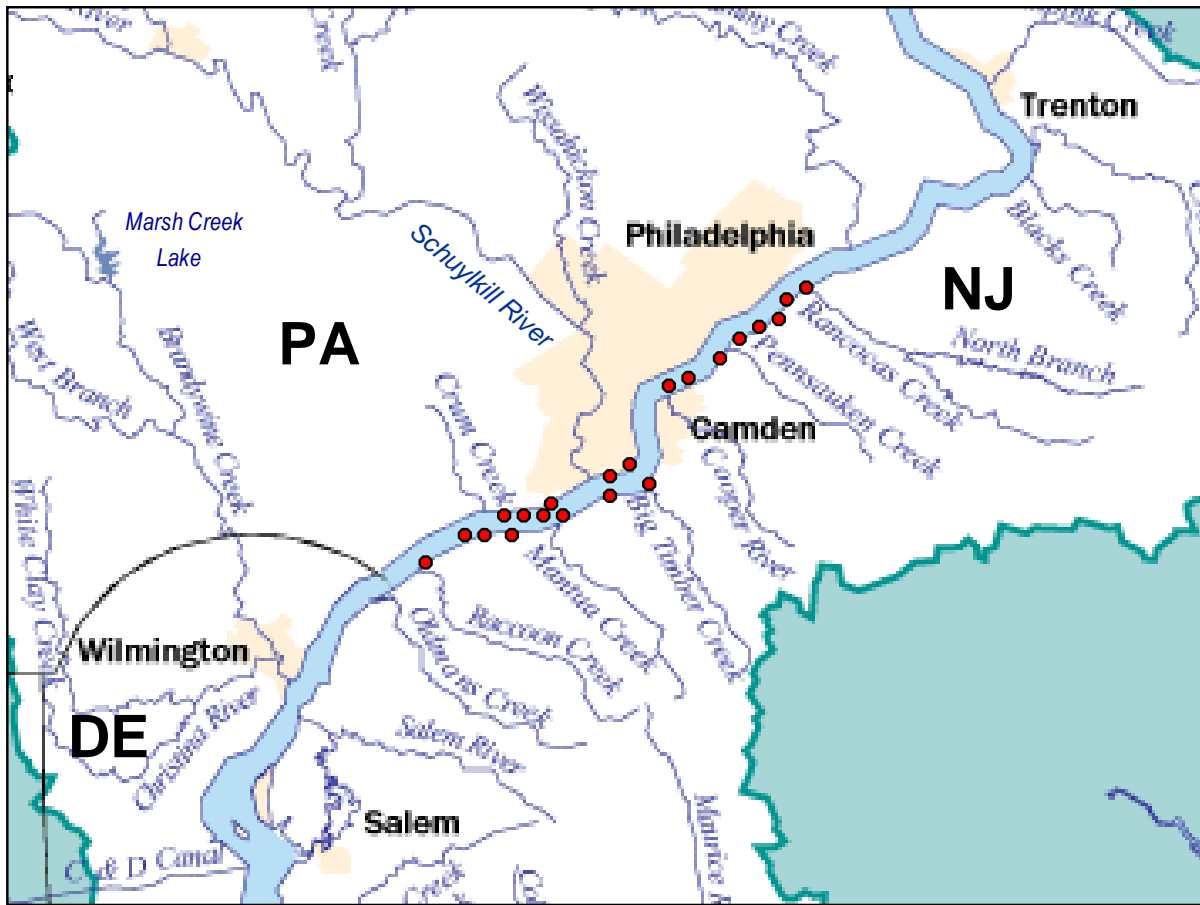


Figure 1. Map of the 21 index sites sampled between Rancocas Creek (RM 109.76) and Raccoon Creek (RM 80.66) on the Delaware Estuary between May 8 and 25, 2018. Base map adapted from the Delaware River Basin Commission.

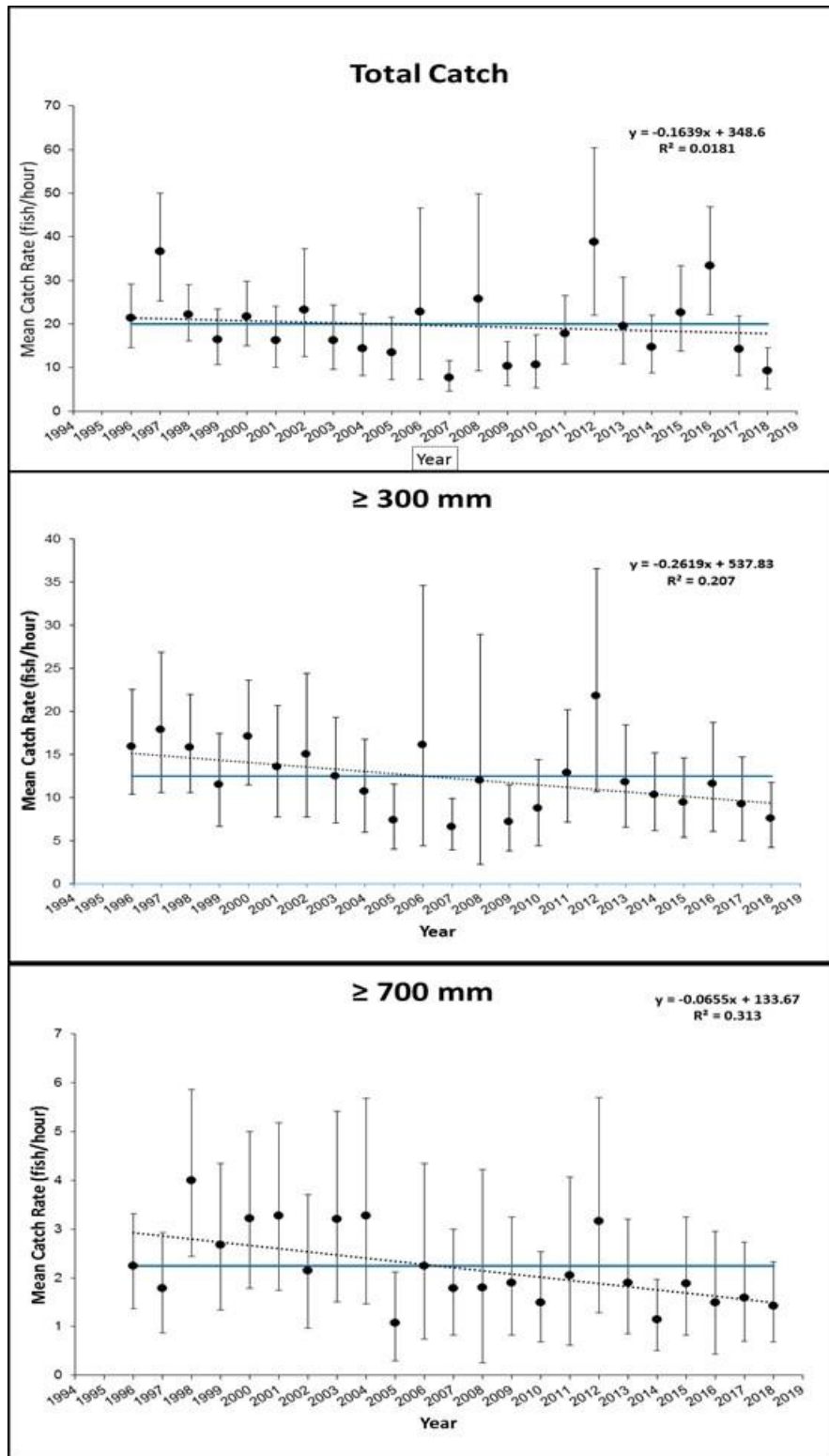


Figure 2. Mean catch rates, 95% confidence intervals, linear trends (dashed line), and long-term means (solid blue line) for Striped Bass captured from the 21 index sites on the Delaware Estuary between 1996 and 2018.

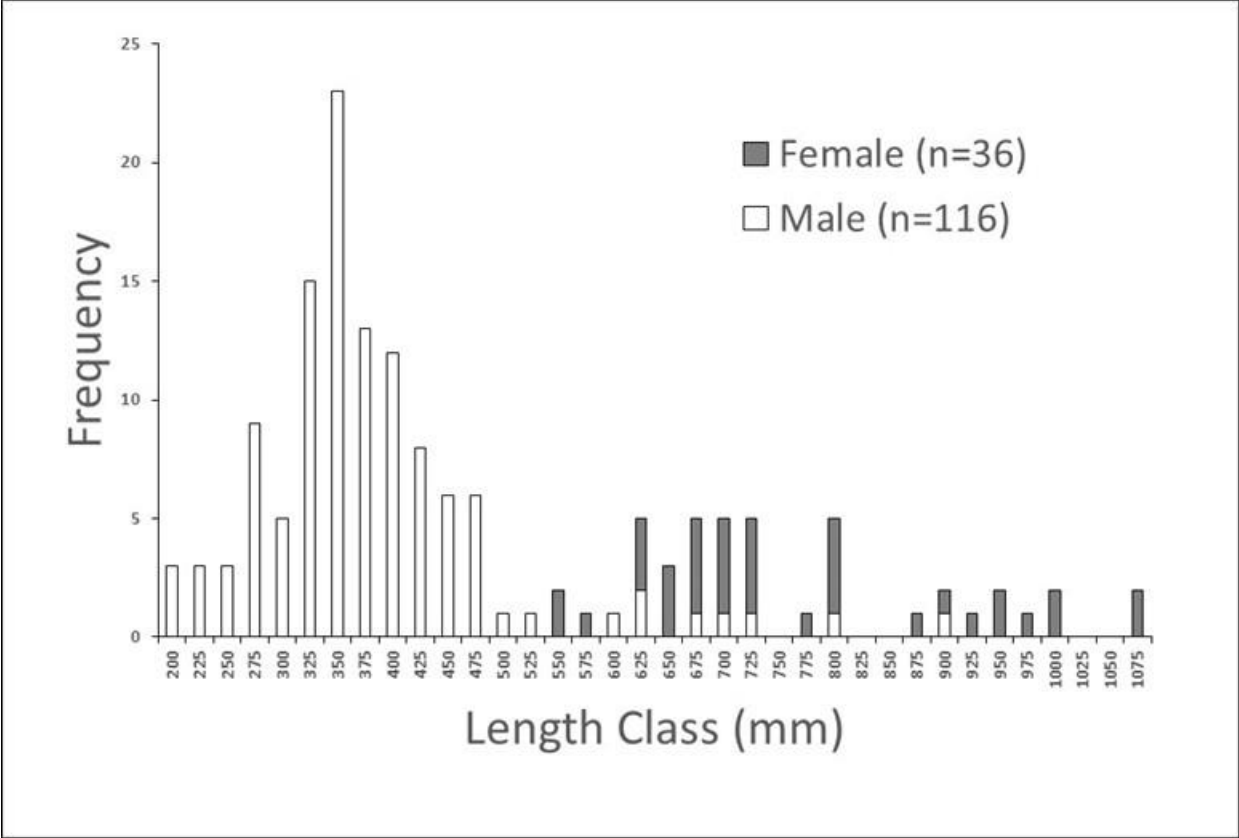


Figure 3. Length-frequency distribution for male (white bars) and female (gray bars) Striped Bass captured from the 21 index sites on the Delaware Estuary between May 8 and 25, 2018.

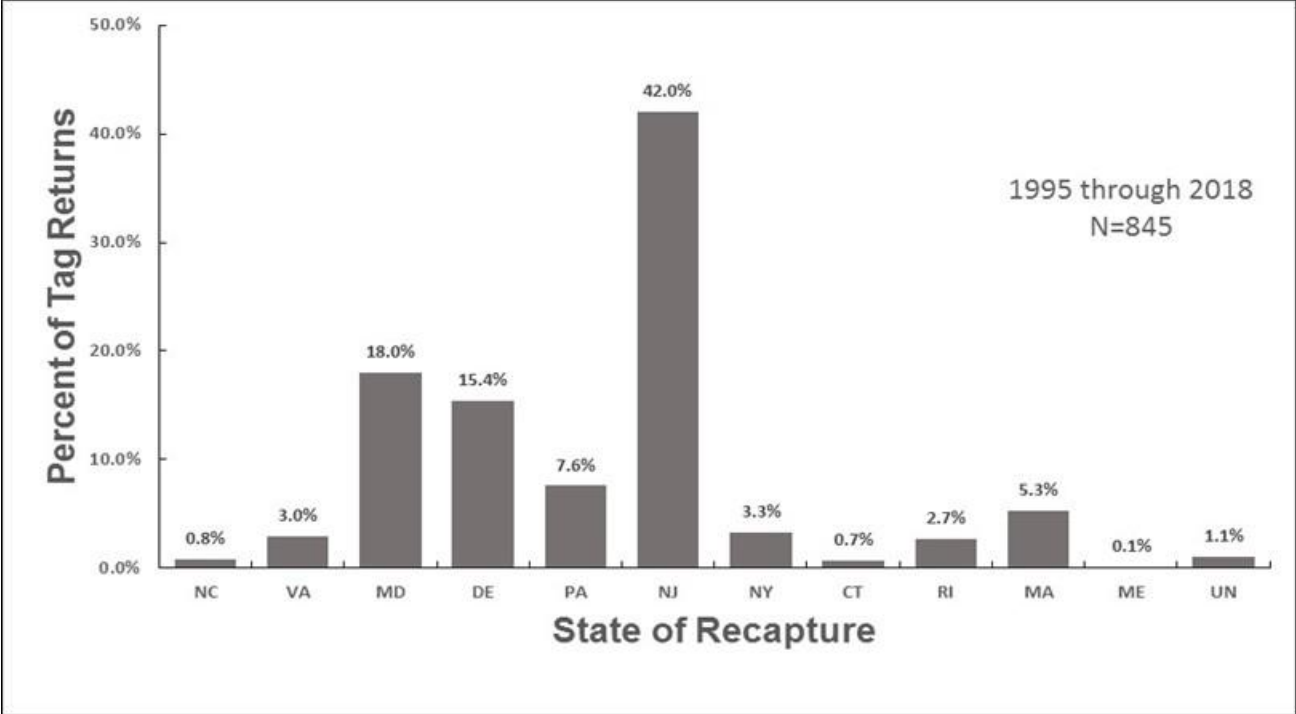


Figure 4. Percentage of tag returns by state of recapture for Striped Bass implanted with U.S. Fish and Wildlife Service anchor tags by the Pennsylvania Fish and Boat Commission during spawning stock surveys on the Delaware Estuary between 1995 and 2018 (UN = unknown recapture location).



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Delaware’s Atlantic Striped Bass Addendum VI Implementation Plan

Summary of Proposed Measures

Recreational Fishery

State	Size Limits	Bag Limits	Other	Open Season
Delaware	28-38” slot	1	Catch & release on spawning grounds Apr. 1 – May 31	Year round.
	Except in Delaware Bay and River and their tidal tributaries, 20-25”	1		July 1 – Aug. 31

Commercial Fishery

State	Size Limits	Seasonal Quota	Open Season
Delaware – Gillnet	28” minimum size, except 20” min in Del. Bay and River during spring season	113,021 lbs.	2.15-5.31 (2.15-3.30 for Nanticoke River) & 11.15-12.31; drift nets only 2.15-2.28 & 5.1-5.31; no fixed nets in Del. River. No trip limit
Delaware – Hook and Line	28” min	5,948 lbs.	4.1-12.31, 200 lbs/day trip limit

Section 1: Coastal Recreational Fishery

Delaware proposes a conservation equivalency (CE) option that achieves at least an 18% reduction from 2017 total recreational removals following the criteria established by the Technical Committee (TC). Delaware’s CE option expands the board-approved slot limit to 28 - 38” TL with a one fish bag limit year round for all state waters, with the exception of Delaware Bay and River, and their tidal tributaries, which will have a 20-25” slot size limit and a one fish bag limit during July 1-Aug. 31. Reducing from a two fish bag to one fish in the Delaware Bay and River will decrease total mortality, but at this time we do not have the data available to quantify the amount of reduction this conservation method will produce.

This option will reduce total removals by at least 18.18%, with additional reductions occurring through the reduced bag limit during the summer season. Also, our proposed Conservation Equivalency option will maintain a spawning area closure from April 1-May 31 to protect spawning adults. The spawning area is further defined in Section 2 and prohibits recreational and commercial harvest in the spawning areas during that time. Further analysis is provided. This proposal meets the data standards established by the TC.

The data sources used in the analysis are the MRIP estimates provided in Greg Wojcik’s spreadsheet, and tag-recapture data collected by Delaware’s Division of Fish & Wildlife to confirm that Delaware River striped bass that remain in river during the summer months comprise a resident population of males.

