Atlantic States Marine Fisheries Commission

Executive Committee

October 18, 2023
8:00 – 10:00 a.m.
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 *(S. Woodward)*	8:00 a.m.
2.	Board Consent • Approval of Agenda • Approval of Meeting Summary from August 2023	8:00 a.m.
3.	Public Comment	8:05 a.m.
4.	Review and Consider Approval of FY2023 Audit *(J. Cimino)* **Action**	8:10 a.m.
5.	Discuss Per Diem Rate for Meals and Incidentals (*R. Beal)*	8:40 a.m.
6.	Legislative Update (*A. Law)*	9:00 a.m.
7.	Future Annual Meeting Update (*L. Leach)*	9:30 a.m.
8.	Other Business/Adjourn	9:45 a.m.

The meeting will be held at Beaufort Hotel (2440 Lennoxville Road, Beaufort, North Carolina; 252.728.3000) and via webinar; click here for details

DRAFT MEETING SUMMARY OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

EXECUTIVE COMMITTEE

Westin Crystal City
Arlington, Virginia

August 2, 2023

For Review and Action by the Executive Committee October 18, 2023

INDEX OF MOTIONS

ATTENDANCE

Committee Members

Pat Keliher, ME
Cheri Patterson, NH
Dennis Abbott, NH (LA Chair)
Dan McKiernan, MA
Jason McNamee, RI
Justin Davis, CT
John Maniscalco, proxy for Basil Seggos, NY
Joe Cimino, NJ, Vice Chair
Kris Kuhn, PA
Roy Miller, DE (GA Chair)
John Clark, DE
Lynn Fegley, MD
Pat Geer, proxy for Jamie Green, VA
Chris Batsavage, proxy for Kathy Rawls, NC
Mel Bell, SC
Spud Woodward, GA, Chair
Erika Burgess, FL

Other Commissioners/Proxies

Ben Dyar, SCDNR
Rep. Joe Gresko, CT LA
Doug Haymans, GA AA
Rep. Allison Hepler, ME LA
Jeff Kaelin, NJ GA
Ray Kane, MA GA
Nichola Meserve, MA DMF
Bryan Plumlee, VA GA
Malcolm Rhodes, SC GA

Staff

Bob Beal
Tina Berger
Lisa Carty
Toni Kerns
Laura Leach
Alexander Law
Chelsea Tuohy

Guests

Max Appelman, NOAA
William Brantley, NCDEQ
Chip Lynch, NOAA
Christina Wiegand, SAFMC
Mike Ruccio, NO

CALL TO ORDER
The Executive Committee (EC) of the Atlantic States Marine Fisheries Commission convened August 2, 2023 in the Jefferson Ballroom at The Westin in Crystal City, Virginia. The meeting was called to order at 8:00 a.m. by Chair Spud Woodward.

APPROVAL OF AGENDA
The agenda was approved as presented.

APPROVAL OF SUMMARY
The summary minutes from the May 3, 2023 meeting were approved as presented.

PUBLIC COMMENT
There was no public comment.

CARES & CAA UPDATE
Mrs. Leach gave an update on the CARES and CAA activities. The CARES program is complete and there is the possibility for the need to return $159.93 to the U.S. Treasury. CAA has a projected completion of July 31, 2024, and currently $91,041,387 has been disbursed to the states, with $13,418,965 remaining to be disbursed.

L/GA COMMISSIONER STIPENDS
Mr. Beal presented the results of the L/GA members stipend potential survey. Fourteen Commissioners responded; 10 said they were eligible to receive a stipend and six said they would be amenable to receiving one. No action was taken based on these results.

LEGISLATIVE COMMITTEE UPDATE
Mr. Law presented on three bills the Executive Committee should be aware of per the recommendation of the Legislative Committee. These included: the National Oceanic and Atmospheric Administration Act of 2023 (H.R. 3980), the Supporting the Health of Aquatic systems through Research Knowledge and Enhanced Dialogue Act (or SHARKED Act, H.R. 4051), and the Fishery Improvement to Streamline untimely regulatory Hurdles post Emergency Situation Act (or FISHES Act, H.R.5103). The Policy Board will potentially take action on both the FISHES and NOAA Act of 2023 on Thursday.

PER DIEM RATES
Mr. Beal presented a report on the potential for an increase in Per Diem rates for Commission meetings. The increase would be from Commission, not federal funds. The Committee requested a detailed analysis to determine the projected cost to the Commission of roughly a 30% increase in meal per diem.

ADJOURN
The Executive Committee adjourned at 9:32 a.m.

Atlantic States Marine Fisheries Commission

Business Session of the Commission

October 18, 2023
10:15 – 11:45 a.m.
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 *(S. Woodward)*	10:15 a.m.
2.	Board Consent • Approval of Agenda • Approval of Proceedings from November 2022	10:20 a.m.
3.	Public Comment	10:20 a.m.
4.	Review and Consider Approval of 2024 Action Plan **Final Action**	10:25 a.m.
5.	Review Draft 2024-2028 Strategic Plan	11:15 a.m.
6.	Elect Commission Chair and Vice-Chair	11:35 a.m.
7.	Review Noncompliance Findings, if necessary **Final Action**	11:40 a.m.
8.	Other Business/Adjourn	11:45 a.m.

The meeting will be held at Beaufort Hotel (2440 Lennoxville Road, Beaufort, North Carolina; 252.728.3000) and via webinar; click here for details

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

BUSINESS SESSION

The Westin Crystal City
Arlington, Virginia
Hybrid Meeting

November 9, 2022

TABLE OF CONTENTS

INDEX OF MOTIONS

ATTENDANCE

Board Members

Megan Ware, ME, proxy for P. Keliher (AA)
Cheri Patterson, NH (AA)
Doug Grout, NH (GA)
Dan McKiernan, MA (AA)
Raymond Kane, MA (GA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)
Jason McNamee, RI (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)
Justin Davis, CT (AA)
Bill Hyatt, CT (GA)
Jim Gilmore, NY (AA)
Joe Cimino, NJ (AA)
Tom Fote, NJ (GA)
Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)
Kris Kuhn, PA, proxy for T. Schaeffer (AA)
Loren Lustig, PA (GA)
John Clark, DE (AA)
Craig Pugh, DE, proxy for Rep. Carson (LA)
Lynn Fegley, MD (AA) (Acting)
Pat Geer, VA, proxy for J. Green (AA)
Chris Batsavage, NC, proxy for K. Rawls (AA)
Jerry Mannen, NC (GA)
Chris McDonough, SC, proxy for Sen. Cromer (LA)
Doug Haymans, GA (AA)
Spud Woodward, GA (GA)
Erika Burgess, FL, proxy for J. McCawley (AA)
Gary Jennings, FL (GA)
Marty Gary, PRFC
Mike Ruccio, NOAA
Rick Jacobson, US FWS

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

Staff

Robert Beal
Toni Kerns
Tina Berger
Maya Drzewicki
Kristen Anstead
James Boyle
Pat Campfield
Emilie Franke
Lisa Havel
Chris Jacobs
Jeff Kipp
Sarah Murray
Caitlin Starks
Deke Tompkins

Guests

Jason Avila
Alan Bianchi, NC DENR
Colleen Bouffard
Nicole Caudell, MD DNR
Karson Cisneros, MAFMC
Heather Corbett, NJ DEP
Jessica Daher, NJ DEP
Jeffrey Dobbs, NC DENR
Cynthia Ferrio, NOAA
Anthony Friedrich, SGA
Alexa Galvan, VMRC
Lewis Gillingham, VMRC
Jesse Hornstein, NYS DEC
Adam Kenyon, VMRC
John Kravchak
Mike Luisi, MD DNR
Tina Moore, NC DENR
Brandon Muffley, MAFMC
Brian Neilan, NJ DEP
Derek Orner, NOAA
Nicholas Popoff, US FWS
Will Poston, SGA
Jill Ramsey, VMRC
Jeff Renchen, FL FWC
Chris Scott, NYS DEC
McLean Seward, NC DENR
Somers Smott, VMRC
Bryan Sparrow, Fuji Film
Rene St. Armand, CT DEEP
Alex Su
Beth Versak, MD DNR
Eric Wallace
Kate Wilke, TNC
Angel Willey, MD DNR
Chris Wright, NOAA
Faith Zerbe, DE Riverkeepers
Erik Zlokovitz, MD DNR

The Business Session of the Atlantic States Marine Fisheries Commission convened in The Monmouth I Room in The Ocean Place Resort, a hybrid meeting, in-person and webinar; Wednesday, November 9, 2022, and was called to order at 10:15 a.m. by Vice-Chair Joe Cimino.

CALL TO ORDER

CHAIR JOE CIMINO: Some of you are aware Chairman is trying to beat some weather here, and he headed out early, so I will be subbing for him. Joe Cimino; New Jersey DEP, Vice-Chair of the Commission. We have some agenda items to go through here. We're going to get some exciting presentations on the Action Plan.

APPROVAL OF AGENDA

CHAIR CIMINO: I'll start with our call to order, and look for approval of the agenda. I see no hands in objection, so we'll approve by consent.

APPROVAL OF PROCEEDINGS

CHAIR CIMINO: Approval of the proceedings from May, 2022. If no issues or objections we'll consider approved by consent. Public comment. You all look like you work here. I don't think we have any public comment.

CONSIDER APPROVAL OF THE 2023 ACTION PLAN

CHAIR CIMINO: Okay, so we'll get into the Approval of the 2023 Action Plan.

EXECUTIVE DIRECTOR ROBERT E. BEAL: Just really quickly before you jump into the details of the Action Plan. This will be very similar to how we've done it in the past. We'll go through each of the goals, and at the end of each goal we'll stop and you guys can ask any questions or make any recommendations for changes.

You know if there is anything really significant that will take a lot of staff time, we may need to talk about tradeoffs. But we think it is a pretty comprehensive plan so far. As you see, all the staff is up here, and so we'll each go through sort of the goals that each department has in the Action Plan.

The first one is Goal Number 1 that's fishery management activities, and if you guys will remember that it's divided up into high priority species and what we call medium low priority species. The high priorities are just that. They're the ones that are, they're busy. There is a lot going on with those species next year.

The other ones, there still is a lot going on with some of those medium and low priorities, but they are not quite as high profile, and won't take quite as much staff time and Commissioner time to work through those. With that I'll turn it over to Toni to go through Goal Number 1, please.

MS. TONI KERNS: Thank you, Bob, and thank you, Mr. Chairman. For the high priority species, and just as a reminder, it's not that we think that these species are more important than another one, it's about staff workload and Board workload. For American eel, this moved up into the higher priority. The stock assessment peer review will be occurring in the coming months, and then we'll be able to report out to the Board, and if necessary, we'll take management action.

Under American lobster there is a couple things that are continuing from last year, but in particular we'll be working with all of our state and federal partners, as well as ACCSP on implementing and integrating the tracking device data collection as part of Addendum XXIV. In addition, the Board made it clear it's going to be moving forward on Addendum XXVII, which is the trigger mechanism for the protection of spawning stock biomass in the Gulf of Maine/Georges Bank stock.

Then scrolling on down to striped bass, the Board did approve Addendum I for public comment and this is for their voluntary transfers of commercial quota. Then for summer flounder, scup, black sea bass and bluefish, we have some very similar bullets, so I'm only going to go over it one time here under black sea bass.

That is to continue working with the Mid-Atlantic Council on some of the recreational measures, and this is one to do the recreational sector separation and catch accounting amendment. It could turn into some version of an addendum, just to be clear, and then as well as develop the recreational reform technical guidance document, and continue developing the harvest control rule options that did not get approved earlier this year.

This species will also, all the species will have a research track and a management track stock assessment and peer review. Then moving down to bluefish, the one difference is that we'll be working with the Council to develop a management uncertainty policy for that species. For horseshoe crab, we'll work with a workgroup that will review and update the best management practices for handling biomedical catch.

We'll move forward with conducting the ARM if it does get approved at the meeting tomorrow. For Jonah crab, we're going to work with same as lobster on the tracking device, as well as review the benchmark stock assessment and respond if necessary. I'm going to skip through scup, because that is the same bullet.

For shad and river herring we'll review the river herring benchmark stock assessment and peer review and respond as necessary, and there is still a couple of SFMPs and shad habitat plans that will come forward to the Board. Then scrolling down to our medium and low priority species. For Atlantic croaker and spot, we'll initiate a benchmark stock assessment that will be peer reviewed in 2024.

For Atlantic herring, we'll be exploring funding options for a biological sampling program. This week the Board did not take any action for Draft Addendum III, which is the allocation of the Area 1A quota. I think we'll probably pull this bullet out of the document, unless I hear otherwise today from the states. Scrolling down to Atlantic sturgeon, we'll be initiating the benchmark stock assessment for review in 2024, and continue to monitor the federal activities in response to the action plan to reduce Atlantic sturgeon bycatch in federal large mesh gillnet fisheries, and respond to any actions that the Council may take if necessary. For black drum we'll be reviewing the benchmark stock assessment and peer review that will be coming out, and respond, if necessary, as well as updating the indicators of fishery performance and indices of abundance. For coastal shark, again we'll continue to monitor HMS activities, but specifically looking at what they are doing with Amendment 14.

Then also any proposed rules to consider the prohibition and retention of sharks listed as threatened under the Endangered Species Act. We've been told by HMS that that is a possibility for next year. For Atlantic cobia we will explore reactions to emerging harvest in the Mid-Atlantic. We heard a little bit about this yesterday.

We won't go into it for now, but if there are questions, answer them. Northern shrimp, we will develop the management triggers to indicate when the stock can support a commercial fishery, ad that is through the workgroup that has been engaging on how to move forward with northern shrimp management.

For red drum we'll initiate a benchmark stock assessment, which would be peer reviewed in 2024. Then under Spanish mackerel we'll review the revised SEDAR stock assessment, in response to the South Atlantic Council's SSC recommendation, and then we'll respond, if necessary, in collaboration with our South Atlantic partners, and we'll consider development of a management action to address the differences in the state and federal management plan that we heard about yesterday at the Coastal Pelagics Board meeting, and we'll do that with the Council.

For spiny dogfish, if there are actions that get taken through the New England and Mid-Atlantic Councils for the reduction of sturgeon in the large mesh gillnet fisheries, we would respond in the spiny dogfish that is one of the species that is in that

action plan from NOAA. I've already gone over spot, and we don't have any new tasks for weakfish or winter flounder or tautaug.

Under the crosscutting issues, a lot of these issues are carrying over from last year. We've been working on them, but work continues on them. But we did add to the scenario planning is to respond to the summit recommendations, to make sure any proposed actions that come out of there have a path forward.

Then we also added to the bulleted list, even though we have been working on these things this year to continue to develop and finalize the de minimis policy for use in Commission FMPs. Lastly, to explore the development or the guidance or policy level document on allocation and the use of mode splits, which has been discussions in the past, but not officially in the Action Plan. That is everything that I have, I'll take questions.

CHAIR CIMINO: Questions for Toni? Go ahead, Adam.

MR. ADAM NOWALSKY: At the Mid-Atlantic Council's meeting in October, the Executive Committee approved a draft 2023 Implementation Plan, which will be considered by the Full Council in December. That included under summer flounder, scup and black sea bass, initiate development of action to replace recreational harvest control rule after a sunset period. The question is, does the item we have here for those species that continue development of recreational harvest control rule options. I interpreted that as specifications on an annual basis, or was that really referring to the changes that would need to be made because of the sunset period on that action?

MS. KERNS: Adam, those are the changes or the work that needs to be done on the options that weren't approved that the Board asked staff to do. Then if that includes a management action because we're ready before the end of the year, we can roll that into that bullet.

CHAIR CIMINO: Adam, are you okay? Thank you, great question. Any others? No, okay. Bob.

EXECUTIVE DIRECT BEAL: Pat Campfield is going to run through Goal 2, which is the Science Program Activities.

MR. PATRICK A. CAMPFIELD: This includes all of the Commission's fisheries research, surveys and stock assessment activities. In the first category under the Science Committees, that includes Management Science Committee, Assessment Science Committee, Fisheries Socioeconomics.

New activity for 2023 is to update the Commission's research priorities. We do this across the board every five years, so the document was last updated in a comprehensive fashion in 2018, so we'll do that again here in 2023. Then any priority research that comes out of that we'll try to work with the science committees to develop proposals to fund that kind of research.

We'll also incorporate risk and uncertainty lessons learned for the next iteration of the tool. You may recall a lot of work done on risk and uncertainty for tautaug. The next candidate species is cobia, so we'll try to move that forward next year. Also, a bit down in the weeds, but for the stock assessment purposes, create a centralized repository for archiving assessment modeling code to enhance our ability to run models.

Under data collection, nothing really new under the SEAMAP program. Under the NEMAP Survey program, communicate with offshore wind energy developers on the use of the NEMAP brand, in terms of their pre and post construction surveys and monitoring. Under collection of new data to address stock assessment needs, support the states, South Atlantic Council and ACCSP with Citizen Science projects, to collect new recreational live release data.

Under the fisheries research category and under fish gauging, we plan to conduct age sample exchanges and workshops to compare protocols for both menhaden and Atlantic sturgeon. Then under

ecosystem-based management and changing ocean conditions, nothing really new. Toni alluded to the Scenario Planning Initiative that we went through yesterday.

There is also a lot of strong science coming out of NMFS and their fishery science center, so we continue to stay plugged in with the science centers on latest and greatest, including products like their climate and vulnerability assessments. Then finally, under competing ocean uses, to determine the Commission's role in wind energy intersections with fisheries. I think those are the highlights in science.

CHAIR CIMINO: Thank you, Pat, questions for Pat? Seeing none; oh, we do. Go ahead, Jay, sorry.

DR. JASON McNAMEE: One question I had was that concept you have in there for the repository. I just wanted to mention. I think, I can't remember what the context was. I think it was like an ecosystem modeling workshop thing that I was at. But I think NOAA is thinking about something similar. It's just important to just be connected with that so we don't have like, I don't know, competing repositories.

Maybe that's okay to have that. But at least we'll know where the different tools are. I just wanted to mention that, and then just a quick question on the bullet on the enhanced. I can't remember exactly how it was written, but the enhanced computing power. I just wonder what that, you're talking about like a super computer or efficient code? I was just sort of wondering.

MR. CAMPFIELD: You all are very curious about the computational speed and code we used in the stock assessments, but really, I think we're on the same page that you're talking about with NMFS. This is stemming from the bluefish assessment that is just wrapping up, and Katie has been a major contributor to, using what's call GitHub, so a centralized repository for the code, but sort of on shared servers where you can run the models a lot faster. Working with Tony Wood in Woods Hole and the Science Center on bluefish, but doing it more broadly for all Commission assessments.

CHAIR CIMINO: I was going to say that all Doug Adams fans chuckle when they see a bullet point like that, and then I'll turn it over to Dr. Drew.

DR. KATIE DREW: Just to add on to that. I think one of the things we did find with the bluefish assessment is that NOAA has very strict requirements about how they use GitHub, and we certainly wouldn't want to compete with them in any way, but we want to set up something to be more flexible for ASMFC purposes, and complement whatever NOAA is doing with their own repository.

CHAIR CIMINO: Go ahead, John.

MR. JOHN CLARK: Pat, did I miss it? Did you mention anything about the Economic and Social Sciences Committee in this one?

MR. CAMPFIELD: Thanks, John, so at the top of the goal there are a few bullet points there on the highlights of what we try to achieve each year with the SAS Committee, and providing input to the fishery management plans. There have been some one-off inquiries related to the menhaden, I think black sea bass, in the last couple of years. But again, the overall activity is to keep the Socioeconomic Committee engaged, and when requests come in from the Boards, if there are data to try to provide that advice.

MR. CLARK: Thanks, I was just curious, just because I noticed in a lot of the comments coming up about the horseshoe crab ARM is that so many of the commenters were saying the economic value of ecotourism for the crabs and the birds. I was just curious if that was something that was being considered to look at. I'm sure that is something that might come up with other species, as we move forward or those type of issues.

EXECUTIVE DIRECTOR BEAL: John, in response. We don't have anything specific in there for horseshoe

crab or your ecotourism type thing. But if that is something, a bullet we want to add to the action plan, and ask the SAS Committee to look at it, you know that is fair game for sure.

MR. CLARK: Right, I just meant that has been so highly scrutinized, I just figured it would be something that at least we could say, you know we are aware of that situation.

CHAIR CIMINO: Yes, and I think there is going to be some discussions during the Horseshoe Crab Board meeting about what is the future of the ARM, and what are we going to look at moving forward. We had the peer review of the ARM that suggested a management strategy evaluation, and so if something like that comes along, you know we'll certainly be looking at socioeconomics. I'll turn it over to Lynn, go ahead, please.

MS. LYNN FEGLEY: Just to pile on John's comment. I don't advocate adding this as a bullet to this plan yet. But in a couple hours we'll be tackling menhaden allocation. We have a lot of concerns in our state about what the impacts are when you do these reallocations to market, and also the impacts of transferring quota on markets in the state. Like when are you really disrupting how product is flowing up and down the coast, when you do these allocations?

I think it's something that we need to maybe for all of our species, think about considering, and maybe allowing the SAS to start doing some more. I know data are hard to come by in this regard, but it would be nice when we have these conversations, if we had a little ability to address some of these economic and market concerns. Like I said, I don't know the best for this plan, but maybe it's something we can put on our radar, and think about when we go around again.

CHAIR CIMINO: Yes, I agree, and you know sitting through the Climate Scenario Workshop yesterday, when you're thinking about the future you also need to have a base line, right. I'm not sure we do for every species. I feel pretty comfortable saying we really don't. I agree, I think it's something that in some form or another we have to start to tackle. Any other comments or questions?

EXECUTIVE DIRECTOR BEAL: All right, the next goal is Goal 3, fisheries statistics, and Geoff White will handle that one.

MR. GEOFF WHITE: Goal 3 is really focused on the fisheries dependent data collected through ACCSP. The items highlighted on a continuing basis take up a fair amount of the activities that are reliant by other departments and other agencies. We kind of tweaked a few items in that section to include an additional component of the MRIP surveys that we help support, as well as engaging and aligning with the Commission's Outreach and Communication Plan. Similar item on partnerships. I wanted to just continue highlighting the data approaches, and the partnerships with all the other agencies in data collection initiatives, and data dissemination to support other systems. Specifically, under fisheries dependent data collection, within SAFIS we're trying to highlight items that will really focus on accomplishing in 2023. The first item reads a little bit cryptically, but truthfully, we've been using the same species list across the dealer and the trip reporting applications for a long time as a choice, and it's necessary at this point to separate out the species unit, market grades that are available to selection lists in the dealer reports.

That those rows that are available for commercial trips or for-hire trips. That is shortening those lists, entities are selecting better records, it allows us to drive which questions are being asked in which application. This is kind of an initial step we're already working on, which should be rolling out early in 2023.

Another major item is to extend the one-stop reporting initiative, to expand that a bit more across more of the federal permits, and to begin gaining the requirements from the states by holding a workshop on what their requirements are for one-

stop reporting. Also, we're supporting implementation of spatial data management.

As I have mentioned about the lobster trip locations, VMS, not just collecting the location data, but providing ways for the state agencies to visualize that and look into other means of support with it. Then more towards the end of the year and throughout the year, we're looking at applying designing and applying the updated participant and permit information database design.

Again, it's an item that helps to better show the history of a particular entity in the data warehouse, as well as which records should be visible to those through the confidentiality approaches. It may not be the exciting things that folks were thinking about when it comes to the action plan, but they are definitely necessary steps to move this forward.

Under recreational surveys we are sharing the infrastructure that we've developed with both the Gulf of Mexico and Hawaii, to kind of standardizes and extend the methodology for some of those staff and agency-based data collection activities. Under data standards, distribution and use, we will be convening a workshop to identify the best practices on data validation, reconciliation and documentation for improving data integrity.

This is a lot of the Coordinating Council's Accountability Workgroup, and how the different data streams do line up and connect for data quality and use by management. We'll continue to refine the for-hire program methodology with MRIP, to more fully incorporate logbooks and the math that goes along with that.

We'll be establishing policies and procedures for ACCSP Citizen Science data and data collection systems, including the SciFish project. Under data distribution, we're looking to expand the data warehouse contact, really looking at the updated MRIP standards and presentation of the recreational estimates aligning with public presentation of the MRIP estimates that will be changing in April of 2023.

Also, establishing new biological data feeds to fulfill that section of the data warehouse. Of course, under data use, we do a lot to support the assessments that are going on. We'll be continuing to provide validated commercial landings data for the Commission assessments and the SEDAR assessments that were listed there, and responding to data requests. Thank you.

CHAIR CIMINO: Thank you, Geoff, any questions for Geoff? Go ahead, John.

MR. CLARK: Geoff, if you're going to be looking for volunteers to go to Hawaii, I'll mentor them on the tablets. I'm sure we have APAIS staff that would love to do that.

DR. McNAMEE: I was wondering about the large pelagic survey, so that item is about working with the states to transfer that program to states, or I was wondering like what you mean by that bullet.

MR. WHITE: It's a recognition of something that has been done by the states already. The large pelagic telephone survey add-on to the for-hire survey component, is an extension of that phone interview that is already occurring, and the states were already doing. But we hadn't captured a recognition of that in the Action Plan. It's not a new activity, it is more an explanation of what happens.

CHAIR CIMINO: Anyone else?

EXECUTIVE DIRECTOR BEAL: Moving on, Goal 4 is compliance LEC activities, and Toni is going to handle that, I believe.

MS. KERNS: I just have two updates for the Law Enforcement goal. The first is in concurrence with the goal for lobster and Jonah crab that will have the Law Enforcement Committee work with the states to incorporate or implement the vessel tracking devices consistent with the Addendum.

In addition, the Committee has started this week working on making changes to the guidelines for resource managers, so I don't know if we should say newly revised guidelines. But I'll think of a way to edit that to show that this will be the third update to that document. It was last updated in 2015.

CHAIR CIMINO: Question?

EXECUTIVE DIRECTOR BEAL: All right that was quick. Moving on, Goal 5 is habitat work, and Pat is going to cover that.

MR. CAMPFIELD: Goal 5 covers the Habitat Program as well as the Commission support of the Atlantic Coastal Fish Habitat Partnership. Not a lot of new activities, though continue to generate habitat management series publications, the Habitat Hotline Outreach Newsletter of state activities and federal partner activities.

They will also continue to work on fish habitats of concern. Under the leverage partnerships section, a couple of activities under the Atlantic Coastal Fish Habitat Partnership are to identify partners and support restoration, grant administration, and project management. That is an activity that the U.S. Fish and Wildlife Service has supported for a number of years. Hopefully that will continue, but with some new federal legislation that may change, so we need to brainstorm and find a Plan B. Also work with partners to develop standardized SAV monitoring protocols for the coast. That has been working closely with PEW and other NGOs leading that effort.

Then finally, implement the new ACFHP five-year strategic plan, and the next annual action plan for the partnership, including new initiatives with climate resilience and DEJ. The ACFHP Steering Committee is meeting down the hall this week, to hopefully put the finishing touches on that next Strategic Plan.

CHAIR CIMINO: Thank, Pat, any questions for Pat?

EXECUTIVE DIRECTOR BEAL: Great, thanks, moving along, Goal 6 is Outreach efforts, and Tina Berger will cover that.

MS. TINA L. BERGER: Thank you. As Bob mentioned, this goal is about outreach and communication. As many of the other sections or goals, we do a lot of things on a continuing basis. I'll just highlight a few of the big things that we will be working on next year. We'll continue to keep on making our annual report a slim, sleek, concise overview of what we're accomplishing each year.

We're going to highlight our outreach efforts on some focused subjects and species, and those are identified under that first header under current and new technologies. We're going to be doing a lot of work on the website, not completely revising it, but certainly updating and upgrading it, making it HTPPS compliant, increasing its flow and user friendliness, and developing new content.

We will also be migrating three of the websites that we currently host in-office to an off-site host, to increase security of our own servers and internal structures. Under stakeholder participation, we'll continue to revitalize advisory panels for those species that will have major activities next year, and get our advisory panel primer up to date, including several new changes that have been made.

Under media relations and networking, as Geoff mentioned in his, we're going to be finalizing a communication plan that seeks to clarify our staff roles and responsibilities, and provide a vision for future outreach efforts for all the Commission programs. We will continue on a continuing effort, respond to factual inaccuracies that have been showing up in various news articles, in particular horseshoe crab, but other species as well. That is the major activities for Goal 6. Thank you.

CHAIR CIMINO: Thank you, Tina, any question? Yes, John.

MR. CLARK: Not a question, Joe, I just wanted to thank Tina for her phenomenal efforts in responding to all the false information coming out about the Horseshoe Crab ARM, and you know just seeing some of the things that we've already seen about the latest update of the menhaden assessment. It looks like it's going to be keeping your hands full, Tina, responding to these types of things. Thanks again.

CHAIR CIMINO: Loren.

MR. LOREN W. LUSTIG: Thank you for the report regarding outreach. I'm very familiar with some programs that have been developed in the past that take outreach into the classrooms. For example, there is a program that occurred in Maryland, when I was working there, called Grasses in Classes, that encouraged to actually have a hands-on, in terms of conservation. A similar program, Trout in the Classroom in Pennsylvania. Do we have any plans or hopes to develop similar programs that relate to marine fishes?

MS. BERGER: I'll answer this in this way. You know the Commission is centralized in Arlington. It is hard for us to get sort of programs out into nature, based on our accessibility to that. We can certainly work in greater effort to work with the state programs, and working with their education, to get into classrooms through the states.

That may be a more appropriate way to do that than at the Commission level. We have in the past participated in a lot of tradeshows and coast fests, as in the Georgia Coast Fest, where we hit a large number of young children with activities and information that is easily accessible. I agree with you, it's an important way to educate our youth, and get them familiar with the natural world. I'll seek ways to do that at the Commission level.

CHAIR CIMINO: Yes, I would just add that we had the State Directors meeting with all the other Commissions just last week, and we had a pretty long discussion on equity and diversity. You know the general consensus was, the only way that we're going to see diversity around these tables, and in fisheries management, is to start getting people interested at a very early age. Any other questions?

EXECUTIVE DIRECTOR BEAL: Moving on to Goal 7. This is the Commission's legislative activity. A lot of this is care and feeding, but a couple of highlights. In fact, we started this work last night. Eric Reid opened up lines of communication with Congressman Pallone and his staff, so that's pretty nice, we were able to see them at their celebration party last night.

Moving on to some other specifics. Obviously, there was an election yesterday, and we will reach out to the new staff members and new officers, and committee structure may be changing and other things. We'll get to know those folks early in the new year, once the 118th Congress is set. Then a lot of the activities we work on through the legislative program is appropriations and support for the activities of the Commission, highlighting or adding SEAMAP, South Atlantic and trawl survey work there.

The other bills, the Bipartisan Infrastructure Law and the Inflation Reduction Act have a ton of money in them, and we're trying to find ways to tap into that money for habitat work, survey work and other things. We just noted that in there. We need to add the RISEE Act to the last bullet under the topic of engaging Congress and the administration on legislation. We will add that. We already have Recovering Americas Wildlife Act in there, and we'll see where that goes. We may be able to take that off if that were to pass before the end of the calendar year. There are some conversations about fishery compensation and litigation legislation for offshore wind power, and we'll track that pending legislation as well. We'll work with NOAA leadership and Congressional folks for sort of the out fiscal years, '23 and '24, trying to get our priorities recognized there.

Again, you know highlighting our budget priorities, SEAMAP, South Atlantic, Chesapeake Bay work for menhaden, and also there is a specific ask in here for helping South Carolina with their research vessel. That vessel is a little bit beyond the useful life of a survey vessel, we'll say. It's being held together by duct tape and bubblegum, but it's still working, and we're going to try to get that replaced and retrofit and help out South Carolina with that.

Then the last bullet here that's new is highlighting the USGS Commission partnership. ASMFC and the other three Commissions, including the Great Lakes, have new and cooperative programs and research work going on with USGS. I'm going to try to find some financial support for that in the year moving forward.

Those are the highlights of our legislative activity, and we're getting very close to hiring a new Legislative Coordinator, which will be great. Happy to answer any questions on that. Moving on, last but not least, Goal Number 8, right, is Laura's finance and administration activities.

MS. LAURA C. LEACH: As you are well aware, most of the activities in Goal 8 are ongoing every year, so I'm really going to only point out one that I'm really excited about. I mean I love them all, that's not how I meant that. But Geoff has been working very hard to develop a database, comprehensive database, that we can track everything of our incoming funds, as well as the contracts that go out from those funds.

Because, especially with the project cooperative agreement that we have that Derek Orner runs. We put out a lot of contracts on those. We have a lot of money in those, and it's been run by spreadsheets for a very long time, and Geoff and I have been working very hard to make a comprehensive database that will capture the complete life cycle. I'm very excited about that. Everything else is ongoing, so I'm not going to bore you. You can ask me any questions that you would like, but otherwise that is the only one I'm going to highlight.

CHAIR CIMINO: Questions for Laura? Thank you, Laura. Erika, go ahead, please.

MR. ERIKA BURGESS: My question was back on the legislative item. Bob, I was wondering if work on streamlining the federal disaster funding is included in your legislative priorities? I know several states have run into issues with the amount of time it takes to get federal disaster declarations approved, and then funding through the OMB process.

More recently in Florida, we as many of you know, were devastated by Hurricane Ian, which wiped out much of our infrastructure in Southwest Florida, and our Southwest shrimping fleet. The response we have from NOAA is that, come back to us in a year, show us your losses, and then we'll consider a disaster request. In the meantime, we have people without homes, without businesses, without boats. This system just really seems to be broken. I would like to see it be an ASMFC priority.

EXECUTIVE DIRECTOR BEAL: Thanks for that comment. We do not have that included here. The question is, how much of that can we affect at ASMFC? In other words, you know it is a federal process, OMB is involved. For the herring disaster in the northeast, we're actually working with the states, and hopefully be able to move that money along pretty quickly once we get it.

But the bottlenecks are not on our end. We can put something in here, but there are conversations going on at the federal level to speed that up and make it more efficient. It's up to the group. We can put something in here, but I'm not sure we can affect a whole lot of change from the Commission side of things.

CHAIR CIMINO: Go ahead, Pat.

MR. PATRICK C. KELIHER: I don't disagree with anything that Bob said. But one thing that we may want to though consider around disaster declaration is the appropriations component,

adding that as a priority to already appropriations quests. That is going to be an ongoing conversation.

Especially in light of what is happening on the west coast with the Alaskan crab fishery and the huge amount of money that is going to be requested there. You may want to think about it strictly from, I agree with all your comments, but strictly from an appropriations standpoint. I can see us wanting to add that to our asks going forward through that process.

EXECUTIVE DIRECTOR BEAL: Okay, we can add that if the group is comfortable with that. One other noteworthy thing here is that when we were at the State Directors meeting in San Diego last week, Sam Rauch reported out. They are going to hire a full-time staffer or two that is going to be available just to work on disaster. Some of the activity that happens within NOAA Fisheries, hopefully will be sped up, if that person is on staff full time. But we can add some language about appropriation and seeking funds for disasters.

CHAIR CIMINO: Yes, and part of that was Sam's recognition that this is happening a lot more often. I think that's a good idea. I mean it needs to be part of our bigger discussions.

MR. KELIHER: Yes, I think that's a good reminder. I had forgotten about that conversation, because those were some very key questions asked to NOAA leadership around streamlining the process. While it's not capture here, it certainly was captured by the State Directors in that meeting last week.

CHAIR CIMINO: Sorry, go ahead, Tom.

MR. THOMAS P. FOTE: Yes, we've been discussing the same problem at MAFAC, and how do we basically correct the problem. I'll work with you, because I'm still going to be on MAFAC until 2025, so we can work that way also.

CHAIR CIMINO: Great, thank you. Any other questions? **We're looking for a motion to approve as modified. I'm going to give it to Tom Fote, and I'm going to give a second to John Clark.** That is homefield advantage there.

ELECTION OF COMMISSION CHAIR AND VICE-CHAIR

CHAIR CIMINO: The next item is election of Chair and Vice-Chair, and for once I'm going to pass this over to Bob with no smart Alec remarks.

EXECUTIVE DIRECTOR BEAL: You can save those remarks until after the election, Joe. I think everyone knows where we are. Spud Woodward has been Chair for a year and Joe Cimino has been Vice-Chair of the Commission. But the Guiding Documents of the Commission require an annual election of leadership at the Commission.

The Commission sets up a Nominations Committee every year, and the membership this year is Erika Burgess from Florida, John Clark from Delaware, and it's Chaired by Pat Keliher from Maine. With that I will call on Mr. Keliher for a report out from the Nominations Committee.

