

Atlantic States Marine Fisheries Commission

Atlantic Striped Bass Management Board

*February 7, 2018
3:00 – 4:30 p.m.
Arlington, Virginia*

Agenda

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

1. Welcome/Call to Order (*M. Armstrong*) 3:00 p.m.
2. Board Consent 3:00 p.m.
 - Approval of Agenda
 - Approval of Proceedings from October 2017
3. Public Comment 3:05 p.m.
4. Review and Consider Maryland Conservation Equivalency Proposal **Final Action** 3:15 p.m.
 - Maryland Conservation Equivalency Proposal Overview (*M. Luisi*)
 - Technical Committee Report (*N. Lengyel*)
 - Law Enforcement Committee Report (*M. Robson*)
 - Advisory Panel Report (*M. Appelman*)
 - Consider Maryland Conservation Equivalency Proposal (*M. Armstrong*)
5. 2018 Benchmark Stock Assessment Progress Update (*K. Drew*) 4:20 p.m.
6. Other Business/Adjourn 4:30 p.m.

The meeting will be held at the Westin Crystal City 1800 Jefferson Davis Highway, Arlington, Virginia; 703.486.1111

MEETING OVERVIEW
Atlantic Striped Bass Management Board Meeting

February 7, 2018
3:00 – 4:30 p.m.
Arlington, Virginia

Chair: Mike Armstrong (MA) Assumed Chairmanship: 02/18	Technical Committee Chair: Nicole Lengyel (RI)	Law Enforcement Committee Rep: Kurt Blanchard (RI)
Vice Chair: Michelle Duval (NC)	Advisory Panel Chair: Louis Bassano (NJ)	Previous Board Meeting: October 19, 2017
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 2017

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.

<p>4. Review and Consider Maryland Conservation Equivalency Proposal (3:15 p.m. – 4:20 p.m.) Final Action</p> <p>Background</p> <ul style="list-style-type: none"> • Maryland submitted a conservation equivalency proposal for its summer/fall recreational striped bass fishery in the Chesapeake Bay (Briefing Materials) • Maryland’s summer/fall fishery (May 16-Dec 20) in the Chesapeake bay is currently regulated by a two fish bag limit with a 20” minimum size limit where only one fish can be greater than 28” minimum size. • Proposed measures include a reduced minimum size limit of 19” during all or part of the summer/fall months, or year round in conjunction with a mandatory circle hook requirement for recreational bait fishermen. • The Technical Committee, Advisory Panel and Law Enforcement Committee met via webinar, separately, to review the proposed measures and provide their respective comments and recommendations for Board consideration (Briefing Materials) <p>Presentations</p> <ul style="list-style-type: none"> • Technical Committee Report by N. Lengyel
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<ul style="list-style-type: none">• Law Enforcement Committee Report by M. Robson• Advisory Panel Report by M. Appelman
Board Actions for Consideration <ul style="list-style-type: none">• Consider Maryland Conservation Equivalency Proposal

5. 2018 Benchmark Stock Assessment Progress Update (4:20 p.m. – 4:30 p.m.)
Background <ul style="list-style-type: none">• A benchmark stock assessment is currently underway and schedule for peer review at the end of 2018.
Presentations <ul style="list-style-type: none">• Benchmark Stock Assessment Progress Update by K. Drew

6. 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

- TC – June 15th: Annual compliance reports due
- TC/SASC/TSC – All Year: benchmark stock assessment
 - Mar./Apr. 2018: Modeling Workshop I
 - May 2018: Updated data submission for Assessment through 2017
 - July 2018: Modeling Workshop II
 - Sept. 2018: Final SASC call/webinar to approve stock status determination
 - 1st week of Oct. 2018: All Draft Report components due to staff
 - 2nd week of Nov. 2018: Assessment Report due to external peer-review panel
 - Nov. 27-30, 2018: Peer review (SAW/SARC 66)

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

SAS Members: Edward Hale (DE, Chair), Gary Nelson (MA, Vice Chair), Alexei Sharov (MD), Hank Liao (ODU), Justin Davis (CT), Michael Celestino (NJ), 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), Edward Hale (DE), 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**

**The Marriott Norfolk Waterside
Norfolk, Virginia
October 19, 2017**

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.

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1. **Approval of agenda** by consent (Page 1).
2. **Approval of proceedings of May 2017** by consent (Page 1).
3. **Move to approve the 2017 Fishery Management Plan Review and state compliance for Atlantic Striped Bass** (Page 8). Motion by Mike Luisi; second by Pat Keliher. Motion carried (Page 8).
4. **Move to elect Mike Armstrong as Chair of the Atlantic Striped Bass Management Board, and Michelle Duval as Vice-chair** (Page 17). Motion by Ritchie White; second by Russ Allen. Motion carried (Page 17).
5. **Move to adjourn** by consent (Page 18).

ATTENDANCE

Board Members

Patrick Keliher, ME (AA)	Andrew Shiels, PA, proxy for J. Arway (AA)
G. Ritchie White, NH (GA)	Loren Lustig, PA (GA)
Doug Grout, NH (AA)	John Clark, PA, proxy for D. Saveikis (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Roy Miller, DE (GA)
Raymond Kane, MA (GA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
Mike Armstrong, MA, proxy for D. Pierce (AA)	Ed O'Brien, MD, proxy for Del. Stein (LA)
David Borden, RI (GA)	Mike Luisi, MD, proxy for D. Blazer (AA)
Jay McNamee, RI, proxy for J. Coit (AA)	Rob O'Reilly, VA, proxy for John Bull (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Kyle Schick, VA, proxy for Sen. Stuart (LA)
Matt Gates, CT, proxy for M. Alexander (AA)	Catherine Davenport, VA (GA)
James Gilmore, NY (AA)	Michelle Duval, NC, proxy for B. Davis (AA)
John McMurray, NY, proxy for Sen. Boyle (LA)	David Bush, NC, proxy for Rep. Steinburg (LA)
Russ Allen, NJ, proxy for L. Herrighty (AA)	Derek Orner, NMFS
Tom Fote, NJ (GA)	Sherry White, USFWS
Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)	

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

Ex-Officio Members

Nicole Lengyel, Technical Committee Chair

Staff

Robert Beal	Katie Drew
Toni Kerns	Max Appelman

Guests

(NOTE: Sign-In sheet not distributed)

Robert Newberry, DelMarVa Fishermen Assn.	Robert T. Brown, MWA Bill Goldsborough, MD
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The Atlantic Striped Bass Management Board of the Atlantic States Marine Fisheries Commission convened in the Hampton Roads Ballroom V of the Marriott Waterside Hotel, Norfolk, Virginia, October 19, 2017, and was called to order at 8:00 o'clock a.m. by Chairman James J. Gilmore.

CALL TO ORDER

CHAIRMAN JAMES J. GILMORE: Good morning, my name is Jim Gilmore; I'm the Administrative Commissioner for New York, and I'll be Chairing the Striped Bass Board meeting this morning. Welcome to everybody on this bright, beautiful day. We actually during the Executive Committee meeting yesterday it said we had instructions on how to run a meeting.

We've got them here, how to do it very efficiently. Actually there is only one thing on it. It says don't let Tom Fote talk. That being said; let's get right into the agenda.

APPROVAL OF AGENDA

CHAIRMAN GILMORE: First off, first action item is Board Consent; Approval of the Agenda. The agenda should be in your briefing package. Are there any changes to the agenda? Seeing none; we'll take that as unanimous consent.

APPROVAL OF PROCEEDINGS

CHAIRMAN GILMORE: Next is our approval of the proceedings from May of 2017. You have reviewed those, any changes to our proceedings from our last meeting? Seeing none; we'll take those with unanimous consent.

PUBLIC COMMENT

CHAIRMAN GILMORE: Our next agenda item is Public Comment. I've had two individuals that have signed up; actually three individuals that have signed up that want to speak, so I'll take them in order. First we have Bill Goldsborough. These again are for topics not on the agenda today. Please keep your comments brief. Thank you, go ahead, Bill.

MR. WILLIAM GOLDSBOROUGH: Thank you, Mr. Chairman, members of the Committee. My name is Bill Goldsborough. I come here today as

a private citizen; albeit one who spent many years around this table working on striped bass. My interest today is to encourage certain steps that I believe are necessary to continue to grow and strengthen the striped bass population.

In that quest we are fortunate to have some strong year classes in the pipeline from good recruitment in Chesapeake Bay. The 2011 and 2015 year classes are very strong; as you know. We now have word from the 2017 Maryland Young-of-Year Survey that this year's spawn was good as well.

The concern I have is whether these fish will find sufficient forage to reach their full potential. As we are all aware, striped bass depend heavily on Atlantic menhaden as prey. To that point I call your attention to a new paper by Buchheister et al. this year that underscores this dependence by showing a tight correlation between striped bass and menhaden biomass; with both declining with increased menhaden fishing mortality.

As you know, the Menhaden Board will be finalizing Amendment 3 next month. It is my hope that ecological reference points will finally be adopted at that meeting; that will ensure sufficient forage for striped bass and other predators along the coast. But another decision in Amendment 3 may have greater implications for those striped bass year classes currently maturing in Chesapeake Bay. My message to this Board is not to overlook it. I'm referring to the Chesapeake Bay menhaden reduction fishery cap.

While the ecological reference points are crucial for ecological balance coastwide; the only tool we have to buffer the concentration of the fishery in Chesapeake Bay is the reduction cap. While menhaden stock biomass has improved in recent years, most of that biomass is in northern waters; while harvest pressure is concentrated in the Bay region where biomass is relatively low.

There is real potential for striped bass in Chesapeake Bay to be food limited in these coming years; and in fact recently there have been numerous reports from anglers in

Maryland of skinny stripers, with no apparent body fat. Whether this condition is related to the wasting disease mycobacteriosis that sometimes plagues the Bay has not been determined.

But recall that Jacobs et al. 2011 did find that poor diet enhances the progression and severity of mycobacteriosis in Chesapeake Bay striped bass. The bottom line is that the Bay reduction cap for menhaden remains important for striped bass; and it is my hope that this message is carried to the Menhaden Board when it deliberates Amendment 3 next month. Thank you, Mr. Chairman.

CHAIRMAN GILMORE: Thanks Bill, good to see you again. Next we have Captain Bob Newberry.

CAPTAIN BOB NEWBERRY: Mr. Chairman, members of the Committee, my name is Robert Newberry; Chairman of DelMarVa Fisheries. I'm here to discuss today a situation in hand that I believe will be discussed today also is about the problem that we're having in Maryland; specifically in the northern reaches of the Bay, with the amount of discard or the B-2s, and the problem that is arising from that.

It's a very, very troublesome situation. I run a charter service alone and represent many others in the charter business too. We have seen over the past three years, as we have testified here, not me, but Captain Phil Langley, who is head of the Charterboat Association, has testified of his concern over the amount of waste of these fish or these B-2s.

We have put together a group and have addressed this with DNR. I'm not here to point fingers or blame on anybody, because the old saying is if you point your finger at somebody you've got three pointing back at you. I'm just as guilty as everybody else is that is participating in this decimation of these fish.

What concerns me is I would really like to see this Commission, when it's addressed today is to really buckle down and take a good look at this problem; because it's not thousands of fish, we're in the hundreds of thousands of fish that

are being wasted. For the past three years we have had slicks of fish that one we have a film of this year was two miles wide and three miles long; it had washed up on the beaches of Kent Island, massive amount of buzzards were feeding on them.

People were complaining about the amount of buzzards. But it's not the fact that these fish were skinny and small, it's going after the conservation equivalence for this 20 inch fish. I would implore the Commission that when this is addressed to seriously look at it; because the one thing that I've said here before in the past three years, and I'm going to say it again and I just hope it kind of sticks like superglue is that when a natural resource is politicized, there are only two outcomes from that.

It is the demise of that natural resource, and the demise of the industry based upon that resource, and we're seeing that happen right now. The science is there. I think that Maryland should lead the charge on this; which I'm fully sure that they will and working with ASMFC and the other states.

Because if we are going to ensure the longevity of these striped bass, and seeing what I've seen over the past three years as a result of Addendum IV. It is horrific. Once again, I will repeat myself is that politicizing of a natural resource leads to two problems; the demise of that resource and the demise of the industry based around it. Thank you very much.

CHAIRMAN GILMORE: Thank you, Captain Newberry. Last I have Robert Brown.

MR. ROBERT T. BROWN: Thank you Mr. Chairman, for letting me speak. My name is Robert T. Brown; I'm President of the Maryland Watermen's Association. We have a large problem in Maryland with discards, since we have a minimum size of a 20 inch rockfish in the state of Maryland.

This all came about back a few years ago when we got a 25 percent reduction on the coast and a 20.5 percent reduction in the Chesapeake Bay.

To meet the criteria to keep fishing, we went to a 20 inch fish on the sport and charterboats to meet the criteria we had to be fishing legally. When this happened, by raising that size limit of those fish and the amount of fish that we have in the Bay, you have to catch anywhere from 20 to 50 or 80 fish before you can catch one that is of legal size.

Once you hook these fish, especially during the warm waters of the summer, we have a lot of fish that die. These dead discards have been floating all up and down the Bay. They've been floating and going ashore in different places. It's not because they have a lack of feed. It's because we have so many fish in the Bay at this time; and we have two or three more year classes that I'm glad to hear that we have.

But with the abundance of rockfish that are in the Bay is becoming overwhelming. What I would like, hopefully I just want to make everybody aware of this so we can do something to stop this; because it's a waste of the resource when you can't catch it all the time and keep it. You're better off to go out and catch a few fish, catch your quota, go back in. It's better for business than catching all these fish and having these discards. I thank you for your time.

CHAIRMAN GILMORE: Thank you, Mr. Brown. Is there any other public comment before we get into the rest of the agenda?

CONSIDER 2017 FISHERY MANAGEMENT PLAN REVIEW AND STATE COMPLIANCE REPORTS

CHAIRMAN GILMORE: Okay seeing none; we're going to go right into Item 4, Consider 2017 Fishery Management Plan Review and State Compliance Report; and Max has got a presentation for us. Max.

MR. MAX APPELMAN: This is the 2017 FMP Review for striped bass. The reporting period is the 2016 calendar year. A quick overview of my presentation; touch on the status of the stock and the status of the fishery, move on to status of management measures, and wrap up with compliance and Review Team recommendations.

Based on the results of the 2016 stock assessment update, Atlantic striped bass is not overfished, and overfishing is not occurring. In 2015 spawning stock biomass was estimated at 58,853 metric tons, which is just above the threshold.

Fishing mortality was estimated at 0.16, which is below the threshold and the target; and as we're all likely aware, the benchmark is currently underway. Peer review is expected at the end of 2018.