The MRIP data obtained by Greg Wojcik for Delaware consists of 60 individual length assignments for a total of 33,678 striped bass during 2016 through 2017. Striped bass catches in Delaware only occur in Waves 2, 3, 4, and 6. The only “non-compliant” catch in Delaware waters consists of the 20-25” resident Delaware River male striped bass caught in Wave 4 (July/August) in 2016-2017. Although classified as ‘non-compliant’ in the analysis, these fish were fully compliant as their harvest was allowed based on the Conservation Equivalency proposal approved by the TC and Management Board in 2008.

All calculation followed the methods outlined in Greg Wojcik’s spreadsheet.

Ocean Slot:	28-38”
DE River Summer Slot:	20-25”
New Harvest	17,576
New Non-Comp Harvest	886
New Dead Discards	1,369
Old Dead Removals	42,478
New Removals	62,310
Percent Reduction	18.18%

Based on the included analysis, this proposal achieves an 18.18% reduction in total removals from pooled 2016-2017 for all size-related analysis.

Section 2: Chesapeake Bay Recreational Fishery (MD, VA, PRFC, DC)

NA.

Section 3: Coastal Commercial Fishery

In accordance with the Board’s decision, Delaware will implement an 18% reduction from the Addendum IV commercial quotas, resulting in a commercial quota of 118,970 lbs. with a 20” minimum size for gillnets in Delaware Bay and River during the spring and a 28” minimum size for all other gear and locations.

Seasons:

The spring commercial gillnet fishery will be open from February 15 through May 31. The gillnet

quota will be 113,021 lbs., 95% of the state commercial quota of 118,970 lbs. If less than 98% of the total gillnet quota is landed in the spring season, a fall gillnet season will be held from November 15 through December 31 for the remaining quota. There is no trip limit for the gillnet fishery. The commercial hook and line season will run from April 1 through December 31, with an allocation of 5,949 lbs., 5% of the total quota. A trip limit of 200 lbs/day is in effect for the commercial hook and line fishery. Delaware Bay gillnet restrictions will consist of drift nets only from February 15 – 28 (mesh size greater than 4" stretch) and May 10 – 31.

Spawning Area Closure:

No commercial or recreational harvest will be allowed in April and May on the spawning grounds, which are defined as the Chesapeake and Delaware Canal, the Delaware River north of the Canal, and the Delaware portion of the Nanticoke River.

Individual Transferable Quota (ITQ) and Tagging Requirements:

All licensed gillnetters will be allocated an equal share of the quota in pounds. For example in 2013, the gillnet quota (183,816 lbs.) was divided by the number of licensed gillnetters who applied for quota (111) to establish the ITQ for the spring fishery (1,656 lbs.). The individual quotas are transferable, provided the transfer is made prior to the issuance of the tags. The number of tags required to fill an individual quota was estimated by dividing the total quota by the expected average weight of striped bass to be landed for that gear type and season.

All striped bass in the possession of a commercial fisher are required by regulation to have a state-issued numbered tag locked through the jaw and gill. If a commercial fisher needs additional tags to fill his/her quota, the State will verify the balance of the quota remaining from reports submitted to the State by the weigh stations. All unused tags will be returned to the State with a written report of landings within 30 days of the closure of the spring and fall fishing seasons.

Weigh-Station Reporting:

Commercial fishers are required to bring all landed striped bass to one of the weigh-stations located throughout the state. The weigh-stations record the aggregate weight and apply a second locking tag to each striped bass landed. The weigh-stations maintain written logs of the date landed, number of fish, total daily weight, and also report each fisherman's daily catch through an Interactive Voice Reporting (IVR) system.

Section 4: Chesapeake Bay Commercial Fishery (MD, VA, PRFC)

NA.

Section 5: Circle Hook Requirements

Delaware will revise its current circle hook requirement (7 Delaware Administrative Code 3502) to require the use of circle hooks, as defined in Addendum VI, when recreationally fishing with bait. The regulation will be in effect by January 1, 2021.

Delaware will provide circle hook outreach through press releases, prominent informational sections in the Delaware Fishing Guide (print and online), social media, targeted email, and other efforts.

Section 6: Timeline for Implementation

Delaware will begin the regulatory process to change striped bass regulations in December 2019. In accordance with Delaware's Administrative Procedures Act (APA), a public hearing will be held no sooner than 20 days after publication of the draft regulation in the Register of Regulations to discuss the striped bass regulation changes. Delaware will require a decision from ASMFC on its proposed recreational options before the public hearing. Public input on the recreational fishing options will be taken at the hearing and during the APA-mandated 30 day public comment period. Delaware will use the public comment as part of its decision process in choosing the recreational option to include in the final regulation. The regulation should be in effect before the spring recreational striped bass fishing season begins in April 2020. The circle hook requirement regulation will be in effect by January 1, 2021.

Delaware may need the Department of Natural Resources and Environmental Control Secretary to issue an Emergency Order to put the new commercial striped bass quota in effect for the February 2020 start of the commercial striped bass gillnet season. The Emergency Order would expire when the final regulations go into effect in April 2020.



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Delaware’s Atlantic Striped Bass Addendum VI Implementation Plan

Summary of Proposed Measures

Recreational Fishery

State	Size Limits	Bag Limits	Other	Open Season
Delaware	28-35” slot	1	Catch & release on spawning grounds Apr. 1 – May 31	Year round.
	Except in Delaware Bay and River and their tidal tributaries, 20-25”	1		July 1 – Aug. 31

Commercial Fishery

State	Size Limits	Seasonal Quota	Open Season
Delaware – Gillnet	28” minimum size, except 20” min in Del. Bay and River during spring season	135,350 lbs.	2.15-5.31 (2.15-3.30 for Nanticoke River) & 11.15-12.31; drift nets only 2.15-2.28 & 5.1-5.31; no fixed nets in Del. River. No trip limit
Delaware – Hook and Line	28” min	7,124 lbs.	4.1-12.31, 200 lbs/day trip limit

Section 1: Coastal Recreational Fishery

Delaware proposes a conservation equivalency (CE) option that achieves at least an 18% reduction from 2017 total recreational removals following the criteria established by the Technical Committee (TC). Delaware’s CE option expands board-approved the slot limit to 28 - 35” TL with a one fish bag limit year round for all state waters, with the exception of Delaware Bay and River, and their tidal tributaries, which will have a 20-25” slot size limit and a one fish bag limit during July 1-Aug. 31. Reducing from a two fish bag to one fish in the Delaware Bay and River will decrease total mortality, but at this time we do not have the data available to quantify the amount of reduction this conservation method will produce.

This option will reduce total removals by at least 20.40%, with additional reductions occurring through the reduced bag limit during the summer season. Also, our proposed Conservation Equivalency option will maintain a spawning area closure from April 1-May 31 to protect spawning adults. The spawning area is further defined in Section 2 and prohibits recreational and commercial harvest in the spawning areas during that time. Further analysis is provided. This proposal meets the data standards established by the TC.

The data sources used in the analysis are the MRIP estimates provided in Greg Wojcik’s spreadsheet, and tag-recapture data collected by Delaware’s Division of Fish & Wildlife to confirm that Delaware River striped bass that remain in river during the summer months comprise a resident population of males.

The MRIP data obtained by Greg Wojcik for Delaware consists of 60 individual length assignments for a total of 33,678 striped bass during 2016 through 2017. Striped bass catches in Delaware only occur in Waves 2, 3, 4, and 6. The only “non-compliant” catch in Delaware waters consists of the 20-25” resident Delaware River male striped bass caught in Wave 4 (July/August) in 2016-2017. Although classified as ‘non-compliant’ in the analysis, these fish were fully compliant as their harvest was allowed based on the Conservation Equivalency proposal approved by the TC and Management Board in 2008.

All calculation followed the methods outlined in Greg Wojcik’s spreadsheet.

Ocean Slot:	28-35”
DE River Summer Slot:	20-25”
New Harvest	15,609
New Non-Comp Harvest	994
New Dead Discards	1,537
Old Dead Removals	42,478
New Removals	60,618
Percent Reduction	20.40%

Based on the included analysis, this proposal achieves a 20.40% reduction in total removals from pooled 2016-2017 for all size-related analysis.

Section 2: Chesapeake Bay Recreational Fishery (MD, VA, PRFC, DC)

NA.

Section 3: Coastal Commercial Fishery

Delaware will implement a 1.8% reduction from the Addendum IV commercial quotas, resulting in a commercial quota of 142,473 lbs. with a 20” minimum size for gillnets in Delaware Bay and River during the spring and a 28” minimum size for all other gear and locations. The combination of a 20.40% reduction in recreational mortality with a 1.8% reduction in commercial mortality results in a total reduction of 18.4% from 2017.

Seasons:

The spring commercial gillnet fishery will be open from February 15 through May 31. The gillnet quota will be 135,350 lbs., 95% of the state commercial quota of 142,473 lbs. If less than 98% of the total gillnet quota is landed in the spring season, a fall gillnet season will be held from November 15 through December 31 for the remaining quota. There is no trip limit for the gillnet fishery. The commercial hook and line season will run from April 1 through December 31, with an allocation of 7,124 lbs., 5% of the total quota. A trip limit of 200 lbs/day is in effect for the commercial hook and line fishery. Delaware Bay gillnet restrictions will consist of drift nets only from February 15 – 28 (mesh size greater than 4" stretch) and May 10 – 31.

Spawning Area Closure:

No commercial or recreational harvest will be allowed in April and May on the spawning grounds, which are defined as the Chesapeake and Delaware Canal, the Delaware River north of the Canal, and the Delaware portion of the Nanticoke River.

Individual Transferable Quota (ITQ) and Tagging Requirements:

All licensed gillnetters will be allocated an equal share of the quota in pounds. For example in 2013, the gillnet quota (183,816 lbs.) was divided by the number of licensed gillnetters who applied for quota (111) to establish the ITQ for the spring fishery (1,656 lbs.). The individual quotas are transferable, provided the transfer is made prior to the issuance of the tags. The number of tags required to fill an individual quota was estimated by dividing the total quota by the expected average weight of striped bass to be landed for that gear type and season.

All striped bass in the possession of a commercial fisher are required by regulation to have a state-issued numbered tag locked through the jaw and gill. If a commercial fisher needs additional tags to fill his/her quota, the State will verify the balance of the quota remaining from reports submitted to the State by the weigh stations. All unused tags will be returned to the State with a written report of landings within 30 days of the closure of the spring and fall fishing seasons.

Weigh-Station Reporting:

Commercial fishers are required to bring all landed striped bass to one of the weigh-stations located throughout the state. The weigh-stations record the aggregate weight and apply a second locking tag to each striped bass landed. The weigh-stations maintain written logs of the date landed, number of fish, total daily weight, and also report each fisherman's daily catch through an Interactive Voice Reporting (IVR) system.

Section 4: Chesapeake Bay Commercial Fishery (MD, VA, PRFC)

NA.

Section 5: Circle Hook Requirements

Delaware will revise its current circle hook requirement (7 Delaware Administrative Code 3502) to require the use of circle hooks, as defined in Addendum VI, when recreationally fishing with bait. The regulation will be in effect by January 1, 2021.

Delaware will provide circle hook outreach through press releases, prominent informational sections in the Delaware Fishing Guide (print and online), social media, targeted email, and other efforts.

Section 6: Timeline for Implementation

Delaware will begin the regulatory process to change striped bass regulations in December 2019. In accordance with Delaware's Administrative Procedures Act (APA), a public hearing will be held no sooner than 20 days after publication of the draft regulation in the Register of Regulations to discuss the striped bass regulation changes. Delaware will require a decision from ASMFC on its proposed recreational options before the public hearing. Public input on the recreational fishing options will be taken at the hearing and during the APA-mandated 30 day public comment period. Delaware will use the public comment as part of its decision process in choosing the recreational option to include in the final regulation. The regulation should be in effect before the spring recreational striped bass fishing season begins in April 2020. The circle hook requirement regulation will be in effect by January 1, 2021.

Delaware may need the Department of Natural Resources and Environmental Control Secretary to issue an Emergency Order to put the new commercial striped bass quota in effect for the February 2020 start of the commercial striped bass gillnet season. The Emergency Order would expire when the final regulations go into effect in April 2020.

Maryland’s Atlantic Striped Bass Addendum VI Implementation Plan

Introduction

In October 2019 the Atlantic States Marine Fisheries Commission finalized Addendum VI to the Interstate Fisheries Management Plan for Atlantic Striped Bass. The Addendum is intended to reduce fishing mortality by 18% beginning in the 2020 fishing year in order to address overfishing. As specified in the Addendum, states may submit an implementation plan that demonstrates equivalent conservation benefit to the plan-specified option if the state determines that alternative management actions would result in more effective and equitable management within state waters. The state of Maryland is most concerned with the high discard mortality of striped bass, particularly in Chesapeake Bay in midsummer when water/air temperatures are high and dissolved oxygen levels are depressed. Options presented here are designed to reduce both harvest and discard mortality from the recreational fishery particularly in the summer months. Maryland is also interested in extending protection for large migratory fish as they pass through the Bay to the spawning reaches. Finally, these options account for an unequal/unbalanced application of the reduction to Maryland’s recreational and commercial fisheries. Hence, the proposal considers a 1.8% reduction to Maryland’s commercial sector and a 20.6% reduction in the recreational sector to meet the overall goal of an 18% reduction statewide.

Note that options 2a through 2c use the same calculations but redistribute impacts at different times of year. Because of the short turn-around time for this proposal, Maryland may find it necessary to make minor adjustments to rebalance impacts of the proposed management elements within the year. All calculation methods would remain the same as those presented and the 20.6% reduction goal would be met in all cases.

Summary of Proposed Measures

Recreational Fishery

State	Size Limits	Bag Limits	Other	Open Season
Maryland Atlantic & Coastal Bays Fishery	28-35”	1 fish		All year
Maryland Chesapeake Bay Fishery	Spring Trophy: 35” Summer/Fall: 19” min size, only 1 fish can be >28” (Option 2a)	Spring Trophy: 1 fish Summer/Fall: 2 fish May 16-July 4 1 fish Aug 1-Aug 31 2 fish Sept 1-Dec 6	No targeting March-April; Charter captains cannot keep fish for personal consumption; No targeting during July closure	Spring Trophy: May 1-May 15 Summer/Fall: May 16-July 4, Aug 1-Dec 6 Closed July 5-31
	Spring Trophy: 35” Summer/Fall:	Spring Trophy: 1 fish Summer/Fall: 2 fish May 16-July 4 1 fish Aug 1-Aug 31	Charter captains cannot keep fish for personal consumption; No	Spring Trophy: May 1-May 15 Summer/Fall: May 16-July 4, Aug 1-Nov 30

	19" min size, only 1 fish can be >28" (Option 2b)	2 fish Sept 1-Nov 30	targeting during July closure	Closed July 5-31
	Spring Trophy: 35" Summer/Fall: 19" min size, only 1 fish can be >28" (Option 2c)	Spring Trophy: 1 fish Summer/Fall: 2 fish May 16-July 9 1 fish Aug 1-Sept 30 2 fish Oct 1-Dec 6	No targeting April; Charter captains cannot keep fish for personal consumption; No targeting during July closure	Spring Trophy: May 1-May 15 Summer/Fall: May 16-July 9 Aug 1-Dec 6 Closed July 10-31
	Spring Trophy: 35" Summer/Fall: 19" min size, only 1 fish can be >28" for charters (Option 2d)	Spring Trophy: 1 fish Summer/Fall: 1 fish private/shore 2 fish for-hire sector	No targeting April; Charter captains cannot keep fish for personal consumption; No targeting during August closure	Spring Trophy: May 1-May 15 Summer/Fall: May 16-Aug 15, Sept 1-Dec 10; Closed Aug 16-31 and Dec 11-15

Commercial Fishery

State	Size Limits	Seasonal Quota	Open Season
Maryland Atlantic Commercial Fishery	24" min	89,094	Trawl and Gill Net Jan 1 – May 31, Oct 1 – Dec 31
Maryland Chesapeake Bay Commercial Fishery	18" – 36"	1,445,394 lbs	Drift Gill Net Jan 1 – Feb 29, Dec 1 – Dec 31 Hook & Line, Haul Seine June 1 – Nov 30 Pound Net June 1 – Dec 31

Section 1: Coastal Recreational Fishery

1a.) Maryland intends to implement the ASMFC Board approved coastal management option from Addendum VI - a one fish bag limit and a slot size of 28" minimum size to less than 35" total length for the coastal bays and ocean fishery.

