Atlantic States Marine Fisheries Commission

ISFMP Policy Board

January 25, 2024
8:30 – 10:30 am
Hybrid Meeting

Draft Agenda

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

1. Welcome/Call to Order *(J. Cimino)*	8:30 a.m.
2. Board Consent *(J. Cimino)* • Approval of Agenda • Approval of Proceedings from October 2023	8:30 a.m.
3. Public Comment	8:35 a.m.
4. Executive Committee Report (*J. Cimino*) **Action**	8:45 a.m.
5. Review and Discuss 2023 Commissioner Survey Results (*A. Law*)	9:00 a.m.
6. Consider Jurisdiction Requests for Species Declared Interest **Final Action**	9:15 a.m.
7. Discuss Aquaculture in the Exclusive Economic Zone (*D. Blacklock*)	9:25 a.m.
8. Review NOAA Fisheries White Paper for an Industry-Based Survey	9:55 a.m.
9. Review Noncompliance Findings (If Necessary) **Action**	10:20 a.m.
10. Other Business	10:25 a.m.
11. Adjourn	10:30 a.m.

The meeting will be held at The Westin Crystal City (1800 Richmond Highway, Arlington, VA; 703.486.1111) and via webinar; click here for details

MEETING OVERVIEW

ISFMP Policy Board
Thursday January 25, 2024
8:30 – 10:30 a.m.
Webinar

Chair: Joe Cimino (NJ) Assumed Chairmanship: 10/23	Vice Chair: Dan McKiernan (MA)	Previous Board Meetings: October 19, 2023
Voting Members: ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, DC, PRFC, VA, NC, SC, GA, FL, NMFS, USFWS (19 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from October 19, 2023

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

4. Executive Committee Report (8:45- 9:00 a.m.) Action
Background • The Executive Committee will meet on February 1, 2023 • The Legislative committee will present a draft a letter of support (**supplemental materials**) for establishing a federal working waterfront grant program. Rep. Pingree and Sen. Collins have introduced two bills **(H.R. 6641** and **S. 3180** respectively) that would do this, but they differ in sections.
Presentations • J. Cimino will provide an update of the Executive Committee's work • A. Law will present the draft letter of support for establishing a federal working waterfronts grant program
Board action for consideration at this meeting • Consider approval of the federal working waterfronts grant program letter

5. Review and Discuss 2022 Commissioner Survey Results (9:00-9:15 a.m.)

Background

- Commissioners completed a survey of Commission performance in 2023 (**Meeting Materials**). The survey measures Commissioner's opinions regarding the progress and actions of the Commission in 2023.

Presentations

- A. Law will present the results of the 2023 Commissioner survey highlighting significant changes from the previous year.

Board discussion for consideration at this meeting

- Determine if any action is required based on the survey results

6. Consider Jurisdiction Requests for Species Declared Interest (9:15-9:25 a.m.) Final Action

Background

- The Commission's Rules and Regulations specify the process for a jurisdiction to declare an interest in a fishery.
- New York has requested to declare into the Atlantic Migratory Group (AMG) Cobia Fishery (**Meeting Materials**)

Presentations

- Staff will present changes to the species declared interest

Board action for consideration at this meeting

- Consider approving New York's request to declare into the AMG Cobia fishery

7. Discuss Aquaculture in the Exclusive Economic Zone (9:25-9:55 a.m.)

Background

- NOAA's Office of Aquaculture is seeking opportunities to expand US aquaculture that aligns with its 2011 Aquaculture Policy

Presentations

- D. Blacklock will present an update from the Office of Aquaculture and discuss state involvement in increasing aquaculture in the EEZ (e.g. striped bass)

Board action for consideration at this meeting

- None

8. Review NOAA Fisheries White Paper for an Industry-Base Survey (9:55-10:20 a.m.)

Background

- The Commission, along with the Mid Atlantic and New England Fishery Management Councils, requested information on an industry-based survey that would be complementary to the NEFSC Spring and Autumn bottom trawl survey
- The NEFSC has written a white paper responding to the Councils and Commission's request (**Supplemental Materials**)

Presentations

- Staff will present and overview of the NEFSC white paper

Board action for consideration at this meeting

- None

9. Review Non-Compliance Findings, if Necessary Action

10. Other Business

11. Adjourn

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

ISFMP POLICY BOARD

Beaufort Hotel
Beaufort, North Carolina
Hybrid Meeting

October 19, 2023

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INDEX OF MOTIONS

8. **Move that the Commission supports the New England and Mid-Atlantic Fisheries Management Council's request for information on an industry-based survey and the Commission send a similar letter requesting the NEFSC completes a white paper by January 12, 2024 outlining an industry-based survey that is complementary to the Spring and Autumn bottom trawl survey for the Commission and Councils** (Page 25). Motion by Eric Reid; second by Raymond Kane. Motion passes by unanimous consent (Page 25).

9. **Move to adjourn** by Consent (Page 26).

ATTENDANCE

Board Members

Pat Keliher, ME (AA)
Steve Train, ME (GA)
Allison Hepler, ME (LA)
Cheri Patterson, NH (AA)
Dennis Abbott, NH proxy for Sen. Watters (LA)
Doug Grout, NH (GA)
Dan McKiernan, MA (AA)
Raymond Kane, MA (GA)
Jason McNamee, RI (AA)
David Borden, RI (GA)
Eric Reid, RI, proxy for Sen. Sosnowski (RI)
Justin Davis, CT (AA)
William Hyatt, CT (GA)
Marty Gary, NY (AA)
Joe Cimino, NJ (AA)
Jeff Kaelin, NJ (GA)
Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)
Loren Lustig, PA (GA)
John Clark, DE (AA)
Roy Miller, DE (GA)
Craig Pugh, DE, proxy for Rep. Carson (DE)
Lynn Fegley, MD (AA, Acting)
David Sikorski, MD, proxy for Del. Stein (LA)
Shanna Madsen VA, proxy for J. Green (AA)
Chris Batsavage, NC, proxy for K. Rawls (AA)
Chad Thomas, NC, proxy for Rep. Wray (LA)
Malcolm Rhodes, SC (GA)
Ben Dyar, SC, proxy for Sen. Cromer (LA)
Doug Haymans, GA (AA)
Spud Woodward, GA (GA)
Erika Burgess, FL, proxy for J. McCawley (AA)
Ingrid Braun, PRFC
Mike Ruccio, NOAA

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

Staff

Bob Beal
Toni Kerns
Tina Berger
Katie Drew
Madeline Musante
Chelsea Tuohy
Caitlin Starks
Emily Franke
James Boyle
Tracey Bauer
Geoff White
Jeff Kipp
Mike Rinaldi
Lindsey Aubart
Kurt Blanchard

Guests

Max Appelman, NOAA
Mike Armstrong, MA DMF
Pat Augustine
Carolyn Belcher, GA DNR
Jessica Best, NYS DEC
Alan Bianchi, NC DMF
Jeffrey Brust, NJ DEP
Michael Celestino, NJ DEP
Haley Clinton, NC DEQ
Robert Corbett, NC DMF
Caitlin Craig, NYS DEC
Dustin Delano, NEFSA
Julie Evans
Catherine Fede, NYS DEC
Cynthia Ferrio, NOAA
James Fletcher, United National Fishermen's Assn.
Tony Friedrich, ASGA
Pat Geer, VMRC
Lewis Gillingham, VMRC
Joseph Grist, VMRC
Jon Hare, NOAA
Jesse Hornstein, NYS DEC
Blaik Keppler, SC DNR
Robert LaFrance
Thomas Lilly
Brooke Lowman, VMRC
Chip Lynch, NOAA
John Maniscalco, NYS DEC
Nichola Meserve, MA DMF
Chris McDonough, SC DNR
Joshua McGilly, VMRC
Patrick Moran, MA Environmental Police
Brandon Muffley, MAFMC
Allison Murphy, NOAA
Josh Newhard, US FWS
Thomas Newman
Will Poston
Jill Ramsey, VMRC
Kathy Rawls, NC (AA)
Harry Rickabaugh, MD DNR
Jason Rock, NC DMF
Kirby Rootes-Murdy, BOEM
Cody Rubner, ASGA

Guests (continued)

Erin Schnettler, NOAA
Alexandra Schwaab, AFWA
Christopher Scott, NYS DEC
Ethan Simpson, VMRC
Melissa Smith ME DMR
Somers Smott, VMRC
Scott Travers, RI Saltwater Anglers Assn.
Troy Tuckey, VIMS
Mike Waine, ASA
Shelby White, NC DMF
Kelly Whitmore, MA DMF
Chris Wright, NOAA
Daniel Zapf, NC DEQ
Erik Zlokovitz, MD DNR

The Interstate Fisheries Management Board of the Atlantic States Marine Fisheries Commission convened in the Rachel Carson Ballroom via hybrid meeting, in-person and webinar; Thursday, October 19, 2023, and was called to order at 9:45 a.m. by Chair A. G. "Spud" Woodward.

CALL TO ORDER

CHAIR SPUD WOODWARD: All right, I'm going to call the meeting of the ISFMP Policy Board to order, here in beautiful Beaufort, North Carolina, October 19th. I want to welcome everybody as we wind down from a very busy meeting week.

APPROVAL OF AGENDA

CHAIR WOODWARD: We'll start off with we have an agenda. I have one addition to the agenda from Eric Reid, carried over from yesterday, so I am going to call on him when we get to Other Business.

I believe, Dan, you might have something you want to address in other business of the Policy Board? Okay, and then Toni has got something that she wants to update everybody about, related to some Mid-Atlantic Fishery Management Council activities. Any other changes, modifications to the agenda?

I will be presenting the Chair's report here, and Pat asked that I do it like somebody from New York, but I'm not sure that is physically possible for me, but I'll make it as quick as I can. Any other modifications to the agenda? Any opposition to the agenda as modified? We'll consider it accepted by unanimous consent.

APPROVAL OF PROCEEDINGS

CHAIR WOODWARD: We also have the proceedings from July and August, 2023, any modifications or corrections to those proceedings? Seeing none; any opposition to accepting them? Then we'll consider those accepted by unanimous consent.

PUBLIC COMMENT

CHAIR WOODWARD: Public comment, is there anyone in the room from the public? I don't see anyone, anybody online from the public? We don't have any public comment.

EXECUTIVE COMMITTEE REPORT

CHAIR WOODWARD: I'm going to launch into a brief report on the Executive Committee activities, and then I'm going to follow that up with my Chair's report.

The Executive Committee met yesterday morning. We covered a variety of topics. First is AOC Chair, Joe Cimino presented a summary of the FY2023 financial audit, which was a clean audit once again, attributable to the excellent services we have from our Financial and Administrative Support Group. That report was considered and approved by the Executive Committee.

We also had a discussion about per diem rates that had carried forward from a previous Executive Committee meeting. After some discussion there was a motion made and approved to increase the meals and incidentals rate by 30 percent. Are there any questions about that while I'm addressing that topic? Then Alexander provided an update, a Legislative update of several things that are still in the queue. Obviously, as most of us realized, things are a little tumultuous over there inside the beltway these days, so we'll just keep tabs on things and keep everybody updated. Laura provided an update on future annual meetings, and our next annual meeting will be in Annapolis, Maryland, and Lynn has assured us that it is going to be a fun time for everybody, so we look forward to being in Annapolis.

Other business items included an update on CAA spending, and we are winding that down. I think we're going to have most of that money accounted for, and also Pat Keliher provided us just an update on some eel aquaculture activities up in Maine. I certainly encourage you if you're not familiar with American Unagi, you all. But they have a pretty amazing operation up there, and I'll just throw one statistic out, you can correct me if I'm wrong, Pat. But they are producing a biomass of yellow eels from that one facility that is greater than what we're actually harvesting. Is that right, from the wild population. It's pretty amazing. They have a nice

website; they even have merchandise. If you would like a tee-shirt that says eels across the front of it, you can get an eel tee-shirt.

That pretty much concludes our activities for our Executive Committee. Any questions about that? If not, I'm going to go into my Chair's Report. First and foremost, I want to thank you all for your support you've given Joe and me this past year. It has been a busy year with a lot of challenges and successes.

I am proud of our ability to collectively meet our issues head on and work to resolutions that we can all support. I'm pleased to say that over my term as Commission Chair, we have successfully revised three of the Commission's foundational policies, our Appeals Process, De Minimis Policy, and our Conservation Equivalency Guidelines, which I hope to be finalized later during this Policy Board meeting.

Each are fundamentally important to ensuring that we treat each other fairly, with clearly articulated guidelines and processes, and without undue burden in the management process. There has been a lot of stock assessment activities here with benchmark stock assessments for American eel, black drum, Jonah crab and winter flounder, all endorsed through our peer review process, and accepted for management use by the relevant species management board.

Another five benchmark stock assessments for river herring, red drum, Atlantic menhaden, ecological reference points, Atlantic croaker and spot are in preparation for completion in the 2024 and 2025 years. A response to the American eel benchmark stock assessment, finding that eels continue to be depleted.

The Board initiated an addendum to consider changes to the coastwide yellow eel harvest cap, to include using a new tool for setting the coastwide cap based on abundance indices, and catch, as proposed by the benchmark stock assessment. At the same time, the American Eel Board is working on an addendum to address Maine's glass eel fishery quota, which sunsets in 2024.

Commissioners also took important steps to increase spawning protection for the Gulf of Maine/Georges Bank stock of American lobster, and rebuild American striped bass. Though the adoption of Addendum XXVII, the American Lobster Board established a trigger mechanism to implement management that is specifically gauge and escape vent sizes to provide additional protection of the spawning stock biomass. Earlier this week the Board reviewed the annual data update of American lobster industries in the Addendum XXVII trigger index, and discussed whether new management measures will be needed to implement the addressed trip trigger, and ensure the sustainability of this valuable resource and fishery.

In May, for the first time in 12 years, Commissioners used the Emergency Action Provision of the ISFMP Charter, to implement a 31-inch maximum size limit for striped bass recreational fisheries, in order to control recreational harvest and protect a strong year class that could aid in strong stock rebuilding.

This action responded to the near doubling of estimated recreational harvest in 2021 to 2022, and the strong likelihood that the 2029 rebuilding timeline would not be met, unless fishing mortality was reduced. In August, the Atlantic Striped Bass Board extended the Emergency Provision until October 28, 2024, and initiated development of Draft Addendum II, to consider management measures designed to reduce fishing mortality to the target, and to promote stock rebuilding. Yesterday the Board approved this Addendum for public comment.

This year was one of heightened stakeholder and media scrutiny of the Commissioner's management and supporting signs. Concerned stakeholders contend that there is localized depletion of Atlantic menhaden in the Chesapeake Bay, largely due to the reduction fishery, and that this depletion has resulted in the declines of other fish and bird populations in the Bay.

In an effort to address this issue, the Virginia Institute of Marine Science and Maryland Department of Natural Resources are each

developing approaches to assess the ecology, fishery impact, and economic importance of the menhaden populations in their portions of the Bay. Until we get more specifics about menhaden within the Chesapeake Bay, menhaden will continue to be managed on a coastwide basis, with the use of ecological reference points.

The science behind our management of horseshoe crab populations in Delaware Bay has been criticized by stakeholders and in the media. There have been years of work by conscientious state and federal bird and fishery scientists to improve the Adaptive Resource Management Framework, which has been endorsed by an independent peer review panel of experts.

Yet shorebird activists and journalists challenged the validity of the decisions made based on the ARM Framework, opining that our management of horseshoe crabs is the primary factor contributing to the demise and endangered shorebirds like the red knot. The Commission welcomes constructive input and criticism, we will continue to refine our models and management through the best available science.

However, I want to say unequivocally that Commission leadership has confidence in the ARM Framework revision, and fully support its use in setting harvest levels for horseshoe crabs of Delaware Bay origin. In the next year and for years to come, three overarching themes will continue to dominate Commission discussions and actions. These are the impacts of potential overestimation of recreational harvest and effort, due to a bias in the Marine Recreational and Information Program Fishing Effort Survey, the effects of climate change on our coastal resources and communities. The most recent issue of Saltwater Sportsmen highlighted a tarpon caught off the beach at Cape Cod, and a new state record king mackerel in Delaware is sort of emblematic of the things that are changing out there, and the intersection of protected species and fisheries.

All three issues will significantly impact our management process, and our success in addressing them, allowing our ability to be open and honest about the issues before us, and to seek solutions that are best for both the sustainability of the resource under our care, and the communities that depend on them.

In closing, I want to thank the staff for their support during my tenure as Commission Chair. I also want to thank Joe for his willingness to serve, as a leader and for his valuable perspective over the past few years. I know that he and Dan will do a great job as Chair and Vice-Chair. I'll look forward to working with all of you, as we strive to ensure that we have healthy fisheries along the Atlantic Coast. Thank you very much.

CONSIDER APPROVAL OF REVISED CONSERVATION EQUIVALENCY POLICY AND TECHNICAL GUIDANCE DOCUMENT

CHAIR WOODWARD: Now I'm going to launch back into this Conservation Equivalency Policy Guidelines, Technical Guidance, whatever we're going to call it. We've been chewing on this for a while, so I hope that we can bring this to closure with unanimous consent. If we're not in unanimous then I feel like, you know we'll have to call a vote on this and see if we can move it forward.

I know there are concerns about certain parts of it, and I certainly understand those concerns. We all look at this through the lens of past experiences and future possible consequences. But I think this is one of those situations where we've got to be careful, and not let the perfect be the enemy of the good. With that I'm going to turn it over to Toni, and we'll get started.

MS. TONI KERNS: I just wanted to say thank you for your leadership over the past two years, it's been a really good time sitting up there with you. We're going to run through Conservation Equivalency Guidance Document. Just as a reminder, this document is to provide guidance on the application of conservation equivalency, and how the Commission uses the process within our management plan.

We started off from a task from the Executive

Committee. The Management Science Committee provided information on some of the more technical aspects of the document, in particular some of the requirements of data analyses in the requirements for proposals. At the last meeting we went through a version of the document.

The Policy Board provided some guidance and changes during that meeting. Those changes were made, e-mailed back to the Policy Board, additional comments and changes were e-mailed to me, and the document you have on your meeting materials reflect all of those changes that folks had asked for.

In the case where there wasn't agreement, it created options in the document for the Board to consider today. The document is overall more streamlined now. I tried to get rid of some of the duplications in the document. It has the background section, general policy guidance section, a portion where it describes when conservation equivalency is not allowed, what needs to be contained within the state proposal, what those standards are, what the review process entails, and then information on coordination, and guidance with our federal partners. I did receive some feedback from folks that the document was moving in a direction where states wouldn't have the flexibility anymore to do what conservation equivalency is intended to do.

That is just that part of sort of that allows states to have the flexibility to craft management measures, that meet the needs of their state fisheries, but still has the same or greater conservation as the standard FMP measure. I tried to roll some pieces back in the document. I don't know if I rolled it back enough or not, but to still be able to allow for that flexibility for states, and yet still have some guidance and policy within the document itself.

The document definitely no longer has a lot of suggestions or recommendations, so if there are places where we want to bring it back to a suggestion or a recommendation, just point those out, and we can roll those back. Today I am just going to go over the sections where we have options in the document, as to not reread the entire document for the group.

The first part is where conservation equivalency is potentially not allowed. Just thinking about what is the status of the stock, and do we want to give guidance to the Board, on whether or not conservation equivalency can be permitted. The first option, and the first three options would be standard across the board for all FMPs, and then the fourth option gives the responsibility back to the management board itself.

The first option is to not allow conservation equivalency in any FMP if the stock is overfished. The second option is to not allow conservation equivalency if the stock is overfished, depleted or unknown. The third option is to not allow conservation equivalency if the stock is overfished, unless allowed by a board via two-thirds majority vote, and the application of the voting policy on two-thirds in Article 2, would apply, and that's if the federal partners abstain then they don't count to the denominator.

Then the fourth option is to allow for board discretion for making the decision on whether or not conservation equivalency is allowed or not. It can be based on stock status. If a board implements a stock status restriction for CE, it can choose to apply that restriction to the entire fishery, or part of the fishery, meaning identify a specific sector that that would apply to.

If a board decides to not implement a stock status restriction for CE, the board would provide a rationale in their meeting proceedings as to why the CE restriction is not needed for that species if the stock were overfished or overfishing was occurring. Then moving on down into the document, and looking at the nonquantifiable measures.

This section just identifies if a state is submitting a proposal that has something that cannot be quantified. It can be a part of the state's proposal, but it can't count toward meeting the equivalent standard of the FMP. It provides some examples of what are nonquantifiable measures at this time. These can change in the future if we have the ability to quantify them. These nonquantifiable measures include circle hooks, nontargeting zones or periods,

no gaffing, outreach promoting best practices or release, and measures that are expected to reduce release mortality or overall, just other measures of other discards. There were some folks that felt strongly about removing this language, and other folks that wanted to keep this language, so I just made it an option. The next section where we had disagreement amongst the Board is looking at the standard that has to be in a conservation equivalency proposal, and this is looking at standards.

If a proposal has a closed period as part of its proposal, the document states that any closed periods must come from periods of high availability, and include at least two consecutive weekend periods, a weekend meaning Friday, Saturday and Sunday. There were some folks that did not want this bolded language to be a part of the document, and others that did.

I will note that this language came from that management and science group that had evaluated some of the more technical aspects of the document, and were part of their recommendation. Then lastly was actually a question from me. As I went through these last final changes, while we had originally said that conservation equivalency plans had to include an end date from the state.

I thought to myself, if we are reviewing these conservation equivalency proposals every year, and the Board can terminate a program if its not working in some way or another, then does that proposal need an end date if it's being reviewed each year or not? Just a question to the Board if we can make a change to that or not. Then just as a reminder, as Spud said, we're trying to get this document finished today, so that will be our final consideration is to approve the document. Any questions?

CHAIR WOODWARD: All right, go ahead, Jason, and then I'll go to you, Doug.

DR. JASON McNAMEE: Thank you, Mr. Chair. Yes, Toni, the only question I had, I was thinking about the high availability are kind of subjective still, so I'll offer you how I interpret that. My concern is, you know if you put a closed period in, it might not be the highest wave, let's say, but it has harvest in it that is relatively high for the year. That would be my interpretation of that. Is that what you think as well?

MS. KERNS: Yes, I agree with you, Jason. It doesn't necessarily have to be the highest availability, but it shouldn't be the ones where you basically have no catch during that time.

CHAIR WOODWARD: Al right, Doug, then I'll go to Dan.

MR. DOUGLAS E. GROUT: Toni, I just wanted a clarification on Page 4, this wording under what are nonquantifiable measures. The way I read it; it said these measures could include several of those nontargeted zones. But is the intent of this is it would say that as of right now, these are the ones that you cannot use period, or if you could come up with, say for circle hooks.

You've got studies that show how much lower mortality you have with certain species for circle hooks. But the problem we have is we don't have an idea of how many people are using circle hooks. But if people put in a study, or put it in their recreational monitoring, where they could actually say, 50 percent of our public uses circle hooks on this, so we're realizing this percentage. Could they in fact use it? I just want to make sure this isn't just locking these out forever, but if they can demonstrate it in a quantifiable manner they could use circle hooks, or some of the other things.

MS. KERNS: Someone had asked me to put some examples in the document, so that is originally why I put these in here. I phrased it in a way, it could include, because we wanted to leave the window open, if we do come up with ways to quantify them, then they are not 100 percent fine to use. You just need the math to show that the measure can be equivalent to the standard of the FMP that you are trying to replace.

CHAIR WOODWARD: All right, Dan, and then I 'll go to Shanna.

MR. DANIEL McKIERNAN: My question follows up on

Jason's comments, relative to the requirements of closing times of high abundance. My understanding of how we've used that data is, for example Wave 5, September/October. In Massachusetts there is a whole lot more fishing going on, on Labor Day weekend than there is on Halloween.

The catch rates are average for that month, but if you lose days on the back end, you're probably not saving many fish. My question is actually relative to Richard Cody's presentation. Are we seeing a future where we're going to have monthly MRIP estimates in the future? Would that help resolve that?

MS. KERNS: I think we are going to have a future where we will be getting monthly information. I'm going to turn to Jason. I think it will help resolve that, but he is shaking his head, yes, so yes.

MR. McKIERNAN: I think that would minimize the need for that, because if you're looking at a two-month wave, the catch rates can vary a whole lot, you know trending from one end of the wave to another. But if you're getting int monthly waves, maybe you don't need that.

MS. KERNS: Can you go to these proposed changes at Slide 6. That is the pleasure of the Board. If you think you don't need it any more or not, I think the intention of the group, and Jason has his hand up, so it's to make sure that the state is considering these higher availability timeframes versus incredibly low variability timeframes, where catch is not really occurring.

You're not really impacting the stock. I'll note that the two-week consecutive period with the weekends was to make sure that shorter closures you see a lot of recruitment, and you want to have at least a minimum amount of time for that. But Jason, go ahead.

DR. McNAMEE: Yes, just to clarify. I think it is a goal of MRIP to get there. When that happens, I am not sure, given all of the things that they are trying to do. But to your point, Dan, I think there is still a need to, I think it gets better. You know you can be a little more refined a month with that. But you still have, there have been in the past people trying to put in conservation equivalencies where they are like kicking off, like a couple of days, and then they sort of spread them out. I think that's what this is trying to avoid. I think there is still a need.

CHAIR WOODWARD: All right, is everybody good on that? I'm going to go to Shanna and then to Eric.

MS. SHANNA MADSEN: Thank you, Toni. I know this document has been a labor of love, so I just wanted to give you a shout out and say, thank you very much for listening to all of us, and giving us some options to talk about this morning. My question actually is also related to this, so I'm glad that this is up here.

I think, Toni, you did a really good job of kind of telling us that you're looking for making sure that there is a long enough time period that there is not recruitment. I did have a question. Has Law Enforcement gotten to like kind of look this over and think about whether or not that is a long enough time period

I think one of the considerations that we make in trying to create a closure mid-season is yes, to make sure that we're not creating a short enough period that you know if you have three days there that doesn't really mean anything, but also, what would be most effective for, like enforcements, so like a minimum closure period?

I'm kind of less, I guess not less concerned, but less concerned about the high availability times, and more kind of worried about like how long do we need to close maybe mid-season, in order for Law Enforcement to actually see, to have enough time, to make sure that people aren't out there still fishing during kind of that open/closed season period. Just a question to that.

MS. KERNS: We did not specifically bring it to Law Enforcement. I'll offer Kurt to come to the microphone if he has any insight. I know that we've talked about two-week closures in summer flounder, scup, and black sea bass prior before, so maybe he remembers from then.

MR. KURT BLANCHARD: Short closures are not really liked by Law Enforcement, because there is such a fine window. But as far as having the ability to enforce them, or be prepared to enforce them. As long as it's going out publicly and noticed, and it's been regulation codified, we're already planning for that.

We will be aware of that up front on a seasonal basis of what our priorities are and where we're going to be. We'll have that opportunity to do that. But have a short closure like this is not really ideal for Law Enforcement. But we understand it has to happen at times, and it does happen at times. I hope that answers your question.

MS. MADSEN: Thank you, just a quick follow up. Do you think that two weeks is kind of optimal for that? It seems kind of short still in the middle of the season, but just wondering.

MR. BLANCHARD: The longer the duration the better.

CHAIR WOODWARD: All right, Erika.

MS. ERIKA BURGESS: Thank you, Mr. Chair, and Toni, thank you too for the time that you spent on this and the time that you spent with me talking through me through this document. I wanted to ask you whether you thought under the measures that cannot be qualified, rather that italicized bold wording is actually needed, in order for the TC to make a decision about the effectiveness or measurableness of a CE proposal.

MS. KERNS: Strictly examples, so whether or not examples are needed, I guess some people ask, what does that mean? Maybe sometimes it can be helpful for a group, but is it a hundred percent necessary to conduct the business, probably not? Still need to evaluate.

CHAIR WOODWARD: Tell you what, why don't, Lynn, and then why don't we focus on what is up on the screen, and see if we can make a decision about that one, and decide whether we want to keep that bolded language or not, so Lynn, I'll go to you and then I'll come back to that.

MS. LYNN FEGLEY: This is not really a question, it's just a follow up to what Erika said, and yes, thank you, Toni, for your work on this. I do think, just to Erika's point of whether we need this sentence, given the TC is going to evaluate. I do think what this does is provide the state with some guidelines up front to save time.

I think it's really important, you know messages to the state, don't be doing this stuff, where you're doing a weekend here and a weekend there, a Wednesday and a Friday. It just puts everybody on the same playing field going forward, so I think it has that value.

CHAIR WOODWARD: Yes, I kind of liken this to when you take a father's daughter out on a date and he says bring her home early enough or he says, bring her home at nine. There is some value in specificity. Roy.

MR. ROY W. MILLER: Looking at the wording that is before us, any closed period must come from a period of high availability, and include at least two consecutive weekend periods. I can think of examples from the past, where if the required reduction was relatively modest, something in the 5 to 10 percent range.

Lopping off several months at the beginning or the ending of a fishing year might suffice, even though that is not the period of high availability. But in the past, if we wanted to make a modest change, sometimes we took those off-season approaches to get a fairly low percentage reduction.

CHAIR WOODWARD: All right, Justin, and then Doug.

DR. JUSTIN DAVIS: From my standpoint, for the record, I like Option 1. I appreciate the guidance to keep sort of a minimum length of any closure, to make sure it has some chance of being effective, and that the effort just isn't displaced before and after the closure. But the term high availability to me is just subjective. What's high, what's not?

I'm not sure exactly what availability means in this context. Is it a period of high harvest? Is it a period when the fish are available? I mean I'm thinking about tautog in Long Island Sound. There are plenty of tautog available in New York in the summer, but they've been closed for a long time, so we don't have any record of catch and harvest there in the summer. As someone who likes to spearfish in the summer, Long Island Sound is a constant source of annoyance for me that you guys aren't open in the summer, but that's neither here nor there. For me, I appreciate the intent, but I jut think the term is too subjective, and the metric of the effectiveness of the proposed closure should be the math, whatever math is done to estimate the potential savings in harvest.

MS. KERNS: Just to note. When someone makes a motion on this, if you're deciding you want to keep the language about the closed periods, will you make sure you are very clear about what is getting deleted versus not? In the end I was thinking that the whole sentence would go away. I was sort of short-handing for the slide. Just be very clear if you're going to split the sentence in half, and you want to keep part of it, then make that motion that way.

DR. DAVIS: I would be willing to make a motion to try to advance the ball forward here, if you want to do that at this point in time.

CHAIR WOODWARD: Why don't you go ahead and make that motion, and we'll wait until we get a second, but we still have other people in the queue, so go ahead.

DR. DAVIS: Okay, so I would **move to delete the words, "come from a period of high availability and" such that it would read any closed period must include at least two consecutive weekend periods, Friday, Saturday and Sunday,** and that section type was bolded.

CHAIR WOODWARD: Al right, we have a motion, have a second from Doug Haymans to that motion. I had Doug.

MR. DOUG HAYMANS: Yes, I was just going to agree with both Roy and Justin's points, and Justin knew exactly where I was so that's fine.

CHAIR WOODWARD: Shanna, was that your topic too? Go ahead.

MS. MADSEN: It was, and I completely agree with Dr. Davis's points. One thing I guess I would say is to kind of take into account for what Roy is discussing. I sort of envision this closed period as a more mid-season issue than a beginning of season issue. For instance, I think that like Roy said, there are times when we do closures, especially from maybe the beginning of the season, that I think that we can actually get some pretty good savings for.

I maybe don't agree with that being just a couple of days, but I could maybe find some comfort level on it being let's say a week. I think that the two-week period is a little bit long, if we're considering like Roy is saying, maybe some small reductions that need to be made, from either the beginning or the end of the season.

CHAIR WOODWARD: All right, Malcolm, and then I'll go to Doug Grout.

DR. MALCOLM RHODES: Yes, I think I agree with the motion, and it takes out some of the question. When reading this, the initial document said it must come, and then when we have the keep or delete it says should come, and to me that's a very different point. One allows the TC some ability to look at what the option is, if it's a should. The other one requires that it must come from that. I was going to say, if the document said should, which gives the TC a chance to look at it. But Justin, your option takes care of a lot of that also.

CHAIR WOODWARD: Okay, Doug Grout, and then I'll go to Ray Kane.

MR. GROUT: I definitely feel supportive of including the words, it must include at least two consecutive weekend periods. I was wondering, because this period of high availability, would it be more comfortable for the Board if it said, period of high availability within a wave? Because I could see where there are certain waves, if you took it at the

end of the wave or the beginning of the wave you could have a two-week closure, and have absolutely no impact.