MR. KELIHER: The Nomination Committee did send an e-mail through Bob last week, asking for further nominations. After receiving countless requests for other names to be put forward, and considering that, as I was just reminded by my seatmate to my left that the current Chair decided to duck out of this meeting early.

We did have to have an emergency meeting of the Nominations Committee. But in light of all that, we did come to the conclusion, because of the fantastic work of our Chairman, Spud Woodward, and Vice-Chairman Joe Cimino, that we would move them forward as a slate for renomination, or for nomination.

EXECUTIVE DIRECTOR BEAL: Okay, thank you, Pat, for that report from the Nominations Committee, and since it is from a committee it does not need a second. The Commission always does allow

nominations from the field, so are there any other nominations, outside of what the Nominations Committee has brought forward?

Seeing none; let's see if we can do this efficiently now. Bet we can**. Is there any opposition to reelecting Spud Woodward as the Commission's Chair and Joe Cimino as the Vice-Chair of the Commission? Seeing no hands; congratulations, Spud, wherever you are in your travels, and congratulations, Joe on another year.** (Applause)

CHAIR CIMINO: Yes, thanks. I wanted to say, Spud had some comments, and this kind of even goes to the Action Plan too. Hopefully, if all goes well, he'll be home safe and things will be all right there, and he'll be able to make those comments during Policy Board, which he'll be chairing virtually, and thank you all. Yes, any other business to come before us? Go ahead, Tom.

MR. FOTE: Yes, I was just thinking of the first time that I got a chance to vote as a commissioner, with the vote in the election in 1991. I remember that at that period of time, that was the only opportunity at the Business Meeting, we got Governor's Appointee and Legislative Appointee able to vote. The progress over the years has really been something. It gave me a warm feeling to basically do this vote again.

ADJOURNMENT

CHAIR CIMINO: Okay, if nothing else, I'll entertain a motion to adjourn.

(Whereupon the meeting adjourned at 11:05 a.m. on Wednesday, November 9, 2022)

Atlantic States Marine Fisheries Commission

Spiny Dogfish Management Board

October 18, 2023
1:00 – 1:45 p.m.
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 *(N. Meserve)* 1:00 p.m.

2. Board Consent 1:00 p.m.
   - Approval of Agenda
   - Approval of Proceedings from August 2023

3. Public Comment 1:05 p.m.

4. Review Atlantic Sturgeon Fishery Management Action Team/Plan Development Team Alternatives *(K. Cisneros)* 1:15 p.m.

5. Consider Approval of Fishery Management Plan Review and State Compliance for the 2022-2023 Fishing Year (*J. Boyle)* **Action** 1:35 p.m.

6. Other Business/Adjourn 1:45 p.m.

The meeting will be held at Beaufort Hotel (2440 Lennoxville Road, Beaufort, North Carolina; 252.728.3000) and via webinar; click here for details

MEETING OVERVIEW

October 18, 2023
1:00 – 1:45 p.m.
Hybrid Meeting

Chair: Nichola Meserve (MA) Assumed Chairmanship: 10/21	Technical Committee Chair: Scott Newlin (DE)	Law Enforcement Committee Representative: Baker (MA)
Vice-Chair: Pat Geer (VA)	Advisory Panel Chair: Vacant	Previous Board Meeting: August 3, 2023
Voting Members: ME, NH, MA, RI, CT, NY, NJ, DE, MD, VA, NC, NMFS (12 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from August 3, 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 should use the webinar raise your hand function and the Board Chair will let you know when to speak. 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 Board Chair will not allow additional public comment on an issue. For agenda items that the public has not had a chance to provide input, the Board Chair may allow limited opportunity for comment. The Board Chair has the discretion to limit the number of speakers and/or the length of each comment.

4. Review Atlantic Sturgeon Fishery Management Action Team/Plan Development Team Alternatives (1:15-1:35 p.m.)

Background

- In response to the 2021 Biological Opinion and 2022 Action Plan to Reduce Atlantic Sturgeon Bycatch in Federal Large Mesh Gillnet Fisheries, a joint FMAT/PDT of the New England and Mid-Atlantic Fisheries Management Councils formed to develop a range of alternatives to reduce sturgeon bycatch in the Monkfish and Spiny Dogfish Fisheries.

Presentations

- Review Progress and Timeline Updates on the Mid-Atlantic and New England Fishery Management Councils' Joint Action on the Spiny Dogfish Fishery to Reduce Atlantic Sturgeon Bycatch by K. Cisneros

5. Consider Fishery Management Plan Review and State Compliance for the 2022-2023 Fishing Year (1:35-1:45 p.m.) Action

Background

- State Compliance Reports were due on July 1, 2023.

- The Plan Review Team reviewed each state report and compiled the annual FMP Review (**Supplemental Materials**).

Presentations

- Overview of the FMP Review Report by J. Boyle

Board Actions for Consideration

- Approve FMP Review for 2022-2023 fishing year, state compliance reports, and *de minimis* requests

6. Other Business/Adjourn

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

SPINY DOGFISH MANAGEMENT BOARD

The Westin Crystal City
Arlington, Virginia
Hybrid Meeting

August 3, 2023

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ATTENDANCE

Board Members

Megan Ware, ME, proxy for P. Keliher (AA)
Cheri Patterson, NH (AA)
Doug Grout, NH (GA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)
Nicola Meserve, MA, proxy for D. McKiernan (AA)
Raymond Kane, MA (GA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)
Jason McNamee, RI (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)
Justin Davis, CT (AA)
Joseph Gresko, CT (LA)
John Maniscalco, NY, proxy for B. Seggos (AA)
Emerson Hasbrouck, NY (GA)
Joe Cimino, NJ (AA)
Jeff Kaelin, NJ (GA)
Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)
John Clark, DE (AA)
Roy Miller, DE (GA)
Michael Luisi, MD, proxy for L. Fegley (AA)
Russell Dize, MD (GA)
Pat Geer, VA, proxy for J. Green (AA)
Bryan Plumlee, VA (GA)
Chris Batsavage, NC, proxy for K. Rawls (AA)
Chad Thomas, NC, proxy for Rep. Wray (LA)
Cynthia Ferrio, NOAA

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

Ex-Officio Members

Staff

Bob Beal
Toni Kerns
Madeline Musante
Tina Berger
Tracy Bauer
James Boyle
Chris Jacobs
Caitlin Starks
Alexander Law
Katie Drew
Jainita Patel
Kurt Blanchard
Chelsea Tuohy

Guests

Michael Academia, CCB
Pat Augustine
William Barnhill, NOAA
Alan Bianchi, NC DMF
Emily Bodell, NEFMC
Jason Boucher, NOAA
Karson Cisneros, MAFMC
Haley Clinton, NC DEQ
Jennifer Couture, NEFMC
Steve Doctor, MD DNR
Jared Flowers, GA DNR
Robin Frede, NEFMC
Tony Friedrich, ASGA
Angela Giuliano, MD DNR
Melanie Griffin, MA DMF
Jay Hermsen, NOAA
Matthew Heyl, NJ DEP
Jesse Hornstein, NYS DEC
Emily Keiley, NOAA
Chris McDonough, SC DNR
Dan McKiernan, MA (AA)
Brandon Muffley, MAFMC
Allison Murphy, NOAA
Thomas Newman
Danielle Palmer, NOAA
Nicole Pitts, NOAA
Jill Ramsey, VMRC
McLean Seward, NC DMF
Ethan Simpson, VMRC
Somers Smott, VMRC
Kevin Sullivan, NH F&G
Mike Waine, ASA
Craig Weedon, MD DNR
Kelly Whitmore, MA DMF
Angel Willey, MD DNR
Phil Zalesak, SMRFO

The Spiny Dogfish Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia, via hybrid meeting, in-person and webinar; Thursday, August 3, 2023, and was called to order at 8:30 a.m. by Chair Nichola Meserve.

CALL TO ORDER

CHAIR NICHOLA MESERVE: Good morning, welcome to the last day of the Summer Meeting. We're going to start off with the Spiny Dogfish Management Board meeting for August 3rd. My name is Nichola Meserve with Massachusetts, I'm joined up front by James Boyle, our Species Coordinator, and also virtually we have Cynthia Ferrio from NOAA, who will be helping us with one of our agenda items today.

APPROVAL OF AGENDA

CHAIR MESERVE: We have a quick meeting, so you have your agenda before you. Are there any changes to the agenda today? Any opposition to approving the agenda? If not, we'll consider that approved by consent.

APPROVAL OF PROCEEDINGS

CHAIR MESERVE: We have proceedings from our last meeting in February of 2023, are there any modifications to the proceedings? Seeing none; we'll also consider those approved by consent, and move on to public comment.

PUBLIC COMMENT

CHAIR MESERVE: This is an opportunity for members of the public to comment on items that are not on the agenda today. Are there any hands for public comment? None in the room and none online either, so we can move on to an update on the Council's joint action on the monkfish and dogfish fisheries, to reduce Atlantic sturgeon bycatch.

The Board is tracking this joint action with the understanding that the Dogfish Board may be looking to make some complementary action, once the Councils have gotten further down the road in their development of this action. We'll look to Cynthia to provide that update.

REVIEW PROGRESS ON MID-ATLANTIC AND NEW ENGLAND FISHERY MANAGEMENT COUNCILS' JOINT ACTION ON MONKFISH AND DOGFISH FISHERIES TO REDUCE ATLANTIC STURGEON BYCATCH

MS. CYNTHIA FERRIO: Just a brief background on this action. First**,** both the New England and Mid-Atlantic Councils are cooperatively developing a joint framework to reduce Atlantic sturgeon bycatch in federal large mesh gillnet fisheries, and this is in response to the requirements of the 2021 biological opinion for sturgeon. These requirements in general laid out by the Bi-Op are to reduce or minimize the impacts of incidental take in large mesh gillnet fisheries, and large mesh in the Bi-Op is defined as mesh size greater than 7-inches.

But then without major disruption to the operations of these fisheries, and for this action monkfish and spiny dogfish were identified as the two primary fisheries of focus, primarily because they are managed by both Councils, and they had the highest number of sturgeon interactions with gillnet gear in the recent, I think five to ten years. Although throughout this development process there has been some discussion with respect to dogfish, about whether or not to include measures to also reduce interactions with smaller mesh sizes, such as 5 to 7 inches, because that is where most of the dogfish gillnet fishery is prosecuted with less than 7 inches, and also where many of the interactions have taken place with sturgeon.

In May this year, a joint committee of the monkfish and dogfish committees for both Councils recommended potential alternative measures to reduce sturgeon bycatch in both fisheries, and I'll speak primarily for the dogfish, because this is the Dogfish Board. These measures were really with seasonal restricted gear areas, to focus on the hot spot interactions with sturgeon, and limited soak

times ranging from 24 to 72 hours, but mostly 48 to 72 hours.

The Committee also did recommend including alternatives for those smaller mesh sizes, so not just greater than 7-inch mesh sizes. Then in their respective June meetings, both Councils, Mid-Atlantic and New England reviewed these alternatives presented by the committees. Both Councils did note that before approving any alternatives, they wanted to meet with law enforcement.

The Law Enforcement Committees, to discuss the enforceability of these possible alternatives, and the feasibility, the realistic possibility of things such as soak time restrictions, if that would be possible or worth pursuing. We actually do have a meeting scheduled for early September to develop this further.

In terms of the two Council meetings, the Mid-Atlantic recommended continued development of these alternatives, both the restricted gear areas and soak trends, and did recommend looking at both 5 to 7 inches and greater than 7 inches, but not final approval, just continued development pending the discussion with law enforcement.

The New England Council approved the full range of monkfish alternatives, but held off on making any firm decisions for spiny dogfish until, again, after the meeting with law enforcement. We're holding off on any final decisions. We also announced in June that new bycatch estimates for Atlantic sturgeon in the gillnet fishery for the recent 5-year period has been exceeded or has exceeded the allowed levels under the Endangered Species Act, which will likely trigger the re-initiation of the 2021 Biological Opinion, which has initiated this action.

That said, the timelines are still being worked out, and re-initiation has not happened yet, so we are still held to those requirements of the original 2021 Biological Opinion, so we still need to follow through with this framework action and everything is still proceeding as planned. The only change in the timeline here would be that the Council's have decided that rather than taking final action on this in December, as originally planned.

We're going to maybe extend that and push final action to Spring 2024, maybe April, to better align with any new information coming from the re-initiation process, and help guide in the development of any measures to help restrict, and see what comes out of the re-initiation for the Bi-Op. Just a final note as we're going through this, everything I'm talking about with this framework is for federal waters, it's a Council action. But with dogfish specifically, a majority of the interactions with sturgeon have occurred in state waters. I think it's really important. There have been folks, obviously from the states at these meetings, at the Committees, but if the Commission were to take a complementary cooperative action in federal waters with this, it might be really beneficial, just because it only does so much if we're doing federal waters versus state waters. I think it would be worth the Board and Commission to evaluate and look and see if we want to take a cooperative action, specifically for dogfish. That is pretty much my update, I can take questions.

CHAIR MESERVE: Thank you, Cynthia, are there any questions for Cynthia about this joint action? Yes, John Clark.

MR. JOHN CLARK: I might have missed it, but what was the Bi-Op allowance of sturgeon catch, and how many were caught in the dogfish fishery?

CHAIR MESERVE: Can you provide those details for us, Cynthia?

MS. FERRIO: I don't have hard numbers. I can look it up. Yes, I can get back to you. I don't have the hard numbers in front of me. I know that dogfish was second highest in volume, but I don't have the numbers, or what the ITS was specifically.

CHAIR MESERVE: We can follow up with specific numbers, all right, John? Are there any other

questions? It sounds to me as though the Board will be discussing in May, in our spring meeting, the potential for complementary action, if the final action does occur at the Council's April meeting. More to come.

CONSIDER APPROVAL OF FISHERY MANAGEMENT PLAN REVIEW AND STATE COMPLIANCE FOR 2021-2022 FISHING SEASON

CHAIR MESERVE: We will move on next to the FMP Review and State Compliance for the 2021-2022 Fishing Year, and James is going to give us that presentation.

MR. JAMES BOYLE IV: Good morning, everyone. I will briefly go through the Spiny Dogfish FMP Review and State Compliance for the 2021 to 2022 fishing year. Just a quick overview. I'll start with a reminder of the status of the stock, based on the 2018 stock assessment update. Then I'll discuss the fishery, and wrap up with the state compliance, de minimis request and PRT recommendations.

The latest stock status information for management use still comes from the 2018 stock assessment update. The female spawning stock biomass was estimated to be over 106,000 metric tons in 2018, which was above the threshold of 79,644 metric tons. In 2017 fishing mortality on exploitable females was estimated to be 0.202, and has remained below the threshold level of 0.244 since 2005.

A research track assessment was recently completed at the end of 2022, and a management track assessment is scheduled to be peer reviewed in September of this year. In terms of the commercial quota and landings, the fishing year ran from May 1, 2021 to April 30 of 2022. The quota was 29.56 million pounds. The trip limit was 6,000 pounds for the northern region states, and commercial landings in total were approximately 9.87 million pounds.

This is about a 23 percent decrease from the fishing year 2020 to 2021. Recreational harvest and dead discards, which were reported by calendar year rather than fishing year, both increased harvest with approximately 471,864 pounds in 2021, which is about a 79 percent increase from 2020. The dead discards were estimated to be about 2.6 million pounds, which is a 52 percent increase from 2020. All regions and states harvested within their quota, and all states implemented regulations consistent with the requirements of the FMP, with one minor note that I'll get into in the PRT recommendations.

Under the spiny dogfish FMP, a state qualifies for de minimis status on request if its landings are less than 1 percent of the coastwide landings. New York and Delaware have both requested de minimis status, and Delaware qualified by harvesting less than 1 percent, whereas New York harvested just over with 1.14 percent of the total landings.

There are a few PRT recommendations. The first is that while every state did satisfy the weekly reporting requirement through either SAFIS or NOAA Fisheries, some states did not provide their reporting regulations that show their requirement, and the PRT just requests those going forward. The PRT also noted a concern that Connecticut's regulations are not consistent with the finning prohibition required under Addendum V.

Specifically, Addendum V states that "Removing any fin of spiny dogfish at sea is prohibited, including the tail," and all spiny dogfish must be landed with fins naturally attached to the corresponding carcass. However, Connecticut's wording is, the possession of spiny dogfish fins in the absence of the fish from which removed is prohibited.

The PRT believes that this language is inconsistent, and allows the fins to be detached at sea, as long as the body of the fish is also maintained in possession. I have spoken with Connecticut about this issue, and they are planning on amending their regulations accordingly in the fall, to be implemented during the current fishing year.

Furthermore, the PRT notes that the FMP gives a fairly loosely defined definition of biomedical supply for exempted fishing permits, and the states are reporting harvest under a variety of research and education purposes. While the reported harvest under these permits is well below the 1,000 fish limit, the PRT may require Board input on what types of harvest count toward this limit in the future, should any state start to near that limit.

Finally, the PRT recommends the Board consider the purpose of the de minimis provisions as they are currently written, given that all states must satisfy the only monitoring requirement to report annual landings, regardless of de minimis status. With that the Board action to consider today is the approval of the FMP Review and State Compliance for the 2021/2022 Fishing Year, as well as the de minimis requests for both New York and Delaware. With that I'll be happy to take any questions.

CHAIR MESERVE: Are there questions? I guess I have one that I would start with. New York's landings in a single year are not within the de minimis percentage, but if you looked at the three-year average would they fall? The Board may remember that there are new guidelines on de minimis that are expected to be adopted into FMPs in the future that establish using a three-year average as the basis.

MR. BOYLE: Yes, if we were going by a three-year average, as stated by the Commission's de minimis policy, they would qualify.

CHAIR MESERVE: I think that is something we could consider in New York's request for de minimis. Are there any questions? Sounds like Connecticut is aware of the issue with the finning, and can take care of that in a timely manner.

DR. JUSTIN DAVIS: Yes, thank you, Madam Chair, yes that was just an oversight in our regulation language, and thankfully we have declaration authority to do anything that is an FMP mandate, so that is a really simple process and we'll correct it pretty quick.

CHAIR MESERVE: Great, thank you for that, Justin. Any questions? Mike Luisi.

MR. MICHAEL LUISI: No questions, I can make a motion if you prefer, I don't know if staff prepared one.

CHAIR MESERVE: Yes, just one moment to get that up. Go ahead, please.

MR. LUISI: Okay, the motion, **move to approve the Fishery Management Plan Review, State Compliance Reports and de minimis requests for Delaware and New York for the 2021-2022 Fishing Year.**

CHAIR MESERVE: Is there a second to that? Ray Kane. **Any Board discussion on this motion? Seeing none; is there any opposition to the motion? Seeing none; we will consider that approved unanimously.**

ADJOURNMENT

CHAIR MESERVE: That brings us to any other business. Is there any other business to come before the Board today? No, if not you've done a lovely job staying on track here, and we will take a motion to adjourn. So moved, all right, thank you.

(Whereupon the meeting adjourned at 9:00 a.m. on Thursday, August 3, 2023)

Atlantic States Marine Fisheries Commission

Atlantic Striped Bass Management Board

October 18, 2023
2:00 – 5:00 p.m.
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 *(M. Gary)*	2:00 p.m.
2.	Board Consent • Approval of Agenda • Approval of Proceedings from August 2023	2:05 p.m.
3.	Public Comment	2:10 p.m.
4.	Consider Approval of Draft Addendum II for Public Comment *(T. Kerns)* **Action** • Technical Committee Report	2:20 p.m.
5.	Albemarle-Roanoke Atlantic Striped Bass Management Update (*C. Batsavage*)	4:45 p.m.
6.	Other Business/Adjourn	4:55 p.m.

The meeting will be held at Beaufort Hotel (2440 Lennoxville Road, Beaufort, North Carolina; 252.728.3000) and via webinar; click here for details

MEETING OVERVIEW

Atlantic Striped Bass Management Board
October 18, 2023
2:00 – 5:00 p.m.
Hybrid

Chair: Marty Gary (NY) Assumed Chairmanship: 01/22	Technical Committee Chair: Nicole Lengyel Costa (RI)	Law Enforcement Committee Rep: Sgt. Jeff Mercer (RI)
Vice Chair: Megan Ware (ME)	Advisory Panel Chair: Louis Bassano (NJ)	Previous Board Meeting: August 1, 2023
Voting Members: ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, DC, PRFC, VA, NC, NMFS, USFWS (16 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from August 1, 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. Draft Addendum II (2:20-4:45 p.m.) Action

Background

- In May 2023, the Board initiated Addendum II to Amendment 7 to address stock rebuilding beyond 2023. The Draft Addendum considers 2024 management measures projected to achieve the fishing mortality target in 2024.
- The PDT drafted an addendum document and presented it to the Board in August. As specified by the Board, the draft addendum included options to modify the ocean recreational slot limit paired with harvest season closures, options to implement a maximum size limit (and potentially modify minimum size/bag limits) for Chesapeake Bay recreational fisheries, and options to implement a maximum size limit for commercial fisheries.
- The Board modified the draft addendum to remove the recreational seasons, added a range of maximum recreational size limits in the Bay, added commercial quota changes, and a gill net exemptions. These changes required additional PDT and TC work.
- The TC met to provide recommendations on the spawning potential analysis to review commercial quotas associated with a maximum size limit (**Briefing Materials**).
- The PDT drafted a revised addendum based on Board feedback (**Briefing Materials**)

- The PDT also discussed other potential options, which could be added to the draft addendum document by the Board **(Supplemental Materials)**.

Presentations

- Overview of TC report
- Overview of Draft Addendum II for public comment by T. Kerns

Board actions for consideration at this meeting

- Approve Draft Addendum II for public comment.

5. Albemarle-Roanoke Atlantic Striped Bass Management Update (4:45-4:55p.m.)

Background

- The Albemarle/Roanoke (A/R) striped bass stock is jointly managed by the NCDMF and NC Wildlife Resources Commission (NCWRC) with management responsibilities for Albemarle Sound and its tributaries falling under NCDMF and the Roanoke River management responsibilities falling under NCWRC
- The most recent A/R striped bass stock assessments showed the stock continues to decline, and continued poor juvenile recruitment.
- As a result, NC is implementing a harvest moratorium via adaptive management measures under Amendment 2 of the NC Estuarine Striped Bass FMP starting this fall, meaning the Albemarle Sound fishery will not reopen in October (**Briefing Materials**)

Presentations

- C. Batsavage will provide an update on the Albemarle/Roanoke stock management

Board actions for consideration at this meeting

- None

6. Other Business/Adjourn (5:00 p.m.)

Atlantic Striped Bass

Activity level: Medium

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

Committee Task List

- TC – Develop alternatives for bag and size limit analysis for effort controls
- TC-SAS – Prepare for 2024 stock assessment update

TC Members: Michael Brown (ME), Kevin Sullivan (NH), Gary Nelson (MA), Nicole Lengyel Costa (RI), Kurt Gottschall (CT), Caitlin Craig (NY), Brendan Harrison (NJ), Tyler Grabowski (PA), Margaret Conroy (DE), Alexei Sharov (MD), Luke Lyon (DC), Ingrid Braun (PRFC), Joshua McGilly (VA), Charlton Godwin (NC), Jeremy McCargo (NC), Peter Schuhmann (UNCW), Tony Wood (NMFS), Steve Minkkinen (USFWS), John Ellis (USFWS), Katie Drew (ASMFC)

SAS Members: Michael Celestino (NJ, Chair), Gary Nelson (MA), Alexei Sharov (MD), Brooke Lowman (VMRC), John Sweka (USFWS), Margaret Conroy (DE), Katie Drew (ASMFC)

Tagging Subcommittee (TSC) Members: Angela Giuliano (MD), Beth Versak (MD), Brendan Harrison (NJ), Chris Bonzek (VIMS), Gary Nelson (MA), Ian Park (DE), Jessica Best (NY), Josh Newhard (USFWS), Julien Martin (USGS), Katie Drew (ASMFC)

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

ATLANTIC STRIPED BASS MANAGEMENT BOARD

The Westin Crystal City
Arlington, Virginia
Hybrid Meeting

August 1, 2023

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INDEX OF MOTIONS

9. **Main Motion**

Move to remove Options sets B and C from Section 3.2.1 (Options for Implementing a Commercial Maximum Size Limit) from Draft Addendum II. Task the PDT with conducting spawning potential analysis to determine quota reductions, using 2022 as the starting point, associated with each Option in Option sets D (Ocean Commercial Maximum Size Limits) and E (Chesapeake Bay Commercial Maximum Size Limits). Add a new Option Set to Section 3.2.1 containing the following options for reductions to commercial quotas:

Option A. Status Quo. All commercial fisheries maintain 2017 size limits and (or Addendum VI approved CE plans) and Amendment 7 quotas (and Addendum VI approved CE-adjusted quotas).

Option B. Commercial Quota Reductions. Quotas for all commercial fisheries will be reduced by 14.5% from 2022 commercial quotas (including quotas adjusted through approved Addendum VI CE plans) (Page 39). Motion by Justin Davis; second by Mike Armstrong.

Motion to Substitute

Move to substitute to remove Option B2 from Section 3.2.1 (Page 44). Motion by Emerson Hasbrouck; second by Craig Pugh. Motion fails (Roll Call: In Favor – RI, NY, DE; Opposed – NH, ME, MD, VA, NC, PA, NOAA, USFWS, NJ, CT, MA, PRFC; Abstentions – DC; Null – None) (Page 45).

10. **Main Motion**

Move to remove Options sets B and C from Section 3.2.1 (Options for Implementing a Commercial Maximum Size Limit) from Draft Addendum II. Task the PDT with conducting spawning potential analysis to determine quota reductions, using 2022 as the starting point, associated with each Option in Option sets D (Ocean Commercial Maximum Size Limits) and E (Chesapeake Bay Commercial Maximum Size Limits). Add a new Option Set to Section 3.2.1 containing the following options for reductions to commercial quotas:

Option A. Status Quo. All commercial fisheries maintain 2017 size limits and (or Addendum VI approved CE plans) and Amendment 7 quotas (and Addendum VI approved CE-adjusted quotas).

Option B. Commercial Quota Reductions. Quotas for all commercial fisheries will be reduced by 14.5% from 2022 commercial quotas (including quotas adjusted through approved Addendum VI CE plans).

Motion to Amend

Move to amend to add an option to require maximum mesh sizes for gillnets and exempt them from maximum size limits (Page 45). Motion by John Clark; second by Dennis Abbott. Motion passes (Roll Call: In Favor – NH, ME, DE, VA, PA, NOAA, USFWS, NJ, CT, MA, RI, PRFC; Opposed – MD, NC, NY; Abstentions – DC; Null – None) (Page 47).

Main Motion as Amended

Move to remove Options sets B and C from Section 3.2.1 (Options for Implementing a Commercial Maximum Size Limit) from Draft Addendum II. Task the PDT with conducting spawning potential analysis to determine quota reductions, using 2022 as the starting point, associated with each Option in Option sets D (Ocean Commercial Maximum Size Limits) and E (Chesapeake Bay Commercial Maximum Size Limits). Add an option to require maximum mesh sizes for gillnets and exempt them from maximum size limits. Add a new Option Set to Section 3.2.1 containing the following options for reductions to commercial quotas:

Option A. Status Quo. All commercial fisheries maintain 2017 size limits and (or Addendum VI approved CE plans) and Amendment 7 quotas (and Addendum VI approved CE-adjusted quotas).

Option B. Commercial Quota Reductions. Quotas for all commercial fisheries will be reduced up to 14.5% from 2022 commercial quotas (including quotas adjusted through approved Addendum VI CE plans).

Motion to Amend
Move to amend to replace "by" with "up to" in Option B (Page 48). Motion by Pat Geer; second by Raymond Kane. Motion passes (Roll Call: In Favor – NH, ME, DE, MD, VA, NC, PA, NOAA, USFWS, NJ, NY, CT, MA, RI, PRFC; Opposed – None; Abstentions – DC; Null – None) (Page 48).

Main Motion as Amended
Move to remove Options sets B and C from Section 3.2.1 (Options for Implementing a Commercial Maximum Size Limit) from Draft Addendum II. Task the PDT with conducting spawning potential analysis to determine quota reductions, using 2022 as the starting point, associated with each Option in Option sets D (Ocean Commercial Maximum Size Limits) and E (Chesapeake Bay Commercial Maximum Size Limits). Add an option to require maximum mesh sizes for gillnets and exempt them from maximum size limits. Add a new Option Set to Section 3.2.1 containing the following options for reductions to commercial quotas:

Option A. Status Quo. All commercial fisheries maintain 2017 size limits and (or Addendum VI approved CE plans) and Amendment 7 quotas (and Addendum VI approved CE-adjusted quotas).

Option B. Commercial Quota Reductions. Quotas for all commercial fisheries will be reduced up to 14.5% from 2022 commercial quotas (including quotas adjusted through approved Addendum VI CE plans).

Motion to Amend
Move to amend to add Option C that would reduce commercial landings up to 14.5% from 2022 commercial landings (Page 48). Motion by David Sikorski; second by Mike Armstrong. Motion fails (Roll Call: In Favor – CT, NH, PA; Opposed – ME, MD, VA, NC, DE, NJ, NY, MA, RI, PRFC; Abstentions – DC, NOAA, USFWS; Null – None) (Page 49).

Main Motion as Amended
Move to remove Options sets B and C from Section 3.2.1 (Options for Implementing a Commercial Maximum Size Limit) from Draft Addendum II. Task the PDT with conducting spawning potential analysis to determine quota reductions, using 2022 as the starting point, associated with each Option in Option sets D (Ocean Commercial Maximum Size Limits) and E (Chesapeake Bay Commercial Maximum Size Limits). Add an option to require maximum mesh sizes for gillnets and exempt them from maximum size limits. Add a new Option Set to Section 3.2.1 containing the following options for reductions to commercial quotas:

Option A. Status Quo. All commercial fisheries maintain 2017 size limits and (or Addendum VI approved CE plans) and Amendment 7 quotas (and Addendum VI approved CE-adjusted quotas).

Option B. Commercial Quota Reductions. Quotas for all commercial fisheries will be reduced up to 14.5% from 2022 commercial quotas (including quotas adjusted through approved Addendum VI CE plans). Motion passes (Roll Call: In Favor – NH, ME, DE, MD, VA, NC, PA, NOAA, USFWS, NJ, CT, MA, RI, PRFC; Opposed

– NY; Abstentions – DC; Null – None) (Page 50).

11. **Move to add the at-sea filleting options from the PDT memo** (Page 50). Motion by Justin Davis; second by Mike Armstrong. Motion passes by consent (Page 51).

12. **Move to add an option to the addendum that prevents the alteration of the length of a striped bass prior to landing at the dock** (Page 52). Motion by Roy Miller; second by Dennis Abbott. Motion fails (Roll Call: In Favor – NH, DE, RI; Opposed – ME, VA, NC, PA, NJ, NY, CT, MA, PRFC, MD; Abstentions – DC, NOAA, USFWS; Null – None) (Page 53).

13. **Move to adjourn** by consent (Page 60).

ATTENDANCE

Board Members

Megan Ware, ME, proxy for P. Keliher (AA)
Rep. Allison Hepler, ME (LA)
Cheri Patterson, NH (AA)
Doug Grout, NH (GA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)
Mike Armstrong, MA, proxy for D. McKiernan (AA)
Raymond Kane, MA (GA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)
Jason McNamee, RI (AA)
David Borden, RI (GA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)
Justin Davis, CT (AA)
Bill Hyatt, CT (GA)
Craig Miner, proxy for Rep. Gresko (LA)
Jesse Hornstein, NY, proxy for B. Seggos (AA)
Emerson Hasbrouck, NY (GA)
Joe Cimino, NJ (AA)
Jeff Kaelin, NJ (GA)
Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)
Tim Schaeffer, PA (AA)
Loren Lustig, PA (GA)
John Clark, DE (AA)
Roy Miller, DE (GA)
Craig Pugh, DE, proxy for Rep. Carson (LA)
Michael Luisi, MD, proxy for L. Fegley (AA Acting)
Robert T. Brown, MD, proxy for R. Dize (GA)
David Sikorski, MD, proxy for Del. Stein (LA)
Pageer proxy for J. Green (AA)
Chris Batsavage, NC, proxy for K. Rawls (AA)
Chad Thomas, NC, proxy for Rep. Wray (LA)
Marty Gary, PRFC
Dan Ryan, DC, proxy for R. Cloyd
Max Appelman, NMFS
Rick Jacobson, US FWS

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

Ex-Officio Members

Nicole Lengyel Costa, Technical Committee Chair
Jeffrey Mercer, Law Enforcement Representative
Mike Celestino, Stk. Assmnt. Subcommittee Chair

Staff

Bob Beal
Toni Kerns
Tina Berger
Katie Drew
Alex DiJohnson
James Boyle
Caitlin Starks
Emily Franke
Tracey Bauer
Madeline Musante
Jainita Patel
Kristen Anstead
Jeff Kipp
Pat Campfield
Kurt Blanchard

Guests

Dave Anderson, The Fisherman Mag.
Pat Augustine
Andrew Aus
Meredith Bartron, US FWS
Rob Beal, ME Marine Patrol
Rick Bellavance, Priority Charters. LLC
John Bello, VA Saltwater Sportfishing Assn
Sue Bertoline
Jessica Best, NYS DEC
Alan Bianchi, NC DMF
Fred Bird, Congressional Sportsmen Foundation
Kalil Boghdan
Jason Boucher, NOAA
Ingrid Braun, PRFC
Matt Broderick, The Fisherman Mag.
Jeffrey Brust, NJ DFW
Francis Buckley, Rowan University
Ron Buffington, JLS Light Tackle Guide
Scot Calitri, NH F&G
Craig Cantelmo, Van Staal

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

Guests (continued)

Nicole Caudell, MD DNR
Benson Chiles, Chiles Consulting
Blane Chocklett
Matthew Cieri, ME DMR
Haley Clinton, NC DEQ
Richard Cody, NOAA
Allison Colden, CBF
Margaret Conroy, DE DNREC
Heather Corbett, NJ DEP
Caitlin Craig, NYS DEC
Scott Curatolo-Wagemann, Cornell
Sarah Cvach, DM DNR
Bob Danielson
Rachel, Dean
Jeff Deem, VMRC
Patrick Denno
Greg DiDomenico
Evan Dintaman
Russell Dize, MD (GA)
Douglas Dockery, Cape Cod Salties Sportfishing Club
Steve Doctor, MD DNR
C. Dollar, CCA
Eric Durell, MD DNR
Wes Eakin, NY DEC
Mark Eustis
Julie Evans, Evans Communications
Peter Fallon, ME Assn of Charterboat Captains
Jared Flowers, GA DNR
Jennifer Foss
Thomas Fote, Jersey Coast Anglers Association
Tony Friedrich, ASGA
Tom Fuda
Pat Gallen
Alexa Galvan, VMRC
Paul Genovese, MD DNR
Lewis Gillingham, VMRC
Angela Giuliano, MD DNR
Joseph Grist, VMRC
Brian Hardman, MD Charter Boat Assn
Brendan Harrison, NJ DEP
Georgette Henrich, Plum Island Surfcasters
Daniel Herrick, MD DNR
Jaclyn Higgins
Jeffrey Horne, MD DNR
Tim Horner
Harry Hornick, MD DNR
Jesse Howe, CCA MD
Jim Hutchinson, The Fisherman
James Jewkes
Yan Jiao, Virginia Tech
Gregg Kenney, NYE DEC
Aaron Kornbluth, Akorn Environmental
Thomas Kosinski
Kris Kuhn, PA FBC
Josh Lashley
Sarah Lazo, NOAA
William Lucey, Save the Sound
Chip Lynch, NOAA
Pam Lyons Gromen, Wild Oceans
Shanna Madsen, VMRC
Jill Maganza-Ruiz, November Rain Charters
Jerry Mannen Jr.
Casey Marker, MD DNR
Thomas Matulonis, Menhaden Defenders
Genine McClair, MD DNR
Brian McCormick
Joshua McGilly, VMRC
Robert McGinness
Daniel McKiernan, MA DMF
Kevin McMenamin, Annapolis Anglers Club
Meredith Mendelson, ME DMR
Nichola Meserve, MA DMF
Steve Meyers
Michael Mike
Steve Minkkinen, US FWS
Kathy Mitchell
Chris Moore, CBF
Brandon Muffley, MAFMC
Timothy Mugherini
Brian Neilan, NJ DEP
Ted Nesius
Robert Newberry, Delmarva Fisheries Assn Inc
Josh Newhard, US FWS
Thomas Newman
Dave Nolan
Tyler O'Neill
George O'Donnell, MD DNR
Zane Oliver
Derek Orner, NOAA
Kenneth Ostrand, US FWS
Katherine Papercosta, NOAA
Patrick Paquette
Ian Park, DE DFW
Joshua Parker
Robert Pellegrino, Plum Island Surfcasters
Michael Pirri
Nicole Pitts
Will Poston, ASGA
William Pruit, MD Charter Boat Assn
Jill Ramsey, VMRC
Story Reed, MA DMF
Harry Rickabaugh, MD DNR
Steven Robichaud
Cody Rubner
Patrick Rudman
Daniel Ryan, DOEE
Linnea Saby, Senate Environment and Public Works
Zach Schuller
Alexandra Schwaab, AFWA
Tara Scott, NOAA
Christopher Scott, NYS DEC
Buddy Seigel, ACSA
Ross Self, SC DNR
McLean Seward, NC DMF
Paul Shafer, Manasquan Fishing Club
Alexei Sharov, MD DNR
Greg Shute, iFishMD.com Charters
Jeffrey Silver
Ethan Simpson, VMRC
Amanda Small, MD DNR

Guests (continued)

Michael Smolek, Upper Bay Charter Captains Assn
Somers Smott, VMRC
Ross Squire, NYCRF
Renee St. Amand, CT DEEP
Michael Stangl, DE F&W
Joel Stoehr
ElizaBeth Streifeneder, NYS DEC
Kevin Sullivan, NH F&G
John Sweka, US FWS
Mike Tambone
Colin Temple
Chad Thomas, NC Marine & Estuary Foundation
David Tolbert
Michael Toole, Plum Island Surfcasters
Jim Uphoff, MD DNR
Taylor Vavra, Stripers Forever
Beth Versak, MD DNR
Mike Waine, ASA
Craig Weedon, MD DNR
Kyle White
Angel Willey, MD DNR
Brian Williams, Badfish Fishing Charters
Charles Witek
Michael Woods, Backcountry Hunters & Anglers
Chris Woodward
Emerald Wright, NH F&G
Jordan Zimmerman, DE DFW
Erik Zlokovitz, MD DNR
Renee Zobel, NH F&G

The Atlantic Striped Bass Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia, a hybrid meeting, in-person and webinar; Tuesday, August 1, 2023, and was called to order at 1:45 a.m. by Chair Martin Gary.