Section 2: Chesapeake Bay Recreational Fishery (Maryland)

2a.) Under this option, Maryland would not allow any targeting (including catch and release) of striped bass in March and April and start the trophy season later (May 1 rather than the 3rd Saturday of April). For the trophy season open May 1-May 15, the minimum size would remain 35". Maryland's resident summer/fall fishery would start on May 16 and run through December 6 with a closure for 27 days in

July and the season ending 9 days earlier in December. The minimum size would remain 19" as it was in 2019 under Maryland's conservation equivalency proposal. During the July closure, no targeting of striped bass would be allowed. While the bag limit would remain 2 fish for the majority of the summer/fall season, it would drop to a 1 fish bag limit for the month of August. As with current regulations, when the bag limit is 2 fish, only one of the two fish is allowed to be greater than 28". Additionally, charter boat captains would no longer be allowed to keep one fish per trip for personal consumption in the summer/fall season.

- Maryland's target reduction for the Chesapeake Bay recreational fishery is 20.6% to account for the commercial sectors taking a 1.8% reduction in quota. The reduction increases from 18% to 20.5% to account for the Chesapeake Bay commercial quota and to 20.6% to account for the Atlantic commercial quota (see sections 3 and 4 for more information on these calculations).
- Maryland's 2015-2018 average inland harvest and releases by wave were used for the calculations due to the calculations mostly involving seasonal closures.
- Calculations were conducted starting at a 19" minimum size which was approved by the Striped Bass Management Board as conservationally equivalent with circle hooks to a 20" minimum size.
- Striped bass are very common in Maryland's Chesapeake Bay and while we expect a no targeting rule to reduce the number of discards, we know that striped bass will continue to be encountered. To estimate the effect of no targeting during wave 2 (March and April), MRIP trip and catch data for 2015-2018 were used. In order to calculate how much releases would be reduced during the closure period, we assumed trips that were only targeting striped bass (e.g. no other species were targeted) would no longer release any striped bass. If striped bass were targeted with a second species, these trips would still release striped bass but at a lower non-targeted rate. Additionally, all striped bass releases from non-targeted trips would still occur as estimated by MRIP. Using this method, we decremented the wave 2 releases by 0.769, the 2015-2018 average estimated reduction in releases. This decreased wave 2 releases from the 2015-2018 average of 375,468 fish to 86,883 fish. Using a 9% discard mortality rate, this reduced dead discards from 33,792 dead fish to 7,819 fish.
 - Maryland currently has no targeting rules in place for spawning reaches in the spring period. COMAR 08.02.15.03 §D defines this as: ". . . during the period March 1 through May 31, a person may not catch, harass, harm, pursue, hunt, shoot, wound, or attempt to catch striped bass or striped bass hybrids in the striped bass spawning rivers and areas listed in §B of this regulation." For March and April, Maryland would extend these regulations to the entire Bay and not just spawning reaches.
- By starting the trophy season on May 1, no harvest is expected in wave 2. This decreases the harvested fish by 84,874 fish, on average.
- Given concerns with the combination of low dissolved oxygen and high water and air temperatures in the summer in Chesapeake Bay, Maryland is proposing to close the season in July for 27 days. By dividing the average wave 4 harvest estimate (330,162 fish) by 62 days (the number of days in wave 4), we estimate each day of closure will reduce harvest by 5,325 fish. A 27 day closure will reduce harvest by 143,780 fish.
- Similar to our proposed measures in wave 2, Maryland would not allow the targeting of striped bass during the July closure. However, we expect that some striped bass releases will still occur.

To estimate how much discards could decrease, we used 2015-2018 MRIP catch and trip data to calculate the average reduction in striped bass releases expected during the closure. Like above, we assumed trips that were only targeting striped bass (e.g. no other species were targeted) would no longer release any striped bass. If striped bass were targeted with a second species, these trips would still release striped bass but at a lower non-targeted rate. Additionally, all striped bass releases from non-targeted trips would still occur as estimated by MRIP. For 2015-2018, releases in wave 4 were estimated to be reduced 59.2%, on average. Assuming this remains constant in 2020, we estimate that each day of closure will reduce the releases by 23,512 fish on average $(2,461,146/62) \times 0.592$. Over 27 days, this will reduce releases by 634,821 fish which will reduce dead discards from 221,503 fish to 164,369 fish.

- Currently, charter boat captains are allowed to keep 1 fish per trip for personal consumption during the summer/fall season, commonly referred to as a “boat fish”. Using 2017 Maryland charter logbook data, and assuming any boat fish are only kept after the paying party has limited out, we calculated how many boat fish were reported as harvested. The 2017 data suggests that 1,538 boat fish were harvested. These fish were removed from the harvest and estimated to contribute 0.08% to the reduction in total removals.
- MRIP data from 2015-2018 were used to calculate the effect of a 1 fish bag limit in August. The bag limit analysis was identical to that used for Addendum IV and the estimate of the reduction of total removals under perfect compliance (25.5%) was used. Given the small sample sizes at the wave level, the estimate of the reduction in total removals for the entire year was used in the calculations. The Wave 4 harvest and release estimates were first divided in half to approximate the total removals only in August. The reduction in total removals was then calculated as the August total removals reduced by 25.5 %. The calculated annual reduction in total removals due to having one fish bag limit in August is estimated to be 3.46%.
- Similar calculations to the wave 4 closure were done using the wave 6 harvest estimate to calculate the effect of a 9 day closure in December. As targeting/catch and release of striped bass would still be allowed, only harvest was adjusted. Maryland’s season was open until December 20 in 2017, or 50 days of wave 6. The 2015-2018 average MRIP harvest was 211,849 fish in wave 6. The average daily harvest rate would be $211,849/50$ which equals 4,237 fish per day. Therefore, the 9 day closure is estimated to save 38,133 fish.
- Combining all of these measures, Maryland estimates that the total removals will be decreased by 20.8%.

2b.) Under this option, Maryland would delay the start of the trophy season to May 1 rather than the 3rd Saturday of April and it would continue to close on May 15. Targeting of striped bass pre-season (recreational catch and release) would still be allowed and the minimum size would remain 35”. Maryland’s resident summer/fall fishery would start on May 16 and run through November 30 with a closure for 27 days in July and the season ending 15 days earlier in December. The minimum size would remain 19” as it was in 2019 under Maryland’s conservation equivalency proposal. During the July closure, no targeting of striped bass would be allowed. While the bag limit would remain 2 fish for the majority of the summer/fall season, it would drop to a 1 fish bag limit for the month of August. As with current regulations, when the bag limit is 2 fish, only one of the two fish is allowed to be greater than 28”. Additionally, charter boat captains would no longer be allowed to keep one fish per trip for personal consumption in the summer/fall season.

- Maryland’s target reduction for the Chesapeake Bay recreational fishery is 20.6% to account for the commercial sectors taking a 1.8% reduction in quota. The reduction increases from 18% to 20.5% to account for the Chesapeake Bay commercial quota and to 20.6% to account for the Atlantic commercial quota (see sections 3 and 4 for more information on these calculations).
- Maryland’s 2015-2018 average inland harvest and releases by wave were used for the calculations due to the calculations mostly involving seasonal closures.
- Calculations were conducted starting at a 19” minimum size which was approved by the Striped Bass Management Board as conservationally equivalent with circle hooks to a 20” minimum size.
- By starting the trophy season on May 1, no harvest is expected in wave 2. This decreases the harvested fish by 84,874 fish, on average.
- Given concerns with the combination of low dissolved oxygen and high water and air temperatures in the summer in Chesapeake Bay, Maryland is proposing to close the season in July for 27 days. By dividing the average wave 4 harvest estimate (330,162 fish) by 62 days (the number of days in wave 4), we estimate each day of closure will reduce harvest by 5,325 fish. A 27 day closure will reduce harvest by 143,780 fish.
- Similar to the option described above, Maryland would not allow the targeting of striped bass during the July closure. However, we expect that striped bass releases will still occur. To estimate how much discards could decrease, we used 2015-2018 MRIP catch and trip data to calculate the average reduction in striped bass releases expected during the closure. Like above, we assumed trips that were only targeting striped bass (e.g. no other species were targeted) would no longer release any striped bass. If striped bass were targeted with a second species, these trips would still release striped bass but at a lower non-targeted rate. Additionally, all striped bass releases from non-targeted trips would still occur as estimated by MRIP. For 2015-2018, releases in wave 4 were estimated to be reduced 59.2%, on average. Assuming this remains constant in 2020, we estimate that each day of closure will reduce the releases by 23,512 fish $(2,461,146/62) \times 0.592$. Over 27 days, this will reduce releases by 634,821 fish on average which, assuming a 9% discard mortality rate, will reduce dead discards from 221,503 fish to 164,369 fish.
 - Maryland currently has no targeting rules in place for spawning reaches in the spring period. COMAR 08.02.15.03 §D defines this as: “. . . during the period March 1 through May 31, a person may not catch, harass, harm, pursue, hunt, shoot, wound, or attempt to catch striped bass or striped bass hybrids in the striped bass spawning rivers and areas listed in §B of this regulation.” Similar regulations would be put in place for the July closure.
- Currently, charter boat captains are allowed to keep 1 fish per trip for personal consumption during the summer/fall season, commonly referred to as a “boat fish”. Using 2017 Maryland charter logbook data, and assuming any boat fish are only kept after the paying party has limited out, we calculated how many boat fish were reported as harvested. The 2017 data suggests that 1,538 boat fish were harvested. These fish were removed from the harvest and estimated to contribute 0.08% to the reduction in total removals.
- MRIP data from 2015-2018 was used to calculate the effect of a 1 fish bag limit in August. The bag limit analysis was identical to that used for Addendum IV and the estimate of the reduction of total removals under perfect compliance (25.5%) was used. Given the small sample sizes at

the wave level, the estimate of the reduction in total removals for the entire year was used in the calculations. The Wave 4 harvest and release estimates were first divided in half to approximate the total removals only in August. The reduction in total removals was then calculated as the August total removals times (1-0.255). The calculated reduction for a one fish bag limit for the month of August is estimated to be 3.46%.

- Similar calculations as above were done using the wave 6 harvest estimate to calculate the effect of a 15 day closure in December. As targeting/catch and release of striped bass would still be allowed, only harvest was adjusted. Maryland's season was open to harvest until December 20 in 2017, or 50 days of wave 6. The 2015-2018 average MRIP harvest was 211,849 fish in wave 6. The average daily harvest rate would be 211,849/50 which equals 4,237 fish per day. Therefore, the 15 day closure is estimated to save 63,555 fish.
- Combining all of these measures, Maryland estimates that the total removals will be decreased by 20.8%.

2c.) Under this option, Maryland would not allow any targeting of striped bass in April and start our trophy season later, opening on May 1 rather than the 3rd Saturday of April and closing on May 15. The minimum size would remain 35". Maryland's resident summer/fall fishery would start on May 16 and run through December 6 with a closure for 22 days in July and the season ending 9 days earlier in December. The minimum size would remain 19" as it was in 2019 under Maryland's conservation equivalency proposal. During the July closure, no targeting of striped bass would be allowed. While the bag limit would remain 2 fish for the majority of the summer/fall season, it would drop to a 1 fish bag limit for the months of August and September. As with current regulations, when the bag limit is 2 fish, only one of the two fish is allowed to be greater than 28". Additionally, charter boat captains would no longer be allowed to keep one fish per trip for personal consumption in the summer/fall season.

- Maryland's target reduction for the Chesapeake Bay recreational fishery is 20.6% to account for the commercial sectors taking a 1.8% reduction in quota. The reduction increases from 18% to 20.5% to account for the Chesapeake Bay commercial quota and to 20.6% to account for the Atlantic commercial quota (see sections 3 and 4 for more information on these calculations).
- Maryland's 2015-2018 average inland harvest and releases by wave were used for the calculations due to the calculations mostly involving seasonal closures.
- Calculations were conducted starting at a 19" minimum size which was approved by the Striped Bass Management Board as conservationally equivalent with circle hooks to a 20" minimum size.
- Striped bass are very common in Maryland's Chesapeake Bay and while we expect a no targeting rule to reduce the number of discards, we expect that striped bass will continue to be encountered. To estimate the effect of no targeting during April, we used MRIP trip and catch data. In order to calculate how much releases would be reduced during the closure period, we assumed trips that were only targeting striped bass (e.g. no other species were targeted) would no longer release any striped bass. If striped bass were targeted with a second species, these trips would still release striped bass but at a lower non-targeted rate. Additionally, all striped bass releases from non-targeted trips would still occur as estimated by MRIP. Using this method, we decremented the wave 2 releases by 0.769, the 2015-2018 average estimated reduction in releases. This decreased average wave 2 releases from 375,468 fish to 231,176 fish. Using a 9% discard mortality rate, this reduced dead discards from 33,792 dead fish to 20,806 fish.

- Maryland currently has no targeting rules in place for spawning reaches in the spring period. COMAR 08.02.15.03 §D defines this as: “. . . during the period March 1 through May 31, a person may not catch, harass, harm, pursue, hunt, shoot, wound, or attempt to catch striped bass or striped bass hybrids in the striped bass spawning rivers and areas listed in §B of this regulation.” For the month of April, Maryland would extend these no targeting regulations to the entire Bay and not just spawning reaches.
- By starting the trophy season on May 1, no harvest is expected in wave 2. This decreases the harvested fish by 84,874 fish on average.
- Given concerns with the combination of low dissolved oxygen and high water and air temperatures in the summer in Chesapeake Bay, Maryland is proposing to close the season in July for 22 days. By dividing the average wave 4 harvest estimate (330,162 fish) by 62 days (the number of days in wave 4), we estimate each day of closure will reduce harvest by 5,325 fish. A 22 day closure will reduce harvest by 117,154 fish on average.
- Similar to our proposed measures in wave 2, Maryland would not allow the targeting of striped bass during the July closure. However, we expect that striped bass releases will still occur. To estimate how much discards could decrease, we used 2015-2018 MRIP catch and trip data to calculate the average reduction in striped bass releases expected during the closure. Like above, we assumed trips that were only targeting striped bass (e.g. no other species were targeted) would no longer release any striped bass. If striped bass were targeted with a second species, these trips would still release striped bass but at a lower non-targeted rate. Additionally, all striped bass releases from non-targeted trips would still occur as estimated by MRIP. For 2015-2018, releases in wave 4 were estimated to be reduced 59.2%, on average. Assuming this remains constant in 2020, we estimate that each day of closure will reduce the releases by 23,512 fish $(2,461,146/62) \times 0.592$. Over 22 days, this will reduce releases by 517,261 fish which will reduce average dead discards from 221,503 fish to 174,950 fish.
- Currently, charter boat captains are allowed to keep 1 fish per trip for personal consumption during the summer/fall season, commonly referred to as a “boat fish”. Using 2017 Maryland charter logbook data, and assuming any boat fish are only kept after the paying party has limited out, we calculated how many boat fish were reported as harvested. The 2017 data suggest that 1,538 boat fish were harvested. These fish were removed from the harvest and estimated to contribute 0.08% to the reduction in total removals.
- MRIP data from 2015-2018 was used to calculate the effect of a 1 fish bag limit in August and September. The bag limit analysis was identical to that used for Addendum IV and the estimate of the reduction of total removals under perfect compliance (25.5%) was used. Given the small sample sizes at the wave level, the estimate for the entire year was used in the calculations. The wave 4 and wave 5 harvest and release estimates were first divided in half to approximate the total removals for only August and September, respectively. The reduction in total removals was then calculated as the August total removals (or September total removals) times $(1-0.255)$. The calculated reduction is 5.85%.
- Similar calculations were done using the wave 6 harvest estimate to calculate the effect of a 9 day closure in December. As targeting/catch and release of striped bass would still be allowed, only harvest was adjusted. Maryland’s season was open until December 20 in 2017, or 50 days of wave 6. The 2015-2018 average MRIP harvest was 211,849 fish in wave 6. Divided by 50, this

means a harvest closure would save, on average, 4,237 fish per day. Therefore, the 9 day closure is estimated to save 38,133 fish.

- Combining all of these measures, Maryland estimates that the total removals will be decreased by 20.7%.

2d.) Under this option, the Chesapeake Bay regulations for the spring trophy fishery would remain the same with a one fish bag limit and a 35" minimum size. However, the season would open on May 1 (rather than the 3rd Saturday of April) and continue through May 15. Additionally, the targeted catch and release of striped bass in April would be prohibited. Starting on May 16 and continuing through December 10, the private and shore sectors of the recreational fishery would have a one fish bag limit and a 19" minimum size. As part of a bonus program for Chesapeake Bay charter boats, the for-hire sector would be allowed to keep 2 fish per person per day, also with a 19" minimum size, as long as they participate in the Department's new electronic reporting system which requires a hail and includes harvest verification. As with current regulations, when the bag limit is 2 fish, only one of the two fish is allowed to be greater than 28". Additionally, the season will be closed 16 days in wave 4 (August 16-31) and shortened 5 days in December (closing December 10 rather than December 15) for both sectors. No targeting of striped bass would be allowed during the August closure.