If you narrow this down to within a wave, you're not talking about having to take it, say during where your highest catch waves, like in New Hampshire you catch the most fish in Wave 4 for many species. But if I was to need to put in a closed season for striped bass, for example, in Wave 3, I had to take a 15 percent reduction. I could get two-weeks closures in Wave 3, but if I took it at the beginning of the wave there is no effect.

If I take it during the period of high availability during the wave, I would have some actual impact on it. That's where I personally think we have to include some aspect of high availability in the motion. Maybe if, I don't know if Justin would feel more comfortable with. I'll see where the discussion goes, and I may do a motion to amend on this, or just to try and include some concept of this, but within a wave.

CHAIR WOODWARD: Ray Kane.

MR. RAYMOND W. KANE: Why don't we have enforcement in the room? I would like this to read, the closed period of retention, because I don't know how we're going to stop recreational fishermen from fishing. I think that's what we're talking about, and I would like to hear from enforcement, how they would enforce something like this, if you're just going to tell the public you can't go fishing. People are going to fish. I think the word retention has got to be in this motion some place. Can we hear from enforcement, get an opinion?

MS. KERNS: Ray, I'll just state that a proposal can have retention, harvest closures, no targeting closures. There are all different types of closed periods. This document isn't getting into the specificity of the types of closed periods that need to occur, it is just generally talking about closed periods.

I would just say, if we start getting into that type of nitty gritty of the document, it would be very, I don't know. We're going to start spinning our wheels here a little bit. But Kurt can discuss the enforcement of those things. But we didn't get into retention versus no targeting at all, when we were discussing this as the Management Science Group, it was just about closed periods, period.

MR. BLANCHARD: Basically, closed periods is not new to us. In law enforcement we deal with it in several fisheries, striped bass commercial being one with closed days. The key to any type of closure like this, with a short window or a tighter window is proper education, getting the message out, letting the regulated community know what is going on, get the voluntary compliance. All of those things help us in law enforcement, you know the impact for these types of closures. But again, having the proper notice and having it codified in our regulations up front, not a last-minute type change, we'll have time to prepare for these types of things, and dedicate resources as needed.

MS. KERNS: I'll just remind the Board that this document is for all of our species, it is not just for one particular species that I think we have our minds on. Any species management board can add additional requirements to conservation equivalency in the FMP itself, which striped bass has done, and it does have additional CE requirements. If there is something that a species board wants to be more restrictive on, then that species board can do that. But this is intended to be useful for all of our FMPs, to give some guidance. Keep that in mind as we try to move forward here.

MR. KANE: Thank you, Toni, for the explanation.

CHAIR WOODWARD: What we have now has removed the high availability term, but still includes two consecutive weekend periods. This would be the guidance, or you as a state proposing conservation equivalency would have to propose something that includes that, so that's the question. Is that too prescriptive or not? Bill, I'm going to go to you.

MR. WILLIAM HYATT: I was just going to speak in favor of the motion without any further amendment. I think the argument that this all comes down to

math is valid, and the inclusion of at least two consecutive weekend periods is sufficient to give us confidence in that math.

CHAIR WOODWARD: Yes, also just maybe read this from the bass document says, when evaluating closed periods availability will be considered parenthetical, even within a month availability can be very different, particularly when comparing the beginning and the end. That is sort of implied that you are going to have variability, whatever you're looking at. We have a motion; we have a second. We've had some discussion. Any more discussion on this motion? Any opposition to the motion?

MS. MADSEN: Not opposition, but can we caucus?

CHAIR WOODWARD: I'll give you a couple three minutes to caucus on this.

MR. HAYMANS: Mister Chair, quick question. By approving this motion, we're basically approving Option 2, right? There is no need to go back and revisit whether we keep or delete.

CHAIR WOODWARD: Well, yes, Option 2 with modifications. All right, Lynn, you have a question?

MS. FEGLEY: Just a clarifying question, if I might. To be clear on this. A technical committee, if there is a needed reduction for these, the Technical Committee could recommend to the Board as an option a six-day closure, right? This doesn't limit what a Board may consider outside of conservation equivalency, correct?

MS. KERNS: Correct, a Board could have less than. It is fairly standards, I will say, to have closed periods be no less than two weeks. I recognize we recently had some that were ten days, but it is pretty much a standard that they should be two weeks' time, because of recruitment. Spud asked me this question, that this closed period for the CE proposals is, it's what is it, 16 days? It ends up being 16 days, because the closed period has to include two consecutive weekends, and you can't have opening in the middle. It is an entirety of the closed period.

CHAIR WOODWARD: Yes, 10 days. That would be 10 days. All right, we've had a caucus, so I'm going to ask the question again. **Any opposition to this motion? Seeing none; we'll consider this accepted by unanimous consent** and the document going forward will reflect that. I am going to ask Toni to back up to the beginning of this, so we can go back and deal with the choices we have to make in the order in which they were presented. I'm going to turn it back over to her, just to quickly go over this one again. Doug, do you have a question?

MR. GROUT: That was a motion to amend the wording that was in there, we haven't made a decision yet, as to whether.

CHAIR WOODWARD: No, that was the motion to accept, basically Option 2 as modified. Is everybody clear with that?

MS. KERNS: The first set of options, and I'll note that the options were not numbered correctly in the document, I'm sorry. It is one, two, three four in order. But these are when conservation equivalency is not permitted under stock status guidance. The Option 1 is just simply when it's overfished. Option 2 includes depleted and unknown, as well as overfished. Option 3 is when the stock is overfished, unless the Board by two-thirds vote says it is allowed. Option 4 allows it to be to the Board's discretion itself.

CHAIR WOODWARD: All right, Jason.

DR. McNAMEE: I have a motion, Mr. Chair, whenever you're ready.

CHAIR WOODWARD: I say make your motion.

DR. McNAMEE: Okay, so I **move to approve the fourth option for inclusion in the document**.

CHAIR WOODWARD: All right, do I have a second? John Clark second. We have a motion to accept Option 4, Board discretion, species board will consider the use of uh oh, go ahead.

MS. KERNS: Jason, can I add just a couple words to

the end, so it is transparent to the public. It's in the document, for when CE is not allowed, just to say **when CE is not allowed** to the end of your motion.

DR. McNAMEE: Yes, oh that is totally fine, yes.

CHAIR WOODWARD: All right, we'll get that list of options back up, so everybody knows what we're deliberating on here. All right, go ahead, Erika.

MS. BURGESS: I have a question that is about how this will work, and maybe this applies to all of these, all the options before us. Does the Board's decision have to be codified in an amendment in order to create CE options for that species, or is it simply a motion by the Board, and that codifies what CE is allowed for each species?

MS. KERNS: To my reading of this, when a board gets an assessment, and the stock is either overfished or overfishing is occurring, then the board will make a decision if CE is not allowed. The standard is that it is allowed unless a board decides otherwise. If the board says no more CE, then the automatic would be continued.

CHAIR WOODWARD: Follow up to that, Erika, are you clear?

MS. BURGESS: Just to be clear. Does that decision have to be codified in an amendment, or is it the motion at the board that lays it out?

MS. KERNS: It would be a motion by the board.

CHAIR WOODWARD: All right, so we have a motion and a second. Discussion on this motion. Is everybody clear what this means? Chris Batsavage.

MR. CHRIS BATSAVAGE: Yes, I think the specificity kind of makes Option 4 clear, but it's kind of what we do right now. I feel more comfortable with some guardrails on when conservation equivalency could be used when the stock is overfished. I would like to make a **substitute motion to approve Option 3**. If I get a second, I'll add a little more justification for why I think that.

CHAIR WOODWARD: All right, we have a substitute motion by Chris Batsavage and a second by Doug Grout. That is **Option 3 is now the substitute motion**. Discussion on the substitute motion. Shanna.

MS. MADSEN: I think we had a pretty robust discussion on this the last time this document was brought to this Board. I completely agree with Mr. Batsavage. I am much more comfortable with Option 3. Essentially, it is Option 4, but it requires a majority, which is something that we don't do right now. I think the thoroughness of requiring a majority means that we'll have a much more robust conversation on the records regarding why we are deciding to either permit or not permit conservation equivalency. I am in full support of this motion to substitute.

CHAIR WOODWARD: All right, Jason.

DR. McNAMEE: I'm in agreement that 3 and 4 have a lot of similarities, and I'm okay with Option 3 as well. I think it makes it a little more formal and rigid, which is why I selected Option 4, because what I was trying to avoid is deep regret in the throws of a board meeting with, you know multiple votes going around, because you can never foresee all of the situations you might want to be sympathetic with. I can get behind this. I fear regret, but we can always come back and fix it later.

CHAIR WOODWARD: Yes, I think regret is part of our world we just can't seem to get away from sometimes. I've got Joe Cimino and then Dan.

MR. JOE CIMINO: This is my first time on the microphone, so I also want to thank Toni for all the work on this. I'm exactly where Jay is, because I think a lot of the discussions that we've had show an inherent bias to CE. We've had discussions about backs to the wall and needing guardrails in a way that suggests that we're not talking about equivalent measure, but something we think people are getting away with.

That concerns me with some of these votes, because we have technical experts that are saying it is

conservationally equivalent, but we are treating it differently. I agree there are going to be options that are uncertain, and that's where board discretion is important, and trusting our technical folks.

I too can live with the two-thirds, because I think, you know when Dan put that in, it hopefully will give us flexibility for types of CE that we're not really thinking about necessarily, that are going to be important in the future. But I do worry about that bias, and I hope that as we move forward, we can recognize that in some of our votes.

CHAIR WOODWARD: We'll got to Dan and then to Justin.

MR. McKIERNAN: This I think is a question for Toni. Could you paint the scenario where this would take place? Is it my correct understanding that the board would approve an addendum and it would be at the following meeting where somebody would be coming back saying, hey we know what was passed there, but we really want to take a different tact on this, or do you expect that when the board approves the addendum, at that point they have to start playing a conservation equivalency card.

MS. KERNS: If this motion were to pass, and there are stocks that are overfished, it's not an addendum, because it is when the assessment comes through. You get an assessment, and if the assessment says the stock is overfished, then the board would need to consider either at the time that they receive the assessment, or I would suggest the following meeting if they are going to task the TC with evaluating some information that came out of that assessment.

The board would then decide either one of those two meetings, whether or not they want to allow CE for some reason, and then they would need to vote to do that. Any CE program that was in place prior to the assessment, and then have the overfished status, and the board keeps conservation equivalency not allowed.

Then any CE program the board would need to work with that state to end those programs, and put new measures in for that state at that time. It wouldn't be like immediate, must change everything right away. You would have to work through that process to bring those CE plans back to whatever is the standard of the FMP.

It may be that the Board is putting an addendum out or an amendment out to change the measures of the plan to address that overfished status, and those states would just come in to new measures through that addendum or amendment process. That would be what I think would be the most likely that would happen.

CHAIR WOODWARD: All right, Justin, then we'll go to Dennis.

DR. DAVIS: I was interested in the language in Option 2 that says overfished, depleted or unknown. I note that that isn't included in the suggested amended motion. I don't know, I was trying to think through a scenario in which conservation equivalency would come into play for species that are depleted or of unknown status, and I was kind of having trouble coming up with one.

But I just thought I would throw it out there for the Board's consideration that maybe it would be important to include that, if we do end up going with Option 3 of including that language that CE should not be permitted if the stock is overfished, depleted or unknown, unless allowed by board vote. Just putting that out there for consideration.

MS. KERNS: If you want to add it then we would need to put it into the motion.

CHAIR WOODWARD: All right, Dennis, and then I'm going to go to Doug Grout.

MR. DENNIS ABBOTT: Just backing up a little bit. The idea of this revision to the conservation equivalency document was intended to put more teeth into the document. This is the result of quite a lot of work by various people, including say myself, Joe Cimino and others, that worked on a subcommittee for, I don't know, off and on for a year it seems like.
But I support Option 3, and I really like the idea of

having a two-thirds vote, because it isn't, how many times have we sat here and some of us have not been happy with the fact that the Technical Committee, by virtue of how they do things, were led to support a conservation equivalency proposal, when people knew that the effects of it probably wouldn't meet the intended purpose.

I think the whole object here is to put some boundaries around conservation equivalency. I view this as a very correct approach in dealing with conservation equivalency moving down the road. Because there are socioeconomics and other things that have to figure into our decision making, other than the Technical Committee alone saying, okay we've run the numbers and this is what it is, so let's support Option 3, it's a good compromise.

CHAIR WOODWARD: All right, Doug Grout, then we'll go to Steve Train.

MR. GROUT: I'm just going to pass, because I've already had my questions answered.

CHAIR WOODWARD: Steve, then I'll go to Roy Miller.

MR. STEPHEN TRAIN: Maybe I'm not fully grasping this. If we have a species X that is overfished, and we decide the states need a little more leeway, and we vote two-thirds, then each state may be able to go to conservation equivalency. My question is, do we evaluate each conservation equivalency plan and require a two-thirds majority for that if we do it?

MS. KERNS: No, the two-thirds only is to allow the use of conservation equivalency. Then any state that puts forward a proposal, if it is allowed, is just a regular vote of the board.

CHAIR WOODWARD: Roy, then I'll go back to you, Dave.

MR. MILLER: Mr. Chair, I wonder if I might ask. If Option 3 were to pass, or perhaps even Option 4 as well. What happens to grandfathered conservation equivalency measures? I thinking of striped bass, for instance, where we have some grandfathered conservation equivalency for an overfished stock. If someone could answer that for me, then it might color how I would vote on Option 3 or 4.

MS. KERNS: Roy, at this time the Striped Bass Board allows the states of Delaware, New York, New Jersey, to have some CE plans. I would not use the word that they are grandfathered in, because those plans get approved through the changes in the FMP every time there is language in the FMP that says, this will or will not be allowed. I wouldn't use the word grandfathered. If the Board want to just say, in any point in time in one of their addendums, that these programs are in perpetuity until the state decides to make a change, that is the prerogative of the Board.

But any CE plan that is in place, and if overfished comes forward, then all of those plans would need to be evaluated as the Board addresses that overfished status. A board can make a decision to say, yes, this is allowed and this is no longer allowed. It is up to that board to make that decision. But I would not use the word grandfathered for anything.

CHAIR WOODWARD: All right, Jason, then I'll go to you, Lynn.

DR. McNAMEE: If unknown comes back up, it hasn't yet, but I'll hold my comments until if and when that does.

CHAIR WOODWARD: Okay, Lynn.

MS. FEGLEY: Just back to the process. I think I can live with Option 3, but I think I can think of several species, where conservation equivalency with the guardrails in place in other places in this document, could actually serve the resource better. But perhaps tension in this room might make it more difficult for a state to go down that road.

I'm wondering if when an assessment comes up, and the stock is overfished, if it would be too much to ask if the Technical Committee or the SAS, as part of that assessment, could help the board understand why management measures might have different impacts in different areas.

A simple version of that is striped bass, where the same size limit in Chesapeake Bay in Maryland Chesapeake Bay, isn't necessarily going to have the same conservation impact as a size limit on the coast, so that when an overfished status comes up, the board has a real understanding of, okay, we have a situation here, where this species really is distributed as a different demographic, a different age distribution, a different something. That would make it, more difficult to provide a uniform regulation. I don't know that I'm totally clear, but I think more information would inform a two-thirds majority vote better. I think it could be helpful.

MS. KERNS: Lynn, I'll give you two paths that you can sort of utilize what you're looking for, I think. A board is going to get a stock status. You know if this were to pass that there are some CE plans out there. If your state has one that you're interested in sort of retaining, then when we get that assessment.

You can task a technical committee to evaluate the CE plans prior to making a vote on whether or not conservation equivalency is allowed, so that you can utilize that during your voting process. If CE is no longer allowed, and again if the stock is overfished, I'm assuming the board is going to do something to address that overfished status.

States that have CE programs can include the measures that are in your CE program through this upcoming addendum or amendment process. It's not saying that individual states cannot have unique measures, it's that you need to go through the FMP process to get to those unique measures. Part of I think where some folks have hesitation in the use of CE, is that you don't go through the public process to get there.

No one gets to comment on them, and so individual state programs can go into that addendum or amendment that is addressing the overfished status, and you can still have those, especially for ones that may provide more conservation to the resource. It will be evaluated, and the Board can make the decision on them there. I think that there are two paths where you can get there.

CHAIR WOODWARD: All right, John.

MR. JOHN CLARK: Thanks to Toni and the committee that put this together, a lot of work clearly went in. I seconded Option 4; I still think it's the best way to go is have board discretion. We had a good example bringing up striped bass again yesterday, where if the addendum had included a commercial maximum size the gillnet exemption would have required states to come forward with CE, and it's an overfished stock.

Go through another two-thirds vote just to get those plans approved after the addendum would have required them to come forth with a CE proposal seems like a bit of overkill there. Plus, just seeing some past votes. Sometimes we have difficulty determining what two-thirds even means for some of these boards, whether certain entities are even eligible to vote. I think it's better just to stick with Option 4.

CHAIR WOODWARD: All right, we've had a lot of discussion here, but I think we're at the point we need to vote. We have a substitute motion before the Board, and based on what I heard from Justin, if we do vote the substitute up to the main motion then we can certainly entertain a motion to amend that motion to add any language that we think is necessary to improve it.

At this point I'll give you a few minutes to caucus if you think it's necessary. I think it's good, caucus on this before we vote. All right, I'm going to read the substitute motion, just to make sure everybody is clear on what we're going to be voting on here, and that is move to amend to replace the fourth with the third option. Let's put that slide back up that shows exactly what that third option is, so everybody knows what we're doing. **All those in favor of the motion to substitute, amend, signify by raising your hand. Those opposed, like sign. Null votes, any abstentions. I don't see any. Motion 12 yay, 4 nays, no abstentions, no nulls**. That now becomes the main motion. The main motion now is to accept Option 3. Yes, Doug.

MR. HAYMANS: We counted 5 nays, but maybe that's wrong.

CHAIR WOODWARD: All right, **5 nays**. Any need to caucus on this vote? Justin.

DR. DAVIS: Sorry to belabor this, but I did want to offer a **motion to amend, to add the words depleted or unknown to that option** that I discussed earlier.

CHAIR WOODWARD: Okay. Let's see if we can put that up there. Is that your intent with that? Okay, do I have a second for that? Ray Kane seconds it. Is everybody clear what this motion to amend does? It simply adds those words into Option 3. **Option 3 would say CE is not permitted if the stock is overfished, depleted or unknown, unless allowed by board, et cetera, et cetera.** Any discussion on this? Jason.

DR. McNAMEE: Yes, I would caution. I'm opposed to this amendment. You know you can have a stock with unknown status has an enormous abundance, you know. I think this adds a bunch of uncertainty into the process, so I don't think we should make this amendment. Even depleted gives me concern, so I think keeping with the original motion is the way to go here. This is again, just like before. I think this would cause us regret, probably pretty quickly, so I don't support the amendment.

CHAIR WOODWARD: I've got Megan and then Erika.

MS. MEGAN WARE: I think I'm on the slightly similar page to Jason, where the unknown is making me a little nervous, just as the volatility I've seen in assessments, but also assessments failing, or going from a model based to an index based or whatever. I am, I think a little more comfortable with depleted, but definitely I'm struggling with the unknown part of that.

CHAIR WOODWARD: All right, Erika and then Chris.

MS. BURGESS: I'm also speaking in opposition to this motion for specifically the unknown part of this. Many of our coastal sharks we do not know their stock status, and we likely never will. For species like red drum, we manage that based upon spawning potential ratio, so we don't have an overfished or overfishing determination for that stock. I think leaving it with the previous motion is better than adding depleted or unknown.

CHAIR WOODWARD: All right, Chris Batsavage, then I'll go to you, Shanna.

MR. BATSAVAGE: I could support depleted, you know kind of for the reasons that Megan gave, and I was thinking about some examples where unknown would fit in, so I appreciate Erika giving a couple. I couldn't support the motion with unknown in it, but I could support depleted being added to this option.

CHAIR WOODWARD: All right, Shanna, and then I'll go to Marty and Doug.

MS. MADSEN: Yes, I won't belabor the point, because I think Megan and Chris covered it really well. I completely agree, I am not comfortable with unknown. However, for a depleted stock, I will say that I feel like we don't afford them a lot of protection or thought sometimes. There is not a lot of action associated with the depleted stocks. I'm not sure if this is necessarily the appropriate place to do this. However, I can't support this motion as stands, but I could have some more conversation on adding depleted.

CHAIR WOODWARD: All right, Marty, then I'll go back to you, Justin.

MR. MARTIN GARY: Just a point of clarification. It's still a Board decision though, right, at the end of the day, or not?

MS. KERNS: Under this option, if you have an assessment that comes forward and it is overfished, if you add these two, depleted or unknown, CE will not be permitted unless the Board decides to allow it via two-thirds vote.

MR. GARY: But regardless of that language change, correct? It doesn't matter. Maybe I'm not reading it right.

MS. KERNS: You don't have these two statuses. CE will not be permitted if the stock is overfished. The Board can allow it by voting to via two-thirds vote.

CHAIR WOODWARD: Yes, this language just merely adds those other two stock status descriptors into it. That has been the subject of the discussion is, you know those have different meanings to different people in different circumstances than overfished does. Justin.

DR. DAVIS: I don't know if it's a possibility, but I would be fine if this was **changed to just say depleted**. I think we've heard around the table that the unknown part is what is giving people pause about this. I don't know if Robert's Rules allows for that, but maybe Spud's Rules allows for that at this juncture. I don't know.

CHAIR WOODWARD: Yes, Spud's Rules of Expediency do permit such things as that. Are you fine with that, Ray? **We're going to take the word unknown out of this motion to amend**. Now we have the word depleted, so now we can have a discussion about that, if anybody would like to. If not, then anybody need time to caucus on this one?

I don't see any heads, okay good. I'm going to try**. Is there any opposition to the motion to amend? All right, we do have one vote in opposition, any null votes? Any abstentions? I'm going to assume the others are yeas, so that motion carries, so now we have an amended main motion**, which is the language of the third option with the word "depleted" added, so it's overfished or depleted, and then that would require a two-thirds vote by the Board to allow conservation equivalency in those circumstances. Basically, we have a slightly modified substitute motion that you voted up. Any discussion on that? Any need to caucus on that? If not, is there any opposition? Malcolm.

DR. RHODES: Can you just read the current motion into the record, please?

CHAIR WOODWARD: Yes, we've got to make sure we've got it right here. Okay, the **motion under consideration is CE is not permitted if the stock is overfished or depleted, unless allowed by board via 2/3 majority vote (the rules on voting in Article II. Section 1. apply.) Any opposition to the motion? Seeing none; any null votes, any abstentions? All right, so that motion carries**, so in the document going forward it will be Option 3 under that section. Ready to move on to the next one?

MS. KERNS: Madeline, if you can bring up Slide 5 in the presentation, this is whether or not we want to include the examples of what nonquantifiable could include or not.

CHAIR WOODWARD: Doug, go ahead.

MR. GROUT: I **move to approve Option 1, including the sets above**.

CHAIR WOODWARD: All right, do I have a second for that? Jason, I have a second from Dr. Jason McNamee. Any discussion on this motion? Erika.

MS. BURGESS: I would like to make a substitute motion. That **substitute motion would be to remove, or to choose Option 2**.

CHAIR WOODWARD: Okay, we have a substitute motion. Do I have a second for the substitute motion? Is that a second, Ben? New guy, all right, so now we have a substitute motion in front of us, and that is Option 2, so once we get that up, we'll bring it back up, so everybody knows exactly what we're looking at. Lynn.

MS. FEGLEY: I just have a question, and I think it's just because I don't know, my brain is probably tired. But what would be a scenario, where not having this language in the document would matter? I'm just trying to figure out, how would it matter? Does that mean that if somebody said, oh we're going to use circle hooks as a CE method. Well, if you can't quantify it, the Technical Committee should review that and say you can't quantify it. I'm trying to understand where practically this language would impact a CE proposal.

CHAIR WOODWARD: Yes, I think these were, as Toni said, included as examples of the types of things that are difficult to quantify. It doesn't mean they are impossible to quantify, it just means they are difficult to quantify. I can just tell you from the South Atlantic Council's standpoint it's descending devises. It's

proving you know a word, but knowing it and proving it in a quantitative manner is a completely different situation. But we do have a motion that belongs to the Board, Jason.

DR. McNAMEE: Yes, just to add on. I thought Lynn's comment was good, and it is how I was kind of thinking about it too. The value that I saw in having it, which is why I seconded Doug's motion is, you could see this list, and then if a motion is, you could see this list, and then if you're intending on using something like that in a CE, you know that you've got a burden of proof that you know, so it's very clear. I saw value in it for that reason.

CHAIR WOODWARD: Further discussion, Erika.

MS. BURGESS: Thank you, as maker of the motion I thought I would speak to this. As Lynn said, not including this language does not change or alter the Technical Committee's ability to evaluate what the magnitude of catch or harvest might be under a conservation equivalency proposal. Several of the options that are listed here, Florida is actively trying to quantify right now. Florida things are happening at the South Atlantic Council. I think that including things may date this document, and it would be better to just leave it.

I'm concerned that we are driving decisions. It hasn't been, but before I was very concerned that we were driving decisions about what goes in this conservation equivalency guidance for the entire Commission, based on one or two species, and not considering the full suite of species, and assuming that all conservation equivalency is some way to circumvent the Commission's management intent. I think that by removing this we would show that we're not looking down upon conservation equivalencies, and we're considering all species.

CHAIR WOODWARD: All right, any further discussion on this? Any need to caucus on this before we vote? All right, I'll give you all a few minutes to caucus on this one. Everybody ready on this one: **All those in favor of the move to substitute for Option 2, raise your hand. Got them?**

All right, lower your hands, those opposed. Okay, null votes, abstentions. All right, that was 6 yea, 11 noes, and 0 nulls and 0 abstentions. The motion fails, so we're back to the main motion, which is to **approve Option 1 for nonquantifiable measures.** Can we put that up there again, just to make sure everybody knows what we're looking at? Okay that's the sentence that would remain in the document**. Is there any opposition to the motion to include this in the document?**

Don't see any, no opposition, one vote, I have one opposed. Any nulls, any abstentions? Motion carries, so this language will remain in the document. I think that is all of the option choices we needed to go through, but there is a question that needs to be answered by the Board, so we can finalize this and get this document approved for implementation, so Toni.

MS. KERNS: Back to that last question that I had, as I was reviewing the document. If we are going to review each states conservation equivalency each year, and evaluate, does a conservation equivalency proposal need to have an end date or not? If you think it should have an end date, I can alter the document. I mean if you think it should have an end date, then the document would stay as it is. If you think that we do not need to have an end date, then I can just change the language in the document.

CHAIR WOODWARD: Doug Grout and Jason.
MR. GROUT: I would say that you do not need to have it in the document. Do you need a motion, or can you just take general consensus?

CHAIR WOODWARD: Jason.

DR. McNAMEE: I was just going to say the same thing, so I support what Doug just said.

CHAIR WOODWARD: Okay, is everybody clear? Restate that, Toni.

MS. KERNS: I would alter the document to say, proposals do not need an end date, and the reason for that is that they are being evaluated each year through either a process set up by the Board or via

the FMP Review process. The Board has the discretion, if they think it's not meeting the objectives of the states plan, then it can terminate that CE in any given year.

CHAIR WOODWARD: Is everybody clear on that? I see a lot of heads nodding. Okay, that was the last decision point related to modification of the document. Now we need a motion to approve the document as modified through today's deliberations. I think you've got a written motion? Yes, we've got one we're going to put up on the board, if someone is willing to make it, I will get you to read it into the record once it is up there. Mike Ruccio, I see your hand up.

MR. MICHAEL RUCCIO: I'm sorry for belaboring the conversation around an end date. I'm looking for some certainty that that process that Tonis described about deliberate evaluation for something that exists in perpetuity as either complicit within the document, the commission processes, or within the respective FMPs or a board process. I guess I do have a little bit of concern that something could exist in perpetuity, and just want to make sure that we have some checks and balances on that, to make sure that as it proceeds through time it is achieving what it's designed to do.

CHAIR WOODWARD: All right, Mike, she's looking through the draft, just to see where that is addressed.

MS. KERNS: Mike, on Page 7 is the Plan Review following Approval and Implementation. Number one states that it will be evaluated on an annual basis, either through the FMP Review Process, or something otherwise specified by the Board, and that the PRT is responsible for evaluating all aspects of the program.

If the conditions and goals of the FMP are maintained or not. If it's not then the PRT would report to the Board on the performance of that CE program, and can make recommendations to the Board to change it if necessary or not, and the Board can make that determination to end that program.

CHAIR WOODWARD: Any follow up to that Mike? Did it answer your question?

MR. RUCCIO: Yes, thank you for that, Toni. I think I still have some reservations, but I'm satisfied that there is a process. Thank you, my question has been answered.

CHAIR WOODWARD: All right, thank you. Where is our motion? Is someone willing to make this motion? Lynn Fegley.

MS. FEGLEY: I would **move to approve the Conservation Equivalency: Policy and Technical Guidance Document as modified today**

CHAIR WOODWARD: Thank you, do I have a second? I have a second from Ingrid Braun. All right, any need for any more discussion on this? **Any opposition to this motion? Seeing none; motion carries**, thank you, very, very much. Very good. I can go into my semi-retirement with a clear conscience now, thank you.

Just to keep us moving along, I mean if you need a biological break, just step out. I want to keep us moving along, so we can stay on schedule.

NOAA FISHERIES UPDATE ON NORTH ATLANTIC RIGHT WHALE FUNDING FROM THE INFLATION REDUCTION ACT

CHAIR WOODWARD: We've got Dr. Jon Hare online; he is going to walk us through an update on North Atlantic Right Whale funding from the Inflation Reduction Act. Jon, can you hear me?

DR. JON HARE: Yes, I can, thank you very much, Sir.

CHAIR WOODWARD: All right, I'm going to turn it over to you.

DR. HARE: Okay, great, and I'm sorry I'm not there with you in Beaufort, but it is a beautiful day here in Woods Hole. See, I just wanted to quickly provide an overview of the North Atlantic Right Whale Inflation Reduction Act funding, and then open the door and be working with all of you to just coordinate all of the

activities that are going on.

You know the funding; we've got 82 million dollars for North Atlantic Right Whale activities with the Inflation Reduction Act. Really a historic opportunity to invest in sort of the future of how we're going to address this conservation challenge. We sort of laid out the IRA funding to follow the agencies road to recovery, which has two main components.

Address the threats to North Atlantic Right Whale, and monitor our progress and recovery, then there are three elements to each of those two major pieces. We're going to use the IRA funding to focus on developing and implementing transformative technologies and approaches as part of this road to recovery.

We will again, as I said before, we'll be complementing and leveraging other funding sources. The IRA funding really enables these transformative investments, and our goal is to develop and advance technologies and new approaches that support dynamic management, based on a more informed understanding of the spatial-temporal distribution of right whale, and also enabling the timely responses to where whales are detected.

We're going to be deploying existing and developing new technologies for North Atlantic right whale detection. We're going to be integrating these detection technologies in the risk models and assessments, to support more dynamic management. Again, fully recognized partnerships with multiple industries to help us do this together. Then leveraging the IRA funding with other pieces, to really support the science components, the management components, and the enforcement components. This just gives a breakdown of how these funds, how this 82 million is going to be used. We have 3.2 million to support sort of the administration and project coordination, and then we have a large chunk of funds to support monitoring and modeling. A big emphasis, 17.3 million in passive acoustics monitoring, and there the Regional Wildlife Science Consortium hosted a workshop a couple weeks ago, to make sure that we were getting out in front on coordinating all the passive acoustic work that is going to be going on.

We have 3.5 million to help us think about satellite tagging, which currently we don't do with North Atlantic right whales, but we are going to see if there are new technologies that could be applicable. We have some funds for uncrewed systems development, and we're going to be continuing to advance models, which we're using to support management, decision support tool, for the entanglement risk, and the models which support the vessel speed rule.

Then another investment in using very high-resolution satellite imagery and artificial intelligence detection, to see if we can't really expand the footprint of the areas that we're able to protect right whales over. The next big component of the spend plan is this vessel strike risk reduction. Currently, the Agency doesn't really have dedicated funds to think about a more dynamic vessel strike science and management paradigm.

These 20.1 million dollars is going to be used to help us do that. Looking at identifying, developing, implementing technologies for vessel detection and avoidance, to sort of help us reduce vessel strikes as a risk to North Atlantic right whale. Then the other component is continued additional support from the on-demand fishing, and working to develop interoperability standards for gear conflicts, training for use of systems, and just providing additional support to ongoing activities.