This is a look at spawning stock biomass over time. This is Figure 1 from the FMP review report. What you can see is an exponential increase almost from the beginning of the time series; then it crosses the threshold at 1995, which is not coincidentally the definition of that threshold is that value. It continues on to a peak around 2003, and since then has been declining. In 2015 you can see it is just slightly above that threshold level.

Moving on to fishing mortality rate over time, a similar trend here in the beginning of the time series as the management plan relaxed regulations, you can see fishing mortality increase to a peak around 2006, 2007; at which point it decreased a little bit but has fluctuated right around 0.2 it's across the threshold, and is currently below the target in 2015.

Moving on to status of the fishery, this is looking at the commercial sector; 2016 was an estimate of 4.8 million pounds. This is very similar to 2015. Both of these fishing seasons were under the Addendum IV quota; so that's not very surprising. Commercial landings and discards by state are detailed in Tables 1, 2, and 3; but just a couple more points here, 60 percent of the harvest did come from the Chesapeake Bay fisheries, and that discard estimate in 2016 is a little over 400,000 pounds, which is higher than it was last year but much lower than the year before that. It is sort of middle of the road. I do have one small correction in the FMP Review report. I incorrectly reported the difference between the 2015 and the 2016 landings numbers; it's a very small number and very small

difference; but just FYI I'll make that change in the final version.

Moving on to the recreational fishery; so 2016 did mark an 18 percent increase in total removals compared to 2015; that's in terms of number of fish. We are talking about harvest and dead discards when we say total removals. The 2016 harvest estimate was a little over 1.5 million fish; which equates to roughly 19.9 million pounds; 46 percent of that came from the Chesapeake Bay fisheries, in terms of number of fish. Our fish released increased by 37 percent; which in that dead discard estimate is 1.04 million fish.

That is the red bars on that figure there. You can see it is pretty high over the recent decade or so; but if you move further into those peak biomass years in the mid '90s to 2008, it is actually on the lower end. Just to put things in perspective.

Take a quick peek at the Albemarle Sound, Roanoke River stock. Based on a stock specific assessment conducted by North Carolina, this AR stock is not overfished and overfishing is not occurring. The 2014 spawning stock biomass estimate is a little over 2 million pounds; which is well over the threshold and the target, 2014 fishing mortality estimate at 0.06, which is similarly well below the threshold and target. Speaking with North Carolina's staff, I was advised to extend caution when evaluating those terminal year stock status estimates for the AR. It is likely an overestimate of SSB, and an underestimate of F considering the retrospective bias exhibited by the AR stock-specific model. The magnitude of those values will likely change as additional years of data are incorporated.

A quick look at the harvest in Albemarle Roanoke stock from that region, commercial harvest was a little over 120,000 pounds. This is a slight increase relative to 2015, and recreational harvest just shy of 80,000 pounds, also a slight increase from 2015.

Moving on to status of management measures; this is a look at the coastal commercial quota. In 2016, Rhode Island had a reduced quota due to

overages in 2015. The total coastal commercial quota was 2.84 million pounds.

This was not exceeded, however there were three state-specific overages; Massachusetts by 68,927 pounds, Rhode Island by 32 pounds, Virginia by 589 pounds, and those overages will be deducted from the current 2017 quota. Moving to the Chesapeake Bay, there were no deductions from 2015, so the commercial quota stands as it is in Addendum IV. The 2016 Bay wide quota was not exceeded. Similarly there were no jurisdiction specific overages.

Now, looking at the juvenile abundance index analysis, Addendum II defines recruitment failure as a value that is lower than 75 percent, or the first quartile, Q1 of all values in a fixed time series appropriate to each JAI. The PRT, which does include some membership overlap with the Technical Committee, reviews this Juvenile Abundance Index from six different surveys; and if any of those surveys do fall below its respective Q1 for three consecutive years, appropriate action is recommended to the Board.

For the 2017 JAI Review, the Review Team evaluated the 2014, 2015, and 2016 values; and there was no management action triggered. This is a very small figure; however, you can see it much better in your review report. What I'm clearly trying to do is direct your attention to two specific values.

The top right corner that's the Maryland JAI in the Chesapeake Bay; and then in the middle on the left is from New York and the Hudson River; those two values in 2016 were below Q1. The previous years in those time series were above average, so again no management action triggered. But if this does continue next year or the year after that might see some red flags.

Status of management measures continues with Addendum III. This is the commercial tagging program. Addendum III requires all states with commercial fisheries to implement a commercial tagging program; and to submit annual monitoring reports no less than 60 days prior to

the start of their first commercial season.

The monitoring report primarily includes a summary of the previous year's tagging program. This includes also tag descriptions for the upcoming season, as well as highlighting any issues with the program. In 2016 all states submitted reports on schedule; and implemented commercial tagging programs consistent with those requirements. You can refer to Table 10 in the report, which summarizes each state's program requirements.

Wrapping up with compliance and recommendations, the Review Team reviewed all the state compliance reports, and determined that each state and jurisdiction implemented regulations consistent with Amendment 6 and Addenda I through IV. There were no de minimis requests at this time. As such, the Review Team recommends the Board accept the 2017 FMP Review and State Compliance reports for Atlantic striped bass. I'll take any questions.

CHAIRMAN GILMORE: Thanks, Max, great report. Questions, John.

MR. JOHN CLARK: Thanks for the report, Max. When you showed that graph of total recreational mortality, it looked like the mortality in 2016 was almost equivalent to the mortality in 2014, the last year before Addendum IV went into effect. The main difference being that most of, well not most of it, but much more of the mortality was due to discards in 2016 than in 2014.

Obviously, as many of us thought from the get go that these reference points were very conservative, and as we've been hearing from the charter fishermen from the Chesapeake for the last couple of years. We're still killing a lot of striped bass; it's just we're not harvesting them. Once again, I think this points toward the discussion we'll be getting into later on the reference points, changing them.

CHAIRMAN GILMORE: John McMurray.

MR. JOHN G. McMURRAY: Max, can you put up

the SSB chart? That does not include 2016.

MR. APPELMAN: Correct. The terminal year in the 2016 update was 2015.

MR. McMURRAY: Thank you. Is there any indication that we're starting to trend upward. The SSB is starting to go back up with 2016? I mean you would think that the 2011s are starting to recruit. You would think some of them would have recruited in 2015, and certainly by now we should be seeing some sort of upward trend. Is there any indication that that is happening?

MR. APPELMAN: In terms of spawning stock biomass, I can't make any interpretations of that for 2016. We haven't put any of that data through the model itself. Clearly there is anecdotal evidence and B2s are higher; indicating some catch of smaller, non-retainable striped bass. I think that's corroborated, but as far as spawning stock biomass that estimate includes a lot of other information; so it's hard to tell what would happen in 2016.

MR. McMURRAY: One more question. Well, you know fishing mortality seems to be going down pretty precipitously; according to the chart. You would think it wouldn't be all B2s; you would have some keeper fish that are starting to recruit. You would assume there would be some upward trend there, even in 2015.

I don't know if that's a cause for concern or not. I would just note that anecdotally, there are a lot of complaints this year that we're not seeing the usual abundance and size of fish that we should be seeing this time of the year. It's just something to note, something we should keep an eye on.

CHAIRMAN GILMORE: Dave Borden.

MR. DAVID V. BORDEN: Just a quick question. On that recreational discard mortality, I think I could probably speak on behalf of everybody. It's such a waste of a resource. I guess my question is to what extent had the PDT, Technical Committee or whatever look at that

issue and try to formulate ways to reduce it? I mean to the extent we can reduce that we can liberalize the catch regulations. Has that been done in the recent past, and if not maybe we could get that done?

MR. APPELMAN: I think those conversations have occurred, not explicitly, but sort of as part of other exercises that the TC has done. I think speaking on behalf of the TC, two members next to me that can chime in if they feel they need to, but it's a tradeoff. If you relaxed regulations you'll keep more, and you'll still have some discards and vice versa. If that helps answer your question.

CHAIRMAN GILMORE: Go ahead, Dave.

MR. BORDEN: I still think it would be a useful exercise to the extent that the Technical Committee could weave that into their assignments; and try to bring back recommendations to the Board. At least we would have something to consider.

CHAIRMAN GILMORE: I guess it's a concern that everybody has with the discard mortality. I think I'm going to talk a little bit about it later. We'll see. I mean obviously we'll have discussions on it, but they're pretty well over tasked right now. Are you suggesting we do something in addition, or that they just in their deliberations when they're talking about the next stock assessment that they discuss it?

MR. BORDEN: Next stock assessment.

CHAIRMAN GILMORE: Okay well, we'll see. Obviously it's a problem that needs to be addressed, so they'll be considering it somewhat. Loren.

MR. LOREN W. LUSTIG: Thanks to Max for an excellent report; very interesting report. I'm specifically concerned as we certainly all are regarding the fishing mortality for these discards. I'm wondering about anecdotal evidence that has been given to me personally, and probably to most of us in the room, concerning two sort of fishing procedures.

One is the use or lack thereof or circle hooks and the second being the inclination or lack thereof for the angler to play out the fish to absolute exhaustion. It's my understanding that those two factors really contribute to mortality. The first part of the question is am I right, and second is how can we work out a plan that would lessen this mortality?

MR. APPELMAN: The fighting aspect of that is not something I'm going to comment on here; but the circle hooks, yes I think some jurisdictions do require circle hooks and they've been shown to reduce your release mortality rate slightly. I'm hearing down to 5 percent, right now 9 percent is used in our models. As far as how long an angler fights their fish. I think that's more of an education outreach type discussion.

CHAIRMAN GILMORE: Yes, I'll just add to it, Loren. I think that you know, if you go back to the individual states the circle hooks are definitely an improvement; although they're not a solution, because you still foul hook with circle hooks. But still, they help out with that mortality, and I think that angling techniques or whatever really some of the states do good outreach and education programs. I think each one of us has to do more of that to kind of reduce the discard mortality. Ritchie White.

MR. G. RITCHIE WHITE: I think the release mortality is affected more by the size of the stock, the year classes, and angler decisions. The charterboats I know if they go out in the morning and the angler catches his legal keeper or keepers say in the first 15 minutes; and they've paid for six hours. They fish the six hours. They're not coming home after ten minutes after getting their legal fish.

I guess I don't see where changing a size so that the anglers can catch the fish from a charterboat standpoint lessens release mortality; unless they are able to go target different species. Then the size of the fish, if you have a lot of fish that are undersize, and especially now in New England we have a lot of fish that are very small. I mean

there is no way you could have any kind of regulations to keep a 16 inch striped bass along the coast. I think it's more complicated than just saying if we adjusted the size a little bit then that would take care of a lot of release mortality.

CHAIRMAN GILMORE: Thanks Ritchie, good point. Mike Luisi.

MR. LUISI: I had intended to discuss with the Board the active role that Maryland is going to be taking to help address this issue. I was planning to bring it up under new business. I don't know if that would still be more appropriate. Given where this conversation is leading though, I would be happy to offer to the Board our review and intentions in the coming months; if you think that's appropriate now.

CHAIRMAN GILMORE: I think I would rather stay until other business, because I would like to get this approved and then you know we get through those reference points we'll do it then, Mike. Tom Fote.

MR. THOMAS P. FOTE: I guess I'll wait until we have that discussion; because I have a few points to make in that direction.

CHAIRMAN GILMORE: Are there any other questions for Max? John McMurray.

MR. McMURRAY: One more quick question. I'm a little confused about this discard mortality conversation; because having spent the better part of two decades on the water targeting striped bass, those smaller fish, those 18 inch fish, sub 20 inch fish are pretty robust. You have to do a lot to kill them.

Unless these guys are fishing with treble hooks and clam bellies, I don't understand how we're having slicks of dead fish in the Chesapeake Bay. My question really is; is the discard mortality in the Chesapeake Bay presumably higher than it is on the coast, or is it flat out 9 percent across the board? Is there any reason to believe that that is not accurate?

MR. APPELMAN: The discard mortality rate is

the same across the board. There is more fish coming, being caught in the Bay relative to the coast, so I think that is why you would see a higher number in the Bay relative to the coast. But the release mortality rate that 9 percent that is applied to all catches that stays the same. It's proportional; it's just how many fish are actually coming out of the water?

MR. GILMORE: Is this to this point, Mike? Go ahead.

MR. LUISI: To the question asked, and I'm not going to argue the 9 percent. Nine percent is what is used across the board in the assessment, and it's what we plot when we talk about B2s and the amount of dead discards that come from those released fish. But there is evidence and work that has been done in Chesapeake Bay that results in mortality as high as 30 percent in some cases, 27, 28, and 29 percent.

It has to do with water temperature. It has to do with hook location and other elements that go into everyday fishing activities. I don't want the Board to think that this 9 percent is something that is across the board. It changes in different parts of the coast. It has a lot to do with the hooks that are used and the baits that are used. Artificial lures certainly don't have the same mortality that live lining and chumming have.

We're seeing that on the Chesapeake Bay. Again, I'm not going to get into details later. I just wanted to brief the Board on what Maryland has been doing to actively pursue this problem. But I wanted to also make sure the Board understood that 9 percent while it's used for the assessment, it is not a standard. There is evidence that it can be higher than that.

MR. APPELMAN: Mr. Chairman, if I could just jump in and respond to Mike; and more info for John. That 9 percent is clearly a topic of interest. The Stock Assessment Subcommittee and Technical Committee will be diving into that thoroughly with this benchmark coming up. I wouldn't be surprised to see that number change, however.

CHAIRMAN GILMORE: Tom Fote.

MR. FOTE: Yes, Maryland did studies years ago, and basically looked at water temperature, looked at air temperature, and looked at a couple other things that basically affect the mortality. Those figures are out there. The study is there. The Technical Committee really doesn't need to do anything.

It was actually the air temperature above 90 degrees, no matter where you're fishing in the Delaware River or any of those warm water, low salinity areas. The hook and release mortality some places could be as high as 40 percent; we looked at back then. That is when Jersey Coast started putting out information that if you're basically fishing hook and release, because we already knew that striped bass because of the behavior of the anglers, is going to be greater.

It was in the early years, greater by hook and release mortality than catch mortality. I mean those figures you can go back and look at them. We were always catching and killing more fish by hook and release than we were by keeping them. It was going to be a natural way that that fishery was played.

Unlike summer flounder which shouldn't be there, striped bass was always there. Now, some of the things that are basically affecting it and it is true, when you basically fight with light tackle and you basically stress a fish out in hot water. It goes up. I recommend to my fly fishermen, you put 20 pound leaders on; you don't use light tackle. If you're out fishing in the Delaware River and the water is above 80 degrees, you should be using 40 pound test; get the fish as carefully as you can to the boat, don't touch it and release it. We put all those things out years ago; because we realized that in hot water up in low salinity situations, the hook and release mortality is going to be greater.