- Maryland's target reduction for the Chesapeake Bay recreational fishery is 20.6% to account for the commercial sectors taking a 1.8% reduction in quota. The reduction increases from 18% to 20.5% to account for the Chesapeake Bay commercial quota and to 20.6% to account for the Atlantic commercial quota (see sections 3 and 4 of the original Maryland implementation plan for more information on these calculations).
- Maryland's 2015-2018 average inland harvest and releases by wave were used for the calculations due to the calculations involving seasonal closures.
- Calculations were conducted starting at a 19" minimum size which was approved by the Striped Bass Management Board as conservationally equivalent with circle hooks to a 20" minimum size.
- Striped bass are very common in Maryland's Chesapeake Bay and while we expect a no targeting rule to reduce the number of discards, we expect that striped bass will continue to be encountered. To estimate the effect of no targeting during April, we used 2015-2018 MRIP trip and catch data. In order to calculate how much releases would be reduced during the closure period, we assumed trips that were only targeting striped bass (e.g. no other species were targeted) would no longer release any striped bass. If striped bass were targeted with a second species, these trips would still release striped bass but at a lower non-targeted rate. Additionally, all striped bass releases from non-targeted trips would still occur as estimated by MRIP. Using this method, we decremented the wave 2 releases by 0.769, the 2015-2018 average estimated reduction in releases. Fish saved from not allowing striped bass to be targeted in April were calculated as the number of fish no longer released in April multiplied by the 9% discard mortality rate. This resulted in 12,986 fewer dead releases. Additionally, by starting the trophy season on May 1, no harvest is expected in wave 2. This decreases the harvested fish by 84,874 fish, based on the 2015-2018 average harvest. These two actions are estimated to reduce removals by 4.8%.
 - Maryland currently has no targeting rules in place for spawning reaches in the spring period. COMAR 08.02.15.03 §D defines this as: "... during the period March 1 through

May 31, a person may not catch, harass, harm, pursue, hunt, shoot, wound, or attempt to catch striped bass or striped bass hybrids in the striped bass spawning rivers and areas listed in §B of this regulation.” For the month of April, Maryland would extend these regulations to the entire Bay and not just spawning reaches.

- Bag limit reductions were calculated by sector using the 2015-2018 MRIP intercept data and the same methodology as Addendum IV. Sector specific bag limit analyses were used as it seems reasonable to expect anglers on charter boat and head boat trips to limit out more frequently than anglers on private boat or shore based trips due to the experience of the captain. The four year average estimate of the private harvest reduction under perfect compliance (23.01%) was used to adjust the private sector harvest only. By applying the 1 fish bag limit to just the private and shore modes, we assume that all charter boats would operate as they usually have under the current 2 fish bag limit. Additionally, discards are assumed to remain at the same level. This is estimated to reduce total removals by 10.0%.
 - Note: In order for for-hire anglers to keep two fish under the charter bonus program that Maryland intends to develop, Maryland will require for-hire vessel participation in our new state of the art electronic reporting system which includes daily reporting and a hailing component. While this program will be open to all Chesapeake Bay for-hire vessels, it is possible that not all will enroll. Vessels not participating in the bonus program would still be under the 1 fish bag limit that is applied to the private and shore modes. Because we are assuming in these calculations that all for-hire vessels would operate as they have previously under a 2 fish bag limit, this calculation may underestimate the reduction achieved if some portion of the for-hire vessels do not choose to enroll in the bonus fish program and are limited to 1 fish/person.
- Given concerns with the combination of low dissolved oxygen and high water and air temperatures in the summer in Chesapeake Bay, Maryland is proposing a partial closure of wave 4 (16 days of August). This closure would apply to both the private and for-hire sectors. Calculations were done using the wave 4 harvest and release estimates following the application of the 1 fish bag limit to the private sector in order to not double count savings. By dividing the new average wave 4 harvest estimate (264,422 fish) by 62 days (the number of days in wave 4), we estimate each day of closure will reduce harvest by 4,265 fish. A 16 day closure is estimated to reduce harvest by 68,238 fish.
- Similar to our proposed measures in wave 2, Maryland would not allow the targeting of striped bass during the August closure. However, we expect that some striped bass releases will still occur. To estimate how much discards could decrease, we used 2015-2018 MRIP catch and trip data to calculate the average reduction in striped bass releases expected during the closure. Like above, we assumed trips that were only targeting striped bass (e.g. no other species were targeted) would no longer release any striped bass. If striped bass were targeted with a second species, these trips would still release striped bass but at a lower non-targeted rate. Additionally, all striped bass releases from non-targeted trips would still occur as estimated by MRIP. For 2015-2018, releases in wave 4 were estimated to be reduced 59.2%, on average. Assuming this remains constant in 2020, we estimate that each day of closure will reduce the releases by 23,512 fish on average $(2,461,146/62) \times 0.592$. Over 16 days, this will reduce releases by 376,190 fish which will reduce dead discards by 33,857 fish.

- Currently, charter boat captains are allowed to keep 1 fish per trip for personal consumption during the summer/fall season, commonly referred to as a “boat fish”. Using 2017 Maryland charter logbook data, and assuming any boat fish are only kept after the paying party has limited out, we calculated how many boat fish were reported as harvested. The 2017 data suggests that 1,538 boat fish were harvested. These fish were removed from the harvest and estimated to contribute 0.08% to the reduction in total removals.
- Similar calculations to the wave 4 closure were done using the wave 6 harvest estimate to calculate the effect of a 5 day closure in December. As targeting/catch and release of striped bass would still be allowed, only harvest was adjusted. Maryland’s season was open until December 20 during 2015-2017 and until December 15 in 2018. This means that during the 2015-2018 period, wave 6 was open to harvest an average of 48.8 days. The 2015-2018 average MRIP harvest, following the application of a 1 fish bag limit to the private sector, was 165,369 fish in wave 6. The average daily harvest rate would be 165,369/48.8 which equals 3,392 fish per day. Therefore, the 5 day closure is estimated to save 16,961 fish.
- Combining all of these measures, the overall reduction in total removals is estimated to be 20.8%.

Section 3: Coastal Commercial Fishery

3a.) Maryland intends to reduce the commercial coastal fishery quota by 1.8% and the remainder of the required reductions will be taken by the Chesapeake Bay recreational sector. See the “Convert Comm Lbs to #s 16 & 17” and “2017 MRIP & % Redux Rec Takes” tabs in the accompanying Excel file for the calculations.

- The average weight of commercially harvested fish in 2016 and 2017 (weighted by number) was used in order to convert the difference in pounds to numbers of fish. Commercially harvested fish were sampled at striped bass check stations. In 2016 and 2017, a total of 205 fish were measured and weighed. Using the annual compliance report spreadsheets, the 2016-2017 N weighted average weight was 24.83 pounds.
- Given the difference between the 18% quota (74,396 pounds) and the 1.8% reduced quota (89,094 pound), the recreational sector will have to make up for 14,698 pounds which is equivalent to 592 fish (14,698/24.83).
- An 18% reduction from Maryland’s 2017 recreational total removals (1,792,579 fish) results in a reduction of 322,664 fish from the recreational sector. Adding 592 more fish to this number means that Maryland’s recreational fishery will have to reduce total removals by 323,256 fish, an overall reduction of 18.03%.

Maryland’s 2020 coastal commercial quota will be 89,094 pounds, 1.8% less than the Addendum IV quota. Maryland’s coastal commercial size limit will remain the same with a minimum size of 24”. The trawl and gill net fishery will be open from January 1-May 31, 2020 and October 1-December 31, 2020.

Section 4: Chesapeake Bay Commercial Fishery (Maryland)

4a.) Maryland intends to reduce the commercial Chesapeake Bay quota by 1.8% and have the remainder of the required reductions be taken by the Chesapeake Bay recreational sector. See the “Convert Comm Lbs to #s 16 & 17” and “2017 MRIP & % Redux Rec Takes” tabs in the accompanying Excel file for the calculations.

- The average weight of commercially harvested fish in 2016 and 2017 (weighted by number) was used in order to convert the difference in pounds to numbers of fish. Commercially harvested fish were sampled at striped bass check stations. In 2016 and 2017, a total of 11,014 fish were measured and weighed. Using the annual compliance report spreadsheet, the 2016-2017 N weighted average weight was 5.24 pounds.
- Given the difference between the 18% quota (1,471,888 pounds) and the 1.8% reduced quota (1,445,394 pounds), the recreational sector will have to make up for 238,446 pounds which is equivalent to 45,478 fish (238,446/5.24).
- An 18% reduction from Maryland's 2017 recreational total removals (1,792,579 fish) results in a reduction of 322,664 fish from the recreational sector. Adding 45,478 more fish to this number means that Maryland's recreational fishery will have to reduce total removals by 368,142 fish, an overall reduction of 20.5%. Adding in the 592 fish from the Atlantic commercial fishery, the overall reduction needed to be taken by Maryland's Chesapeake Bay recreational fishery is $((368,142 + 592)/1,792,579) \times 100 = (368,734/1,792,579) \times 100 = 20.6\%$

This means that Maryland's 2020 Chesapeake Bay commercial quota will be 1,445,394 pounds, 1.8% less than the Addendum IV quota. Commercial size limits will remain the same with a minimum size of 18" and a maximum size of 36". Seasons will also remain the same and differ by gear. The drift gill net fishery will be open from January 1-February 29, 2020 and December 1-31, 2020. The haul seine and hook and line fisheries will be open from June 1-November 30, 2020 and the pound net fishery will be open from June 1-December 31, 2020.

Section 5: Circle Hook Requirements

Maryland put in regulations for 2018 and 2019 requiring that anglers in Chesapeake Bay and its tidal tributaries: use circle hooks when chumming or live-lining; use J hooks or circle hooks when using fish, crabs, or worms as bait or when using processed baits; and disallowed any other hooks, such as treble hooks, to be used from May 16-December 15. These regulations apply to all anglers no matter what species they are targeting. Specifically, the Code of Maryland Regulations (COMAR) 08.02.05.02.02 states:

F. Bait.

(1) When using fish, crabs, or worms as bait, or processed bait, a person recreationally angling in the Susquehanna Flats and Northeast River during the period March 1 through May 3 shall only use a:

- (a) Circle hook; or
- (b) "J" hook with a gap of less than or equal to 1/2 inch between the point and the shank.

(2) Except for chumming or live-lining, when using fish, crabs, or worms as bait, or processed bait, a person recreationally angling in the Chesapeake Bay and its tidal tributaries during the periods May 16, 2018 through December 15, 2018 and May 16, 2019 through December 15, 2019 shall only use a:

- (a) Circle hook; or
- (b) "J" hook.

(3) When chumming or live-lining, a person recreationally angling in the Chesapeake Bay and its tidal tributaries during the periods May 16, 2018 through December 15, 2018 and May 16, 2019 through December 15, 2019 shall only use a circle hook.

(4) A person may not use eels as bait while fishing with hook and line in the tidal waters of the Chesapeake Bay and its tributaries, except for a recreational, charter, or commercial hook and line fisherman authorized to participate in and fish during summer and fall striped bass seasons established in COMAR 08.02.15.

However, these regulations are set to sunset December 15, 2019. For this reason, Maryland began the regulatory process in November 2019 to make these hook requirement regulations permanent (<https://dnr.maryland.gov/fisheries/Pages/regulations/changes.aspx#sbrec>). Following scoping in November, proposed regulations were submitted for Administrative, Executive, and Legislative Review (AELR) in December. A public hearing will be held January 9 and public comment is open until January 21. This should have allowed the Department to have the circle hook regulations in place by March 2020 however the AELR has requested the Department hold the regulations for additional time so that the Department can address their questions and concerns. This would potentially push back the effective date to May 2020.

Maryland intends to continue their previous public education campaigns which will include printed materials for outreach events and for APAIS field interviewers to hand out, public presentations at sportsfishing shows and to fishing clubs, posts to our Facebook page, a website describing the use of circle hooks and best fish handling practices, and a piece in our annual fishing guide. Additionally, we will continue to distribute circle hooks to anglers.

Section 6: Timeline for Implementation

Commercial quotas will be set January 1, 2020.

Recreational regulations for the Chesapeake Bay spring season as well as permanent circle hook regulations for chumming and live lining within Chesapeake Bay were scoped in November. Scoping allows the public the opportunity to comment on proposed regulations before they are developed. Since then, regulations have been developed and were submitted to the Administrative, Executive, and Legislative Review (AELR) in December. A public hearing on the proposed spring regulations is scheduled for January 9 and the public comment period on them is open until January 21. While this timeline should have allowed us to have the spring regulations in place by March 1, 2020, AELR has requested the Department hold the regulations for additional time, so that the Department can address their questions and concerns. This would potentially push back the effective date to May 4, 2020.

Regulations for the Chesapeake Bay summer/fall season including closed days and bag limits will also have to go through our regulatory process. The department hopes to scope those regulations with the public in January and begin the regulatory promulgation process in February, with the expectation that these regulations would be in place by July 1, 2020, although the timing of these regulations is somewhat contingent upon when the spring regulations are ultimately adopted.

Recreational regulations for the Atlantic coast fishery can be set by public notice and will be implemented by April 1, 2020.

Appendix: Alternative Methods to Calculate Discard Reductions during Season Closures

In Maryland's original conservation equivalency proposal, all striped bass released from striped bass targeted trips (e.g. striped bass as PRIM1 or PRIM2) were assumed to no longer be released during season closures. However, releases of striped bass from trips not targeting striped bass were still assumed to occur. Given the uncertainty around how many anglers may still fish for other species during the closures and encounter/release striped bass, the Technical Committee suggested exploring other methods.

MRIP data from trips catching striped bass were subset to 2015-2018 Maryland inland trips. As the potential no targeting rules would be in place for waves 2 and 4, specific combinations of target species in these waves were explored to see what species anglers said they were fishing for when they released striped bass. While the numbers of striped bass released were variable year to year, in all years, most of the striped bass releases came from trips that were only targeting striped bass (Figures 1 and 2) followed often by trips without a declared targeted species. Other trips that contributed the most to striped bass releases included white perch, bluefish, spot, summer flounder, and Spanish mackerel.

The original methodology where all targeted striped bass releases are removed represents the maximum expected reduction or upper bound we would expect under the closure. Three other methods were explored to estimate how releases may be reduced during a closure:

1. **No Striped Bass Only Trips:** Under this calculation method, we assumed trips that were only targeting striped bass (e.g. no other species were targeted) would no longer release any striped bass. Striped bass releases would still occur for trips where either striped bass weren't targeted or trips where striped bass were targeted with a second species. These releases were assumed to be equal to the number of releases estimated by MRIP.
2. **All Striped Bass Trips Still Occur:** Under this calculation method, any trips where striped bass were either the primary or secondary target would still occur and release striped bass at a lower non-targeted rate. This non-targeted rate was calculated as the number of releases per trip for all trips where striped bass were not a targeted species. All striped bass releases from non-targeted trips would still occur in the numbers estimated by MRIP. This represents the "worst case" scenario where all previous striped bass trips still happen (i.e. no one stops fishing) but they switch to other fishing targets where they still encounter striped bass.
3. **Combined:** This method combines elements from methods 1 and 2. Under this calculation method, we assumed trips that were only targeting striped bass (e.g. no other species were targeted) would no longer release any striped bass. If striped bass were targeted with a second species, these trips would still release striped bass but at a lower non-targeted rate (calculated in the same way as described above). Additionally, all striped bass releases from non-targeted trips would still occur.

A summary of the estimated reductions in releases is provided below (Table 1). See the Excel spreadsheet entitled "Other Calculation Methods to Account for NonTargeting.xlsx" for the calculations.

Because so many of the Maryland inland trips report only targeting striped bass, the estimated reduction in releases from the "No Striped Bass Only Trips" and "Combined Method" are both similar to, though slightly less than, the original analysis method. The extreme option where all striped bass trips still occur has the smallest reduction in releases as all trips are assumed to still encounter striped bass

though at a reduced rate of releases. Under this method in wave 2, there was actually a projected increase in releases. An increase, however, is unlikely to actually occur and this estimate is likely due to very small numbers of non-targeted intercepts in wave 2, ranging from 3-16 intercepts across the years. For this reason, rather than using an increase in discards as a sensitivity in our closure analyses for wave 2, this was set at 0 to indicate a possible no change in releases.

After examination of all options, Maryland proposes using the combined method in order to calculate the striped bass releases during a season closure. Unfortunately, we have no quantitative way to predict how many striped bass only trips might still occur by switching to other target species; however, this analysis allows us to look at the likely range of striped bass releases during a closure. It is reasonable to assume that trips that only target striped bass are likely to cease. This is because these anglers seem to be interested in only striped bass fishing based on their declaration of fishing targets. Anglers no longer fishing during the closure is likely, particularly in certain parts of Maryland's portion of Chesapeake Bay. While anglers south of the Bay Bridge fishing in higher salinity water often have a greater variety of species to fish for, particularly in wave 4, anglers north of the Bay Bridge have fewer options, mostly limited to white perch and catfish. Additionally, the combined method assumes that striped bass trips where other second target species were declared will still occur. As seen in the analysis presented, in most waves/years, striped bass are released, on average, at a lower rate when the target species was not striped bass. Given anglers would no longer be allowed to target striped bass, it seems reasonable that they would also discard them at a lower rate than when striped bass is listed as a target species.