Then 5 million, relatively modest amount, going to the Office of Law Enforcement, to provide them some additional equipment for enforcing regulations with regards to North Atlantic right whale, and also to support some of their operation. I think that's it, I just really wanted to quick provide you all an overview. Happy to take questions now, but looking forward to working with you to continue to address this challenge that we face together, so thank you very much.

CHAIR WOODWARD: Thank you, Joh. Any questions for Jon on his presentation? I don't see any, but

thank you for being with us this morning, Jon, and giving us an update.

DR. HARE: Yes, sorry I'm not there in person, but I'll see you next time.

CHAIR WOODWARD: All right, we did have one individual that wished to make public comment. We started early, so they were not able to, they didn't log on until after we started, so I'm going to give Tom Lilly a couple of minutes to address the Policy Board, so Tom, go ahead, I'll give you a couple of minutes, please.

MR. THOMAS LILLY: Spud, you just said that you are not going to do anything to help Chesapeake Bay until you get more spatial data available. What you're really doing here is nailing shut the coffin on the Chesapeake Bay. I hate to think that you're really trying to return back to quantitative management of this resource, and refusing to do the holistic management that Amendment 3 really requires. Are you abandoning your ERP science that says, the striped bass are the indicator species of the level of menhaden harvest. Five years of young of the year failure in a row, a catastrophe. Spud, and the Board members, Bob, and Lynn, don't you agree that the Board and every one of you knows right now that based on the ERPs, that there is not nearly enough menhaden in the Bay. Do you agree with that? Isn't that what the ERPs are telling you by definition?

Whatever the amount of menhaden in the Bay right now, what we know is that it's not nearly enough, am I correct? Is there really any other information needed? Knowing we don't have enough, Policy Board, is it your policy to stop right there, or does your policy to apply the holistic management required by Amendment 3, or are you abandoning both the ERP science and Amendment 3, and a requirement that you are to act on the available science.

Just ask yourselves the questions, Board members. What can the Commission do right now to increase the menhaden coming into the Virginia Bay by at least 50,000 tons? Ask yourself the question, am I don't everything right now that is necessary to make sure the Chesapeake Bay experience for our people and our children is the best it can be.

Because it's all up to you, right now, this Board, to set the policy of the ethics and the justice required by your charter, to treat Maryland fairly. Maryland is probably having about 2,500 schools of its menhaden that would be migrating to Maryland, to help us, being caught in Virginia. Is that justice?

Is abandoning Amendment 3 and the ERP science the direction that this Policy Board wants to go? Isn't this situation so important that this Board right now can direct the staff to look into the cause of this catastrophe with the reproduction of striped bass. The cause shouldn't be too hard to figure, your ERP science defines it.
Really the question is, holistically, not quantitatively, how do you effectively reduce that harvest in Chesapeake Bay? I think the staff could give you some very clear options. I appreciate your giving me this time, but isn't this such a question that the staff could give you those options within a week or so, they are pretty obvious, and the Striped Bass Board, the Menhaden Board, isn't this important enough that they could have a special meeting within the next 30 days, and take some action.

CHAIR WOODWARD: All right, Tom, wrap it up.

MR. LILLY: Spud, thank you very much, and have a great retirement.

COMMITTEE UPDATES

CHAIR WOODWARD: All right, thank you. We're going to move on to our Committee Updates.

ASSESSMENT SCIENCE COMMITTEE

CHAIR WOODWARD: I'm going to call on Jainita to give us Assessment Science Committee Report.

MS. JAINITA PATEL: The Assessment Science Committee met in late September, and there are two main changes that we wanted to bring to the Board's attention. The first is that the river herring assessment, which was meant to be presented in February of 2024 has now been moved to May. This

is based on the Assessment Workshop in August, where the SAS decided that they needed a little bit more time. The second and larger change is that the spot and croaker benchmark assessments, which are usually done together, have now been uncoupled. Croaker's assessment will be completed in 2024, and the spot assessment has been moved to 2025. The main reason for this is because we no longer have a stock synthesis modeler for the joint assessment. Additionally, there is a project being conducted for spot at the University of Maryland that follows a concurrent timeline as the new stock schedule.

We are seeking support from the Board for the changes presented today, and just for your reference, here is the updated stock assessment schedule. I know it's really hard to read, but this is also included in the supplemental material for your reference, and with that I would be happy to take any questions.

CHAIR WOODWARD: Thank you, any questions? We don't need necessarily a formal motion, just general concurrence with those changes. Does anybody have any concerns about those changes? Seeing none; then we're good to go.

LAW ENFORCEMENT COMMITTEE

CHAIR WOODWARD: Kurt, I'll turn it over to you for Law Enforcement Committee update.

MR. KURT BLANCHARD: The following is a report of the activity of the Law Enforcement Committee since our last reporting period. The LEC has been successful in and has participated in the following deliberations. We participated in discussions in reference to the current tautog tagging study out of New York.

We have provided comments in reference to tag types and duration of the study, as well as collaborating with the striped bass Plan Development Team with proposed regulatory language in reference to filleting at sea and consideration of for-hire participants to have specific regulatory options in Draft Addendum II.

Additionally, the Committee was informed on the status of Addendum XXVII to Amendment 3 of the American Lobster Fisheries Management Plan, specifically the consideration of timeline of gauge size and escape vent changes in LCMA1. The LEC has been convening this past week and we addressed the following topics.

Continued review of the documents, the Document Guideline for Resource Managers on the Enforceability of Fisheries Management Measures, this document, dated 2015. A subcommittee was established in the spring of 2023, with the goal of finalizing a draft document for the LEC approval. Three meetings were held over the summer, and a revised draft document was presented to the full LEC at the annual meeting.

Our next step will be to score and prioritize the management measures contained in this document. This will occur in late 2023, with a goal of the Board's approval in 2024. Deputy Chief Jason Snellbaker of New Jersey Fish and Wildlife, reported on his experience in the second phase of the NACLELA/ICCA Wildlife Officer Exchange Program with the Belize Fisheries Compliance and Enforcement Agency.

He shared his experience of traveling to Belize and learning about their fisheries manager programs. This shared experience helped to increase international collaboration and individual capacity to address wildlife crimes globally. The Committee also discussed how best to utilize the interstate wildlife violators compact, to share licensed sanctions among participating jurisdictions. For example, if the state of Maine were to issue a licensed sanction for violation of their regulations, the state of New Hampshire or Massachusetts or any compact partner state, with like regulation, can also revoke the privilege of this same fishermen in their state, based on the Maine suspension.

For our member state agencies, this appears to be an unused resource that could help protect our marine fisheries and offer a deterrent. The following is an example of patrol effort and case work being conducted along the coast by our law enforcement partners. Two Maine Marine Patrol boats, involving

six marine patrol officers, hauled 870 traps in one day.

A Maine fisherman was charged with exceeding the lobster trap limit of 800, and fishing 30 untagged lobster traps. The charges are currently pending in court, and 70 excess traps were seized by the officers, and will be liable. Additionally, a five-month investigation resulted in another Maine fisherman being charged with possession of an untagged and undersized halibut.

These violations were witnessed by officers during a boarding in the overnight hours. The fisherman was summoned for lobster without a license, for possession of undersized and untagged halibut, and a Marine Mammals Protection Act violation for possession of harbor porpoise that was referred to NOAA.

Through continued surveillance offshore, this fisherman was also charged with fishing 56 untagged lobster traps. Five months later, he was again boarded offshore, and found to be engaging in a licensed activity while under suspension. Officers from Georgia DNR, while working a NOAA JEA Patrol, boarded a vessel at Grays Reef with four people onboard. These fishermen were found to be in possession of 11 undersized black sea bass. They also possessed one red grouper and one gag grouper.

The season was closed for both grouper species. They also did not possess a descending device onboard, and the fishermen were not using circle hooks as required. These violations resulted in federal referral for a summary settlement of $825.00 with the state. Finally, this past week, officers from Rhode Island Environmental Police received a complaint of people shore fishing, and reportedly taking overage of striped bass.

Officers responded to the area, and upon investigation they found a fisherman who was in possession of three undersized tautog, and upon being interviewed, the fisherman admitted to hiding striped bass in the tree line. Officers located 13 striped bass, 12 of which were undersized and one of which was oversized.

This fisherman was summoned to District Court for these violations. Mr. Chair, this is my report. One anecdote is I would like to thank the Commissioners who were able to find our meeting room and participate in our session. For those of you that did try to get there and couldn't find us, we really appreciate the effort.

CHAIR WOODWARD: Well, you all know you all do some of your best work undercover. I guess they were just trying to make.

CHAIR BLANCHARD: We did not place the caution tape outside.

CHAIR WOODWARD: Thank you, Kurt, any questions for Kurt on his report? Thank you, we certainly appreciate the efforts of our law enforcement folks. It's a tough job these days, and getting tougher all the time, so we really appreciate it.

ATLANTIC COASTAL FISH HABITAT PARTNERSHIP

CHAIR WOODWARD: All right, at this point I'm going to turn it over to Simen for a report on Atlantic Coastal Fish Habitat Partnership and the Habitat Committee. The floor is yours.

MR. SIMEN KAALSTAD: Hi everyone, I just want to give you guys an update on what the Atlantic Coastal Fish Habitat Partnership and the ASMFC Habitat Committee have been discussing, while you guys have been having fun up here. The Steering Committee for the Atlantic Coastal Fish Habitat Partnership, we met on Monday and Tuesday, and we reviewed a number of items.

We went over our newest Action Plan, sort of to revisit what we've accomplished so far in 2023, and the next steps going into the next year, as well as we updated the Subcommittee and Working Groups for the various tasks that we do as a partnership. We discussed fundraising strategies, the ACFHP Business Plan, as well as all of the BIL/IRA funding opportunities that relate to habitat restoration.

We also finalized our annual funding application for fiscal year 2025. We were honored to have Todd Miller form the North Carolina Coastal Federation do a presentation about the amazing habitat restoration work that they're doing. We also had Jason Olive from the National Fish Habitat Partnership, and the U.S. Fisheries and Wildlife Service give an update on the activities on a national level, as well as Ryan Roberts, who was part of that conversation as well.

Regarding the BIL and IRA funding opportunities, the Atlantic Coastal Fish Habitat Partnership, we did put in a letter of intent for the NOAA Climate Resilience Regional Challenge, which was a string of eight projects, all the way from Florida up to New Hampshire. Those projects were focused on oyster reef restoration and engaging the underserved community.

We sought almost 25 million dollars in funds, and we were not successful. There were about 900 applicants for this particular opportunity. I'm not the only one who is disappointed. Then coming up, we are going to submit a similar type of proposal for the NOAA Transformational Habitat Restoration. That is a bit of a smaller fund, but our target is around 15 million dollars, and we're going to have a bit of a more focused watershed approach in Georgia, Delaware and New Hampshire, and hopefully this one will be successful.

Regarding the funding application that ACFHP puts out every year. This year's funding application will be open at the end of the month on October 31st, and it will close on January 31st. That's also because the projects have to be recommended to the National Fish Habitat Board by the end of March, so there is some reviewing and ranking in between there.

As per usual, it's focused on fish habitat conservation projects. There has to be a one-to-one non-federal match, which can be the tricky person with a smaller projects and partners. But more or less it's the same as it has been, a little bit more emphasis on DEIJ components and public access. This year we have run the application through an online form, rather than the classic Word document.

HABITAT COMMITTEE

MR. KAALSTAD: Moving on to the Habitat Committee. We met on Wednesday and today, and yesterday morning actually, I forgot to include this, Todd Miller gave us all a tour of the North River Wetlands Preserve, and we got to see one of the sites that actually helped fund for the Dunna Marsh Project, and it's beautiful out there, and they are doing really well.
If you ever have a chance, go check it out. But yes, Habitat Committee, we met on Wednesday and Thursday. We discussed the Habitat Hotline. Conversations surrounding maybe changing up the format, figuring out what topics we need, but most importantly there is a need to follow up with you all, and the broader audience, to kind of figure out what the most applicable content for that publication is.

We also discussed the Habitat Management Series; the current version being focused on acoustic impacts. It's at the finish line, we've just got to clean up some comments, and then also topics for the next issue. Most importantly, we have now completed the Fish Habitats of Concern. Hopefully you have the Fish Habitats of Concern Document, which I'll give you guys a tiny overview of in just a minute.

We were also fortunate enough to have Bill Crowell and Judd Kenworthy of the Albemarle-Pamlico National Estuary Partnership provide presentations on their work, and they have a lot of interesting projects going on with mapping SAV around the North Carolina coast. For the Fish Habitats of Concern documents.

The Habitat Committee drafted this FHOC designation for all Commissioned only managed species, plus Atlantic sturgeon. In drafting this document, we considered current Commission documents, such as the Fisheries Management Plans Species Habitat Fact Sheets. The Habitat Management Series publications, and of course current literature.

The destinations for these fish habitats of concern

are based on four criteria, the importance of the ecological function provided by the habitat, the extent to which the habitat is sensitive to human induced environmental degradation, whether and to what extent development activities are or will be stressing that habitat type, or the rarity of the habitat type.

For example, here is spot. The Habitat Committee recommends for larvae brackish and saltwater march and SAV in mesohaline and polyhaline waters. For juveniles from Delaware to Florida, low salinity bays and tidal marsh creeks of mud and detrital bottoms that contain their epifaunal and infaunal prey, as well as submerged aquatic vegetation in the Chesapeake Bay in North Carolina.

For young of the year in the early spring, sea grass habitats are very important, so we've estimated those, and for adults, tidal creeks and estuarine bays with mud and detrital substrates, which support mud and prey. Sort of additional points is that bottom tending fishing gear may impact spot FHOCs. That is something to consider. With that I am happy to take any questions.

CHAIR WOODWARD: Thank you, Simen, any questions for Simen? Lynn.

MS. FEGLEY: Yes, thank you very much for your presentation, and for your work on this. I think it's just becoming increasingly important as we face climate change effects. But I just wanted to ask you a couple questions about the striped bass section, and that section opened by saying that adult striped bass are highly concentrated, and most vulnerable to exploitation in their offshore wintering grounds. I'm just a little bit curious about that sentence, and wondering, that doesn't include outside three miles, right?

MR. KAALSTAD: That's a good question, and full disclosure, I was not here for the development of the document. I was the one who whipped everyone into finishing the document.

MS. FEGLEY: That's totally fine. Thank you.

MR. KAALSTAD: But I will ask the one who is responsible for that section.

CHAIR WOODWARD: All right, any other questions? Thanks, Simen, and certainly thanks to all the folks that worked on habitat. Without the habitat, the rest of this stuff we talk about is kind of pointless. It's just good to have the effort and energy put into it like we do have. Toni, go ahead.

MS. KERNS: I just want to reinforce something that Simen said. The Committee is needing to decide, there are two things I wanted to talk about. The Committee is deciding on their next habitat management series document, so if the Policy Board has issues or ideas of what that document topic should be, please get in touch with myself or Simen, and let us know what those topics are, or if you just generally have some topic ideas, so that Simen can bring them back to the Habitat Committee that would be great.

These management series documents are to help out the states, and so they can come up with ideas, but they would love to have topics that you all are interested in, or will help you, as you develop policy back at home. Please, let us know what those are, and then the second part is, we are looking for an action today to approve the Fish Habitats of Concern Document, if people are comfortable doing so. Lynn, I do not have the answer to your question though. I bet we could check with Wilson; he wrote that section.

CHAIR WOODWARD: We have a motion regarding what Toni just described. All right, so we have a draft **motion to approve the Fish Habitat of Concerns document**, is someone willing to make that motion? John Clark. Do we have a second? Malcolm Rhodes is a second. **Any discussion on that motion? Any opposition to that motion? Seeing none; the motion carries.**

MS. KERNS: Lynn, we'll get a response to you, and if there is a major change we can make a small tweak, and let the Board know what that small tweak would be.

MS. FEGLEY: Thank you. I have a couple of, I know this should just sail in, no problem, but maybe I'll give you a call, talk over a couple of things, it would be good.

MR. KAALSTAD: Yes, I would be happy to discuss that further.

CHAIR WOODWARD: All right, very good, thank you, Simen. All right, we do not have any noncompliance finding, thank the good Lord, to deal with.

OTHER BUSINESS

CHAIR WOODWARD: We do have some Other Business to deal with. We've got Eric Reid online, Eric brought this up earlier in the meeting, so I'm going to turn it over to Eric, he's got a subject he wants to discuss with us, and a request for possible action of the Policy Board, so Eric.

MR. ERIC REID: Thank you, Mr. Chair, Mr. ex-officio Chair, whichever you prefer. I did bring this up yesterday under the Business Session, the Executive Committee, I'm sorry.

BIGELOW TRAWL SURVEY

MR. ERIC REID: It's mainly to bring attention to the Board members who are not on the New England and Mid-Atlantic Councils, who have already addressed the issues surrounding the Trawl Survey performance by the Bigelow.

If and when the federal trawl survey fails or falls short, which it has been doing quite a bit in the last several years. The impact on the fishing community is really not ideal. Survey alternatives to the current trawl survey are conducted by the Bigelow are being considered now. NTAP, the Northeast Trawl Advisory Panel, of which the Commission is a member, is working on it now.

One alternative under development is using industry vessels to complement, not replace but complement, the current survey. New England and the Mid-Atlantic both passed similar motions at their last meeting, and I'm really looking for a unified position of support from all three management bodies on the east coast, and I'm happy to read this motion for the record whenever you're ready, Mr. Chair.

CHAIR WOODWARD: Go ahead, Eric.

MR. REID: I **move that the Commission supports the New England and Mid-Atlantic Fisheries Management Council's request for information on an industry-based survey and the Commission send a similar letter requesting the NEFSC completes a white paper by January 12, 2024 outlining an industry-based survey that is complementary to the Spring and Autumn bottom trawl survey for the Commission and Councils**. If I get a second, I'm happy to answer any questions. I don't really think I need to provide any additional rationale, unless it is necessary, Mr. Chair.

CHAIR WOODWARD: Do I have a second to Eric's motion? Got a second from Ray Kane. All right, so we have a second to the motion. He's provided some rationale. Any questions for Eric? Any discussion on the motion? **Any opposition to the motion? Does everybody feel comfortable doing this? A lot of heads nodding, so it sounds like the Policy Board is fully supportive of this, Eric.** Staff will work to get this done, and make sure we weigh in as we need to on this, so thank you for bringing it to the attention of the Policy Board.

MR. REID: Thank you, Mr. Chair, it's a beautiful day here in southern Rhode Island, thank you.

CHAIR WOODWARD: All right, Dan, you've got an item, I think, for us.

MR. McKIERNAN: Yes, thank you, Mr. Chairman. I'm wondering, it dawned on me toward the end of the Horseshoe Crab meeting.

POT FISHERY EFFORT

MR. McKIERNAN: I'm wondering if we could communicate to the Horseshoe Crab Board or the State Directors or the leads, to endeavor to quantify effort in pot fisheries that use horseshoe crabs, and I'll just give you a little bit of background. My agency

has applied for an incidental take permit with the National Marine Fisheries Service for the take of leatherback turtles, and occasional right whales.

As part of the exercise, we were required to describe our pot fisheries, which is one of the gears that entangles leatherback turtles. It was quite revealing for us to be able to document about a 55 percent decline in the trap hauls, which means there is probably a 55 percent decline in the need for horseshoe crabs within the Massachusetts sector of pot fishermen.

It dawned on me that it's probably the kind of statistic that we should be gathering. This was the whelk fishery, of course, we don't have an interstate whelk plan. But I think within each of the agencies that is represented in the Horseshoe Crab Board, at least most of them, they have access to that data.

I was wondering if we could communicate informally to, maybe through Caitlin, asking states, maybe at their next meeting, the next time we do convene that group, or maybe just through correspondence. The potential for enumerating trap haul or effort, especially in light of today's conversation with the folks from Delaware, to talk about reduced effort. It would be nice to put some numbers to that, and not just have anecdotes.

CHAIR WOODWARD: Toni, do you have?

MS. KERNS: I think Caitlin will reach out to the states, and we'll do the best we can to get responses.

CHAIR WOODWARD: All right, thank you, Dan. All right, and I think you have something you wanted to make the Board aware of.

MS. KERNS: This is just a quick FYI, because it's coming up quickly and I think we just learned about it yesterday. The Mid-Atlantic Council is going to hold a public webinar/scoping session on November 1, to solicit stakeholder input on some summer flounder regulations, including minimum mesh size and mesh exemptions.

We will e-mail out the information on the webinar itself, it's from 2 to 5 on the 1st but I think it would be good for the states to send this information to their summer flounder permit holders, so that they can provide input. I think the Council is soliciting this information, because they may take up this issue. I assume that our Board would also take up an issue with them, since we have full state water and federal water commercial fishermen using mesh. I just want to make sure that the state permit holders get input into this process.

CHAIR WOODWARD: Any questions about that? All right, seeing none.

ADJOURNMENT

CHAIR WOODWARD: Any other business to come before the Policy Board? Seeing none; then before I adjourn, I'm going to call on Bob.

EXECUTIVE DIRECTOR ROBERT E. BEAL: Just real quick kind of where we are within the meeting now.

CHAIR WOODWARD: All right, thanks, and we will stand adjourned. Thank you.

(Whereupon the meeting adjourned at 11:45 a.m. on October 19, 2023)

Atlantic States Marine Fisheries Commission

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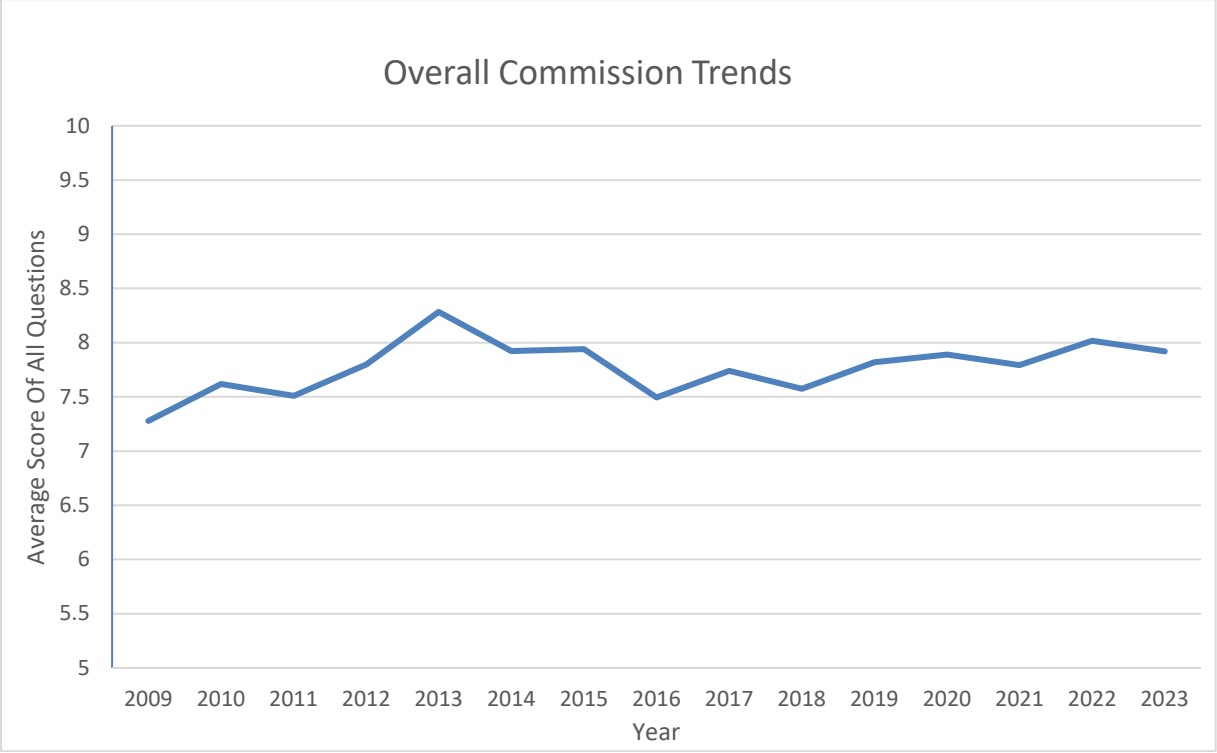
703.842.0740 • www.asmfc.org

MEMORANDUM

SUBJECT: 2023 Commissioner Survey Results
TO: ISFMP Policy Board
FROM: Alexander Law
DATE: January 25, 2024

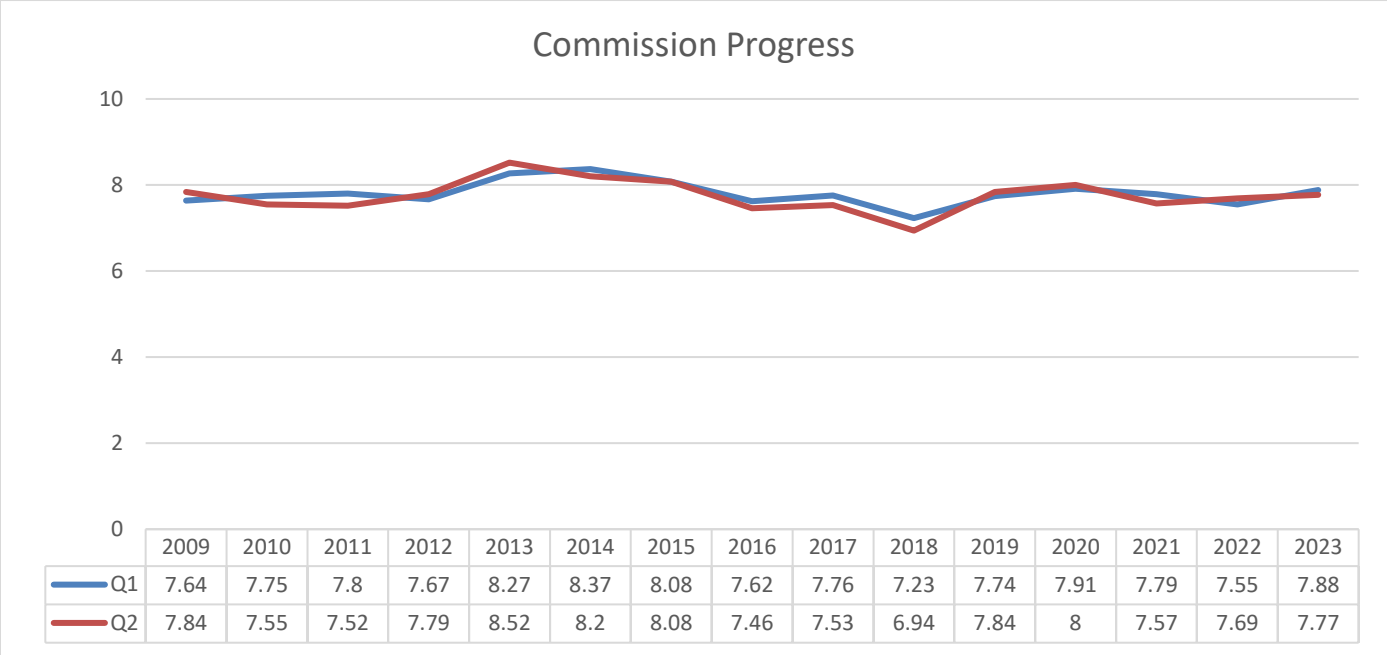
33 Commissioners and Proxies completed the 2023 ASMFC Commissioner Survey, which is based on the Commission's 2019-2023 Strategic Plan. Questions 1-16 prompted respondents to rate their answers on a scale of 1 to 10 (ten-point Likert scale) and questions 17-21 prompted respondents to provide a written response. Questions 7, 8, 14, and 15 were new to the 2015 survey, and question 16 was added in 2020.

This memo includes graphs tracking responses for questions 1-16 throughout the time series (2009-2023), a summary of the five open-ended questions for 2023, and unabridged responses to the five open-ended questions.



Commission Progress

1. How comfortable are you that the Commission has a clear and achievable plan to reach the Vision (Sustainably managing Atlantic Coastal Fisheries)?
2. How confident are you that the Commission's actions reflect progress toward its Vision?



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Q1	7.64	7.75	7.8	7.67	8.27	8.37	8.08	7.62	7.76	7.23	7.74	7.91	7.79	7.55	7.88
Q2	7.84	7.55	7.52	7.79	8.52	8.2	8.08	7.46	7.53	6.94	7.84	8	7.57	7.69	7.77

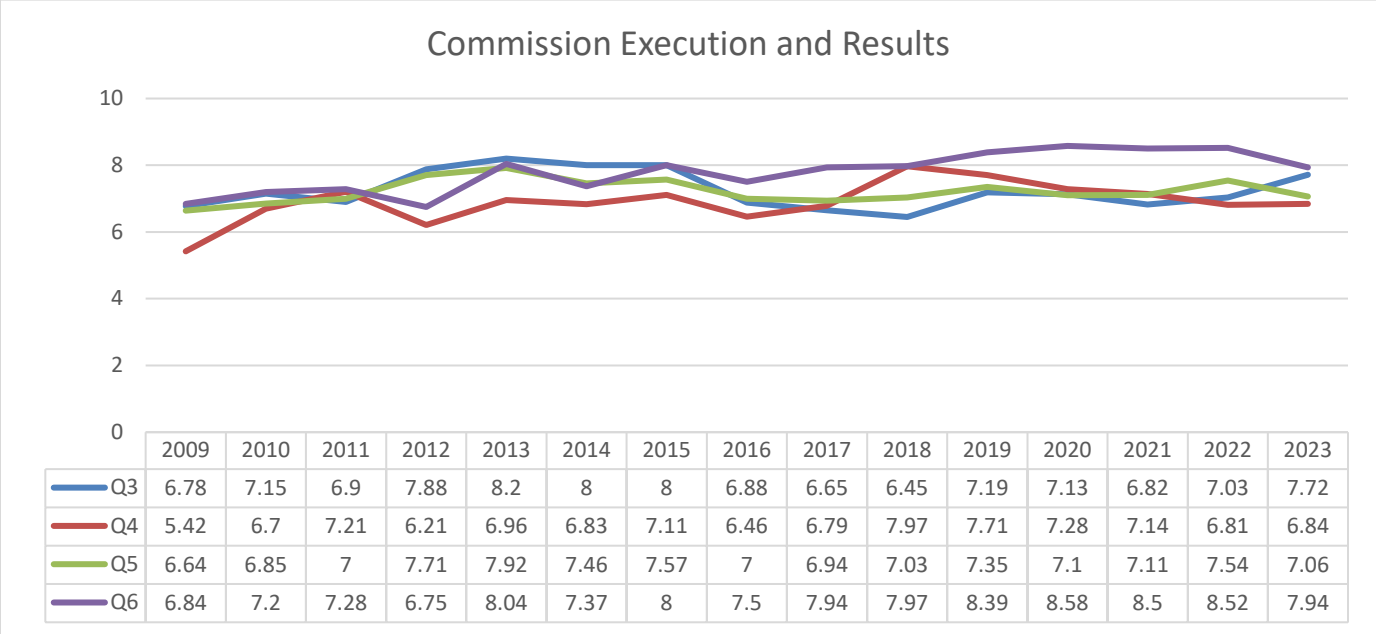
Commission Execution and Results

3. How satisfied are you with the cooperation between Commissioners to achieve the Commission's Vision?

4. How satisfied are you that the Commission has an appropriate level of cooperation with federal partners?

5. How satisfied are you with the Commission's working relationship with our constituent partners (commercial, recreational, and environmental)?

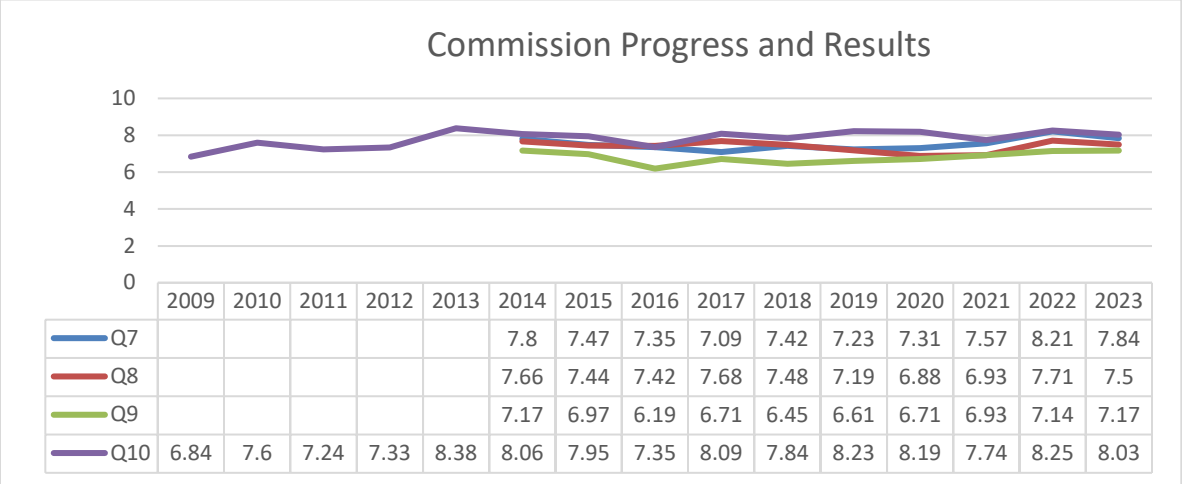
6. How satisfied are you with the Commission's effort and success in securing adequate fiscal resources to support management and science needs?