CALL TO ORDER

CHAIR MARTIN GARY: Good afternoon, everybody. Welcome to ASMFCs Atlantic Striped Bass Management Board Meeting. My name is Marty Gary; I'm your Chairman from the Potomac River Fisheries Commission. Our Vice-Chair is Megan Ware from the state of Maine. Our Technical Committee Chair is Nicole Lengyel Costa from Rhode Island.

Our AP Chair is Lou Bassano from New Jersey, and our Law Enforcement representative is Jeff Mercer from Rhode Island. I'm joined at the front table to my right by Toni Kerns, and Dr. Katie Drew. As Toni just mentioned, notably absent today is Emilie Franke, who is out on maternity leave, and again, congratulations to Emilie and here husband on the birth of their new child.

APPROVAL OF AGENDA

CHAIR GARY: We'll go ahead and move into today's meeting. The first order of business is Approval of the Agenda. What I would like to say up front is, we did have a request to modify the agenda and shift the order of issues in the agenda. Because of the background of the draft addendum, and the information relates both to the emergency action of the addendum, we were asked to go first over the background section of the draft addendum, and then go to the emergency action, then finish the draft addendum.

That change has been suggested, and I am, as Chair, inclined to accept it. But if there is any opposition, we will consider it. Is there any opposition to that modification in the agenda? Seeing none; are there any other modifications, additions to the agenda today? Seeing none; the agenda is approved by consent.

APPROVAL OF PROCEEDINGS

CHAIR GARY: Next, we'll move into the approval of the proceedings from May, 2023. Are there any edits to the proceedings from May, 2023? Seeing none; we'll approve those proceedings from May, 2023.

PUBLIC COMMENT

CHAIR GARY: Next, we'll move into public comment. These are for items that are not on the agenda, and I'm going to look for raised hands in the audience.

I'll ask Toni to look online, to see if there are any raised hands for public comment for items that are not part of our agenda today. I do not see any raised hands in the audience, are there any online, Toni? None online, okay.

CONSIDER APPROVAL OF FISHERY MANAGEMENT PLAN REVIEW AND STATE COMPLIANCE FOR 2022 FISHING YEAR

CHAIR GARY: Our next item on the agenda is Consider Approval of Fishery Management Plan Review and State Compliance for the 2022 Fishing Year. Toni will present the FMP Review for 2022, which will include Plan Review Team recommendations, and after that presentation the Board will need to determine whether there is any direction needed to be given to the PRT recommendations, and we'll consider approval of the FMP Review. Toni, I'll turn it to you.

MS. TONI KERNS: The Striped Bass Plan Review Team reviewed state compliance reports and compiled the FMP Review for the 2022 fishing year. This was included in the supplemental materials for the Board. Today, I'm going to highlight some of the key points that were in the document. There is a lot of detail in the FMP review, but I will touch on the stock status, the status of the FMP, management measures, and the PRT comments and recommendations.

As Marty just noted, our action will be considering approval of the FMP review and state compliance reports at the end. For the status of the stock, there was a 2022 stock assessment update. The striped

bass stock is overfished, but overfishing is not occurring. We used data through 2021, and the next stock assessment update is in progress, and will be delivered in 2024.

This figure shows the spawning stock biomass in blue, and recruitment as the reddish bars. You can see that female SSB has declined since the time series high in 2003, and has been below the SSB threshold since 2013. For Age 1 recruitment there has been a period of low recruitment since about 2005.

We have had some strong year classes, the ’11, ’14 and ’15, and then some sort of slightly above average in 2018 as well. For fishing mortality, you can see that F was estimated to be at or above the F threshold, below the F threshold, which indicates overfishing is not occurring. The 2022 was the third year of Addendum VI implementation.

Addendum VI measures were designed to reduce total removals by 18 percent relative to the 2017 levels. I’ll go through how well we’re doing with that in a later slide. As you all know, we had some commercial reductions, as well as recreational reductions. The recreational slot limit was changed to 28 to less than 35, at one fish per day in the ocean, and the Bay fishery was set at 18 for a minimum size limit for one fish per day.

Moving on to the status of the fishery. This fishery shows the performance over time by sector. At the bottom is the commercial harvest in blue, the commercial discards are shown in red, and they’ve been relatively stable over time. This is due to impacts of commercial quotas. Most removals are coming from the recreational sector.

The recreational harvest is in green, and the recreational release mortality is in purple. Total recreational removals account for 90 percent of all removals, and total commercial removals account for 10 percent of the removals. In 2022 striped bass removals were estimated at 6.8 million fish, which is a 32 percent increase from 2021.

Here on the screen is a proportion of removals by sector over the past couple of years, 2022 is the bottom row, and the harvest is 9 percent. Dead discards are 1 percent for commercial. For recreational it was 51 percent harvest and 39 percent release mortality. For the commercial fishery, and I apologize, that should be 2022 at the top. Harvest was 4.28 million pounds in 2022. This is a 7 percent decrease by weight from 2021. For commercial utilization of the quota, the ocean fishery utilization increased to 79 percent in 2022, from 76 in ’21, and the Chesapeake Bay utilization of their quota decreased to 80 percent from 83 percent in 2021. For the recreational fishery, total recreational catch coastwide was estimated at 33.1 million fish in 2022, which is a 38 percent increase from ’21.

Under the same management measures from 2020 to 2021, total recreational harvest in 2022 increased to 3.4 million fish. It is an 88 percent increase by number, relative to 2021. This increase was likely due to the increased availability of the 2015-year class in the ocean slot. New Jersey landed the largest portion of recreational harvest, followed by New York, Maryland, and Massachusetts.

The proportion of coastwide recreational harvest in the Bay was estimated at 20 percent in 2022, compared to 35 percent in ’21. By weight, the proportion of recreational harvest in the Bay was estimated at 9 percent in ’22, compared to 20 percent in ’21. The decrease in the proportion of recreational harvest in the Bay, and therefore an increased proportion of ocean harvest, aligns with the availability of the strong 2015-year class.

The vast majority of recreational striped bass catch, over 90 percent, is released alive due to the angler preference or regulations. The stock assessment assumes, based on the previous studies that 9 percent of those fish released alive will die as a result of being caught. In 2022 recreational anglers caught and released an estimated 29.6 million fish, of which 2.7 million are assumed to have died.

This is a 3 percent increase in live releases from ’21, and in 2022 the combined private and shore modes

of the recreational striped bass fishery accounted for 95 percent of recreational removals, and the for-hire component accounted for 5 percent. Coastwide in 2022, private vessel and shore mode recreational removals increased by 42 percent, while the for-hire removals decreased by 7 percent.

This trend differs by region and by mode. The PRT notes that there are several factors that contribute to trends in the recreational catch and effort, including year class availability, overall stock abundance, nearshore availability of bait and striped bass, as well as angler behavior. The relatively strong 2015-year class moving into the ocean and becoming available within that ocean slot is likely the primary driver of this increased recreational catch in the ocean for '22.

Angler effort and behavior is also an important to consider when there are more fish available in the fishery, effort can often increase in response to that. Moving into the status of our management measures. As I said before, we look at the performance of the measures from Addendum VI, relative to the coastwide harvest in 2017, and in 2022 only a 3.5 percent reduction in total removals coastwide in numbers of fish was realized, relative to total removals in 2017.

We believe that this is due to the increase in the ocean recreational harvest in 2022, with that 2015-year class. The report also includes the state-by-state realized change in the recreational removals. Here on the screen, you can see the realized changes from 2017 to 2022 for each state. It shows the predicted reduction in removals from the state conservation equivalency plans where applicable. The PRT notes that there are differences in performance, and those are influenced by many factors. That includes changes in effort, fish availability, year class and environmental factors. Some of the states saw increased recreational releases, which contributes to the states realizing a less than predicted reduction.

The PRT also notes that there is a time of year-to-year availability, even under consistent regulations. The report also includes state-by-state percent change in commercial harvest by weight from 2017 to 2022, and percent change in commercial quota implemented through Addendum VI, including the conservation equivalency plans that went along with it.

The realized changes shown here are for 2022, compared to 2017, which are different than the realized changes comparing 2020 to 2017, because commercial harvest levels have changed. You can see they vary anywhere from 18 to 1.8 percent. As of May, 2022, the new Amendment 7 recruitment trigger is effective.

That trigger is that if any of the four JAIs used in the stock assessment model, those include New York, New Jersey, Maryland and Virginia's, show an index value that is below 75 percent of all values from 1992 to 2006. That is the high recruitment period. If those values are below for three consecutive years, then an interim F target and an interim F threshold that is calculated using the low recruitment assumption will be implemented, and the management triggers will be reevaluated using those interim reference points.

The Maryland JAI meets that trigger criteria. We are actually already using this low recruitment scenario, so there isn't a change that we have to do, and the stock assessment for 2024 is being conducted using that low recruitment assumption. The figure just shows the four JAIs. Starting from the top left is New York.

Their JAI has been above the trigger level for the past three years. New Jersey is top right, and that trigger has been below for the last two years, and then on the bottom Maryland, with their, it's actually four years below the trigger level, and Virginia was the lowest trigger level for the past two years. In 2022, all states have implemented a management and monitoring program that is consistent with the provisions of the FMP.

Last year Emilie went through three inconsistencies that were found by the PRT but the Board did not raise any concerns with these, so it was noted that we wouldn't go over them with the Board, but they

still are there. They are listed in the document. There were no de minimis requests from the states.

The PRT recommends that the Board task the PRT with review of the commercial tagging program at regular intervals, and they would like to start to do this for next year, to review the program components, such as biological metrics used to allocate the tags. Unless I hear the Board does not want the PRT to do this, the PRT will go ahead and carry forward with this action, just to be super clear.

Then also, the PRT also noted that for the incidental catch requirements, many states have implemented the provision as written or very close to, as written in Amendment 7. Some of the states referred to alternative regulatory language, instead of having specific language related to striped bass, it's language that is related to other species as well. But that language notes that anglers can only take or catch striped bass via methods and gear that are legally allowed. It doesn't specifically say that striped bass must be returned to the water unharmed, and that is part of the language is the incidental catch requirement.

The PRT doesn't necessarily think that it's a compliance issue for these states that have done this, but they just wanted to make sure the Board was aware. If the Board has any issues, then the PRT can reach back out to those states. But if there is no concern by the Board, then we will just note it and then move on from it in the future. It's really just about whether or not it specifically says striped bass must be returned to the water unharmed.

Then lastly, the PRT notes, recommends that New York may want to consider a change to their Hudson River monitoring program to provide an index of relative abundance, to characterize the Hudson River stock. This was a high priority research recommendation of SAW 66, and I think would benefit future stock assessments, if New York is able to do this. I will take any questions.

CHAIR GARY: Questions for Toni on the review, start with Loren Lustig.

MR. LOREN W. LUSTIG: Thank you, Toni, for a very, very interesting report. My question relates to whether the PRT considered the impact of poaching, and what sorts of totals might be suggested for that illegal activity.

MS. KERNS: I believe Jeff Mercer is on the line, and I know that Emilie had a conversation with the Law Enforcement Committee on the ability to make any recommendations relative to compliance. I'm going to see if Jeff can speak to that. I was not a part of that conversation, so it is a little tricky for me to respond.

MR. JEFFREY MERCER: Yes, certainly striped bass poaching is a big concern. At our last meeting we discussed measures to try to quantify that. Some states do have the ability to pull species-specific records out of their records management systems, other states don't. That is something that we are currently working on to try to quantify the impact of poaching.

CHAIR GARY: Loren, did that answer your question?

MR. LUSTIG: Yes, thank you, Mr. Chair.

CHAIR GARY: Additional questions for Toni. Adam.

MR. ADAM NOWALSKY: As part of the review that was presented here today, you went over the JAI triggers as well. I was wondering if the PRT has had any discussion about the merits of changed migratory patterns. Clearly, you've seen with the winter tagging study where that changed location has provided dramatically different results, since that location occurred since the years prior to that. I was just wondering if the PRT has begun discussing any similar habitat changes in climate that are affecting those JAI indices, and if not what this Board could potentially do to seek some answers about that moving forward.

MS. KERNS: The PRT has not, Adam, but we could get TC.

DR. KATIE DREW: Yes, I think it might be a better role for the TC to look at that. I will say, you know when

they are available in the ocean versus inshore/offshore, further south/further north. They also have to go back to the same places to spawn. These indices are designed to cover the existing spawning grounds and the existing juvenile habitat. I think, you know we could look for, do we see signals of recruitment outside of these areas in any way?

But I think these surveys are designed to try to pick that up, so it's not necessarily a matter of these surveys missing them, it's more they are probably reflecting potential impacts of climate change on the ability to have a successful year class is sort of captured already by those indices. But we could look into, either for this assessment or for the benchmark assessment, of looking outside the existing survey areas, to try to go see if they are in different areas that aren't being picked up by the survey, which I think is maybe your concern.

MR. NOWALSKY: What would be the appropriate time to make that request? Is that something that would come apart, why I assume this Board would have to approve TORs at some point for that. Is that where that should come about, or where would you recommend that request be made in tasking to the TC or other bodies.

DR. DREW: I think it depends a little bit on your urgency. I know we do have the assessment update next year. I think there is already a lot of work on the Stock Assessment Team's plate for that assessment update, and for any kind of follow up work. This, depending on how urgent you think it is.

It might be better to address that specifically through the benchmark and a term of reference. We can make a note that you're interested in this and sort of if time allows. prior to that we can see if we can get something done. However, if you think this is a very high issue of concern for you, then we can maybe try to prioritize that for this upcoming assessment update.

MR. NOWALSKY: I would accept a note, and I'll continue this discussion with other Commissioners and decide how we want to proceed on a more formal basis.

CHAIR GARY: Additional questions for Toni on the Plan Review? Toni, did we get the necessary clarity or feedback? I guess there were a couple of items that you wanted to be sure of, but I didn't see any opposition.

MS. KERNS: I have the clarity, unless someone raises a concern on the tagging, the PRT will work on that for next year, and I don't think that there was concern on the language, so I think we're good there. We'll just need to have a motion to consider approval of the FMP Review and state compliance reports, if somebody wants to make that motion.

CHAIR GARY: Before we take that motion, because we are going to be approving this document. We have one person from the public who has raised his hand and we have a lot of ground to cover today, but to be consistent, I'm going to go ahead and let this one person make comment, I'm sorry it's a question. The name of the person is?

MS. KERNS: Colin Temple.

CHAIR GARY: Mr. Temple, if you could ask your question and be as concise as possible, thank you.

MR. COLIN TEMPLE: I apologize, I must have hit that button by accident, no question here.

CHAIR GARY: All right, thank you, Colin. No other hands raised; I'll entertain a motion. Emerson.

MR. EMERSON C. HASBROUCK: I'll make that motion, does staff have a motion prepared? I'll make that motion once they have it ready.

CHAIR GARY: All right, Emerson, if you could read it in.

MR. HASBROUCK: **Move to approve the 2022 Fishing Year FMP Review and state compliance report.**

CHAIR GARY: Thank you, Emerson, we have a second by John Clark. All right, Emerson, speak to it, if need be, it's self-explanatory maybe.

MR. HASBROUCK: Yes, I think the review that Toni provided is self-explanatory, thank you.

CHAIR GARY: **We'll try it this way, is there any opposition to the motion? Seeing none; the motion passes by consent.** All right, so we're able to move on and this is where we're going to rearrange things just a little bit.

REVIEW BACKGROUND AND TIMELINE OF DRAFT ADDENDUM II ON 2024 MANAGEMENT MEASURES FOR PUBLIC COMMENT

CHAIR GARY: Toni is now going to present the background information on Draft Addendum II. Following the presentation we'll take questions on the background section of the draft, and only questions on the background of the draft, please. Go ahead, Toni.

MS. KERNS: Today I'll be presenting the Atlantic Stiped Bass Draft Addendum II for Board review to take out to public comment. I will go over the background, the timeline, and then we'll take a pause. First and foremost, I want to thank the Plan Development Team for their time in developing this draft document.

They had several meetings over the past two months, and these individuals I think went well above and beyond to get this document ready. For those supervisors, accolades to your Plan Review Team members. They all worked incredibly hard. I will be utilizing some of these Plan Development Team members today, and questions potentially, so I also thank them ahead of time. I have the phone-a-friend options.

This is the fastest timeline we can get through for this draft Addendum II. Currently we are at the August section, where the Board will consider reviewing this document for public comment. If it is approved, we will have the public comment period August through September. Depending on how complex the Board makes this document, that may extend into October a little. The ideal situation is if we could have it ready for the annual meeting in October. Annual meeting is a little earlier, so it could be a tight timeline. If we can't make that October timeframe, then we could have a special meeting of the Board later in the year. Depending on what types of measures there are, we are hoping that it is somewhat simple, and implementation for the states won't be too difficult, and that states would be able to implement these measures in time for the start of the 2024 fishing year.

If the Board makes some significant changes to the options in the document, then there is the potential to shift this all back one meeting cycle. The Draft Addendum has these four components, the introduction, the overview which has the statement of the problem, the background, management status and fishery status.

The proposed management measures, which would include recreational and commercial measures and then a compliance section. We'll move into the document now. In May of '23, the Board initiated this draft to address stock rebuilding beyond 2023. The Board directed the PDT to include measures to achieve an F target from the '22 assessment.

Recreational measures to include modifications to the slot, harvest closures and maximum size limits, commercial measures to include a maximum size limit but no quota reductions, and the ability for the Board to respond via Board action to the 2024 stock assessment update. Now I'll go into the overview.

Atlantic striped bass were declared overfished in 2019, and then thus subject to a rebuilding plan that requires the stock to be rebuilt to its spawning stock biomass by 2029. The most recent rebuilding projections indicate a low probability of meeting that deadline if fishing mortality rates associated with the level of catch in 2022 continues.

There is concern that the recreational and commercial management measures in Amendment 7, in combination with a strong 2015-year class will lead to similarly high levels of catch in 2024. Therefore, this draft addendum considers measures to reduce removals from the 2022 level, to achieve a target fishing mortality rate in '24 and support stock rebuilding.

There is also a concern that the addendum process will take too long to respond to the results of the ’24 stock assessment update, and therefore the document proposes options to address this. As I went through in the FMP review, the stock is overfished but overfishing is not occurring. The 2022 assessment update had projections that indicated we had a 97 percent probability of achieving our rebuilding goal.

That was using the harvest rates from 2021. In May, the Board saw that we had new projections using the preliminary ’22 removals, and that probability dropped to 15 percent. It should be noted that the projections are not the same as a full stock assessment, where a model would be rerun to include the 2022 catch at age and index data.

This figure just shows that probability of achieving stock rebuilding using the ’21 data, which is in gray, and then the 2022 harvest data, which is in yellow. Amendment 7 maintained the Addendum VI to Amendment 6 recreational commercial fishery measures. Separate management measures are in place for both the ocean and the Chesapeake Bay fisheries, due to distinct size availability of fish between these two areas. Because Amendment 7 did not revise the FMP standard commercial and recreational measures from those of Addendum VI, the conservation equivalency program implemented under Addendum VI, were allowed to be carried forward by the states in 2022 under the framework management of Amendment 7. The use of CE is subject to additional restrictions through Amendment 7. Those restrictions do not allow CE programs when the stock is overfished. It does have exceptions for the Hudson River, Delaware River, and Delaware Bay fisheries.

In context of this draft addendum and the current stock status, the FMP standard for the ocean or the Chesapeake Bay recreational fisheries is changed, and the existing Addendum VI Conservation Equivalency Programs affecting those fisheries are invalidated, and then a state would not be able to request new CE programs for non-quota managed fisheries, with the exception of those that I noted, until the stock is no longer considered overfished by a future assessment.

For the states that combined their Addendum VI Conservation Equivalency Programs across the sectors, so combined the commercial and the recreational measures to get to the 18 percent. This could have implications beyond just the recreational fishery for those states. Part of the rationale for not changing any of the commercial and recreational measures under Amendment 7 was that final action on the Amendment was right before we had the stock assessment results.

That 2022 stock assessment was expected to provide management advice as to whether or not the existing measures under Addendum VI were successful, and did they reduce mortality to the target level and put the stock back on track for rebuilding. The Amendment included a provision that would allow the Board to immediately respond.

The stock assessment results came out somewhat positive, and thus we did not need to utilize the provision. Then the Board took emergency action. We will get into this a little bit more in a couple of minutes, but the emergency action reduced the ocean recreational slot from 28 to less than 35, to 28 to 31, and then it layered a 31 maximum size limit to the Bay’s recreational fisheries with the exception of the trophy fishery.

The measures were intended to reduce harvest from the levels seen in 2022 to protect that ’15-year class. The ’15-year class is the primary reason for the increase in harvest in 2022, as many of the fish born that year began to exceed the 28-inch length, which is the lower bound of the ocean slot.

By implementing the 31-inch maximum size, over 50 percent of the 2015-year class should be protected from recreational harvest. It’s projected that the emergency action measures will achieve somewhere between an 18 and 30 percent reduction in harvest in 2023. The proposed measures could lead to less effort on what anglers prefer is a larger fish in the recreational fishery.

This could mean that we could have less harvest or an increase in discards. It makes the short-term impacts on the fishery unclear. If it's one direction you could have potential short-term impacts on the economies that could be negative if you have less folks going out fishing, if the effort is reduced significantly. But the short-term impacts could be stymied by long term quality fishing experience if they have the positive impact on the stock for rebuilding. Implementing seasonal no-harvest closures is intended to reduce the number of fish harvested. However, angler behavior may shift to catch and release fishing, thereby increasing the number of recreational releases. Additionally, seasonal closures for striped bass may shift effort in targeting other species or shift to other times of year when the recreational fishery is open, thus negating some of those no harvesting closures.

In the commercial fishery looking at social and economic impacts, in states where a new maximum size limit significantly changes the size of the commercially harvested fish, dealers, processors, and consumers will have to adjust to a new smaller fish size, potentially requiring changes in the supply chain and marketing.

In the short term, harvesters may also be more limited to adjusting to market demand if they are operating within a really small slot. Additionally, the harvest of smaller fish by the commercial sector will likely result in longer effort and an increased number of fish being removed, although the total poundage will not change, as that is governed by your state quotas.

Looking at the status of the fishery, we went over some pieces of this already that I'm not going to repeat too much. In 2022, we saw an increase driven by the recreational removals as commercial removals decreased. The commercial sector accounted for 10 percent of the total removals, and the recreational sector accounted for 90 percent of the total removals.

Under the same management measures in 2020 to 2021, total recreational harvest in 2022 increased by 88 percent relative to 2021. The increase was due to the strong '15-year class. New Jersey landed the largest portion of the recreational harvest, followed by New York, Maryland and Mass.

The proportion of the coastwide recreational harvest in numbers from the Chesapeake Bay was estimated at 20 percent in 2022, which was down from 35 percent in 2021. In 2022 the combined private and vessel shore modes of the fishery accounted for 95 percent of the removals, and the for-hire was 5 percent.

The ocean and Chesapeake Bay regions experienced different changes in recreational catch in 2022, relative to 2021, due to the 2015s coming into that ocean slot. Those fish have already moved through the Chesapeake Bay, so it didn't impact the Bay catch as much. The ocean region saw an increase in the harvest, and the Bay saw a much smaller increase in recreational harvest and a decrease in live releases.

The number of trips directed at striped bass also show a differing trend between the ocean and the Bay. In 2022 the ocean-directed trips increased by 31 percent and the Bay-directed trips decreased by about 2 percent. I'm almost done. The commercial fishery is managed by quota system, resulting in relatively stable landings since 2004.

The ocean commercial size limit, seasons and gear type vary by state. The current minimum legal-size ranges from 20 to 35 percent. There is generally speaking a lower minimum size in the Mid-Atlantic, and the New England states have larger minimum sizes, and harvest is predominantly hook and line. In the Mid-Atlantic the harvest is predominantly drift and anchored gillnets. In the ocean region, only New York has a commercial slot with a lower and an upper bound, 26 to 38 at this time. The Bay commercial size limits and gear type are more uniform, with an 18-inch minimum size for Bay states, although Maryland has a year-round maximum size limit at 36 inches. PRFC and Virginia have seasonal maximum size limits of 36 and 28 inches respectively. All three Bay states have a combination of pound net, drift net, hook and line gear types.

Commercial striped bass fisheries operate differently in each state, with a range of gears and seasons, which result in differing size fish being harvested within each state. Mean length of harvest ranges from 30.2 total length to 41.1 total length. That is the background.

CHAIR GARY: Thank you, Toni, and again, thanks to all the PDT members for all their hard work. We'll go ahead and take questions from the Board relative to the background material that Toni just presented. Mike Luisi.

MR. MICHAEL LUISI: Great job, Toni, I know it's challenging to step in on a species like this for staff that aren't here to do the presentation, so thanks for doing that. I hope I'm not the only one that may have just gotten a little lost in the discussion on CE. What would be helpful, I guess for the follow up discussion that we plan to have on management options is all that you said, is there an effect somehow that is going to trickle out into what it is we're discussing now?

If we have to make decisions as a Board on how to move forward, given the CE discussion, is that something we should do prior to the management option discussions? You know just looking for some direction on making sure that we're all of the understanding as to where any types of changes may stem from, before we get too far into the weeds.

MS. KERNS: If we employ options that are looking at changing the FMP standard, which is pretty much all of the Bay recreational options, to put it bluntly. Then we'll not be able to use conservation equivalency, like whatever gets adopted is what the Bay states would have to employ, and CE would no longer be an option, because of the stock status for recreational.

If we do not employ changing the FMP standard, which is basically status quo, then you can continue with your current CE state regulations, the current state plan. Does that help? Just to remind everybody, CE is allowed in commercial measures, just to put it out there.

MR. LUISI: Given that answer, I just want to make sure I'm clear. We'll have to decide, the Board will need to make a decision at some point today how we want past conservation equivalency programs to be factored into, where we step off the platform into the future. Is that where we are?

To provide an example, there was a few years ago when we made the decision to reduce both the commercial and recreational fisheries, we did it. We put more emphasis on the recreational fishery. We took some quota from the commercial fishery, but it wasn't the same amount in theory, it was more lopsided.

For us to continue maintaining the commercial quota we have, and if reductions come as a result of Addendum II, it would come from that quota rather than having to take the 18 percent first, and then adding to that reduction. That would be if the conservation equivalent if we wipe the slate clean on the states, right? Okay.

MS. KERNS: Correct, if you wipe the slate clean then you would have to go back and take the reduction. But if you don't wipe the slate clean and then the measures that we adopt through the document are the new standard, then you move forward.

CHAIR GARY: Justin Davis.

DR. JUSTIN DAVIS: Just a clarification on that discussion just then. Even though, so adopting new recreational options in the Bay would sort of preclude the use of previously approved CE programs. Some of the measures proposed in Addendum II for the Bay include things that were approved by CE, therefore you would sort of be making the stuff that was approved by CE the new FMP standard, so it's not like it would go away.

MS. KERNS: Yes, they don't necessarily go away, but there are options in the document that are being vetted through full public process. I would not consider them CE measures anymore.

CHAIR GARY: Additional questions for Toni. Adam Nowalsky.

MR. NOWALSKY: Two questions, if I may. If not, then I'll let you pick the one that you want to answer. Question number onr is that in the section for the statement of the problem, we highlight the concern about the draft addendum needing to consider measures to reduce removals, specifically.

Then later in the document, under the emergency action, we highlight the fact that that emergency action was meant specifically to reduce harvest. I'm wondering if there was any discussion during the drafting of this document that this section should highlight that most recent action only took action on harvest, and not removals, which I think given the FMP review that we just received, and if you look in the FMP review.

While you highlighted only the last three years, if you look at the last six years, five years preceding 2022 there were more removals that came from release mortality than from harvest. My eye caught the fact that the statement of the problem focused on removals, the emergency action harvest, and I was wondering if there was discussion about building that contradiction out a little bit more in this section.

Then my second question focused on what I feel is a glaring omission from the social and economic impacts of the document, regarding the impacts to different demographics. Specifically, the harvest fishermen are typically very different demographic than your demographic that is targeting releases.

In fact, I think the public comment that we saw, one of them caught my eye here. When you look at a sales manager for Van Staal, which we know is a very high-end company, advocating for continuing with not affecting the release mortality group. I think that that makes very clear that here is a very different impact on demographics. I'm curious as to why that was omitted in entirety in the social and economic impact section.

MS. KERNS: I'm going to start with your demographic question, and then I may phone my friend, you know Nichola or Nicole on your first question, on relative to it was on purpose to have a distinction between removals and harvest. For the demographics, I need to go and check with our staff individual, who I believe wrote this section. My guess is that there isn't hard data on the demographics, but I could be wrong. If there is information that we can somewhat cite from, then we can add that to the document. But if there is not, it is difficult for us to use observed information versus information that we can cite.

DR. DREW: Right, the question of harvest versus removals. Obviously, what the population cares about is removals. It doesn't matter for the striped bass if you get harvested or you died after you were released alive. The level that we need to get to is based on removals. However, our management tools are not effective at two folding releases.

Basically, when you're looking at the tools that we have, which is a bag limit or a size limit, we can quantify the impact on harvest better. But you don't really have a way to stop people from releasing so many fish. We do focus on removals, that is sort of our overall metric, because we are accounting for the fact that if you make that size limit smaller, or when you make that slot smaller when you decrease the bag limit, you are increasing releases.

People are throwing more fish back, and we're counting those additional dead fishes against the savings in harvest, so that we get a total removal that is appropriate. We're not aiming for an X percent reduction in harvest, we are aiming for an X percent reduction in removals, which is what we need.

However, we have a really hard time quantifying metrics on regulations that would get us a reduction in, basically the number of trips that are interacting with striped bass that are releasing striped bass. You know you can put in a season and say, this is a closed season, you can't harvest striped bass anymore, or you can't catch striped bass, you can't harvest striped bass.

But we still don't know what the impact of that is going to be on the total number of releases. If everybody who harvested a striped bass going to switch over to releases? Then you haven't affected your releases at all. Is everybody who fished for or caught a striped bass going to stop fishing for striped

bass, because if you are no longer allowed to harvest them, in which case all of your releases would go away?

Maybe that is the bottom limit. But it's probably somewhere in between, where some people will switch to catch and release. Some people will switch to targeting something like bluefish, where you're going to catch striped bass anyway, and you are not going to affect your regulations at all, or you're not going to affect your releases at all, even though you are complying with the regulations, or you're going to switch to something like black sea bass, where you will have a lower release rate of striped bass.

I think the issue that we are struggling with, we struggled with it with this Addendum, we struggled with it with the Amendment, we struggled with it for a while now, is what management tool do we have to control the release component of the catch. Bag limits and size limits, all of our savings are coming on the harvest side, then that is what we can quantify.

It is really hard to quantify the impacts of season closures on circle hooks, on all of these other things, on how we are going to reduce the total number of live releases. For this Addendum, we focused on that harvest component, because that is what we could get done in this amount of time. How we handle releases going forward I think is a much larger conversation, and if the Board has thoughts on how to handle that, for sure we're open to that.

CHAIR GARY: Follow, Adam.

MR. NOWALSKY: On that thought section, I believe you want to focus just on questions on this right now. You will entertain suggestions for edits on the entirety of the document after we get through everything, or are you looking for suggestions to edits to the background section now as well?

CHAIR GARY: Just questions now, Adam, if you don't mind. Additional questions for Toni. Emerson.

MR. HASBROUCK: I just thought of this as Katie was answering Adam's question. For no targeting closures, I'm following you, I think there is some language to this in the staff memo. We can not quantify what the reduction of removals is, with things like a no-targeting closure. But that doesn't mean there isn't a reduction, it just means that we can't calculate, is that right?

DR. DREW: Right, maybe there would be a reduction, maybe there would not be. I mean I think it depends on how anglers are responding to that closure, and I think that is what we have always struggled with trying to incorporate into our calculations. Is it better than nothing? Probably. But is it better than something else? That is where we struggle.

MR. HASBROUCK: Right, but we've already, it happens when we ask the question. Haven't we already implemented some components, where we cannot calculate what the impact is, such as circle hooks and no gaffing. But we've implemented those, because we do know that there is going to be a reduction in removals, similar to what there might be with a no-targeting closure?

DR. DREW: Yes, we have implemented the circle hook provision some of the gaffing requirements, et cetera, that will have an unquantifiable benefit for the stock. But they did not go towards achieving a specific reduction on paper. Essentially, they got put in, but we did not count them towards any kind of reduction, and will have to wait and see for the benefits, kind of in the long term of if they help the stock at all.

CHAIR GARY: Thanks, Emerson and Katie. Before we move on, any further questions for Toni? This is going to inform our discussions and deliberations regarding the emergency action, and our discussions for Draft Addendum II. Any further questions for Toni? All right, if that is the case then we'll go ahead and move on to the emergency action.

REVIEW STATUS OF 2023 EMERGENCY ACTION

CHAIR GARY: Toni will provide a summary of the public hearing on the emergency action. Toni will also review the timeline for the emergency action, the possibilities for renewal of that action. After this presentation, we'll take questions, and again only questions on the emergency action for Toni, and after the questions, the Board will then need to

determine whether or not we're going to renew this action for an additional year or not. I will potentially entertain public comment, depending on the outcome. Toni, it's all yours.

MS. KERNS: At our last meeting the Board approved the emergency action to implement the 31-inch maximum size limit for striped bass recreational fisheries, effective for 180 days. It was from May 2 through October 28 it expires. The emergency action did exclude the Chesapeake Bay trophy fishery. All other measures remain the same. All states implemented the emergency action by the July 2nd deadline.

PUBLIC HEARING SUMMARY

MS. KERNS: I'll go through the hearings. We held 4 virtual public hearings, which is the requirement of an emergency action within 30 days of that action.

We had 62 people, including representatives from 11 organizations, comment in support of the emergency action. Those comments noted support for taking proactive, swift action to protect this strong 2015-year class, so that those fish can contribute to the spawning stock biomass and help rebuild the stock.

Comments noted the importance of the 2015-year class, and the need to get those fish out of the slot limit, especially considering the recent low recruitment that we've been seeing and the lack of strong young year classes coming into the fishery. Some of the comments noted the importance of all sectors contributing equally to the stock rebuilding, and some noted concern about the potential for states to be out of compliance with the emergency action.

We had 24 people, primarily charterboat captains, also including representatives from 3 organizations comment in opposition to the emergency action. Those comments noted the narrow slot limit would increase recreational releases and mortality, due to fishing longer to find a fish within the slot.

Comments noted the action only targets those who harvest striped bass, and that there should be measures to address the catch and release fishery. Comments noted the negative economic impact of the narrow slot, in particular on the for-hire business, and expressed support for managing the for-hire sector separately from private boat anglers and shore fishermen.