Due to the difficulty of predicting angler choices, as demonstrated in Murphy et al. (2019), estimates of discards during season closures have some uncertainty that is difficult to quantify without separate study. However, season closures remove completely or substantially lower interactions between fishing gear and the fish and are the most efficient way to reduce recreational dead discards that currently comprise near half of the estimated total striped bass losses. For this reason, we believe these methodologies have merit and help inform the Technical Committee on the best method moving forward to estimate releases during a harvest closure.

Literature Cited

Murphy, Jr., R., S. Scyphers, S. Gray, and J.H. Grabowski. 2019. Angler attitudes explain disparate behavioral reactions to fishery regulations. *Fisheries* 44(10): 475-487.

Table 1. Comparison of estimated of reductions of releases between methods and years.

	2015	2016	2017	2018	Average
Wave 2	Reduction in Releases	Reduction in Releases	Reduction in Releases	Reduction in Releases	Reduction in Releases
Prop of releases that were targeted (original analysis)	-97	-80	-53	-85	-78.75
Combined Method	-94.73	-79.81	-49.05	-83.85	-76.86
No Striped Bass Only Trips	-80.59	-80.03	-48.11	-84.27	-73.25
All Striped Bass Trips Still Occur	34.92	-6.06	47.30	-30.49	11.41
Wave 4					
Prop of releases that were targeted (original analysis)	-60	-66	-73	-71	-67.50
Combined Method	-55.12	-60.71	-65.47	-55.61	-59.23
No Striped Bass Only Trips	-52.36	-60.29	-60.77	-60.32	-58.43
All Striped Bass Trips Still Occur	-16.12	-28.24	-40.32	-1.26	-21.49

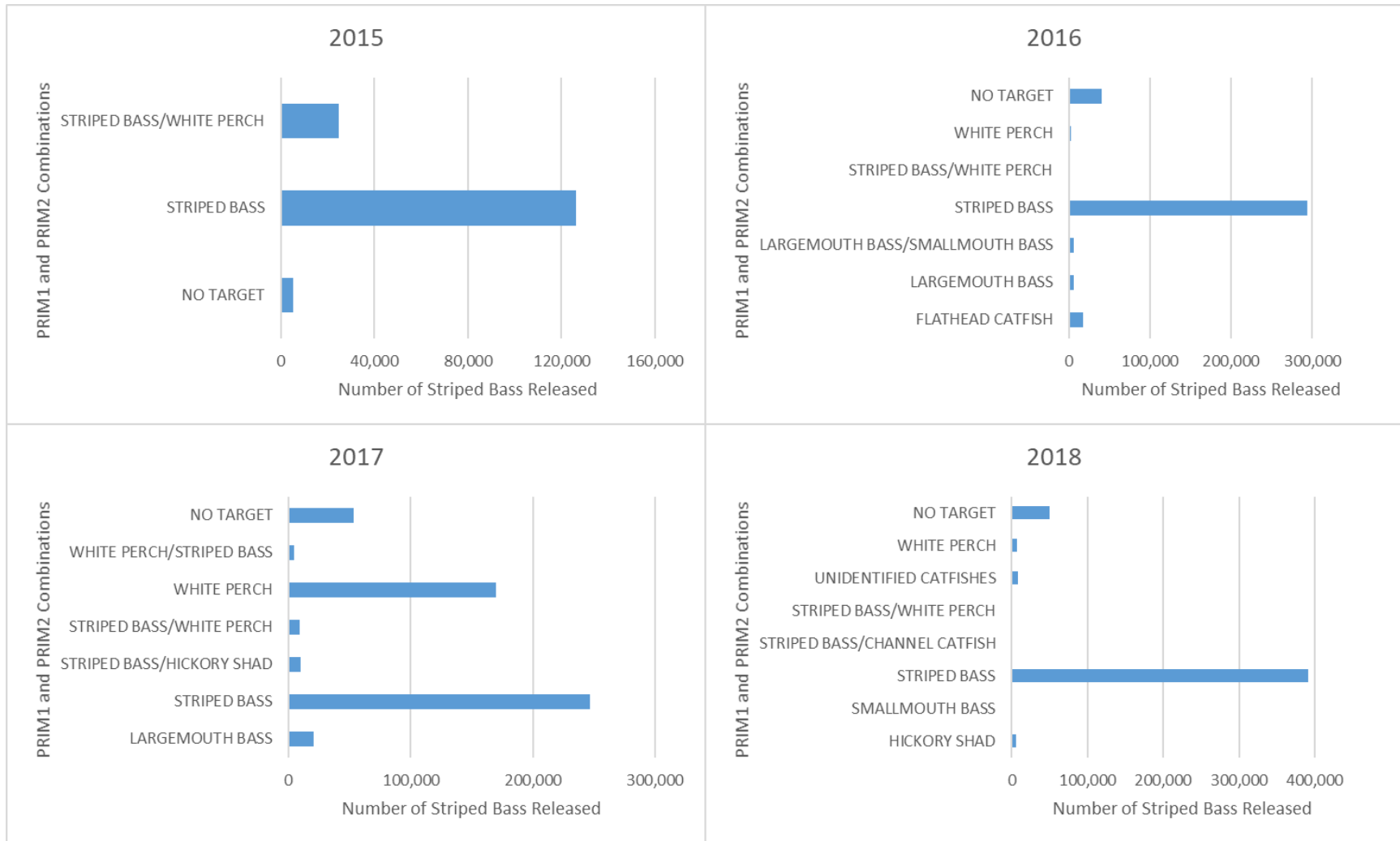


Figure 1. Releases of striped bass in wave 2 by target species (PRIM1/PRIM2) from 2015-2018.

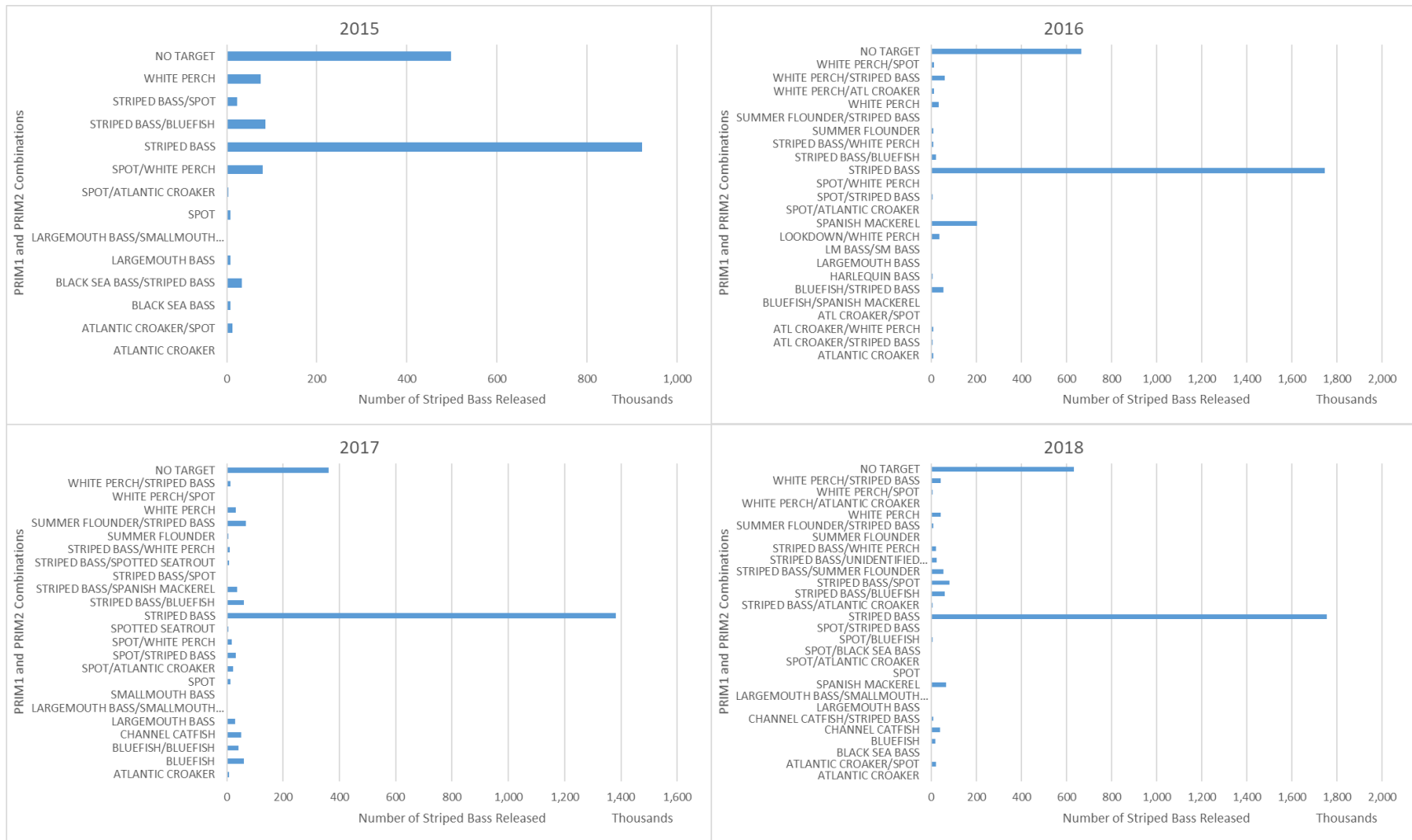


Figure 2. Releases of striped bass in wave 4 by target species (PRIM1/PRIM2) from 2015-2018.

Atlantic Striped Bass Addendum VI Implementation Plan for the Potomac River

**Prepared for the
Atlantic States Marine Fisheries Commission
November 2019 - Revised**

**Potomac River Fisheries Commission
P.O. Box 9
Colonial Beach, VA 22443
(804) 224-7148**

Potomac River Fisheries Commission Addendum VI Implementation Plan for Atlantic Striped Bass

Summary of Proposed Conservation Equivalency Measures

Option #1 Recreational Fishery – 20.5% reduction (MDNR calculations)

Jurisdiction	Size Limits	Bag Limits	Other	Open Season
Potomac River Spring Season	35" TL min	1 fish/person/day (incl. charter capt)	Downstream of Rt. 301 Bridge	May 1 – 15
Potomac River Summer/Fall Fishery	20" min	2 fish/person/day	No direct targeting during closed season	May 16 – July 6 Aug. 21 - Dec. 31

Option #2 Recreational Fishery – 20.5% reduction (MDNR calculations)

Jurisdiction	Size Limits	Bag Limits	Other	Open Season
Potomac River Spring Season	35" TL min	1 fish/person/day (incl. charter capt)	Downstream of Rt. 301 Bridge	May 1 – 15
Potomac River Summer/Fall Fishery	20" min	2 fish/person/day		May 16 - June 30 Sept. 1 - Dec. 31

Option #3 Recreational Fishery – 20.5% reduction (VMRC calculations)

Jurisdiction	Size Limits	Bag Limits	Other	Open Season
Potomac River Spring Season	35" TL min	1 fish/person/day (incl. charter capt)	Downstream of Rt. 301 Bridge	May 1 – 15
Potomac River Fall Fishery	20" min	2 fish/person/day		Aug. 8 - Dec. 31

Option #4 Recreational Fishery – 20.5% reduction (VMRC calculations)

Jurisdiction	Size Limits	Bag Limits	Other	Open Season
Potomac River Spring Season	35" TL min	1 fish/person/day (incl. charter capt)	Downstream of Rt. 301 Bridge	May 1 – 15
Potomac River Fall Fishery	20" min	2 fish/person/day		May 16 – July 6 Nov. 18 - Dec. 31

Commercial Fishery – 1.8% reduction from 2017 quota = 572,861 lbs

Jurisdiction	Size Limits	Seasonal Quota	Open Season
Potomac River	18" min 18" min / 36" max 18" min	GN – 349,405 lbs	Jan. 1 – Feb. 14 Feb. 15 – Mar. 25 Nov. 9 – Dec. 31
	18" min / 36" max 18" min	PN – 127,748 lbs	Feb. 15 – Mar. 25 June 1 – Dec. 15
	18" min 18" min / 36" max 18" min	HL – 81,959 lbs	Jan. 1 – Feb. 14 Feb. 15 – Mar. 25 June 1 – Dec. 31
	18" min / 36" max 18" min	Misc – 13,749 lbs	Feb. 15 – Mar. 25 June 1 – Dec. 15

Section 1: Coastal Recreational Fishery – N/A

Section 2: Chesapeake Bay Recreational Fishery (PRFC)

Option #1 Conservation Equivalency (MDNR calculations)

Under this option, PRFC would delay the start of the spring trophy season to May 1 rather than the 3rd Saturday of April, and it would continue to close on May 15 (forfeit 13 days). The minimum size would remain at 35". PRFC's resident summer/fall fishery would start on May 16 and run through December 31, with a closure from July 7– August 20 (forfeit 45 days). The minimum size would remain at 20". During the July and August closure, no direct targeting of striped bass would be allowed.

- Using Maryland's calculations, PRFC's target reduction for the recreational fishery is 20.5% to account for the commercial sector taking a 1.8% reduction in the 2017 quota.
- Maryland's 2015-2018 average inland harvest and releases by wave were used for the calculations due to the calculations mostly involving seasonal closures. Maryland's removals were used as a proxy for PRFC removals given similar fishery regulations (seasons and size limits).
- By starting the spring trophy season on May 1, no harvest is expected in wave 2. This decreases the harvested fish by 84,874 fish, on average, which is estimated to be a 4.2% reduction in total removals.
- PRFC is proposing to close the season from July 7 – August 20. By dividing the average Maryland wave 4 harvest estimate (330,162 fish) by 62 days (the number of days in wave 4), we estimate each day closure will reduce harvest by 5,325 fish. A 45 day closure will reduce harvest by 239,634 fish ($5,325.1935 \times 45$).
- PRFC would not allow the direct targeting of striped bass during the July and August closure; however, we expect that some striped bass releases will still occur. To estimate how much discards could decrease, we used 2015-2018 MRIP catch and trip data and calculated the average reduction of striped bass releases in Maryland using the combined method proposed by Maryland for their proposal. Under this methodology, we assumed trips that were only targeting striped bass (e.g. no other species were targeted) would no longer release any striped bass. If striped bass were targeted with a second species, these trips would still release striped bass but at a lower non-targeted rate. Additionally, all striped bass releases from non-targeted trips would still occur as estimated by MRIP. For 2015-2018, releases in wave 4 were estimated to be reduced 59.2%, on average. Assuming this remains constant in 2020, we estimate that each day of closure will reduce the releases by 23,512 fish ($(2,461,146/62) \times 0.5923$). Multiplying 23,512 fish by 45 days, this reduces the number of releases by 1,058,035 fish.
- Combining all of these measures using the Maryland data, PRFC estimates that the total removals will be decreased by 20.7%.

Option #2 Conservation Equivalency (MDNR calculations)

Under this option, PRFC would delay the start of the spring trophy season to May 1 rather than the 3rd Saturday of April, and it would continue to close on May 15 (forfeit 13 days). The minimum size would remain at 35". PRFC's resident summer/fall fishery would start on May 16 and run through December 31, with a closure for all of wave 4 (July and August) (forfeit 62 days). The minimum size would remain at 20".

- Using Maryland's calculations, PRFC's target reduction for the recreational fishery is 20.5% to account for the commercial sector taking a 1.8% reduction in the 2017 quota.
- Maryland's 2015-2018 average inland harvest and releases by wave were used for the calculations due to the calculations mostly involving seasonal closures. Maryland's removals were used as a proxy for PRFC removals given similar fishery regulations (seasons and size limits).
- By starting the spring trophy season on May 1, no harvest is expected in wave 2. This decreases the harvested fish by 84,874 fish, on average, which is estimated to be a 4.2% reduction in total removals.
- PRFC is proposing to close the summer season for all of wave 4. Removal of the average Maryland wave 4 harvest estimate (330,162 fish) is estimated to reduce total removals by 16.3%.
- Using the Maryland data as a proxy for PRFC's landings and combining all of these measures, PRFC estimates that the total removals will be decreased by 20.5%.

Option #3 Conservation Equivalency (VMRC calculations)

Under this option, PRFC would delay the start of the spring trophy season to May 1 rather than the 3rd Saturday of April, and it would continue to close on May 15 (forfeit 13 days). The minimum size would remain at 35". PRFC's resident summer/fall fishery would start on August 8 and run through December 31 (forfeit 84 days). The minimum size would remain at 20".