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Q3	6.78	7.15	6.9	7.88	8.2	8	8	6.88	6.65	6.45	7.19	7.13	6.82	7.03	7.72
Q4	5.42	6.7	7.21	6.21	6.96	6.83	7.11	6.46	6.79	7.97	7.71	7.28	7.14	6.81	6.84
Q5	6.64	6.85	7	7.71	7.92	7.46	7.57	7	6.94	7.03	7.35	7.1	7.11	7.54	7.06
Q6	6.84	7.2	7.28	6.75	8.04	7.37	8	7.5	7.94	7.97	8.39	8.58	8.5	8.52	7.94

Commission Progress and Results

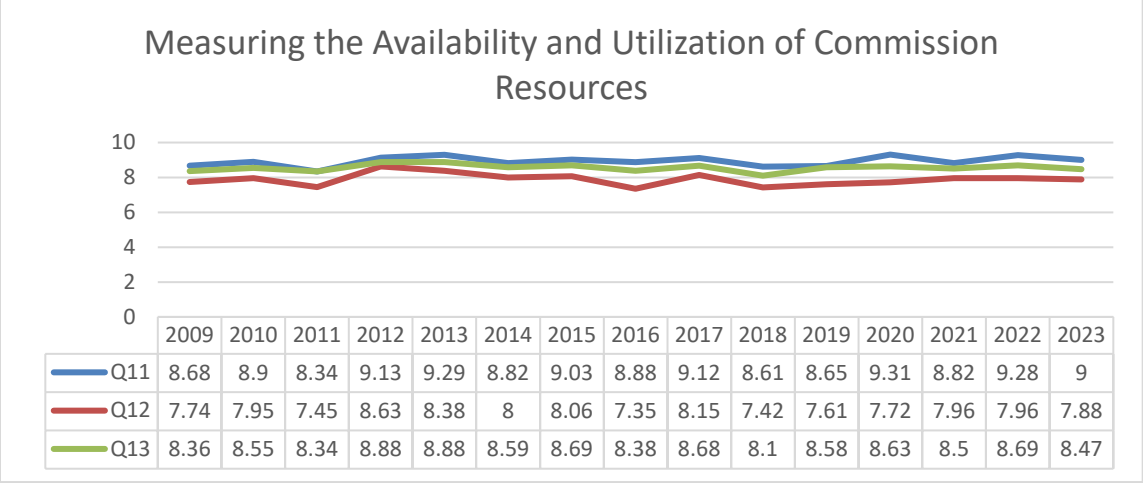
7. One of the metrics the Commission uses to measure progress is tracking the number of stocks where overfishing is no longer occurring. Is this a clear metric to measure progress?
8. How satisfied are you with the Commission's progress to end overfishing?
9. Are you satisfied with the Commission's ability to manage rebuilt stocks?
10. How satisfied are you with the Commission's efforts to engage with state legislators and members of Congress?



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Q7						7.8	7.47	7.35	7.09	7.42	7.23	7.31	7.57	8.21	7.84
Q8						7.66	7.44	7.42	7.68	7.48	7.19	6.88	6.93	7.71	7.5
Q9						7.17	6.97	6.19	6.71	6.45	6.61	6.71	6.93	7.14	7.17
Q10	6.84	7.6	7.24	7.33	8.38	8.06	7.95	7.35	8.09	7.84	8.23	8.19	7.74	8.25	8.03

Measuring the Availability and Utilization of Commission Resources

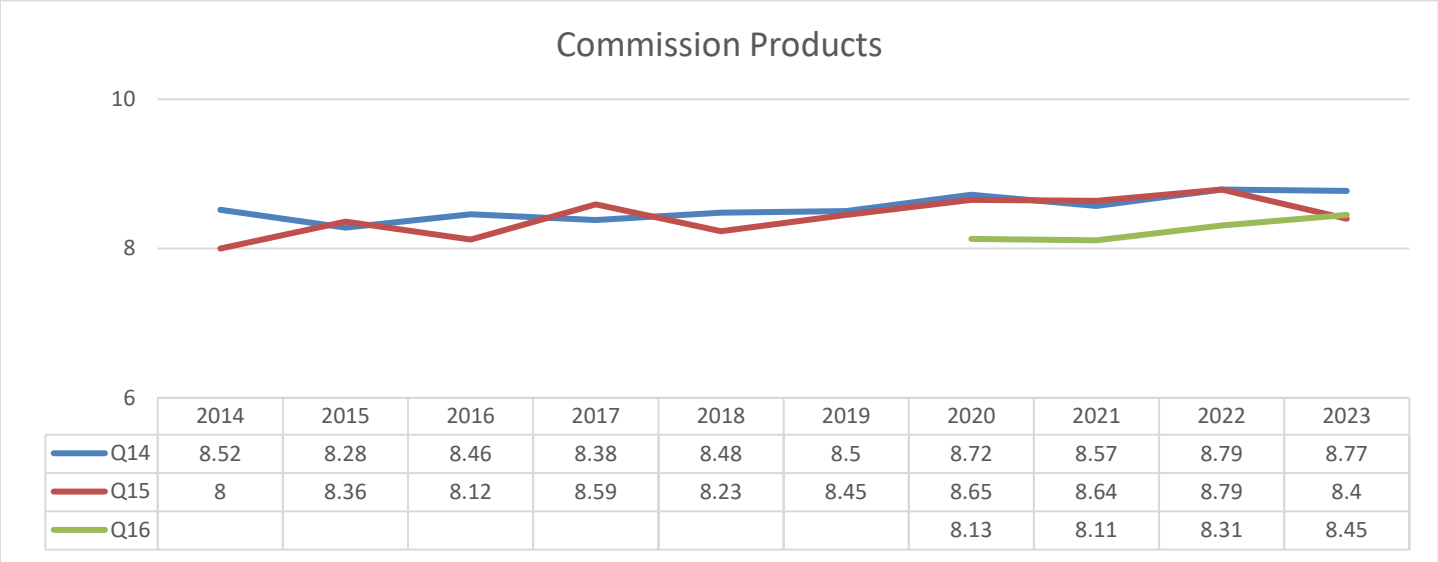
11. How satisfied are you that the Commission efficiently and effectively utilizes available fiscal and human resources?
12. How comfortable are you with the Commission's performance in reacting to new information and adapting accordingly to achieve Commission Goals?
13. The Commission has a limited scope of authority. How comfortable are you that the Commission spends the appropriate amount of resources on issues within its control?



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Q11	8.68	8.9	8.34	9.13	9.29	8.82	9.03	8.88	9.12	8.61	8.65	9.31	8.82	9.28	9
Q12	7.74	7.95	7.45	8.63	8.38	8	8.06	7.35	8.15	7.42	7.61	7.72	7.96	7.96	7.88
Q13	8.36	8.55	8.34	8.88	8.88	8.59	8.69	8.38	8.68	8.1	8.58	8.63	8.5	8.69	8.47

Commission Products

14. How satisfied are you with the products of the ISFMP Department?
15. How satisfied are you with the products of the Science Department?
16. How satisfied are you with the products ACCSP?



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Q14	8.52	8.28	8.46	8.38	8.48	8.5	8.72	8.57	8.79	8.77
Q15	8	8.36	8.12	8.59	8.23	8.45	8.65	8.64	8.79	8.4
Q16							8.13	8.11	8.31	8.45

Highlights of the Ten-Point Scale Questions:

(Q4), Cooperation with Federal partners consistently scores as our lowest question, with an average of 6.9 over 15 years. Over the last two years creating this memo, the sentiment expressed in the open ended questions has been that it's the responsibility of the FMCs to engage with the Commission more.

(Q11-13), Utilization and availability of Commission resources consistently scores at the top of the survey. The efficient and effective utilization of available fiscal and human resources is a particular highlight with a 15-year average of 8.9.

Discussion Question Summaries

Obstacles to the Commission's success in rebuilding stocks (Q17) that were mentioned are known concerns that have been brought up in the past. The main recurring concern is climate change and changing environmental conditions impeding rebuilding. Other concerns listed data reliability and short-term interests or political pressures outweighing long-term progress.

The most **useful products produced by the Commission (Q18)** include meeting materials and summaries; annual FMP reviews and assessments; and overall staff support for a variety of issues that the Commission provides. Nearly all ASMFC products were mentioned.

Additional products the Commission could provide (Q19) Multiple comments mentioned changing the usage of language in documents or providing simplified documents for the public, to communicate our decision-making to an audience that aren't biologists. They noted the challenge of getting public buy-in. Other suggestions varied greatly.

Issues the Commission should focus on more (Q20) include the incorporation of socioeconomics into allocation, incorporating environmental factors into analyses and building climate resilient stocks,

communicating with a public population that doesn't go to public hearings, incorporation of new technology such as AI, and management of rebuilt stocks.

Additional comments (Q21)

Many Commissioners declined to respond to this question. Those who did commented on the value of ASMFC as an organization, coming together to find solutions to difficult problems, how we are well positioned to increase engagement with the councils, and how thankful they are for the staff.

Unabridged Answers to Questions 17-20

Q17 What is the single biggest obstacle to the Commission's success in rebuilding stocks?

1. Balancing recreational and commercial fishery industries
2. Data may not show a true picture of stock condition because inputs may be inaccurate.
3. It may not be possible due to climate change, and that have to factor into any rebuilding program. The commission does not reevaluate re-rebuilding programs as frequently as would be desirable. Good example being the lobster rebuilding program for Southern New England. That rebuilding program was adopted 16 years ago, have not achieved the desired result, and has not been revisited.
4. Industry and science communication
5. Environment
6. Delays in updating stock assessments attributed to the lack of data and/or difficulty in securing stock assessment scientists
7. I am concerned that ASMFC has redefined the issue of rebuilt stocks. With many species they are nowhere near the status of stocks from the 1950s or 1960s. A good example are the population numbers of menhaden.
8. The biggest obstacle appears to be states reluctance to manage for the greater good. Interests within each state seem to keep them from doing "the right thing" because of political (financial) interests within the state. Makes it very difficult to make other states not want to do the same thing - protect their turf. Striped bass, menhaden and horseshoe crabs are examples.
9. Climate change
10. Putting the short-term concerns of stakeholders ahead of management measures required to rebuild stocks.
11. Things like climate change, environmental degradation, and other issues that the Commission cannot control.
12. The influence of politics that "overrules" good management
13. Data needs are the biggest obstacle. This includes data needs for species/populations (Ex: on menhaden populations in the Bay; horseshoe crabs, etc.), and for recreational fisheries (MRIP). Another obstacle is the amount of time we sometimes spend on allocation/reallocation issues which detracts from time that could be spent on focusing on rebuilding.
14. Lack of accountability within the recreational sector.
15. Access to sufficient data to support assessments
16. Environmental factors
17. Having reliable date. Take striped bass for instance, the MRIP estimates in 2022 were double that of previous years during a time of rebuilding. At the same time NOAA announces that MRIP has some biases that could impact the estimates as much as 30%. We are trying to make decisions on information that may be suspect.
18. Ecosystem effects that adversely affect early life history stages.
19. Environmental Changes, things beyond our control

20. Climate change; and in some cases adequate science to accurately assess resource status and what is needed to sustain fisheries resources
21. Information on data-poor stocks (e.g., American Eel).
22. Commercial fishermen
23. The environment (global warming leading to distribution changes, invasive species replacing native species) is changing faster than the fisheries regulators can respond coherently to the changes.
24. Competing priorities
25. #1. climate change #2. state self-interest
26. Finding ways to match access to perceived abundance, flawed recreational catch/harvest that undermines public faith
27. Climate Change
28. Grappling with the need to incorporate non-stationarity of reference points into management is a challenge we've not completely solved yet, but the commission is on the right track with the ecological ref pt work. This non-stationarity is often driven by climate/environmental factors, so is why it's so challenging to overcome.
29. Keeping angler effort within sustainable bounds, in order to minimize the potential for overfishing stocks shared with party/charter and commercial sectors

Q18 What are the most useful products the Commission produces for you?

1. PRFC is slowly incorporating eTRIPS but has not implemented the software fully yet
2. Reports are best we have to make decisions so all the detail created around the subject species
3. Annual review of each fishery management plan and fish stock
4. Newsletter and status of stock
5. Stock Assessments
6. Annual stock updates for each species
7. I am very anxious to learn more about what the public thinks concerning our goals and programs. I would appreciate extending the time frame for public comments at our meetings.
8. Science/reports seems to a strong point.
9. Fisheries focus, actually everything is useful, just in varying degrees
10. Meeting material, FMPs, stock assessments & FMP Reviews
11. Reports and summaries.
12. Meeting materials that provide a summary of actions needed in meetings
13. Information on species and data on fisheries.
14. Access to ASMFC staff.
15. FMP reviews, meeting summaries
16. Information for meetings - especially the summaries
17. The fishery management plan amendment documents
18. Data Habitat updates
19. The variety of meeting materials; well done!
20. Newsletter, Stock numbers
21. The Assessments, FMPs, and other information distributed by ASMFC is always top quality and very useful.
22. Letters to congress and the Department of Congress advocating for ASMFC and member states' priorities
23. Website with extensive documentation of plans, reviews, hearing materials, summary documents, etc
24. Webpage, FMP reviews, conduct of public hearings

25. Stock Assessments, congressional updates
26. The Commission always puts out high quality products whether it be presentations for public hearings, or fisheries science trainings, which seem to be back on track post pandemic. An added benefit is the help with administering funding (e.g. CARES Act stuff) and contract employees. If it weren't for the Commission, we would not be as successful and efficient on those two fronts, so I am very appreciative of those services. Commission trainings are top notch and a great value to the states.
27. Annual FMP reviews / reports to the public on Commission actions - advisors are generally underutilized, so very few AP reports that can be reviewed and shared with the public

Q19 What additional products could the Commission create to make your job easier?

1. Recreational fishing reporting mobile app
2. I can't think of additional products that are needed. I think we need to pick up the pace of our deliberations.
3. Habitat/Fish assemblage changes due to climate change.
4. None identified at this time -
5. Be careful with the use of fishery science acronyms. Make the reports as understandable as possible, including for those in the audience who are not trained fishery biologists.
6. Fishery Performance Reports for ASMFC-only species every 2-3 years if annually is impractical. I think they would provide additional context to the FMP Reviews and possibly improve AP member engagement.
7. Ability to copy graphs and tables just by clicking on them.
8. Pros and cons of alternatives under consideration including socio economic impacts
9. More transparency between GARFO and ASMFC.
10. I love the story maps that have been started. The Commission does use a lot of complicated language (e.g. Fmsy) that the general public doesn't really understand, so more material for lay people would be helpful
11. Possibly have a summary of the latest commercial and recreational harvest data available as current as possible. This would save time having to run the queries individually.
12. A summary version of plan amendments similar to the SAFMC decision document format.
13. I don't know enough yet to make that suggestion
14. ASMFC has information that runs the gamut from highly technical to simple enough for someone new to fisheries management to understand the issues. Yet we are seeing more of the public that will not be persuaded by science. I don't know what can be done about this situation as more information isn't changing minds.
15. If commission could help identify state regulatory changes, quota usage, etc.
16. Nothing more needed
17. Can't think of any, the Commission is great!
18. Better utilize the species APs / make staff time available to individual commissioners in responding to constituent's management and science inquiries

Q20 What issue(s) should the Commission focus more attention/time on?

1. How we deal with stocks that are considered overfished, or that have overfishing in the context of climate change. I also think we need to evaluate if AI can be brought to bear on some of our problems, and accelerate the development process. I'm confident that there are aspects of the fishery management development process that could be significantly accelerated utilizing AI. It also may have application for doing reviews similar to a MSE review. In the specific context of the lobster fishery , we need to re-examine the entire Federal fishery management process as it

currently doesn't work as witnessed by the 12 year lag in some regulations. I think we need a different model or context that allows simultaneous development of FMP, particularly on the lobster issue in order to avoid significant implementation delays
2. Communication with industry
3. Maintain/increase funding to support fisheries management needs.
4. Coordinating and supporting better data collection strategies, especially for species that continue to be listed as "data poor".
5. Ponder ways to completely rebuild the menhaden stock. This might include eliminating the harvest of menhaden for reduction purposes (Omega Protein) from any areas under ASMFC jurisdiction. That would mean prohibiting harvest by the reduction industry from any bays, rivers, and out 3 miles from the coast line.
6. Shifting & expanding species ranges and their impacts on management & governance
7. How to manage depleted stocks. Better defining our role in conjunction with the Councils and NMFS for jointly managed species.
8. Commissioners should be more mindful of all the work done by staff. A little "thank you" now and then goes a long way.
9. Move the needle a bit towards conservation & sustainability over allocation. Probably unrealistic, but it would be great if we could do that. A slightly greater focus on habitat issues would be a move in this direction.
10. Management of rebuilt stocks.
11. Allocation - no easy solutions here, but working to find a process that is robust and inclusive which doesn't always happen in the course of board meetings. Socio economics? That would probably require additional funding.
12. Engaging public that doesn't seek out public hearings
13. Recreational fishing accountability
14. Continuing to build partnerships between the states so there is a unified effort to gain the needed support of federal agencies and Congress for interjurisdictional fishery management along the Atlantic Coast.
15. Ensuring increased funding for sampling and studies to justify our decisions
16. Conservation/replenishing stocks
17. Good to see the increased emphasis on the CESS as acknowledging the economic consequences of management decisions makes clear to the public that decisions are being made with full awareness that some decisions will cause economic difficulties for some of our public.
18. thoroughly evaluating consequences and implications of recreational mode-splits
19. Pushing on NOAA to resolve this MRIP mess
20. Climate resilient stocks allocation related to shifting stocks
21. We need to continue to work on incorporating environmental factors into analyses wherever possible, continue working towards ecological ref pts (maintaining existing, increasing adoption of them where they are not already in use, and evolving in how we create them), and developing a robust risk and uncertainty policy.
22. Less focus on the Administration's climate crisis', which has become a convenient argument for interstate reallocations at the Commission.

Q21 Additional comments.

1. If agenda was designed to start later on first day that commission might avoid first night charges being in advance of the first meeting day.
2. I consider it a joy and privilege to be part of ASMFC and strongly support conservation measures for these valued marine resources.

3. Sometimes I think it would be good to remind everyone that the species we deal with are often migratory and just because your state is doing well, doesn't mean that it isn't impacting your neighbors - sometimes severely.
4. Keep up the great work--the excellent staff make our jobs much easier!
5. Given all the changes that managers are faced with (IRA money, 304(f) Climate change, etc) I think the ASMFC is well positioned to enhance our involvement with the 3 other East Coast management bodies. We (they) need to be more active in engaging with the Commission to produce better outcomes coastwide. Perhaps having the ED's attend a Commission meeting once in a while would be one way to cooperate moving forward
6. I continue to be impressed with the Commission's ability to work together to find solutions to highly contentious problems in a productive, civil and mostly equitable way.
7. The staff of ASMFC does an outstanding job given the magnitude and complexity of interjurisdictional fishery management.
8. Every year that I take this survey, I try to find the right words to describe how impressive ASMFC is as an organization, from the leadership down to the support staff. Keep up the great work. On other items - the technology for hybrid hearings is excellent and I've been told by in-person attendees that they did not feel they were missing anything by not having the ASMFC staff in the room with them.
9. Need to resume more in-person TC meetings. Bring back the hospitality suite! :-)
10. Commission staff are amazing. They provide excellent support to the states and do a great job at managing a large and varied workload.
11. Keep on keeping on!!!
12. I hope the Commission will continue to work towards the development of sector separation of the Party and Charter sector. I'm not suggesting we do this, I just want the Commission to have the discussion about this in a comprehensive way, so we can either adopt the strategy, or not, one way or the other. But it is important to finally have this discussion in a robust way.
13. Thank you for the opportunity to participate in this survey. I look forward to learning about the results.

ATLANTIC STATES MARINE FISHERIES COMMISSION

STATE DECLARATION OF INTERESTED BY SPECIES – February 2021

	ME	NH	MA	RI	CT	NY	NJ	PA	DE	MD	DC	PRFC	VA	NC	SC	GA	FL	NMFS	USFWS	Councils
Managed Species																				
American Eel	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
American Lobster	*	*	*	*	*	*	*		*	*			*					*		
Atlantic Croaker							*		*	*		*	*	*	*	*	*	*		
Atlantic Herring	*	*	*	*	*	*	*											*		NEFMC
Atlantic Menhaden	*	*	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	
Atlantic Striped Bass	*	*	*	*	*	*	*	*	*	*	*	*	*	*				*	*	
Atlantic Sturgeon	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Black Drum							*		*	*		*	*	*	*	*	*	*		
Black Sea Bass		*	*	*	*	*	*		*	*		*	*	*				*		
Bluefish	*	*	*	*	*	*	*		*	*		*	*	*	*	*	*	*		
Coastal Sharks			*	*	*	*	*		*	*			*	*	*	*	*	*		
Cobia				*			*		*	*		*	*	*	*	*	*	*		SAFMC
Horseshoe Crab			*	*	*	*	*		*	*		*	*	*	*	*	*	*	*	
Jonah Crab	*	*	*	*	*	*	*		*	*			*					*		NEFMC
Northern Shrimp	*	*	*																	
Red Drum							*		*	*		*	*	*	*	*	*	*		
Scup			*	*	*	*	*		*	*			*	*				*		
Shad and River Herring	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Spanish Mackerel				*		*	*		*	*		*	*	*	*	*	*	*		SAFMC
Spiny Dogfish	*	*	*	*	*	*	*		*	*			*	*				*		
Spot							*		*	*		*	*	*	*	*	*	*		
Spotted Seatrout							*		*	*		*	*	*	*	*	*	*		
Summer Flounder			*	*	*	*	*		*	*		*	*	*				*	*	
Tautog			*	*	*	*	*		*	*			*					*		
Weakfish				*	*	*	*		*	*		*	*	*	*	*	*	*		
Winter Flounder	*	*	*	*	*	*	*											*		
Total number of Species	12	13	18	20	18	19	25	5	23	23	4	17	23	20	15	15	15	23	7	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Marine Resources
123 Kings Park Blvd. (Nissequogue River State Park), Kings Park, NY 11754
P: (631) 444-0430 | F: (631) 444-0434 | FW.Marine@dec.ny.gov
www.dec.ny.gov

November 6, 2023

Robert Beal
Executive Director
Atlantic States Marine Fisheries Commission
1050 N. Highland Street, Suite A-N
Arlington, VA 22201

Dear Mr. Beal,

The state of New York intends to declare into the cobia fishery and would appreciate the ISFMP Policy Board consider our request.

In the past 5 years, the occurrence of cobia in New York waters has dramatically increased. Prior to 2019, commercial cobia landings in New York never eclipsed 1,000 pounds. Between 2019 and 2022, commercial landings were over 1,000 pounds each year, reaching a high of 5,183 pounds in 2020. New York's commercial landings were 6.9%, 2.6%, and 2.0% of coastwide commercial cobia landings in 2020, 2021, and 2022. In 2022, the Cobia Plan Review Team recommended that New York declare interest in the cobia fishery due to our increased commercial landings. Preliminary 2023 commercial cobia landings in New York are 436 pounds.

Recreational encounters with cobia have also increased in recent years. In 2020 and 2022, 2,979 and 4,184 fish were caught respectively. Prior to 2020, the last record of recreational cobia catch in New York occurred in 1994. Although MRIP has not successfully intercepted cobia trips in recent years except for 2020 and 2022, cobia have become a popular summer target of recreational anglers.

Additionally, studies have shown that the suitable habitat for cobia is shifting northward. In 40 years it is projected that the waters off New Jersey will have the most suitable habitat for cobia in the summer[1]. As coastal waters continue to warm, we can expect to see growth of cobia fisheries north of Virginia. Cobia may also spawn within estuaries and bays further north as the timing and spatial extent of cobia migration patterns shift and spawning habitat changes[1].

In accordance with the Atlantic States Marine Fisheries Commission Compact & Rules and Regulations, Article VI, section 5, "a state shall be deemed to have an interest in a fishery if, according to the latest published statistics or available records of the National Marine Fisheries Service or equivalent state statistic, it meets any of the following criteria: (a) such fish are found customarily in its territorial waters; (b) such fish are customarily or periodically in the territorial waters of such state for the purpose of spawning or in transit to and from spawning grounds; or (c) the citizens of the state are recorded as having taken 5 percent or more of the total Atlantic coast catch of the species of fish in any of the five preceding years. For the above reasons, we believe that New York satisfies at least one of the criteria required for a state to declare an interest into a fishery.

Sincerely,

Martin L. Gary, Director
NYSDEC Division of Marine Resources

[1]Crear, D.P., Watkins, B.E., Saba, V.S., Graves, J.E., Jensen, D.R., Hobday, A.J., and Weng, K.C. (2020) Contemporary and future distributions of cobia, *Rachycentron canadum*. Diversity and Distributions. 26, 1002-1015.

Tina Berger

Subject: FW: [External] ASMFC Winter Meeting Agenda Item for January, 24, 2024: Localized Depletion of Atlantic Menhaden in the Chesapeake Bay

From: Phil Zalesak <flypax@md.metrocast.net>
Sent: Thursday, January 4, 2024 12:18 PM
To: Robert Beal <Rbeal@asmfc.org>
Cc: Conor McManus <conor.mcmanus@dem.ri.gov>; David Reed <david@chesapeakelegal.org>; Dale William Neal <dalewilliamneal@gmail.com>; Ron Smith <smitty3894@aol.com>; Joe Thorpe <jthorpe@umm.edu>; MICHAEL ACADEMIA <macademia@email.wm.edu>; KEN SCHULTZ <ken@kenschultz.com>; ROMARIC MONCRIEFFE <romaric.moncrieffe@audubon.org>; tomburkett@virginia.edu; 'Brian Collins' <brian.c1@me.com>; Bradley Bell <bellmarineservices@gmail.com>; Dr. Steven Zalesak <stzalesak@gmail.com>; Battista91@yahoo.com; 'Sal Icaza' <marylandospreyfestival@gmail.com>; juliekazz@comcast.net; ospreycbva@gmail.com; JEREMY COX <jcox@bayjournal.com>; THOMAS LILLY <foragematters@aol.com>; JON HURDLE <jonhurdle@gmail.com>; wsmckeever@gmail.com; George Scocca <george@nyangler.com>; Manasquantaxi@gmail.com; Floyd Warren <fdwarren@md.metrocast.net>; Rick Herdon <rzherndon@gmail.com>; Steve Fagan <steven.fagan60@icloud.com>; PHILIP ZALESAK <flypax@md.metrocast.net>; debbiescampbell@comcast.net; Christi Medice <cmedice10@gmail.com>; Bert Olmstead <boatman5@ymail.com>
Subject: RE: [External] ASMFC Winter Meeting Agenda Item for January, 24, 2024: Localized Depletion of Atlantic Menhaden in the Chesapeake Bay

Bob,

I am requesting an **exception to your standard operating procedure.**

First, the mortality rate of striped bass is tied directly to the mortality rate of Atlantic menhaden as documented by the Atlantic States Marine Fisheries Commission. Ignoring this relationship will only lead to the further deterioration of the Chesapeake Bay marine environment to the detriment of other fish, birds, and mammals dependent on Atlantic menhaden for their survival.

Second, the proposed presentation is on behalf of the following organizations and individuals. They want their voices heard:

- David Reed, Executive Director **Chesapeake Legal Alliance**
- Phil Zalesak, President **Southern Maryland Recreational Fishing Organization**
- Dale William Neal, Senior Editor, **Save Our Menhaden**
- Ron Smith, President, **Atlantic Coast Sportfishing Association**
- Joe Thorpe, Managing Editor, **Chesapeake Bay Sportfishing Association**
- Michael Academia, MSc Biology, **Osprey Researcher & Science Advisor for the Virginia Osprey Foundation, Williamsburg, Virginia**
- Ken Schultz, At-Large Member, **VMRC Menhaden Management Advisory Board, Former member, VMRC Recreational Fishing Advisory Board, Accomac, Virginia**
- Roberta Kellam, Former Member of **Virginia State Water Control Board, Franktown, Virginia**
- Tom Burkett, **Northampton County Resident**
- Brian Collins, **Alexandria, Virginia Resident**
- Bradley Bell, Owner, **Bell Marine Services**

- Dr. Steven Zalesak, **US Government Consultant**, Moseley, Virginia
- Bert Olmstead, President **Kent Island Fishermen**
- Alan Battista, **Author, Writer, Sponsored Athlete**
- Sal Icaza, President, **Maryland Osprey and Nature Festival**
- Julie Kacmarcik, Conservation Chair, **Richmond Audubon Society**
- Remy Moncrieffe, Policy Manager, Marine Conservation, **National Audubon Society**
- Joanie Millward, Executive Director of the **Virginia Osprey Foundation**, Colonial Beach, Virginia

Third, there is nothing on your agenda after 12 noon on Thursday, January 24th. There is plenty of time for the Atlantic Menhaden Management Board to hear their concerns. https://www.asmfc.org/home/2024-winter-meeting

Fourth, here's the latest on osprey in the Chesapeake Bay: https://www.wfxrtv.com/news/outdoors-bound/william-mary-study-finds-vital-raptor-species-in-on-the-decline-in-virginia/

Regards,

Phil

PS – Teammates, please weigh in as required

From: Robert Beal [mailto:Rbeal@asmfc.org]
Sent: Thursday, January 4, 2024 10:08 AM
To: PHILIP ZALESAK
Cc: Conor McManus
Subject: RE: [External] ASMFC Winter Meeting Agenda Item for January 2024: Localized Depletion of Atlantic Menhaden in the Chesapeake Bay

Good Morning Phil,

Thank you for providing additional comments on Atlantic menhaden management. Your comments will be provided to the Commissioners in the briefing materials for the Winter Meeting.

As we have discussed in the past, the Commission's guiding documents state that species management board meetings "shall be called by the Executive Director with the approval of the Commission Chair". Therefore, I am responding for Chair McManus.

The Commission has an open process to collect significant public input during and between meetings. You and others have fully availed yourselves of our public comment process. While I am confident the Commissioners are fully aware of your position on menhaden management in the Chesapeake region, you are encouraged to provide additional comment at this upcoming meeting. We are not able to accommodate your request for 30 minutes on the Winter Meeting agenda. As you know the Commission manages dozens of fisheries and has thousands of stakeholders along the Atlantic coast. In order to treat all stakeholders fairly and consistently, we can't accommodate requests for extended time on board agendas for public presentations.

At the upcoming ASMFC Winter Meeting, your comments would be most appropriate at the beginning of the ISFMP Policy Board meeting at 8:30am on Thursday, January 25.

Please note the public comment timeline in the preliminary meeting notice at the following link:
https://asmfc.org/files/2024WinterMeeting/2024WinterMtgFirstNotice_PreliminaryAgenda.pdf [asmfc.org]

Regards,
Bob

From: Phil Zalesak <flypax@md.metrocast.net>
Sent: Tuesday, January 2, 2024 8:41 AM
To: Conor McManus <conor.mcmanus@dem.ri.gov>
Cc: Robert Beal <Rbeal@asmfc.org>; Dennis Abbott <swamper199@gmail.com>; PHILIP ZALESAK <flypax@md.metrocast.net>; Floyd Warren <fdwarren@md.metrocast.net>; Rick Herdon <rzherndon@gmail.com>; Steve Fagan <steven.fagan60@icloud.com>; David Reed <david@chesapeakelegal.org>
Subject: [External] ASMFC Winter Meeting Agenda Item for January 2024: Localized Depletion of Atlantic Menhaden in the Chesapeake Bay

Chairman Conor McManus,

First, congratulations on your new position as the incoming chairman of the Atlantic Menhaden Management Board.