Some noted concern about the accuracy in the use of MRIP data. Some comments also addressed other striped bass management topics, including the need for increased outreach and education on best handling practices and release practices, and for better understanding of the contribution of the spawning grounds north of the Chesapeake Bay to the population.

DISCUSS TIMELINE FOR POSSIBLE EXTENSION OF EMERGENCY ACTION

MS. KERNS: As I noted before, the current emergency action expires on October 28. If the Board deems it is necessary, they can extend this emergency action for 1 year, and they can do this 2 times, so it would be a total of 2 years if you did it both times. A simple majority vote is just needed to extend the emergency action. Any questions?

CHAIR GARY: Questions for Toni. Justin.

DR. DAVIS: If I remember correctly, one of the conditions is that the Board had to initiate an addendum as part of doing the emergency action. Addendum II, I would assume meets that standard, and then is there any specification about sort of what we have to do with the addendum during the timeline of the emergency action being in place?

MS. KERNS: Just we need to continue to work on the Addendum. There isn't a specific timeline in the charter to say how quickly the management document needs to be completed. As long as you are continuing to work on it, it is fine.

CHAIR GARY: Additional questions for Toni on the emergency action. Mike.

MR. LUISI: This is a simple one. Thinking about the timing of how this all plays out. Has staff given any thought to whether or not it makes sense to consider that extension today versus in October, when we

would be closer to the deadline, kind of giving us an additional year rather than an additional 10 months until next summer?

I mean we're kind of losing some time. Not that I think the emergency is the long-term plan, but as at least for a backstop in the event that Addendum II needs some more work in development. Is there a pro and con versus between August and October, since it doesn't expire until the end of October?

MS. KERNS: We have talked about it. One, I think if you're going to extend it, you should just use the full provision of the year to allow for that leeway of work on the Addendum, in case something comes up. I guess the one, may consider a pro of doing it today is that then there is plenty of notice to the public that you are going to extend. Any other pros and cons, up to the Board, Bob can add to that.

EXECUTIVE DIRECTOR ROBERT E. BEAL: The other way to look at it is, if the Board were to extend it today, they can make the effective date of that extension October 28, so you wouldn't lose that time, Mike, necessarily. In other words, if the Board decided to extend it today, the 365-day clock would not necessarily start today.

They could have that clock starting in late October, and then it provides all the advice that Toni gave to the public that the Board's intention is to carry this emergency forward while they complete the Addendum. You don't necessarily lose two months by doing it today, if that is what the Board wants to do.

MR. LUISI: That's why you make the big bucks, Bob.

CHAIR GARY: Additional questions. Dennis Abbott.

MR. DENNIS ABBOTT: Then I would assume that if we adopted Addendum II, that would supersede the emergency action that we may implement today.

MS. KERNS: Correct.

CHAIR GARY: All right, any final question for Toni, before we start our deliberation on the emergency action? Seeing none; okay we're going to open the floor up to the Board, to discuss and determine whether or not we want to renew this action for another additional year, so I'll start the discussion. Who would like to tee us off? Opponents? Go ahead, Dr. Armstrong.

DR. MICHAEL ARMSTRONG: I think I'm speaking the obvious. I mean we have to extend this, and so I'll make a motion.

CHAIR GARY: All right, it looks like Madeline and Katie are getting ready.

DR. ARMSTRONG: Well, let me talk while you're looking. It would be my intention that this would be added on, as Bob just spoke, to the end when we run out in October, as opposed to this effective date. It's not in the current motion, but if it needs to be added, I will do that. I move to extend the Board's May 2, 2023 emergency action of 31" maximum recreational size limit for another year, applicable to all recreational fisheries.

CHAIR GARY: Do we want to add a date to that, Mike?

DR. ARMSTRONG: Perfected, yes, please. Would you like me to read that again?

MS. KERNS: If you would, please.

DR. ARMSTRONG: I can read. **Move to extend the Board's May 2, 2023 emergency action of 31" maximum recreational size limit for one year effective October 28, 2023, applicable to all recreational fisheries.**

CHAIR GARY: Do we have a second? Dave Sikorski. Back to you, Dr. Armstrong for any words to your motion.

DR. ARMSTRONG: I don't think I have to say too much. It was a necessary thing we had to do, and I think to control F, all indications are that we need to continue it until we have this Addendum, and then the assessment.

CHAIR GARY: All right, thank you, Mike, and Dave as seconder, do you want to add anything to the comments to the motion?

MR. DAVID SIKORSKI: No, I think it would be important to let the record reflect that this is different than the original emergency action. The original emergency action carved out the Chesapeake Bay trophy fishery, because that fishery was starting, or even happening for a two-week window earlier this year, but moving forward as written that exemption would not exist.

MS. KERNS: I don't think Mike intended to revise.

DR. ARMSTRONG: Yes, I have since been informed that we cannot go back and affect the trophy fishery through this motion.

MR. SIKORSKI: You cannot, and therefore applicable to all recreational fisheries seems to be a little in conflict with that. Maybe we don't need that last sentence?

MS. KERNS: Edit to say except the trophy fish.

MR. SIKORSKI: **Or just after 2023, October 28, 2023 comma, just make it a period**. Okay.

CHAIR GARY: Go ahead, Bob.

EXECUTIVE DIRECTOR BEAL: Just a quick comment on this. If procedurally the charter only allows the Board to extend an emergency action for these two one-year periods, it doesn't allow an extension and a modification at the same time. If the Board wanted to do a new emergency or something different, it would trigger two-thirds vote and this motion only needs to be passed by simple majority, and it would trigger the four public hearings, et cetera, et cetera.

But if it's one year extension of your current emergency provision, then you don't need any of those, just simple majority, no public hearings.

CHAIR GARY: All right, thank you, Bob, for that clarification. We have the motion now refined appropriately. All right, Roy Miller.

MR. ROY W. MILLER: Mr. Chairman, could I seek clarification? The motion as it now reads and as interpreted by Bob Beal, that means we are not changing, not requiring a change to the Bay trophy fishery, am I right?

CHAIR GARY: That is correct.

MR. MILLER: Okay.

CHAIR GARY: Other discussion on this motion. Adam Nowalsky.

MR. NOWALSKY: I would **offer that this motion should include explicit language that this emergency action would terminate with the implementation of Draft Addendum II**. I would accept that as something if we just want to **add that as a friendly amendment**, or if not, I will make that motion to amend this.

CHAIR GARY: Go ahead, Bob.

EXECUTIVE DIRECTOR BEAL: I think this can be done two different ways, either the way Adam suggested, or in the text of the Addendum, say the intent of this Addendum is to replace the emergency action that is currently in place at the Commission. It needs to be clear that that is the intent, but it can be done either way. Either one I think is fair.

CHAIR GARY: Dr. Armstrong, would you accept a friendly?

DR. ARMSTRONG: **I would.**

CHAIR GARY: All right, can we modify then? Mike, I've got you in the queue next, right? You raised your hand. All right, go ahead, Mike. In the interest of time let's go ahead and keep the conversation going.

MR. LUISI: Yes, certainly, Mr. Chairman. I guess my question is, why don't we just put up what the emergency action was and extend it, instead of the debate and discussion about the language. To make sure it's clear to the public, doesn't it make sense just to move it forward? I don't know, just a thought.

CHAIR GARY: Go ahead, Toni.

MS. KERNS: The meeting summary, I can put the motion in, if that is helpful, Mike. I don't think we have to repeat the motion, but I'll make sure it's very clear what the measures were. I promise.

CHAIR GARY: All right, so we're still modifying that motion. Further discussion. We're good now? All right, modification complete. Adam.

MR. NOWALSKY: While I appreciate this change, this really doesn't change my position from where we were when we discussed this back at the spring meeting. Mainly that if the concern of this body is the health of the resource, and in five of the last six years removals have exceeded, the majority of the removals have come from release mortality and not harvest, and this emergency action focuses only on harvest.

How can we in good conscience say we're doing this purely for the resource? We are doing this as a de facto reallocation from the harvest fishery to the release fishery. The reallocation of such has a dramatic impact on the demographics of the users of this resource. They are very different users. They come from very different backgrounds.

They have a very different purpose. Not only is this not in the overall best interest of the resource, but it severely impacts one demographic group over another, and so I continue to remain in opposition to this on those merits, not because I'm turning a blind eye to the health of the resource.

CHAIR GARY: Additional comments, particularly if anybody hasn't had a chance to weigh in. I think we may, before we call the question, we may have some public that want to comment. Is that correct, Toni?

MS. KERNS: Julie Evans had her hand up. Julie, I have opened up your microphone.

MS. JULIE EVANS: Thank you, Toni, and thank everybody here today for the comments. I am in support of Adam's comments, I find them right on target. As a fairly new person to these sorts of meetings, even though I've only done it for three or four years. It is kind of perplexing to me why one group is given priority to continue to catch trophy fish over the rest of us.

I know you're not talking about this, but sometime during this meeting, maybe somebody can explain to me why the Chesapeake Bay trophy group is able to go unfettered, while everyone else has to toe the line on slot size. But just speaking to this, then that was a question like ten minutes ago, but I find Adam's comments on target, and I would support Adam's targets.

By the way, I am the Fisheries Representative for the town of East Hampton. Although we couldn't reach our own consensus on what I should say today, so I am speaking on behalf of our local for-hire industry here in Montauk, which continues to suffer tremendously, because of what is going on in their striped bass fishery. Thank you.

CHAIR GARY: Thank you, Ms. Evans. I'm going to go ahead and take up to three more comments, one minute a piece. We have Ms. Adams commented for about one minutes, so we'll take up to three more comments. I'm going to look into the room for now. Is there anybody in the room that would like to comment? I'll go back to online, and online Tom Fote. Tom.

MR. THOMAS P. FOTE: I strongly agree with Adam. I mean I just find it disingenuous that Maryland makes the motion while you get exempted from the trophy fishery, and I also see that Massachusetts allows for hook and line commercial fishery, which I don't know how they regulate it. But from what I understand, any recreational person that decides to go into the electro fishery can get a permit. This way you sell 7 fish and you actually take 1 home to eat, so they get around the regulation. I'm not sure if that is true, but that is what I've heard. I find this regulation is totally affecting the subsistence fishermen. Environmental justice, we keep talking about environmental justice at NOAA, I do it at MAFAC.

I find that the Atlantic States Marine Fisheries Commission ignores it completely, even though when I was a Commissioner, I brought it up numerous times, and you basically seem not to care

what happens to the poor or the subsistence fisherman. They are a majority or they are a lot more populated in numbers than the release fishing, I'll leave it at that. Thank you for the time.

CHAIR GARY: Thank you, very much, Tom, and we'll take up to two more comments. Do you have anybody else, Toni?

MS. KERNS: No hands on the webinar.

CHAIR GARY: All right, is there a need to caucus before the vote? Again, this takes a simple majority, I believe. No need to caucus. We'll go ahead. **We are going to call these into the record, but we'll start off with all those in favor, please raise your hands.**

MS. KERNS: I'll start from my right side. New Hampshire, Maine, Delaware, Maryland, Virginia, North Carolina, Pennsylvania, NOAA, Fish and Wildlife Service, New York, Connecticut, Massachusetts, Rhode Island and Potomac River Fisheries Commission.

CHAIR GARY: All those opposed, please raise your hand.

MS. KERNS: District of Colombia and New Jersey.

CHAIR GARY: That is everybody, right? Motion passes 14 in favor, 2 opposed. Thank you. Next, we'll go back to the draft addendum. We're going to go ahead and take a five-minute break, and then we'll reconvene here in five minutes and let everybody just catch their breath for a second, because I think this next step of the discussion is going to be pretty lengthy, and hopefully we'll be ready to go. Hopefully we won't need multiple five-minute breaks. Take five minutes.

MS. KERNS: Be back at 3:01.

(Whereupon a recess was taken)

REVIEW PROPOSED MANAGEMENT OPTIONS AND CONSIDER APPROVAL OF DRAFT ADDENDUM II ON 2024 MANAGEMENT MEASURES FOR PUBLIC COMMENT

CHAIR GARY: The ASMFC Atlantic Striped Bass Board is reconvened, and so now Toni will continue presenting the Draft Addendum, and we'll go into the proposed management options. Following the presentation we'll take questions first, again only questions, and after the questions we'll move into discussion. We can have a brief discussion, but if there are motions, we're going to want to get those onto the table as soon as possible. Toni, go ahead, it's all yours.

MS. KERNS: At the beginning of my presentation, I neglected to also thank the Technical Committee for their work in helping the Plan Development Team craft these options or develop analyses to support these options, so I also just want to say thank you to them as well. I'm going to apologize in advance about how much I'm going to speak now, to provide clarity for how the PDT came about some of these options, and the rationale behind them. As I think someone noted earlier, there is a size document, a PDT memo that gets into some of the issues and concerns that the PDT saw. The PDT made some recommendations that the Board, in some cases they are recommendations, in some cases there are observations for additional options that the Board could add to the document, if it's the Board's prerogative.

We would need some motions to add those things specifically to the document. We tried to craft the options in the PDT Memo to read as they would if you added them into the document, to make it easier to add in quickly. But I have built those into the presentation today, I won't do a separate PDT Memo presentation.

In order to develop the management options, we needed to do projections. A projection method was used in the 2022 assessment, to achieve the F target in '24 with a 50 percent probability. The TC used the 2022 removals, and state removals, and estimated

'23 removals to account for the emergency action regulations.

A new selectivity curve was developed for the '23 emergency action regulations. The TC also did some sensitivity runs for these projections, and found that the '23 removals varied anywhere between 4.8 and 5.7 million fish. The necessary percent reduction to achieve the F target in '24, only varied by 1.5 percent.

While that seems like a large variation in millions of fish, the actual percent is not quite as large. These projections concluded that we needed a 14.5 percent reduction to achieve the F target in 2024. Because of the maximum size limit is being considered, and not reductions in quota, we cannot determine what that reduction is, unless we do some runs to determine what those calculations would be to adjust the quotas.

You would have to do some additional work to figure out how much of a reduction you get from the maximum size limits, those runs have to be for each individual state, because each state's selectivity is different with their maximum size limits. We did not have time to do that for this, and so the PDT determined that commercial reductions cannot be calculated for the maximum size limit, so the overall reduction has to come straight from the recreational fishery.

That overall reduction would be 16.1 percent. In order to figure out the option development, the TC did a bunch of work to calculate what were the best years to use, in order to characterize fish availability in 2024, because we have to project that on using something other than stock assessment.

The TC determined for the ocean fishery 2020 data is used to characterize the fish availability in 2024, and 2022 data was used to develop the closure options. For the Bay they used '21 data to characterize fish availability in '24, and 2022 data for the closure options. Getting into the recreational options first. The recreational options presented are designed to achieve a 16.1 percent reduction in the ocean, and at least a 16.1 percent reduction in the Bay. All size limits are in total lengths.

Bag limits are per person per day, and the Board will choose one option for each region when they approve the document. Conservation equivalency programs will not be allowed for non-quota-managed recreational fisheries, with the exception of the Hudson River, Delaware River, Delaware Bay recreational fisheries. It is noted that in the CE criteria, or proposals, it says that you should have no less than a two-week duration of closure. This document does have some closures that are 10 days. The TC and PDT determined that if you do a 10-day closure, then there has to be two consecutive weekends from a Friday to a Sunday bounding that 10-day closure.

For the ocean recreational fishery, we have two options, well sort of two options. You have Option 1, which is status quo. You have one fish at 28" to less than 35", with a 2017 season date. This allows for the continuation of existing Addendum VI conservation equivalency plans, and it does not achieve the objective of the document to achieve the F target in '24.

Then we have a series of different slot limits and season closures. The season closures are no harvest closures. Most of the ocean slot options continue the use of the 28" minimum size limit. Given the longstanding nature of this measure, and consideration of environmental justice issues, so for example providing legal access to shore-based anglers to continue providing some protection to that strong 2015-year class, and that none of the ocean slot limits exceed a 34" maximum size.

For the season closures, a coastwide closure with the same closure dates for each state would ensure consistency in the timing of closures across all states, but would present an equitability challenge. We know that recreational fisheries operate very differently along the Atlantic coast, based on timing, other biological, environmental, and social economic consideration.

Coastwide closures would result in a different level of harvest reduction for each state. The 2022 harvest data by Wave are used to calculate what level of harvest reduction would be expected for the

seasonal closure options that I'll present here. If these tables are too small, I'm sorry. You can follow along in your Addendum document to see the measures better.

But the first set of options look at the 28" to 31" slot limit, and it has various closures from 10 to 21 days and in different waves. The next set of options, which are C, have slot limits 28" to 32" with closures 14 to 21 days, and then Option D has a slot limit of 30-33 inches, with closures from 14 to 21 days.

For the Bay, again we have status quo, 1 fish at 18", 2017 season date allows for the continuation of the CE programs from Addendum VI, and this option does not achieve the objective of the document. All Bay options propose a maximum recreational size limit for B through I. These range from 23" to 28". The higher maximum size limit of 28" allows for a harvest of a portion of the above average 2018-year class, which will be Age 6 with an average length estimate of just over 26" in 2024.

We see differences in striped bass seasons, and they have long differed between the Bay jurisdictions. In 2020 those seasons were further deviated with additional CE plans in the Bay. Due to the complexity of the Addendum 6 CE plans and associated uncertainty in estimating increased harvest from removing a closure, all the options that are presented maintain those 2022 season closures. It should be noted that recreational closures implemented in some of the Bay jurisdictions were part of approved CE plans to account for taking a lower reduction in the commercial sector, to overall achieve the previous Addendum VI reduction. By maintaining the shorter 2022 recreational season, those previous CE programs cannot be entirely wiped clean, so that may be considered when addressing the starting point for the commercial quotas. This gets to your question, Mike, of either wiping the slate clean or just starting a new FMP standard. Some of the options proposed additional closures on top of the existing closures.

Those additional seasonal closures proposed in the options are no harvest closures, and the additional closures continue when current harvest occurs throughout the year in each Bay jurisdiction. The Options B and C, the consistency in these options is a maximum size limit. It is 23" for B, and Option C is 24". Then Option D, E, F and G have consistent minimum and maximum size limits. They range from 20" to 24", 20" to 25", 20" to 26", and then 20" to 28".

Then the Option H and I have consistent minimum size, maximum size, and bag limit. Those size limits are all set at one fish. The PDT notes on the recreational options, the Board would want to consider a starting point for the measures. This mostly just applies to the Bay options and the commercial options, due to the nature of the CE programs in place. Are we wiping the slate clean? Are we starting a new FMP standard?

No Bay recreational option creates a truly consistent set of measures across the Bay. This is due to those issues that I just raised with the season closures. Wiping the slate clean was not 100 percent feasible with these options. But the PDT did try to create options where there are standard size bag limits with the 2022 seasons maintained.

If it is the Board's intent to proceed in adopting past CE programs as part of the new FMP standard, or not, the Board can eliminate options before approving the draft addendum for public comment. If you want to wipe the slate clean you can, and we'll pull those options out, or if you don't, you don't have to. Some of them would eliminate certain commercial options as well.

For the Bay, since the recreational options don't completely wipe the slate clean, the commercial FMP standard approach may not be consistent across the Board, and for the ocean the Board should consider the implications of that FMP standard on states that originally took less than an 18 percent quota reduction for their commercial fisheries in Addendum VI.

I'll note that the Board doesn't have to make these decisions today, outside of whether or not you are going to remove some options or not. You can make a final judgment call of whether or not you're saying something is going to become the new FMP

standard, when you approve the final options in the document.

The PDT had some additional notes on recreational options that you could also include. These are mode splits, no-targeting seasonal closures and at-sea filleting. I know there are a lot of words on the screen. This shows the actual options as they would read if we added them into the document, but more importantly, the Board discussed potential exemptions for for-hire modes from the 2023 emergency action due to the lateness of the rule change.

But that motion failed due to lack of majority. During that discussion, some Board members noted they have overarching concerns about considering separate for-hire measures as a part of the striped bass FMP at all. The PDT acknowledged the comments made by the Board, but they also recognized the public comment that they heard when listening to the emergency action public hearings. Considering the comments that they heard, they went ahead and explored potential recreational options with differing bag limits or slot limits for private vessel, shore anglers, and for the for-hire modes. The PDT recognizes that there were several issues that the Board would need to consider, including concerns about equity and enforcement on different regulations, and develop possible options to not delay the Addendum schedule, should it be the Board's desire to consider a recreational mode split.

For the ocean recreational measures, potential options propose a wider slot limit in the for-hire modes for some of the draft addendum options. Mathematically a wider slot limit in the for-hire sector is feasible in the ocean, because their for-hire removals are a small proportion of the total ocean removals. On average it is 6 percent of the ocean recreational harvest and 3 percent of the total ocean recreational removals over the past three years.

Therefore, it doesn't impact each option's achievement of the overall reduction much. The ocean recreational mode split options on the screen allow the for-hire modes to harvest a wider slot, only decreases each option's reduction by 0.1 percent compared to if the for-hire modes were under the same measures as the rest of the fishery.

For the Bay, potential options could propose an increased bag limit of two fish for the for-hire modes across all the Bay jurisdictions instead of one fish. In the Bay the for-hire removals are about one-fifth of the total Bay removals, so on average 27 percent of the Bay recreational harvest and 18 percent of the Bay recreational removals over the past three years.

To account for the two-fish bag limit, some of the mode split options propose a narrower slot limit as compared to the existing options, where it has a one-fish bag limit. Another additional option could be at-sea filleting. During the recreational size-limit option, a PDT member raised concerns about state allowances for at-sea filleting of recreational caught striped bass.

In particular where racks are not required for enforcement of size limit, and are no corresponding minimum/maximum fillet lengths. With the expected narrowing of legal-size fish, there could be incentive to exploit a loophole in the state's that do not have these measures already in place. Enforcement with maximum size limits is particularly challenging when you do allow for at-sea filleting.

The option allows for states to craft their own measures, but address specific issues to narrow the exploitation of loopholes. I am missing my no target, no targeting seasonal closure slide, so I'm just going to talk about it. The PDT also made notes about no targeting season closures. While the Board did have discussions during the emergency action regulations about the potential of addressing no targeting closures, they did not implement those, because as we previously discussed through Adam's question, we don't have an ability to quantify these measures.

The Board could take any of the no-harvest closures and turn them into no-targeting closures. Some of this was raised during the public hearing comment as the same concerns that both Adam and Tom brought up today. But we would not be able to quantify what

additional reduction may come from a no-targeting closures versus a no-harvest closure.

The Law Enforcement Committee has in the past said that they do have difficulties enforcing no targeting closures, due to the nature of the inability to confirm that someone is directing on striped bass, versus another fishery. I recognize that there are some states and jurisdictions that have been trying this, and so if we do move forward with this, we could talk with their law enforcement on how successful or unsuccessful they have been in the enforcement of the measure. Then we'll move on to commercial measures, which is Slide 31, thanks.

The following options propose implementing a maximum size limit for the striped bass commercial fisheries in the ocean and the Chesapeake Bay. The intent of the size limit options is to protect the largest, mature female striped bass contributing to the SSB. Commercial striped bass fisheries operate in each state with varying gears, seasons and size limits.

Consequently, the implementing a standard maximum size limit across all commercial striped bass fisheries would result in a range of impacts that differ by state and gear type. In the past, when individual states changed their commercial size limits through CE, the states simultaneously adjusted their quotas up or down for maintaining the same spawning potential under the new size limit, as compared to their previous size limit.

The process of adjusting quotas to maintain the same spawning potential, has been standard practice for CE programs in the FMP for many years. If a commercial maximum size limit is implemented, and there are corresponding quota adjustments to account for spawning potential, many state quotas will likely decrease to account for lost spawning potential, due to harvesting smaller fish.

As maximum size limits decrease, harvested fish size will also decrease, along with the degree of corresponding commercial quota reductions, as illustrated in the table. Additionally, a new maximum size limit may lead to state's requiring a lower minimum size limit through conservational equivalency, to expand their harvest slot. This would further contribute to changes in quotas, and changes in the size of the commercially harvested fish.

States that already have smaller fish would likely see less of a quota reduction from a new maximum size limit, since their fisheries already select for a smaller fish. If a commercial maximum size limit is implemented without corresponding quota adjustments, the number of fish harvested may increase, since the average size of the commercial harvested fish may decrease in some states, along with the potential of increased discards, which would be the opposite effect of what you would be trying to do through these Addendum measures.

If the maximum size limit is implemented, there is also significant concern about the potential for increased dead discards from anchored gillnets. The concern is, any intended benefit of releasing the larger striped bass caught in the anchored gillnet will be offset by the high mortality rate of discarded fish from these gillnets, and the resulting need to continue fishing, possibly with a greater amount of gear, in order to meet that individual's quota or a state quota.

For the options, there is status quo, no change in the maximum size limit, maintain all measures and quotas from 2017 or the Addendum VI CE Plan. The Amendment 7 quotas including CE adjusted quotas, would also remain unchanged. Then we have a series of potential options. The first Option Set for B is adjustments to the spawning potential with the quota. Option B1 is no adjustment. The quotas would not be adjusted with a spawning potential analysis, it would not account for a change in the spawning potential resulting from harvesting different sized fish. Option B2 is you would adjust the quotas. They would be adjusted with the spawning potential analysis, state-specific analyses would be required in order to adjust the spawning potential for the new size limit. Most state quotas would likely decrease. Option C is what is the starting point for applying maximum size limits to quotas.

C1. You would use 2022 as the starting point, so all of the measures and quota limits from this 2022 year. That would include those that have been adjusted for Addendum 6 CE. The states could still submit conservational equivalency proposals to adjust their size limits using spawning potential analyses. But in this measure the states could not go below 18" and they could not go above whatever is the selected maximum size limit.

Then for Option C2 you would use the FMP standard as the starting point. We would align the quotas with the historical FMP standard, so go back and then implement selected maximum size limits from those original quotas, prior to Amendment 6, and they would result in a standard commercial slot limit for each region.

For Option Set D, the Ocean Commercial Maximum Size Limit, we have a series of size limits. They range from 38" to 42" for the ocean fishery, and then Option Set E looks at maximum size limits for the Chesapeake Bay. They range 36" for all Bay commercial fisheries, except for January 1 through May 31, when the max size would be reduced to 28", or there is a second option that does not have that season put in.

The PDT notes that if a spawning potential analysis and quota adjustment is required as part of this Addendum, which is the B Set options. This will be unique for each state, and will need to be conducted at some point. The Board has to decide if they choose to utilize these options when this analysis would occur. We have three choices. One, before public comment occurs, so that would delay the Addendum by one meeting cycle.

The benefit of this is that during public comment they would be able to see what happens to their commercial quota, whether or not it goes up or down. It could be done after the Addendum is approved. The public would not know how their quota would change during the comment period, or Option 3, which is in the middle of the public comment period. States would work to try to figure out how their quota would be adjusted, hopefully prior to their public hearings, so it could be a part of your public hearing.

I have some concerns about this third option, if it is asking for Commission staff to be a part of this figuring out of how the adjustment would be. We're on a reduced staff capacity, not having Emilie in-house and work being done on the 2024 stock assessment, and many other stock assessments that are ongoing right now. If the states can support this reduction on their determining what the spawning potential analysis will show to how it impacts the quota on their own, then we could do this.

But if it is asking Commission staff to do this, it will be very difficult to do so. Thinking about the commercial size limit changes and quota adjustments, past changes to commercial sizes have been accompanied by the corresponding changes to the state's commercial quota to account for maintaining that spawning potential. This process has been a standard practice for many years. The PDT recommends that the Board discuss their intent, and make a decision today regarding how to move forward with this. If they do not want to adjust, then you can eliminate several of the management options. Lastly, the PDT discussed, as I noted in the presentation, anchored gillnets. There were concerns about the potential for the increased dead discards, particularly for the anchored gillnets by the PDT, if a maximum size limit is implemented. The concern is, and you know relative to the intended benefit, being negated by the rein of discards. It is estimated that a 45 percent discard mortality rate is seen in the anchored gillnets.

This is what is being used in the stock assessment. To address the concerns, the draft addendum could consider provisions specific to anchored gillnets that would implement a maximum mesh size instead of a maximum fish size. Determining what that maximum mesh size may need to be could take some time.

The Board could include options that would say that the mesh size would be specified at a later date, which may be difficult for the public to comment on, or states could submit conservation equivalency programs for those that have anchored gillnet

programs. Then lastly, during the discussions there was a concern raised about the commercial tagging program on the point of tagging, and that tagging of striped bass at the point of sale versus the point of harvest.

Three states tag at the point of sale, one PDT member noted that point of sale tagging may not be as effective from an accountability and enforcement perspective, as compared to point of harvest tagging, especially if states have overlapping commercial and recreational size limits. There is a difference of opinion among the PDT members on the issue.

Another PDT member noted that point of harvest tagging has the same potential accountability and enforcement issues, and that states with point-of-sale tagging have effectively addressed overlapping sector size limits by requiring recreational fin clipping provisions. If the Board is concerned with this at all, they could either ask for this review of the commercial tagging program, which we said we would do earlier in the FMP review.

Then the results of the PRTs finding could be included in another management document or the Board could just make a decision and include it in this document. Then the last section of the document looks at responding to the stock assessment. In Amendment 7 we had a similar provision that was not needed.

But this provision says, if an upcoming stock assessment update indicates that the stock is not projected to rebuild by 2029, with a probability of greater than or equal to 50 percent, the Board could respond via Board action, where they could change management measures by voting just to pass a motion at the Board meeting, instead of developing an addendum.

This allows for fast action to the stock assessment if an addendum or an amendment process is done instead, it can take up to two years for those measures to be implemented, versus Board action often allows those actions to be implemented in the next fishing year, or even immediately, if it is something that can be changed by the states through emergency action. Today we are looking to consider approval of this document for public comment. I will take questions.

CHAIR GARY: Thank you, Toni, for the very thorough presentation, and here we go. We'll start off with questions only. After questions are done, we'll prepare for the discussion. Let's start, see if we can pick a few hands that we haven't called on yet. Start with Doug Grout. Keep your hand raised, so I can get you in the queue.

MR. DOUGLAS E. GROUT: Thank you to the PDT for all their tremendous work with this, and coming up with a number of options that can address our issues here. I had Toni, three questions for clarification for me. The first one is, I noticed under the Chesapeake Bay recreational options on your slide up there.

You had a note at the beginning that said, does not achieve needed percentage reduction. Is that identified anywhere in the document? If it is, just point me to the page and that's fine. I just was looking at that. That surprised me, because I didn't see that anyplace. Then I'll have two more once you're through with that.

MS. KERNS: Option A, status quo for both the ocean and the Bay options don't achieve the measures, and it is on Page 13 and 15, as part of the text of the status quo option. It says it doesn't achieve the objective of the document, and the objective is the reduction.

MR. GROUT: Thank you, I appreciate that. This next question involves the conservation equivalency provision. There is an exemption that says you can't have conservation equivalency if you don't have quota. I mean if you don't have quota management, except for Hudson River, Delaware River and Delaware Bay, they get an exemption for that. Is there somewhere in the document it explains why that is, because I can imagine the public asking that question?

DR. DREW: It's not in this document, because it was part of what was decided under Amendment 7. It may be in there, it may not be, but it's basically

related to the availability of the size of the fish available in these more producer areas. The Chesapeake Bay is essentially grandfathered in with having smaller size limits.

Whereas, the Delaware Bay and the Hudson River are not under our current system. Conservation equivalency is a way for them to, I think the Board wanted to retain that ability to have smaller size limits for these producer areas that are not officially producer areas. But that was part of Amendment 7.

MR. GROUT: Okay, part of Amendment 7. I would suggest be prepared at public hearings for that question to be explained to the public. Finally, under the commercial, let's see if I can read my scratch here. I have a question. I know the Board in their motion for the Addendum said to produce a document reducing the maximum size limit, and not reducing the quota. If we were to try to add that in right now, you wouldn't need a calculation of SPR reductions, would we?

MS. KERNS: If you just want to do straight reduction of the quotas.

MR. GROUT: Straight reductions of the quotas of 14 percent.

MS. KERNS: Correct, no SPR calculations.

DR. DREW: The SPR calculations are only related to the size limit changes in the commercial fishery, so no size limit changes no SPR calculations.

MR. GROUT: Thank you.

CHAIR GARY: The queue is, John Clark and then we'll go to Emerson Hasbrouck, Justin Davis and Max Appelman. Go ahead, John.

MR. JOHN CLARK: Roy just said that you missed him.

CHAIR GARY: I won't ever let that happen again, Roy.

MR. CLARK: Thank you, Toni, for that whirlwind tour through a long and complicated document here. But if I missed it, I'm sorry, I'm just kind of curious, because I know the motion said that for recreational options that seasonal closures should be a secondary option for those, and yet I take it we can't meet these reductions without them.

Katie has just given us another reminder of how impossible it is to quantify these seasonal reductions. Like I said, I'm just curious. Were there any other possibilities, like I mean obviously, a 28" to 28.5" slot is impossible, but like a small slot and then like maybe a fish over 45". I don't know, I'm just asking if there are ways to do this without coming up with these seasons?

DR. DREW: Yes, basically the emergency action 28" to 31" alone got you extremely close to that reduction, but on paper it did not achieve that reduction, so on paper to get to that 15 percent reduction, or to get to the required reduction, we would need either an even narrower slot. I think the PDT did talk about; you know would we want to go to a half-inch? Like for the 18" to 20" to 30.5" and they agreed that we don't manage on a half inch measurement right now.

That would just be incredibly confusing for everybody, and probably really difficult to quantify, like the savings in that inch. I think you have to go to either a narrower slot, or add these season closures in. Obviously, since these enclosures are only giving us a few extra percentage points on paper, which is probably within the uncertainty amount in these reductions anyway. But eventually on paper there was no way you could get to the reductions we needed without these season closures.

MR. CLARK: Just to be clear, you said that 28" to 30.5" would get the reduction?

DR. DREW: We did not look at any for the ocean, we looked at a couple for the Bay, where like going half an inch down or half an inch up would get you to that right reduction. We didn't really look at it for the Bay, sorry for the ocean it is possible on paper you could try to track that down, but we felt like the enforcement and management uncertainty around that was not worth it.

CHAIR GARY: Roy, I'm going to make amends with you, you get next shot.

MR. MILLER: Thank you very much, Mr. Chairman, and thank you, Toni, for your summarization of this considerable body of work by the Plan Development Team. A lot of thought went into it. During your summary of this process, I lost track of Chesapeake trophy fishery. Where does it fit into all of this, or would there no longer be a Chesapeake trophy fishery?

MS. KERNS: The trophy fishery would have to follow whatever the ocean fishery measures are, because that is how that trophy fishery exists, it's based off of the ocean fish, so it would have to follow those measures.

MR. MILLER: They might need to rename the program, if we went to a fairly low maximum size limit. It's no longer a trophy fish then.

MS. KERNS: Perhaps.

CHAIR GARY: Back to the queue, we'll go Emerson, Justin, and Max.

MR. HASBROUCK: I didn't have a specific question for Toni on her presentation, my question is more about process, in terms of how we're going to move forward. I can either ask you that question right now, Mr. Chairman, or you can come back to me when you've gone through other people who have direct questions for Toni. It's your pleasure.

CHAIR GARY: I'm sorry, Emerson, I got distracted for a second. Sure, go ahead.

MS. KERNS: Emerson, for process I think what Marty would like to do, or he and I have discussed, is we'll go through each of the sectors, so it is the pleasure of the Board where you want to start, but we can start with recreational or commercial, or the response. But we'll do all of the recreational at once, all of the commercial at once, and then the response one, if that helps.

CHAIR GARY: Justin.

DR. DAVIS: I have a question related to the potential to do spawning potential analysis, related to the maximum size limit option. There was a slide in the presentations that said it was a possibility that if we kicked it back one meeting cycle, sent it back to the PDT, we could ask for that spawning potential analysis.

If I'm understanding it right, the outcome of that analysis would be dependent on the option selected in Options Sets B, C, D and E, or actually it would just be C, D, and E, right? You know you would need to figure out whether you're using the FMP standards as a starting point or 2022, and then which max size limit for the ocean or the Chesapeake Bay accordingly so.

Now it's possible the Board could make a decision at this meeting to eliminate Option Set C, and just make a decision there. But either way you're talking about sort of multiple permutations, and so the intent would be to produce that. I guess I'm just asking like, is it feasible to really do all that before the next meeting?

MS. KERNS: We would shoot for that, Justin. If there are no eliminations of any of the option sets it might be really tricky. I was really hoping that we would choose either wipe the slate clean, or FMP standards, so that it doesn't have to be so many permutations, and maybe knock one or two options out of those permutations, but pleasure of the Board. If we leave them all in, I make no promises.

CHAIR GARY: Max.

MR. MAX APPELMAN: I think a question for Katie, maybe. I'm just trying to reconcile two different numbers of that scene in the draft addendum versus an earlier, I think it was a TC report. On the one hand we're saying 14.5 percent reduction relative to 2022, to get us to F target in 2024.