Yes, it has a big factor and it always was going to have a factor. Ritchie is right. When people go out, I mean I sit on the beach and watch guys fish one striped bass after another during the blitz, and nobody is even taking a fish home. But some

of their behavior is not what you should be doing to actively and nicely release fish for the highest percentage of protection.

CHAIRMAN GILMORE: All right we've had good discussion on this. I think as Max had said, this is going to be looked at in the next assessment. We're going to move along, but we're going to need a motion to approve this. Mike Luisi.

MR. LUISI: **I move to approve the 2017 Fishery Management Plan Review and State Compliance for Atlantic Striped Bass.**

CHAIRMAN GILMORE: Thanks Mike, second by Pat Keliher. Discussion on the motion, seeing none; is there any objection to the motion? Seeing none; we'll adopt that as unanimous consent.

RECOMMENDATIONS FOR THE 2018 BENCHMARK STOCK ASSESSMENT

CHAIRMAN GILMORE: Okay, we're going to go into Item Number 5, Biological Reference Points. The TC is looking for some guidance on this.

We have actually not looked at the reference points since Amendment 6, in 2003. With a new stock assessment the TC has definitely had some issues they would like to bring up. Nicole is going to do a presentation, and then we'll have some discussion on maybe which option we can go with; so Nicole.

TECHNICAL COMMITTEE REPORT

MS. NICOLE LENGYEL: Today I will be presenting a TC report where the TC and the Stock Assessment Subcommittee are requesting Board guidance on Atlantic striped bass FMP goals and objectives. I am going to start by going through some background; including the 2018 benchmark assessment, the current biological reference points used in the current assessment, FMP objectives and acceptable risk; and then get into the Board guidance that we're seeking.

The 2018 benchmark assessment is currently underway. In fact we just had our first data workshop in September. TOR Number 5 is to

update or redefine biological reference points, including BRPs, point estimates or proxies for BMSY, SSB_{msy}, FMSY, or MSY. Define stock status based on BRPs by stock component where possible.

The current SSB threshold, as Max pointed out earlier, is the estimate of SSB in 1995, and the target is 125 percent of that value. You can see from the figure that while we are well below the target, we are hovering right around the threshold. The current F target and threshold are those that will maintain the populations at the SSB target and threshold.

Again, you can see from the figure that F is well below both the target and threshold, as of the 2016 assessment. There is a tradeoff between preserving spawning stock biomass and allowing fishing. As we just heard, the Board has raised concern that the current biological reference points may be too conservative; for various biological, ecological, and socioeconomic reasons, and may be restricting fishing unnecessarily. The current management objectives and acceptable risk levels were laid out in Amendment 6 to the striped bass FMP back in 2003. The TC and SAS posed to the Board several questions. Is the Board satisfied with the current management objectives, and acceptable risk levels, as laid out in Amendment 6? Does the Board want to manage the stock to maximize yield, maximize catch rates, maximize the availability of trophy fish, and what is the acceptable level of risk when it comes to preventing stock collapse?

The TC and SAS recognize that this is not a simple task; and we're not recommending that the Board decide these items today. Instead we're recommending that the Board consider one of the following; a formal workshop, such as the Ecosystem Management Objectives Workshop that was done recently for Atlantic menhaden, developing a subcommittee of the Board.

Develop and issue a survey for the Board to seek preferred direction for management, and preferred balance between spawning stock biomass and F. The TC and SAS could also

conduct a full management strategy management evaluation; however, it would not be completed until after the benchmark is complete and peer reviewed. With that I can take any questions.

PROVIDE GUIDANCE ON REFERENCE POINTS

CHAIRMAN GILMORE: Thanks, Nicole, we'll take questions for Nicole first. Remember when you ask them, and you start thinking about which one of these options we would like to pursue if it's the Board's pleasure. When you make those comments remember, you might be volunteering to sit on one of those things. Michelle.

DR. MICHELLE DUVAL: not volunteering anything, but just a question. Maybe this isn't strictly for Nicole, but perhaps for Toni and Bob as well. I know that one of the items that we discussed last year and I believe the Policy Board is going to get an update on this from the Risk and Uncertainty Policy Working Group.

The Risk and Uncertainty Policy Working Group, if I recall, was looking at sort of striped bass as kind of their case study for trying to apply the draft approach; and had spoken of possibly having a Commissioner workshop to walk through that. With these two, and looking at the option for a workshop here to revisit management objectives, would those two workshops dovetail? Has there been any discussion about that? I assume it's probably less a question for Nicole and more a question for Bob or Toni.

CHAIRMAN GILMORE: Go Bob.

EXECUTIVE DIRECTOR ROBERT E. BEAL: The plan right now with risk and uncertainty is to have a workshop at the February meeting. We were going to do some of that today; but we got into a time crunch. We figured it would be better to put it off until February, and we could really spend some time and focus on it; spend a couple hours at a Commissioner workshop.

Jason McNamee is kind of the guru of this right now; or at least the messenger. You know

striped bass is the example, and we may be able to tie some of those together. But I don't know if the risk and uncertainty policy is going to be mature enough necessarily; to produce outcomes that can be plugged into these striped bass questions. But I think it can shed some light on it, but I don't know. There may be some additional work that still needs to be done specific to striped bass.

CHAIRMAN GILMORE: Katie, go ahead.

DR. KATIE DREW: Just to add to that. The current risk and uncertainty policy is really sort of a component of a larger policy; and we're working on a specific subcomponent of that which is how you evaluate the risk level for reducing F to a target, for example. That sort of assumes that we already have a target and a threshold that we're happy with.

That is what we're going to work on in February. But I think it's going to open the door for a discussion about how do you set that target and threshold at a level that you're happy with; before you go through this risk tree. I think this could be, they won't be fully complementary, but I think they could open the discussion in a way that might help the Striped Bass Working Group understand what we're talking about, and give them better ideas about what we would want for a reference point discussion from that.

CHAIRMAN GILMORE: Other questions for Nicole? John.

MR. CLARK: At this point you're just looking for not suggestions on the reference points, just how the process of how we would get to considering new reference points; like the suggestion just made by Michelle or a working group or whatever. Is that where we're at here?

CHAIRMAN GILMORE: Yes, John. Essentially we need to have a working group, or we would have a subcommittee of the Board to work on it, or the last option again which I don't think is very popular because it is going to delay things, you know quite a bit. It's really those three options we need to look at. Jason.

MR. JASON McNAMEE: I just wanted to offer maybe a word of caution; and then I'll actually give a recommendation on some of the questions the Technical Committee asked, if that's okay. First, when I was reading through the Technical Committee report, I think the presentation kind of addressed some of my concerns.

But I'll voice them anyways. I don't want people to walk away from this with the impression that we can set these biological reference points solely based on Board objectives, and things like that. That is an element of what should be considered, but we don't want to presume that we might not be able to develop actual MSY biological reference points or things like that.

We need to be careful and not think about them as dials that we can turn up and down to whatever degree we desire. There are population dynamics to consider within that calculus. On the actual questions, all of the options that were presented I think are good options. I will say the workshop that we did for Atlantic menhaden worked out really well.

We found that to be productive. While we haven't necessarily operationalized those objectives and goals, we have used them on occasion in some of our deliberations; whether we know it or not. I think it set the stage for menhaden to do some further work; specifically something like an MSE and that will be my last quick comment.

I think moving towards management strategy evaluation is something we ought to do. We should be thinking about it, but we should do it thoughtfully; and I would suggest that as a Commission across species, we should be thoughtful about which. We should start with an example. There has not been a lot of this done. In our area I think Atlantic herring is the only example that I'm aware of for the Mid-Atlantic/New England Regions. We want to be thoughtful about that. We want to pick an example that we can work through. It's a great idea for striped bass. But we should think about it a little more comprehensively before we pop

doing an MSE on any specific species.

CHAIRMAN GILMORE: Good point, Jay. Doug Grout.

MR. DOUGLAS E. GROUT: My experience with MSE with herring, it has some potential. Although there is a lot of analytical work that the Technical Committee has to do to provide these different, once we come up with ideas, to provide the analysis for this. Obviously as the Technical Committee indicated, MSE would be something that would have to be taken up after the stock assessment; if we were going to go that way.

That being said, I think to get the Board discussing this. You know potentially a workshop leading to a subcommittee that would take the results of the workshop; and try and work on it. But at the same time, again we may need some analysis of what kind of harvest would we be looking at, with a yield being maximized versus maximizing trophy fish.

What is the difference? To be honest with you, we've kind of been down this road. I think we all know that we have different parts of the coast requiring or asking for different management objectives on this. That's going to be the tough part for us; to work out some kind of a compromise that would work for everybody. At least in the short term I'm suggesting a workshop, moving into a subcommittee work.

CHAIRMAN GILMORE: Ritchie White.

MR. WHITE: I think all three. I think you start with a workshop, you take the results of that and go to a subcommittee of the Board. Then I think that then ends up sending a survey out to the whole Commission; so that you have more feedback to it. I think an important piece, especially for the subcommittee of the Board, is to have the different reference points worked out roughly, described, and then given the present stock how that might be interpreted into regulations so that people can more fully understand the impacts of the three different options.

CHAIRMAN GILMORE: Mike Luisi.

MR. LUISI: I'm happy to hear that these reference points are something that is being raised to this level of importance. I've always been one that has thought that the current targets that are set for spawning stock biomass, or set to a point where they're unachievable. They may be achievable, but we're unable to maintain them.

It sets a false expectation for fishermen along the coast, so I'm happy to hear that this is being considered at the level that it is. I also agree with Doug and Ritchie that a workshop followed by a subcommittee of the Board is probably the best plan forward in helping to advise the TC and SAS on this. Unlike my counterpart from North Carolina, I will certainly offer my services to the subcommittee if you choose so, Mr. Chairman.

CHAIRMAN GILMORE: Sounds like a throw down, Michelle. I'll get you in a second. I've got Pat Keliher first.

MR. PATRICK C. KELIHER: I certainly don't have any problem with what is being recommended here. There have been a couple comments about MSE management strategies, and I would caution the Board regarding the complexity of management strategies. Amendment 8 for herring at the New England Council has been a very long process.

My initial read is it's not showing any appreciable benefits to the predator component associated with those ecosystem-based approaches. Before we start down that road, I think we should all understand better what that would entail; and the process and the length of the process it would entail.

CHAIRMAN GILMORE: Michelle, and it's good to see you so warm; because last year at this time I could see a little face at the end of the table, huddled in wool. Go ahead.

DR. DUVAL: Not to be outdone by my colleague from Maryland, I would of course be happy to participate in any subcommittee that was

developed to ensure a full representation of the range of Atlantic striped bass, thank you.

CHAIRMAN GILMORE: Thank you. John McMurray.

MR. McMURRAY: I'm fine with all of these things, with proceeding down this track. But if we do decide to revise the goals and objectives that were established in Amendment 6, and put an emphasis on yield at the expense of opportunity. I'm pretty sure that needs to be at least an addendum, possibly an amendment. I know that's how we do things at the Council when we want to revise the goals and objectives.

We certainly don't have the time for that as far as providing input to the stock assessment folks. My concern really here is that the public get a chance to weigh in on this; because I could tell you with some certainty that the New York recreational fishing public is not going to be okay with taking on more risk. We really do need to consider the public when we do this.

CHAIRMAN GILMORE: The meetings will be open to the public, so as you go through this process they will have input through the process for that. Mike Armstrong.

MR. MICHAEL ARMSTRONG: I'm actually thrilled that the TC is pushing this. In my mind this Board has never explicitly stated what they want this fishery to look like. You know it can be commercial, it can be recreational, but those are very different. I think a lot of the angst that this Board goes through is because there is commercial fighting recreational and Bay fighting coast.

We all have different interest and I think we need to go through a process to explicitly say what we want it to look like. I also think we're in a very good spot. We have a few good years locked and loaded. We have an F of 0.16. I don't see the critical need of banging out an assessment. If MSE is the way to get us in a place where everyone can manage things better, then I would be happy delaying the assessment; or at least getting the peer review or something like

that. But I'm not an expert on MSE. I defer to others. If that was the best way to do this, I mean I see a survey of the Board as that's just a bunch of opinions. I would love to see some quantitative things put on it, and a whole bunch of different looks evaluated. But this was supposed to be questions for Nicole. The MSE process would be about how long? Long.

DR. DREW: Yes. Not an insignificant. See, essentially what the MSE process is doing is a sort of assimilation of running the assessment model in parallel with different economic or yield objectives. To be able to evaluate under this set of reference points, this is what the fishery would look like. This is what the stock would look like. This is the kind of yield. This is the kind of risk level you would see.

It's a fairly complex process; and would require building additional model on top of the stock assessment model. There is probably a middle ground, in terms of doing a full blown management strategy evaluation versus having the TC evaluate a few key reference points to say, we want to look at the yield and the biological status for maybe three or four different objectives, and evaluating some of that.

There may be time after the assessment for a more full back and forth with the TC; in terms of you guys saying, we like this, we don't like this, can we see this option. But going forward with the assessment, we don't want to do that as part of the assessment. We would like to have some firmer guidance from the Board in terms of how to set up one or two reference points that you guys might want to look at; as opposed to the full range of options that are out there.

CHAIRMAN GILMORE: Rob O'Reilly. Mike, can you hit your microphone.

MR. O'REILLY: I'll talk about Mike from here. Not to disagree, but if we go back to the underpinnings of Amendment 6, exactly what one of the central themes was, was what do you want this fishery to look like? If you remember, there was an extension in that process; because

one thing everyone wanted to do was have a uniform size limit throughout the coast and the Bay, at 24 inches.

Then it was discovered, oops, the allocation that originally was established for Amendment 5, which was 51 percent Chesapeake Bay Area, 49 percent elsewhere was disrupted markedly. That was just a glitch. But beyond that glitch there was a lot of talk about what should this fishery look like; which is a great thing to ask of all our fisheries. I certainly support Mike in saying it's a great thing. Concerning the MSE, I tend to think Pat is right.

Depending on how it's done could make a difference, as Dr. Drew has stated. You know there is a lot going on now with risk assessments leading to a management strategy evaluation. I know I've looked into this to some extent; and it can be really overwhelming. You know we should probably think about that a little bit. I think the practical approach that Dr. Drew mentioned, to sort of get some guidance. That is really what we should look for; rather than hang our hats on the outcome of an MSE.

CHAIRMAN GILMORE: Roy Miller.