Second, I would like you to consider the same proposal I submitted to former chairman Mel Bell.

Please advise me of your decision as soon as possible for planning purposes.

Thanks for your help.

Very Respectfully,

Phil Zalesak (240-538-3626)
President
Southern Maryland Recreational Fishing Organization
Corporate Facebook Page: https://www.facebook.com/profile.php?id=61552422541232
Membership Facebook Page: https://www.facebook.com/groups/598428253621775

CHESAPEAKE LEGAL ALLIANCE

SMRFO

PETITION FOR RULEMAKING BY THE VIRGINIA MARINE RESOURCES COMMISSION REGARDING ATLANTIC MENHADEN, THE CHESAPEAKE BAY, AND THE REDUCTION FISHERY.

On behalf of the Chesapeake Legal Alliance and Southern Maryland Recreational Fishing Organization, along with the undersigned co-petitioners, we hereby submit a petition for rulemaking, pursuant to Va. Code Ann. § 2.2-4007, seeking the Virginia Marine Resources Commission's (VMRC) adoption of the recommendations below. We request that the recommendations be adopted and that the VMRC make specific findings in line with its statutory obligations under Va. Code Ann. § 28.2-203.

A large and growing constituency in the Commonwealth of Virginia and the wider Chesapeake Bay community demands immediate, scientifically-grounded, and enforceable regulatory action to decrease the harmful biological, ecological, and socioeconomic effects that the Atlantic menhaden reduction fishery has and may continue to have on marine ecosystems. Such action is key to the welfare of user groups at sea and on shore that rely upon robust stocks of menhaden and their predators.

While individual states and the Atlantic States Marine Fisheries Commission are considering a moratorium on fishing for striped bass (Maryland instituted one in summer 2023), among the most economically valuable fish on the Atlantic coast and one that is heavily dependent upon menhaden as prey, Virginia is doing little to protect menhaden. At a time when there have never been so many anthropogenic and environmental pressures on these and other stocks, and with mounting evidence of the risks of insufficient fishery management, we call on the Commonwealth to protect menhaden in a way that maximizes benefits for marine wildlife, the Chesapeake Bay ecosystem, and all coastal communities and economies.

Virginia law requires the menhaden fishery to be managed using conservation and management measures that protect both the fishery and the public's interest. Therefore, pursuant to VMRC's obligations and authorities under Va. Code Ann. § 28.2-201, we recommend the VMRC:

1. **Enact a moratorium in the Bay: Set a precautionary moratorium on purse seine landings by the menhaden reduction fleet within the Chesapeake Bay.**
2. **Require no less than 40% of harvest from federal waters: Set a limit of no more than 60% of current purse seine menhaden landings within Virginia waters (approximately 94,000 metric tons).**
3. **Codify a 1-mile shoreline buffer: Establish a permanent 1-nautical mile shoreline buffer along Virginia's shoreline prohibiting the use of menhaden purse seines.**
4. **Fund and implement a menhaden population study: Implement and enhance the Atlantic Menhaden Research proposal to investigate localized depletion and its impacts on the Bay (VIMS, October 1, 2023).**
5. **Establish proper industry oversight: Require increased vessel and landings monitoring and reporting to ensure compliance and reduce bycatch and impacts on Bay habitats.**

TABLE OF CONTENTS

BACKGROUND.

FORAGE FISH: CRITICAL FOOD WEB LINKS.

Forage fish such as herrings, sardines, mackerels, and menhadens are the lifeblood of ocean and estuarine ecosystems and communities, transferring the energy in plankton up the food web to form the foundations of fishing, ecotourism, and coastal economies (Essington et al., 2006). At the same time, forage fish support the largest wild capture fisheries in the world (Pauly et al., 1998). As demand for these fish increases and their populations decrease, entire ecosystems, and the people who rely upon them, experience the cascading effects of this decline. “Scientists … have identified an alarming trend in populations of large predatory fishes in the world's oceans…that up to 90% of all large predatory fish such as cod, sharks, halibut, grouper, tuna, swordfish, and marlin have been depleted” (Myers, 2003).

Forage fish like menhaden are in increasingly high demand worldwide, particularly to feed the growing finfish aquaculture industry. Aquaculture's share of the forage catch has nearly doubled since 2000 (Pauly et al., 2013).

Nearly 90% of global forage fish catch is used by so-called reduction industries that “reduce” them into meal and oil. According to data from the U.N. Food and Agriculture Organization, total world aquaculture production expanded by 609% in annual output from 1990 to 2020, with an average growth of 6.7% per year. Aquaculture now consumes nearly 70% of global fish meal and 90% of fish oil.” - (FAO, 2020; Hilborn et al., 2017; Tacon & Metian, 2008).

Overall, the science suggests that declines in forage fish populations can have significant and far-reaching impacts on both marine ecosystems and human well-being, highlighting the importance of effective management and conservation (Pauly et al., 1998; Essington et al., 2006; Pikitch et al., 2012; Hilborn et al., 2017; Cury et al., 2018; (Kaplan et al., 2013)).

Forage species like menhaden can resist the effects of sustained high harvests, but when environmental conditions, fishing effort, and predation levels change, populations may plummet rapidly and become perilously less able to recover (Jacobsen & Essington, 2018), leading to: declines in abundance, distribution, and resilience of forage populations; localized depletion of the target species and their dependent predators; food insecurity in communities dependent on wild-caught forage and their predators; reduced food availability for predators of commercial and recreational value; reduced opportunities and revenue for other dependent industries; and overall undermined ocean and estuarine ecosystem resilience (Nissar et al., 2023).

Industrial-scale forage fishing has also been linked to the release of toxic industrial wastes and other marine pollution (*e.g.*, plastics); bycatch of non-target species, such

as prized red drum & Spanish mackerel and protected species like marine mammals and turtles; and habitat destruction of nursery areas like seagrass meadows.

Some combination of these effects commonly exists in places where forage fisheries occur at scale. Worse, impacts can be additive, broadly affecting ecosystems and people who rely upon them for their livelihoods, food, recreation, culture, and other benefits known in the scientific community as “ecosystem services.”

Forage species like menhaden have never faced so many simultaneous anthropogenic, ecological, and environmental threats. The oceans continue to change due to warming waters, acidification, intensifying storms, shifting food availability, and other emerging threats like plastic pollution and contamination from personal care products and pharmaceuticals.

ATLANTIC MENHADEN.

Ecosystem and human values.

The Atlantic menhaden (*Brevoortia tyrannus*) is a forage fish vital to the Chesapeake Bay (Cuker, 2020). It not only supports the largest fishery in the Bay but also plays a crucial role in the Bay's food web by filtering plankton, recycling nutrients, and serving as prey for predator fish, marine mammals, and seabirds (Cuker, 2020).

Menhaden are famously called “the most important fish in the sea,” and over the past few decades, substantial evidence has emerged to support that claim. They play an outsized role in food webs, consuming plankton that they convert into the energy that feeds many iconic predators. Models demonstrate, too, that menhaden are not only among the most important prey items by number for many predators (Buchheister et al., 2017), but also among the most nutrient-rich. Menhaden is a prime example of why ecosystem-based fisheries management (EBFM) is necessary: there have been calls for managing the menhaden population as a key ecosystem component for decades.

Data alone can’t tell the story of the importance of menhaden: the boom-and-bust nature of their population changes are accompanied by large swings in the presence and behavior of predators and other forage species. From humpback whales gracing New York Harbor to pockets of recovered osprey populations to striped bass and tuna feeding blitzes, many people know what abundant menhaden populations can bring–and the effects of their regional and local declines. Despite the growing abundance of data and tailored management mechanisms that focus on optimizing the benefits menhaden provide:

- There is grave concern as to the efficacy of agency management;

- Annual commercial harvests by the reduction fleet often top 1 billion pounds per year, and are concentrated in the Chesapeake Bay, a key nursery to menhaden and foraging ground for many of its predators; and,

- There are concerns related to the health of the menhaden population (*e.g.*, diminished geographic distribution, average size-at-age, and age-to-maturity) and their dependent predators.

Industrial menhaden fisheries.

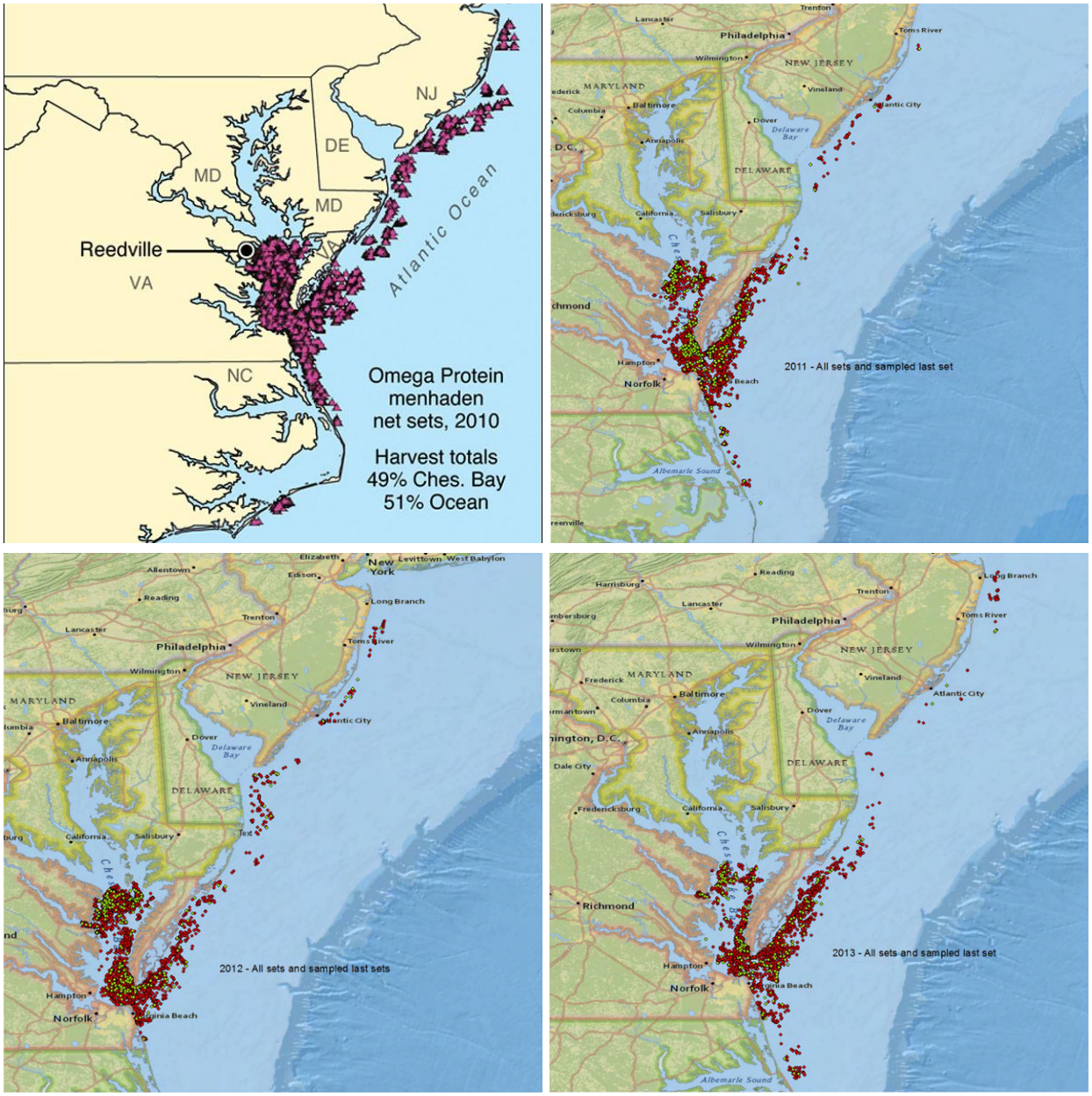
The Atlantic menhaden commercial fishery consists of a purse-seine reduction sector, which captures fish to produce fish meal and oil, and a bait sector that provides bait to support other commercial and recreational fishing. The management mechanisms in place for Atlantic menhaden are primarily governed by the Atlantic States Marine Fisheries Commission (ASMFC), with state-level authority of the 15 coastal states, NOAA Fisheries, and the U.S. Fish & Wildlife Service all coming into play on the ASMFC's Menhaden Management Board (MMB). The MMB oversees development and implementation of fishery management plans that include restrictions on catch volume and location, allocation, and more. Ongoing data collection, stock assessments, and collaboration among states play a crucial role in shaping management strategies.

Virginia is the key Atlantic state for the future of menhaden: it is where the vast majority of Atlantic menhaden are caught. Until recently, Virginia was the only Atlantic state that managed the fishery through its legislature and not its state natural resource agency, the Virginia Marine Resources Commission (§ 28.2-201. Authority of Commission to Make Regulations, Establish Licenses, and Prepare Fishery Management Plans; Accept Federal Grants; Enforcement; Penalty for Violation of Regulation, n.d.). This recent change was seen by many as a potentially substantial turning point (Bulletin, 2020; Menhaden Changes in Virginia, 2020), as it was expected to result in diligent oversight and meaningful management of the fishery, ushering in a new period of sustainability. Alas, as this petition will show, the VMRC has not yet begun to implement meaningful management efforts.

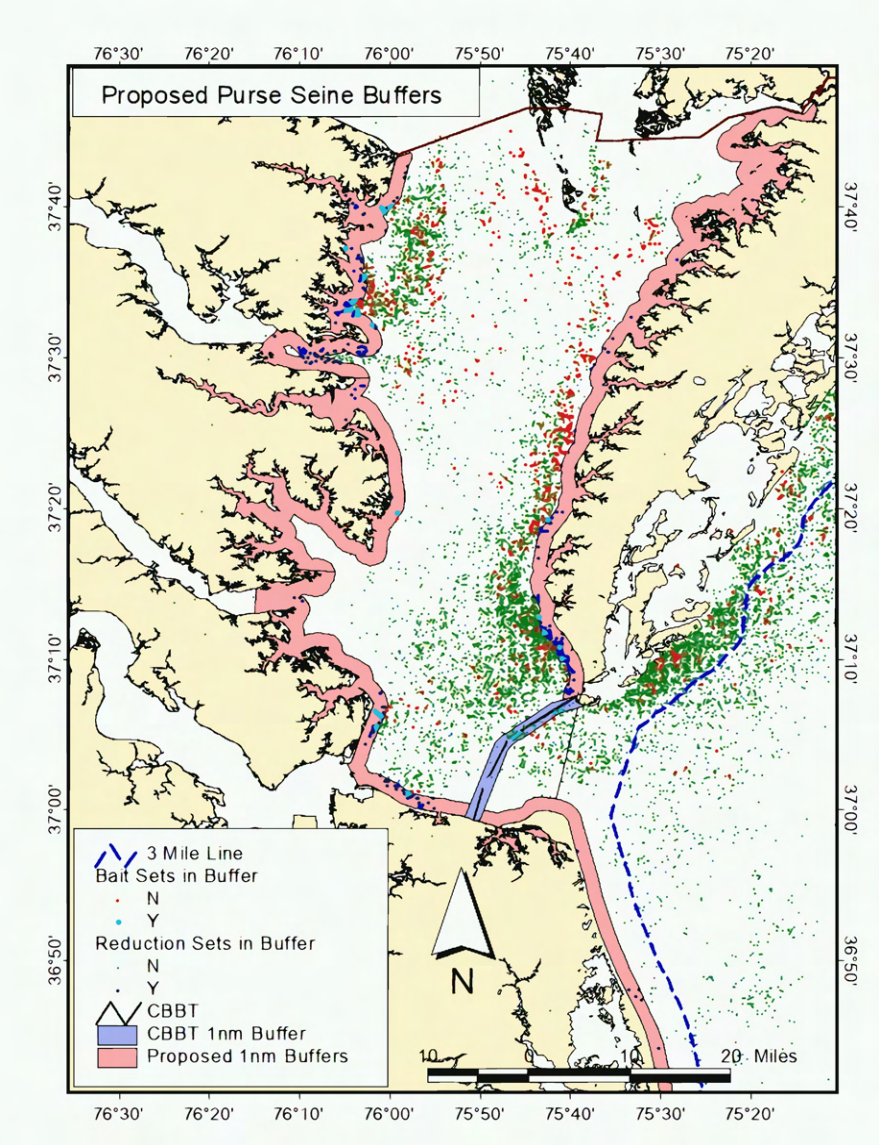
Distribution of menhaden fishing activity.

Fishing activity for menhaden coastwide occurs mostly within 3 nautical miles of the shore. Fishing is year-round, but there are concentrated peaks from May to September in Virginia and from November to January farther south. Most of the fishing by the reduction fleet takes place in the Virginia portion of Chesapeake Bay and along ocean beaches. In Chesapeake Bay, most fishing takes place in the Bay's main stem. During the summer, the reduction fleet sometimes goes as far north as just off New York Harbor. Purse-seining for reduction purposes is prohibited by state law in every Atlantic coastal state except Virginia, so purse-seine sets in the ocean are by definition more than 3 nautical miles from shore (NOAA Fisheries, 2021).

Limited spatial data are available for the fishery as public reporting of net set locations and corresponding landings amounts is not required. Based on the few available maps, there is evidence that a substantial amount of net sets and landings occur in federal waters beyond 3 nautical miles. It's worth noting that 2011 landings, as reported by NOAA Fisheries staff, were approximately equivalent between the Chesapeake Bay and the ocean. This would suggest that the fleet should be capable of adapting to reduced landings in the Bay and focus more of their effort in federal waters without losing opportunities to meet their catch limits.



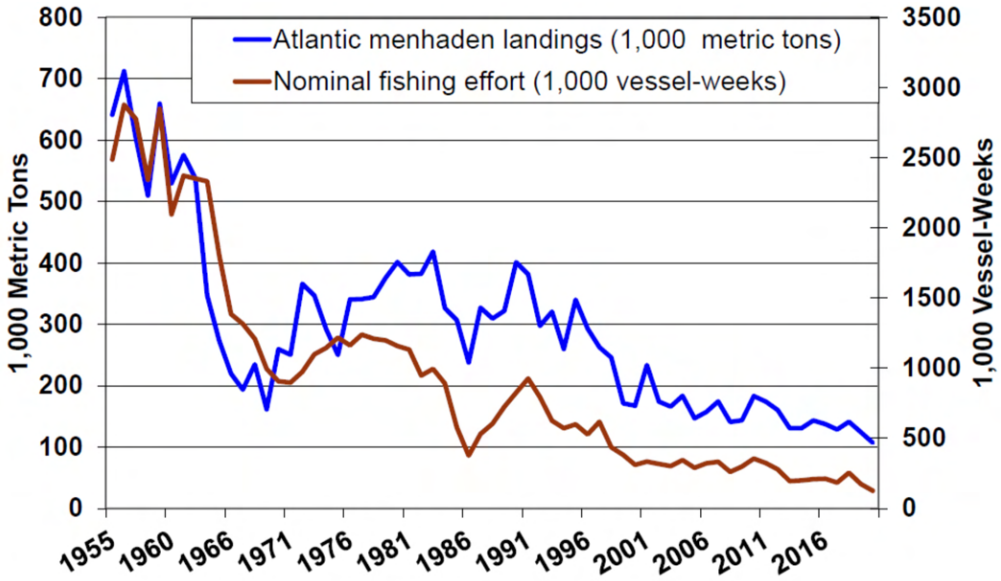
Sources: Top left: Joseph Smith, NOAA Fisheries (2011);
Top right to bottom right: Figures 4.1.3.4.1 - 4.1.3.4.3 in
(SouthEast Data, Assessment, and Review, 2015). Images cover the years 2010-2013.



Source: Figure 1 from (Virginia Marine Resources Commission, 2022)

Reduction fishery fishing practices. The reduction fishery uses purse seine nets made of nylon fiber around 1,000-1,400 feet long, with a depth of 65-90 feet and a stretched mesh size of about 1.75 inches. The net is the size of several football fields and is deployed for approximately 35-45 minutes before it is closed. The mothership vessels range from about 150-200 feet long and carry two smaller purse seine boats measuring about 40 feet long. Schools of menhaden are located by spotter planes that can cover wide swaths of the Bay and ocean in short order; the pilots direct both mothership and "purse boats" to the school. The purse boats are then deployed to encircle the schools. The net is closed around the school by a purse line; the mothership is then able to insert a large-mouthed vacuum tube into the nets to suck menhaden–and other items caught in the net–into its high-capacity hold (NOAA Fisheries, 2021).

Landings by the reduction fleet have declined substantially over time, as shown graphically below. This has occurred for a variety of reasons, including geographical contraction of the stock, which led to the closure of many reduction factories located north of the Chesapeake Bay due to a scarcity of fish (Michelson, 2022).



Source: (GlobalTRUST, 2023)

Menhaden and the Chesapeake Bay.

Although the "Chesapeake Bay is believed to be the most important nursery for Atlantic menhaden along the U.S. east coast" (VIMS, 2023) based on decades of science and on-the-water experience (see also SouthEast Data, Assessment, and Review (2015)), the structure and abundance of the Atlantic menhaden stock in the Bay are not well understood because of a lack of scientific surveys, the reduction fishery's confined geographical range (Liang et al., 2020), and the lack of publicly available reduction fishery landings and effort data. In response to public concerns, in a precautionary move, the ASMFC implemented a limit of 109,020 metric tons for the purse-seine reduction fishery in the Chesapeake Bay in 2006. Despite the ASMFC's stock assessment indicating that the coastwide stock was not overfished or experiencing overfishing, this measure was taken as a precautionary step to address ecosystem concerns (ASMFC, 2006). The cap was reduced to 87,216 metric tons in 2013 and to 51,000 metric tons in 2020.

"The Virginia-based menhaden fishery is overfishing the stock in and around the Chesapeake Bay, which is preventing the important forage fish from making its way into the Bay and its tributaries." - Dr. Noah Bressman, Salisbury University

Signs of concern: menhaden.

Despite their reported healthy Atlantic coastwide stock status, there are numerous concerning signs evident in their population dynamics:

- Reduced menhaden size-at-age. Research by Dr. R. Eugene Turner revealed that menhaden are experiencing a reduction in body weight, length, and overall size due at least in part to fishing pressure and rising ocean temperatures, declining in body size by approximately 15% over the past 65 years. He noted that "Smaller sized fish of the same age will appear as fishing pressure increases, and fish maturation may accelerate. … The effect of the fishing, if present, can be reversed, whereas the consequences of temperature changes are permanent for now, and anticipated to increase" (Turner, 2017). A published response (Schueller et al., 2018) by NOAA and university staff called some of Turner's findings into question, but data and experience would suggest that this is a very real and concerning trend, evidenced, for example, by the disappearance of large menhaden (Smith & O'bier, 1996).
- Reduced menhaden age-at-maturity. Menhaden stock assessments (SouthEast Data, Assessment, and Review, 2015, 2020) show that menhaden are reproducing at earlier ages than ever before, which raises concerns about their reproductive capacity. Warming ocean temperatures and decades of intense fishing pressure are believed to be responsible for this shift. According to NOAA, Menhaden off the Atlantic Coast are now reaching sexual maturity at an age of 2-3 years, while previously, they did not reproduce until they had reached four years old. This development makes the species more vulnerable to overfishing, as younger, smaller fish are more likely to be caught in nets and make it more challenging for them to maintain a viable population. Plus, older fish produce vastly more spawn.
- Reduced menhaden range. Atlantic menhaden once were common in spectacular oil-slick-producing schools from northern Florida to Canada, but have contracted in distribution over time to the mid-Atlantic (Liang et al., 2020), and more recently, to southern New England and the Gulf of Maine. There have been multiple periods of coastwide population declines over time, often accompanied by closures of reduction plants and corresponding commercial fishery shifts to other sensitive forage species.

"A ban on fishing for the reduction industry could bring the population back to historic levels within a few years, given the very high reproductive capacity of menhaden and the excessive phytoplankton populations that plague the Bay. A return to super abundance of menhaden could help reduce algal concentrations as well as fuel the expansion of populations of the many species of fish, and birds, dependent on this oily fish." - (Cuker, 2020)

A key additional consideration relates to the fact that the ASMFC assumes that there is constant and complete communication (connectivity) among regional populations of Atlantic menhaden, including the Chesapeake Bay, treating the entire Atlantic coast menhaden population as a single stock (ASMFC, 2017). However, a recent published study modeling menhaden regional populations indicates that dispersion and communication among regional populations is limited, and where it does occur, is concentrated within only a few months (Liljestrand et al., 2019). Similarly, this assumption of perfect distributional ubiquity ignores the documented migration patterns of menhaden, leading to potential over- or underestimations of population dynamics. In actuality, there may be limited mixing or migration between different regions of Atlantic menhaden. In the context of the Chesapeake Bay, factors such as seasonal replenishment, age/size cohorts, and variations in menhaden distribution throughout the Bay (north/south) may play a more significant role in the population structure and movement than what is currently assumed by the ASMFC. By considering these factors more accurately, fisheries management can better account for the unique characteristics of the Chesapeake Bay's Atlantic menhaden population and improve long-term sustainability and conservation efforts.

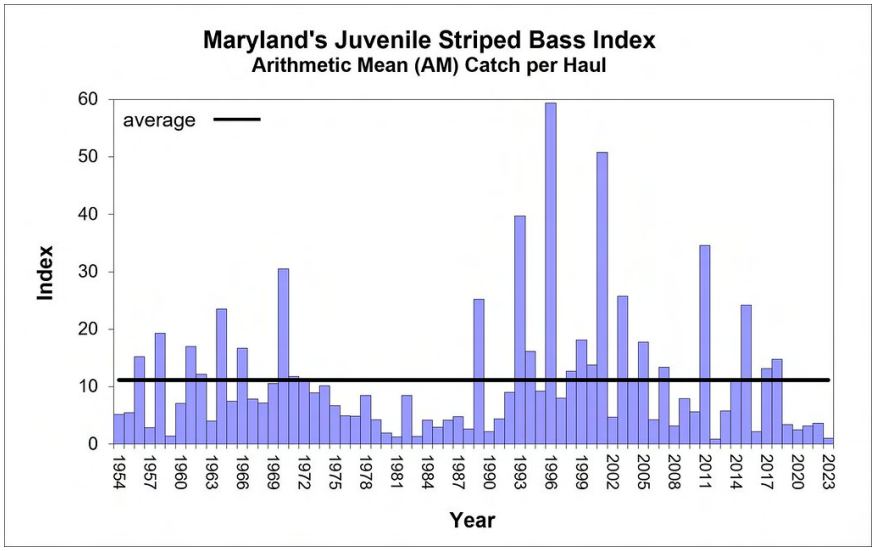
We request a response from VMRC regarding the foregoing conclusion that the menhaden fishery has and continues to experience declines within the Chesapeake Bay region, including the justification and analyses for any responsive actions or inaction.

"The number of large striped bass, I'm talking about 25-30 pounds and up, is 100% related to the amount of [menhaden] that are in the area. You are not going to find a lot of 40 pound fish hanging around unless there are [menhaden] for them to eat ... You raised the quota this year (for [menhaden]) ... and I haven't seen a pod of [menhaden] in months." - T.J. Karbowski, Charter Captain

Signs of concern: other species.

Similar concerning trends exist for other species in the Chesapeake Bay and along the Atlantic coast.

Striped bass. Inarguably among the most important fish in the Bay for the multitude of sectors of the economy that they support, striped bass populations in recent years have witnessed a concerning decline. These declines recently reached such a significant level (*Chesapeake Bay 2023 Young-of-Year Striped Bass Survey Results Announced*, n.d.) that the Maryland Department of Natural Resources submitted emergency regulations in late November 2023 to protect the species' spawning population (Maryland Department of Natural Resources, 2023b).

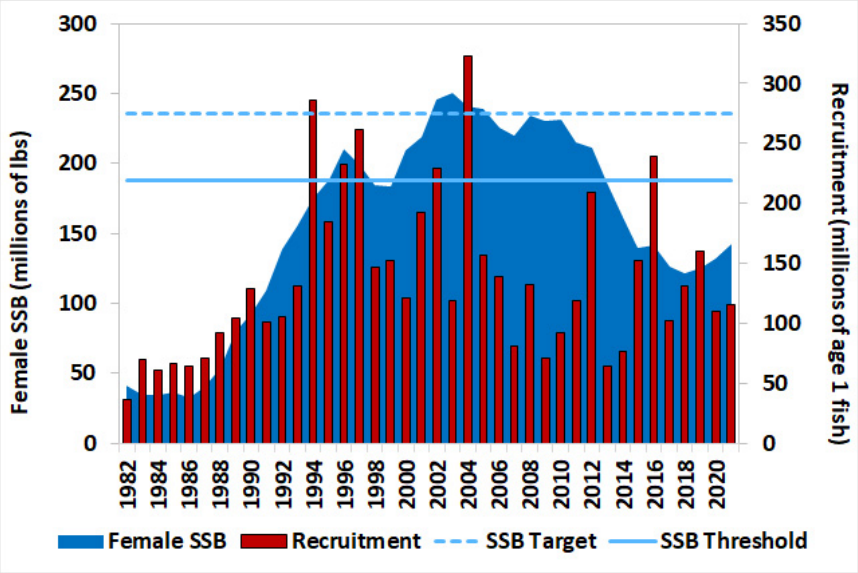


Source: (Maryland Department of Natural Resources, 2023a)

The striped bass story is similar in Virginia. Researchers at the Virginia Institute of Marine Science (VIMS) observed a poor year class of young-of-year striped bass in Chesapeake Bay tributaries in 2023, according to their ongoing long-term survey. The VIMS Juvenile Striped Bass Seine Survey recorded a mean value of 4.26 fish per seine haul, significantly lower than the historic average of 7.77 fish. This drop in annual recruitment aligns with patterns seen in the long-term monitoring program. Since the end of the striped bass fishing moratorium in 1990, single years of low recruitment in Virginia waters have occurred about every ten years, with the last instance in 2012, but multiple consecutive years of recent declines have persisted (Virginia Institute of Marine Science, 2023). This most recent finding follows coastwide declines that began in earnest in 2012.

Multiple factors have contributed to this decline, including overfishing, habitat loss, and poor water quality. The ASMFC has recognized the severity of the issue and has implemented regulations to achieve striped bass population recovery (Atlantic States Marine Fisheries Commission, 2023). Additionally, research conducted by the University of Maryland Center for Environmental Science (UMCES) suggests that climate change, specifically rising water temperatures and extreme weather, may also be impacting the survival and reproduction of striped bass (Bailey & Secor, 2016). In the past, adult striped bass would annually migrate to the Chesapeake Bay during April and May for spawning, coinciding with the abundance of zooplankton and other microscopic food sources crucial for larval striped bass survival. However, recent winters characterized by below-average snowfalls have resulted in reduced snowmelt in rivers and streams, negatively impacting the spawning environment for striped bass. Additionally, research suggests that warmer winters are causing changes in spring zooplankton production in the Chesapeake Bay, which could potentially impact the survival of juvenile striped bass and many other species.

Atlantic Striped Bass Female Spawning Stock Biomass and Recruitment
Source: Atlantic Striped Bass Stock Assessment Update, 2022



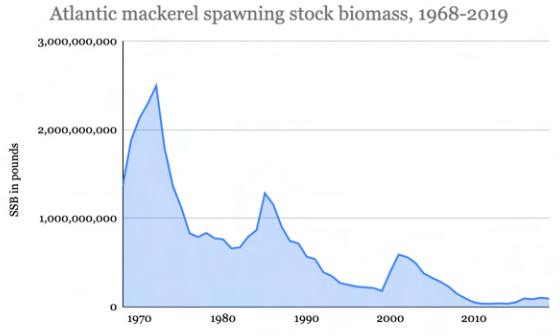
Source: (Atlantic States Marine Fisheries Commission, 2022)

- Despite these challenges, historical data indicate that under favorable environmental conditions, the striped bass population has shown the ability to rebound quickly (CBF, 2021; UMCES, 2020). Historical data reveal that favorable environmental conditions, such as abundant winter snowfalls or increased spring rainfalls, have played a role in supporting more productive juvenile striped bass classes. In 2023 in the Chesapeake Bay, not only striped bass but also other anadromous species with similar spawning behavior, like white perch, yellow perch, and herring, have witnessed below-average reproduction (Maryland Department of Natural Resources, 2023a).