Then I think I saw in another, this was based on the emergency measures achieving up to a 30 percent reduction relative to 2022, but this is getting back to what John was saying. We don't see that as like a standalone option in the draft addendum. I think my

brain is trying to do an apples-to-apples comparison where there isn't one, and maybe you could just help me understand the differences in those two numbers.

DR. DREW: I think this really illustrates kind of where we are, you know sort of we've reached a lot of what we can do with the limits of the data that we have, and the assumptions that we can make about what kind of a reduction we can expect. There was sort of two questions here, two steps to this calculation.

The first step is, number one, we've implemented emergency action in 2023. What is that going to do to removals in 2023? Then we need that in order to take the next step to project forward to say, okay we expect this level of removals in 2023. What level of removals can we get in 2024 and be at or below the F target?

Then you figure out that, so that gives you sort of, this is the level of removals we need in 2024, according to the projections, and that is basically a 14.5 percent reduction from 2022 levels, in order to achieve that F target in 2024. Then we have to go back and say, okay what combination of regulations will, on paper, get us to that reduction?

For the question of what does emergency action do? We basically used 2018 and 2019 as proxies for what we think is going to happen in 2022 and 2023, because the 2011-year class is basically the same age in 2018 and 2019 as the 2015-year class will be in 2022 and 2023. We could sort of use what happened to the 2011-year class as it moved from 2018 to 2019, under consistent regulations, what happened to that.

Let's apply the emergency action regulations to 2019, and see what kind of reduction you get. That gives us that big reduction of 30 percent. A lot of that is coming from the fact that we saw a drop in catch, mainly in the Bay, as we moved from 2018 to 2019, with no change in regulations. That calculation is combining the effects of the new regulations, that is that tighter slot limit, as well as the effect of fish availability and the growth of that 2011-year class into and out of that slot. That is where our big 30 percent number comes from. However, there is a lot of different assumptions we can make about how to do that calculation on paper. For example, a lot of that catch there was almost no effect of the emergency action on paper on the Bay, but you still see a big drop in catch from 2018 to 2019 in the Bay. If we assume 2022 to 2023 there is no change in the Bay harvest, you get a smaller reduction. If we only look at the effect of what happens if we implement those measures on 2019, relative to 2019, as opposed to relative to 2018, you get an even smaller reduction.

That is down to about, I think that is like maybe 16 or 18 percent, compared to that 30 percent. I think that illustrates the uncertainty in these reductions, and what we're trying to capture with these reductions on paper, of the dynamics of changes in effort, changes in angler behavior, changes in the availability and the abundance of the fish, the growth of the fish. Then we get to 2024, and we're trying to do these calculations again on paper.

This time, ideally it would be great if we could say, what happened in 2019 versus 2020. But 2020 number one was the Addendum VI, so we put in management, and that changed harvest. Then we also had COVID, and that presumably changed harvest and removals in some way that we can't untangle from the effective management, from the effect of that 2011-year class moving through, et cetera.

We use kind of an internal, you know if we apply this regulation to 2020, what would it be if we didn't have a regulation change in 2020? That is where that 14, roughly in the ocean it is about 14 percent for the emergency action in 2024. In the Bay it's about a 2 percent decrease for the emergency action in 2024.

That method is missing sort of the effect of the strong year class moving through the fishery, and potential changes in abundance. That is making it difficult to quantify. But that is part of why we're seeing a big change, a difference in kind of like our maximum predicted reduction on the 2023 emergency action affect, versus the 2024 emergency action affect.

We are struggling with the availability of the data to characterize what is going to happen here. On paper what happens is that our estimate of the emergency action reduction effect in 2024, is not enough to get you to the 14.5 percent reduction that we need. We did the numbers. I don't think they are in the document, but they are basically we're expecting overall about an 11 percent reduction if we keep the emergency actions in, relative to 2024, compared to the 14.5 percent that we need overall. Yes, sorry, it's a lot.

I am happy to clarify anything that was unclear on that. But as I said, I think we are really hitting the limits of what we can do with the data that we have and the assumptions that we can make about what the effect of how year class strength, how availability, how abundance, how angler behavior are all interacting with these regulations to predict what is going to happen.

CHAIR GARY: Pat Geer.

MR. PAT GEER: Katie, I just need some clarification. Did you say there was no regulatory changes in the Chesapeake Bay in 2019?

DR. DREW: From '18 to '19 there were no changes, or that there were minimal changes. Were there changes?

MR. GEER: Yes, there were. We implemented, prior to the approval of Addendum VI. In August of 2019, we adopted the 1-fish, going from 2-1, and we adopted emergency regulations on gillnets, making it maximum 7-inch mesh in the Bay, and 9 inches. Going from 2 to 1 fish was a substantial change in regulations in 2019 in the Bay.

DR. DREW: That may be part of it for, Virginia is a smaller component of the overall removals in the Chesapeake Bay than Maryland, so that is part of it. I expect part of it is also the fact that if you look at the catch-at-age there was, basically those 2011-year classes were hanging around a bit in the Bay in 2018. They're almost gone out of the catch-at-age, virtually gone in 2019, which is what we would expect to be happening with the 2015s from 2022 to 2023. But yes, there is probably a little bit of an effect on the rest. We also did not look at, like this is purely on the recreational side, so the commercial side regulation change did not affect this size frequency calculation, but it is possible that the bag limit change did, to a small degree.

CHAIR GARY: We're going to go to Adam, but before I call on him, I'm going to see a last show of hands so we can move this into discussion. Does anybody else have any burning questions? Mike, so we'll leave it at Mike, so it's going to be Adam and Mike, and then we're going to move into discussion.

MR. NOWALSKY: In the PDT memo on additional topics under the no-targeting seasonal closures, there is the statement, the PDT recognizes there is continued questions and concerns about enforcement of no-targeting closures. Certainly, none of this is a laughing matter, people, resources, these are all very serious topics.

But this did make me think of a joke I heard about the person shipwrecked a hundred miles from shore, started to swim, got 99 miles away, got tired, I can't make it, and they swam all the way back. Why is that relevant here? Well, I'm thinking about these no-targeting closures, and I'm thinking about all of our state enforcement agencies that have joint enforcement agreements with federal authorities, and we have an EEZ that is 197 miles wide from 3 to 220 miles.

It left me wondering, why is it that we can enforce no targeting in 197 miles of our coast, but we have a problem in the 3 miles closes to our coast? I'm wondering if you could expand on what is different about that 3 miles versus the other 197 that would make a no-targeting closure so difficult to enforce?

MS. KERNS: Adam, I'm going to go to Jeff Mercer, Law Enforcement representative.

MR. JEFF MERCER: I would say in general that a no targeting is difficult to enforce. It is difficult to

enforce in federal waters. It's just something that is difficult to prove whether or not you are targeting striped bass or bluefish. We do our best with it, but it is a measure that is very difficult for enforcement to enforce wherever it occurs.
CHAIR GARY: Go ahead, Adam, follow up.

MR. NOWALSKY: Just to follow up, there is no new inherent difficulty that the last three miles would incur that aren't already a problem for the other 197 miles, if I understood that correctly.

MR. MERCER: There is a complete prohibition on retaining striped bass in the federal waters as well, so that makes it slightly easier on our end, and we do take enforcement actions out there based upon that. But it is difficult to prove a case on targeting in federal waters. Would it be any less or more difficult in state waters? I can't really answer that, it is essentially the same thing, but it is a difficult case to prove.

CHAIR GARY: Last comments, Mike, sorry, questions.

DR. ARMSTRONG: Katie, if we could go back to the percentage reduction from the emergency action in 2024. I thought I just heard you say 11 percent, but I had heard calculations say 14.1 percent.

DR. DREW: It's 14.1 percent for the ocean, and about 2 percent for the Bay, so when you add them together and combine with no changes on the commercial side, you get 11 percent reduction overall.

DR. ARMSTRONG: Okay, versus the 14.5.

DR. DREW: That we need overall.

CHAIR GARY: Does that answer your question, Mike?

DR. ARMSTRONG: Unfortunately, yes.

CHAIR GARY: That was our last question, so we're going to go into discussion now, the most challenging part of this meeting. I know the Board knows this, but for the listening public, so the exercise we're about to embark upon is to take this very well done and thorough document, created by the Plan Development Team, and then craft it into something that the public can really respond to and understand.

Part of that exercise is taking things out that we think are not necessary, and then also on the other end of the spectrum, things that may be missing, and adding them to the document. As Emerson had asked, and Toni had replied, a strategy we want to employ is to take one section or the other, it really doesn't matter.

But once we started recreational measures, let's stick with that and finish them, so 3.1 or 3.2 commercial, and we'll go from there. I will open the floor up, we can have some brief discussion, but when we put motions on the floor, if we have limited time. That will hasten us to our conclusion. I'll open it up. I'm going to go to Justin and then Emerson and then Adam, and then Mike. Go ahead, Justin.

DR. DAVIS: I guess I wanted to ask, do we have to go in the order of talking about recreational and then commercial, or would you be open, I mean if it is the will of the Board too, to address the commercial section first?

CHAIR GARY: I might not have been clear. We could go either way. But once we start one, once a motion is up for one, you want to throw a motion up right now, you can start the process.

DR. DAVIS: I am willing to do that, Mr. Chairman, but I'll defer back, some other folks raised their hands that also wanted to participate in discussion, so I don't want to short circuit what they might have wanted to ask.

CHAIR GARY: Okay, so you're going to hold back. I think we had Emerson, and then we had Adam and then Mike.

MR. HASBROUCK: I was prepared to make a motion relative to Section 3.1, but I also have a motion relative to 3.2. I'll make either one of those motions, depending on where you want to start.

CHAIR GARY: You didn't send those motions; you just have them?

MR. HASBROUCK: Yes, but they are just as valid as ones that were sent in previously.

MS. KERNS: Read us very slowly, please.

CHAIR GARY: All right, Emerson, you get the honors, lead us into.

MR. HASBROUCK: Okay, do you prefer whether I start with 3.1 or 3.2?

CHAIR GARY: Three point one.

MR. HASBROUCK: Okay, **move to add under 3.1.1 and under 3.1.2, an option that states that any recreational season closure implemented through this addendum would be a no harvest closure, and an option that states that any recreational season closure implemented through this addendum would be a no targeting closure**.

CHAIR GARY: For members of the listening public, we are typing in Mr. Hasbrouck's motion, and we'll have it upon the screen in a moment, and we'll read it into the record.

MS. KERNS: Emerson, just to clarify. The goal of this is for the public to choose whether it's a harvest closure, or the public to provide input, the Board will choose, whether this is a harvest closure or a no targeting closure.

MR. HASBROUCK: Yes, that is right. It is to provide two options for any closures. One is that the closure would be a no harvest closure, and the other option would be to have a no targeting closure, and to get public input on both of those options for any closure.

CHAIR GARY: Do we have a second to this motion? Mike Luisi. All right, Emerson, do you want to expand on your motion?

MR. HASBROUCK: Over 90 percent of the recreational catch is discarded. If you look at data from the past 10 years, for some years removals from harvest are greater than the discard mortality, and in some years recreational discard mortality is greater than the recreational harvest.

Harvest and release mortality have been pretty much evenly split, in terms of which one comprised the majority of recreational removals over the past 10 years. I don't know why we would not want to help address this high level of discard mortality by implementing no targeting. I think we need to get at that somehow.

I know that there are enforcement issues, but I keep hearing from the public that the public wants to do the right thing to help rebuild this resource as quickly as possible. I have to think that there will be compliance with no targeting, even if enforcement is problematic. Also, there currently are no targeting closures in the Chesapeake

I also understand that we can't actually calculate what the reduction in fishing mortality will be with a no targeting closure. But we couldn't calculate that for some of the other things that we've implemented, circle hooks and no gaffing, but we know that they are going to reduce mortality. Similarly, with a no targeting closure it is going to reduce that discard mortality.

CHAIR GARY: Mike, do you want to add anything to that?

MR. LUISI: Yes, thank you, Mr. Chairman. I agree with Emerson. I also agree with the points that Adam Nowalsky made earlier. I feel pretty strongly, and I've made this clear to the Board, that I think no targeting closures are appropriate in this fishery, where the majority of the mortality is coming from fish being released. I realize that it is a large recreational fishery, and fish are always going to die after being released.

But I think we can do something about it from the Board, to ensure that this sector of the fishing public is held to some standard that will help in the rebuilding of the spawning stock biomass. Emerson mentioned that there are no targeting closures in the Chesapeake. Maryland is one of the states that has

a no targeting closure, and just to give you my own observation.

I drove over the Bay Bridge over the Chesapeake Bay on the second day of the no targeting, no harvest closure last weekend, a couple weekends ago, and the boats were dramatically reduced. Now there were still some people out jigging on the pilings, but there were a lot less boats than there were two days before that.

While it's difficult to quantify, I think it's really important, and I think it's a way for the truly passionate angler to accept the fact that this stock needs more than what we are able to do with the tools that we have. I don't have a crystal ball, but I think I know this conversation is going to go down the road of nothing really works for anyone, as far as options being presented. We're at that point, I think where we need to start making some difficult decisions, and this will be a great opportunity to get the feedback from the public, so that is why I seconded it.

CHAIR GARY: We'll open it up for discussion, anyone? Doug Grout.

MR. GROUT: I normally am very supportive of providing the public with the opportunity to address options in the plans that we put forward. Right now, I'll give you folks my feeling, is this document is way too complex for the public. We have got to narrow this down to something that is simple, because otherwise your public will be spinning their heads. If Emerson, you had presented this after we had done some paring, I would probably support putting it in.

But right now, adding one more thing on top, before we start cutting things out, and narrowing it down, it is going to be difficult for me to support it at this point. You know, I might suggest we table it towards the end, and bring that up as an option at that point. The other thing that I wanted to ask the members of the Bay states that have nontargeting options. Has their law enforcement ever been able to bring a case forward, and get a conviction for someone who was targeting during those periods?

CHAIR GARY: I'll tell you this much. PRFC has a no targeting provision, and my understanding is that law enforcement officers have written tickets. They've also told me that when they approach them and ask them if they were fishing for striped bass, they admitted they were. They admitted they were fishing; they issued the ticket. But that is about as much as I know about it. I think, Mike, I don't know if you have any comments from your side.

MR. LUISI: No, I'm sorry, I don't have any detailed information about the actual enforcement. I do know that the first year we had the rule in effect it was more of a warning shot across the bow, for anglers that were found to be targeting striped bass. But in recent years I haven't followed up with any exact details on what is being enforced, although I know it is being enforced. People are being stopped, tickets are being written, but how many of them get prosecuted, I'm not sure.

CHAIR GARY: Toni, do you want to add something?

MS. KERNS: Mike, I think you hit home for the Law Enforcement Committee, often it's where the rubber hits the road. The tickets can be written, but how well they can be prosecuted in court is another story. We can try to see if we can get some more information on that. But I just wanted to note, relative to the discard mortality.

In 2022, the release mortality is actually starting to go down. In '21 it was 50 percent overall of the release mortality, and in 2022 it is 39 percent. It's not at those highest levels anymore. Then in terms of the discards themselves from the ocean and the Bay, those values also went down in '21 to 2022.

CHAIR GARY: Jason.

DR. JASON McNAMEE: I actually don't have anything relative to the motion, but I wanted to let you know that I have a motion relative to these same sections, so I just wanted to let you know that, in case process-wise you wanted to come to me sometime in the near future.

CHAIR GARY: You have a motion you want to offer up potentially at some point. Let's go to Dave Sikorski.

MR. SIKORSKI: Coming from the Bay perspective and seeing what no targeting closures have done, I would disagree slightly with Mr. Luisi. This year we've had a concentration of fishing in one place, one place only for the most part, Baltimore Harbor. Reflection of what is happening on the Chesapeake Bay today is very different than 2017, when we were looking at the benchmark assessment, and how do we address the majority of removals coming from discards.

Also, the Chesapeake Bay, to my knowledge, has never had a majority source of removals coming from dead discards. We are a harvest focused fishery, at least in Maryland, and so are addressing harvest is the way that you can address mortality. I have some concerns about quantifying no targeting closures and their value in trying to chase this fishery that is continuing to decline.

I don't look at catch and release as a sector, you know similar to what Mr. Luisi said, you know catch and release people. I look at catch and release fishing as a reality of recreational fishing. I look at dead discards as a reality of commercial fishing, and we should manage those wasted dead fish in whichever way we can.

But if we continue to talk about it in sectors and groups of people and demographics, we're making a grave mistake in the current trajectory of this fishery. I really look forward to seeing what the public would have to say on this. I generally don't support implementing no targeting, I don't think it's a successful way to quantify saving fish at this stage of this fishery.

CHAIR GARY: I know we have a lot of motions to go through, and we're going to have to move the discussions to votes pretty quickly. If you have a burning desire to comment on this before we call the question, let me know. Otherwise, we're going to move this forward. Not seeing any burning. Well, I see Robert T do you want to? Go ahead.

MR. ROBERT T. BROWN: Yes, we have a lot of problems out there, not only with these fish that are catch release, it happens more than just during the summer months. It happens during the winter months, it happens during the spawning season, and it's time when the season is over, and it's got to come to a halt, because dead discards are why we're here today. If we didn't have the dead discards we wouldn't be here on this topic.

CHAIR GARY: I'm going to go ahead and I would like to call the question, if we could. I know we have three Board motions they want to tee up, so we've got a lot of things that are starting to pile up. Does it need a caucus on this? All right, there is, let's caucus. We'll give it 30 seconds. It is time. **We'll call the question. All those in favor, please raise your hand.**

MS. KERNS: Potomac River Fisheries Commission, Rhode Island, New York, New Jersey, Pennsylvania, North Carolina, Virginia, District of Colombia, Maryland, Delaware.

CHAIR GARY: Those opposed.

MS. KERNS: New Hampshire, Maine, Connecticut, Massachusetts.

CHAIR GARY: Abstentions.

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

CHAIR GARY: Null votes. The motion passes, 10, 4, 2. We have three Board members that have motions teed up. I would like to respect those, and the individual that has participated the least, I'm going to give him the next option. That's going to be Mike Armstrong. Then we're going to go to Adam, and then we're going to go to, who am I missing? Justin, oh Jason, and then Justin, you have one? Okay, that is the queue. Go ahead, Mike, you're up.

DR. ARMSTRONG: I don't think I'm the only one here that is having a real hard time grasping all these percentages. In fact, I was just blindsided by that 11 percent, I thought it was 14.1, because a lot of it is not in the document. But I think my motions are still

valid, but it's all about sequencing. We need to get percentages. We were pretty darn close with 14.1 on the coast with the emergency action. We need some from commercial, we need some from the Bay. From a sequential point of view, I would say we start with those and end with the coast, maybe.

But that is based on my, so I'm going to go ahead and go with a Chesapeake Bay option, which currently is only accounting for a couple of percentage points, because it is a 31-inch maximum size, which does almost nothing in the Bay. Let me throw this motion out. **Move to amend Chesapeake Bay Recreational Options B and D to include maximum size limit options ranging from 23" to 26" in 1" increments and remove all other options.** There is a lot of explain to do there if I get a second.

CHAIR GARY: Do we have a second to the motion? Justin Davis. All right, go ahead, Mike.

DR. ARMSTRONG: First off, you know we have to deal with the season thing. The input I've heard is it's a nonstarter. These are so difficult to implement, the recruitment we don't calculate, the enforcement we don't calculate, and the TC admits they don't know the affect of these. Yet we're using them. We're only using them to get a couple extra percentage points. All my options are going to be, get rid of the seasonal components and see if we can get close to the required 14.5 percent cut that we need to hit the F target.

I eliminated all the options with seasons, and so you look at Option B at a 23 inch it is 17.8 percent reduction, so I'm proposing 23, 26, so it would be incrementally less. I don't know, we probably don't have time for analysis, and maybe we don't need analysis. Sometimes common sense should guide us. Option B is similar, so we have the same season as last year, we have the maximum size will be subject to 23" to 26" whatever we pick. The difference between B and D is we will do a 20" size among all Chesapeake jurisdictions, and I think there is something very attractive to getting all the Bay on one size. I think I'll leave it at that. We need reduction from the Bay. We can't leave it at 31" or we're not going to be able to use just the emergency action. If we can't get to it, we're going to have to use seasons. I don't know of anyone here that wants a season, and we are completely opposed.

They are so disruptive. They are disruptive to tourism, disruptive to for-hire fleets, and the whole recruitment of yes, sure, I'm going to take two weeks off from fishing and I'm going to do my fishing the day after it opens again. I don't know what we really got out of them. Anyway, I'll leave it at that.

CHAIR GARY: Justin, do you have anything to add?

DR. DAVIS: The only thing I'll add is that from my perspective, if I'm understanding the motion correctly it's, this is sort of adding new options in, taking some out as well, and that I think we would need analysis of these various options, to see what reduction they achieve.

I think from my standpoint, voting this up would sort of be an affirmation at this point that we are not sending this out for public comment today, that we would be kicking it back to the PDT for additional analysis. But that is my perspective, I would be interested in hearing perspectives from other members of the Board.

CHAIR GARY: What I would like to do is take two comments in favor, two opposed and call the question.

DR. ARMSTRONG: Mr. Chair, can I re-comment?

CHAIR GARY: Go ahead.

DR. ARMSTRONG: One other piece I forgot is the smaller size limit offered some protection to the 2018-year class that are still milling around the Bay, and will come back, because that is all we've got left is the 2018, so that will offer some protection to that too. In regards to analysis, I live and breathe by the science, but there is so much uncertainty in every single step of this analysis, no one's fault, we just don't have the ability to predict landings.

We're saying we get a 30 percent cut from the EA, well maybe we got a 50 percent, or on the other side

maybe we got a 10 percent cut. We don't really know until the day they come in. To a point, sometimes these analyses are misleading, or giving us false hope. I'm torn about sending it back to be reanalyzed.

We know the direction; we know at a 23-inch we get 17.8. Well, we know it's less at 26-inches. I don't know. I know a lot of people aren't comfortable with moving in that direction, but we've got to get something out and we've got to get something out quick, and get our ducks in a row for when problems really start. We're not in a big problem yet, but it's coming.

CHAIR GARY: What I would like to do is two supporting comments and two opposing alternating, so show your hands if you would like to support this. Go ahead, Toni.

MS. KERNS: Just to be clear, Option B and D would maintain the season for the Chesapeake Bay fisheries and maintain the bag limit as they are in 2022. It would just adjust in Option B the maximum size limit, and Option D it adjusts the minimum and the maximum size limit, for clarification.

DR. ARMSTRONG: Thank you, Toni, I didn't explain that well.

CHAIR GARY: A supporting comment, Megan.

MS. MEGAN WARE: I don't know if I'm supporting or not, but I'll provide where I'm at. Things I like, I think that this actually does simplify this section of the document. It took poor Toni, I timed it, 35 minutes to go through the management alternatives alone on this document. I think we have to start cutting heavily here, and so I like that this is accomplishing that.

I would also agree with what Mike said, in terms of the harvest closures. I think there is a lot of uncertainty, specifically around that management tool. We have, I think a sentence in the draft addendum that says, the TC is not recommending closures less than two weeks because of uncertainty. I think there are a lot of things there that make us on slightly shakier ground with those closures.

Maybe to more Justin's point. It's not clear to me, kind of the range of reductions that this will lead us to. That makes me a little nervous about, I just don't know what the 26-inch maximum will get us. I think at this point I'm willing to consider this for the other two reasons I stated, but if this goes forward, I think some things that may be helpful, depending on where we end up in the document.

I don't know if there are confidence intervals around these percent removals or not. If there are, that may be helpful, or having some sort of key almost at the end, where if we're looking at commercial ocean and Bay recreational measures, I think the public is going to want to know how they add up together. We're going to have to think of some way to present that in a concise way, which is on the Board to remove alternatives, but I can see that being a potential challenge.

CHAIR GARY: An opposing comment, Mike Luisi, and we would like to keep these comments if we could to a minute to try to tighten this up. Go ahead, Mike.

MR. LUISI: I'll be very quick. I'm not sure if I oppose it or support it right now, and I understand the intention. But I think, well my question is, if we deviate. Let's say we just take Option B and we start to add one inch to the maximum size in increments of one inch to 24, 25, and 26. Eventually that overall reduction is going to drop below the 16 percent, and I think that is clear what Mike is putting forward.

I just think it sets a stage for Chesapeake Bay to be characterized as the region that doesn't need to pull its weight here, and that we can get around the options presented, and not take a full reduction. I'm not suer if it was intended to be that way. I don't think it was intended in any bad vein. But I don't know if I can support coming out to the public with options that shows the Chesapeake Bay isn't meeting the demand of the Addendum for some other purpose. It's just hard for me to think through.

CHAIR GARY: I think Katie has a clarifying comment.

DR. DREW: I think Megan raised an excellent point about, you know, are there confidence intervals around these reductions, and there are not. I mean I think if you want to think about this, like talking about the 2013 prediction of, you know under one set of assumptions we're predicting a 30 percent reduction, under another we're predicting an 18 percent reduction.

I think depending on how we did these reductions on paper with the 2024, we would likely see a range of numbers here. I think the question is kind of, at this point we're very focused on these point estimates, what's on paper. I think people have already raised the issue of, is a ten-day closure worth the uncertainty that we're getting here?

Are we trying to chase a few percentage points on paper by putting in a measure that is likely to not be effective, that we have a very difficult time even quantifying the effects? I know we've seen in other species the difficulties of trying to hit these point estimates with tweaking seasons a few days here, a few days there, and it has not worked out.

I think it seems like we are maybe trying to get an option on the table to try to move away from seasons, just trying to tweak these numbers. But then the question is, what are we doing on paper? How are we presenting these? We're very focused on kind of the point estimate of the reduction, and I think it is going to be there is uncertainty there that is difficult for us to quantify.

But maybe an option would be, instead of focusing on the percent reduction that we're anticipating here, let's try to focus on maybe what is the probability of achieving F in F target in 2024 with these measures, instead of trying to say, this is going to get you a 16 percent reduction, this is going to get you 17.2 reduction.

Focus more on, here are options, and here is the risk of achieving or not achieving F target in 2024, where I think some of the uncertainty of population size of abundance, things like that, do get translated through better into that probability than something looking right now, trying to track on paper, chase a few percentages points with a few days of closure here or there. It would require a revision to how we have presented these options, and kind of how we've talked about them.

We haven't done these calculations, but it would be relatively straightforward to do. Maybe that would provide the Board and the public a better framework for understanding kind of the uncertainty and the risk, as opposed to trying to chase some of these point estimates a few percentage points on paper, where there is already a lot of uncertainty.

CHAIR GARY: Two more comments, one in support. Pat a supporting comment.

MR. GEER: I don't have a big problem with 25, 26. I'm a little concerned about having that range be as low as 23, because the slot limit would be so small, especially during the summer months with this intense fishing, water temperatures are warm, the release mortality is much higher than 9 percent in those warm temperatures. I'm a little concerned about that.

CHAIR GARY: One last comment opposing. Dave Sikorski.

MR. SIKORSKI: I think removing Option H from the document is a mistake. It has a 19-inch size limit, 19-inch minimum, which is our current regulation in Maryland. That regulation seems to balance availability of fish and the dead discard issue a little bit. Of course, if we have smaller size limits, we have less dead discards in the Bay.

I would want Option H to continue on. Another component of Option H is the one-fish for all modes. It does not have a mode split. If we removed that we would not give the public a chance to weigh in for Chesapeake Bay options, which include no mode split and mode splits, you know both paths down the road. As written, I have an issue with this motion.

CHAIR GARY: We'll call the question, I'll go ahead and do a 30 second caucus if that is good with everybody, unless you need more time. Let's go 30

seconds and see how it works. All right we'll call, go ahead.

MR. LUISI: I'll look to you for direction on this, Mr. Chairman, but I think given Mr. Sikorski's comments, I think we can maybe address some of the overall concern here, if you would allow me to amend the motion at this time. I would move to amend, and after the word options, I guess the way to say it would be to accept Option H for increments, and remove all other options, with the exception of Option H.

DR. ARMSTRONG: Mr. Chair, procedural question.

CHAIR GARY: Go ahead, Mike.

DR. ARMSTRONG: I'm happy to take this as a friendly amendment. I don't know the procedure, whatever is easiest.

MR. SIKORSKI: I think the easy way here is after increments. Instead of and remove all other options you would say and remove, whichever options we would like to remove. The original intent would be Option C removed, Option E removed, Option F removed and Option G removed. We could remove I as well. The goal would be that H stay in place, and I think Mr. Luisi has something to add in regard to that.

MR. LUISI: If you guys are okay with it, I think the language that Dave had would specify what comes out, rather than saying it's all coming out except for one of the additional pieces. If we can do that quickly. I also, while staff are working on the language. I think it would be important, especially in our region, given the fact that we have mode splits.

I would like to see the H alternative, which is in the draft memo from the PDT, be included in this as well under H, so H-1. H-A, I don't know what you want to refer to it as. But it's called Option H alternative in the draft memo. What that does is it establishes the same minimum size limit for all jurisdictions, with the same maximum size limit of 23-inches. However, it does consider a 2-fish bag limit for the party charter, and that would be for all jurisdictions. Split. Do it as a separate motion.

MS. KERNS: Because that is a different subject matter, I think it would be easier, Mike, if we could take up mode splits on its own, and not incorporate it in here, if that's okay.

MR. LUISI: I'm fine with that. That's fine.

CHAIR GARY: We have it up on the screen and it is seconded. Mike, can you go ahead and read that in?

MR. SIKORSKI: Looks like it's me.

CHAIR GARY: Sorry David, it's the amended version. Go ahead, Dave Sikorski.

MR. SIKORSKI: **Move to amend to replace, and I quote, "all other options" end quote, with Option "C, E, F, G, and I."** I'm not sure I read that very well.

CHAIR GARY: Thank you, Dave, and seconded by John Clark. All right, Dave, do you want to quickly speak to that? Really quick.

MR. SIKORSKI: No need to, I think I've already explained it.

CHAIR GARY: John, any comments? All good. Caucus 30 seconds.

DR. ARMSTRONG: Could I, just a clarification, sorry. The 23-inch, that's not subject to the 23, 24, 25, 26 is that under H?

MR. SIKORSKI: As written it would be, and I would only offer that that makes any sense, because there is a 22.4 percent reduction for Option H right now, so I think there is some wiggle room. You potentially increase the maximum size of the slot and still stay within the reductions, I think.

MS. KERNS: The way you wrote it is not correct. **When you said your motion that is not what you said, you said you just wanted H**, not to have it in the maximum size limit. All you need to do is add Option H to B and D.

MR. SIKORSKI: Yes. **Add Option H to Option B and D in the original motion as part of my amendment** please, sorry.

CHAIR GARY: Seconder good with that.

MR. SIKORSKI: Alphabets are tough.

CHAIR GARY: Adam, did you have a clarifying question?

MR. NOWALSKY: That was it right there.

CHAIR GARY: All right, let's try that caucus again, 30 seconds. All right, we'll go ahead and call the question. Before I do that, because of the back and forth, I'm just going to read this into the record. **Move to amend Chesapeake Bay Recreational Options B and D to include maximum size limit options ranging from 23" to 26" in 1" increments and remove all other options.**

That was the original motion by Dr. Armstrong, seconded by Dr. Davis, and there was a move to amend to add H after D. That motion was by Mr. Sikorski, seconded by Mr. Clark, so we're voting on the amended motion, and I'll call the question. All those in favor, please raise your hand.

MS. KERNS: New Hampshire, Maine, Delaware, Maryland, District of Colombia, Virginia, North Carolina, Pennsylvania, NOAA, Fish and Wildlife Service, New Jersey, New York, Connecticut, Massachusetts, Rhode Island, Potomac River Fisheries Commission, and that is everybody, I believe.

CHAIR GARY: Sixteen?

MS. KERNS: Yes.

CHAIR GARY: The motion passes unanimously. Now the amended motion becomes the main motion, and I guess we can do this by consent. **Any opposition to the main motion? Is there any objection to what is now the main motion? Seeing none; the motion passes**. All right, let's try to keep things moving. Adam, I know you were next in the queue, but can I please ask you this, because we decided to kind of stick with the Chesapeake Bay recreational, we're just going to hold you, if that's okay, and so Jason, it's your time and then Justin.

DR. McNAMEE: Before I launch in here, I'm just noting the previous motion altered my motion. I sent it to Toni. I have a motion, it is relevant to the sections that we've been talking about, so I'll just go to it. I would like to **move to add new options to Section 3.1.1. and 3.1.2 in the Draft Addendum II that allow for mode splitting**. **These are Options B, C, and D as defined in the PDT memo to the Board dated July 17, 2023 for Section 3.1.1 and Option H as defined in the PDT memo to the Board dated July 17, 2023 for Section 3.1.2**. That's my motion, if I get a second, I will give you some reasoning.

CHAIR GARY: Second is by Emerson Hasbrouck. Go ahead, Jason.

DR. McNAMEE: Just some reasoning behind the motion. All of the options in the motion still achieve significant reductions. All of the options still require the party and charter industry to implement slot limits, so they would still be participating in the management concept of year class protection, spawning stock biomass protection, all of the things we're trying to achieve with slot limits. The party and charter industry are a small component of the overall removals, and this is talking about the ocean fishery. It is more in the Bay, but it is between 3 and 6 percent, depending on whether you are looking at harvest or total removals. The party and charter mode are a unique and different segment of our fisheries. In the same way that we're comfortable managing commercial fisheries under different regulations, we should have the same comfort managing the party and charter industry differently, as it is unique from both the commercial and recreational segments of the fishery. Given the business model of this segment of the fishery, I'm genuinely concerned about the solvency of this industry.

In particular, those that focus on the striped bass fishery, which is a lot of them, and feel that by allowing for some flexibility in management we can

offer some relief to this segment from the fishery, while still meeting our management goals with striped bass. Then finally, just to offer the point, we're simply seeking public comment on concepts at this point, so this is a really good opportunity to get feedback on this topic from across the spectrum of opinions, which I think will probably get us sampling those right now.

CHAIR GARY: Emerson, anything to add to that as seconder?

MR. HASBROUCK: No, Jason did an excellent job at justification, and I agree with everything he said.

CHAIR GARY: Same strategy, two in favor, two opposed. In favor, Adam.

MR. NOWLASKY: Yes, I'm going to speak in favor of this ultimately, but before I do so, I believe Dr. McNamee referenced needing to change this relative to recent motions, and I believe the Option H in the PDT memo explicitly had a minimum and a maximum of 19 to 23, and the last motion set out incremental. I think at a minimum, this motion would need to reflect that Option H at a minimum remove the, all modes would have a size limit of 19 to 23-inch, if that is in fact the motion makers intent.

Beyond that I'll just say that I would speak in favor of leaving this in. As we've heard before, it is generally the policy of this Commission to be inclusive, with regards to what we send out for public comment. The nature of the mode split question is clearly one that is very polarizing. We'll certainly hear comments here today, but I think it would serve us well as a Board and as a body, to get that comment officially on the record regarding this species in particular.

CHAIR GARY: Opposing comment. I'll have another supporting comment and then we'll call the question. Justin.

DR. DAVIS: Thanks, Mr. Chair, but I'll defer to Jason, the maker of the motion. It looks like he has something to add.

CHAIR GARY: Go ahead, Jay.

DR. McNAMEE: I had mentioned that my motion changed based on the last motion, and that was because one of the options, I specifically, had come off the board. I am anticipating, potentially, one of these options for the ocean fishery may also come off the board, so I just wanted to kind of state that if an option gets removed by the Board. It would be my understanding that it would also remove this mode split option, the one that paralleled it. I'm hoping that makes sense. We can come back and do a motion to that affect, or maybe there is some other procedures that makes sense. But I didn't intend for, it's all the sequencing is challenging with this, as you all know. If one of these options comes off, maybe we can revisit and amend this or something like that.

CHAIR GARY: Doug.

MR. GROUT: Just to Jason. I know you were side barring with Toni, but Adam made a good point about Option A as defined by the PDT in the Board memo. Option H now has a series of maximum size increments. Are you talking about does the party charterboat also?

(Whereupon there was a power outage)

CHAIR GARY: All right, let's make our way back to the board. Okay, let's reconvene the Atlantic States Marine Fishery Commission's Atlantic Striped Bass Management Board, and I think to pick it up where we left off. Doug Grout, can we go back and kind of start with your comments, and kind of rehash those, and get us off to a good start? Go ahead.

MR. GROUT: No, I'll put it in much quicker terms. Please be aware that the Option H in the memo is now different than the Option H that we just modified. If we could have some clarity on which H you mean, and how, I appreciate it.

CHAIR GARY: Go ahead, Jay.