MR. ROY W. MILLER: I appreciate all the suggestions I've heard this morning. It isn't clear to me what the timing of this would be. In other words, if we undertake this workshop, what is the intended timing relative to the benchmark stock assessment? Once I get an answer to that just let me add that we've been wrestling with striped bass for a long time. Getting our hands around what everyone wants proved to be challenging back in the 1990s, and it continues to be a challenge; and just point out a little historical perspective on that. It's difficult to get everyone to agree on what they want for the status of the striped bass stock.

CHAIRMAN GILMORE: It's a good question, Roy. Go ahead, Max.

MR. APPELMAN: Thanks for that question, Roy. Talking with my colleagues on timing, obviously the benchmark is underway. The earlier the

team can get that guidance the better. Considering December/January is tough to convene a workshop, and that seems like the route that this Board wants to take.

I was hoping maybe a webinar would be possible for a first stab at a workshop; and then maybe in February we can get a more localized number of members for a subcommittee, and then moving forward with that trying to have final guidance from that subcommittee as early as August or May. I think that's the ballpark timeline we're hoping for here. Again, the peer review is at the end of 2018. Obviously the Stock Assessment Team is going to be exploring some models between now and May; and then at that time we would need some strict guidance.

CHAIRMAN GILMORE: Go ahead, Roy.

MR. MILLER: It sounds, if I may summarize, it sounds like these two tasks will be occurring simultaneously. In other words this workshop will be convening while the benchmark stock assessment is underway. Am I correct in that?

CHAIRMAN GILMORE: Yes. Ritchie.

MR. WHITE: A comment and then a question. Since I believe I heard Michelle volunteer to be Chair of the subcommittee, and since she did that I'll be willing to serve on the subcommittee as well. The question is will it take an addendum or an amendment to change the reference points?

CHAIRMAN GILMORE: Go ahead, Bob.

EXECUTIVE DIRECTOR BEAL: It's sort of at the pleasure of the Board. The Amendment 6 allows reference points to be changed through an addendum; but changing reference points and evaluating or asking the public, what do you want this fishery to look like, and those sorts of things, are pretty big questions.

The Board may want to consider a more lengthy amendment process and do some scoping hearings; and then a final round of hearings. It's really up to the Board as to how much public

involvement, and how many times they want to go out to the public and talk to them about these range of options.

Just this conversation is very similar to what happened in 2002, when Amendment 6 was developed. We were going around, trying to figure out what you want the fishery to look like. There is competing needs and tradeoffs, and there was a working group formed. Pat Keliher was actually on it as the AP Chair at the time; so he's changed jobs and doing different things. I think he's the only one that's left around here that was on that. But ultimately the Board ended up going out to public hearing with an F rate threshold that was set, as Jason mentioned on the biological parameters of these animals. Then the targets at the time was 0.2, 0.25, and 0.3 those three options were taken out to the public and a series of figures that went along with each of those options that showed what your yield would be, what eight and older fish would look like and different things.

You know it was a very direct question to the public in 2002. What do you want this fishery to look like, and here are the tradeoffs? It was at that time illustrated really well. I think it seems like we're heading down a similar path where we're going to have some level of development of those different options and tradeoffs at the Board level. Then as John was saying, go out to the public and say all right, here's your tradeoffs, what do you want?

CHAIRMAN GILMORE: Okay, I guess we'll figure that out as we move along. Is there any objection to Michelle Chairing the – I'm only kidding. I've got Jay McNamee.

MR. McNAMEE: I got a little excited with all the MSE talk, so I'll rein that in a little bit so you can keep this meeting moving along; but just maybe a comment. I'm not sure if the formal workshop is still on the table as well, and I just want to remind people the construct of that. That workshop, it was pretty diverse.

They looked outside; it was outside of the Board. They brought in folks from the industry, bait and

reduction, and folks from NGOs and things like that. Keep that in mind. That's how you get that really good comprehensive feedback in those workshops is to think outside of the kind of narrow universe of what your normal working committees are.

CHAIRMAN GILMORE: Tom Fote.

MR. FOTE: I'm willing to serve on Michelle's committee also. If you get ten striped bass fishermen in the room, and you get ten climate change people in the room, and you would find in the climate change maybe get 48 to 52 percent is in agreement. In the striped bass you would get 10 percent, because nobody could agree with each other. That's usually when you get ten striped bass fishermen, when you come to rules and regulations.

Yes, I would be willing to participate in a workshop. But the other thing, Rob reminded me, thank you, Rob for reminding me. Back in the '90s when we did this, we assumed that Chesapeake Bay was doing 85 or 75 percent of the contribution to the coastal migratory stocks. Well as the years progressed, and that's when Delaware really still had a lot of problems left. It was not a big stock of striped bass being reproduced in the Delaware River.

That has changed over the years. Some years the Hudson River and the Delaware River make a bigger contribution than the 5, or 10, or 15 percent that we assumed years ago. It is estimated maybe up to 30 percent or 40 percent. I've been calling for a workshop on that for many years, to find out what is the actual contribution of the Chesapeake Bay?

What is the actual contribution of the Delaware River, and what is the actual contribution of the Hudson River? It would help us better manage the stocks to basically do that and fairly manage the stocks. I'm looking for that workshop. I've been waiting for it for about, I guess since the Delaware River recovered; hopefully that we would put on our agenda too.

CHAIRMAN GILMORE: John Clark.

MR. CLARK: This sounds like a lengthy process. We have already been under the Addendum IV reference points now for three years. You've heard from the fishermen in the Chesapeake, and from the Chesapeake states the problems that this addendum has caused in the Chesapeake; and as Tom was pointing out, we're having similar problems in the Delaware.

I would just like to know if there is any way that we could speed this process up; because I think that when we took a 25 percent cut on a stock that was not overfished and overfishing was not occurring that was a big cut. At this point there is going to be no relief to the states in the producer areas until what, 2020 at this rate?

CHAIRMAN GILMORE: I think John at this point maybe; yes I have that concern too. But I think the workshop; you know we get that going. Max had said and maybe we get better timeframes after we get that done. Now it sounds like we were looking for one of three options. Now we might be doing all three. But let's get through the workshop I think, and then we'll figure that out after that point. Adam, did you have your hand up?

MR. ADAM NOWALSKY: Yes, I did, thank you. Building on that lengthy process comment, in the TC's memo they requested guidance by the May Board meeting. Can we accomplish that with these tasks? I think would be my first question. Then the second question I had for the TC in this document. I found it noteworthy that in the same paragraph where they outlined their requested timeline, they highlighted the acceptable level of risk when it comes to preventing stock collapse.

Now most of the work that we do when we look at our reference points is to prevent overfishing; which is in large part a function of a management decision, a desired target biomass trying to achieve. But that element of acceptable level of risk, when it comes to preventing stock collapse, I'm not sure we really have any level of risk for allowing stock collapse.

We have level of risk for achieving targets or

thresholds. But I would love some clarity on what guidance we would provide there, preventing stock collapse. I was really struck by that. I wasn't expecting to see that in the document. Those two questions, one is the May Board meeting a critical timeline; and this element of acceptable level of risk of stock collapse versus just achieving some target or threshold.

DR. DREW: In terms of the timeline, May would be ideal for us in order to really fully, in order to get that guidance as soon as possible. But we do recognize that this is an incredibly complex issue; and there are a lot of moving parts and stakeholder considerations that have to go into it. If you guys provided us some guidance by August that would still allow us, we're planning on having a second assessment workshop at that point, and that would allow us to fold in those objectives at that point.

I think we outlined this timeline, so that we could develop reference points that could go to peer review; and be available for management use as soon as that peer review is complete at the end of the year. When we're putting this workshop together, or when you guys are participating in this, we may have to come to recognize that there may be no solution that makes everybody happy. But if you could provide us with some rough guidance to keep things moving forward that would be great. I think in terms of the timeline, August would still work for us if we need to get some kind of rough guidance at that point. In terms of the stock collapse question, I think you're right in the sense that we try to manage two targets and things like that. But I think there is an implicit, when you're setting those targets and thresholds, there is an implicit question of how risky do we want to be?

I think that has come up, certainly at the Board level, of talking about okay we've set this threshold for SSB at the 1995 level, where the stock was in great shape. That implies a minimal risk if you go below that of anything negative happening to the stock. But the question then becomes, if we relax that if we become less conservative, if we allow a lower threshold to

allow more fishing pressure.

Then when you go below that threshold you're in a riskier position. I think it's not just a matter of saying okay we're going to lower the biomass threshold; so we can allow more fishing pressure. You have to recognize that that comes with risks, and the Board should tell us what level of risk are you comfortable with; in terms of setting that threshold and setting those targets, so that you can balance the tradeoffs between how much fishing pressure you allow and how much spawning stock biomass you preserve; in order to buffer that potential risk.

When you drop below the threshold when the threshold is high that is a less risky action or a less risky occurrence than when you drop below the threshold when the threshold is low. We would like guidance on the Board, in terms of some of those questions; because there are obviously different levels that you could set that SSB target and threshold at, depending on what your management objectives are, and what your level of risk you are comfortable with. There is an assessment of risk implicit in all of these questions. We just want to make that explicit.

CHAIRMAN GILMORE: Okay David, you have cleanup. See I didn't make any baseball references today until now.

MR. DAVID E. BUSH, JR.: I'll try to avoid that one for the moment. Determining the management strategy or philosophy that best represents the stakeholders, is obviously something that is the heart of what we need to do. It's what we do to come here to set at the table. We have reference points; we need to stay between them. In doing so, what works for the people that will be out there?

It's going to be different up and down the coast. There are going to be different groups and what not. But understanding how difficult this is going to be. It's going to take time. I guess my question would be, as mentioned earlier in one of the earlier presentations. To change things would just simply be tradeoffs at this point. Those tradeoffs in my mind would be throwing

dead fish over the boat versus keeping them and maybe building a little more confidence in the process.

Are there any recommendations that might work in the interim that we are capable of instituting in the short term; that might achieve those goals? You know again, turning some discards into landings, building a little confidence in the process, and buying us some time until we get some of this very difficult stuff hammered out.

CHAIRMAN GILMORE: I don't believe, David, there is anything we can do short term. I think it's a problem we all are concerned about. But I think this is probably going to be the quickest way to get to it. I think the pleasure of the Board sounds like we want to go ahead with a workshop first. I think that would eventually get into some subcommittee.

I think the working group when we charged that; I'm sorry, the workshop today. That they will refine a timeline and we'll see how well we can do in terms of aligning with the stock assessment. Unless I hear any objection to that I think we'll proceed with that. We'll start with the workshop. I don't think we need a motion for this. We can just decide to do it. But Toni is raising her hand, so go ahead, Toni. Okay, Bob.

EXECUTIVE DIRECTOR BEAL: A quick question. Is the idea that the workshop would be during one of our quarterly meetings? It's a budget question.

CHAIRMAN GILMORE: Yes, Max and I were just talking about it. I kind of like the idea of maybe doing some kind of a call first to kind of frame that out. We can talk about the budget at that point to see how involved it's going to be. Is everybody okay with that approach? Okay seeing none; we'll proceed that way. We'll start with getting a workshop together and we'll see how it goes.

ELECT BOARD CHAIR AND VICE-CHAIR

CHAIRMAN GILMORE: Okay, the next item on the agenda, we actually have a unique thing. We have to elect both a Board Chair and a Vice-

Chair, because well Russ Allen is actually, if you haven't heard, is going to be retiring; and you know he volunteered to be Vice-Chairman. At any rate we need to get both a Chair and a Vice-Chair, so do I have any nominations, first for Chairman? Ritchie White.

MR. WHITE: This clearly is a great honor having to nominate two instead of one. **The slate that I nominate will be Mike Armstrong for Chair, and Michelle Duval as Vice-Chair.** She certainly is stepping up to the plate recently.

CHAIRMAN GILMORE: Are there second to that motion? Russ Allen seconding that motion, very good. Are there any objections to those two nominations? Seeing none; the unanimous consent, congratulations to our new Chairman, Mike Armstrong, and our new Vice-Chair woman, Michelle Duval.

**OTHER BUSINESS
MORTALITY DISCARD**

CHAIRMAN GILMORE: Okay, we're up to other business; and Mike, you wanted to bring up the topic on that mortality discard, so go ahead.

MR. LUISI: I'll be very brief. I wasn't anticipating the discussion that we had earlier, which I was happy to have. I'm glad that a number of the Board members here, we all should be very concerned over dead discards; it's a wasteful product of the work that we do. It's been brought to our attention not only through the science and through MRIP. But it's being brought to our attention every day by folks in the field; those fishermen who are experiencing this and seeing this first hand.

I just wanted to bring the matter up here today, and to inform the Board of the active role that Maryland is planning to participate in to help remedy the situation in the Chesapeake Bay. Now that Mike is the new Chair, I'll take the opportunity to disagree with you that there is not an interim process that we can go forward with. We can't wait any more. We can't wait until 2020 or 2021; however long this process is going to take for there to be some change to

what we feel is a very serious problem, a very serious trend in dead discards and waste in this fishery. We are going to take an active role; I've mentioned that. We've reviewed the Commission's guidance on conservation equivalency, and it is our intention at this time to work internally and with our stakeholders to put forth a conservation equivalency program for the 2018 summer/fall season for next year. In review of that guidance, what we are hoping for, Mr. Chairman, is that we could work through Mike in the coming months, and through staff to have TC review prior to the end of this year.

We would really hope that we could get on the agenda for the February meeting; to address that proposal, and discuss how we could begin at least in the interim between now and the benchmark process, look at trying to solve or at least correct the problem of turning dead discards into harvest. If anyone has any questions, I'm not going to get into any details at this time. I just wanted to make the Board aware of our intentions moving forward. We hope that we'll be able to have this opportunity in February to discuss the proposal.

CHAIRMAN GILMORE: Tom, do you have a quick comment?

MR. FOTE: When we did this in '94, '92, when we started opening the fishery up. There was a lot of education of how to hook and release fish; both bluefish and striped bass. Well that's a long time ago. We have a lot of new anglers in, plus back then we could communicate through newspapers, magazines and articles.

Well, nowadays we've got to do it in blogs, YouTube, and there are a whole bunch of other methods. What we really need to do is reach out, make some new videos that we can post online; to basically how to actively hook and release bluefish, striped bass, and many other species. Like the effort New Jersey tried to do with summer flounder.

We're hopefully going to continue that with other species over the years. I think it's about time Commissioners start looking at that. We

had these workshops back in the '90s. I think Pat Keliher attended before he got involved in fisheries management attending those workshops, and how we could get this to their anglers and their customers. We need to start doing that.

But we also need to look at other means of communication; because the newspapers are no longer there. They don't write those articles anymore like they used to; and the magazines are a dying breed, so we have to really look at other forms of communication the way the young people do it.

CHAIRMAN GILMORE: Okay Ritchie White, you get the last comment.