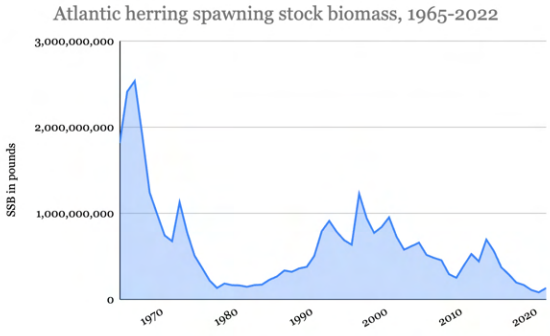
Other forage fish. Along the Atlantic coast, evidence shows that other forage fish populations have suffered steep declines, measured both by their declining population levels and harvests. Some of these species have historically been the focus of large-scale commercial fishing operations, while others have been incidentally caught as bycatch. This increased fishing pressure, combined with other ecological and environmental variables, has led to marked decreases in populations, with some species reaching historically low levels.

As a result of these declines in availability, commercial fishing companies along the Atlantic coast have turned to never-before-targeted species like chub (Mid-Atlantic Fishery Management Council, 2023), bullet, frigate mackerels (South Atlantic Fishery Management Council, Dolphin Wahoo Committee, 2018), and thread herring (Lund's Fisheries, Inc, H&L Axelsson, Inc & Axelsson Seiner, Inc Port of Cape May, NJ, 2021).

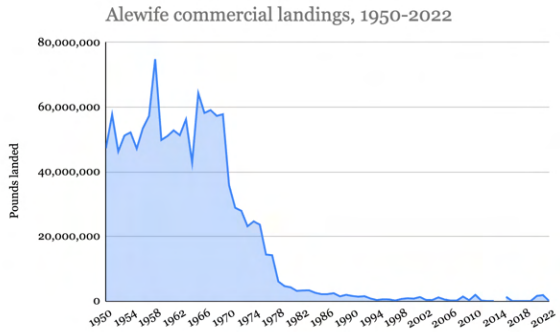
Atlantic mackerel (*Scomber scrombus*): overfished & overfishing (Source)

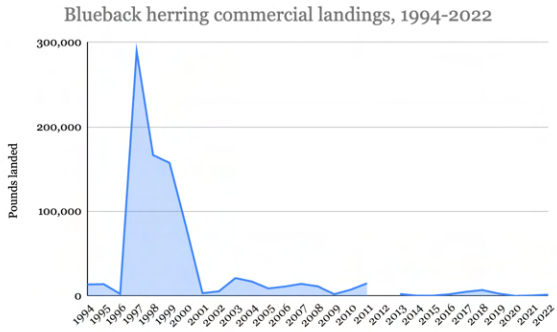


Atlantic herring (*Clupea harengus*): overfished (Source)

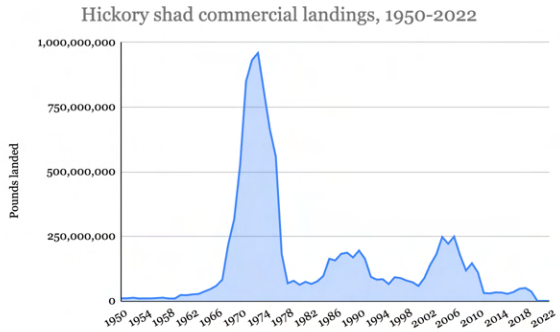


River herrings (Alewife (*Alosa pseudoharengus*) and Blueback (*Alosa aestivalis*)): Depleted at near historic lows on a coastwide basis (Source)





Shad (Hickory (*Alosa mediocris*) and American shad (*Alosa sapidissima*)): coastwide populations are depleted (Source)



"If we fail to account for the role of forage fish in the ecosystem, we can suffer very detrimental consequences. It happened with anchovies off Peru, which at one point represented 10 percent of the entire world's catch." - Dr. Ellen Pikitch, Stony Brook University

The decline of other forage fish populations has a significant interrelation with menhaden. Many economically and culturally valuable finfish predators such as striped bass, tunas, other highly migratory species, sharks, bluefish, along with marine mammals and seabirds, are capable of "prey switching." This is when they can change their primary food source(s) if it/they becomes less available. However, when multiple forage species experience a decline, predators' potential to find ample and calorically sufficient food is reduced. Consequently, the decline in diverse prey species can limit the efficacy of prey-switching.

A decline in menhaden and their critically important predator striped bass led to the first interstate catch limit on menhaden in 2006. However, this restriction only applied to the Chesapeake Bay, a key nursery for striped bass. It wasn't until 2013 that the ASMFC implemented the first-ever coastwide catch limit, effectively reducing allowed landings by 25% from the prior year. This decision resulted in significant rebounds of menhaden populations for several years. In response, many stakeholders, including fisheries scientists, conservation organizations, coastal businesses, and individuals, have urged the VMRC to follow suit to ensure sustainable menhaden populations to support wildlife, fishing, ecotourism, and coastal economies.

We request a response from VMRC regarding the foregoing conclusion that declines in the menhaden fishery has led to declines in reliant species, including the justification and analyses for any responsive actions or inaction.

Economic impacts.

"I have seen very few [menhaden] for striped bass … We're in the middle of a fall run, I operate a 36-foot charter boat … I carry 6 passengers who like to harvest and eat striped bass. I do consider my passengers to be underrepresented. They are not aware of the means to voice their opinion on striped bass. And today we have beautiful conditions, light winds, no rain finally, and my boat is sitting at the dock because I don't have any trips. There are seven other charter boats in the harbor; they don't have trips either and one party boat as well … Right in the middle of the fall run we cannot get our boat off of the dock … This has strong implications for our business. It has great impact to us as operators and owners, our mates, marinas, their mechanics, their fuel docks, local businesses, hotels, and delis." - Michael Pirri, Charter Captain

Annually between 2011 and 2018, around 700,000 anglers participated in saltwater recreational fishing in Virginia, adding $465 million to the state's economy and generating 6,504 jobs (NOAA Fisheries, 2022). The majority of the sportfishing and boating industry–over 90% of them small businesses–form the economic backbone of Virginia and Chesapeake Bay coastal communities.

Recreational fisheries, such as the striped bass fishery are crucial contributors to Virginia's economy and support a multitude of fishing-dependent businesses within the industry. Striped bass, the most significant marine recreational fishery in the U.S., generates $166 million in recreational fishing activity exclusive to Virginia. Nevertheless, the economic value of striped bass fishing in Virginia has seen a decline of more than 50% over the past ten years (Southwick Associates, 2019).

Anglers and boaters contribute substantially to conservation and habitat restoration efforts through their payments for licensing fees and excise taxes via the Sport Fish Restoration and Boating Trust Fund. In 2021, $399 million was allocated to the states for fishery conservation programs, resulting in $6.26 million specifically for conservation programs in Virginia, funded solely by the collective efforts of anglers and boaters.

By comparison, NOAA Fisheries data on commercial menhaden landings in Virginia show that revenue generated between 2011 and 2021 ranged from a high of $57 million in 2020 to a low of $25 million in 2013 (NOAA Fisheries, 2022). A study completed in 2017 shows the total economic impacts (direct, indirect, and induced) of the reduction sector using 2015 purse seine landings of 311 million pounds to be $88 million, which includes about $23 million in earnings and total employment of 528 people (which includes baseline and additional employment) (John Whitehead, 2017).

The cost to fish for menhaden varies depending on the vessel and its usage. Vessels over 70 gross tons using purse seines, which encompass all nine "mothership" vessels

utilized by the reduction fleet (GlobalTRUST, 2023), pay a maximum of $996 annually for a Virginia commercial fishing license. The smaller bait fishery vessels in the fleet, numbering around 20 purse boats under 70 gross tons, have an annual license cost capped at $249 (Virginia Register of Regulations, 2009). This adds up to a maximum of approximately $14,000 in yearly vessel license fees for the reduction fleet. For perspective, the reduction industry in Virginia harvests approximately three quarters of a billion fish, each year. The value of this public resource is many orders of magnitude greater than the fees paid by a private company.

On the other hand, an annual saltwater recreational fishing license for Virginia residents is priced at $12.50. Using conservative calculations (not considering the more expensive $25/year cost for out-of-state licenses), based on the average number of total anglers fishing in Virginia from 2011-2018 (NOAA Fisheries, 2022), the overall license fees amount to about $8.75 million.

The implications of this enormous discrepancy suggest that the Virginia public essentially subsidizes the extraction of this crucial forage fish for an industry that generates financial benefits for a foreign-owned company and precludes benefits such as fishing opportunities and cleaner water for Virginians.

We request a response from VMRC regarding the foregoing conclusion that the declines in the menhaden fishery have led to economic harm to related industries, including the justification and analyses for any responsive actions or inaction.

APPLICATION OF PRECAUTIONARY MEASURES.

"Jersey Politicians did one thing right: Getting the … [menhaden] boats out of state waters. That has allowed a vast biomass of menhaden to proliferate throughout the year in Jersey waters. This draws behemoth bass into the bays, river systems and along shore to fatten up on omnipresent adult [menhaden] ." - Nick Honachefsky, Executive Producer & host of The Saltwater Underground (on why New Jersey has become the new East Coast hotspot for striped bass fishing)

Mismanagement of menhaden represents a threat to entire ecosystems. The local collapse of menhaden can have far-reaching impacts on dependent industries such as commercial and recreational fishing, affecting jobs, revenue, and livelihoods, as well as ecotourism activities that rely on healthy and diverse marine ecosystems. Decades of science and on-the-water experience reveal that it is essential to manage forage fish populations differently than predators to ensure their sustainability and preserve the integrity of marine food webs.

Precautionary approaches may be implemented in forage fishery management using any combination of scientifically supported strategies. These can be applied spatially (such as by maintaining a minimum distance from shorelines), temporally (like avoiding fishing during specific life history stages), and quantitatively (by setting catch limits that intend to offer various benefits to different users).

Spatially and temporally explicit management measures are needed to achieve optimum yield,[1] including rebuilding the resource where it has declined (*e.g.*, South Atlantic states), where it is under high fishing pressure (*e.g.*, Chesapeake Bay), and where the stock is shifting in abundance and distribution (*e.g.*, New England) and in the interest of minimizing user conflicts precipitated by the reduction fishery, which were identified throughout ASMFC's Amendment 3 to the Interstate Fishery Management Plan for Atlantic Menhaden process and in prior and subsequent actions (Atlantic States Marine Fisheries Commission, 2017). These management strategies are already reflected in both federal and state laws, including Virginia fisheries law. The VMRC not only has the obligation to manage the menhaden fishery pursuant to the mandated conservation and management measures (Va. Code Ann. § 28.2-203), but the authority

[1] The Magnuson-Stevens Act (MSA) provides the legal framework for the application of optimum yield, which is required as part of MSA's National Standard 1: "… conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield (OY) from each fishery for the U.S. fishing industry." OY is defined as "the amount of fish that will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems; that is prescribed on the basis of the maximum sustainable yield (MSY) from the fishery, as reduced by any relevant economic, social, or ecological factor; and, in the case of an overfished fishery, that provides for rebuilding to a level consistent with producing the MSY in such fishery. OY may be established at the stock or "stock complex" level, or at the fishery level. OY has been increasingly adopted by fishery managers in the U.S., and has been codified in case law (50 CFR § 600.310 - National Standard 1—Optimum Yield).

to promulgate those rules necessary to carry out those mandates (Va. Code Ann. § 28.2-201).[2]

"Hundreds of millions of dollars have been invested in improving the water quality in the Chesapeake Bay ... the people in Virginia are promised fishable and swimmable waters ... These achievements will mean nothing if the keystone marine species such as menhaden are depleted from the Bay ... I am here today to ask the VMRC to do its part to protect the fishery resources for the benefit of all the citizens and the wildlife of the Bay watershed. It is abundantly obvious the industrial reduction fishery operated ... in Reedville, Virginia, the only reduction fishery in the Chesapeake Bay, is drastically depleting the available food supply for economically important species such as striped bass and ecologically important species such as osprey..." - Roberta Kellum, former Virginia State Water Board Control member.

PRECAUTIONARY CATCH LIMITS.

Recommendation 1:
Establish a moratorium within the Chesapeake Bay.

"My request for you today is to initiate a moratorium on [the] menhaden reduction fishery for the year 2024 and in continuation until the Commission can review the marine scientist menhaden report in the Chesapeake Bay as directed by the Virginia State Senate." - Tom Burkett, University of Virginia, Virginia Coast Reserve LTER.

In the interest of establishing precautionary limits for recovery of the Chesapeake Bay menhaden populations and dependent predators and user groups there, we recommend a moratorium on Chesapeake Bay purse seine landings within the

[2] Virginia fisheries law closely resembles the MSA, providing a nearly identical framework for conservation and management measures, which must be applied to the menhaden fishery (Va. Code Ann. § 28.2-203). These required standards mandate that the agency shall: 1. prevent overfishing while achieving the optimum yield; 2. be based upon the best scientific, economic, biological and sociological information available; 3. to the extent practicable, an individual stock of fish shall be managed as a unit throughout the territorial waters of the Commonwealth, and interrelated stocks of fish shall be managed as a unit or in close coordination; 4. not discriminate among user groups, and allocation shall be (i) fair and equitable to all fishermen; (ii) reasonably calculated to promote conservation; and (iii) carried out in such manner that no person acquires an excessive share of such privileges; 5. promote efficiency in the utilization of fishery resources, except that no such measure shall have economic allocation as its sole purpose; 6. take into account variations among, and contingencies in, fisheries, fishery resources, and catches; 7. where practicable, minimize regulatory burdens which inhibit innovation, expansion, and normal business operations.

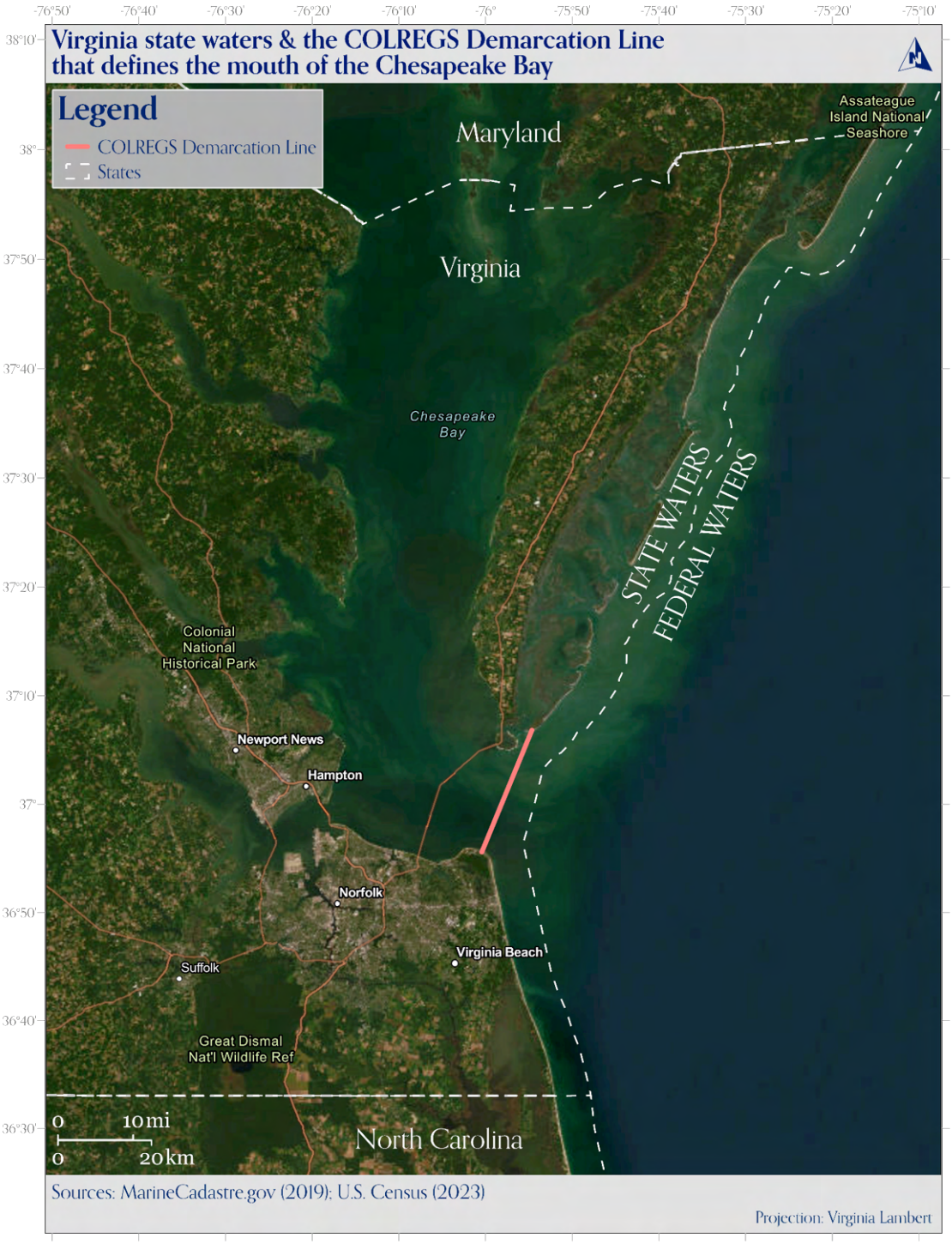
Chesapeake Bay extending to the COLREG Demarcation Line that separates the Chesapeake Bay entrance from the Atlantic Ocean (33 CFR 80.510, Chesapeake Bay Entrance, VA). This reduction should remain in force unless and until reliable, methodologically sound, Bay-wide estimates of menhaden stock abundance within the Bay are available that yield information to set appropriate biologically and ecologically based spatiotemporal catch limits. Spatiotemporal catch limits should also contemplate sustainability of important predators such as striped bass, bluefish, and ospreys, based on the best available science and broadly agreed-upon principles of ecosystem-based fishery management.

To acknowledge the practical realities of fishing, we recommend a limited exception to the moratorium, aimed at addressing safety concerns related to fishing in federal waters under extreme weather conditions. In such circumstances, we recognize the potential need for limited purse seine landings within the Bay; such emergency operations should not exceed 10% of the current Bay cap (5,100 metric tons).

Recommendation 2:
No less than 40% of the harvest should be taken from federal waters.

"Precautionary management that minimizes risk of collapse of the menhaden resource is critical to the wellbeing of the Bay, its fisheries, and water quality." - (Ed Houde, Eric Annis, Kevin Friedland, Cynthia Jones, Raemarie Johnson, Alexei Sharov, Joe Smith, Braddock Spear, Jim Uphoff, Doug Vaughan, Marek Topolski, Alesia Read, Jonathan Kramer, Shannon Green, Jessica Smits, 2011).

In addition, to limit the potential and actual negative consequences of high fishing pressure for menhaden on the menhaden population, their predators, and other marine wildlife in and around what is among the most important areas for menhaden along the Atlantic coast (*i.e.*, the mouth of the Bay), the current allocation to Virginia's reduction fishery (156,522 metric tons or 345 million pounds) should be limited by 60% within Virginia waters. This means that notwithstanding the recommended reduction within the Bay, the menhaden harvest within Virginia waters should remain under 94,000 metric tons, with the remaining harvest taken outside of Virginia waters, to remain in force unless and until appropriate estimates of menhaden seasonal stocks within the Bay and a clear understanding of the effects of their removals are available. Further, we recommend that because non-reduction purse-seine fishing comprises less than 9% of the total, that those limits not be impacted by these reductions.



Justification.
Setting catch limits based on biological, ecological, and environmental factors and/or past fishery performance is common practice in fisheries management. It often involves establishing indicator-specific reference points (such as the number of individuals in the population or the biomass of reproductive adults) with a desired population target

and a floor or threshold below which the population should not drop. Scientists worldwide emphasize the critical importance of setting meaningful thresholds, which, when reached, trigger swift management responses to protect the stock from crashing. This approach aims to prevent the population from reaching a level of depletion that could induce adverse ripple effects on the ecosystem.

Supplemental measures like spatiotemporal management also offer protection. Examples include establishing marine protected areas or imposing closed seasons during crucial reproductive and migratory periods. These "buffers" play an essential role in ensuring the sustainability of forage fish populations, which in turn support ecosystems and people. Examples of the successful implementation of precautionary moratoria and limits for forage species include capelin in the North Atlantic and krill in the Southern Ocean.[3]

The ASMFC has implemented a management mechanism for the coastwide Atlantic menhaden stock that accounts for the dietary needs of key predators such as bluefish, weakfish, spiny dogfish, and most notably, striped bass. This buffer aims to ensure adequate menhaden abundance to support predators and the fisheries that target menhaden. While the ASMFC has enacted some science-based, precautionary measures for menhaden, they have done so on a coastwide basis irrespective of the complex sub-regional dynamics of menhaden, their predators, and the menhaden fisheries (Atlantic States Marine Fisheries Commission, 2017). As a result, states like Virginia can choose to fish to quota maximums set forth by ASMFC.

"Despite recent increases in adult biomass, juvenile indices have declined coastwide and have remained particularly low in Chesapeake Bay" (Simpson et al., 2016)

The Virginia Administrative Code 4 VAC 20-1270-10 ET SEQ., promulgated pursuant to Va. Code Ann. § 28.2-203, is written in a manner that contemplates the application of a wide range of tools to effectively manage menhaden fisheries. In fact, Va. Code Ann. § 28.2-203 includes most of the mechanisms contained in the Magnuson-Stevens Fishery Conservation and Management Act (MSA), which serves as the primary fishing law in the United States and sets forth national standards for fisheries management. By incorporating the provisions of the MSA and its national standards, Virginia code enables implementation of scientifically-based management measures, such as setting

[3] A) Capelin fishing instituted moratoria in certain years to protect the population and ensure its recovery. The fishery has also implemented quotas, which are periodically adjusted based on scientific assessments and population status. As a result, the Icelandic capelin fishery has been Marine Stewardship Council (MSC)-certified as a sustainable and well-managed fishery (Marine Stewardship Council, n.d.). This certification highlights the adherence to responsible fishing practices in the Icelandic capelin fishery, including the use of pelagic trawl and purse seine methods. B) The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) regulates the krill fishery through catch limits and other measures. The catch limit is set with a precautionary approach to ensure the sustainability of krill and maintain the delicate balance of the Antarctic marine ecosystem. Additionally, CCAMLR established marine protected areas that safeguard specific regions and habitats important for krill and other species (Commission for the Conservation of Antarctic Marine Living Resources, 2021).

catch limits, determining optimum yield, minimizing bycatch, and preventing overfishing when promulgating regulations for the menhaden fishery. These tools provide a comprehensive framework that facilitates sustainable management and ensures the long-term viability of the fishery. By aligning with the principles of the MSA, the Virginia code promotes responsible fishery practices and supports the conservation and preservation of menhaden resources.

States other than Virginia that have eliminated the fishing of menhaden using purse seines within state waters (to 3 nm) have witnessed a remarkable recovery in their local menhaden populations, a finding that underscores the heterogeneity of the stock. This resurgence has had positive implications for various aspects of the ecosystem and industries dependent on them.

States other than Virginia that have eliminated the fishing of menhaden using purse seines within state waters (to 3 nm) have witnessed a remarkable recovery in their local menhaden populations, a finding that underscores the heterogeneity of the stock. This resurgence has had positive implications for various aspects of the ecosystem and industries dependent on them. New Jersey and New York exemplify this recovery with thriving whale watching businesses, made possible by the resurgence of marine mammals like humpback whales and dolphins, that now feed on menhaden in vast quantities. Similarly, in northern and southern New England, the revival of menhaden has become vital for the lobster fishery and false albacore, striped bass, and bluefin tuna in states like Rhode Island (The Saltwater Edge, 2021). With the decline in the availability of Atlantic herring, lobster fishers have increasingly relied on menhaden as bait. The restoration of menhaden populations in these areas has brought relief to the lobster fishery and helped sustain this important industry.

Virginia, as the key player in the menhaden fishery in the Chesapeake Bay and Atlantic-coastwide, bears the responsibility of collecting high-quality data to ensure effective management of the stock. However, the current state of data collection leaves much to be desired. The reduction industry, a significant contributor to the menhaden fishery, does not share its data publicly, which makes it challenging to generate an accurate picture of the population's status. Furthermore, there is a lack of fishery-independent surveys explicitly designed to understand menhaden population dynamics. Instead, researchers must rely on surveys like the Chesapeake Bay Multispecies Monitoring and Assessment Program and Maryland and Virginia Juvenile Striped Bass Surveys to glean information about menhaden indirectly. While these surveys provide some insight into menhaden dynamics, they fall short in providing the fine-grained spatiotemporal resolution needed to make informed management decisions and they are not specifically designed to understand menhaden. To effectively manage the menhaden stock, Virginia must prioritize the collection of data with a sufficient level of methodological rigor and spatiotemporal resolution to gain a full understanding of the population's dynamics and the impact of fishing.

OTHER PRECAUTIONARY MEASURES.

As discussed above, the Virginia code pertaining to menhaden fisheries (4 VAC 20-1270-10 *et seq*.) is written in a manner that allows for the application of a wide range of tools to effectively manage menhaden fisheries, including the establishment of precautionary spatial and temporal exclusion zones or buffers.

Recommendation 3:
Establish a permanent 1-nautical mile shoreline buffer for the entirety of Virginia's shoreline that prohibits the use of menhaden purse seines.

In the interest of supporting the resilience and recovery of menhaden populations in the Bay and along the Atlantic coast as well as many of their dependent predators, we recommend implementing through Chapter 4 VAC 20-1270-10 *et seq*. a minimum 1-nautical mile, permanent exclusion zone within Virginia waters using the best available shoreline location data. The existing 0.5-nautical mile exclusion zone for the Chesapeake Bay Bridge Tunnel should be further evaluated for the extent to which it adequately reduces user conflicts, minimizes bycatch and habitat disturbance, and catch of menhaden at key life history stages (e.g., migration and key feeding times).

As a complement to this exclusion zone, VMRC should review the potential risks and known instances of interacting with habitats such as seagrasses, oyster reefs, and fossilized oyster shells due to purse seine net contact with the seafloor.

Justification.

Following decades of reports by the fishery, government officials, the recreational fishing community, and others of net spills, Chesapeake Bay-bottom habitat disturbances, incidences of the catch of non-target species (bycatch, discussed below), and user conflicts such as vessel displacement of recreational fishers, the Commonwealth of Virginia sought to address these issues in 2022 through rulemaking modifications to Chapter 4 VAC 20 -1270-10 et seq., "Pertaining to Atlantic Menhaden," to modify purse seine area and time restrictions. The VMRC conducted limited analysis and public engagement to understand the broader need for and implications of implementing buffers like those being sought in Louisiana (discussed below).

Despite the attendance by hundreds of Virginians at a Dec. 6, 2022 public hearing and over 10,000 public comments gathered via petition that emphasized the need for more conservative spatial and temporal buffers (Theodore Roosevelt Conservation Partnership, 2022), in a five-to-four vote, the VMRC disappointed the recreational fishing, conservation, waterfront landowners, and tourism communities by opting for a resolution that strongly favors the reduction fishery and has no regulatory force. The

approved Memorandum of Understanding (MOU)[4] (Virginia Marine Resources Commission et al., 2023) aims to "... limit future spills incidents and to create a transparent and efficient spill response protocol," stating further that "it will reduce user conflict and strengthen the stewardship of Virginia's shared aquatic resources." This resolution does not adequately address conservation concerns and the issues of fish kills, net spills, habitat disturbances, and user conflicts, and is not built upon adequate evaluations of costs and benefits of spatial buffers.

"... a majority of sets in Virginia waters in recent years have been near the mouth of Chesapeake Bay and along the barrier islands of [the] Eastern Shore."
- (SouthEast Data, Assessment, and Review, 2015)

The VMRC has stated that the Virginia menhaden purse seine fishery has reported 14 fish spills between 2018-2021 (Virginia Marine Resources Commission et al., 2023). It is worth noting that this number is based on *voluntary industry reporting*. During its evaluation of potential time and areas closures, the VMRC acknowledged that while the chances of a net tear and fish spill from menhaden purse seine fisheries are extremely low (0.11%, which amounts to approximately 1.11 spills per 1,000 net sets) (Virginia Marine Resources Commission, 2022), the implications are significant given the scale of each net set, the total number of sets, the locations of some of these sets, potential impacts to Bay-bottom habitat, and known and potential catch of non-target species. Whenever such spills lead to dead fish appearing on public beaches during the summer, or involve managed and protected gamefish being inadvertently caught as bycatch, it significantly escalates awareness and concern among the public.

There is video, photo, and narrative evidence of the practice of fishing with purse seines close to shore. Some of these events are tied to associated fish spills caused by net tears and purposeful dumping due to the nets being over-capacity.

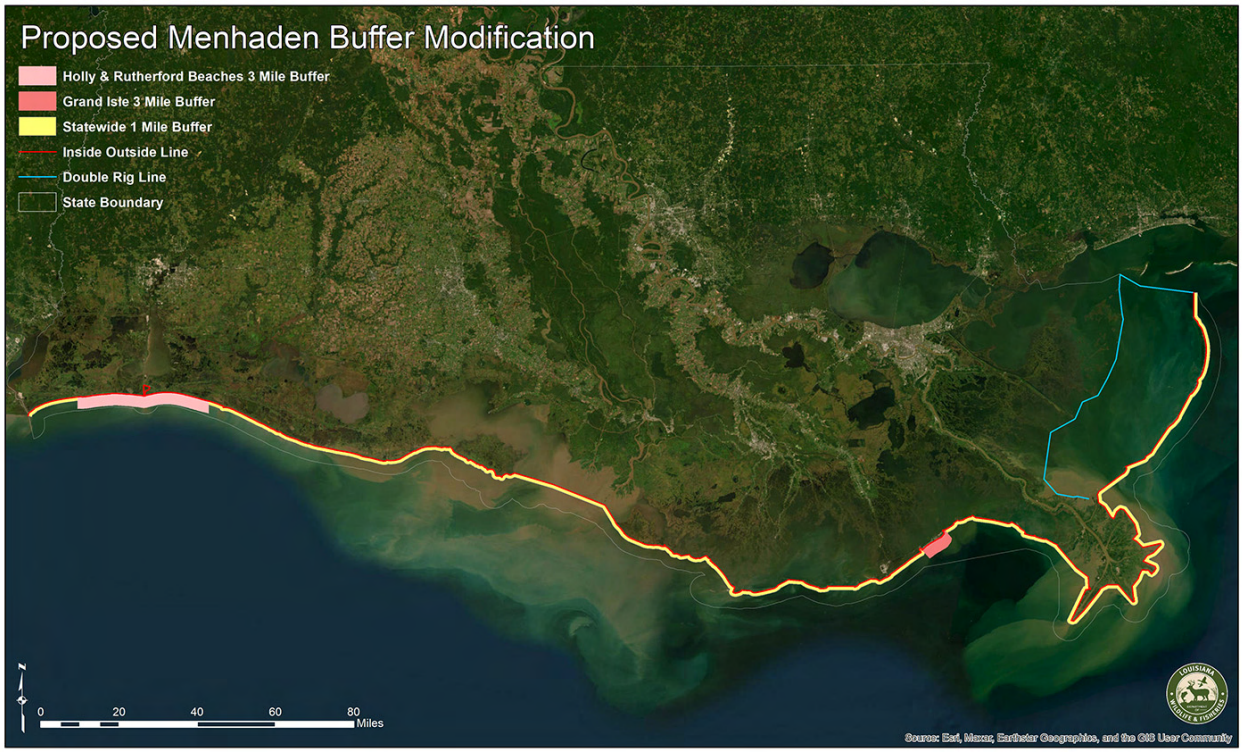
- "Omega Protein takes responsibility for some of the fish on Eastern Shore beach that enraged residents" (WAVY TV 10, 2022)
- "From 2010: Fishing company spills 50,000 fish, washing up on beaches" (13News Now, 2021)
- "Special Investigation: Huge menhaden haul, a controversial catch" (WAVY TV 10, 2015)
- "Menhaden: The Most Important Fish in the Bay" (Link, 2012)
- "Action needed to curb menhaden 'net spills,' harvest" (Leonard & Sikorski, 2022)

In addition to known examples of purposeful "slipping" (release) of nets due to overcapacity, safety concerns, equipment malfunctions, and bycatch, the risk of net tears from bottom obstructions in menhaden purse seine fisheries can be mitigated by keeping the fleet a certain distance from the shore, putting them in deeper waters. The location of spills, wind, and tides significantly influence where dead fish from spills end up. By prohibiting the fleet from operating within a known distance from the shore,

[4] An MOU differs from a Memorandum of Agreement (MOA) in that an MOU describes the terms of an agreement in a broad sense, signifying only a mutual understanding among parties, and does not, like an MOA, provide detailed consensus or reference specific actions and responsibilities of each party.

many dead fish from potential future spills can be prevented from reaching the shore. Based on Captain's Daily Fishing Reports data compiled and analyzed by the VMRC,[5] substantially less than 10% of the Bay effort (*i.e.*, individual sets) has occurred within this zone for both the reduction and bait fleets between 2016 and 2022 (Virginia Marine Resources Commission, 2022).