DR. McNAMEE: Yes, the power outage was convenient, it gave me a minute to think this through with Mike and Doug. My intent was that the

modified, the new modified Option H for 3.1.2, I think it's still, so in the memo it specifies a single slot, because that is what existed before.

But I think it is logical to allow the slot to be in these increments that the motion we made prior to this one, sets up, and it just adds the extra fish for the party and charter sector. That was what the original example given in the memo offered anyways. The modes all have the same slot, and it just added a fish for the party and charter. That's what the intent would be, and I think it is okay the way that it's up there.

MS. KERNS: Emerson seconded it, yes.

CHAIR GARY: We've had comment, we've clarified the motion, are we ready to call the question? Do you need a caucus? We'll call the question then. **All those in favor of this motion, please raise your hand.**

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

CHAIR GARY: All those opposed.

MS. KERNS: Maine, North Carolina, Massachusetts.

CHAIR GARY: Abstentions.

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

CHAIR GARY: Null votes. The motion passes 11, 3, 2. All right, I think that takes us to Dr. Davis. You had one ready for us, Justin?

DR. DAVIS: I do, but it does not have to do with the sections we've been dealing with, and I just want to acknowledge that Adam was ahead of me in the queue, so if we're moving to a new section I'll defer to Adam.

CHAIR GARY: I think Adam, but yours is related to the commercial section?

MR. NOWALSKY: Mine is in the background section, but is related to Emerson's first motion, what was that two days ago now?

CHAIR GARY: How about if we go to ocean options, would hold Justin yours, and hold Adam still, so we still have you in the queue. Are there any ocean options? Dr. Armstrong.

DR. ARMSTRONG: I have a motion, if you liked the last one you are going to love this one. **Move to replace Ocean Recreational Option B with the slot limit of 28" to 31" and no seasonal harvest closure, and remove Option C and D**.

CHAIR GARY: Do we have a second? Cheri Patterson. Mike, can you speak to your motion?

DR. ARMSTRONG: Again, in the interest of simplifying things, we're going from four options to two, one if it's status quo. But it goes back to the lynchpin is, do we believe that seasonal closures are appropriate now. I don't and I think it is needlessly complicating things. That gets us a 14.1 cut, and I kind of wished that we had talked about commercial first, because I believe there is going to be a cut suggested there. That will get us more.

We just got a fair amount of cut from the Bay. We don't know how much, but it is a lot more than the 31-inches. I think the standalone with all these together will come close to 14.5 percent, which is what we need when everyone is participating. I got rid of Option D, because I don't think now is the time to be changing the minimum size.

I mean, God, we have compliance issues already. We don't need a 30-inch size. Option C only gets us 11 percent as a standalone without seasonal, and that to me isn't enough, and probably not worth going to public hearing with. We're left with the emergency action or status quo.

CHAIR GARY: Comments, Cheri as seconder?

MS. CHERI PATTERSON: Mike covered it. I don't think seasons are something that will be consistent

for us, so I don't think we should be considering those.

CHAIR GARY: We'll take again two comments in favor, two against. In favor comments, go John Clark.

MR. CLARK: More just a question, isn't this pretty much just bringing us back to status quo? Oh no, okay, this is the emergency, so the options would just be status quo and the emergency. Okay, I got it. I'm fine with that.

CHAIR GARY: Doug.

MR. GROUT: I will support this as I supported the changes to get rid of the seasonal options in the Chesapeake Bay. My main reason for this is something that I've heard throughout my career, from the MRFSS, from the MRIP staff. Is it really seasonal closures less than a wave are really highly uncertain.

I know a lot of states have been using those, but the data is not set up to just split. I have closures that are less than a wave, because as we all know, in a two-month period the fishing catching can change dramatically, so you are adding a tremendous amount of uncertainty to your estimates here. The only time I would support any kind of a seasonal closure with any fishery is at the wave level.

CHAIR GARY: Opposing comment, Adam.

MR. NOWALSKY: This Board has not had to sit through too many Monitoring Committee meetings, if any, with the Mid-Atlantic Council and summer flounder, black sea bass, scup, bluefish, where our technical advice has continually been for the two decades that I've been part of these meetings that the best way to constrain harvest is through seasonal closures, period.

That is the advice we have been given ad nauseum. I'm opposed to this motion on the grounds that that is the advice I've heard over and over and over again. Given the earlier motion that this Board passed from Emerson, regarding including different ways of addressing those closures, both harvest as well as targeting. I think that this motion is now inconsistent with the previous action that this Board has took on that earlier motion.

I think that this is essentially just taking an emergency action that was passed with the idea of, well it's just an emergency action until we can get an addendum in place, and now we're putting it in place, potentially for the foreseeable future. There has to be some additional options here as to what striped bass management is going to look like moving forward, not just one single slot limit that is in direct contrast to where removals have come from in the past, takes no action to address them. I can't support this motion.

CHAIR GARY: Unless there is a burning desire for more comment, I would like to call the question. I don't see any, 30 second caucus. All right, **we'll go ahead and call the question. All those in favor, please raise your hand.**

MS. KERNS: Potomac River Fisheries Commission, Massachusetts, NOAA, Virginia, Maryland, Delaware, Maine, New Hampshire.

CHAIR GARY: Those opposed.

MS. KERNS: Rhode Island, New York, New Jersey, Pennsylvania, North Carolina, District of Colombia.

CHAIR GARY: Abstentions.

MS. KERNS: Fish and Wildlife Service.

CHAIR GARY: Null votes.

MS. KERNS: Connecticut. Can the yesses raise your hand again? Never mind.

CHAIR GARY: Motion carries, 8, 6, 1, 1. All right, we'll keep moving. We're still looking for ocean motions. Anyone? Any more recreational motions? Adam.

MR. NOWALSKY: I would like some clarity on where this leaves Emerson's motion that we started out with today, because if that motion was to include the

no targeting provisions for seasonal closures, and this motion now removes seasonal closures as options, where does that leave that earlier motion?

MS. KERNS: Adam, I took Emerson's motion as to any option that got moved forward that had a season closure, it would also contain a no targeting closure. That was the gist of his motion, or the implication of his motion. Right now, the Board has not put forward an option that has a season closure, so therefore there is not an option to add a no targeting closure at this time.

CHAIR GARY: All right, last call for recreational motions. Jason.

DR. McNAMEE: Sorry, Mr. Chair, no motion from me. I have a question about what this does to the motion that I put forward, because now the way the PDT memo reads, it kind of aligns the slots, changes them by widening them a little bit, but says that the seasonal closures. My assumption is it would now align with the new motion that just passed, which means that there would be no seasonal closure for our party and charter mode either, but the slot limit would be the same. I'm just seeking clarification on that.

MS. KERNS: Jason, as I read the example option in the PDT memo, it only specifies the size limit, it doesn't have any specification to the season closure. In the text surrounding it, it says all the other measures would apply to the party and charter, as it does to the private and shore boats. The only thing that this option in itself is doing is changing that slot for the party and charter. Your option still does that, and based on what you said before, for clarity for the Board it removes the C and D.

DR. McNAMEE: Thank you.

CHAIR GARY: Again, so we're back to recreational options, and any last motions on the recreational side. Seeing none; let's move to commercial. Let's go with Justin, and I see John and Emerson.

DR. DAVIS: I sent a memo over to staff, so wait to see if it appears on the screen. That looks like it. Okay, I move, all right hold on everybody. Sorry, it's going to take a while. I **move to remove Options B1 (No Quota Adjustment) and C2 (FMP Standard as Starting Point) from Section 3.2.1, Option 3, implementing a commercial maximum size limit from Draft Addendum II. Task the PDT with conducting spawning potential analysis to determine quota reductions assorted with each option in Option Sets D (Ocean Commercial Maximum Size Limits) and E (Chesapeake Bay Commercial Maximum Size Limits). Add a new Option Set to Section 3.2.1 containing the following options for reductions to commercial quotas:**

Option A, Status Quo, all commercial fisheries maintain 2017 size limits and (or Addendum VI approved CE Plans and Amendment 7 quotas and Addendum VI approved CE adjusted quotas, or

Option B, commercial quota reductions. Quotas for all commercial fisheries will be reduced by 14.5 percent from 2022 commercial quotas, including quotas adjusted to approve Addendum VI CE Plans, and if I get a second, I'm happy to speak to the rationale for the motion.

CHAIR GARY: Second, Mike Armstrong. Go ahead, Justin.

DR. DAVIS: Thank you, Mr. Chairman. Kind of in the spirit of being down here in Washington D.C. I am proposing adding something to the document, but I think I have to pay for it here. I'm removing something as well, so hopefully this all kind of balances out. The intent here is to sort of create two, I guess I would say option paths within the commercial section.

One to apply a maximum size limit to the commercial fishery, and do the spawning potential analysis to understand the quota reductions that would go along with that or going down the pat of just taking a standard, consistent 14.5 percent reduction in commercial quota across the board. The way, and I hope this reads the way I intended. If not, I'm open to suggestions.

But the intent here is that the Board would have to decide either to go down the road of doing a maximum size limit on the commercial fishery, or take a 14.5 percent reduction from all commercial quotas, or stay status quo on commercial quota. I'll acknowledge that this is sort of a deviation from the initial intent and motivation of the Addendum, and the discussion we had on the record back in May.

What I said when I made the motion to start the Addendum was that we should focus on implementing a maximum size limit for the commercial fishery, not quota reductions. I think what we found out, once the PDT dug into that, and I have to thank the PDT for all the work they did on this document, that it turned out to be a very complex issue. If we impose a maximum size limit but don't adjust quotas through spawning potential analysis, as we learned earlier, which actually has the potential to increase removals, which runs counter to what we want to do. I think also we can't ask any jurisdiction to vote for a maximum size limit with a commercial quota adjustment, until they understand what that adjustment is going to be, so we have to have the spawning potential analysis, I think to show jurisdictions what they would be selecting if they choose a maximum size limit.

As an alternative option, just doing a 14.5 percent reduction across the board for commercial quota is relatively simple. You know that 14.5 percent number comes from that is the reduction removal we're looking to get in this document to get down to F target, and I think that would provide sort of an equal reduction across the board.

Whereas we saw, you know with a maximum size limit, that is going to impact different jurisdictions and states differently, so 14.5 percent would be uniform across the board. That is sort of my intent in making the motion here is to hopefully simplify the section dealing with the maximum size limit for the commercial fishery, but also provide an alternative of just doing a straight across the board quota reduction.

CHAIR GARY: Mike, comments as seconder?

DR. ARMSTRONG: Very briefly, yes. I like this motion. I like how it takes out B1 and C2, because I don't think those are particularly topics that are germane for public input. I think those are Board decisions. My question is, do we need to add language that moves B2 into the document? My original, to address this I said, move to remove commercial Option Set B and specify the quotas will be adjusted using spawning potential analysis. Right now, it is just leaving an option just sitting there all alone.

MS. KERNS: I see what you're saying, Mike. Through this motion Justin has chosen B2 for the D and E Set on its own. You actually remove B2, because you've already chosen it in your motion, Justin. Does that make sense? That's how I interpret it anyway.

DR. DAVIS: You're saying essentially, I've removed Option Set B, because we made a decision there, so we've chosen quota adjustment, there is no need to leave in Option Set B, essentially.

MS. KERNS: Correct.

DR. DAVIS: The same for Option Set C. If this motion is voted up, we're choosing 2022 as the starting point for the adjustments, so that is my intent, that matches my intent. This should be reworded to reflect that. I'm open to that.

MS. KERNS: Maybe we could alter that motion to say, remove Option Set B and Option Set C. Yes, you can get rid of the parentheticals, it's fine.

DR. ARMSTRONG: But we don't want them to go away, the remaining ones. Do we need language that says specify in the document that this is the way we will do it?

MS. KERNS: In the motion, right?

DR. DAVIS: Mr. Chair, if I could make a comment.

CHAIR GARY: Go ahead, Justin.

DR. DAVIS: I think the wording of the motion, given that we're tasking the PDT with conducting the

spawning potential analysis, that sort of covers that we've selected that option. Under Option Set B we might need some language saying we're using 2022 as the starting point for the adjustments.

MS. KERNS: It's noted, just for the record, that 2022 is also those CE plans if used.

CHAIR GARY: Clarifications suit the maker and seconder? Good, okay. All right, thank you both, thanks everybody for your patience, and we'll open this up to take comments again for and against. Start with supporting comments. John.

MR. CLARK: I'm still trying to digest this whole motion. A part of it is what I was going to propose as a motion, which was removing C. But I was just wondering if it would be possible, the maximum size limits, as was put forth in the PDT memo, are really a real problem for gillnet fisheries, which I think is pretty much from Delaware south in the Chesapeake there. I was wondering if we can with this motion, just exempt the gillnet fishery from looking at maximum size limits and replace it with mesh size limits, or would that have to be a whole separate motion here, rather than just amending this?

CHAIR GARY: John, it sounds like you could go either way, but the mesh size might be problematic. Toni or Katie, could you explain why?

MS. KERNS: John, for the mesh size, and I guess if you substitute the motion or if you do a separate motion, it would be helpful to have an understanding of what is your intention of how to determine what that mesh size would be. Would they be exempted once it's figured out? I don't know if we'll be able to determine a mesh size to take out for public comment.

MR. CLARK: Perhaps what we could do is, you know if we wanted to make a grand unified motion. In addition to the maximum size limits, because mesh size is not in there, I'm just curious as to whether we could just add it. You know if we're already going to be examining what happens with maximum sizes in the commercial fishery. Can we look at the corresponding mesh sizes? I think with mesh sizes we can get pretty close to a maximum size, but of course it is not going to be perfect, because they are still going to be catching fish that are larger than whatever the maximum size is. Particularly in anchored nets, a lot of times those fish will be dead when they are removed.

Plus, we have ITQ fisheries anyhow, where the fisherman has a set weight limit he can catch. There is no point in discarding that fish, is the point. I was just wondering. I don't know exactly how we modify this one, but to bring the gillnet mesh into this would be a pretty neat way to have a single motion that would cover everything.

MS. KERNS: John, I think you could just try to do an amendment. See if you can get an exemption for your anchored gillnets, and then move forward. I think that is the best way to proceed.

MR. CLARK: Right, I was just thinking based on the motion, we're already taking about maximum size limits, and going to be examining that. This would just be to set maximum mesh limits that correspond to those maximum size limits. It might be something we could do easily here, although I'm not really coming up with an easy way to do it. Could we just add wording for right now to Option sets D and E, which are the maximum size limits, to perhaps determine the quota reductions using the maximum size limits and the corresponding gillnet mesh sizes.

MS. KERNS: John, in the PDT memo on Page 7, do you have that in front of you? There are two options. There is an anchored gillnet exemption or there is the option to allow the states to submit proposals requesting an exemption. Do you want to just choose one of those?

MR. CLARK: Well, I was just thinking even with, you know as I said, with an ITQ fishery and with a driftnet, if you catch something larger than a maximum size, the survival is going to be better than an anchor net. But if it's an ITQ, what is the point of throwing it back? I mean why not just have the fishermen harvest that fish?

I would just like to see that the restrictions we put in place would recognize the fact that these are different fisheries, and we're trying to get the same result with gillnets, but we're not holding them to the same standard as the hook and line fishery or a pound net or whatever.

MS. KERNS: Understood, and that's what an anchored gillnet exemption would do here, so the anchored gillnets would not be subject to a maximum size limit, but they would be subject to a mesh size requirement. You would need to figure out what that corresponding mesh size requirement would be.

Under Option F3, the states would submit a conservation equivalency proposal to whatever maximum size limit gets approved, if that is the option that goes forward, for a mesh size requirement equal to, for the anchored gillnet fishery, or are you not even wanting to have a mesh size requirement? You just want a full exemption?

MR. CLARK: No, as I said, we can work with this. I guess in that case what we should do is work on this one, and then also have the option in F here to look at that. I guess it would have to be a separate motion then.

MS. KERNS: Do you prefer F2 or F3?

MR. CLARK: Let me read them over again. Maybe you just come back to me.

CHAIR GARY: All right, so we'll stay with the main motion here right now, and we'll go ahead and take comments. I'm going to take up to four comments. Mike, go ahead.

MR. LUISI: Two thoughts to help me decide. The first one is, based on the discussion that we had that Toni presented earlier, Justin. Does this delay the review and the approval of the Draft Addendum until our next meeting, so we can all have the opportunity to see the calculations that would come forth as a result of your motion, or not? I guess that is one of my questions, and then Mr. Chairman, I do have a comment regarding the overall motion.

CHAIR GARY: Okay, thanks, Mike. We're going to let Justin respond to that and then back to you.

DR. DAVIS: Good question, Mike. I think it depends on the will of the Board, although Toni, correct me if I'm wrong. If the Board was willing to send this out for public comment, acknowledging that that spawning potential analysis will be done, those tables will be populated before the public sees it. But the Board doesn't need to see that before it goes to the public. Then I think that we can vote to send it out today.

If the Board felt like they want to see the results of that spawning potential analysis associated with those different options, thinking that if they saw that someone might see one and decide they wan to vote to take it out of the document or something. I think that is really a decision for the Board of whether we would be willing to make that move to ask for the analysis, but be good with it going out to the public before we see the results or not.

CHAIR GARY: Back to you, Mike.

DR. LUISI: Thanks for that, Justin, I guess we'll make that decision later. I'll start by saying, I like the first paragraph, I think it accomplishes everything that I thought was reasonable to kind of break things down a little bit, and get the calculations done for maximum size limits. It's not that I'm arguing against Option B.

I think the commercial quota reduction is a reasonable request or a reasonable consideration by the Board, given where we are with striped bass and the health of the stock. I find some concern in that some of the decisions we've already made here today, and what is going to be analyzed, is likely going to produce reduction values on the recreational fishery that are less than what we're shooting for as a target reduction.

Now we have an option where 14.5 percent with no consideration of anything other than that would be made on the commercial, and yes because it is easy, but is easy the right way to do it? The harder way to

do it and the bigger bang for your buck is to deal with release mortality, but that is difficult.

I just don't like the rationale behind, let's just take 14.5 percent from the commercial fishermen, because it's easy to do. They are going to see themselves compared with the other sectors, in a way that takes the full extent of the reduction on them, yet the recreational anglers, given the scenarios we've discussed could find themselves falling within a variable range.

My point is, I would prefer to see that reduced by to reduced up to 14.5 percent, as a way of evaluating and considering some additional levels of reduction on the commercial end. That is what I would have preferred it to say. But that's where I stand.

CHAIR GARY: Toni has got some clarifications to offer.

MS. KERNS: I'll offer for your comfort level, Mike, that the Board always has the option to do something within the range of the options that are in the document. You have 0 and you have 14.5, and you've got everything in between. Come time for approval, you could, I understand where you are going with what you're discussing.

Something to think about as the Board provides their direction to staff on when this document goes out, and the spawning potential closures. I know that some states have done the spawning potential, and then what that does to your quotas. Some states have done these calculations before. I don't believe that every state has done these before.

There are some adjustments that we'll need to make from the last time a state did it, based on new information. Is it your prerogative to just let each state do it and bring it to the public hearing as the state calculated it? Does the TC need to review what a state has calculated? Are there states that are going to need some help? Who is going to help them? Just keep thinking about those things and continue your discussions.

CHAIR GARY: We've got Dave Sikorski followed by Robert T. Brown.

MR. SIKORSKI: That was helpful. In a section of this motion, it talks about Option B. I think the only way that we're actually going to achieve the goal that got us here today, which is controlling F, is if we reduce some commercial landings, not commercial quotas. If you look at the 2022 performance for the fishery, in the Chesapeake Bay, and we look at it compared to 2017 levels, the Addendum VI, you know where we started.

Chesapeake Bay has had a 10 percent, 24 percent and 15 percent increase in commercial quotas compared to 2017. That is Table 13C. I entered this meeting thinking; how do we save 986,000 fish? I don't care who saves them, how are we going to save them? We've reduced some quota; we're not saving fish.

Just for a little clarity of the Bay versus the ocean, based on 2022 removals. Bay commercial removals account for 35 percent of total removals, according to the data provided. That is 1,573,732 fish. Ocean removals, I'm sorry the total removals are that 1.5 million. From the ocean total removals, 2.5 percent of those removals are commercial. Clearly again, we have a challenge with how we're managing the Chesapeake Bay, and who gets to take what, and how that relates to the F, because that is all that matters today.

Are we reducing F? We've watched some folks on the sideline to not be involved in conservation over the last three years, and Table 13C shows it plain as day in the Chesapeake Bay. You look at Table 13B. Table 13B, the only portion of that that did not achieve removals from 2017 levels was the recreational fishery in 2022. This Board has already taken action to limit the recreational fishery from the '22 levels by taking emergency action. To sum it up, if we're not reducing from landings, we're not reducing F. We have 986,000 fish to save here, and I think it's very important we look at all these sources, and make sure that this Addendum as it moves out addresses that, addresses 986,000 fish being saved.

Recognizing that maybe not everybody has fish to give, and some have to give a little more. That is my thoughts, I don't have an amendment here, other than I've spoken to it, and I want to see what Board members think. Maybe I'll take another bite.

CHAIR GARY: Robert T. and then Emerson Hasbrouck.

MR. BROWN: Yes, we came here today we're talking about dead discards. Everybody knows that is a problem. The commercial fishery has less dead discards than any other fishery that we have. The commercial fishery is accountable for the fish they've got that we catch. We've got tags that we tag every fish.

We've got fish that we have to carry to weigh-in stations in some states. I mean we're very accountable on every fish we caught, and taking 14.5 percent reduction is a hardship on the commercial fishermen. I mean you've got a lot of people who wouldn't be able to eat a rockfish if it wasn't for the commercial fishermen, because they can't afford to go catch the fish.

It's time that you readjust this and look at this cut in quota, as we are not the ones that have the high dead discards. The dead discards are what really needs to be addressed. We don't have that problem, and we are down to 10 percent of the fish that is being caught, and that's with our dead discards.

You need to take a careful look at this, reevaluate it, because our commercial fishery, it will really be hurt very bad. Some will probably fold up and go out of business with a 14.5 percent reduction. Let's concentrate on dead discards, which is the main problem and hopefully we can correct it.
CHAIR GARY: Emerson.

MR. HASBROUCK: I'm opposed to this motion, and I am opposed to the extent that I have a motion to substitute. A very simple motion. I **move to remove Option B2**. That is my motion to substitute. This essentially removes the option to require a quota adjustment using spawning potential analysis to account for maximum size. If I get a second, I can talk about this more.

CHAIR GARY: Is there a second to that motion? One last call for a motion, Emerson made the motion. Is there a second? Seeing none; the motion does not move forward. Oh, wait a minute. Toni just noticed, Emerson, you got a second from Craig Pugh online, so your motion is up. Go ahead and speak to the motion.

MR. HASBROUCK: Addendum II was not intended to consider a commercial quota reduction, but to only consider a commercial maximum size. I was the seconder on that motion to develop Addendum II, and I did not intend the Addendum to implement a commercial quota reduction. Maybe Dr. Davis thinks differently, because he made the motion. But when I seconded that motion, and when I supported it, I did not intend it to implement a commercial quota reduction. Further, the quota reductions presented in the draft show a greater percent reduction in the commercial quota than will be required by the recreational catch reduction.

That is using the, I'm sorry with the spawning potential analysis. What is presented in the Draft, using that spawning potential analysis, commercial reductions are likely to exceed either that 14.5 percent or what the reductions are in the recreational fishery. This motion also eliminates all the issues described in the PDT memo, relative to state-specific calculations.

I don't particularly want to take this Addendum out to public hearing, and tell the public that we don't really know what the commercial quota reductions are going to be state by state under the Option A up there, when we go through the adjustment. If we don't know what they are, I think it's very disingenuous for us to bring it out to the public and say, we'll let you know what it's going to be.

I also don't want to send it out to the public without us reviewing it first, without the Board reviewing what those reductions are going to be under the spawning potential analysis. But I don't want to delay any action on this Draft Addendum to a future

Board meeting. I think we need to take action now and get this out to the public, and get this thing going down the road. Also, we just opposed seasons, but now we want to impose a 14.5 percent or greater reduction on the sector that only contributes 10 percent of the removals.

CHAIR GARY: Thank you, Emerson, and if Craig Pugh would like to comment as seconder and I would like to call the question, get us back on track if we could. Craig, do you want to comment?

MR. PUGH: I respect Toni's opinion and what she said, and most of the time she's right. But the language here says will, and that is what the public is going to read. They're going to see commercial fisheries will be reduced, and they will expect it to, will be reduced. I know I certainly would if that was the language intended.

It doesn't say could, it doesn't say that there is from 0 to 14, it says it will be reduced by that, and because of that that is probably my main reason for the distastefulness of this part of the motion. I'm in agreement with Emerson and maybe a few others. But we are taking quite the commercial hit here for having 10 percent of the fishery.

We're going to be reduced by 14.5 percent. We're already at, I think we're allocated about 1,200 pounds apiece, 1,200 pounds apiece in the state of Delaware. I'm looking at, I know John can correct me here, but that is probably pretty close to 1,000, maybe 1,000 pounds. Am I an actual commercial fisherman or am I reduced to a hobby?

That's kind of the way we've felt for a long period of time, the degradation of our commercial industry is nothing new, and my little talks here are nothing new to any of you. But we just keep whittling away and whittling away and whittling away, because it is, because it's easy. Oh, that is easy to take away from them, we know what it is. Sure, you know what it is, but we've done a hell of a good job with trying to target our fish so that it will market well, with hardly any dead discards. I would love to show any of you that actual knowledge that we have, where we actually catch the fish, you know two- or three-days quota easy with 3 or 400 yards of net. It's like fishing in a mud puddle to me. When I was a kid, we used to fish 3,000 yards in that.

It's the degradation of our commercial fishery just keeps whittling away and whittling away and whittling away. Is it really worth it here? Is the emergency really that big of an emergency? I'm not so sure. I'm seeing a lot of fish that are 14, 16-inches. What year class is that? A ton of those fish have shown up as bycatch. Apparently, we've missed that. But there seems to be a lot of things that we've missed. At any rate, I'll be quiet.

CHAIR GARY: Is there a need for a caucus before we call the question? Yes, okay, 30 seconds. All right, **let's call the question. All those in favor, please raise your hands. Jason, you have a question? Thank you, Jason. Let's call the question. All those in favor, please raise your hand.**

MS. KERNS: Rhode Island, New York, Delaware.

CHAIR GARY: Those opposed.

MS. KERNS: New Hampshire, Maine, Maryland, Virginia, North Carolina, Pennsylvania, NOAA, Fish and Wildlife Service, New Jersey, Connecticut, Massachusetts, Potomac River Fisheries Commission.

CHAIR GARY: Abstentions.

MS. KERNS: District of Colombia.

CHAIR GARY: Null votes.

MS. KERNS: Three, 12, 1.

CHAIR GARY: Motion fails 3, 12, 1. We're back to the main motion. We're going to try to address your concerns, John, go ahead.

MR. CLARK: I think what I would like to put in there is from the memo, Option F2. I think the **motion can be amended to add Option F2**. I think I can **modify it to just be all gillnets not anchored, but just Option**

F2, modified to be gillnets. That would be, where would we put that again.

MS. KERNS: Want some help, John?

MR. CLARK: I guess **we could put it after E, (Chesapeake Bay Commercial Maximum Size Limits), and move to add Option F2**.

MS. KERNS: John, so you would say, instead of saying F2, since you're changing it, because that only is specific to, just say to exempt all gillnets.

MR. CLARK: Okay, to exempt gillnets from, yes that would work. To exempt gillnets from maximum size limits.

MS. KERNS: Are you going to require the mesh size?

MR. CLARK: Oh, to require maximum mesh sizes and exempt from maximum size limits.

CHAIR GARY: Does that look right, John?

MR. CLARK: I believe so, the idea here is that for gillnets we will set a maximum mesh size that would correspond to whatever size limit is chosen, and then they will be exempted from the size limit requirement. I believe that says it.

CHAIR GARY: Do we have a second to the motion? Dennis Abbott. Go ahead, Justin.

DR. DAVIS: Question for John. I think the intent here is that if the Board ended up voting up the maximum size limit options, then we would look to require a maximum mesh, like not if the Board ended up either going for status quo on commercial or doing the Option B, 14.5 percent reduction.

MR. CLARK: Correct, Justin. It's only if maximum size limits are chosen.

CHAIR GARY: Okay, we've got a motion and a second. Dennis, did you want to speak to it? No, good. I'll have two comments. Emerson.

MR. HASBROUCK: I'm just wondering what this maximum mesh size is going to be based on. What studies are we going to base that on? What information is available?

MR. CLARK: We have a lot of, and I would say this is probably true for most gillnet fisheries. We have a lot of commercial sampling data. As I said, nothing is going to be perfect. But for example, I would say if you were going for a whatever, 40-inch size limit that maybe an 8-inch mesh would be the maximum size. That is not going to stop a larger fish than that from getting stuck in there, but it would probably reduce the amount of striped bass that are over the maximum size that would get caught in the net.

CHAIR GARY: That was a question for John, I'll allow two comments, if anybody has any. Go ahead, Chris.

MR. CHRIS BATSAVAGE: Yes, I can certainly support a maximum mesh size if you have a maximum size limit. I understand that although gillnets are pretty selective, you do get fish that kind of fall outside of that range. However, exempting the gillnet fishery from that size limit, I don't think is necessary.

In Albemarle Sound, our commercial fishery, we have a maximum gillnet mesh size that corresponds with the maximum size limit. Yes, I'm sure there are some discards, but they are fairly minimal, and some of those bigger fish that do get caught that are bigger than are in that mesh size, cannot be killed and can be released, especially if the water is cold. Yes, there is a discard mortality rate, but it's not 100 percent. I'm opposed to this. I think it's just adding more complexity to the Addendum.

CHAIR GARY: John, you get the last word.

MR. CLARK: I just wanted to respond to Chris that I certainly understand what you're saying, Chris, but we're talking about ITQ fisheries here too. It's not like these striped bass are not being accounted for. The other part of it is, is that we did an extensive bit of looking at discard mortality from anchored gillnets in the early 2000s.

The fishery was different then, it was targeting smaller fish, but when a net is set for 24 hours, and let's say the striped bass gets caught in there an hour after that net is set. That is a dead discard, I mean there is no way that striped bass is surviving 23 hours in an anchored net, with strong currents that we have. That is part of the rationale here, and as I said, I just think overall that having seen a lot of this, done a lot of work with discard mortality from gillnets, that especially where we have an ITQ, it just doesn't really make a lot of sense.

CHAIR GARY: Since you were just responding to Chris, we still have that one comment. Cheri, you get it.

MS. PATTERSON: I just have more of a question for John. You are increasing a mesh size, and forgive me, I'm not familiar with your area. What is that going to do for ESA bycatch, sturgeon, for example?

MR. CLARK: We do have some sturgeon bycatch in the gillnet fishery, very small amount. In fact, before it was listed as ESA, we had good cooperation in getting actual numbers. The good thing we have seen in the years where we were able to get cooperation is that discard mortality from sturgeon, even in anchored nets, is very low. They are very tough in those nets.

CHAIR GARY: All right, let's try a 30 second caucus, and we'll call the question. Let's go ahead and call the question. **All those in favor of the amended motion, raise your hand, please.**

MS. KERNS: New Hampshire, Maine, Delaware, Virginia, Pennsylvania, NOAA, Fish and Wildlife Service, New Jersey, Connecticut, Massachusetts, Rhode Island, Potomac River Fisheries Commission.

CHAIR GARY: All those opposed.

MS. KERNS: Maryland, North Carolina, New York.

CHAIR GARY: Abstentions.

MS. KERNS: District of Colombia.

CHAIR GARY: Null votes.

MS. KERNS: It's 12, 3, 1.

CHAIR GARY: All right, motion passes 12, 3, 1. We'll have to blend the language now, I guess.

MS. KERNS: Just give me one second to do that, and we should read this motion into the record.

CHAIR GARY: All right, we'll just read this into the record before we call the question. **Move to remove Options Sets B and C from Section 3.2.1 (Options for Implementing a Commercial Maximum Size Limit) from Draft Addendum II. Task the PDT with conducting spawning potential analysis to determine quota reductions using 2022 as a starting point, associated with each option in Options Sets D (Ocean Commercial Maximum Size Limits) and E (Chesapeake Bay Commercial Maximum Size Limits). Add an option to require maximum mesh sizes for gillnets, and exempt them from maximum size limits. Add a new Option Set to Section 3.2.1 containing the following options for reductions to commercial quotas.**

Option A, Status Quo, all commercial fisheries maintain 2017 size limits and (or Addendum VI approved CE Plans and Amendment 7 quotas and Addendum VI approved CE adjusted quotas.

Option B, Commercial Quota Reductions. Quotas for all commercial fisheries would be reduced by 14.5 percent from 2022 commercial quotas, including quotas adjusted to approve Addendum VI CE Plans.

CHAIR GARY: Pat, you have a question.

MR. GEER: Yes, I've had my hand raised for a while. I'm wondering if Dr. Davis would consider a friendly amendment. Mike Luisi and Craig Pugh both brought up the 14.5 percent reduction in quota. Can we change that to reduced up to 14.5 percent?

CHAIR GARY: Yes, Pat, I'm being advised It is property of the Board, you can't do a friendly. You can amend.

MR. GEER: I would like to **amend to read Option B as Commercial Quota Reductions. Quotas for all commercial fisheries would be reduced up to 14.5 percent from the 2022 commercial quotas.**

CHAIR GARY: Let's just give it a moment so we can get the exact language up. Does that look right, Pat?

MR. GEER: Yes, it does, and if you want me to explain, I thought Craig did the best job. He said, by putting it out there.

CHAIR GARY: Let me get a second first. Ray Kane. Go ahead, Pat.

MR. GEER: I was just going to say what Mr. Pugh said. By putting it out the way it was written, it will be 14.5, and I think we should consider anything below and up to 14.5 percent.

CHAIR GARY: Ray, any thoughts? Okay, your good. We have Eric Reid online, go ahead, Eric, you have a comment on this motion?

MR. ERIC REID: I appreciate Mr. Geer recognizing that it is a toxic motion as it sits. I just want to make sure; I mean personally I would rather say no more than 14.5 percent, but I guess I can live with "up to." But I want to be clear that the rationale, or the explanation of these two options will plainly state that the range between status quo and 14.5 percent is in play, not either nothing or all. As long as Ms. Kerns will help me out with that in the document, I would be fine.

CHAIR GARY: Any other comments? All right, 30 second caucus, we'll vote. Okay, thank you, John, let's make it 2 minutes. All right, we will go ahead and call the question on the amended motion. **All those in favor, please raise your hand.**

MS. KERNS: New Hampshire, Maine, Delaware, Maryland, Virginia, North Carolina, Pennsylvania, NOAA, Fish and Wildlife Service, New Jersey, New York, Connecticut, Massachusetts, Rhode Island and Potomac River Fisheries Commission.

CHAIR GARY: All those opposed. Abstentions.

MS. KERNS: District of Colombia.

CHAIR GARY: Null votes. Motion passes 15, 0, 1. Now we'll modify the language on the screen. We have another Board member, Dave Sikorski, he would like to, go ahead.

MR. SIKORSKI: I would like to make a motion, move to, I'm trying to follow the changes here. As this gets clarified here. Are you going to replace "by" 14.5 percent with "up to?" Okay. You all heard me talk about my concerns about folks getting left in supporting conservation and saving some of these 986,000 fish we need to save.

I think it will be a healthy exercise to add an additional option, which will allow us to look at reductions from landings, not just quota for 2022. I would **move to add an option, Option C, for commercial landings reductions. Landings for all commercial fisheries would be reduced up to 14.5 percent from 2022 commercial landings, including those which fish under quotas adjusted for the approved Addendum VI CE Plans.**

CHAIR GARY: We'll get that up on the board and then look for a second then, give us a moment. Okay, Dave, just to check off, does that language match up with what you're thinking?

MR. SIKORSKI: Yes.

CHAIR GARY: Do we have a second to this motion? Dr. Armstrong has seconded the motion, so we have it up on the board. Go ahead, Dave, you want to speak to this motion?

MR. SIKORSKI: No, I've spoken to it enough this afternoon. I just think it's a good opportunity to see what the public thinks about quotas versus landings, so we can save some fish and reduce removals.

CHAIR GARY: Mike, any extra comments? Are there any comments on the motion? Go ahead, Megan.

MS. WARE: I'm stealing this comment, because I heard it on this side of the table. But we have two states that had overages in 2022, so it would be

helpful to know, are we reducing 14.5 percent from the landings or from what their quota was?

MR. SIKORSKI: I would think it would be smarter to go from quota in that case. Obviously, the analysis that is provided would show that you are not saving as many fish when you're doing it from an overage. In those cases, there is, I'm assuming payback and all that other stuff. Ultimately this is giving us two options to look at, recognizing that anomaly. Help.