MR. WHITE: Thank you, I'll try to be brief. I would just recommend to the Technical Committee in this process that they do all they can to help Maryland try to achieve what they're trying to accomplish. If Maryland comes forward with a proposal that doesn't quite meet muster that the Technical Committee will try to give alternatives and advice as to how Maryland could reach what they're trying to accomplish.

I'm not sure whether that's normal in the Technical Committee, if the Technical Committee just declines and then asks the state to reapply; or whether they do give alternatives. But I just think that that is important that we try to do all we can that we don't go down the road that we've just recently been down.

CHAIRMAN GILMORE: Okay, just a last item we have before we adjourn is I have to do my swan song speech; because this is my last meeting as Chairman. It's been an honor and a pleasure serving for the last two years. I think we're leaving ourselves in good hands with Mike and Michelle.

I just wanted to say for all you folks that have never sat up here; we really don't know what we're doing. It's really the staff that keeps us well balanced. My congratulations to particularly Max, Nicole, and Katie, they just do an outstanding job, as with the staff. Remember,

Max, he's only been here a couple of years.

I mean so we got some new folks along with Megan or whatever. These guys are the best of the best of what we have here. I appreciate them, and I would give them a round of applause; unless there is any other business to come before the Board, sorry, Toni.

ADJOURNMENT

CHAIRMAN GILMORE: Okay we are adjourned and Toni's got the microphone.

(Whereupon the meeting adjourned at 9:22 o'clock p.m. on October 19, 2017)



Larry Hogan, Governor
Boyd Rutherford, Lt. Governor
Mark Belton, Secretary
Joanne Throwe, Deputy Secretary

Maryland Proposal for Review by the Atlantic States Marine Fisheries Commission Atlantic Striped Bass Technical Committee: Alternate size limit and season options for the 2018 Chesapeake Bay Summer/Fall Season

December 2017

Background

Under the Management Program Equivalency section (4.6.2) of Amendment 6 to the Interstate Fishery Management Plan for Atlantic Striped Bass, the state of Maryland is requesting to implement a management program that is conservationally equivalent to the management program required under Addendum IV to Amendment 6 of the Atlantic Striped Bass fishery management plan. Addendum IV was implemented in 2015 and called for a 25% reduction in total removals for the coastal fisheries and a 20.5% reduction in total removals in Chesapeake Bay in order to reduce fishing mortality (F) to the target and to protect the 2011 year class. These actions resulted in new summer/fall regulations in Chesapeake Bay for the 2015-2017 fishing seasons with a 20" minimum size limit for recreational anglers.

Proposal

Maryland is proposing alternate size limit and season combinations with the primary goal of reducing dead discards. The proposed options increase harvest but are estimated to have zero or minimal impact on total removals. Maryland is most interested in seeking approval of the methodology used to calculate the impacts of conservation equivalent options and is seeking approval for employing a discard mortality rate that is higher than 9% in the warmest months of the year when a variety of hook types are used. Maryland is also seeking feedback on results of an analysis using a discard mortality of less than 9% due to the possible inclusion of a mandatory circle hook provision for recreational bait fishing.

Rationale for an Alternative Management Program in Maryland

Stakeholder Concerns and Supporting Data

Since new regulations were enacted in 2015, the Maryland Department of Natural Resources and the Atlantic Striped Bass Management Board have heard concerns from Maryland anglers, particularly the charter boat industry, about the consequences of these actions. The first concern was the increase in discards (Figure 1). The number of live releases was lowest from 2008-2011, increased through 2014, and then sharply increased in 2015 and 2016, most likely in response to raising the minimum size 2". Charter captains reported having to discard many more fish in order to catch their limit, often citing ten or more fish discarded for every one that was of legal size. This high level of discards was corroborated through the charter logbooks captains are required to submit (Figure 2). From 2013-2014 under an 18" minimum size limit, 2.7 fish were discarded on average per one fish harvested, while the individual trip ratios ranged from 0-250. In comparison, the mean ratio of discards to harvest was 4.3 fish from 2015-2016, and values ranged from 0-232 fish discarded per fish harvested. Though the distribution is very skewed, there are a fair number of trips reporting more than ten fish discarded for every fish harvested with many reporting 20-50 fish discarded for every fish harvested. Charter captains reported that this high level of discards was effecting them economically, making it difficult for them to attract customers due to reduced fishing success. This has resulted in reduced revenue for the charter industry and the risk of them losing business (February 2017 and May 2017 ASMFC Striped Bass Management Board Meeting Minutes).

The second concern of stakeholders is the discard mortality rate. Anglers estimate that the mortality rate, particularly in the summer months, is much higher than the 9% value used in the striped bass stock assessment. Reports from charter boat captains estimate that approximately 30% of the fish they throw back will not survive. Strong perception of a significant increase in the number of dead discards as a result of management actions has also led to criticism of management agencies by recreational anglers. The intent of this proposal is to reduce waste without increasing total removals by shifting fish from the dead discard to harvest category.

How the Proposed Measures Meet Management Objectives

The objectives of Addendum IV are to bring fishing mortality back to the target and protect the 2011 year class. Based on the 2016 stock assessment update, F was slightly below the target. Additionally, the 2011 year class will be 7 years old in 2018. This means that the majority of these fish will be part of the migratory population and mostly unsusceptible to the Maryland Chesapeake Bay summer/fall fishery.

Considering that the objectives of Addendum IV are achieved, the striped bass stock is neither overfished nor is overfishing occurring, and stakeholder concerns, Maryland is proposing new regulations for the 2018 summer/fall fishing season in order to reduce dead discards while keeping the change in total removals at or near zero. While most of the striped bass of the 2011 year class are now above the minimum size limits, these regulations are important to put in place in order to minimize the number of dead discards of following year classes and in particular, the incoming strong 2015 year class.

Proposed Method

Discard Mortality Rate

The 9% discard mortality rate used in the striped bass stock assessment is from a paper by Diodati and Richards (1996). It was conducted in Massachusetts waters (31 ppt) to analyze the hooking mortality rate on sublegal fish (27-57 cm). Anglers were limited to using unbaited lures with treble hooks, single hook rubber jigs, or baited single hooks. Their logistic regression model included hook type (treble hooks vs. single hooks), depth of hook penetration, and angler experience as significant factors in predicting discard mortality. While the stock assessment uses the overall discard mortality estimate of 9%, discard mortality did vary depending on conditions. Under the best conditions, discard mortality was estimated at 3%. Under intermediate conditions, discard mortality was estimated at 9%, and under the worst set of conditions, discard mortality was estimated at 26%.

Within Chesapeake Bay, Lukacovic and Uphoff (2007) collected data on hooking mortality using natural cut bait on J-hooks and circle hooks. While water temperatures observed during the study period were similar to those in Diodati and Richards (1996; 15-28°C), salinities were lower in Chesapeake Bay (1.6-17.8 ppt). In this study, the significant factors in the logistic regression for discard mortality included fish length, hook location, and air temperature. In their study, the highest mortality rates tended to occur in June and July when the air temperature was highest. Under the best conditions, the median release mortality was 3%. Under intermediate conditions, the median release mortality was 6%, and under the worst conditions, the median release mortality was 27%. These values were very similar to those estimated by Diodati and Richards (1996) and both studies suggest that under the worst conditions, mortality rates could be as high as 26-27%. These upper estimates also corroborate the estimated discard mortality reported by Maryland charter boat captains.

The Chesapeake Bay studies, however, all examine the use of artificial lures (with treble hooks) or natural baits (on single hooks including J- and circle hooks). While chumming is a popular fishing technique in Chesapeake Bay that gained popularity in the 1990s, and is the fishing technique the Lukacovic and Uphoff (2007) study examined, it has become less popular in recent years. Since 2000, live lining has increased in popularity, particularly when small spot or other live baits are available in the summer time. Live lining often uses a treble hook inserted in the back of a live bait. While we are not

aware of any studies looking at discard mortality rates associated with live lining, anecdotal observations indicate that the use of treble hooks and live bait more often results in a fish deeply swallowing a hook, increasing the discard mortality rate.

Based on the combination of studies and anecdotal information, we present calculations for conservation equivalent options using both a 27% and 9% mortality rate, with the argument that 27% is the more appropriate figure given current fishing techniques and environmental conditions in Chesapeake Bay during the warmest months of the summer.

The Department is also considering implementing a mandatory circle hook provision for all anglers fishing with bait. Lukacovic and Uphoff (2007) estimated discard mortality rates for circle and J-hooks and these estimates form the basis of our analysis. Using data from Table 4 of their report, we calculated the median discard mortality for circle hooks within the high mortality group (0.145) and compared that to the median discard mortality of the high mortality group, circle and J-hooks combined (0.267). The ratio of circle hook to J-hook mortality (0.543), as well as assumptions on the proportions of fishing with bait and artificial lures throughout the year, were used to estimate the discard mortality with a mandatory circle hook provision for bait fishing.

Estimation of the Change in Total Removals with Smaller Minimum Sizes

To estimate what the average change in total removals would be if we lowered the minimum size from 20" to 19" for all or portions of the summer/fall season, we used a method similar to that used in Addendum IV. MRIP harvest and discard estimates for Maryland inland areas, all modes combined, were queried by wave for 2000-2014. The years 2000-2014 were chosen as large year classes, similar to the 2011 and 2015 year classes, were present and moving through the population (i.e. the 2011 year class will be age 7 in 2018, the same age as the 1993 year class in 2000). In addition, regulations were generally consistent over this time period with an 18" minimum size and the summer/fall season going until December 15, with the exception of 2000 and 2001 which had seasons that ended on November 30. By averaging 15 years of harvest data, we should be able to account for various sources of variation in total removals, including year class strength, differing weather patterns, economic factors, and changing angler behavior.

The harvest length frequency was used to estimate the number of fish harvested within the 18-18.99", 19-19.99", and ≥ 20 " length bins. Harvest length frequencies came from the MRFSS/MRIP survey, the volunteer charter boat survey, and/or the volunteer angler survey (see Excel file "MD LF_inches" tab for more information on sources and sample sizes by year) and sources were consistent with what was used in the compliance reports, where possible.

The principal assumption of the analysis is that the total catch (harvest plus discards) and its size frequency within a year would not have changed if the minimum size was raised from 18" to 19" to 20". However, all fish that were kept under the 18" minimum size but became sublegal due to the change, would have been released. For each year, harvest and discards were first calculated assuming we had had a 20" minimum size for the whole year (the regulations in place in 2015 and 2016). This was done by subtracting the estimated number of fish harvested in the 18" and 19" length bins from the harvest estimated by MRIP under an 18" minimum size. These fish that are no longer harvested are then added to the number of discards estimated by MRIP. Adding together harvest and dead discards (discards * the discard mortality rate), the total removals assuming a 20" minimum size were calculated. Following the same concept, harvest, dead discards, and total removals were calculated under a 19" minimum size for all or part of the summer/fall season and compared to the harvest, dead discards, and total removals calculated under a 20" minimum size. Percent change in harvest, dead discards, and total removals were calculated separately for each year. The average percent change in total removals for 2000-2014 was used as the best estimate of how decreasing the minimum size from 20" to 19" for all or part of the fishing season would affect total removals. In addition to the average change in total removals, 95% confidence intervals were estimated as 2 standard errors.

Additional details on the analysis are as follows:

- Estimates were made by wave using separate length frequencies for wave 3 and waves 4-6 which align with Maryland's fishing seasons and the possibility of larger fish available to the fishery following the spawning season in wave 3.
- Wave 3 harvest and discards were adjusted based on the proportion of wave 3 harvest that occurs after the trophy season estimated from charter logbooks, a similar methodology as used in the migrant harvest reports (Horne 2017) in order to remove the trophy season from wave 3.
- Calculations are presented two ways: with a 9% discard mortality rate for all waves as assumed in the stock assessment; and a 27% discard mortality rate in waves 3 and 4 and a 9% discard mortality rate in waves 5 and 6 as suggested by the discard mortality studies cited above. These waves best align with the months where the Lukacovic and Uphoff (2007) study indicated higher mortality rates in Chesapeake Bay.
- For calculations where the December fishery was removed (2002-2014), the wave 6 harvest was adjusted assuming 45 days of fishing (the number of days the recreational fishery is open in wave 6). As most of the effort and harvest occurs in November, we feel the simplifying assumption of 45 days of fishing in wave 6 is acceptable. For calculations that use partial waves, catch was assumed to be constant throughout the wave.

An example calculation is shown in Table 1.

Results

Based on stakeholder input, a variety of options were explored where the 19" minimum size was in place for part of the year and the 20" minimum size was maintained for the rest of the fishing season (Table 2). For options that keep the season open through December 15, our calculations show slight increases of total removals by 2-6%, depending on assumptions made about the discard mortality rate. However, dead discards will decrease 1-2% relative to the number of dead discards estimated under a 20" minimum size. For options that close the season on November 30, the estimated change in total removals ranges from -1% to 5%, assuming a 9% discard mortality rate, and from -2 to 3%, assuming a 27% discard mortality rate in waves 3 and 4.

One benefit of this method is that it includes 15 years of data and we are able to estimate a confidence interval around the estimated change in total removals. Based on these calculations, options A, B, C, G, and H (Table 2) have confidence intervals that encompass zero and are therefore unlikely to result in a net increase in total removals relative to having a 20" minimum size limit for the whole year. While the calculations for some options indicate that total removals may increase slightly (Figure 3), all options achieve our goal of reducing dead discards.

Preliminary analysis based on studies conducted in Chesapeake Bay indicate that mandatory circle hook use for recreational bait fishing throughout the year could reduce discard mortality by approximately 54% compared to J-hooks. When discard mortality rates are decreased by this percentage for bait fishing, our analyses indicate dead discards could be reduced enough that a 19" minimum size for the entire season is estimated to achieve a 0% increase in total removals ($\pm 2.5\%$).

Conclusions

Maryland is proposing various changes to the Chesapeake Bay summer/fall fishery in order to reduce dead discards which have increased since the 20" minimum size was put in place following Addendum IV. Our analyses demonstrate that these proposed regulations should have a small effect on Maryland's summer/fall total removals, anywhere from -2% to 6% depending on the discard mortality rate assumed, how long the minimum size is 19", and the season length. While Addendum IV was focused on protecting the 2011 year class, this year class is now less available in Chesapeake Bay and generally larger than any minimum sizes we are proposing. However, with the 2015 year class moving into the fishery, we

would like to be proactive in lessening the number of dead discards. With a lower size limit, we also expect that anglers will limit out earlier and discard fewer fish overall. While we are unable to quantify the effect this would have on our total removals, the assumption that anglers will limit out and end fishing trips earlier, thereby discarding fewer fish, would decrease our estimated relative change under a smaller minimum size.