For context, Louisiana recently proposed, and will likely soon adopt, buffers applicable to the purse seine fishery for Gulf menhaden by initiating a rulemaking process to prohibit reduction fishing within a minimum of 1 mile from shore statewide and extending to 3 miles in specific, key areas (LeBreton, 2023). This move aims to protect menhaden populations in close proximity to the coast, recognizing their ecological importance and the role they play as a vital food source for numerous marine species. By implementing these fishing restrictions, Louisiana demonstrates its commitment to sustainable fisheries management and the preservation of the menhaden stock and its broader ecological and socioeconomic values. This action also acknowledges the potential impact of reduction fishing on the delicate Louisiana coastal ecosystem and seeks to strike a balance between the needs of the fishing industry and the long-term sustainability of this critical marine resource.



Source: (LeBreton, 2023)

[5] It is worth noting that the Captains Daily Fishing Reports-based net set locations appear to vary substantially in location from anecdotal reports of near-shore fishing as well as data available through Global Fishing Watch, a nonprofit that collects and analyzes vessel Automatic Identification System data to determine where fishing activities occur.

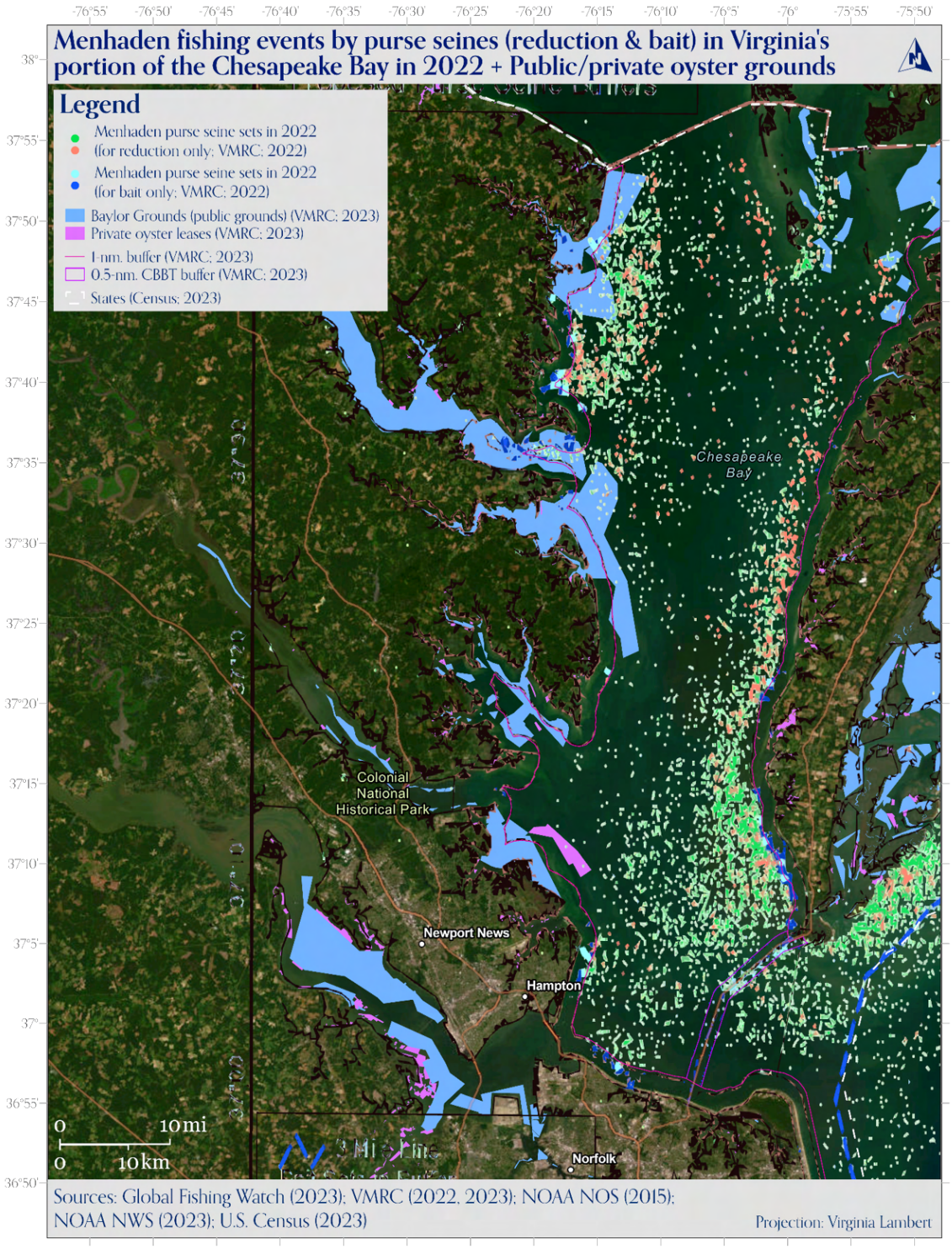
Virginia code § 28.2-314 prohibits any individual from catching fish, shellfish, or marine organisms using a trawl net, drag net, or similar device pulled through the waters by a boat or other craft. It also forbids buying, selling, or attempting to sell any fish captured with a trawl or drag net or comparable gear in the waters of the Commonwealth.

When large, heavy nets are deployed on the seafloor, it can injure or kill marine life, including both mobile and sessile (*e.g.*, seagrasses) organisms. Controlling the precise deployment of large purse nets is challenging, particularly in turbid, high-energy portions of the lower Chesapeake Bay at the mouths of its tributaries. Bottom contact by purse seine gear has been known to result in net tears in some fisheries. In light of the emerging evidence of habitat destruction by menhaden purse seine vessels, there are concerns from fishermen and conservationists about the potential for disturbance or destruction of the seafloor habitats in shallow waters. One petition from 2023 (Dunn, 2023) called on VMRC to bar purse seine fishing for menhaden in shallow Bay waters, arguing that purse nets could scrape the bottom, contrary to stated industry best practices.

Purse seine nets have been publicly acknowledged as being deployed at depths of 50-60 feet in Virginia's portion of the Chesapeake Bay, for example, by Capt. Thomas Moore of Ocean Harvesters in a December 6, 2022 VMRC meeting. The MSC, of which the Atlantic menhaden reduction fishery is an accredited member, emphasizes the importance of a "safety zone" beneath deployed nets. According to the MSC, purse seine fishing in open waters is typically efficient and minimally affects the seabed. It is crucial that the net is deployed at a depth ensuring a safety zone above the sea bottom to prevent the issues cited. While the VMRC has regulations dictating minimum net mesh size, there do not appear to be restrictions on net deployment depth, which indicates a need for careful review and regulatory changes.

Using GIS to overlay VMRC purse seine sets from 2022 (adapted from Fig. 1 of (Virginia Marine Resources Commission, 2022)) with key habitats such as oyster reefs (Virginia Marine Resources Commission, 2023), reveals that net sets do indeed occur in areas identified as Baylor Grounds and Private oyster leases. The extent to which these sets may impact public and/or private oyster grounds is not known, at least publicly.

Further research is required to verify direct habitat destruction in areas where menhaden purse seine vessels are active. The analysis should compare the location, respective depths of net sets, and the real/identified habitats such as seagrasses and oysters (for which there are high-quality spatial data available). Additionally, any analysis should endeavor to document all known occurrences of habitat disruptions to the best degree possible.


Menhaden fishing events by purse seines (reduction & bait) in Virginia's portion of the Chesapeake Bay in 2022 + Public/private oyster grounds
Legend
Menhaden purse seine sets in 2022 (for reduction only; VMRC; 2022)
Menhaden purse seine sets in 2022 (for bait only; VMRC; 2022)
Baylor Grounds (public grounds) (VMRC; 2023)
Private oyster leases (VMRC; 2023)
1-nm. buffer (VMRC; 2023)
0.5-nm. CBBT buffer (VMRC; 2023)
States (Census; 2023)
Chesapeake Bay
Colonial National Historical Park
Newport News
Hampton
Norfolk
0 10 mi
0 10 km
Sources: Global Fishing Watch (2023); VMRC (2022, 2023); NOAA NOS (2015); NOAA NWS (2023); U.S. Census (2023)
Projection: Virginia Lambert

Recommendation 4:
Implement and enhance the Atlantic Menhaden Research proposal to investigate localized depletion and its impacts on the Bay.

In coordination with the October 2023 Atlantic Menhaden Research Planning proposal (Latour and Jim Gartland, 2023), investigate the potential for localized depletion of menhaden–and its impacts on the ecosystem–in the Chesapeake Bay. This initial proposal should be expanded to include significant research and data independent of the reduction fishery's data and should include other relevant indicators such as striped bass and osprey population health. This should further include studying impacts on other user groups such as other commercial fisheries, charter and headboat businesses, recreational fishermen, and relevant components of Virginia's tourism industry. Finally, the study should be co-funded by the reduction fishery, for the benefit of the taxpayers of the Commonwealth.

"The reason we decided to finally begin to make statements about this issue is that we had moved from several hundred chicks starving in the nests to now thousands of chicks starving in the nests in the lower Bay. ... If you look at the relationship between reproductive rates over the last 40 years and the Atlantic menhaden relative abundance index, they are directly related." - Dr. Bryan Watts of the College of William and Mary

Justification.
A complete picture of the dynamics of the menhaden population, menhaden fishing, and the effects of fishing menhaden on its predators in the Chesapeake Bay is limited due to several reasons, chief among them the lack of a consistent, long-term, and well-coordinated Bay-wide stock assessment and limited access to fishery-dependent landings information. The menhaden stock assessment methodology employed by the ASMFC is not spatially explicit, meaning it does not account for localized trends or variations in menhaden populations. This limitation may lead to the neglect of significant trends that exist, even at scales as large as the Chesapeake Bay and Gulf of Maine. The multi-faceted nature of the Bay, with its numerous stakeholders and competing uses, has made it difficult to develop a comprehensive and unified approach towards understanding the status of the menhaden stock there, despite the critical importance of the Bay as a key menhaden nursery.

The absence of a robust and coordinated assessment undermines effective management strategies, as it becomes challenging to balance the diverse needs and interests of various user groups, including commercial fishing, recreational fishing, and conservation efforts. Without a thorough understanding of the menhaden population dynamics specific to the Bay, it becomes challenging to allocate resources and make informed decisions regarding harvest limits and conservation measures. Ignoring these local trends may result in an incomplete assessment of the overall status of the

menhaden population coastwide, too. Therefore, there is a pressing need for enhanced coordination and collaboration among stakeholders to develop and implement a well-coordinated assessment strategy that captures the complexities of the Bay's menhaden population and supports sustainable management practices.

The ASMFC Atlantic Menhaden Technical Committee defined localized depletion as: "Localized depletion in the Chesapeake Bay is defined as a reduction in menhaden population size or density below the level of abundance that is sufficient to maintain its basic ecological (e.g. forage base, grazer of plankton), economic and social/cultural functions. It can occur as a result of fishing pressure, environmental conditions, and predation pressures on a limited spatial and temporal scale." (Maguire, 2009).

The Technical Committee and Ecological Reference Points Work Group have stated that additional data about the total population of Atlantic menhaden in the Chesapeake Bay, possibly gathered through aerial surveys, can help decide how much of the regional catch should be allowed from the Bay to maintain sustainable fishing (Ecological Reference Point Work Group and Atlantic Menhaden Technical Committee, 2021). This more straightforward strategy could help regulate the permitted amount of catch; however, it would not offer wider location-specific information, so it would not assist with allocations based on different regions. The developed ecological reference points would apply across the entire coast and ignore factors like local predator-prey interactions. There are also concerns about the reliability of combining two different methods to estimate fish abundance and about the lack of information about seasonal fish migration in and out of the Bay. This strategy wouldn't need a new model but would necessitate considerable resources to get accurate data on the total number of menhaden in the Chesapeake Bay, a process that currently doesn't exist. This strategy may be ready for review within 5-7 years from starting the survey, but this assumes a minimum of 3 years of data collection to assess year-to-year variations. However, if variations are high, more data would be needed before it's ready for official use. Even though a shorter data collection period may be enough for initial analysis, regular surveys would be necessary for ongoing management advice.

Recommendation 5a:
Require increased vessel and landings monitoring that may include the use of at-sea and dockside observers, electronic monitoring, and vessel monitoring systems, and evaluate landings (hold) capacity aboard reduction "mothership" vessels to ensure compliance and accurate reporting.

To better comprehend the dynamics and impacts of the menhaden purse seine fishery, it is suggested that these operations be required to use at-sea and dockside observers (per ASMFC (SouthEast Data, Assessment, and Review, 2020) and MSC recommendations (SAI Global, 2019)), vessel monitoring systems, and electronic

monitoring. These methods will monitor and document fishing activities, thereby making it easier to capture and understand the complete picture of the fishery and its potential impacts.

Justification.
There is currently no requirement for at-sea observers aboard the menhaden reduction fleet (ASMFC 2017). The NOAA Fisheries Northeast Fisheries Observer Program (NEFOP) has, since 2012, consistently not required observers for the fleet due to several reasons, including limited funds. While Virginia does have an observer program for fisheries prosecuted in state waters, VMRC has stated that funding for observer programs focuses on the fishery with the highest risk of interactions with endangered, threatened, protected species, in this case, the commercial gillnet fishery (GlobalTRUST, 2023). Net set locations and landings amounts, similarly, are not required to be shared publicly. Enhanced monitoring as recommended by the ASMFC and MSC is not being applied.

Recommendation 5b:
Improve data transparency and sharing by requiring that all landings data, including the locations of and landings for individual net sets, be publicly available.

The absence of public reporting of net set location and corresponding landings poses a significant concern. This lack of transparency directly contravenes the principles of good public policy, which advocates for informing decision-making processes. Furthermore, it undermines the scientific research that lays the foundation for our comprehension of the public resource. These policies and scientific insights are essential in enhancing our understanding and managing shared resources effectively. The non-disclosure of such critical information impedes the capacity to make informed decisions, ultimately to the detriment of the public interest.

Justification.
Sharing these data would offer a chance for academic institutions and other interested parties to conduct their own independent analyses, contributing to a broader understanding of the fishery's biological and ecological footprints and socioeconomic implications. This approach will promote comprehensive scientific research, facilitate transparency, and allow for evidence-based decision-making.

In its final 2019 MSC certification report, the MSC assessment team stated that enforcement and compliance information pertaining to the fleet's operations, as reported by State and Federal authorities, are typically neither documented nor disclosed. They recognized the significance and necessity of rules surrounding confidentiality in reporting enforcement and compliance data, but argued that these

principles don't suit the needs for transparency and accountability when the results of enforcement and compliance activities remain publicly inaccessible (SAI Global, 2019).

It is worth noting that Louisiana's recent Notice of Intent (NOI) (Louisiana Wildlife and Fisheries Commission, 2023) to amend rules to the menhaden fishery regarding the buffer zone include updated reporting requirements for spills. The Wildlife and Fisheries Commission issued citations to the Gulf fishery for failing to report the release of menhaden and for "excessive killing of fish" in September and October, 2023, respectively. The number of citations issued does not, however, speak to the full extent of accidental and intentional net releases in Louisiana, which total at least 18 as of October 2023 (Curtis, 2023).

The NOI stipulates a 48-hour period for retrieving any menhaden or bycatch that is unintentionally or intentionally released into the environment and provides penalties and restitution associated with failure to comply. Additionally, the NOI specifies that reporting must be made within 2 hours of any release. The proposed rule modification details specific reporting elements that must be included in the notification, including: date and time of the release; species of fish released; disposition of the fish released; name of the vessel which released the fish; estimation of the number of fish released; photo / video evidence of the release; coordinates of the release; and, causative factors of the release.

We also understand that the Louisiana Wildlife and Fisheries Commission will soon require that annual Gulf menhaden purse seine net set locations and more detailed landings data be made publicly available as part of this action.

Recommendation 5c:
Further evaluate bycatch of non-target species.

Conducting further evaluations of bycatch of non-target species within the menhaden reduction fishery is of paramount importance for a more comprehensive understanding of the fishery's effects on marine wildlife in the Chesapeake Bay. Mandatory vessel monitoring and improved public reporting of bycatch incidents are critical components of this recommendation. Through in-depth evaluations and assessment of bycatch rates in the fishery, stakeholders can guide informed decision-making processes, devise sustainable management practices, and develop effective mitigation strategies.

Justification.
Bycatch refers to the unintentional capture and incidental killing of non-target species during fishing operations. It primarily occurs when fishing gear is deployed to catch a specific species, but other marine organisms, including fish, marine mammals, sea turtles, or seabirds, are inadvertently caught as well. Bycatch is considered a

significant conservation concern and a threat to biodiversity, as it can contribute to the unsustainable depletion of non-target species and disrupt marine ecosystems. Efforts are being made globally to mitigate bycatch through the implementation of fishing regulations, creation of models that help to predict high-bycatch-risk times and areas, development of more selective fishing gear, and promotion of responsible fishing practices to minimize its ecological impacts.

The use of purse seine nets is generally regarded as a "clean" fishing method with low levels of bycatch compared to other gear types such as trawls. However, despite its relative selectivity, purse seines do still inadvertently catch non-target organisms. These organisms can suffer negative consequences as a result. When caught in purse seines, they often experience physical injury, stress, and are subjected to low oxygen conditions. As they are packed densely together in the net, their movements are restricted, leading to increased stress levels. Additionally, the high density of organisms depletes the available dissolved oxygen. If they do not die in the net, these combined factors can affect their ability to swim, reproduce, or find food. In some cases, the act of releasing bycatch back into the water can cause more stress, making it difficult for the animal to recover, particularly if the release is not done properly. Post-release mortality is a concern as some species may not survive the physical and physiological stress experienced during capture and handling, leading to delayed deaths. There is, therefore, a critical need for continuous improvements in fishing practices to reduce such incidental impacts on non-target organisms even in methods considered to be relatively clean.

“The impacts on bycatch species are poorly known. Data on bycatch are only collected on an ad hoc basis at infrequent intervals.” (SAI Global, 2019)

Accurate quantification of bycatch levels in the Atlantic menhaden reduction fishery is challenging due to several factors. Among them is the lack of mandatory independent observers on board during fishing operations. NOAA notes that the fishery has had “very limited observer coverage since 2008” (NOAA Fisheries, 2021). Without independent observers, it is difficult to obtain accurate information on bycatch levels, including the species caught, locations, and times when the bycatch occurs. This data is essential for the development and implementation of effective conservation measures and sustainable fishing practices. The 2019 MSC certification of the fishery recommended ”... that bycatch studies be undertaken on an ongoing basis and that, in order to ensure comparability between studies, these future bycatch studies should be conducted in a more cohesive and standardized manner than has historically been the case” (SAI Global, 2019). In addition every effort should be made to ensure that studies are designed in such a way that the composition of catches by weight can be estimated.Numerous commercial fisheries that target other species along the Atlantic coast are required to have these at-sea observers and/or electronic forms of monitoring (e.g., using on-board cameras). Yet since the menhaden reduction fleet is not required to have monitoring on board, bycatch levels in the Atlantic menhaden reduction fishery

are not well known, and the extent of incidental impacts on non-target species is not fully understood.

"The mid-Atlantic menhaden purse seine fishery historically reported an annual incidental take of one to five common bottlenose dolphins ... There has been very limited federal observer coverage since 2008. ... Because there is no systematic observer program for this fishery, no estimate of bycatch mortality is available." (SAI Global, 2019).

A 2016 literature review assessed potential bycatch of red drum (*Sciaenops ocellatus*) in the Gulf menhaden fishery. Its findings and recommendations are relevant to Atlantic menhaden. The analysis aims to emphasize the potential occurrence of bycatch in the menhaden fishery and the importance of investigating its potential impact on stock dynamics. "Assuming the lowest percentage of total bycatch by weight, which is 0.66% of menhaden landings, the total bycatch ranged from 500 mt in 1948 to 6,500 mt in 1984. Conversely, using the highest percentage of bycatch by weight, which is 3.1% of menhaden landings, the total bycatch ranged from 2,300 mt in 1948 to 30,500 mt in 1984." The estimates provided in the analysis are preliminary and based on sporadic observations of incidental bycatch. The authors note that there are significant limitations to the prior analyses that they reviewed, such as sampling deficiencies and a focus on numbers rather than weights, which hinder the provision of unbiased species composition and bycatch estimates. A compound index approach, similar to that used in trophic ecology, may offer a better representation of bycatch by standardizing weight, number, and occurrence metrics. As it stands, assessing the potential impact of bycatch on red drum in the Gulf menhaden fishery is challenging due to the limited data available. Absence of a federal observer program for the commercial fleet causes additional obstacles in determining the composition and volume of bycatch. The study emphasizes that more comprehensive data collection and improved reporting methods are necessary to better understand and address the issue of bycatch in the menhaden fishery (Sagarese, Skyler R. Nuttall, Matthew A. Serafy, Joseph E & Scott-Denton, 2016).

"Logbook information about bycatch is not likely collected in logbooks as ... there is no space in the logbook for catches other than target catch [emphasis added] since the fishery was always considered a "clean fishery" with limited/negligible amount of bycatch." (GlobalTRUST, 2021).

While quantifying the exact levels of bycatch in the Atlantic menhaden reduction fishery may be challenging, there is ample anecdotal evidence suggesting that the fishery does experience incidental catch of various species. Predatory fish, such as striped bass, have been observed as bycatch in this fishery. Likewise, reports indicate the unintentional capture of marine mammals, such as dolphins, as well as turtles, seabirds, and sharks. Although anecdotal, these accounts highlight the potential for non-target species to be incidentally caught in the fishery. It emphasizes the need for

further research and monitoring to fully understand the extent of bycatch and inform the development of appropriate conservation measures to mitigate its impacts on these vulnerable species in the Atlantic menhaden reduction fishery.

"There is no regular review of measures in place to minimize the fishery's impact on ETP [endangered, threatened, and protected] species." (SAI Global, 2019).

The menhaden purse seine fishery is categorized in accordance with the Marine Mammal Protection Act by NOAA due to the extent of incidental deaths or severe injuries of marine mammals caused by fishery interactions. The design of purse seines leaves little chance for game fish that feed on menhaden to escape before the net is closed, or 'pursed.' NOAA specifically notes that bottlenose dolphin is the species of concern; the fishery is therefore included in its Bottlenose Dolphin Take Reduction Plan. The current classification stems from comparisons to other purse seine fisheries, such as the Category II Gulf of Mexico Menhaden purse seine fishery, and potential interactions involving bottlenose dolphins from northern and southern migratory coastal stocks. It is worth noting that a humpback whale was reported by a fisherman as entangled in a net by the fishery in 2001 (NOAA Fisheries, 2021). There is an ongoing project that focuses on observing sea turtle interactions within the Gulf of Mexico menhaden purse seine fishery. This project, which kicked off in 2020, involves NOAA and fishing industry partners testing various observer methods in the field to elucidate the extent of turtle interactions and potential bycatch. Turtles were observed in the nets during the first phase of the project (Deepwater Horizon Open Ocean Trustee Implementation Group, 2021).

We request responses from VMRC regarding each of the foregoing recommendations (1-5), including the justifications and analyses for any responsive actions or inaction. We further request that the VMRC make specific findings for each of the requirements in Virginia fisheries law. All findings and responses should be in accordance with the VMRC's statutory obligations and authorities, pursuant to Va. Code Ann. § 28.2-200 et seq.

CONCLUSION.

If the management and regulation of Virginia's menhaden fishery is improved, we will secure healthier and more productive fisheries in Virginia waters, a healthier Chesapeake Bay ecosystem, and a healthier economy in the Bay region.

The undersigned thank the VMRC for its consideration of this petition for rulemaking.

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Sal Icaza, *President*, Maryland Osprey and Nature Festival

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We incorporate the below references and citations into the petition. In addition, all of the below references are publicly available and accessible. Please let us know if you are unable to access any of the below and we will provide copies:

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Tina Berger

Subject: RE: [External] Attn: Menhaden Team - ASMFC striped bass Addendum II

-----Original Message-----
From: Brian Collins <brian.c1@me.com>
Sent: Friday, December 22, 2023 5:27 PM
To: Comments <comments@asmfc.org>
Cc: Emilie Franke <EFranke@asmfc.org>
Subject: [External] Attn: Menhaden Team - ASMFC striped bass Addendum II

> Hello, the Addendum II for striped bass is woefully remiss to exclude the over harvesting of Menhaden in the Chesapeake Bay.
>
> The Chesapeake Bay is a separate ecosystem for Menhaden and Striped Bass from the ocean and is the nursery for 90% of East Coast Striped Bass where the Striped Bass live for 9 years before heading to the ocean.
>
> We are starving the fish and the stock is collapsing along with Osprey nesting.
>
> What can explain the exclusion of consideration of industrial fishing of Menhaden in the Chesapeake Bay for preserving the Striped Bass population on the East Coast.
>
> Blaming recreational and commercial fishing of striped bass alone is an incomplete analysis and science to solve the problem.
>
> Thanks, Brian
> Brian Collins
> brian.c1@me.com
> 703-795-8169

From: Robert Beal
To: Tina Berger
Subject: FW: [External] Fw: ASMFC refuses to disclose factory fishing landings in Chesapeake bay ,refuses to hold a menhaden board meeting....n i
Date: Monday, January 8, 2024 9:41:09 PM

Tina,

Please include this email.

Thanks,
Bob

From: Robert Beal
Sent: Thursday, January 4, 2024 4:29 PM
To: THOMAS LILLY <foragematters@aol.com>; Conor McManus <conor.mcmanus@dem.ri.gov>; James Boyle <JBoyle@asmfc.org>; Tina Berger <tberger@asmfc.org>
Subject: RE: [External] Fw: ASMFC refuses to disclose factory fishing landings in Chesapeake bay ,refuses to hold a menhaden board meeting....n i

Tom,

We will include this email and attachments in the Winter Meeting briefing materials.

You stated “it does no good for” public to speak to the Policy Board. This is incorrect. As we have mentioned before, the Policy Board provides oversight to the Commission’s management and scientific activities. If the Policy Board identifies an issue, they can charge a species management board with taking action. Also, the Policy Board has nearly identical membership to the Menhaden Management Board.

Regarding the release of confidential data, the Commission will continue to share the total annual reduction and bait harvest as well as the Chesapeake Bay reduction harvest (to the nearest thousand metric tons) in the Annual FMP Review. In a separate email you requested weekly/monthly landings from the Bay/ocean. We are unable to provide that data due to confidentiality laws. Data confidentiality is not an ASMFC decision, it is driven by federal and state laws. Tina provided the link on confidential data protocol in the email below.

Regards,
Bob

From: Tom Lilly <foragematters@aol.com>
Sent: Thursday, January 4, 2024 3:11 PM

To: Conor McManus <conor.mcmanus@dem.ri.gov>; Robert Beal <Rbeal@asmfc.org>; James Boyle <JBoyle@asmfc.org>; Tina Berger <tberger@asmfc.org>
Subject: [External] Fw: ASMFC refuses to disclose factory fishing landings in Chesapeake bay ,refuses to hold a menhaden board meeting....n i

To Conor McManus, Bob Beal and James Boyle

The menhaden board has not scheduled a meeting at the January 23-25 ASMFC meeting. Unless you change this the public is again denied their right to present the menhaden board with their concerns and the scientific opinions that support them. It does no good for them to speak to the Policy Board as only the menhaden board can act on their concerns directly. Your founding document says your actions are

"to fully reflect the varying values....that are important to the various interest groups involved in coastal fisheries". Charter Section Six.

How can you possibly understand what the public values when you refuse to listen to them at a face to face meeting ?

I think it's fair to say that the millions of people that care about Chesapeake Bay fish and wildlife and millions of their children would ask you to immediately stop allowing purse seiners from taking any menhaden forage out of Virginia waters so their fish and wildlife can get all the food it needs to be the best, healthiest and abundant it can be. That is what they value. They would say that it is your obligation to use the menhaden natural resource for their benefit. The people want you to value them and their children not just a few special interests in Virginia.

The matters we consider urgent for the menhaden board to hear and follow at a meeting is your own ERP science definitions that striped bass are the species most

"sensitive" to the menhaden harvest.(scans). Ospreys are as well (Scan Path...article). They are the canary in the coal mine for inappropriate harvest levels (scans) Unless this board takes steps to reduce the menhaden harvest in Virginia it is telling the public that Chesapeake Bay doesn't matter, that the hundreds of striped bass charter captains who have left the business don't matter, that the millions of wildlife watchers across the bay represented by Virginia and national Audubon don't matter, that the many state and national fishing and marine trade organizations and the Maryland Legislative Caucus, MD Sierra Club and many other conservation groups supporting moving the factory fishing into the US Atlantic don't matter, that the thousands of people that have supported the TRCP petition in Virginia (scan) and now the recent Petition filed by the Chesapeake Legal Alliance don't matter either. This Petition with all the signers was emailed to you at 12:17 pm today by Phil Zalesak . All that seems to matter is protecting a few special commercial fishing interests in Virginia

Now the Commission is refusing to release the Chesapeake Bay factory catch information relevant to the bay 51,000 ton cap. I presume they are also denying releasing the fishing effort to catch that amount that can be compared to historic fishing effort numbers. That data could have been used by fisheries scientists not connected to the Commission to estimate changes in Chesapeake bay menhaden stock abundance. That is information the menhaden board should be considering but will not be unless the Commission distributes this information to them in advance of the January meeting.

The public and probably the board members are being denied a vital data point in menhaden management.

I would urge you to carry out your obligations to the people and wildlife of Chesapeake Bay as clearly set forth in the Charter and schedule a menhaden board meeting in January. Will you at least distribute the totals on the factory menhaden catch in Chesapeake Bay to the menhaden delegates so they can make their own conclusions from it and discuss it in a closed meeting ? We seem to have no other option if this data is not made public. Thank you for your consideration ...Please advise what you will and will not do at this point. Thomas Lilly, Whitehaven, MD.

----- Forwarded Message -----
From: Tina Berger <tberger@asmfc.org>
To: THOMAS LILLY <foragematters@aol.com>
Sent: Thursday, January 4, 2024 at 12:05:20 PM EST
Subject: Follow-up to today's call

Hi Tim – To follow-up to our call this morning, I confirmed with Bob that we will not be adding a Menhaden Board meeting to the Winter Meeting schedule. As a reminder, species management board meetings can only be called by the Executive Director with the approval of the Commission Chair.

As you and I discussed, any issues that you wish to bring before the Commission at the Winter Meeting can be raised at the ISFMP Policy Board or Business Session meetings. You submitted comment will be part of the ISFMP Policy Board materials.

Regarding reduction fishery landings, we are restricted in providing those to you under state and federal of data confidentiality laws. More information on federal data confidentiality, please visit https://www.noaa.gov/organization/administration/nao-216-100-protection-of-confidential-fisheries-statistics.

Best. – Tina

ArcGIS StoryMaps

Go to the MH management plan - just below [illegible] chart to story map

Understanding Ecological Reference Points

Everything you need to know about the development of ERPs for Atlantic menhaden

ASMFC Communications Team

June 22, 2021

Striped bass was the fish predator species that had the strongest response to Atlantic menhaden biomass in the ERP models. As a result, striped bass could be used as a proxy for all of the predator species when evaluating tradeoffs and setting reference points.

Think of striped bass as the "canary in the coal mine." Because it is the most sensitive, menhaden levels that are sufficient for striped bass are not likely to cause a decline in other species.

Its important to note that even though the tradeoff analyses and reference points focus on striped bass, the other species (bluefish, weakfish, spiny dogfish, bay anchovy) are still included in the model and analyses. For example, an increase in menhaden abundance does not just affect striped bass, it also increases bluefish abundance. This also impacts striped bass indirectly, as bluefish are competitors and predators of striped bass.

With ecosystem models, there is more than one way to achieve the desired biomass level for a given species.

For example, if you wanted to increase the abundance of one species, you could reduce the harvest of that species directly, increase the abundance of its prey species, or even reduce the abundance of its competitors. To illustrate these tradeoffs, the Work Group produced a series of "rainbow plots".