MS. KERNS: I think we can hear that it is noted on the record that any state with an overage, it would not include fish from in the overage amount.

MR. SIKORSKI: Thank you, Toni, that was my intent.

CHAIR GARY: All right we have comments for Robert T. and then Chris Batsavage.

MR. BROWN: Yes, this goes back where, you know a lot of times we don't catch our quota. But yet we can't roll it over to the next year. That covers where the landings and stuff are at. I'm not in favor of this. I think, you know whatever the quota is, are you going to list if we don't catch it, is he going to allow us to do it, or is it going to be a credit to us, because there are many years that we haven't caught our quota?

It's something that you have to think about, what way the quota is going. You know if you're not catching it, and some people don't catch it, because like I say, I'm just not fishing this year. I'm doing a bit of crabbing, oyster, fishing, or whatever it may be, because a lot of them have some small quotas. But I think this is overkill.

CHAIR GARY: Chris.

MR. BATSAVAGE: Just trying to get some clarity on this motion to amend. Is the reduction in landings at the state level for each state, because thinking about North Carolina, which hasn't landed any fish, that would just zero out our quota. Just trying to get a better understanding of how the math would work under this option.

MS. KERNS: The way the motion is read your quota would become zero.

CHIAR GARY: Other comments. All right, if we're ready to call the question, we'll go ahead and caucus one minute. We'll go ahead and call the question on the amended motion. **All those in favor, please raise your hand.**

MS. KERNS: Connecticut, New Hampshire and Pennsylvania.

CHAIR GARY: All those opposed.

MS. KERNS: Maine, Maryland, Virginia, North Carolina, Delaware, New Jersey, New York, Massachusetts, Rhode Island, Potomac River Fisheries Commission.

CHAIR GARY: Abstentions.

MS. KERNS: District of Colombia, NOAA Fisheries, Fish and Wildlife Service.

CHAIR GARY: Null votes. Motion fails, 3, 10, 3. We are back to the main motion. Is there any more deliberation or discussion on this particular, we're back to the main motion. Any other last comments before we take a vote? Is there a need to caucus? It doesn't look like it, so we'll call the question. All those in favor, please raise your hand. Let me put it another way, does anybody object to this motion, let's try that. Okay, we're going to vote it up and down then. Sorry, let's try it again. **Everybody in favor, please raise your hand.**

MS. KERNS: New Hampshire, Maine, Delaware, Maryland, Virginia, North Carolina, Pennsylvania, NOAA Fisheries, Fish and Wildlife Service, New Jersey, Connecticut, Massachusetts, Rhode Island, Potomac River Fisheries Commission.

CHAIR GARY: All those opposed.

MS. KERNS: New York.

CHAIR GARY: Abstentions.

MS. KERNS: District of Colombia.

CHAIR GARY: Null votes. Motion passes 14, 1, 1. I would ask at this time, we were focused on the ocean, the options we've done. The recreational options, I guess any options that folks want to put up any motions. Justin.

DR. DAVIS: I would like to make a motion to add into the document the options described at the bottom of Page 9 on the PDT memo, related to filleting at sea. Basically, just make a **motion to add Option A and Option B as written there verbatim into the document**. I apologize, I don't have that prepared ahead of time.

CHAIR GARY: Okay, let's see if we can get that up, Justin, and we'll let you check off on it. Justin, does that language meet your, okay. Do we have a second to that motion? Dr. Armstrong. Justin, do you want to go ahead with your rationale?

DR. DAVIS: I'll be brief. I think we heard some discussion earlier. I do think it creates an enforcement loophole when states allow filleting of striped bass at sea. It's become even more pronounced now with our narrow slot limit. I think it makes sense for the Board to require states to implement common sense language around filleting at sea.

CHIAR GARY: Mike, any comments?

DR. ARMSTRONG: No, it's pretty simple, but the slot size is small. It really needs to be verifiable.

CHAIR GARY: All right, any comments on this motion? Roy.

MR. MILLER: Mr. Chairman, regarding Justin's motion. I was wondering, we have a regulation in Delaware where you can't alter the size of the fish. One year many years ago we had a problem with the fishermen taking a pair of scissors to the tails of fish, to bring them under the maximum size limit. I think that was part of Justin's intent here, but it doesn't say. It just talks about filleting. I would say altering the length of the fish in any way ought to be encompassed with this particular motion.

CHAIR GARY: Roy, did you want to amend it then, the motion?

MR. MILLER: If they bring that motion back up.

MS. KERNS: Roy, this wasn't discussed by the PDT, so I just need a second.

MR. MILLER: If you just added some language in there, or otherwise alter the length of the fish in any way prior to landing.

DR. DAVIS: I certainly appreciate Roy's concerns, and I've had similar discussions with our law enforcement. The challenge there is that the options as worded in the document sort of, there is a status quo option, and then there is an option that compels states that allow at-sea filleting currently to do certain things, which I read as saying that if a state does not currently allow at-sea filleting, there is no requirement in here for them to do anything.

I don't think this is a good vehicle to sort of require states to implement language across the board that they don't currently have. I'm not saying I'm not open to like another motion or an amendment, but I don't think there is an easy way to modify this language in the PDT memo to accomplish what Roy is looking to do.

CHAIR GARY: While staff is still looking at this, Cheri.

MS. PATTERSON: I believe the language New Hampshire uses is, with head and tail intact.

MR. MILLER: That would work.

MS. KERNS: Is the Board asking for a requirement for state regulations, then to say with head and tail intact? I'm trying to figure out. Since the PDT did not review what every state's regulations were relative to this issue. I don't know if it is an issue, if it's not an issue for other states. It is difficult for me to figure out how to apply it to the document. We could do a review of state's regulations, and then if there are

states that don't have anything related to. When we do the review, if there are issues with states not having language surrounding keeping the head and tail intact, or something similar to that effect.

Then we could add something to the document. But if there is, that language is already covered by all the states, then I don't think it is something we need to add to the document. Again, we will need to do that review of every state's language to see if it is necessary or not. Does that make sense?

MR. MILLER: Yes, or we could consider a motion to make it illegal to alter the size of a fish once reduced to harvest, until, basically, until you reach the dock. Otherwise, I can almost guarantee that some fishermen will be altering the size of the fish at sea, with a pair of scissors or whatever, as long as there is a maximum size limit.

CHAIR GARY: Bob, you have some thoughts.

EXECUTIVE DIRECTOR BEAL: I think this is two separate issues. One is filleting at sea and retaining the rack and all these other issues, and the other is, you have a whole fish that hasn't been filleted, but someone just sort of trimmed a half inch off the tail or whatever it might be. I would obviously just handle this motion that deals with filleting at sea.

Then if there is still interest in this, you know add in an option, another motion that would add an option to the document that states are required to prevent or implement regulations that prevent the alteration of the length of a fish, something like that. It's just, keep them separate, and keep them hopefully simple.

CHAIR GARY: Vote up this motion and then have Roy bring another one forward. Roy, if that meets your satisfaction, we'll go ahead and vote this one up, then you can offer up your own motion. Jason.

DR. McNAMEE: Just really quick. You know I'm totally supportive of this. We've tried this a couple of times in Rhode Island. I just wanted to mention, you know it makes total sense for fisheries management. We then run afoul of other agencies, Department of Health, and Water Resources. It gets complicated to make this work, so I just wanted to offer that so people can think about those aspects of this, but generally I'm supportive for all of the reasons that the makers of the motion mentioned.

CHAIR GARY: Any last comments before we vote on the motion? Need a caucus? No, okay. How about let's try the easy way. **Is there any opposition to this motion? Seeing none; the motion passes by consent.** Roy, I think we can come back to you if you would like to offer a motion related to the concerns you had.

MR. MILLER: I'm sort of working on the fly here, can you give me another minute?

CHAIR GARY: Well, in the interest of time, let me just try to reach out and look at the Board. Are there going to be other motions that folks want to put on the table? John.

MR. CLARK: I don't know if it would be a motion at this point, I just want to get more detail on the commercial tagging programs. I know with the FMP review we've asked LEC to look at this again. Back when Addendum III was passed, the LEC strongly recommended that tagging be at the point of harvest. For this Addendum, I don't know if we want to put that out there as an option just for the public consideration. If we want to wait, I guess that would have to wait for another addendum before we would go to that.

MS. KERNS: Well, you did just task the PRT to review the tagging program. We could get the results of that, and then in the future make a change in the document. But that does not preclude you from adding it to this very simple addendum. I'm just putting that back out there, since that is what you all called it in May.

MR. CLARK: Ah, what the hell, it's already 6:40, right? Just for the sake of allowing the public to consider all the options that have been considered, I would like to see that we just put an option in there to require commercial tagging at the point of harvest. I would like the double tagging in there,

which many states do, so point of harvest and at the dealer weigh station also, point of sale.

CHAIR GARY: John, do you have that written down?

MR. CLARK: I don't, but I can.

CHAIR GARY: Can you just, while we're dealing with Roy's, can you type that up really quick?

MR. CLARK: I will do so.

MS. KERNS: John, just while you're thinking about it. It was a notion that the PDT sort of brought up, but it is not fully explored. It doesn't have a background; it does not have justification. I'll need some direction on what you're looking to achieve.

MR. CLARK: In that case, why don't we wait then. We're going to get a full report, right? I'll wait until that point.

CHAIR GARY: Go ahead, Roy.

MR. MILLER: With the assistance of staff, we have a motion up there, Mr. Chair, would you like me to read the motion?

CHIAR GARY: Please.

MR. MILLER: **Move to add an option to the addendum that prevents the alteration of the length of a striped bass prior to landing at the dock.**

CHAIR GARY: Do we have a second to the motion? Dennis Abbott. Go ahead, Roy, would you like to speak to your motion?

MR. MILLER: I think I have sufficiently covered the background on that.

CHAIR GARY: Dennis, any other thoughts? All good. Any comments on the motion? Justin.

DR. DAVIS: As I see this, essentially this got voted up, if this option was voted up at final action in the addendum, states that don't currently have regulatory language on the books addressing this would have to craft that language, implement it, and then during FMP review it would be determined if that language was in compliance or not. It would sort of fall back on the states to develop language to meet this mandate, and/or fall on the Plan Review Team to determine whether language states have on the books meets the intent.

MS. KERNS: I'm texting with Nicole, who is another one helping us put this document together. I think we have to be very careful about how this is understood. This is not about filleting, it's just about altering the fish itself, and some states have some language about it, but sometimes it's related to the filleting, sometimes it's not related to the filleting.

It was a little bit controversial amongst the PDT members, and so we on purpose left this language out, I think. That what Nicole is texting to me. I don't know if Nichola has a different remembrance of this, and if you do, Nichola, come to the table.

MS. NICHOLA MESERVE: Hi everybody. I just don't think the PDT really, I think your first answer was correct that the PDT did not query the states for this type of particular language. I know in Massachusetts we already have language that prevents any mutilation of a fish so that it can't be measured. I don't know that this is needed, nor did the PDT really investigate it yet.

CHAIR GARY: Adam.

MR. NOWALSKY: I appreciate the intent of this motion, but I'm going to have to be opposed to it. I think that there is a lot of language that states have regarding mutilation of fish already that covers this in many cases. I think this is something that could be covered somewhere down the road. A regular practice in the recreational fishery is to bleed fish.

What happens when you bleed a fish and it results in an eighth inch, a sixteenth of an inch of shrinkage? Does that now open the door for saying, well you did something that altered the length of the fish? What happens when you stick it in a cooler on ice and throw something else in there that winds up breaking a part of a tail?

Again, I appreciate the intent. This is the type of thing that I think is just far too vague. I think this is a very minor problem in the scope of what we're trying to address in the big picture here today, and I think this should be put off to somewhere else down the road, where it can be given some more development and thought what the best way forward is. But again, I appreciate the intent here.

CHAIR GARY: Any last comments? Joe and then Megan.

MR. JOE CIMINO: There are at least 9 states that allow filleting. This isn't preventing filleting. The vast majority of those required a rack, so it would be kind of to the rack, okay.

CHAIR GARY: Go ahead, Megan.

MS. WARE: I was just going to say, I'm kind of having flashbacks here. I think it was circle hook language where we had to define bait and our putting it back. We had certain language. I think it's a great idea. I think it needs LEC input. I think this needs PDT development. I would oppose it now, but say let's put it on the burner for a subsequent conversation.

CHAIR GARY: All right, Megan, thank you very much, so any need to caucus? I don't see any heads nodding, so we're going to go ahead and call the question. **All those in favor of the motion, please raise your hand.**

MS. KERNS: New Hampshire, Delaware, Rhode Island.

CHAIR GARY: All those opposed.

MS. KERNS: Maine, Virginia, North Carolina, Pennsylvania, New Jersey, New York, Connecticut, Massachusetts, Potomac River Fisheries Commission and Maryland.

CHAIR GARY: Any abstentions?

MS. KERNS: District of Colombia, NOAA Fisheries, Fish and Wildlife Service.

CHAIR GARY: Null votes. What is our final, all right, motion fails 3, 10, with 3 abstentions. I'm going to ask one more time, any more motions for Draft Addendum II to Amendment 7? Justin.

MR. ABBOT: I would like to make a motion that we have no other motions this evening.

CHAIR GARY: Do I have a second, okay, I think we got your point, Dennis. Go ahead, Justin.

DR. DAVIS: I know the hour is getting late here, but both Mike and Toni at different junctures raised the issue of whether we are going to send this out for public comment after this meeting, or whether the Board wants to come back at a subsequent meeting and see the results of the spawning potential analysis that we decided to do under the motion that got voted up in the commercial section.

There is also the related issue you brought up, Toni, of what level of TC review or not do we want of the work that is done on that spawning potential analysis, which I think relates to that question. I do think we have to deal with that issue before we walk away.

MS. KERNS: Those were going to be my questions back to the Board again before you can have one last motion to take this out to public comment or not. We do need to resolve this, and that is the will of this Board.

CHAIR GARY: Go ahead, Doug.

MR. GROUT: I would propose that the spawning potential calculations be run by the TC, but doesn't need to be brought back to the Board. That is my proposal.

MS. KERNS: I think that if we do that, it is going to shift the timeframe. If we have the TC review these, which is potentially a good thing to do in particular, since I'm not sure every state has done these before, and the TC reviews them. It would not meet the annual meeting timeframe, just because annual meeting is much earlier this year, and I just don't

think we'll have enough time. We would shift to have a special meeting of the Board sometime after the annual meeting in the fall.

Obviously, we'll move this as quickly as we can, and approve still this year. I don't know in terms of timeframes what that means for everybody's implementation dates, of like how quickly states can turn all of their measures over. We haven't really discussed that yet as a Board. We typically don't do that until we approve the document.

CHAIR GARY: Adam.

MR. NOWALSKY: I can't speak for the workloads, but it would be possible to turn some of that around, and instead have a meeting between now and the annual meeting to send this out for public comment, which could potentially then allow us to take final action at the annual meeting.

MS. KERNS: Adam, the problem is, are you saying to not put the spawning potential information in the document?

MR. NOWALSKY: I believe the timeline you put together was that somewhere down the road, not at the annual meeting is when we would take final action. What I'm proposing is there whatever it is that we need to do that would delay that final action, is there the possibility to do that work that would delay sending this out for public comment, so we could get the work done, but still take final action on this document in person.

I don't believe that this document at this point is ripe for some virtual meeting later this fall, quite frankly. Whenever this document gets final action, I believe at this point it warrants an in-person meeting. Whether that is one of our regular scheduled meetings. I just don't want to see this get pushed to, well we're just going to do it.

Hey we've done a lot of great things via webinar, and I know we could take on some very difficult things. But now that we don't have to do it that way, let's not make that mistake. That's what I'm suggesting. If there was some way that we could delay. I would rather see this go out for public comment via some virtual meeting if we just need more time. That is all I'm putting out there.

MS. KERNS: The problem is, Adam, is having time for the TC to review the spawning impacts to the quotas, and the amount of time from that moment to the annual meeting will be very short. I don't think I can get the document out, comments counted, summarized and finished before the Board meeting doing Emilie's job and my job at the same time.

CHIAR GARY: Mike.

DR. ARMSTRONG: To Katie. There is a standard methodology to do this, right, and all the states should be capable of doing it. I mean not to toot our horn, but Gary Nelson has already done it for us.

DR. DREW: I mean not every state has a Gary Nelson. An issue that we will be coming back to later this meeting, not to spoil anything. We are adding, in addition to all of those commercial options, it sounds like the Board wants numbers for the reductions for all of the new recreational options that we have added that were not part of this original document.

Some of that has been done, some of that has not been done. How are we going to combine these different percent reductions across these where we're picking and choosing from different options that may or may not meet the correct option? We have added a lot of work on the technical side, in addition to the SPR calculations that will be needed to set the TC, the PDT, whoever is going to be doing this work needs to do and then have reviewed, and then go into the document, as well as all of these other options we have added.

It has to be out for a specific amount of time. We have to have time afterwards to compile the comments and get it to you by materials. I'm assuming nobody wants this supplemental. I think the issue is really the short turnaround between this meeting and annual meeting, and the amount of changes and new analysis we have added to this document is going to make it very difficult.

DR. ARMSTRONG: It doesn't sound like we have a choice, unless we want to forego some analysis.

MS. KERNS: You can forego having the percent reduction that any of the measures achieve in the document, and forego what it does to the quotas in the document. You can just have the options straight up, with not telling the public how it impacts F, or the probability of achieving F.

CHAIR GARY: Go ahead, Bob.

EXECUTIVE DIRECTOR BEAL: I'll give it a try. What could happen? One option would be the technical folks and the PDT do all the work as quick as they can, and maybe we'll go back and think about how long that will take, and then we'll have a virtual meeting sometime before the annual meeting for everybody to look at the document and see, make sure everything, the math makes sense, and everybody has seen the numbers relative to the commercial quotas and other things.

Then the budget that was approved at the last meeting actually has a contingency fund in it. We could, if the Board wanted to, get together in person some time in November or early December. We've got some council meetings in there that are we'll have to work around. But we could do a face-to-face meeting, one day meeting of this Board in late fall to actually get together, as Adam is suggesting, rather than trying to do this virtually. We have the resources to do that, we just have to decide if the Board members have the time to do that and fly in somewhere.

You know, one option is we do it at the beginning or the end of one of the other Council meetings, where a third or half of this Board almost will be in that place anyway. There is maybe some creative ways to do things here that aren't too bad that we can still achieve that public transparency of an in-person meeting, and allow the technical folks time they need, not really jam them up trying to hurry through things.

The other reality is we're going to have 10, 12 hearings on this most likely. That is going to take a while to have all those hearings and compile that. I think in the seven months that we have left in this year, or five months that we have left in this year we can figure it out, we just need to you know do some staff work and figure that out, or propose some dates.

CHAIR GARY: Thanks, Bob, for trying to try to work through that with us. I think the comment that worried me the most was Toni trying to do her job and Emilie's job at the same time. That doesn't sound good. Mike, I think you had a comment.

MR. LUISI: I have similar concerns that have been expressed already around the table about not only an in-person meeting, which I feel this type of discussion needs to be an in-person meeting. Maybe I'm being a little selfish. I'm concerned about myself getting asked questions that I have no answers to, because we literally took a document and stripped it down, and added new calculations and added this and added that. There is nothing I can refer to anymore, really, when our stakeholders start asking questions tomorrow.

What does this mean for us? I know that a lot of you are in that similar position, where people are going to want to know what is in store, and I don't know what to tell them. I would rather have my eyes on something and be able to see some work by the Technical Committee and the PDT, before we kick this into the public arena, just so I can be prepared and our Agency can be prepared to address concerns, without even having an opportunity to put my eyes on it. I'll leave it there.

MS. KERNS: Once we have a revised version of the document, we could do a virtual meeting to approve the document for public comment if that is to the satisfaction of this Board. Then we would be able to then adjust, potentially use these additional funds to meet in person, to take final action, and all of these things would occur outside of the annual meeting. On the front and in the back end of the annual meeting.

CHAIR GARY: Roy.

MR. MILLER: Mr. Chairman, I don't understand the urgency in getting this Addendum implemented under this compressed timeframe. I mean we took action earlier today to extend the emergency size limits for a year, effective October 28, 2023, or until the implementation of Addendum II, so why are we hurrying the implementation of Addendum II to the point of requiring a separate in-person meeting, when we could simply push it back one meeting cycle, and get everything accomplished that we feel is necessary?

MS. KERNS: Roy, we can do that, push it back one meeting cycle, and then we would approve the document in January, and states would implement measures, hopefully by March/April. I guess between now and the annual meeting states could let me know if we did push back what that timeframe would look, you know if that is a realistic timeframe for them.

Obviously, recreational measures there is no conservation equivalency associated with those. The only thing that you potentially could use some conservation equivalency with is the commercial measures, depending on which options get approved. Implementation plans should be pretty simple. Fingers crossed; I should never say these things out loud.

CHIAR GARY: Adam.

MR. NOWALSKY: Just to build on Roy's comments. Given what we've stripped this document down to, that the ocean options mimic that emergency action that was extended for a year, that all the states already have in place. There are limited things, the possibility for the mode split.

Well, we're down to a very small set of things that have to change anyway, so I echo Roy's comments about that I think that takes the rush off, doing both of this in-person, sending it out at the annual meeting, and then final action in January, I think makes the most sense for everyone, based on what I've heard, and the limited scope of what we now have in this document for changes from what is already in place.

MS. KERNS: I think the one thing that we need to pay particular attention to, and the states need to keep in mind, is that if your commercial quotas do change, you need to be able to change those commercial quotas in 2024.

CHAIR GARY: Dennis.

MR. ABBOTT: I agree with what Bob said, I agree with what the gentleman across the way said, I agree with what Roy said. But I think the importance of doing this Addendum II correct, we shouldn't be putting time limitations on it, as Roy said. We have time. In years past, I can recall other amendments and addendums in striped bass that required in-person meetings. If it's necessary for us to get together, we can find the funding for it as necessary, but we should do this right and we should do this in due time.

CHAIR GARY: If I could be so bold to ask Toni, Katie and maybe Bob too, what is the sweet spot for trying to find the nexus between giving staff enough time to do this properly, and also allowing us, I mean is there a sweet spot? Everybody seems to agree a number of different options can work, but I would kind of like to know from the staff's perspective what is your comfort level?

EXECUTIVE DIRECTOR BEAL: I think the most, I'm not about to call it relaxed, but the most workable solution is to redo the document between now and October, and have hearings between October and the winter meeting, winter meeting final approval. That is the most workable for us. We're a person down, obviously, with Emilie out on maternity leave. You know that's the most workable. But if the Board is in a big hurry to get something done before the end of this calendar year, so they can start implementing earlier in '24.

We can probably find the way to compress it and make it happen with a virtual meeting between now and the annual meeting and an in-person meeting sometime in late November, early December timeframe. But again, I think the less stressful option for staff would be next two regularly scheduled quarterly meetings, you the Board get another look

at the document October, has public comment after that, final approval at winter meeting.

CHAIR GARY: Is there anyone on the Board that would have an issue with what Bob just suggested, just to try to get some consensus on this? Doug.

MR. GROUT: I wouldn't have an issue, as long as all the State Directors here that have commercial quota changes in 2024 are able to do that effectively, get it done in 2024, if we approve it in January.

CHAIR GARY: I understood, Doug, and that is why I guess Bob said that if we have issue there, he can compress that. Mike, you had a thought?

MR. LUISI: Yes, to that point. Even if we were to do the more speedy turn around, with the final decisions made at the mid to end of October, we will still be challenged with our commercial fishery, not just on the coast but more so even in the Bay, given the volume of individuals and the ITQs that they have.

We're going to be strapped to get tags distributed and quotas distributed in time. A January final action will eliminate '24 from us being able to modify quotas, because we send it all through. With our tagging program it all goes out prior to the start of the season, because the season starts on January 1.

We'll be in full swing come mid-October, and just I want to put it out there that the expectation would hopefully be that if this is pushed into January, there will be nothing I can do. It will be very difficult. It would almost be impossible to try to pull quota back after it has been distributed. We don't have the resources to do multiple rounds of quota distribution.

CHAIR GARY: Pat.

MR. GEER: I think all the Bay states are going to be in that similar situation. It's going to be really difficult commercially to get something done. We may have to have two implementation dates, one for commercial and one for recreational. That is the only thing I would suggest.

CHAIR GARY: Are there other jurisdictions that would have similar challenges? John.

MR. CLARK: We're a much smaller scale, but we open in February. I mean we now have the flexibility; I think we could make the changes. But the fishery would probably be underway if we didn't finalize this until early February.

CHAIR GARY: How about the northeast, Rhode Island, Mass, any issues on your end, others?

DR. McNAMEE: Speaking for Rhode Island. It would be tight, but the time period that Toni mentioned, you know this sort of April time period. That is when the fish start showing up. We probably could, it would be tight, but we could probably make it work.

CHAIR GARY: Any other comments on this? We've got to somehow figure out which is the best way to go here. It sounds like it's going to be challenging almost any way we go. But given the staff limitations, it might be just the way I'm hearing it, but it sounds like maybe the way, Bob, you laid it out with coming to the winter meeting. I guess the tradeoff is, how do we deal with these, if we don't know until the end of January, how do we deal with the implementation, especially on the commercial side?

MS. KERNS: You either, go ahead, Megan.

MS. WARE: Given what I'm hearing, I at this point would advocate for a webinar to review it and approve it for public comment, and then a special in-person meeting sometime in the fall after public hearings to approve it.

MS. KERNS: I just want to clarify that that fall webinar potentially could be like mid-November, and I want to hear from the Bay states. Is mid-November too late to change your quotas? Do you have the same, so Mike, if the final action is taken in probably mid-November, can you implement a change in your commercial quota at that point? I'm seeing no from Virginia, no from Maryland, and an unsure from Delaware.

MR. CLARK: Well logistic, it's just tough. I mean just getting the tags in time.

MS. KERNS: I understand, tags have to go out before the start of the fishery. Either way, we are not going to make it for those states. Do you still feel the same way, Megan?

MS. WARE: Yes, it's a no-win situation here.

CHAIR GARY: Bob.

EXECUTIVE DIRECTOR BEAL: It's kind of late, I may overstep my bounds, but we'll see. You know if the Bay states say that realistically they can't get it done regardless of the schedule, and the notion of two different compliance or implementation dates has already come up. The discussion earlier was saying the commercial fishery is only 10 percent of the mortality anyway.

Are we really trying to push thing along and maybe hurry things up that we may not end up with a good product. If the recreational measures are put in in '24, and commercial in '25 potentially, you know does that give a lot of heartburn around the table, I guess is the question. I'm not suggesting it's a good idea or bad idea, it's just that seems to be one of the potential outcomes that could come out of this conversation.

CHAIR GARY: Dr. Armstrong.

DR. ARMSTRONG: Is it the SPR stuff that is really going to be the slowdown?

MS. KERNS: I think it's the SPR stuff, it's all the addition, like the changes in the maximum size limits for the Bay, and what those calculate to be. I think we have some of them, but I don't think we have all of them done. Then what do all of these things combined do to the overall calculation.

There are several things, and don't forget our TC members at the same time are working on the stock assessment. Many of these TC members are working on other stock assessments that are ongoing. I'm trying not to have Katie murder me when I ask her thousands of questions every day, because I am not Emilie. All of those things would take time.

CHAIR GARY: Doug.

MR. GROUT: It's becoming quite evident that we're going to have to have dual implementation dates, and is that going to affect the percentage calculations of the cumulative impact? You know I want this to be done right. You know I wish it would be in place in 2024, but you know I understand the logistics of putting in commercial fishing regulations.

I understand this cut is going to be very difficult for them, but I think you might have to prepare the public for that as a possibility, given the timeframe that we're going to have to deal with, and hope we have to approve it in February, and implement commercial in 2025. Better than we are at now.

MS. KERNS: Katie and I can talk later about what is the best way to present the information. Some options have more solid understanding of what a reduction would be than others. We will work on that and provide that information in the document if we can, with the knowledge that there might be two implementation dates.

MR. GROUT: Or the probability of achieving it at all.

MS. KERNS: Correct.

CHAIR GARY: All right, so I think what we're hearing up at the front here is we're at the closest we're going to get to some consensus is the annual meeting and then final approval at the winter meeting, and the hearings would occur between the two. It sounds like that is the best we can do. Can everybody live with that? Okay. Does that suffice for the will of the Board? Okay, what do we need to do to put a bow on this, a final motion?

MS. KERNS: We will not take action to approve the document for public hearing, since several members of the Board expressed that they wanted to see the document prior to doing that. We will bring that back to the Board. If I can get it in October, and if it is of interest of the Board, we can try to get it done

before the meeting. We will not sit on our laurels, and try to get it out to you all so you can explore it for longer, if that is something that you all would like to see or not, but we'll do our best.

CHAIR GARY: Then we won't approve that to go out to public hearing until the annual meeting.

OTHER BUSINESS

CHAIR GARY: So, at this point we are at other business, I suppose. Correct?

MS. KERNS: We are. I don't think we have any.

WINTER TAGGING SURVEY

CHAIR GARY: I do. You're going to love this, because I'm the champion for this survey, so I'm going to say it again. Right, don't you know, I have to Toni, I have to. Rick Jacobson delayed his flight, and so you're smiling, Rick, so it's all good, it's all good. I would like to bring up, I'm a champion as you all know for the winter tagging survey.

It's been in place for over 30 years. We've been patching funding together from year to year for that. Most recently U.S. Fish and Wildlife Service is putting up the funds for that. At this point, as best I know, we don't have funds for the coming winter. My worry was, I didn't want to let it slip to the annual meeting before we talked about it, we would be right on the cusp.

I don't think there is really anything to discuss, I would just say, and Rick, maybe I will ask if you don't mind, now your flight is delayed. Do you mind saying just a word or two about, you know where Fish and Wildlife is? It sounds like It's iffy at best, and maybe not probable that you have funding this year, is that correct?

MR. RICK JACOBSON: Well, we certainly understand the importance of the survey, both for purposes of how long it's been in place, the information it provides, and that there are some changes going on that it would be best to be able to monitor those changes through time. My crystal ball is a little fuzzy on what exactly the Federal budgets are going to be for Fiscal Year '24. All indications are it's going to be a rocky road.

That is one issue. Another issue is, with inflationary costs the cost of the survey has been going up each year. The contributing sources of funds have not been going up commensurate with those. The Service, in spite of a declining budget over the last several years, has had to bear an increasing portion of those costs.

Now that said, I'm reasonably confident we can manage the winter '24 survey. That presupposes we're under a continuing resolution or something close to a level budget this year. If that doesn't play out and there is a substantial reduction, then we do have to refigure how we're going to do it. I have even greater concerns moving beyond Fiscal Year '24, and we're really going to have to have some sort of relief in order to continue the project.

CHAIR GARY: Thank you, Rick, I appreciate that. Maybe it's a little bit more than iffy, maybe it could still happen, but it's contingent on a few things, you know like you said, with a continuing resolution. I don't really have anything else, Bob, go ahead.

EXECUTIVE DIRECTOR BEAL: Just to follow up on Rick's comments. You know we just decided the Board didn't want to spend the contingency money on a meeting, but that doesn't help with the beyond '24 problem. But last year I think ASMFC chipped in, I don't know $2,000.00 for travel or extra fuel costs or something.

Maybe Rick and I just talk as the year unfolds and see what he has, see what we have, and we can make something work, I think. You know one of the tricky parts of some of our money is it's not approved for on-the-water activities, but we could cover some travel and maybe they charter the boat. We'll figure something out.

But I think between the two of us and budgets and residual funds and that sort of thing, we can probably figure it out for this year, but '25 and beyond, I agree 100 percent with Rick, we've got to figure that out. I'm not sure where that money comes from. We've

been doing this year by year for 30 years now, so we'll keep it up and see how it goes.

CHAIR GARY: Thank you Bob and thank you Rick for that. A lot of people are familiar with that survey, and I remember going out on it in the early nineties on the Oregon 2. The Hart Award winner that you all know, a lot of you know Bill Cole, and I'll never forget him saying, if we had to actually phone Annapolis to get more tags, because they encountered so many striped bass, and Bill Cole said, my God, they're really back.

Now here we are in 2023, and we're in a tough spot with striped bass. There is a little bit of sentimentality that is kind of clouding me, but I've been a pretty big champion for it. I hate to bother and nag Rick and Bob about this, because I'm always nipping at their heals, and seeing if there is a way to do it. But if anybody thinks in their travels of any way, we can fund this thing more stably going forward, I think it would be worthwhile and I appreciate it.

ADJOURNMENT

CHAIR GARY: With that I would seek a motion to adjourn. I mean who get it? We're adjourned. Thanks everybody for your patience, and thanks everybody online for listening.

(Whereupon the meeting adjourned at 7:20 p.m. on Tuesday, August 1, 2023)

Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: Atlantic Striped Bass Management Board

FROM: Atlantic Striped Bass Technical Committee

DATE: September 28, 2023

SUBJECT: Spawning Potential Ratio Adjustment for Commercial Maximum Size Options

Background

As part of Addendum II, the Atlantic Striped Bass Board requested options that imposed a maximum size limit on the Chesapeake Bay and ocean commercial fisheries. Commercial quotas are managed in weight, and changing the size limit of the commercial fishery will change the average size of the fish in the catch, potentially increasing the number of fish removed for the same poundage of quota, and will change the selectivity of the commercial fishery, thus changing the age-classes which are impacted by the fishery. In the past, when states have changed their commercial size limits, their quota has been adjusted to reflect these impacts with the intent of setting a new quota that maintains the same effect on the population in terms of the spawning potential as the Amendment 6 commercial size limits. The Board elected to take this approach for the maximum size limit options for draft Addendum II.

Methods

The spawning potential ratio (SPR) analysis requires life history information and information on the selectivity of the fishery. The selectivity is calculated from the age-length keys for each state. The TC discussed a number of issues regarding the SPR analysis to ensure that all states were using consistent methods and inputs.

Age-Length Keys (ALK) and Selectivity

For the age-length keys, the TC recommended:

- Pool 2021 and 2022 data to represent the most recent time period and increase sample size.
- If any ages have less than 10 lengths sampled, borrow from other years or other states to increase the sample size. This does not apply to the ages beyond the range of the commercial catch – e.g., if no age-2 or age-14 fish are present in the sampling, a state does not need to borrow data; if ages are present but poorly sampled, a state should borrow

Selectivity is also influenced by availability of fish. For example, in the Bay, when older, larger fish are present, they are fully vulnerable to the gear, but they are not available year-round, so using only samples from the Bay commercial fisheries may overstate the selectivity of the Bay fishery on older ages and overestimate the impact of a maximum size limit on the population. The TC recommended the Bay states discuss the issue and agree on how to better represent availability of age classes, not just vulnerability to the gear when developing selectivity curves. This may also be an issue for ocean states like Delaware and New York which also may not have year-round availability of the targeted size classes, but there is more state-to-state variability in the ocean fisheries. Ocean states should consider this issue as it applies to their own data and decide how to pool data from non-commercial sources to better capture the availability as well as the vulnerability of striped bass to their fisheries if necessary.

The TC discussed whether to explicitly include the length frequency from the commercial fishery as part of the selectivity calculations, and in the end decided not to, as the length frequency is influenced by year-class strength and fisher behavior and this analysis should focus on what proportion of each age is legally vulnerable to harvest. If the ALK is predominately commercial sampling data in the ages that overlap any max size changes, the length frequency of the commercial fishery (for 2021 and 2022 or whichever years were added) will be implicitly part of the selectivity calculations.

The TC discussed whether to include the maximum size limit bin in the calculation of vulnerability. Most states calculate their length bins by flooring the measurements; i.e., the 38" bin includes fish from 38.00" to 38.99". For this addendum, the PDT is recommending inclusive size limits, so that a 38.0" fish would be legal to harvest under a 28"-38" slot limit. In this case, excluding the 38" bin from the selectivity calculations would exclude some legal fish, but including would include fish above the size limit (the 38.99" fish, for example). The TC recommended including the maximum size limit bins in the calculations and acknowledged this as a source of uncertainty.

Weight-at-Age

The TC recommended that the SSB weight-at-age and catch weight-at-age be the same values used in the most recent stock assessment reference point calculations and projections.

F Increment and F Target for Calculations

The original SPR analysis was done in R, where the *F* increment over which SPR is calculated is specified by the user; smaller increments give better, more precise estimates but are more computationally expensive and take longer to run. G. Nelson developed an alternative to the R calculations that can be done in Excel using Visual Basic macros which can get more precise answers more efficiently. The TC elected to use this spreadsheet version to do the calculations instead of the R method.