Managers are still soliciting stakeholder input on final regulatory options. While it is possible that one of the options presented in this proposal will be the final option chosen, it is also possible that some changes could be proposed following further discussion. If these methods are approved, we would have the ability to make additional adjustments as necessary. Final regulations would be submitted to the Atlantic Striped Bass Management Board for approval by the May meeting. If approved, new regulations would be implemented for the 2018 summer/fall season and be in place until after the benchmark stock assessment is completed.

Literature Cited

Diodati, P.J. and R. A. Richards. 1996. Mortality of striped bass hooked and released in salt water. Transactions of the American Fisheries Society 125: 300-307.

Horne, J. 2017. Final estimate for 2016 of spring harvest of coastal migrant striped bass in Chesapeake Bay. Maryland Department of Natural Resources, Annapolis, MD. 13 pp.

Lukacovic, R. and J.H. Uphoff. 2007. Recreational catch-and-release mortality of striped bass caught with bait in Chesapeake Bay. Fisheries Technical Report Series No. 50. Maryland Department of Natural Resources, Annapolis, MD. 21 pp.

Table 1. Sample calculation for 2002. The regulatory option used in this example is a 19" minimum size in waves 3 and 4 and a 20" minimum size in waves 5 and 6 assuming a 9% discard mortality rate.

- Adjust MRIP wave 3 harvest and discards to remove the trophy season using the proportion of wave 3 harvest that occurs after May 16, based on charter logbooks. In 2002, the trophy season was estimated to be 0.22 of the wave 3 harvest.

$$78,260 * (1 - 0.22) = 61,202 \text{ fish harvested} \quad 456,684 * (1 - 0.22) = 357,142 \text{ fish discarded}$$

- Calculate the new harvest and discards under a 19" and 20" minimum size. Multiply the discards by 9% to estimate the dead discards. Total removals under the new regulatory option are calculated by summing the harvest and dead discards estimated with a 19" minimum size for waves 3 and 4 and a 20" minimum size for waves 5 and 6 (blue cells). The percent change in harvest, dead discards, and total removals is then calculated. Ex: For total harvest under this option, we add 57,950 + 34,672 + 79,916 + 45,951=218,489 fish harvested. This is compared to the harvest calculated with a 20" minimum size all year (218,489/206,588-1) to estimate the proportional change in the harvest.

2002								20" to 19" reduction			
Maryland	Total Number	Number 18-18.99"	Number 19-19.99"	New #s with 19" Min	New #s with 20" min	change in # fish	% change				
Rec Harv Wave 3	61,202	3,252	6,505	57,950	51,445	6,505	0.13				
Rec Harv Wave 4	37,657	2,985	5,396	34,672	29,276	5,396	0.18				
Rec Harv Wave 5	102,794	8,148	14,730	94,646	79,916	0	0.00				
Rec Harv Wave 6	59,106	4,685	8,469	54,421	45,951	0	0.00				
Rec Harv Waves 4-6	199,557	15,819	28,595	183,738	155,143	5,396	0.03				
Discards Wave 3	357,142			360,394	366,899	-6,505	-0.02		December total removals		
Discards Wave 4	458,390			461,375	466,771	-5,396	-0.01		30,808		
Discards Wave 5	1,488,316			1,496,464	1,511,194	0	0.00				
Discards Wave 6	503,225			507,910	516,380	0	0.00		Change in Total Removals		
Discards Waves 4-6	2,449,931			2,465,750	2,494,345	-5,396	0.00		-0.04		
Dead Discards Wave 3	32,143			32,435	33,021	-585	-0.02				
Dead Discards Wave 4	41,255			41,524	42,009	-486	-0.01				
Dead Discards Wave 5	133,948			134,682	136,007	0	0.00				
Dead Discards Wave 6	45,290			45,712	46,474	0	0.00				
Dead Discards Waves 4-6	220,494			221,917	224,491	-486	0.00				
Total Dead Discards	252,637			256,441	257,512	-1,071	0.00		<-estimated change % dead discards		
Total Removals	513,396			474,930	464,100	10,829	0.02		<- estimated change % Total Removals		
Total Harvest	260,759			218,489	206,588	11,901	0.06		<- estimated change % Harvest		

- To remove December, the total removals in wave 6 assuming a 20" minimum size are adjusted (i.e. remove 15 days of harvest and dead discards) assuming constant effort and catch across the wave. This is then subtracted from the total removals estimate for this option (blue cells) and compared to the total removals there would be under a 20" minimum size for the whole season (green cells). In this example:

$$(45,951 + (516,380 * 0.09)) \times \left(\frac{15}{45}\right) = 30,808 \text{ fish}$$

$$(474,930 - 30,808) / 464,100 - 1 = -0.04$$

Table 2. Possible regulatory options explored.

9% Discard Mortality Rate All Year			
Option	Option Description	Estimated Change in Total Removals	2 SE
A	19" May 16-July 31 (No Dec)	-1%	1.1%
B	19" All Year (Circle Hooks)	0%	2.5%
C	19" Waves 3 & 4 (No Dec)	1%	1.4%
D	19" May 16-July 31	4%	0.6%
E	19" All Year (No Dec)	6%	1.7%
F	19" Waves 3 & 4	6%	0.9%

27% Discard Mortality Rate in Waves 3 & 4			
Option	Option Description	Estimated Change in Total Removals	2 SE
G	19" May 16-July 31 (No Dec)	-1%	0.8%
H	19" Waves 3 & 4 (No Dec)	0%	0.9%
I	19" May 16-July 31	2%	0.3%
J	19" Waves 3 & 4	3%	0.5%
K	19" All Year (No Dec)	3%	1.1%

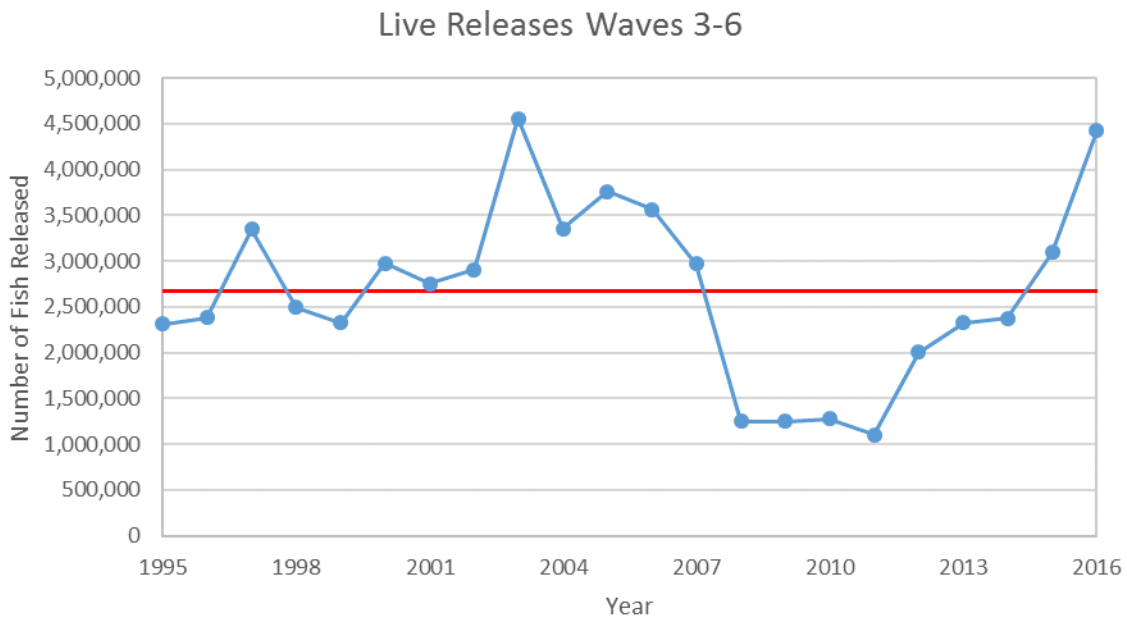
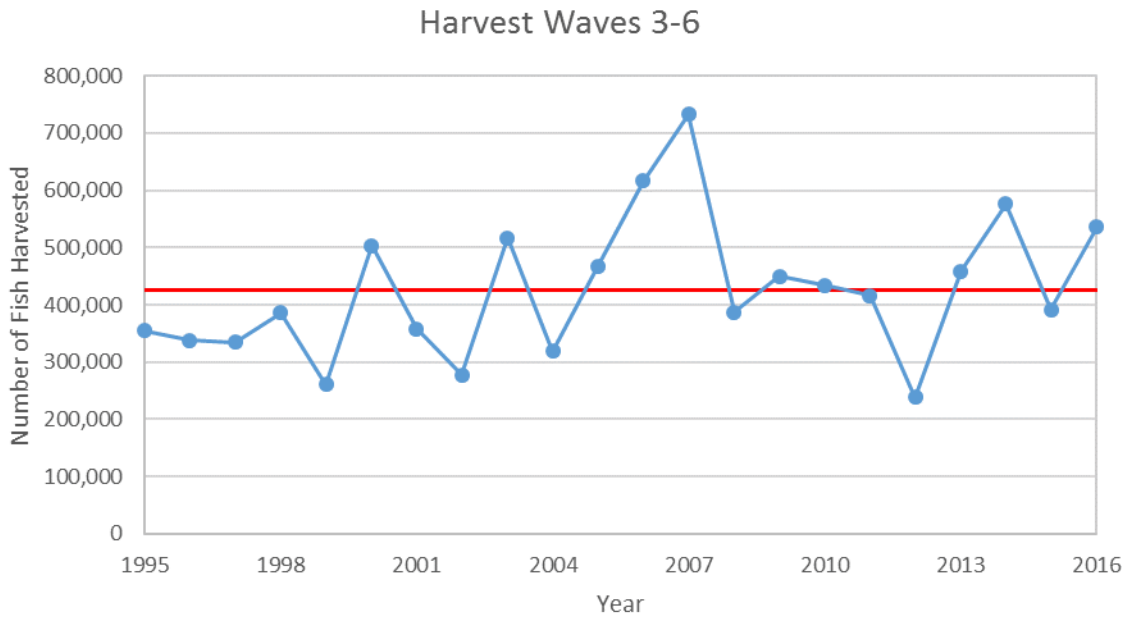


Figure 1. MRIP estimates of harvest and live releases for Maryland inland trips, waves 3-6, all modes combined. The red line is the long term average from 1995-2016.

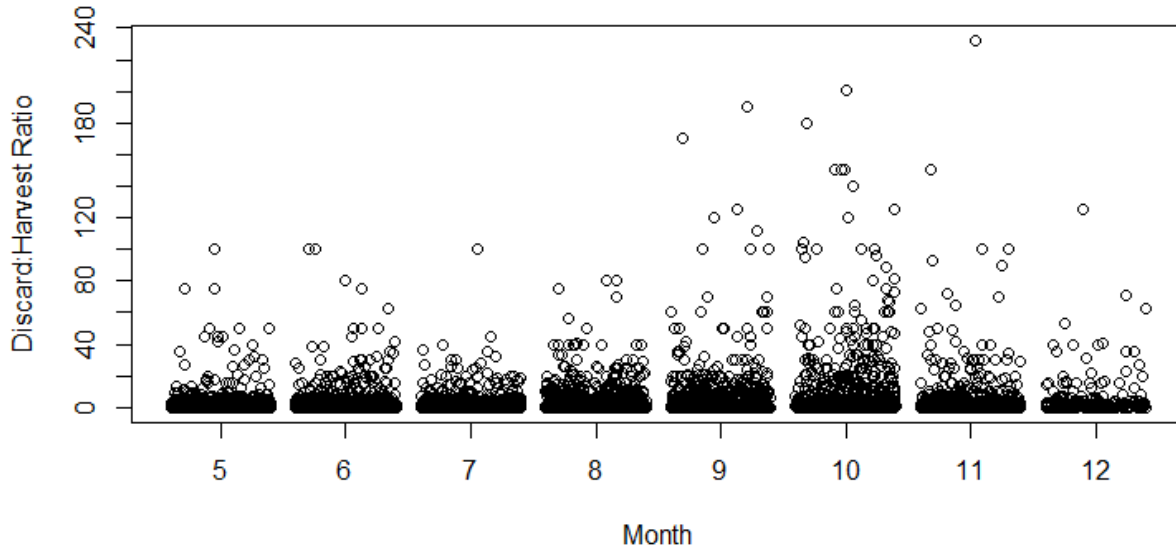


Figure 2. Discard to harvest ratios by month 2015-2016, combined. Each dot represents a logbook trip entry.