This proposal meets the data standards established by the TC because daily harvest rates and total releases in the Potomac River are estimated from MRIP using a four-year average (2015-2018). VMRC used expanded harvest and release estimates from MRIP intercept sites on the Potomac River in the analysis. Sample size included: 2015 – 43 intercepted trips; 2016 – 101 intercepted trips; 2017 – 83 intercepted trips; and 2018 – 77 intercepted trips. A total of 53 intercept sites are located on the Potomac River using Lat/Long and intercept sites.

VMRC used a daily average (2015-2018) harvest rate to estimate the savings from reduced season days by wave-period. The spring trophy season (3rd Saturday of April through May 15) was considered its own wave since the possession limit (1-fish) and recreational minimum size limit (35") is different than the recreational Summer/Fall season. All other wave periods are broken down as follows: May 16 through June 30, July through August, September through October, and November through December. Excel spreadsheet is attached. Reductions to recreational season days and an 1.8% reduction in commercial quota represent an 18% reduction in total removals relative to 2017 PRFC removal levels.

Option #4 Conservation Equivalency (VMRC calculations)

Under this option, PRFC would delay the start of the spring trophy season to May 1 rather than the 3rd Saturday of April, and it would continue to close on May 15 (forfeit 13 days). The minimum size would remain at 35". PRFC's resident summer/fall fishery would start on May 16 through July 6, and reopen November 18 through December 31 (forfeit 134 days). The minimum size would remain at 20".

This proposal meets the data standards established by the TC because daily harvest rates and total releases in the Potomac River are estimated from MRIP using a four-year average (2015-2018). VMRC used expanded harvest and release estimates from MRIP intercept sites on the Potomac River in the analysis. Sample size included: 2015 – 43 intercepted trips; 2016 – 101 intercepted trips; 2017 – 83 intercepted trips; and 2018 – 77 intercepted trips. A total of 53 intercept sites are located on the Potomac River using Lat/Long and intercept sites.

VMRC used a daily average (2015-2018) harvest rate to estimate the savings from reduced season days by wave-period. The spring trophy season (3rd Saturday of April through May 15) was considered its own wave since the possession limit (1-fish) and recreational minimum size limit (35") is different than the recreational Summer/Fall season. All other wave periods are broken down as follows: May 16 through June 30, July through August, September through October, and November through December. Excel spreadsheet is attached. Reductions to recreational season days and an 1.8% reduction in commercial quota represent an 18% reduction in total removals relative to 2017 PRFC removal levels.

Section 3: Coastal Commercial Fishery – N/A

Section 4: Chesapeake Bay Commercial Fishery (PRFC)

4a.) The Potomac River Fisheries Commission's 2017 commercial quota was 583,362 pounds. Instead of the 18% reduction as required in Addendum IV, the Potomac River Fisheries Commission decided to adopt a conservation equivalency measure and approved a 1.8% reduction, resulting in a 2020 commercial quota of 572,861 pounds. As in the past, the gill net fishery will operate from January 1 through February 14, 2020 with an 18" minimum size limit; February 15 through March 25, 2020 with an 18 – 36" slot limit; and reopen November 9 through December 31, 2020 with an 18" minimum size limit. The pound net and miscellaneous

(haul seine and fyke net) fisheries will operate from February 15 through March 25, 2020 with an 18 – 36” slot limit, and from June 1 through December 15, 2020 with an 18” minimum size limit. The hook & line fishery will operate from January 1 through February 14, 2020 with an 18” minimum size limit; February 15 through March 25, 2020 with an 18 – 36” slot limit, and from June 1 through December 31, 2020 with an 18” minimum size limit.

PRFC intends to reduce the commercial quota by 1.8% and have the remainder of the required reductions be taken by the recreational sector. See the “Convert Comm Lbs to #s 16 & 17” and “2017 MRIP & % redux Rec Takes” tabs in the Maryland Excel file for the calculations.

- The average weight of commercially harvested fish in 2016 and 2017 (weighted by number) in Maryland was used in order to convert the difference in pounds to numbers of fish. Commercially harvested fish were sampled at striped bass check stations. In 2016 and 2017, a total of 11,014 fish were measured and weighed. Using the annual compliance report spreadsheet, the 2016-2017 N weighted average weight was 5.24 pounds.
- Given the difference between the 18% quota (1,471,888 pounds) and the 1.8% reduced quota (1,445,394 pounds), the recreational sector will have to make up for 238,446 pounds which is equivalent to 45,478 fish (238,446/5.24).
- An 18% reduction from Maryland’s 2017 recreational total removals (1,792,579 fish) results in a reduction of 322,664 fish from the recreational sector. Adding 45,478 more fish to this number means that Maryland’s recreational fishery will have to reduce total removals by 368,142 fish, and overall reduction of 20.5%.

Section 5: Circle Hook Requirements

In order to comply with the circle hook requirement, the PRFC proposes to initiate angler education beginning in 2020 and continuing in perpetuity going forward. Angler education will be achieved by providing resources to educate anglers on the technical benefits of circle hooks, and methodologies for their proper use. Strategies to deliver this information to anglers will include (but not be limited to):

- Development of website content
- Social media content (Facebook, Instagram and Twitter)
- Development and dissemination of literature (brochures and other handouts)
- Presentations at PRFC Finfish Advisory Committee meetings
- Outreach to fishing clubs and events (fishing expositions and fairs)
- Providing samples of non offset circle hooks (contingent upon funding)

Section 6: Timeline for Implementation

PRFC plans to implement proposed measures prior to the start of the 2020 fishing season for each sector. Addendum VI requires the mandatory use of circle hooks when fishing with bait, effective in 2021. In order to comply with this, Law Enforcement officers (Maryland Natural Resources Police and Virginia Marine Resources Commission) on the Potomac River will be provided with educational handouts and will begin interacting with fishermen on the water in 2020 to let them know the use of circle hooks, when fishing for striped bass with bait, will be mandatory in 2021. PRFC will scope regulatory language in 2020, and adopt regulations to comply with the Addendum’s circle hook requirements, effective January 1, 2021.

Washington DC - Atlantic Striped Bass Addendum VI Implementation Plan

Implementation Plans are due November 30, 2019

Please use the following template when submitting implementation plans. Please be as concise as possible and use bullets to ensure inclusion of all important information. This template references data standards established by the Technical Committee (TC) and detailed in the TC memo (M19-084).

Summary of Proposed Measures

Recreational Fishery

State	Size Limits	Bag Limits	Other	Open Season
Washington DC	18	1		May 16-Dec 31

Commercial Fishery

State	Size Limits	Seasonal Quota	Open Season

Section 1: Coastal Recreational Fishery

1a.) A one fish bag limit and a slot size limit of 28” minimum size to less than 35” total length may be implemented for the ocean fishery without further analysis. The same fishing seasons as in 2017 is required.

OR

1b.) A conservation equivalency (CE) proposal that achieves at least an 18% reduction from 2017 total recreational removals following the criteria established by the TC (see TC memo). If selecting this option, further analysis is required.

If submitting CE, please address the following questions,

- What is your state proposing for a conservation equivalency measure?
- Does your proposal meet the data standards established by the TC?
- What data sources are used in the analysis (include mode or season specific if applicable)?
- Sample size summary by mode, season, or state and/or data source as applicable.
- Describe in one sentence how you did the analysis (e.g., used methods outlined in Greg Wojcik’s spreadsheet, used SAS code provided by Mike Celestino, alternative analysis described briefly).
- Provide a table of results as presented in Greg Wojcik’s spreadsheet or equivalent spreadsheet that is comparable with your analysis.
- Clearly identify that at least an 18% reduction in total removals is achieved from pooled 2016-2017 for all size-related analysis or pooled 2015-2018 data for seasonal and mode-based analyses.

Note: Whether implementing 1a or 1b, please indicate the open and close dates of a season. Also specify if regulations are different by geographical area if applicable (e.g., ocean, bay, river) and the specific season dates of those areas. Also, more conservative regulations may be implemented without pursuing CE. Please contact Max Appelman mappelman@asmfc.org to confirm that proposed measures are more conservative.

Section 2: Chesapeake Bay Recreational Fishery (MD, VA, PRFC, DC)

3a.) Implementation of a one fish bag limit and an 18" minimum size limit for the Chesapeake Bay fishery may be implemented without further analysis.

The District will implement a 18" minimum size limit with a one fish bag limit.

OR

3b.) A CE proposal that achieves at least an 18% reduction from 2017 total recreational removals following the criteria established by the TC (see TC memo). If selecting this option, further analysis is required. Please follow the outline as described in Section 1.

Section 3: Coastal Commercial Fishery

2a.) Implementation of an 18% reduction from the Addendum IV quotas. The reduced quotas in Addendum VI account for previously approved CE programs, therefore, states do not need to submit for CE if they choose to maintain 2017 size limits in its commercial fisheries.

OR

2b.) If a state chooses to modify 2017 size limits, the state needs to submit a CE proposal adjusting its quota relative to the new Addendum VI quota baseline (i.e., 18% reduction from the quota as listed in Addendum IV).

Note: Whether implementing 2a or 2b, please include a list of commercial fishery management measures being implemented (including but not limited to size limits, seasons by gear type). Also, please be brief when submitting commercial fishery CE proposals and follow a similar outline as described in Section 1.

Section 4: Chesapeake Bay Commercial Fishery (MD, VA, PRFC)

4a.) Implementation of an 18% reduction from the Addendum IV Chesapeake Bay commercial quota. After this reduction, the total Chesapeake Bay commercial quota amounts to 2,558,603 lbs. Please indicate what your state/jurisdictions commercial quota will be for 2020, and the commercial fishery management measures being implemented (including but not limited to size limits, seasons by gear type).

Section 5: Circle Hook Requirements

Provide draft regulatory language and/or briefly describe the process the state/jurisdiction is taking to develop appropriate regulations. Please also briefly describe the public education and outreach campaigns the state/jurisdiction will develop to promote awareness and compliance with a circle hook requirement.

The District is currently working on drafting regulatory language for the circle hook requirement. The District recently approved a Fisheries Omnibus Regulation that should be put into effect on January 1, 2020 that will allow the DOEE Fisheries and Wildlife Division to quickly make changes to regulation that will be effective immediately upon approval and announcement from the Director of DOEE.

The District is going to use the 2020 season as an education and outreach year. The District is considering making the circle hook requirement mandatory for all species where a hook size 1/0 or larger is used. The education will be conducted through two activities that are regularly conducted within the District: the spring and summer creel survey as well as weekly enforcement education and outreach conducted by law enforcement.

Section 6: Timeline for Implementation

Briefly describe the timeline for implementation of management measures as well as the start of your state's fisheries relative to your proposed implementation date. **Note:** States are required to implement circle hook requirements by January 1, 2021. All other provisions of Addendum VI must be implemented by April 1, 2020.

The District will implement the size and bag limit regulations by the start of the 2020 striped bass fishing season. The circle hook requirement will be implemented on January 1, 2021 after a year of education and outreach in 2020.

Atlantic Striped Bass Addendum VI Implementation Plan for Virginia

Summary of Proposed Measures

Recreational Fishery

State	Size Limits	Bag Limits	Other	Open Season
Virginia (Chesapeake Bay)	20"-36"	1	Removed Spring Trophy Season	May 16 –June 15, October 4 – December 31
Virginia (Ocean)	28"-36"	1	Removed Spring Trophy Season	January 1 – March 31, May 16 – December 31

Commercial Fishery

State	Size Limits	Seasonal Quota	Other	Open Season
Virginia (Chesapeake Bay)	18" minimum, 28 maximum (March 15 – June 15) 11 days added to commercial max size limit season (formerly March 26 – June 15)	983,393 pounds (7.66% reduction in Add. IV baseline quota)	7" commercial maximum mesh size for gill nets in the Chesapeake Bay.	January 16 – December 31
Virginia (Ocean)	28" minimum	125,034 pounds (9.81% reduction in Add. IV baseline quota)	9" commercial maximum mesh size for gill nets on the coast	January 16 – December 31

Section 1: Coastal Recreational Fishery

1a.) A one fish bag limit and a slot size limit of 28" minimum size to less than 35" total length may be implemented for the ocean fishery without further analysis. The same fishing seasons as in 2017 is required.

OR

1b.) A conservation equivalency (CE) proposal that achieves at least an 18% reduction from 2017 total recreational removals following the criteria established by the TC (see TC memo). If selecting this option, further analysis is required.

If submitting CE, please address the following questions,

- What is your state proposing for a conservation equivalency measure?
 - Virginia is proposing a 36" recreational maximum size limit (28"-36") instead of a 35" recreational maximum size limit on the coast.
- Does your proposal meet the data standards established by the TC?
 - Yes, Virginia implemented a 36" recreational maximum size limit on the coast to keep recreational maximum size limits consistent with recreational maximum size limits in Virginia's portion of the Chesapeake Bay (20"-36"). Total removals on the coast were provided from MRIP (2017). In 2016, no striped bass were recreationally harvested (A+B1) from VA coastal waters. In 2017, a total of 98 fish were harvested (A+B1) and 76,147 fish were released alive (B2) from Virginia's coast. All harvested fish (A+B1) from VA coastal waters in 2017 were 32" FL. Total coastal removals in 2017 (6,951 fish) is equal to the 2017 total coastal harvest (98 fish) plus 2017 total coastal dead discards (6,853 fish). Dead discards were estimated by applying a 9% hooking mortality to the number of coastal releases in 2017.
- What data sources are used in the analysis (include mode or season specific if applicable)?
 - 2017 MRIP total harvest and release estimates from ocean waters (All modes combined).
- Sample size summary by mode, season, or state and/or data source as applicable.
 - Total 2017 coastal harvest and release estimates (numbers of fish) in Virginia were provided from MRIP. Sample sizes are not applicable for total removals by area.
- Describe in one sentence how you did the analysis (e.g., used methods outlined in Greg Wojcik's spreadsheet, used SAS code provided by Mike Celestino, alternative analysis described briefly).
 - Coastal removals in 2020 would remain unchanged relative to 2017 removal levels.
- Provide a table of results as presented in Greg Wojcik's spreadsheet or equivalent spreadsheet that is comparable with your analysis.
 - See tables 1-3 at bottom of the document and attached spreadsheet

- Clearly identify that at least an 18% reduction in total removals is achieved from pooled 2016-2017 for all size-related analysis or pooled 2015-2018 data for seasonal and mode-based analyses.
 - See tables 1-3 at bottom of the document and attached spreadsheet.

Note: Whether implementing 1a or 1b, please indicate the open and close dates of a season. Also specify if regulations are different by geographical area if applicable (e.g., ocean, bay, river) and the specific season dates of those areas. Also, more conservative regulations may be implemented without pursuing CE. Please contact Max Appelman mappelman@asmfc.org to confirm that proposed measures are more conservative.

Section 2: Chesapeake Bay Recreational Fishery (MD, VA, PRFC, DC)

3a.) Implementation of a one fish bag limit and an 18" minimum size limit for the Chesapeake Bay fishery may be implemented without further analysis.

OR

3b.) A CE proposal that achieves at least an 18% reduction from 2017 total recreational removals following the criteria established by the TC (see TC memo). If selecting this option, further analysis is required. Please follow the outline as described in Section 1.

- What is your state proposing for a conservation equivalency measure?
 - Virginia is proposing to maintain current minimum size limits in the Chesapeake Bay (minimum size limit = 20" TL) , implement a 36" recreational maximum size limit and lower the recreational possession limit from two to one-fish per angler.
- Does your proposal meet the data standards established by the TC?
 - Yes, all data are provided through MRIP (2017).
- What data sources are used in the analysis (include mode or season specific if applicable)?
 - 2017 MRIP Inland Harvest and releases (all modes combined).
- Sample size summary by mode, season, or state and/or data source as applicable.
 - Summary data provided from MRIP. Sample sizes are not applicable for total removals by area
- Describe in one sentence how you did the analysis (e.g., used methods outlined in Greg Wojcik's spreadsheet, used SAS code provided by Mike Celestino, alternative analysis described briefly).
 - I used the same bag limit analysis for Chesapeake Bay options in Draft Addendum VI, specific to VA Inland intercepts only.
- Provide a table of results as presented in Greg Wojcik's spreadsheet or equivalent spreadsheet that is comparable with your analysis.

- See tables 1-3 at the bottom of the document and attached spreadsheet.
- Clearly identify that at least an 18% reduction in total removals is achieved from pooled 2016-2017 for all size-related analysis or pooled 2015-2018 data for seasonal and mode-based analyses.
 - All reductions in Chesapeake Bay removals are estimated from lowering the bag limit from 2 to 1-fish per angler. Recreational maximum size limits (36") in the Chesapeake Bay are not included in savings.