ASMFC Atlantic Menhaden Board Adopts Ecological Reference Points

From: Tina Berger <tberger@asmfc.org>
Cc: ALL ARLINGTON STAFF <allarlingtonstaff@asmfc.org>
Date: Thu, Aug 6, 2020 5:42 pm

FOR IMMEDIATE RELEASE, AUGUST 6, 2020
PRESS CONTACT, TINA BERGER, 703.842.0740

ASMFC Atlantic Menhaden Board Adopts Ecological Reference Points

Arlington, VA – The Atlantic States Marine Fisheries Commission's Atlantic Menhaden Management Board approved the use of ecological reference points (ERPs) in the management of Atlantic menhaden. By adopting ERPs, the Board will be accounting for the species' role as an important forage fish. The 2020 Atlantic menhaden benchmark assessments, which were endorsed by an independent panel of fisheries scientists, used the Northwest Atlantic Coastal Shelf Model of Intermediate Complexity for Ecosystems (NWACS-MICE) in combination with the single-species model (Beaufort Assessment Model or BAM) to develop Atlantic menhaden ERPs by evaluating trade-offs between menhaden harvest and predator biomass.

"The Board took another important step in managing Atlantic menhaden in a broader ecosystem context," stated Board Chair Spud Woodward of Georgia. "It's the culmination of more than a decade of effort by state, federal, and academic scientists to develop ERPs that reflect menhaden's role as a key food source for several fish species. These ERPs are not a silver bullet to resolve all our fisheries management issues, and the models on which they are based will continue to evolve. However, the use of ERPs for menhaden management will enhance the success of predator management by providing a more abundant forage base for rebuilding predator fish populations. It is important for us to keep those rebuilding efforts on track through the use of proven management tools such as controls on fishing mortality."

In February and May, the Board tasked the ERP Work Group with additional analyses to explore the ERPs sensitivity to a range of ecosystem scenarios (different assumptions about fishing mortality for other key predator and prey species) and Atlantic herring biomass. These analyses suggested the original scenario (ERP target and threshold outlined below) most closely approximates short-term conditions for the ecosystem. As a result, the ERP Work Group recommended using the original scenario ERPs presented in the assessment report. Moving forward, the ERPs for Atlantic menhaden are:

ERP target: the maximum fishing mortality rate (*F*) on Atlantic menhaden that sustains Atlantic striped bass at their biomass target when striped bass are fished at their *F* target

ERP threshold: the maximum *F* on Atlantic menhaden that keeps Atlantic striped bass at their biomass threshold when striped bass are fished at their *F* target

Atlantic striped bass was the focal species for the ERP definitions because it was the most sensitive predator fish species to Atlantic menhaden harvest in the model, so an ERP target and threshold that sustained striped bass would likely provide sufficient forage for other predators under current ecosystem conditions. For the development of the ERPS, all other focal species in the model (bluefish, weakfish, spiny dogfish, and Atlantic herring) were assumed to be fished at 2017 levels.

In addition to adopting ERPs, the Board discussed setting fishery specifications for 2021-2022. In 2017, the Board set the total allowable catch (TAC) at 216,000 metric tons for 2018-2019, and then maintained that TAC for 2020 with the expectation that it would be set in future years using ERPs. With the adoption of ERPs, the Board tasked the Atlantic Menhaden Technical Committee to run a projection analysis to provide a variety of TAC scenarios and their risk of exceeding the ERP *F* target to compare in setting specifications for 2021-2022. The Board will review the projection analysis at the Annual Meeting in October and then determine a TAC for 2021-2022. As stated in Amendment 3, if a TAC is not set at the Annual Meeting, the TAC from the previous year will be maintained.

For more information, please contact Kirby Rootes-Murdy, Fishery Management Plan Coordinator, at krootes-murdy@asmfc.org or 703.842.0740.

###

PR20-15

The press release can also be found here - http://www.asmfc.org/uploads/file/5f2c7891pr15AtlMenhadenERP_Adoption.pdf

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Sustainable and Cooperative Management of Atlantic Coastal Fisheries

Front. Mar. Sci., 07 May 2021 | https://doi.org/10.3389/fmars.2021.607657 (https://doi.org/10.3389/fmars.2021.607657)

The Path to an Ecosystem Approach for Forage Fish Management: A Case Study of Atlantic Menhaden

Kristen A. Anstead (https://www.frontiersin.org/people/u/1089781)[1]*, Katie Drew (https://www.frontiersin.org/people/u/990320)[1], David Chagaris (https://www.frontiersin.org/people/u/495125)[2], Amy Schueller (https://www.frontiersin.org/people/u/1119106)[4], Jason E. McNamee (https://www.frontiersin.org/people/u/1124192)[5], Andre Buchheister (https://www.frontiersin.org/people/u/1120381)[6], Geneviève Nesslage (https://www.frontiersin.org/people/u/1126723)[7], Jim H. Uphoff Jr. (https://www.frontiersin.org/people/u/1171712)[8], Michael J. Wilberg (https://www.frontiersin.org/people/u/344791)[7], Alexei Sharov[9], Micah J. Dean[10], Jeffrey Brust[11], Michael Celestino[11], Shanna Madsen[12], Sarah Murray (https://www.frontiersin.org/people/u/1090785)[1], Max Appelman[1], Joseph C. Ballenger (https://www.frontiersin.org/people/u/1146004)[13], Tatiana Bilkovic (https://www.frontiersin.org/people/u/359070)[2,14], Ellen Cosby[15], Caitlin Craig[16], Corrin Flora[17], Kurt Gottschall[18], Robert J. Latour (https://www.frontiersin.org/people/u/1146038)[19], Eddie Leonard[20], Ray Mroch[4], Josh Newhard (https://www.frontiersin.org/people/u/1111904)[21], Derek Orner[22], Chris Swanson[23], Jeff Tinsman[24], Edward D. Houde (https://www.frontiersin.org/people/u/615796)[7], Thomas J. Miller[7] and Howard Townsend (https://www.frontiersin.org/people/u/530527)[25]

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[2]Nature Coast Biological Station, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL, United States
[3]Maine Department of Natural Resources, Boothbay Harbor, ME, United States
[4]NOAA Fisheries, Beaufort, NC, United States
[5]Rhode Island Department of Environmental Management, Providence, RI, United States
[6]Department of Fisheries Biology, Humboldt State University, Arcata, CA, United States
[7]Chesapeake Biological Laboratory, University of Maryland Center for Environmental Science, Solomons, MD, United States
[8]Cooperative Oxford Lab, Maryland Department of Natural Resources, Oxford, MD, United States
[9]Maryland Department of Natural Resources, Annapolis, MD, United States
[10]Massachusetts Division of Marine Fisheries, Gloucester, MA, United States
[11]New Jersey Division of Marine Fisheries, Port Republic, NJ, United States
[12]Virginia Marine Resources Commission, Hampton, VA, United States
[13]South Carolina Department of Natural Resources, Charleston, SC, United States
[14]OKEANOS Research Center, University of the Azores, Horta, Portugal
[15]Potomac River Fisheries Commission, Colonial Beach, VA, United States
[16]New York Department of Environmental Conservation, East Setauket, NY, United States

from BAM. All focal species had recently undergone single-species stock assessments, which provided life history, landings, and index data through 2017, as well as estimates of fishing mortality and population size. Newer data were not available for all of the groups included in the full NWACS EwE model; as a result, inputs for those groups were extrapolated from the terminal year of 2013.

The ERP WG evaluated the five ERP models based on their performance (i.e., residuals, sensitivities, and other diagnostics), their strengths and weaknesses, and their ability to inform the fundamental ecosystem management objectives (Buchheister et al., 2017a,b; McNamee, 2018; Uphoff and Sharov, 2018; Nesslage and Wilberg, 2019; Chagaris et al., 2020). The ERP WG ultimately recommended using the NWACS-MICE model rather than the other four for two reasons. First, the EwE framework used by the NWACS-MICE model was the only approach that could address both the top-down effects of predation on Atlantic menhaden and the bottom-up effects of Atlantic menhaden on predator populations, which were required to evaluate the key tradeoffs between Atlantic menhaden harvest and predator needs that were central to the identified ecosystem objectives. Second, the NWACS-MICE implementation was less data-intensive than the full NWACS model, which reduced some of the uncertainty associated with modeling the data-poor predators and prey in the full model. This meant the NWACS-MICE model could be updated more quickly and efficiently, on a timeframe that met manager's needs. Comparisons of the full and MICE versions of the NWACS model indicated that the NWACS-MICE model included the fish predators most sensitive to the menhaden population. Striped bass was the most sensitive fish predator to Atlantic menhaden harvest in both models. In the full NWACS model, nearshore piscivorous birds were also sensitive to Atlantic menhaden *F*, but their response was similar to striped bass over the range of scenarios explored by the full model (Southeast Data Assessment and Review [SEDAR], 2020b). This choice was consistent with a growing body of literature that has recommended models of intermediate complexity (i.e., MICE) for ecosystems as representing a compromise between complexity/realism and uncertainty for use in management (Plagányi et al., 2014; Collie et al., 2016; Punt et al., 2016). Specifically, the ERP WG recommended using the NWACS-MICE in conjunction with the single-species assessment model, BAM; the NWACS-MICE model would provide strategic advice about the trade-offs between Atlantic menhaden fishing mortality and predator biomass to set reference points, while the single-species model would be used to provide short-term tactical advice about harvest strategies to achieve the ERP *F* target (Chagaris et al., 2020; Southeast Data Assessment and Review [SEDAR], 2020b). The ERP report was peer-reviewed with the single-species assessment in 2019, and the ERP WG's recommended tool was deemed acceptable for management use by a panel of independent experts (Southeast Data Assessment and Review [SEDAR], 2020b). The peer-review panel also recommended the continued development of the alternative models going forward.

Current Management

The development and implementation of ERPs for Atlantic menhaden was a lengthy process (Figure 4 and Table 1), but in August 2020, ASMFC adopted the approach from the ERP WG for management use. The ERP target was defined as the maximum *F* on Atlantic menhaden that would sustain striped bass at their biomass target when striped bass were fished at their *F* target. The ERP threshold was defined as the maximum *F* on Atlantic menhaden that would keep striped bass at its biomass threshold when striped bass was fished at its *F* target. For both reference points, all other species in the model were fished at their *status quo* (i.e., 2017) *F* rates. Striped bass was the focal predator species for this analysis because it was the most sensitive to Atlantic menhaden *F* in both the NWACS-MICE and the full NWACS models. Thus, levels of Atlantic menhaden *F* that sustain striped bass should also sustain piscivorous birds and less sensitive predators, in the absence of significant disruptions to the ecosystem (Southeast Data Assessment and Review [SEDAR], 2020b). With these ERP targets and thresholds, the Atlantic Menhaden Management Board reviewed projections from the single-species model, BAM, and set a quota for 2021 and 2022 of 194,400 mt, a 10% decrease in the quota from 2020.

FIGURE 4

A TALE OF TWO BAYS: OSPREY FORTUNES DIVERGE

By: Bryan Watts

7/5/2023

Over the past few years, I have received questions from homeowners, watermen and keen observers around the lower Chesapeake Bay about osprey. Waterfront homeowners have been concerned about "their" pair (often nesting on a private platform). The watermen who have spent their springs out on the water for decades have been concerned about many pairs within the area where they work. The questions are generally the same. What is happening with the osprey? Why are they not producing any young? Nearly all of these inquiries have come from the main stem of the lower Bay. These are the salty polyhaline (above 18 parts per thousand salinity) areas of the Bay where osprey have historically depended on menhaden as their primary prey. Our observations over the decades suggest that the homeowners, watermen and general observers have legitimate reasons for concern.

Osprey brood on the upper James River near Hopewell, Virginia. Productivity within the tidal fresh reaches of the Bay continues to be above sustainable levels with the median brood size of 2. Photo by Bryan Watts.

One of the most prominent subestuaries of the lower Chesapeake is Mobjack Bay. We have osprey productivity data for this area dating back to 1970. Mitchell Byrd and a list of his graduate students including Bob Kennedy, Gary Seek, Chris Stinson, Tim Kinkead and Peter McLean monitored osprey within this location from 1970 through 1990. Monitoring shows that reproductive rate rises from the DDT era to a high in the early to mid-1980s and then begins to decline toward 1990. My graduate student, Andy Glass, worked in Mobjack during the 2006 and 2007 nesting seasons. More recently, Michael Academia worked in Mobjack during the 2021 nesting season. By 2006 productivity had declined to 0.75 young/pr or equivalent to rates documented prior to 1975. By 2021 productivity had declined to 0.32, a rate lower than any year since 1970.

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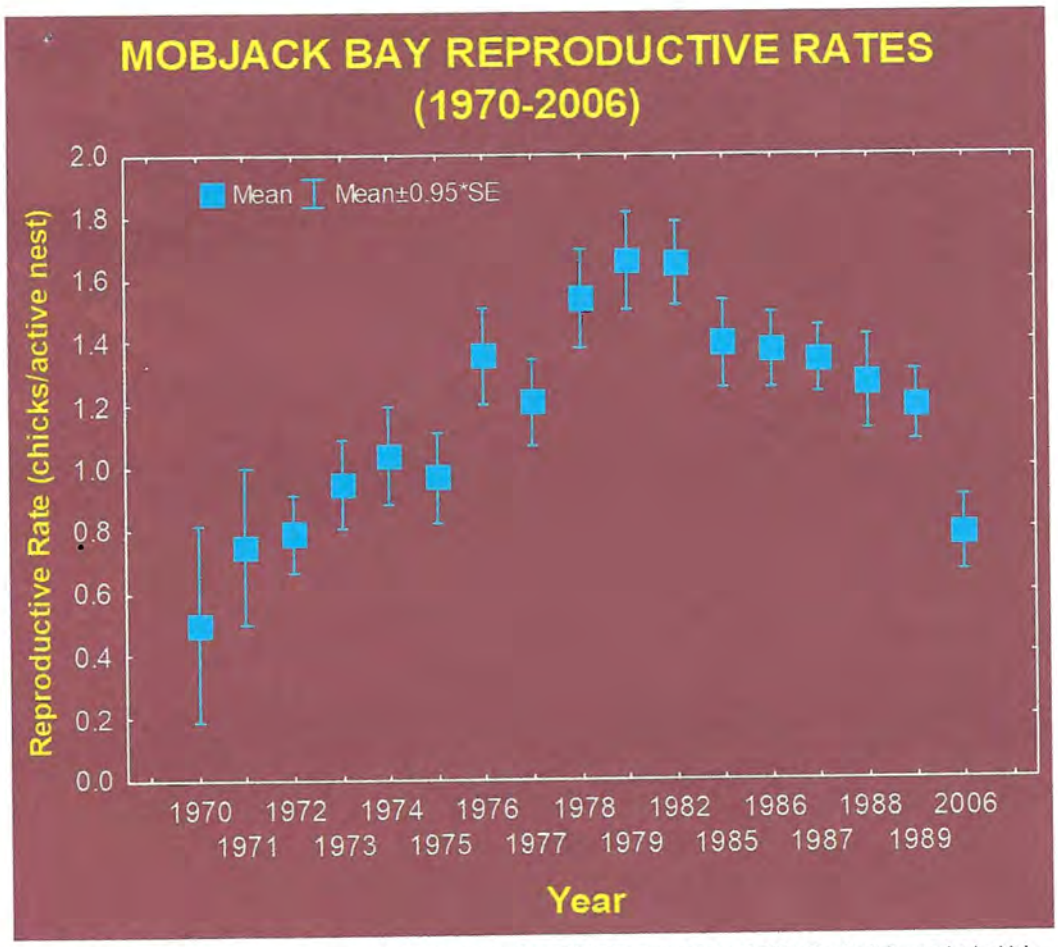


Graph of known osprey reproductive rates in Mobjack Bay from 1970 through 1989 and 2006. Productivity reached a high during the early to mid-1980s and by the mid-2000s fell below sustainable levels. Data from CCB

The underlying cause of reproductive failure in Mobjack has shifted from the DDT era to the present. In 1972, the hatching rate of eggs was 36.5%. Gains in productivity from the early 1970s through the mid-1980s was driven by an improvement in hatching rate as the population recovered from DDT. By the late 1980s, hatching rate was above 90% and in 2006 hatching rate was nearly 95%. Declines in productivity after 1985 have been driven by the starvation of young in nests after hatching. Between 1975 and 2006 fish delivery rates to nests dropped by more than 50% and the importance of menhaden in the diet also dropped by 50%. For most pairs, fish availability in Mobjack Bay is not adequate to raise even a single young. The study conducted in 2021 demonstrated that experimental supplementation of nests with menhaden was effective in reducing starving rates and driving productivity above maintenance levels. This result suggests that if the menhaden population was allowed to recover, osprey could return to sustainable reproductive rates.

First Name

Last Name

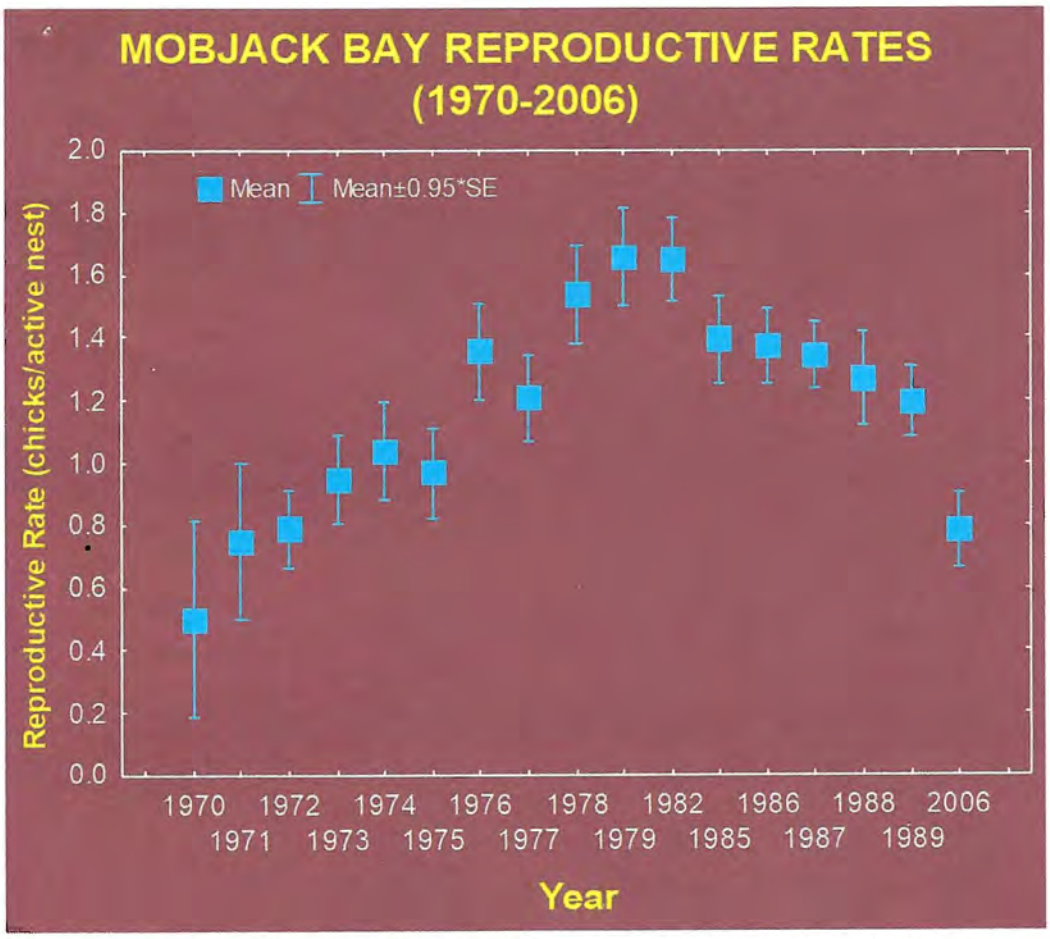
* = required field

Subscribe

Michael Academia uses a mirror pole to check an osprey in Mobjack Bay. During the 2023 breeding season, CCB checked productivity for more than 250 nests to better understand the spatial pattern of failures. Photo by Bryan Watts.

My response to homeowners, watermen and concerned osprey watchers about the lack of young in nests around the lower Bay is that the current fish availability is not high enough to allow osprey to reproduce sustainably. Their young are starving in the nest – most within the first week after hatching.

One of the added questions that homeowners and other observers have is, "Is this just a problem with my pair or is this more widespread?" On the broader population level, the question is, "What is the geographic extent of the demographic sink or black hole?" To begin to address this question, we conducted some broader surveys during the spring of 2023 to expand our view. We surveyed three polyhaline areas of the Bay including Mobjack Bay (Ware River, North River, East River), the lower York River and the Lynnhaven River. The findings were both shocking and depressing. Of the collective 167 nests monitored, only 17 were successful producing 21 young. The reproductive rate of 0.33 is less than 30% of what is needed for the population to break even.



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June 14, 2022

Governor Glenn Youngkin
Office of the Governor
P.O. Box 1475
Richmond, VA 23218

Dear Governor Youngkin,

As members of the recreational fishing and boating community, we ask that you move menhaden reduction fishing out of the Chesapeake Bay until science demonstrates that high volume reduction fishing for menhaden can be allowed without negatively affecting the broader Bay ecosystem.

America's anglers and boaters consistently play an integral role in the stewardship of our shared natural resources by directly funding conservation and habitat restoration efforts through licensing fees and excise taxes set up through the Sport Fish Restoration and Boating Trust Fund on fishing equipment and boat fuel. In 2021 alone, $399 million was apportioned to the states to fund fishery conservation programs.[1] This resulted in $6.26 million in funds for conservation programs specifically in Virginia, funded solely by anglers and boaters.

Our recreational fishing coalition of national and Virginia-based groups is clearly dedicated to maintaining the health of the Chesapeake Bay, the region's economy, and the broader marine ecosystem in the Atlantic. A major source of our conservation ethic is the fact that saltwater recreational fishing is an economic powerhouse, especially for Virginia where fishing is enjoyed by 600,000 anglers annually, contributing $465 million to the Commonwealth's economy and supporting 6,504 jobs.[2] The jobs created by these fisheries are the lifeblood of our coastal communities as more than 90 percent of the sportfishing and boating industry is made up of small businesses.

Atlantic menhaden play a vital role in maintaining the sportfishing economy and the Chesapeake Bay ecosystem by serving as the base of the food chain for many recreationally important species. Specifically, menhaden are critical to the diets of gamefish like striped bass, bluefish, weakfish, and more, that feed Americans and keep them coming to Virginia waters and spending money in our coastal communities. For example, the striped bass fishery is the largest marine recreational fishery in the U.S., driving $166 million in recreational fishing activity in Virginia alone. However, the economic value of striped bass fishing to Virginia has declined by over 50 percent in the past decade.[3]

[1] Certificate of Apportionment For Dingell-Johnson Sport Fish Restoration, available at: https://www.fws.gov/sites/default/files/documents/SFR%20FY22%20Certificate%20of%20Final%20Apportionment%202022Feb3_508.pdf
[2] Fisheries Economics of the United States, 2021, available at: https://media.fisheries.noaa.gov/2021-11/FEUS-2018-final-508_0.pdf
[3] The Economic Contributions of Recreational and Commercial Striped Bass Fishing, 2019, available at: https://mcgrawconservation.org/wp-content/uploads/McGraw-Striped-Bass-Report-FINAL.pdf
[4] Evaluating Ecosystem-Based Reference Points for Atlantic Menhaden, 2017, available at: https://www.tandfonline.com/doi/full/10.1080/19425120.2017.1360420
[5] ASMFC news release, 2019, available at: http://www.asmfc.org/uploads/file/5dfbd30bpr40SecretarialSupport_Menhaden_VANoncompliance.pdf

Part of the decline in the striped bass population is explained by fishing mortality being too high, and in 2014 and 2020 our coalition supported significant reductions on the striped bass fishery to address that decline. However, according to a scientific model, menhaden reduction fishing also contributes to a nearly 30 percent decline in striped bass numbers coast wide.[4] The scientific linkage between menhaden as prey and striped bass as a main predator is undeniable. Therefore, the industrial menhaden fishery in the Chesapeake plays a role in the ability of striped bass to rebuild to healthy population levels. By removing more than 100 million pounds of menhaden every year from the Chesapeake Bay, the most important striped bass nursery on the East Coast, reduction fishing in Virginia is undermining the sportfishing economy and small businesses throughout the Commonwealth.

The detrimental impact of menhaden reduction fishing on the ecosystem is so pronounced that it is prohibited in every state along the East Coast except Virginia. However, each year, over 100 million pounds of menhaden are being removed from the Chesapeake Bay and "reduced" to fish meal and oil for pet food and salmon feed by a foreign-owned company—Cooke Inc. Locally known as Omega Protein, the corporation is exporting this keystone fish to other countries as a global commodity, despite repeated signs of the negative impact it is causing to the environment and other industries dependent on a healthy marine ecosystem. In fact, the Atlantic States Marine Fisheries Commission (ASMFC) found Virginia out of compliance with the Interstate Fishery Management Plan for Atlantic menhaden in 2019, after Omega Protein exceeded the Chesapeake Bay harvest cap by 33 million pounds.[5]

Over the past decade, recreational fishing and boating organizations, coastal businesses, and hundreds of thousands of individual anglers and conservationists have called on decisionmakers to leave enough menhaden in the water to feed the wildlife that support vibrant recreational fishing, boating and other industries that boost Virginia's coastal economy. Governor Youngkin, we urge you to use your authority to move menhaden reduction fishing out of the Bay until science demonstrates that menhaden fishing can be allowed without negatively affecting the broader Bay ecosystem. Importantly, you could put this stopgap in place and still allow Omega Protein to fish in Virginia's ocean waters.

Moving menhaden reduction fishing out of the Bay will help to protect the health of the ecosystem and help grow Virginia's outdoor recreational economy, which benefits all Virginians.

Thank you for your consideration.

Whit Fosburgh

President & CEO

Theodore Roosevelt Conservation Partnership

Glenn Hughes

President

American Sportfishing Association

Frank Hugelmeyer
President
National Marine Manufacturers Association

Jim McDuffie
President & CEO
Bonefish & Tarpon Trust

Matt Gruhn
President
Marine Retailers Association of the Americas

Greg Jacoski
Executive Director
Guy Harvey Ocean Foundation

Patrick Murray
President
Coastal Conservation Association

Ellen Peel
President
The Billfish Foundation

Brett Fitzgerald
Executive Director
Angler Action Foundation

Jared Mott
Conservation Director
Izaak Walton League of America

Jason Schratwieser
President
International Game Fish Association

Ernie Padgette
President
Virginia Division of the Izaak Walton League of America

Virginia Angling Clubs

Steve Atkinson
President
Virginia Saltwater Sportfishing Association

Captain Mike Ostrander
President
Virginia Anglers Club

Chris Schneider

President

Virginia Beach Angler's Club

Joe Stephenson

President

Great Bridge Fisherman's Association

Henry Troutner

Vice President

Norfolk Anglers Club

Samuel A. Graham

President

Central Virginia Sport Fishing Association

Ed Pacheco

President

Virginia Coastal Fly Anglers

Dean Carroll

President

Eastern Shore Anglers Club

Steve Jones Jr.

President

Tidewater Anglers Club

Danny Forehand

President

Peninsula Salt Water Sport Fisherman's Association

From: Tom Lilly
To: Tina Berger
Subject: [External] Fwd: Menhaden concerns in the bay
Date: Monday, January 8, 2024 4:44:43 PM
Attachments: IMG_0824.PNG

Tina. Please include this to the staff, Policy Board, Striped Bass and Menhaden boards. Please acknowledge. Thanks. Tom L.

Sent from my iPhone

Begin forwarded message:

> **From:** Tom Lilly <foragematters@aol.com>
> **Date:** January 2, 2024 at 1:44:13 PM EST
> **To:** Robert Beal <rbeal@asmfc.org>, Mel Bell <BellM@dnr.sc.gov>, James Boyle <JBoyle@asmfc.org>, Tina Berger <tberger@asmfc.org>, Katie Drew <kdrew@asmfc.org>, CONOR MCMANUS <conor.mcmanus@dem.ri.gov>
> **Cc:** Phil Zalesak <flypax@md.metrocast.net>
> **Subject: Re: Menhaden concerns in the bay**
>
> Bob and crew
> Happy new year to all at the Commission. Could you please take a moment to reply to these emails? Possibly James could schedule a phone call this week to discuss it?
>
> Sent from my iPhone
>
> > On Nov 30, 2023, at 12:30 PM, Tom Lilly <foragematters@aol.com> wrote:
> >
> > Bob. Please try to find a few minutes to look at this request we sent in two weeks ago. Does the public have access to the factory catch in the bay / ocean on a weekly/monthly basis, the aging information and where it stands on the bay catch limit for 2023 to date ? Is the ERP stock assessment group using the 2023 fishing effort ,aging information and striped bass and osprey reproduction failure in their formulas? (under the ERP science these are the two indicator species for menhaden harvest levels)
> >
> > Please be aware that our osprey chicks continued their die offs locally , that most of the striped bass we see caught have empty stomachs and that the fall run of juvenile menhaden exiting our river is again almost non existent. Also during this Summer there were no striped bass much smaller than 20 inches being caught that I heard off. The complete loss of our ibises and decreased great blue herons continues. This sad situation begs for a change in management that would move the factory fishing into the US Atlantic zone away from

the bay entrance to bring back a fair and just supply of menhaden forage to Chesapeake Bay. This is a tragic waste of American natural resources that continues to damage our bay ecosystem . Isn't it maximizing the use and enjoyment of Chesapeake bay for millions of our citizens (and their children) that should be the goal of the Commission, the MRC and the MD DNR ? That is what changing the location of the factory fishing would accomplish. It is very difficult to read about and see video evidence of the remarkable recovery of striped bass , ospreys and even whales and bluefin tuna in New Jersey and New York ,where their state waters are now protected from factory fishing. And believe it they did not have a fraction of the problem we have. Please take a few minutes to consider this. Tom Lilly Menhadenproject

Sent from my iPhone

> On Nov 15, 2023, at 8:47 AM, Tom Lilly <foragematters@aol.com> wrote:
>
> Bob. Wondered if you had a chance to look at this mail. Has the staff taken a look at the factory "fishing effort " for 2023 and the aging of the catch ? The ship tracking information posted on Facebook showing daily failures to catch a load seem to be real evidence of a problem for the bay. The corroboration of the problem is the ongoing failure of reproduction of the two species that your ERP science says are menhaden harvest problem indicators. These are,of course, the striped bass and ospreys. I know of no evidence that would rebut the ERP definitions that lay the cause of serious striped bass problems with the menhaden harvest. Nothing to rebut the Commission's advice that striped bass are the "canary in the coal mine" as to menhaden harvests.
>
> Is the staff looking at this and if so do they think the difficulty in catch and failure of the two indicators in the bay are matters of concern for the next meeting of the menhaden board? Please advise. Tom Lilly
>
> Sent from my iPhone
>
> > On Oct 30, 2023, at 9:07 AM, Tom Lilly <foragematters@aol.com> wrote:

Bob. Please look at the post of yesterday's factory fishing . This summer there have been many days of this "unusual " activity.in the VA bay. Often the ships overnight because the catch isn't there. That is new.

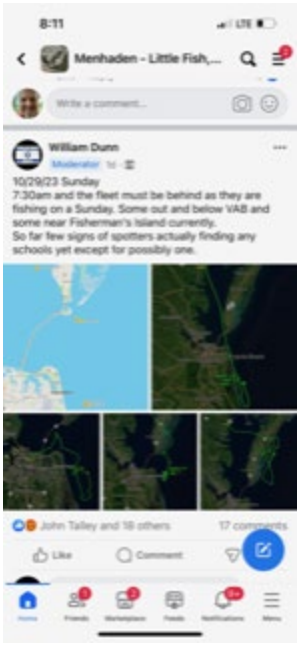
If I understand the Rhode Island calculation of the required menhaden baseline for Narragansett bay and use it for Chesapeake bay there should be 1500 ten ton schools in the bay at all times for our striped bass. This would cover the ospreys as well. So there should be 750 schools in VA . Arguably on the days they can't locate many schools to net there would not be the residual 700 schools or 500 or even 100 in the VA bay. Isn't this what logic dictates ? This is seemingly corroborated by the fact the two ERP indicator species for menhaden harvest levels,the striped bass spawning stock and ospreys, are in reproductive failure in Chesapeake Bay.

The CDFRs have the information that could confirm the conclusions from the daily tracking minute by minute ship activity.

It would seem all the information is available to apply the ERP science definitions to decide whether the menhaden harvest is appropriate or not.

I would like to discuss this if you have a few minutes. Just let me know when. Thanks.

Tom. 443 235 4465.



Sent from my iPhone