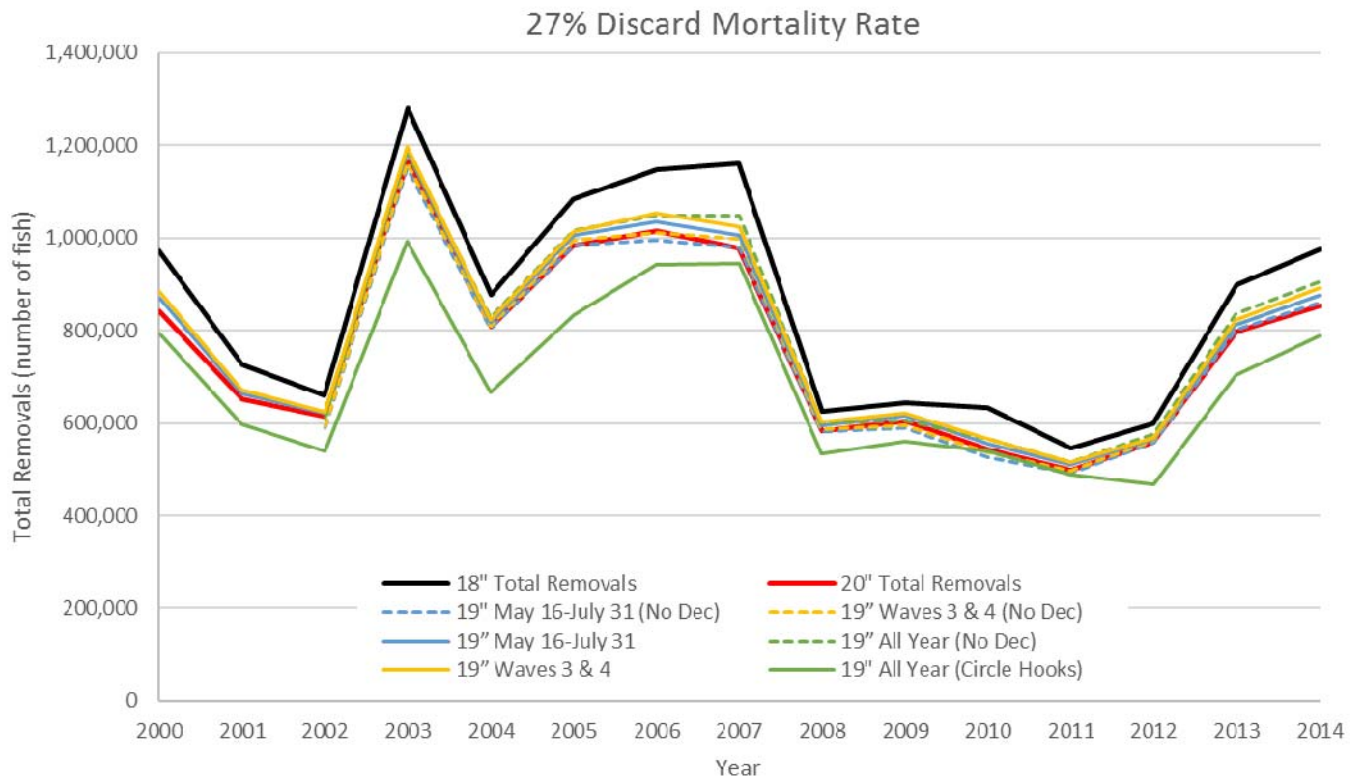
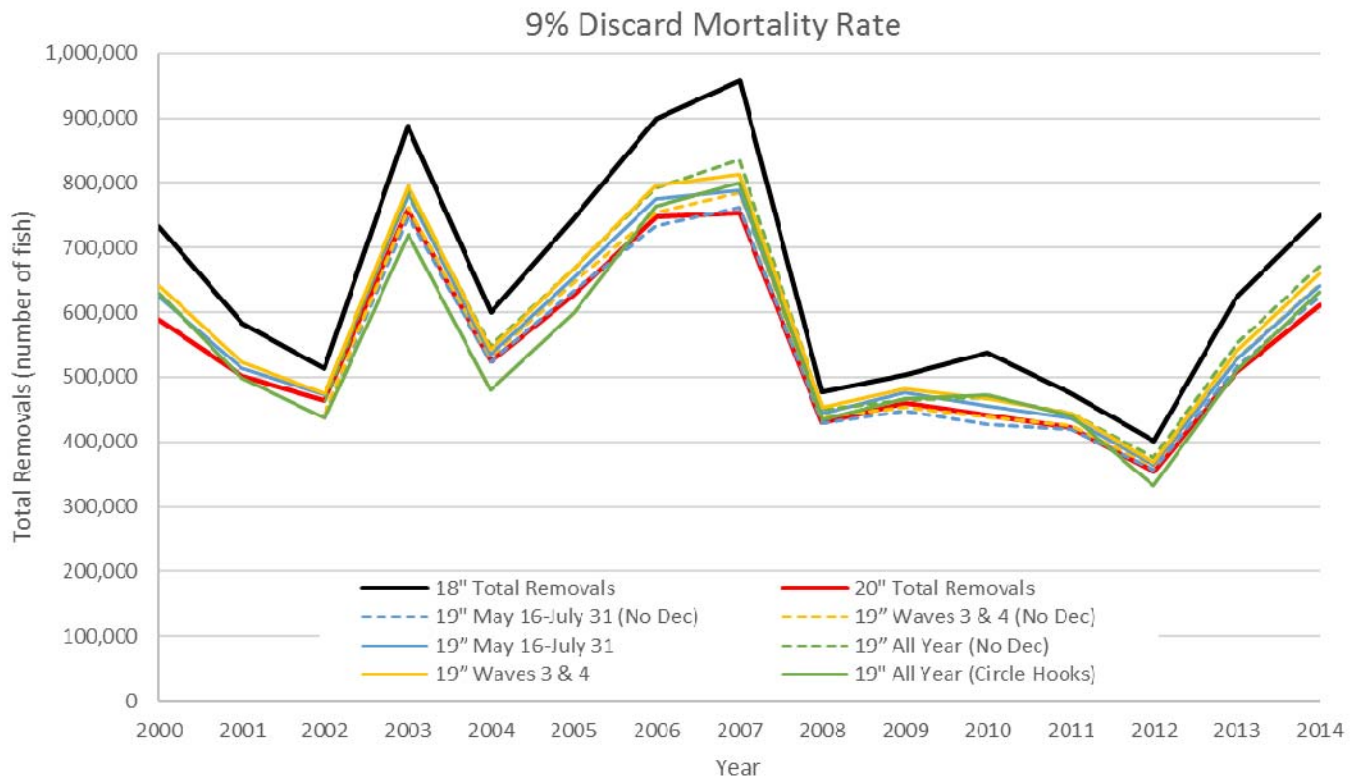


Figure 3. Comparison of estimated total removals, by year, under various minimum size scenarios. Discard mortality is assumed to be 9% (top) and 27% in waves 3 and 4 (bottom). Circle hook estimates are preliminary.



Atlantic States Marine Fisheries Commission

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MEMORANDUM

January 18, 2018

To: Atlantic Striped Bass Management Board

From: Atlantic Striped Bass Technical Committee

RE: Review of Maryland's Conservation Equivalency Proposal for its Summer/Fall Recreational Fishery in the Chesapeake Bay

In accordance with Amendment 6 to the Atlantic Striped Bass Fishery Management Plan (FMP), Maryland submitted a conservation equivalency (CE) proposal for its summer/fall recreational Atlantic striped bass fishery in the Chesapeake Bay. CE proposals are subject to Technical Committee (TC) review and Management Board (Board) approval. Accordingly, the Atlantic Striped Bass Technical Committee (TC) met Friday, January 5, via webinar to review the proposal and develop recommendations regarding the technical merit of the proposed measures for Board consideration.

Background:

In 2015, Maryland raised the minimum size limit in its summer/fall recreational striped bass fishery in the Chesapeake Bay from 18" to 20" to meet the requirements of Addendum IV, i.e., a 20.5% reduction in total removals relative to 2012. Since then, Maryland anglers, particularly the charter boat sector, have expressed concerns regarding the high ratio of released fish to retained fish due to the increased size limit, which has made it very difficult to attract customers. Additionally, there is evidence that the release mortality rate, particularly in the summer months, is much higher than the 9% value used in the coast-wide striped bass stock assessment. Accordingly, Maryland is proposing a number of alternative measures for its summer/fall recreational fishery in the Chesapeake Bay, all of which include a reduced minimum size limit of 19", with the primary goal of reducing dead discards (attached). Quantitative analysis to demonstrate that the proposed measures are equivalent to standards contained in the FMP, i.e., Addendum IV to Amendment 6, was provided.

Technical Committee Review and Recommendations:

In essence, the proposal indicates that by reducing the minimum size limit from 20" to 19" during the summer/fall season, direct harvest would increase and dead discards would decrease resulting in an estimated 1% decrease to a 6% increase in total removals relative to current levels depending on the option chosen (Table 1 – eleven options in total). One set of proposed measures (A-F) uses a 9% release mortality rate and the second set of proposed measures (G-K) uses a 27% release mortality rate for Waves 3 and 4 (summer months) and 9% for all other waves. Additionally, under Option B, the mandatory use of circle hooks for all anglers fishing with bait would be implemented to achieve the estimated change in total removals.

From a technical perspective, it is the consensus of the TC that in general the data sources and calculation methods are appropriate and accurate, and demonstrate that the proposed measures may have minimal impact on total removals relative to current regulations. The TC did note, however, that the proposal did not follow all of the TC's criteria for Addendum IV CE proposals regarding the time series of data to be used (memos 14-110 and 17-007; enclosed). Specifically, MD used a longer time series of data for the analysis (2000- 2014). Season specific catch and size frequencies and season specific alternative discard mortality rates were also used, however these are allowed by the TC CE criteria if the data used are of equal or better quality than the standard set used for Addendum IV.

Although the TC accepted the proposal's methodology as sound, the TC was not comfortable endorsing any of the proposed measures because it is unclear how to interpret conservation equivalency under Addendum IV for fisheries operating in the Chesapeake Bay.

Conservation equivalency is currently defined in the Interstate Fisheries Management Program (ISFMP) Charter as: "Actions taken by a state which differ from the specific requirements of the FMP, but which achieve the same quantified level of conservation for the resource under management." Addendum IV to the striped bass FMP requires the Chesapeake Bay jurisdictions to implement a management program that achieves at least a 20.5% reduction from 2012 harvest (including estimated dead discards), but does not specify what regulations are to be used to achieve that reduction. Addendum IV addressed several management objectives including conservation of the 2011 year class and conservation of spawning fish to enhance the striped bass fishery long-term, as well as reducing F to a level at or below the target beginning in 2015. According to the 2016 Atlantic striped bass stock assessment update, under current regulations, F in 2015 was below the target ($F=0.16$, $F_{\text{target}}=0.18$).

Although Maryland's proposal did not demonstrate that any of the options meet the 20.5% reduction from 2012 levels, options A, G, and H are calculated to have no effect or a slight reduction in removals compared to current regulations, thus being conservationally equivalent to current regulations but not the measures stipulated in the Addendum. Interpretation of whether this proposal meets the letter or the spirit of the conservation equivalency policy is a decision for the Board.

It is important to note that the usual caveats about the uncertainty in bag and size limit analyses apply here. These analyses do not take into account changes in angler behavior due to the new regulations or changes in the population size structure as large or small year classes move through. Specifically, one TC member commented that anglers, especially in the charter boat sector, would likely not cease fishing after catching the creel limit and therefore the number of released fish would not decrease as proposed under a 19" minimum size limit. However, the data from the MD charter boat fleet indicated that the average number of fish discarded per one fish harvested per trip, was lower under the smaller minimum size management regime. The TC also noted that while the increased size limit likely impacted the ratio of released fish to retained fish since implementation of Addendum IV, the presence of the strong 2011 year class in the fishery was also likely an important factor because the proportion of sublegal fish in the population was larger in 2015 and 2016 than in the recent past. The

TC notes that another strong 2015 year class will be entering the fishery in 2018 and will likely contribute to discard mortality in the coming years.

Lastly, in regards to the use of an alternate release mortality rate in Option B, the TC supports the use of circle hooks to reduce post release mortality. However, the TC does not endorse such provisions for conservation equivalency at this time because of the many challenges to accurately calculate the expected change in total removals, e.g., enforceability and angler response. Additionally, the TC needs more information regarding the specific circle hook(s) that would be required and to which anglers the provision would apply to make a justified decision.

Table 1. Possible regulatory options. Source: Maryland Conservation Equivalency Proposal. 2017.

9% Discard Mortality Rate All Year			
Option	Option Description	Estimated Change in Total Removals	2 SE
A	19" May 16-July 31 (No Dec)	-1%	1.1%
B	19" All Year (Circle Hooks)	0%	2.5%
C	19" Waves 3 & 4 (No Dec)	1%	1.4%
D	19" May 16-July 31	4%	0.6%
E	19" All Year (No Dec)	6%	1.7%
F	19" Waves 3 & 4	6%	0.9%

27% Discard Mortality Rate in Waves 3 & 4			
Option	Option Description	Estimated Change in Total Removals	2 SE
G	19" May 16-July 31 (No Dec)	-1%	0.8%
H	19" Waves 3 & 4 (No Dec)	0%	0.9%
I	19" May 16-July 31	2%	0.3%
J	19" Waves 3 & 4	3%	0.5%
K	19" All Year (No Dec)	3%	1.1%



Atlantic States Marine Fisheries Commission

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MEMORANDUM

November 20, 2014

To: Atlantic Striped Bass Technical Committee
From: Michael Waive, FMP Coordinator
RE: Technical Committee Criteria for Conservation Equivalency with Addendum IV

The Atlantic Striped Bass Technical Committee met via conference call on November 18, 2014 to discuss implementation plans for Addendum IV to Amendment 6. The Technical Committee established the following criteria for the development of conservation equivalency proposals.

Recreational Fishery

1.) States can choose any option from the B table below (options B1-B9) for their coastal recreational fishery without further analysis. Chesapeake Bay states can choose any option from Table B or C that achieves at least a 20.5% reduction for their Bay recreational fisheries (Chesapeake Bay tables were in Draft Addendum IV for Public Comment).

Option	Bag Limit	Size limit	Trophy fish	% reduction from 2013 harvest
B1	1	28" min	n/a	31%
B2	1	30" min	n/a	greater than 31% ³
B3	1	32" min	n/a	greater than 31% ³
B4	1	28-40" slot	n/a	greater than 31% ³
B5	2	33" min	n/a	29%
B6	2	28-34" slot	n/a	28%
B7	2 (1 slot, 1 trophy)	1 fish 28-34" slot	1 fish 36" min	28% ³
B8	2 (1 slot, 1 trophy)	1 fish 28-36" slot	1 fish 38" min	26% ³
B9	2 (1 slot, 1 trophy)	1 fish 28-37" slot	1 fish 40" min	26% ³

- 2.) If deviating from options in the B table, states need to submit a state specific analysis using state specific data that demonstrates their proposal meets at least a 25% reduction in total recreational removals. The TC created the following standards for treatment of datasets:
- Data years: pool three years of data, 2011-2013.
 - Treatment of sublegal harvest or trips that exceed the bag limit: Assume perfect compliance for 2015, but imperfect for 2013 (this is what the TC used for the coastwide analysis to create the B table options).
 - Post release mortality: Use 9% as default or an alternative if data exist to estimate it.
 - Supplemental data: If using supplemental data describe the source (e.g., voluntary angler surveys) and characteristics of the supplemental datasets (e.g., methods, sample size, other measures to help evaluate quality).
 - Justify the use of supplemental data in support of or to replace MRIP data.
 - Explain dataset applicability to the type of analysis you are completing.
- 3.) If treating modes separately (i.e., private and for-hire party/charter) states must submit mode-specific data analyses adhering to the data standards established in item 2.

- Note: State(s) must achieve at least a 25% reduction in total removals. This means private or party/charter modes may achieve less than a 25% reduction, but the total, state-wide reduction (weighted by mode-specific removals) must equal at least 25%.
- 4.) If treating seasons separately (e.g., different regulation between spring and fall) states must submit season-specific data and analysis adhering to the data standards established in item 2.
- 5.) Regional proposals can combine data from all states in the region, but if a state drops out of the regional proposal later on, the remaining states must redo the analysis to show they still achieve at least the 25% reduction.
- 6.) The TC also discussed Individual state methodologies as detailed below.

Recreational Fishery

- New Jersey is using SAS code from the analysis of options B7-B9 as previously done. The following is an approved dataset treatment that would apply to options that consider changes to both size and bag limits. Note this treatment is in addition to the data standards established in item 2.
 - Modification of MRIP data: distribute fish to individuals even if the fish caught was not by the individual interviewed. If MRIP can't identify whose fish it is they randomly distribute the fish to the individuals in the party until they run out. This expands the sample size of the dataset used to estimate the reduction in harvest.
 - Note: it is acceptable to use expanded MRIP data if there is only a change to the bag limit or size limit, not both.