Section 3: Coastal Commercial Fishery

2a.) Implementation of an 18% reduction from the Addendum IV quotas. The reduced quotas in Addendum VI account for previously approved CE programs, therefore, states do not need to submit for CE if they choose to maintain 2017 size limits in its commercial fisheries.

OR

2b.) If a state chooses to modify 2017 size limits, the state needs to submit a CE proposal adjusting its quota relative to the new Addendum VI quota baseline (i.e., 18% reduction from the quota as listed in Addendum IV).

Note: Whether implementing 2a or 2b, please include a list of commercial fishery management measures being implemented (including but not limited to size limits, seasons by gear type). Also, please be brief when submitting commercial fishery CE proposals and follow a similar outline as described in Section 1.

- What is your state proposing for a conservation equivalency measure?
 - Virginia is proposing to lower the coastal commercial quota by 9.81%, relative to baseline Addendum IV coastal quota in Virginia. Virginias revised coastal commercial quota for 2020 will be 125,034 pounds (previously 138,640 pounds).
- Does your proposal meet the data standards established by the TC?
 - Yes, commercial landings are provided from ASMFC compliance reports.
- What data sources are used in the analysis (include mode or season specific if applicable)?
 - ASMFC compliance reports and SAW 66 discard mortality estimates from the coast.
- Sample size summary by mode, season, or state and/or data source as applicable.
 - Not applicable
- Describe in one sentence how you did the analysis (e.g., used methods outlined in Greg Wojcik's spreadsheet, used SAS code provided by Mike Celestino, alternative analysis described briefly).
 - I used revised recreational removal estimates in 2020 to estimate the commercial removal target in 2020 that would achieve an 18% reduction in total removals (sectors combined) relative to 2017 removal levels. The necessary reduction in

coastal commercial removals was applied to the average 2017 coastal commercial weight to lower the coastal commercial quota.

- Provide a table of results as presented in Greg Wojcik's spreadsheet or equivalent spreadsheet that is comparable with your analysis.
 - See tables 1-3 at the bottom of the document and attached spreadsheet.
- Clearly identify that at least an 18% reduction in total removals is achieved from pooled 2016-2017 for all size-related analysis or pooled 2015-2018 data for seasonal and mode-based analyses.
 - See tables 1-3 at the bottom of the document and attached spreadsheet. Implementing commercial gill net maximum mesh size restrictions on the coast (9" max mesh size) was not counted towards reductions in coastal commercial removals. Instead, coastal removals were adjusted through reductions in coastal commercial quota.

Section 4: Chesapeake Bay Commercial Fishery (MD, VA, PRFC)

4a.) Implementation of an 18% reduction from the Addendum IV Chesapeake Bay commercial quota. After this reduction, the total Chesapeake Bay commercial quota amounts to 2,558,603 lbs. Please indicate what your state/jurisdictions commercial quota will be for 2020, and the commercial fishery management measures being implemented (including but not limited to size limits, seasons by gear type).

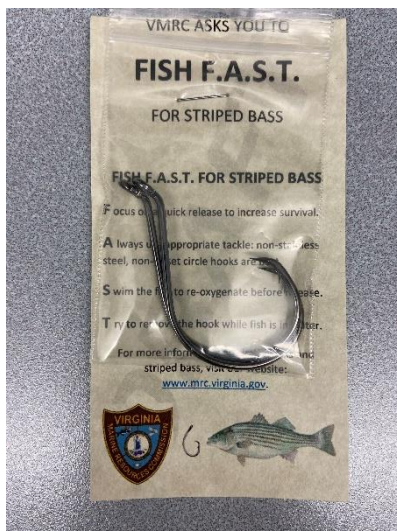
- What is your state proposing for a conservation equivalency measure?
 - Virginia is proposing to lower the Chesapeake Bay commercial quota by 7.66%, relative to baseline addendum IV Chesapeake Bay quota in Virginia. Virginias revised Chesapeake Bay commercial quota for 2020 will be 983,393 pounds (previously 1,064,997 pounds).
- Does your proposal meet the data standards established by the TC?
 - Yes, commercial landings are provided from ASMFC compliance reports.
- What data sources are used in the analysis (include mode or season specific if applicable)?
 - ASMFC compliance reports and SAW 66 discard mortality estimates from the Chesapeake Bay.
- Sample size summary by mode, season, or state and/or data source as applicable.
 - Not applicable
- Describe in one sentence how you did the analysis (e.g., used methods outlined in Greg Wojcik's spreadsheet, used SAS code provided by Mike Celestino, alternative analysis described briefly).

- Virginia used revised recreational removal estimates in 2020 to estimate the commercial removal target in 2020 that would achieve an 18% reduction in total removals (sectors combined) relative to 2017 removal levels. The reduction in commercial Chesapeake Bay removals was applied to the average 2017 commercial Chesapeake Bay weight to lower the Chesapeake Bay commercial quota.
- Provide a table of results as presented in Greg Wojcik’s spreadsheet or equivalent spreadsheet that is comparable with your analysis.
 - See tables 1-3 at the bottom of the document and attached spreadsheet
- Clearly identify that at least an 18% reduction in total removals is achieved from pooled 2016-2017 for all size-related analysis or pooled 2015-2018 data for seasonal and mode-based analyses.
 - See tables 1-3 at the bottom of the document and attached spreadsheet. Implementing commercial gill net maximum mesh size restrictions in the Chesapeake Bay (7” max mesh size) was not counted towards reductions towards Chesapeake Bay commercial removals. Instead, Chesapeake Bay removals were adjusted through reductions in the Chesapeake Bay commercial quota.

Section 5: Circle Hook Requirements

Provide draft regulatory language and/or briefly describe the process the state/jurisdiction is taking to develop appropriate regulations. Please also briefly describe the public education and outreach campaigns the state/jurisdiction will develop to promote awareness and compliance with a circle hook requirement.

Virginia will be distributing circle hooks in 2020 from hook donations received from ASMFC (meetings, events, etc.). In addition, Virginia will be promoting the use of circle hooks in 2020 on our website and social media. Virginia plans to make circle hooks mandatory prior to the start of the 2020 Chesapeake Bay Fall Season. Regulatory language is not available at this time.



Section 6: Timeline for Implementation

Briefly describe the timeline for implementation of management measures as well as the start of your state’s fisheries relative to your proposed implementation date. **Note:** States are required to implement circle hook requirements by January 1, 2021. All other provisions of Addendum VI must be implemented by April 1, 2020.

- Virginia has already implemented recreational measures for the 2019 fishing season. Adjustments to Virginia’s Chesapeake Bay and coastal commercial quotas were approved by our Commission on November 26, 2019 with an effective date of December 1 for the 2020 commercial fishing season.

Table 1. Total Removals (numbers of fish) of Striped Bass in Virginia, by Sector, in 2017.

Virginia Removals (2017)	Removals (numbers of fish) from the Chesapeake Bay	Removals (numbers of fish) from the Coast	Total Removals (numbers of fish)	Total Removals (%)
2017 Va. Recreational Removals	223,385	6,951	230,336	61.73%
2017 Va. Commercial Removals	134,620	8,193	142,813	38.27%
2017 Va. Total Removals	358,005	15,144	373,149	100.00%

18% reduction from 2017 Virginia total removals

305,982



2017 Virginia total removals (373,149 fish) lowered by **18%**

Table 2. Total Revised Removals of Striped Bass, by Sector, in 2020

Sectors	Numbers of fish	Sector - specific reductions in 2020
Recreational revised removals (2020)	176,545	-23.35%
Commercial revised removals (2020)	129,437	-9.37%
Adjusted removals from 2017 (18% reduction)	305,982	

← Bag limit reduction (%)

Table 3. Revised Virginia Chesapeake Bay and Coastal Commercial Quotas in 2020

	Chesapeake Bay Area	Coastal Area	Total
Reductions to the Commercial Sector			
Reduction in numbers of fish (9.37% x 2017 Removals)	12,608	767	13,376
Reduction in pounds of fish (avg. weight * no. fish)	81,604	13,606	95,210
Revised 2020 quota (pounds)	983,393	125,034	1,108,427
% change relative to 2019 quota	-7.66%	-9.81%	-7.91%

Atlantic Striped Bass Addendum VI Implementation Plan for Virginia

Summary of Proposed Measures (Option 2)

Recreational Fishery

State	Size Limits	Bag Limits	Other	Open Season
Virginia (Chesapeake Bay)	20"-36", 1 fish per person per year >36" with special permit	1	Removed Spring Trophy Season	May 16 –June 15, October 4 – December 31
Virginia (Ocean)	28"-36", 1 fish per person per year >36" with special permit	1	Removed Spring Trophy Season	January 1 – March 31, May 16 – December 31

Commercial Fishery

State	Size Limits	Seasonal Quota	Other	Open Season
Virginia (Chesapeake Bay)	18" minimum, 28 maximum (March 15 – June 15) 11 days added to commercial max size limit season (formerly March 26 – June 15)	983,393 pounds (7.66% reduction in Add. IV baseline quota)	7" commercial maximum mesh size for gill nets in the Chesapeake Bay.	January 16 – December 31
Virginia (Ocean)	28" minimum	125,034 pounds (9.81% reduction in Add. IV baseline quota)	9" commercial maximum mesh size for gill nets on the coast	January 16 – December 31

Section 1: Coastal Recreational Fishery

1a.) A one fish bag limit and a slot size limit of 28" minimum size to less than 35" total length may be implemented for the ocean fishery without further analysis. The same fishing seasons as in 2017 is required.

OR

1b.) A conservation equivalency (CE) proposal that achieves at least an 18% reduction from 2017 total recreational removals following the criteria established by the TC (see TC memo). If selecting this option, further analysis is required.

If submitting CE, please address the following questions,

- What is your state proposing for a conservation equivalency measure?
 - Virginia is proposing a 36" recreational maximum size limit (28"-36") instead of a 35" recreational maximum size limit on the coast. However, anglers can harvest 1 fish per year greater than 36" with a special permit.
- Does your proposal meet the data standards established by the TC?
 - Yes, Virginia implemented a 36" recreational maximum size limit on the coast to keep recreational maximum size limits consistent with recreational maximum size limits in Virginia's portion of the Chesapeake Bay (20"-36"). Total removals on the coast were provided from MRIP (2017). In 2016, no striped bass were recreationally harvested (A+B1) from VA coastal waters. In 2017, a total of 98 fish were harvested (A+B1) and 76,147 fish were released alive (B2) from Virginia's coast. All harvested fish (A+B1) from VA coastal waters in 2017 were 32" FL. Total coastal removals in 2017 (6,951 fish) is equal to the 2017 total coastal harvest (98 fish) plus 2017 total coastal dead discards (6,853 fish). Dead discards were estimated by applying a 9% hooking mortality to the number of coastal releases in 2017.
- What data sources are used in the analysis (include mode or season specific if applicable)?
 - 2017 MRIP total harvest and release estimates from ocean waters (All modes combined).
- Sample size summary by mode, season, or state and/or data source as applicable.
 - Total 2017 coastal harvest and release estimates (numbers of fish) in Virginia were provided from MRIP. Sample sizes are not applicable for total removals by area.
- Describe in one sentence how you did the analysis (e.g., used methods outlined in Greg Wojcik's spreadsheet, used SAS code provided by Mike Celestino, alternative analysis described briefly).
 - Coastal removals in 2020 would remain unchanged relative to 2017 removal levels.

- Provide a table of results as presented in Greg Wojcik’s spreadsheet or equivalent spreadsheet that is comparable with your analysis.
 - See tables 1-3 at bottom of the document and attached spreadsheet
- Clearly identify that at least an 18% reduction in total removals is achieved from pooled 2016-2017 for all size-related analysis or pooled 2015-2018 data for seasonal and mode-based analyses.
 - See tables 1-3 at bottom of the document and attached spreadsheet.

Note: Whether implementing 1a or 1b, please indicate the open and close dates of a season. Also specify if regulations are different by geographical area if applicable (e.g., ocean, bay, river) and the specific season dates of those areas. Also, more conservative regulations may be implemented without pursuing CE. Please contact Max Appelman mappelman@asmfc.org to confirm that proposed measures are more conservative.

Section 2: Chesapeake Bay Recreational Fishery (MD, VA, PRFC, DC)

3a.) Implementation of a one fish bag limit and an 18” minimum size limit for the Chesapeake Bay fishery may be implemented without further analysis.

OR

3b.) A CE proposal that achieves at least an 18% reduction from 2017 total recreational removals following the criteria established by the TC (see TC memo). If selecting this option, further analysis is required. Please follow the outline as described in Section 1.

- What is your state proposing for a conservation equivalency measure?
 - Virginia is proposing to maintain current minimum size limits in the Chesapeake Bay (minimum size limit = 20” TL) , implement a 36” recreational maximum size limit and lower the recreational possession limit from two to one-fish per angler. However, anglers can keep 1 fish greater than 36” per year with the use of a special permit.
- Does your proposal meet the data standards established by the TC?
 - Yes, all data are provided through MRIP (2017).
- What data sources are used in the analysis (include mode or season specific if applicable)?
 - 2017 MRIP Inland Harvest and releases (all modes combined).
- Sample size summary by mode, season, or state and/or data source as applicable.
 - Summary data provided from MRIP. Sample sizes are not applicable for total removals by area
- Describe in one sentence how you did the analysis (e.g., used methods outlined in Greg Wojcik’s spreadsheet, used SAS code provided by Mike Celestino, alternative analysis described briefly).

- I used the same bag limit analysis for Chesapeake Bay options in Draft Addendum VI, specific to VA Inland intercepts only.
- Provide a table of results as presented in Greg Wojcik's spreadsheet or equivalent spreadsheet that is comparable with your analysis.
 - See tables 1-3 at the bottom of the document and attached spreadsheet.
- Clearly identify that at least an 18% reduction in total removals is achieved from pooled 2016-2017 for all size-related analysis or pooled 2015-2018 data for seasonal and mode-based analyses.
 - All reductions in Chesapeake Bay removals are estimated from lowering the bag limit from 2 to 1-fish per angler. Recreational maximum size limits (36") in the Chesapeake Bay are not included in savings.

Section 3: Coastal Commercial Fishery

2a.) Implementation of an 18% reduction from the Addendum IV quotas. The reduced quotas in Addendum VI account for previously approved CE programs, therefore, states do not need to submit for CE if they choose to maintain 2017 size limits in its commercial fisheries.

OR

2b.) If a state chooses to modify 2017 size limits, the state needs to submit a CE proposal adjusting its quota relative to the new Addendum VI quota baseline (i.e., 18% reduction from the quota as listed in Addendum IV).

Note: Whether implementing 2a or 2b, please include a list of commercial fishery management measures being implemented (including but not limited to size limits, seasons by gear type). Also, please be brief when submitting commercial fishery CE proposals and follow a similar outline as described in Section 1.

- What is your state proposing for a conservation equivalency measure?
 - Virginia is proposing to lower the coastal commercial quota by 9.81%, relative to baseline Addendum IV coastal quota in Virginia. Virginias revised coastal commercial quota for 2020 will be 125,034 pounds (previously 138,640 pounds).
- Does your proposal meet the data standards established by the TC?
 - Yes, commercial landings are provided from ASMFC compliance reports.
- What data sources are used in the analysis (include mode or season specific if applicable)?
 - ASMFC compliance reports and SAW 66 discard mortality estimates from the coast.
- Sample size summary by mode, season, or state and/or data source as applicable.
 - Not applicable

- Describe in one sentence how you did the analysis (e.g., used methods outlined in Greg Wojcik’s spreadsheet, used SAS code provided by Mike Celestino, alternative analysis described briefly).
 - I used revised recreational removal estimates in 2020 to estimate the commercial removal target in 2020 that would achieve an 18% reduction in total removals (sectors combined) relative to 2017 removal levels. The necessary reduction in coastal commercial removals was applied to the average 2017 coastal commercial weight to lower the coastal commercial quota.
- Provide a table of results as presented in Greg Wojcik’s spreadsheet or equivalent spreadsheet that is comparable with your analysis.
 - See tables 1-3 at the bottom of the document and attached spreadsheet.
- Clearly identify that at least an 18% reduction in total removals is achieved from pooled 2016-2017 for all size-related analysis or pooled 2015-2018 data for seasonal and mode-based analyses.
 - See tables 1-3 at the bottom of the document and attached spreadsheet. Implementing commercial gill net maximum mesh size restrictions on the coast (9” max mesh size) was not counted towards reductions in coastal commercial removals. Instead, coastal removals were adjusted through reductions in coastal commercial quota.

Section 4: Chesapeake Bay Commercial Fishery (MD, VA, PRFC)

4a.) Implementation of an 18% reduction from the Addendum IV Chesapeake Bay commercial quota. After this reduction, the total Chesapeake Bay commercial quota amounts to 2,558,603 lbs. Please indicate what your state/jurisdictions commercial quota will be for 2020, and the commercial fishery management measures being implemented (including but not limited to size limits, seasons by gear type).

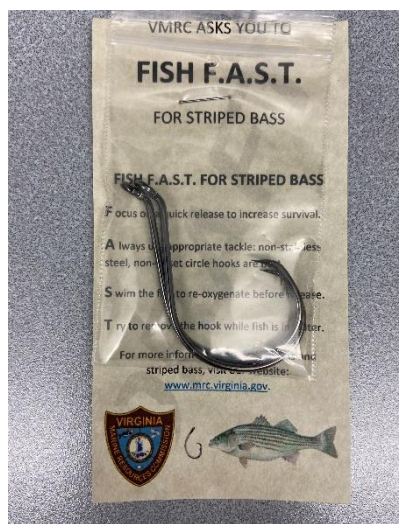
- What is your state proposing for a conservation equivalency measure?
 - Virginia is proposing to lower the Chesapeake Bay commercial quota by 7.66%, relative to baseline addendum IV Chesapeake Bay quota in Virginia. Virginias revised Chesapeake Bay commercial quota for 2020 will be 983,393 pounds (previously 1,064,997 pounds).
- Does your proposal meet the data standards established by the TC?
 - Yes, commercial landings are provided from ASMFC compliance reports.
- What data sources are used in the analysis (include mode or season specific if applicable)?
 - ASMFC compliance reports and SAW 66 discard mortality estimates from the Chesapeake Bay.
- Sample size summary by mode, season, or state and/or data source as applicable.

- Not applicable
- Describe in one sentence how you did the analysis (e.g., used methods outlined in Greg Wojcik’s spreadsheet, used SAS code provided by Mike Celestino, alternative analysis described briefly).
 - Virginia used revised recreational removal estimates in 2020 to estimate the commercial removal target in 2020 that would achieve an 18% reduction in total removals (sectors combined) relative to 2017 removal levels. The reduction in commercial Chesapeake Bay removals was applied to the average 2017 commercial Chesapeake Bay weight to lower the Chesapeake Bay commercial quota.
- Provide a table of results as presented in Greg Wojcik’s spreadsheet or equivalent spreadsheet that is comparable with your analysis.
 - See tables 1-3 at the bottom of the document and attached spreadsheet
- Clearly identify that at least an 18% reduction in total removals is achieved from pooled 2016-2017 for all size-related analysis or pooled 2015-2018 data for seasonal and mode-based analyses.
 - See tables 1-3 at the bottom of the document and attached spreadsheet. Implementing commercial gill net maximum mesh size restrictions in the Chesapeake Bay (7” max mesh size) was not counted towards reductions towards Chesapeake Bay commercial removals. Instead, Chesapeake Bay removals were adjusted through reductions in the Chesapeake Bay commercial quota.

Section 5: Circle Hook Requirements

Provide draft regulatory language and/or briefly describe the process the state/jurisdiction is taking to develop appropriate regulations. Please also briefly describe the public education and outreach campaigns the state/jurisdiction will develop to promote awareness and compliance with a circle hook requirement.

Virginia will be distributing circle hooks in 2020 from hook donations received from ASMFC (meetings, events, etc.). In addition, Virginia will be promoting the use of circle hooks in 2020 on our website and social media. Virginia plans to make circle hooks mandatory prior to the start of the 2020 Chesapeake Bay Fall Season. Regulatory language is not available at this time.



Section 6: Timeline for Implementation

Briefly describe the timeline for implementation of management measures as well as the start of your state’s fisheries relative to your proposed implementation date. **Note:** States are required to implement circle hook requirements by January 1, 2021. All other provisions of Addendum VI must be implemented by April 1, 2020.

- Virginia has already implemented recreational measures for the 2019 fishing season. Adjustments to Virginia’s Chesapeake Bay and coastal commercial quotas were approved by our Commission on November 26, 2019 with an effective date of December 1 for the 2020 commercial fishing season.

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18% reduction from 2017 Virginia total removals

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Revised 2020 quota (pounds)	983,393	125,034	1,108,427
% change relative to 2019 quota	-7.66%	-9.81%	-7.91%



ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

North Carolina’s Atlantic Striped Bass Addendum VI Implementation Plan

Summary of Proposed Measures

Recreational Fishery

State	Size Limits	Bag Limits	Other	Open Season
North Carolina	28-35 inches TL	1/person/day	N/A	Jan. 1-Dec. 31

Commercial Fishery

State	Size Limits	Seasonal Quota	Open Season
North Carolina	28 inches TL	295,495 pounds	Dec. 1-Nov. 30*

*Commercial fishery opened and closed via proclamation (not opened for the entire period)

Section 1: Coastal Recreational Fishery

1a.) North Carolina will implement a one fish bag limit and a slot size limit of 28 inches to less than 35 inches total length and an open season from January 1 through December 31. These regulations only apply to NC’s state ocean waters (estuarine fisheries are managed by NC since they are not a significant part of the coastal migratory stock).

Section 2: Chesapeake Bay Recreational Fishery (MD, VA, PRFC, DC)

N/A

Section 3: Coastal Commercial Fishery

Note: Whether implementing 2a or 2b, please include a list of commercial fishery management measures being implemented (including but not limited to size limits, seasons by gear type). Also, please be brief when submitting commercial fishery CE proposals and follow a similar outline as described in Section 1.

2a.) North Carolina will implement an 18% reduction from their Addendum IV quota, which is 295,495 pounds. The quota will be evenly distributed (~98,498 pounds) among the three target gear types: beach seines, gill nets and trawls. The minimum size limit for the commercial fishery will remain 28 inches total length. The gear requirements for the commercial striped bass fisheries will also remain the same. The gear-specific seasons will open and close via proclamation authority from December 1 to November 30 (the fishery will not remain open the entire period; it is typically prosecuted from December through February and is closed by proclamation). Possession limits will vary among fisheries and available quota. Fishermen are required to possess an Atlantic Ocean Striped Bass Commercial Gear Permit and dealers must possess an Atlantic Ocean Striped Bass Dealer Permit, tag all striped bass with commercial tags

at the point of landing, and report landings daily on quota monitor logs that are sent to the NC Division of Marine Fisheries.

These regulations only apply to NC's state ocean waters (estuarine fisheries are managed by NC since they are not a significant part of the coastal migratory stock).

Section 4: Chesapeake Bay Commercial Fishery (MD, VA, PRFC)

N/A

Section 5: Circle Hook Requirements

North Carolina will implement the circle hook requirement for its recreational striped bass fishery in the ocean via proclamation by no later than January 1, 2021. Consistent with Addendum VI, anglers possessing or fishing for striped bass with natural bait must use non-offset circle hooks. North Carolina Division of Marine Fisheries (NCDMF) staff will develop the specific circle hook regulation language in the coming months.

The NCDMF will continue to distribute ethical angler information to the public (http://portal.ncdenr.org/c/document_library/get_file?p_l_id=1169848&folderId=4426632&name=DLFE-141479.pdf) and will distribute circle hooks to anglers when available.

Section 6: Timeline for Implementation

Briefly describe the timeline for implementation of management measures as well as the start of your state's fisheries relative to your proposed implementation date. **Note:** States are required to implement circle hook requirements by January 1, 2021. All other provisions of Addendum VI must be implemented by April 1, 2020.

North Carolina will implement the 28-35-inch slot limit for its ocean recreational fishery via proclamation on January 1, 2020. This coincides with when striped bass are available in North Carolina's state waters.

North Carolina will manage its commercial fishery under the Addendum VI state quota starting on December 1, 2019 to coincide with the commercial quota season.

North Carolina will implement the circle hook requirement for its recreational striped bass fishery in the ocean via proclamation by no later than January 1, 2021.



Atlantic States Marine Fisheries Commission

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

MEMORANDUM

January 8, 2020

To: Atlantic Striped Bass Management Board

From: Tina Berger, Director of Communications

RE: Advisory Panel Nomination

Please find attached a nomination to the Atlantic Striped Bass Advisory Panel – Bob Humphrey, a commercial rod and reel fisherman and for-hire Captain from Maine. Please review this nomination 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: Max Appelman

M19-94

ATLANTIC STRIPED BASS ADVISORY PANEL

Bolded names await approval by the Atlantic Striped Bass Management Board

January 8, 2020

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
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Phone (eve): 207.688.4854
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New Hampshire

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Appt Reconfirmed 5/10

Massachusetts

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Appt. Confirmed 3/23/11
Appt. Reconfirmed 8/18

Patrick Paquette (rec/for-hire/comm)
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Email: basicpatrick@aol.com
Appt. Confirmed 8/16

Rhode Island

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Appt. Confirmed 2/22/06
Appt Reconfirmed 5/10

Vacancy (rec)

Connecticut

Kyle Douton (rec/tackle shop owner)
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Phone (eve): (860)739-8899
FAX: (860)739-9208
kyle@jbtackle.com
Appt. Confirmed 5/13/14

Vacancy (rec)

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2887 Alfred Court
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FAX: (212)362-4831
john@nycflyfishing.com
Appt. Confirmed 8/15/07

Vacancy (comm)

New Jersey

C. Louis Bassano, Chair
1725 West Central Avenue
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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
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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

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Delaware

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Appt. Confirmed 4/21/94
Appt. Reconfirmed 7/27/99; 7/03 and 7/07

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smithbait@verizon.net
Appt. Confirmed 10/23/18

Maryland

Vacancy – for-hire

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Davidsikorski@mac.com
Appt Confirmed 3/23/11

Virginia

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Williamsburg, VA 23185
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FAX: (757) 259-9669
kelltron@aol.com
Appt. Confirmed 5/23/02
Appt Reconfirmed 5/06 and 5/10

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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

Vacancy (rec)

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.

Kyle J. Schick (marina owner, seafood
restaurateur, rec/com)
901 Irving Avenue
PO Box 400
Colonial Beach, VA 22443
Phone (o): (804) 224-7230
Phone (c): (804) 761-1729

FAX: (804) 224-7232

Email: kyle@cbycmarina.com

Appt. Confirmed 8/15/07



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: Pat Keliher, Commissioner State: Maine
(your name)

Name of Nominee: Bob Humphrey

Address: 727 Poland Range Road

City, State, Zip: Pownal, ME 04069

Please provide the appropriate numbers where the nominee can be reached:

Phone (day): (207) 688-4966

Phone (evening): (207) 688-4854

FAX: _____

Email: bob@bobhumphrey.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 X

3. Is the nominee a member of any fishermen's organizations or clubs?

yes _____ no X

If "yes," please list them below by name.

4. What kinds (species) of fish and/or shellfish has the nominee fished for during the past year?
striped bass tuna
groundfish mackerel
sharks

5. What kinds (species) of fish and/or shellfish has the nominee fished for in the past?
striped bass sharks
bluefish tuna
groundfish sailfish

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? 2 years
2. Is the nominee employed only in commercial fishing? yes _____ no X
3. What is the predominant gear type used by the nominee? rod and reel
4. What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)? offshore

FOR CHARTER/HEADBOAT CAPTAINS:

1. How long has the nominee been employed in the charter/headboat business? 22 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): Outdoor Writer, consulting biologist
3. How many years has the nominee lived in the home port community? 30 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? 55 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.

I was a commercial salmon fisherman in Alaska in 1983 and a commercial tuna fisherman in Maine in 2018 and 2019

FOR SEAFOOD PROCESSORS & DEALERS:

- 1. How long has the nominee been employed in the business of seafood processing/dealing? 2 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):

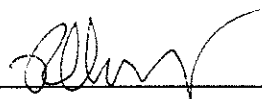
- 3. How many years has the nominee lived in the home port community? 30 years
If less than five years, please indicate the nominee's previous home port community.

FOR OTHER INTERESTED PARTIES:

- 1. How long has the nominee been interested in fishing and/or fisheries management? 55 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:

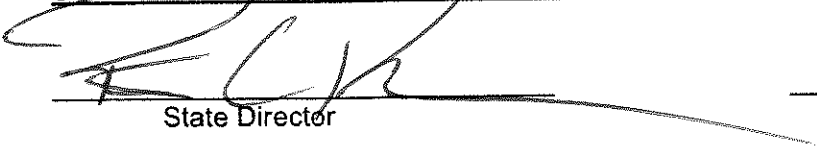
In the space provided below, please provide the Commission with any additional information which you feel would assist us in making choosing new Advisors. You may use as many pages as needed.

Nominee Signature: 

Date: 12/23/19

Name: Bob Humphrey
(please print)

COMMISSIONERS SIGN-OFF (not required for non-traditional stakeholders)


State Director

State Legislator

Governor's Appointee

Max Appelman

From: G2W2
Sent: Tuesday, November 12, 2019 10:15 AM
To: Max Appelman
Subject: FW: Menhaden quotas

-----Original Message-----

From: JPR [mailto:ricbuilds1@yahoo.com]
Sent: Friday, November 1, 2019 6:59 PM
To: G2W2 <G2W2@asmfc.org>
Subject: Menhaden quotas

It was a Good thing to hear people properly managing our national resources, and bounties.

It was a Pleasure

Jpr

John in Virginia

Sent from my iPhone

Max Appelman

From: G2W2
Sent: Tuesday, November 12, 2019 10:15 AM
To: Max Appelman
Subject: FW: Disappointed

[Striped bass public comment](#)

From: Patrick Perrotto [mailto:patrickperrotto@gmail.com]
Sent: Saturday, November 2, 2019 11:18 AM
To: G2W2 <G2W2@asmfc.org>
Subject: Disappointed

I have listened to most webinars with regards to the current state of the striped bass fishery. I feel like my participation has been a complete waste of my time as you ignored the majority of the public's comments. I have lost all faith in the commission's ability to protect this fishery and I now fear for the future. I hope that my 1 year old son will be able to experience striped bass fishing.

Patrick Perrotto



Sun 1/19/2020 8:16 AM

Erika Ritter <acrusingdowntheriver@gmail.com>

[External] Striped Bass Lacking in Florida

To Comments

Cc Lisa Rinaman

You forwarded this message on 1/21/2020 11:50 AM.

Sorry to not reply before the deadline on management.

I am concerned that Florida is causing some of the loss of Striped Bass. A dam across a river on Florida's east coast has made it impossible for them to spawn successfully. We now rely on a fish hatchery. The Ocklawaha River prior to Rodman Dam was the only river long enough with the right current speed and temperature to allow their eggs to mature and hatch. The Ocklawaha River has lost Atlantic Striped Bass. The dam is placed 12 miles upstream from the St John's River. It reduced the access for Striped Bass to 12 miles and not the full length of the river which is 72 miles. Bass were historically about to reach Silver Springs in Marion County to spawn annually. Please consider evaluating the impact of this lost river on Striped Bass populations. Thanks.

7:59 AM Sun Jan 19

books.google.com

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the surrncial aquiter.

Prior to the creation of Rodman Reservoir, several springs existed between Eureka and Rodman Dam. A research paper dated 1971 by a University of Florida Geology student, Elizabeth Abbott, describes 20 springs that existed before the reservoir was created. Abbott (1971) observed some of these springs, and the others were described and located on aerial photos by local people. At the time of her research, some of the higher springs were altered, but still present, and the lower ones were flooded as a result of the dam. Many of the springs have been inundated under the full retention of the reservoir. Figure 4-4 shows the locations of springs as described by Abbott (1971).

4.10 Fish Populations

Estuarine fish species have access to the Ocklawaha River through the St. Johns River, and some take advantage of saltwater wedges that move upstream through the St. Johns River beyond the confluence of the Ocklawaha River. Although some migratory fish are passing through the Buckman Lock, the dam appears to pose a barrier to the spread of a variety of migratory fishes that historically used the system.

The historical data reviewed for the Ocklawaha River and the Rodman Reservoir produced a list of 69 fish species and 22 families. Forty-two species of fish from 18 families were found during the SJRWMD study (1994). The decrease is probably due to the change from a flowing river system to a standing reservoir system. Individual fish biomass is expected to be greater under the full retention (no action) alternative.

Reid (1970) reported 110 fish species in the Ocklawaha River, including such migratory species as striped bass and mullet. Several species on the list have not been recorded from the reservoir since routine fishery sampling began in 1971. These fish include relatively uncommon species such as the dusky and bluenose shiner, the Southern tessellated darter, and snail bullhead. The lack of these species may be due to the change in overall habitat from a flowing system to the reservoir, which favors species that thrive in lakes and are associated with the dense vegetation found in the reservoir.

Two major fish kills have occurred in Rodman Reservoir during the 1980s. In August 1985, an estimated 8.5 million fish died. Spotted sunfish, warmouth, redear sunfish, largemouth bass, and bluespotted sunfish represented 52 percent of the total dead fish. The second kill occurred in October 1988 when an estimated