Commercial Fishery

- 7.) If a state would like to maintain a previously approved conservation equivalency proposal for its commercial fishery the state needs to resubmit its proposal adjusting its conservation equivalency quota to the new Addendum IV quota baseline (highlighted below).

	For Reference	Addendum IV Quota
State	Am6 Quota (lbs)	25% reduction from Am6 Quota (lbs)
Maine	250*	188
New Hampshire	5,750*	4,313
Massachusetts	1,159,750	869,813
Rhode Island	243,625†	182,719
Connecticut	23,750**	17,813
New York	1,061,060†	795,795
New Jersey	321,750**	241,313
Delaware	193,447	145,085
Maryland	131,560†	98,670
Virginia	184,853	138,640
North Carolina	480,480	360,360
Coastal Total	3,806,275	2,854,706

* Commercial harvest/sale prohibited, with no re-allocation of quota.

** Commercial harvest/sale prohibited, with re-allocation of quota to the recreational fishery.

† Quota reduced through management program equivalency; NY (828,293 pounds) and MD (126,396 pounds) beginning in 2004, RI (239,963 pounds) beginning in 2007.

- For example: Maryland reduced its coastal commercial minimum size limit from 28” to 24” which resulted in a reduced quota from 131,560 to 126,396 pounds using yield per recruit methodology. If Maryland chooses to maintain its 24” minimum size then it must re-submit a similar proposal that reduces its Addendum IV baseline quota (98,670 pounds) using a yield per recruit equivalency of 28” and 24” minimum size limits.
- If states with previously approved conservation equivalency choose to increase their minimum size back to 28” there is no conservation equivalency needed, even if they establish a maximum size, because they are choosing to be more conservative. This would result in a state reverting back to its new baseline Addendum IV quota shown in item 7.
- If states submit a conservation equivalency proposal to increase their commercial quota based on establishing an increased minimum size limit, then the TC recommends incorporating an estimation of dead discards into the analysis.



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MEMORANDUM

January 13, 2017

To: Atlantic Striped Bass Management Board
From: Atlantic Striped Bass Technical Committee
RE: Percent Liberalization in Harvest (0.16 to 0.18) and Dataset Recommendation for Conservation Equivalency Proposals

In October 2016, the Atlantic Striped Bass Board (Board) tasked the Technical Committee (TC) to 1) determine the percent liberalization in harvest that would increase fishing mortality (F) from the 2015 terminal year estimate of 0.16 to the FMP target F of 0.18, and 2) to recommend a preferred dataset using updated length-frequency data for states to use when preparing conservation equivalency proposals for recreational regulations. The following represents the work completed by the TC to address these two tasks.

Task 1

Methods:

The two projection scenarios examined were:

1. Project population starting in 2015 through 2017 using preliminary removals for 2016 and fishing mortality (F) of 0.18 (i.e., F target) in 2017. Estimate total removals in 2017.
2. Project population starting in 2015 through 2017 using constant F of 0.156 in 2015 and F of 0.18 in 2016 and 2017. Estimate total removals in 2016 and 2017.

For Scenario 1, error in F and starting abundances for 2015 was assumed. For Scenario 2, only error in starting abundances was assumed. Projections were made for the uncorrected and retrospective bias-corrected estimates of F and spawning stock biomass (SSB), and 10,000 runs were made for each scenario.

Results:

Preliminary 2016 removals are estimated at 3,557,510 fish¹ which is an 18% increase in removals from 2015 (3,017,358 fish). According to the projection model (Tables 1-2), the number of harvested fish that it would take to increase F from 0.156 in 2015 to 0.18 (target F) in 2017 ranges from 303,800 fish (Scenario 2, without retrospective bias correction) to 341,186 fish (Scenario 1, with retrospective bias correction), a 10 - 11% increase in removals from 2015 (Table 3), but a reduction of approximately 6% from preliminary 2016 estimates of removals.

Discussion:

Although projections indicate harvest could increase in 2017 relative to 2015 numbers, all of the scenarios result in 2017 removals that are less than the preliminary 2016 removals.

According to the projections in Scenario 1, F increased to 0.19 in 2016 which is above the F target (0.18) indicating that current recreational and commercial regulations may result in an F of 0.18 or greater in 2016 and 2017. Also, the 2016 removals estimate for Scenario 1, although preliminary, is higher than that estimated via a constant F of 0.180 in Scenario 2. In other words, if the final 2016 removals estimate is lower than that used for Scenario 1, it is still likely that F will be estimated above the F target in 2016.

The TC also stresses that although the assessment is very good, it may not be able to distinguish between fishing mortality point estimates of 0.16 and 0.18. In other words, the upper and lower bounds of the confidence intervals for both F estimates would essentially overlap.

¹ Preliminary removals for 2016 were estimated via the sum of the 2016 preliminary MRIP harvest and dead discards estimate (A+B1+9% of B2's; waves 2-5), the 2015 wave 6 harvest and dead releases estimate from the Mid-Atlantic (wave 6 for 2016 has not been released yet), the 2015 Virginia wave 1 harvest estimate, the preliminary 2016 commercial landings estimates (except 2015 commercial landings were substituted for New York and Virginia because final 2016 landings are expected to be significantly higher for those states), and the 2015 commercial discards estimate.

Table 1. Scenario 1; preliminary 2016 removals estimate. Results of 2016 fishery independent surveys are not accounted for in the 2016 and 2017 stock status projections (F and SSB). Removals are in number of fish. *median value

No Retrospective Bias-Correction						
Year	Removals	F	*Estimated Removals	*SSB (mt)	Probability F is above the threshold	Probability SSB is below the threshold
2015	3,017,358	0.156		58,886	0.021	0.411
2016	3,557,510	0.194		58,754	0.175	0.407
2017		0.180	3,329,752	58,677	0.058	0.417
Retrospective Bias-Correction						
Year	Removals	F	*Estimated Removals	*SSB (mt)	Probability F is above the threshold	Probability SSB is below the threshold
2015	3,017,358	0.148		61,622	0.011	0.244
2016	3,557,510	0.190		61,752	0.140	0.218
2017		0.180	3,358,416	61,466	0.058	0.233

Table 2. Scenario 2; constant F of 0.156 for 2015 and F of 0.18 for 2016 and 2017. Results of 2016 fishery independent surveys are not accounted for in the 2016 and 2017 stock status projections (F and SSB). Estimated removals are in number of fish. *median value

No Retrospective Bias-Correction				
Year	F	*Estimated Removals	*SSB (mt)	Probability SSB is below the threshold
2015	0.148	3,017,230	58,847	0.417
2016	0.180	3,270,465	57,902	0.481
2017	0.180	3,321,030	58,478	0.436
Retrospective Bias-Correction				
Year	F	*Estimated Removals	*SSB (mt)	Probability SSB is below the threshold
2015	0.156	3,017,230	61,471	0.254
2016	0.180	3,318,723	60,310	0.307
2017	0.180	3,332,337	60,595	0.277

Table 3. Percent liberalization in harvest that would increase fishing mortality (F) from the 2015 terminal year estimate of 0.16 to the FMP target F of 0.18. Removals are in number of fish. *model-based estimate. ^based on 2016 preliminary removals estimate; 3,557,510 fish (see footnote above).

Scenario	2015 Removals	2017* Removals	Change in Removals	Percent Change in Removals From 2015	Percent Change in Removals From 2016^	Retrospective Bias?
1	3,017,358	3,329,752	312,394	+10%	-6.4%	No
		3,358,416	341,186	+11%	-5.6%	Yes
2	3,017,230*	3,321,030	303,800	+10%	-6.6%	No
		3,332,337	315,107	+10%	-6.3%	Yes

Task 2

In November 2014, the TC set criteria for the development of conservation equivalency (CE) proposals (M14-110). The TC acknowledges that 2011-2013 data are no longer appropriate for CE proposals due to the emergence of the 2011 year class in the catch data and the change in size-frequency of the current population. The TC discussed that a length-based projection model would be the best approach for states to use to address variability concerns, and is interested in pursuing the development of the model. However, until such a model is developed, the TC recommends states use the most recent three years of size-frequency data for preparing CE proposals unless a state can justify using less data. For example, the sample size from the most recent two years (or one year) may be sufficient. States should explicitly state its justification for using less than the most recent three years of data within the CE proposal.



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MEMORANDUM

January 10, 2018

To: Atlantic Striped Bass Management Board
From: Law Enforcement Committee
RE: Review of Maryland Conservation Equivalency Proposal

The Law Enforcement Committee (LEC) of the Atlantic States Marine Fisheries Commission (ASMFC) reviewed the Maryland Conservation Equivalency Proposal during a teleconference meeting on January 8, 2018.

The following were in attendance: *LEC: Capt. Steve Anthony (NC); Dep. Chief Kurt Blanchard (RI); Lt. Col. Larry Furlong (PA); Lt. Tom Gadowski (NY); Sgt. Greg Garner (SC); Wayne Hettenbach (USDOJ); Maj. Rob Kersey (MD); Capt. Bob Lynn (GA); Capt. Doug Messeck (DE); Katie Moore (USCG); Maj. Patrick Moran (MA); Lt. Patrick O'Shaughnessy (NOAA OLE SE Div); Col. Kyle Overturf (CT); Eric Provencher (NOAA OLE NE Div); Capt. Jason Snellbaker (NJ)*

STAFF: Max Appelman; Mark Robson; Mike Schmidtke; Megan Ware

Max Appelman of ASMFC staff provided an overview of Maryland's proposal and the LEC provided the following comments:

Regarding options to reduce the size limit from 20 to 19 inches, the LEC recommends that all states strive for consistent size and bag limits when regulating contiguous waters, and for charter/headboat and general recreational fishermen to all have the same size limits. However, there were no specific objections to the Maryland proposal for a reduced size limit in the Chesapeake Bay recreational season in the summer/fall period. The LEC recommendation for consistency mirrors comments made during the last round of equivalency proposals for striped bass, which are detailed in a memorandum to the Striped Bass Management Board (*dated January 26, 2015*).

Regarding an option to include a mandatory use of circle hooks along with a year-round size limit reduction, the LEC urged caution in relying too much on strict enforcement of such a gear requirement to ensure meeting harvest reduction targets. Experience in some states has shown that courts are reluctant to prosecute such violations, especially where it may be difficult to demonstrate a clear intention to violate the regulation by recreational anglers. Unless a regulation applies across the board for all species potentially being targeted by anglers, strict enforcement is difficult.

The LEC appreciates the opportunity to comment on conservation equivalency proposals for the Atlantic striped bass fishery.



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MEMORANDUM

January 17, 2018

To: Atlantic Striped Bass Management Board
From: Atlantic Striped Bass Advisory Panel
RE: Review of Maryland Conservation Equivalency Proposal

The Atlantic Striped Bass Advisory Panel (AP) met via teleconference on January 12, 2018, to review and provide comment on Maryland's Conservation Equivalency Proposal for Board consideration.

The following AP members were in attendance: Edwin Cook (RI), Peter Whelan (NH), John Pedrick (PA), Lou Bassano (NJ, AP Chair), Arnold Leo (NY), Al Ristori (NJ), Ed Obrien (MD), David Sikorski (MD), Kelly Place (VA), John McMurray (NY), Joe Fletcher (DC), Dave Pecci (ME, submitted comments electronically). Public attendance included Lou MacKeil (MA).

M18-006

Max Appelman (FMP Coordinator) provided an overview of Maryland's proposal and the AP provided the following comments:

Regarding the proposed options, the AP supports Option B: 19" minimum size limit, all year, with a mandatory circle hook requirement. However, the AP stressed that there is a big difference between the realized conservation benefit and circle hook size, and offset versus in-line. As such, the AP stressed that this requirement must be explicitly defined. The AP added that a non-offset circle hook is preferred, and that larger hooks are generally associated with higher post-release survival (larger circle hooks are less likely to be ingested).

The AP agrees that there is a real issue in the Chesapeake Bay with dead releases. The AP commented that the number of small (undersized) fish in the Bay is overwhelming, and therefore catching large amounts of small fish is unavoidable. Accordingly, much of the discussion focused on the proposals mandatory use of circle hooks to reduce dead discards. In general, the AP feels strongly that circle hooks provide a true conservation benefit and that all striped bass fisheries should implement mandatory circle hook requirements, not just in the Chesapeake Bay. Moreover, the AP noted several times that the use of treble hooks with any bait (live or chunk) should be banned in all striped bass fisheries coast-wide, commercial and recreational. Some AP members did express concerns, however, regarding the precedence of demonstrating conservation equivalency by using a circle hook requirement to achieve a specific post-release mortality rate. That being said the AP believes the conservation benefits outweigh those concerns.

Motion: Move to support Maryland Proposal Option B: 19" minimum size (all year) with a mandatory circle hook requirement. Motion by Mr. McMurray, seconded by Mr. Place. Motion passes without objection.

Appendix 1.

NOTE: The following comment is not to be considered a reflection of AP's discussion or opinion. The comment was submitted after the scheduled teleconference, and as such, the AP did not have an opportunity to respond to or address the comment during its discussion. However, because the commenter is an active member of the AP and was unable to participate in the scheduled teleconference due to unforeseen circumstances, the comment is included below as an appendix to this memo.

To: Max Appelman

From: Patrick Paquette; Striped Bass AP Member, Massachusetts

Date: January 17, 2018

RE: Comments Related to Maryland Proposal for Conservation Equivalency.

First, I agree with the consensus of the AP that there is a real issue with dead discards in the Chesapeake Bay that needs to be addressed. I also agree that the circle hook requirement needs to be explicitly defined in terms of hook type and size because the tackle industry has yet to standardize the term "circle hook" resulting in over 100 different models (not sizes) that list the word "circle" on the package. Additionally, many of the more popular circle hooks (e.g., Octopus Circle) are designed in such a way that that the conservation benefits over a traditional J hook are lost.

However, I am opposed to the Maryland proposal because the realized conservation benefits from a mandatory circle hook requirement is highly uncertain, especially in the short term. Although circle hooks provide a conservation benefit over the use of treble hooks and most J hooks, I believe that it is impossible for a circle hook regulation in today's reality (e.g., terminology challenges within the tackle industry and uncertainties regarding angler behavior) to provide enough conservation benefit to offset any measurable amount of discard mortality. Yes, we can define a circle hook and responsible tackle shops and captains will comply, but considering a Walmart tackle aisle in the area sells thousands of faux circle hooks I see no way the proposal can be effective. Also, mandatory gear regulations tend to raise the cost of said gear to the consumer, and the economic impacts to anglers, retailers, distributors and manufactures were not addressed in the proposal.