The *F* target used to start the calculations also has an impact on the final results. The method that has been used historically uses the current *F* target (*F*=0.167) as the base case. The TC discussed whether to continue to use the overall *F* target, or to use a smaller *F* that represents the proportion of the total *F* due to the commercial fishery. Although the estimated quota reduction was different between the methods, using the smaller *F* did not necessarily result in a smaller quota reduction. However, the current assessment model does not calculate a separate *F* for the commercial and recreational fleets, so the TC agreed that trying to calculate an *F* for each individual state's commercial fishery would increase the uncertainty in the overall analysis and recommended using the *F* target as had been done in the SPR calculations in the CE proposals for previous commercial size limit changes. This was highlighted as another source of uncertainty for the SPR analysis.

Discard Mortality

The TC discussed whether to adjust the estimated selectivity curves for discard mortality. One option that was considered was similar to what was done for the slot limit analysis for Amendment 7, where the proportion of fish-at-age above the legal size limit could be multiplied by a commercial discard mortality rate. In the end, the TC decided not to adjust the selectivity for discard mortality, as this would have the effect of making the new selectivity curves more similar to the status quo and reducing the difference between the status quo quotas and the SPR-equivalent quotas, meaning in most cases, the quota with discard mortality included would be higher than the adjusted quota without discard mortality included. Since commercial discards are not counted against the commercial quota, this would have the effect of allowing more directed commercial harvest while not reducing discards. Instead, the TC recommended trying to estimate the increase in commercial discards that would be expected under the different options and presenting this information in the Addendum as context. This was highlighted as another source of uncertainty for the SPR analysis.

Results:

Table 1. Ocean commercial quota changes under a maximum size of 38, 40, and 42 inches

	Option A. Status Quo (No maximum size applies)		Option B1. 42" maximum size limit		Option B2. 40" Maximum Size Limit		Option B3. 38" Maximum Size Limit	
	2022 Size Limit	**2022 Quota**	**Size Limit**	**Quota (% change)**	**Size Limit**	**Quota (% change)**	**Size Limit**	**Quota (% change)**
ME	N/A*	154	28 - 42"	129 (-16.2)	28 - 40"	122 (-20.8)	28 - 38"	113 (-26.6%)
NH	N/A *	3,537	28 - 42"	2,968 (-16.1%)	28 - 40"	2,796 (-21%)	28 - 38"	2,585 (-26.9%)
MA	35" min	735,240	35 - 42"	634,400 (-13.8%)	35 - 40"	581,483 (-21%)	35 - 38"	545,161 (-25.9%)
RI	26" min FFT; 34" min GC	148,889	26 - 42" FFT 34 - 42" GC	133,040 (-10.6%)	26 - 40" FFT 34 - 40" GC	128,735 (-13.5%)	26 - 40" FFT 34 - 40" GC	119,905 (-19.5%)
CT	N/A **	14,607	28 - 42"	22,255 (52.4%)	28 - 40"	20,642 (41.3%)	28 - 38"	18,821 (28.9%)
NY	26 - 38"	640,718	26 - 42"	704,286 (9.9%)	26 - 40"	672,744 (5%)	26 - 38"	640,718 (0%)
NJ	bonus program 24 - <28"	215,912	24 - 42"	321,708 (49%)	24 - 40"	303,825 (40.7%)	24" - 38"	284,243 (31.7%)
DE	28", except 20" for gill nets in DE Bay/River 2.15-5.31	142,474	28 - 42", except 20 - 42" for gill nets in DE Bay/River 2.15-5.31	133,506 (-6.3%)	28 - 40", except 20 - 40" for gill nets in DE Bay/River 2.15-5.31	128,252 (-10%)	28 - 40", except 20 - 40" for gill nets in DE Bay/River 2.15-5.31	118,854 (-16.6%)
MD	24" min	89,094	24 - 42"	83,141 (-6.7%)	24 - 40"	78,160 (-12.3%)	24 - 38"	72,563 (-18.6%)
VA	28" min	125,034	28 - 42"	118,768 (-5%)	28 - 40"	113,478 (-9.2%)	28 - 38"	107,008 9 (-14.4%)
NC	28" min	295,495	28 - 42"	275,782 (-6.8%)	28 - 40"	264,820 (-10.3%)	28 - 38"	245,048 (-17.1%)

*Assumes the Amendment 6 standard minimum size limit of 28".

** Assumes the minimum size (22-28") of the bonus program that CT's quota was last based on (the bonus program is no longer in use).

Table 2. Chesapeake Bay commercial quota changes under a 36 inch and a seasonal 28 and 36 inch maximum size limit.

	Option A. Status Quo (no maximum size applies)		Option E1. 36" Maximum Size		Option E2. 28" Maximum Size Limit Jan - May; 36" Maximum Size Limit Jun - Dec	
	2022 Size Limit	2022 Quota	Size Limit	Quota (% change)	Size Limit	Quota (% change)
MD Ches Bay	18 - 36"	1,445,394	18 - 36"	1,445,394 (0%)	18 - 28" Jan-May; 18 - 36" Jun - Dec	1,407,463 (-2.6%)
PRFC	18" min, 36" max during 2.15-3.25	572,861		558,626 (-2.5%)		554,767 (-3.2%)
VA Ches Bay	18" min, 28" max during 3.15-6.15	983,393		768,978 (-21.8%)		730,240 (-25.7%)

Results

Table 1 and 2 show the adjusted commercial quotas under different maximum size limit options (Table 1 is for the ocean commercial fishery and table 2 is for the Chesapeake Bay commercial fishery). It should be noted some states (CT, NY and NJ) quotas increase with the change in maximum size, because their existing quotas are based on a maximum size limit that is lower than the proposed options. For states with an increase to their quota, the increase ranges from 5 to 52.4 percent. For states with decreases to their quota, the decrease ranges from 5 to 26.9 percent. A maximum size limit decreases the quota for the majority of states with active commercial fisheries with the exception of New York.

TC Comments

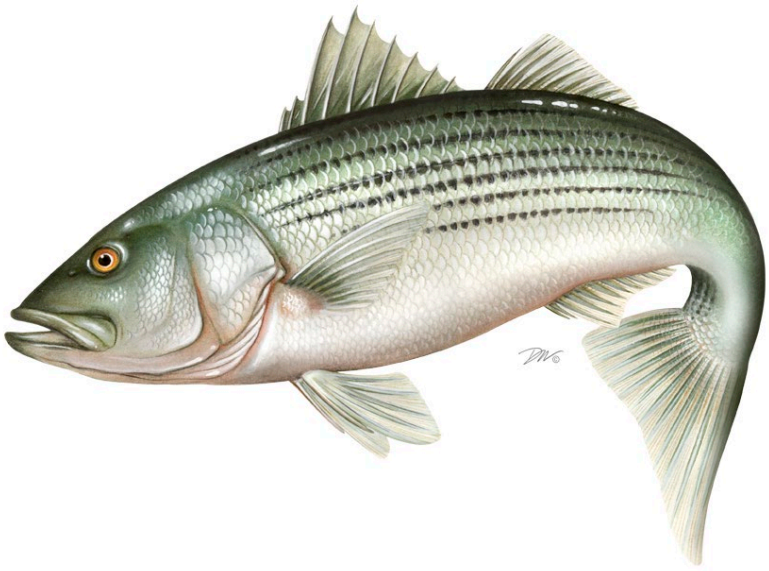
The TC raised concerns about the implementation of a commercial maximum size limit as a management tool. If a maximum size limit is implemented without a quota adjustment, total removals in numbers of fish will increase, as the average size of the fish in the catch is smaller and the discards of oversize fish will increase. The SPR calculations discussed here attempt to account for this by calculating an adjusted quota that will keep a state's commercial impact on the overall spawning potential of the stock the same under the new size limits so that these quotas are conservationally equivalent to the commercial quotas under the status quo regulations. However, the TC notes that there are numerous sources of uncertainty for this analysis, such as the challenge of accurately characterizing the realized change in selectivity under the new regulations, especially combined with the unpredictable effect the new regulations will have on the behavior of the commercial fishery. For example, if the new maximum size is higher than the current maximum size in a state, the SPR calculations allow the quota to be increased to account for the harvest of larger fish. However, the fishery may not actually realize harvest of larger fish due to market demands, availability of larger fish, and gear restrictions or limitations, resulting in higher overall removals with regard to SPR under the higher quota. In addition, the effects of increased discards of oversize fish and the other issues highlighted in the methods section increase the uncertainty about the effects of this management change. Implementing a more uncertain management option that is designed to have no effect on overall stock productivity increases the uncertainty around the rebuilding probabilities and the impact on the stock without having a positive impact on overall stock productivity. There is an increased downside and no upside to implementing this management change from a technical analysis.

The TC understands that the Board's intent with this option is to protect larger, older fish from harvest. However, the TC refers the Board to previous analyses evaluating the impact of slot limits vs. maximum size limits in the recreational fishery, where lower selectivity on older fish had a negligible impact on long-term spawning stock biomass and did not affect the timeline for rebuilding. Fishing mortality and total removals was the driving factor in whether the stock had a high probability of rebuilding by 2029.

Atlantic States Marine Fisheries Commission

DRAFT ADDENDUM II TO AMENDMENT 7 TO THE ATLANTIC STRIPED BASS INTERSTATE FISHERY MANAGEMENT PLAN

Interim Management Measures



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

Draft for Board Review
October 2023

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

Public Comment Process and Proposed Timeline

In May 2023, the Atlantic Striped Bass Management Board initiated the development of Draft Addendum II to Amendment 7 to the Interstate Fishery Management Plan for Atlantic Striped Bass to consider management measures beyond 2023 designed to reduce fishing mortality to the target to support rebuilding the stock by 2029 and consider allowing the Board to respond more quickly to upcoming stock assessment updates. This Draft Addendum presents background on the Atlantic States Marine Fisheries Commission's (Commission) management of striped bass; the addendum process and timeline; a statement of the problem; and management options for public consideration and comment.

The public is encouraged to submit comments regarding the proposed management options in this document at any time during the public comment period. The final date comments will be accepted is **XX Month, XX Day, 2023 at 11:59 p.m. (EST).** Comments may be submitted at state public hearings or by mail or email. If you have any questions or would like to submit comment, please use the contact information below. Organizations planning to release an action alert in response to this Draft Addendum should contact Toni Kerns, Fisheries Policy Director, at tkerns@asmfc.org or 703.842.0740.

Mail: Emilie Franke
Atlantic States Marine Fisheries Commission
1050 N. Highland Street, Suite 200 A-N
Arlington VA. 22201

Email: comments@asmfc.org
(Subject: Striped Bass Draft Addendum II)

Date	Action
May 2023	Board initiated the Draft Addendum
May – September 2023	Plan Development Team (PDT) develops Draft Addendum document
October 2023	Board reviews and approves Draft Addendum II for public comment
November – December 2023	Public comment period, including public hearings
January 2024	Board reviews public comment, selects management measures, final approval of Addendum II

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1.0 INTRODUCTION

Atlantic striped bass (*Morone saxatilis*) are managed through the Atlantic States Marine Fisheries Commission (Commission) in state waters (0–3 miles) and through NOAA Fisheries in federal waters (3–200 miles). The management unit includes the coastal migratory stock from Maine through North Carolina. State waters fisheries for Atlantic striped bass are currently managed under Amendment 7 to the Interstate Fishery Management Plan (FMP), Addendum I to Amendment 7, and a temporary Emergency Action (effective May 2, 2023 through October 28, 2024 unless sooner replaced by this addendum). Harvesting or targeting striped bass in federal waters has been prohibited by NOAA Fisheries since 1990.

In May 2023, the Atlantic Striped Bass Management Board (Board) initiated Addendum II to Amendment 7 to address stock rebuilding beyond 2023. The Board initiated the draft addendum via the following approved motion:

"Move to initiate an Addendum to implement commercial and recreational measures for the ocean and Chesapeake Bay fisheries in 2024 that in aggregate are projected to achieve F-target from the 2022 stock assessment update (F = 0.17). Potential measures for the ocean recreational fishery should include modifications to the Addendum VI standard slot limit of 28-35" with harvest season closures as a secondary non-preferred option. Potential measures for Chesapeake Bay recreational fisheries, as well as ocean and Bay commercial fisheries should include maximum size limits. The addendum will include an option for a provision enabling the Board to respond via Board action to the results of the upcoming stock assessment updates (e.g., currently scheduled for 2024, 2026) if the stock is not projected to rebuild by 2029 with a probability greater than or equal to 50%."

In August 2023, the Board removed consideration of recreational harvest season closures; added options for commercial quota reductions, recreational for-hire specific measures, and minimum requirements for states allowing filleting in the recreational fishery; and provided direction on the range of other commercial and recreational management options requested. Due to the additional time needed to develop and refine the draft addendum, final action on the addendum will no longer occur in 2023 and the implementation schedule of selected measures may span 2024–2025. The Board intends to consider the results of the upcoming 2024 stock assessment update to inform subsequent management action.

2.0 OVERVIEW

2.1 Statement of the Problem

Atlantic striped bass were declared overfished in 2019 and are subject to a rebuilding plan that requires the stock to be rebuilt to its spawning stock biomass target by 2029. The most recent rebuilding projections indicate a low probability of meeting that deadline if the fishing mortality rate associated with the level of catch in 2022 continues. There is concern that the recreational and commercial management measures in Amendment 7, in combination with the availability of the strong 2015 year-class to the fisheries, will lead to a similarly high level of catch in 2024. In response, this draft addendum considers measures to reduce removals from the 2022 level to achieve the target fishing mortality rate and support stock rebuilding.

Stock assessments will be completed during the rebuilding period and used to gauge the success of the measures in achieving the target fishing mortality rate and to estimate the probability of rebuilding the stock by 2029. These assessments are typically completed during the second half of the calendar year, so if a management response is needed to reduce fishing mortality, the typical addendum development and implementation schedule results in new measures not being implemented until two years later. There is concern that such delays may impede rebuilding, especially as the deadline to achieve a rebuilt stock nears. Accordingly, this draft addendum also considers a mechanism that would allow the Board to adjust management measures in response to upcoming stock assessments via Board action, which would be faster than a typical addendum process, if deemed necessary to achieve stock rebuilding by 2029.

2.2 Background

2.2.1 Stock Status

Female spawning stock biomass (SSB) and fishing mortality (*F*) are estimated on a regular basis and compared to target and threshold levels (i.e., biological reference points) to assess the status of the striped bass stock. The 1995 estimate of female SSB is used as the SSB threshold because many stock characteristics, such as an expanded age structure, were reached by this year, and this is also the year the stock was declared recovered. The female SSB target is equal to 125% of the female SSB threshold. The associated *F* threshold and *F* target are calculated to achieve the respective SSB reference points in the long term.

The most recent assessment for striped bass was an update completed in 2022 with data through 2021[1]. Prior to this, the 2018 Benchmark Stock Assessment had determined that striped bass were overfished and experiencing overfishing in the terminal year (2017)[2]. Following the implementation of new management measures in 2020, the 2022 Stock Assessment Update found that the stock was no longer experiencing overfishing in 2021 (*F* = 0.14, below the threshold of 0.20 and the target of 0.17) but remained overfished (Female SSB = 143 million pounds, below both the target of 235 million pounds and the threshold of 188 million pounds) (Figures 1 and 2). These reference points were calculated using the "low recruitment assumption" (per Amendment 7's requirement under a tripped recruitment trigger), which resulted in a lower, more conservative *F* target and threshold compared to the 2018 benchmark assessment. Although below the threshold and considered overfished, female SSB in 2021 was still estimated to be more than three-times of that during the early 1980s, when the stock was considered collapsed (Figure 1).

The assessment also indicated a period of strong recruitment (numbers of age-1 fish entering the population) from 1994–2004, followed by a period of low recruitment from 2005–2011

[1] ASMFC. 2022. Atlantic Striped Bass Stock Assessment Update, Atlantic States Marine Fisheries Commission, Arlington, VA. 191p.

[2] NEFSC. 2019. Summary Report of the 66th Northeast Regional Stock Assessment Review Committee (SARC 66), Northeast Fisheries Science Center, Woods Hole, MA. 40p.

(although not as low as the period of stock collapse in the early 1980s) (Figure 1). This period of low recruitment contributed to the decline in SSB that the stock has experienced since 2010. Recruitment of age-1 fish was high in 2012, 2015, 2016, and 2019 (corresponding to strong 2011, 2014, 2015, and 2018 year classes, respectively); however, estimates of age-1 striped bass were below the long-term average in 2018, 2020, and 2021.

The 2022 assessment also included short-term projections to determine the probability of SSB being at or above the SSB target by 2029. These projections also used the low recruitment assumption, which restricts the estimates of age-1 recruitment to those occurring during 2008–2021, rather than the longer time series of 1993–2021. These projections indicated that under the 2021 fishing mortality rate, there was a 97% probability the stock will be rebuilt by 2029 (Figure 3).

However, concerns over high recreational removals in 2022 compared to 2021 (the terminal year of the most recent assessment update) prompted the Board to request updated stock projections using 2022 preliminary removals. These estimates of preliminary 2022 removals and updated stock projections were presented to the Board in May 2023. The data showed that while commercial removals in 2022 were similar to those in 2021, recreational harvest had increased 88% and recreational live releases by 3%, resulting in an overall 38% increase in recreational removals (relative to 2021). These 2022 removals were used to estimate *F* in 2022. Since striped bass catch and *F* rates vary from year-to-year (even under the same regulations), the average *F* from 2019-2022 (excluding 2020 due to uncertainty associated with COVID-19 impacts) was applied to 2023-2029 in the new projections. Under this *F* rate, the new projections estimate the probability of rebuilding SSB to its target by 2029 drops from 97% to 15% (Figure 3).

It should be noted that these projections are not the same as a full stock assessment update where the model would be re-run to include the 2022 catch-at-age and index data. Accordingly, the status of the stock remains overfished but is not experiencing overfishing as per the 2022 stock assessment update. The next stock assessments for striped bass are currently scheduled for 2024 (an update with data through 2023), 2026 (an update with data through 2025), and 2027 (a benchmark—in which the inputs and methods are fully re-evaluated—likely with data through 2026).

2.2.2 Management Status

Striped bass are currently managed under Amendment 7 to the Interstate Fishery Management Plan (FMP), Addendum I to Amendment 7, and a temporary Emergency Action (effective May 2, 2023 through October 28, 2024 unless sooner replaced by this addendum).

Amendment 7: Amendment 7 consolidated and replaced Amendment 6 and its addenda in 2022; in so doing, several aspects of the management program, including the management triggers, stock rebuilding plan, recreational gear requirements, and conservation equivalency (CE) restrictions, were updated to better align with current fishery needs and priorities. Importantly, Amendment 7 maintained the Addendum VI to Amendment 6 recreational and

commercial fishery measures (the implications of which are described in more detail below). Separate management measures are in place for the ocean and Chesapeake Bay fisheries due to distinct size availabilities of fish between the areas.

Amendment 7's FMP standard for managing the recreational fisheries is a one-fish bag limit with a 28 to less than 35" slot limit for the ocean area, a one-fish bag limit with an 18" minimum size limit for the Chesapeake Bay area, and for both areas the seasons which were in place in 2017. Amendment 7's FMP standard for managing both the ocean and Chesapeake Bay commercial fisheries is a state and/or area specific commercial quota (reduced 18% from 2017), and the size limit(s) in place in 2017. This suite of measures was first implemented under Addendum VI to Amendment 6 in 2020 to achieve an overall 18% reduction in removals relative to 2017 (shared in equivalent commercial and recreational reduction), in response to the 2018 benchmark stock assessment determining the stock as overfished and experiencing overfishing.[3] However, when implementing Addendum VI, numerous states adopted alternative recreational size limits, recreational bag limits, recreational seasons, commercial size limits, and/or commercial quotas through CE.[4] Because Amendment 7 did not revise the FMP standard commercial and recreational fishery measures from those of Addendum VI, the CE programs implemented under Addendum VI were also allowed to be carried forward by states in 2022 under the framework of Amendment 7. See Tables 1–2 for the recreational and commercial measures in place in 2022 and Table 3 for a description of the CE programs implemented. Amendment 7's revision to when and how CE may be employed by states is reviewed below.

Part of the rationale for not changing any commercial and recreational management measures under Amendment 7 was that final action on the amendment preceded the completion of the 2022 stock assessment by several months. The 2022 stock assessment was expected to provide management advice as to whether the existing measures implemented under Addendum VI had successfully reduced fishing mortality to the target level and put the stock on track to rebuild by 2029. In other words, when Amendment 7 was adopted, it was unknown whether additional conservation measures were needed. Because of this timing issue, Amendment 7 instead included a provision allowing the Board to respond quickly to the results of the 2022 stock assessment update with additional management measures if needed for rebuilding success. Specifically, rather than responding via an addendum (which typically requires three Board meetings from addendum initiation to adoption), the Board could specify state measures by a Board vote at a single meeting. Ultimately, the 2022 stock assessment indicated that F in 2021 was below the target, providing a very high probability of achieving a rebuilt stock by

[3] Addendum VI also established the mandatory use of circle hooks when recreationally fishing for striped bass with bait (except as part of an artificial lure); however, this measure was not credited towards the needed 18% reduction in removals to end overfishing. Amendment 7 added two additional gear requirements when recreationally fishing for striped bass: a prohibition on gaffing and the immediate release of striped bass caught on any unapproved method of take.

[4] Conservation equivalency (CE) refers to actions taken by a state which differ from the specific requirements of the FMP, but which achieve the same quantified level of conservation for the resource under management. It is the responsibility of the state to demonstrate the proposed management program is equivalent to the FMP standards and consistent with the restrictions and requirements for CE determined by the Board. Board approval of a CE proposal is required prior to state implementation.

2029; consequently, this provision of Amendment 7, which was specific to responding to the results of the 2022 stock assessment, was not utilized.
The use of CE is subject to additional restrictions and requirements under Amendment 7 *when the FMP standard for a fishery is revised*. First and foremost, CE programs will not be approved for non-quota managed fisheries (with the exception of the Hudson River, Delaware River, and Delaware Bay recreational fisheries) when the stock is at or below the biomass threshold (i.e., overfished), though quota managed CE programs would still be allowed. In the context of this draft addendum and current stock status, this means that if the FMP standard for the ocean or Chesapeake Bay recreational fisheries (as described above) is changed, the existing Addendum VI CE programs affecting those fisheries are invalidated and a state cannot request a new CE program for non-quota managed fisheries (with the exception of the Hudson River, Delaware River, and Delaware Bay recreational fisheries) until the stock is no longer considered overfished by a future stock assessment. For states that combined Addendum VI CE programs across fishery sectors (e.g., took a less than 18% commercial reduction based on achieving more than an 18% recreational reduction), this has implications beyond the recreational fishery.

Additionally, if future CE is requested, CE proposals will be subject to new recreational catch estimate precision standards, uncertainty buffer requirements, and an established definition of "equivalency". Specifically, CE proposals will not be allowed to use Marine Recreational Information Program (MRIP) estimates associated with a percent standard error (PSE) exceeding 40%. PSE is a measure of precision, and higher PSEs indicate the data are less precise. Proposed CE programs for non-quota managed fisheries will be required to include an uncertainty buffer of 10%; this is intended to increase the proposed CE program's probability of achieving equivalency with the FMP standard. However, if a CE proposal uses MRIP estimates with a PSE exceeding 30%, but less than or equal to 40%, then a larger 25% uncertainty buffer is required. Lastly, CE programs for non-quota managed fisheries are required to demonstrate equivalency to the percent reduction/liberalization projected for the FMP standard at the state-specific level (rather than the coastwide level).

Addendum I to Amendment 7: Addendum I was approved and implemented in May 2023 to allow for voluntary ocean commercial quota transfers contingent on stock status. When the stock is overfished, no quota transfers will be allowed. When the stock is not overfished, the Board can decide every one to two years whether it will allow voluntary transfers of unused ocean commercial quota. The Board can also set criteria for allowable transfers, including a limit on how much and when quota can be transferred in a given year, and the eligibility of a state to request a transfer based on its landings. Given the overfished stock status for striped bass, quota transfers will not be authorized in 2024.

2023 Emergency Action: At its May 2023 meeting, the Board was presented with updated stock rebuilding projections that included preliminary removal estimates for 2022. Prior projections with data through 2021 had indicated a very high chance (97%) of rebuilding the overfished striped bass resource to its SSB target by the 2029 rebuilding deadline. Due to a near doubling of recreational harvest in 2022, the new projections estimated that the probability of rebuilding

to the SSB target by 2029 drops to 15% if the higher fishing mortality rate (calculated as the average of 2019-2022 fishing mortality rates, excluding 2020) continues for 2023-2029.
In addition to initiating this draft addendum to consider coastwide changes to the commercial and recreational regulations to bring *F* back to the target level of 0.17, the Board approved an Emergency Action to more immediately address the source of the increase in fishing mortality. Specifically, the Board's May 2, 2023 emergency action required all states to implement a 31-inch maximum size limit for their striped bass recreational fisheries[5] as soon as possible and no later than July 2, 2023, while maintaining all other measures. In effect, the emergency action reduced the ocean recreational slot from 28 to <35" to 28 – 31", and layered a 31" maximum size to the Chesapeake Bay's recreational measures. Emergency actions are effective for 180 days from the time of their declaration, putting the expiration date of the 31" recreational maximum size limit at October 28, 2023, unless sooner rescinded or extended by the Board. At its August 2023 meeting, the Board extended the emergency action for one year (through October 28, 2024) or until the implementation of this addendum (if sooner). If it deems necessary, the Board may extend the emergency action for one additional period of up to a year at a future Board meeting.

The emergency action's 31" recreational maximum size limit is intended to reduce recreational harvest from the level seen in 2022 by providing additional protection to the abundant 2015 year class. The strong 2015 year-class is a primary reason for the increase in harvest in 2022, as many of the fish born that year had begun to exceed 28" in length, the lower bound of the ocean slot limit (Figure 4). In 2023, as 8 year olds, these fish are expected to average 31 ½" in length (Table 4). By implementing the 31" maximum size limit, over 50% of the 2015 year class should be protected from recreational harvest. Without this change, a high majority of the 2015 year-class would have been within the 28" to <35" ocean slot and susceptible to recreational harvest, raising concern that fishing mortality in 2023 would be even greater than 2022 and further erode the probability for rebuilding by 2029. As of July 2, 2023, all states implemented the emergency action's 31" maximum size limit (Table 5).

2.2.2.1 Social and Economic Impacts

For more detailed discussion of recent research into striped bass anglers' preferences and behavior and how it could be applied, see Amendment 7 to the Striped Bass FMP Section 1.5.2.

For the recreational sector, changes in bag and size limits (as well as other management measures not considered herein) affect important attributes of a recreational fishing trip, such as the number of fish of each species that anglers catch and are allowed to keep. In turn, these changes in trip attributes will modify the utility (i.e., level of satisfaction) an angler expects to obtain from the fishing trip (McConnell et al. 1995, Haab and McConnell 2003)[6]. As a result, the

[5] The emergency action excluded the Chesapeake Bay spring trophy fishery from the 31" maximum size limit in 2023 because this fishery occurs for two weeks in May prior to the emergency action's implementation deadline and the fishery's current 35" minimum size limit provides a high level of protection to the 2015 year-class in the short-term.

[6] McConnell, K.E. and Strand, I.E. and Blake-Hedges, L. 1995. Random Utility Models of Recreational Fishing: Catching Fish Using a Poisson Process. Marine Resource Economics 10, p.247-261.

angler may shift target species, modify trip duration or location, or decide not to take the trip and do something else instead. These behavioral responses lead to changes in directed fishing effort, resulting in changes in harvest, fishing mortality, and angler welfare. This is, however, only a short-term response and stock dynamics will dictate any longer-term effects on the resource, which may subsequently feedback and affect future management decisions and angling behavior.

Narrow slot limits, like the 2023 emergency action and the options being considered for beyond 2023, will lead to fish in the larger size range being released in the short-term. For example, a 28" to 31" recreational slot limit in the ocean will lead to fish in the 31" to 35" size range being released in the short-term. Recent research into striped bass anglers' preferences and behavior found the typical striped bass angler prefers to keep larger fish (Carr-Harris and Steinback 2020)[7]. Applying this to a 28 to 31" slot limit, anglers would likely prefer to keep a fish on the size range 31"-35" rather than having to release it, which means that in the short-term, a narrow slot limit like 28 to 31" may reduce effort (i.e., reduce trips) from those anglers seeking to bring fish home in the cooler. Thus, the overall anticipated effect on the number of releases in the short-term is unclear; larger fish are required to be released, but any reduction in effort may reduce the overall number of releases. A reduction in effort could translate into a short-term negative impact on the regional economy and businesses associated with the fishing industry for this species. Importantly, this is likely only a short-term response, and stock dynamics will dictate any longer-term effects on the resource and the angling community. Assuming the options considered for this action will support the rebuilding of the striped bass population, it will likely ensure the quality of the recreational fishing experience for the sector in the long-term.

For the commercial sector, implementing commercial maximum size limits will impact the size range of fish brought to market. In states where a new maximum size limit significantly changes the size of commercially harvested fish, dealers, processors, and consumers will have to adjust to the new smaller fish size, potentially requiring changes in the supply chain, marketing, and processing. In the short-term harvesters may also be more limited to adjusting to market demand if they are operating within a narrow slot limit. Additionally, the harvest of smaller fish would increase the number of fish being removed by the commercial sector and may result in greater effort and gear. Changes in quota could also have economic impacts due to a change in total poundage.

2.2.3 Status of the Fishery

In 2022, total Atlantic striped bass removals (including commercial and recreational harvest, commercial dead discards and recreational release mortality) were estimated at 6.8 million fish, which is a 32% increase from 2021 total removals. This 2022 increase was driven by an increase

Haab, T.C. and McConnell, K.E. 2003. Valuating Environmental and Natural Resources: The Econometrics of Non-Market Valuation, Edward Elgar Publishing.

[7] Carr-Harris, A. and S. Steinback. 2020. Expected economic and biological impacts of recreational Atlantic striped bass fishing policy. Front. Mar. Sci. 6: 814, p.1-20.

in recreational removals, as commercial removals slightly decreased. In 2022, the commercial sector accounted for about 10% of total removals in numbers of fish (9% harvest and 1% dead discards), and the recreational sector accounted for 90% of removals in numbers of fish (51% harvest and 39% release mortality) (Figure 5). Removals for each sector by year are listed in Table 6.

Recreational Fishery

The recreational fishery is managed by bag limits, minimum size or slot size limits, and closed seasons (in some states) to restrict harvest (Table 2). Gear restrictions are also in place to increase the chance of survival after a striped bass is released alive in the recreational fishery. Total recreational catch (harvest and live releases) coastwide was estimated at 33.1 million fish in 2022, which is a 38% increase from 2021. This overall coastwide increase was a combination of a large increase in harvest and a marginal increase in live releases.

From 2004 to 2014, recreational harvest averaged 4.6 million fish per year. From 2015-2019, annual harvest decreased to an estimated 2.8 million fish due to the implementation of more restrictive regulations via Addendum IV, changes in effort and changes in size and distribution of the population through time. Total recreational harvest decreased to 1.71 million fish in 2020 and 1.82 million fish in 2021, likely due to a combination of factors including more restrictive regulations via Addendum VI, fish availability, and impacts of COVID-19. It is important to recognize that impacts from COVID-19 were likely not uniform across states, sectors, or modes.

Under the same management measures as 2020-2021, total recreational harvest in 2022 increased to 3.4 million fish (35.8 million pounds), which is an 88% increase by number relative to 2021 (127% increase by weight). This increase was likely due to the increased availability of the strong 2015 year class in the ocean slot in 2022. New Jersey landed the largest proportion of recreational harvest in number of fish[8] (33%), followed by New York (26%), Maryland (19%), and Massachusetts (14%). The proportion of coastwide recreational harvest in numbers from Chesapeake Bay was estimated at 20% in 2022, compared to 35% in 2021. By weight, the proportion of recreational harvest from the Chesapeake Bay was estimated at 9% in 2022, compared to 20% in 2021.

The vast majority of recreational striped bass catch (over 90%) is released alive either due to angler preference or regulation (i.e., closed season, undersized, or already caught the bag limit). The stock assessment assumes, based on previous studies, that 9% of fish that are released alive die as a result of being caught. In 2022, recreational anglers caught and released an estimated 29.6 million fish, of which 2.7 million are assumed to have died. This represents a 3% increase in live releases coastwide from 2021.

In 2022, combined private vessel/shore modes of the recreational striped bass fishery accounted for 95% of recreational removals, and the for-hire components (charter and head

[8] By weight, New Jersey had the largest proportion of recreational harvest (38%), followed by New York (30%), Massachusetts (15%), and Maryland (9%).

boats) accounted for 5%. Coastwide in 2022, private vessel/shore mode recreational removals increased by 42% relative to 2021, while for-hire recreational removals decreased by 7%. However, this trend differs by region and by mode. In the ocean, private vessel/shore mode removals increased by 52% and for-hire removals increased by 22% in 2022. In the Chesapeake Bay, private vessel/shore mode removals increased by only 3%, and for-hire removals decreased by 27%.

The ocean and Chesapeake Bay regions experienced different changes in recreational catch in 2022 relative to 2021. The ocean region saw an increase in both recreational harvest (132% increase in numbers of fish) and live releases (7% increase) relative to 2021. On the other hand, the Chesapeake Bay saw a much smaller increase in recreational harvest (7% increase) and a decrease in live releases (18% decrease) relative to 2021. Again, the large increase in ocean recreational harvest is likely due to the availability of the strong 2015 year class in the ocean slot in 2022, when many of those age-8 fish were above the legal minimum size of 28 inches.

The number of trips directed at striped bass (primary and secondary target) also shows a differing trend between the ocean and the Chesapeake Bay. In 2022, the number of ocean directed trips increased by 31% relative to 2021, while the number of Chesapeake Bay directed trips decreased slightly by about 2%.

Recent MRIP News Regarding Fishing Effort Survey

In August 2023, NOAA Fisheries released findings of a pilot study it conducted to evaluate potential sources of bias in the recreational Fishing Effort Survey (FES) questionnaire design.[9] This study found switching the sequence of questions resulted in fewer reporting errors and fishing effort estimates that were generally 30 to 40 percent lower for shore and private boat modes than estimates produced from the current design. However, results varied by state and fishing mode. These results are based on a pilot study that had a limited time frame (six months) and geographic scope (only four states included), and much more extensive work needs to be done to determine the true impacts of the survey design. NOAA Fisheries will be conducting a larger-scale follow-up study over the course of 2024. At this time, the potential impacts to recreational catch estimates and stock assessments are unknown.

Even if we were to assume that striped bass recreational catch was overestimated by 30-40% over the timeframe (1982-present), it would likely only change the scale of the biomass but not the overall downward trend in the population that we have seen since 2010. It would not change the fact that, using the same FES methodology, recreational harvest estimates nearly doubled from 2021 to 2022. This increased catch was supported through recreational anglers anecdotally reporting catching more fish as well as numerous states' commercial fisheries utilizing their quota more quickly or fully, particularly in ocean fisheries. The striped bass assessment will be updated in 2024 and can be used to explore how the possible

[9] https://apps-st.fisheries.noaa.gov/rpts/main/public_docs/Evaluating%20Measurement%20Error%20in%20the%20FES%20Consolidated%20Final%20w%20Review.pdf?method=PUB_MANUSCRIPT&id=32268

overestimation of recreational catch may impact biomass and the emergency measures that have been put in place to reduce fishery removals.

Commercial Fishery

The commercial fishery is managed by a quota system resulting in relatively stable landings since 2004. There are two regional quotas; one for the Chesapeake Bay area and one for the ocean area, which includes other bays, inland rivers, and estuaries. In 2022, the ocean commercial striped bass quota was 2,411,154 pounds, and 1,904,852 pounds were harvested in the ocean region. In the Chesapeake Bay region, the 2022 commercial striped bass quota was 3,001,648 pounds, and 2,374,988 pounds were harvested. Neither quota was exceeded in 2022. Refer to Table 1 for 2022 commercial fishery regulations by state, including size limits, trip limits, gear restrictions, and seasons.

From 2004 to 2014, coastwide commercial landings averaged 6.8 million pounds per year. From 2015-2019, commercial landings decreased to an average of 4.7 million pounds due to implementation of reduced quotas through Addendum IV. From 2020-2022, coastwide commercial landings decreased again to an average 4.1 million pounds due to further reduced quotas through Addendum VI.

Since 1990, commercial landings from the ocean fishery have accounted for an average 40% of total coastwide commercial landings by weight, with the other 60% coming from the Chesapeake Bay. The proportion of commercial harvest coming from Chesapeake Bay is much higher in numbers of fish (roughly 80%) because fish harvested in Chesapeake Bay have a lower average weight than fish harvested in ocean fisheries.

Of the total 2022 commercial harvest (combined ocean and Chesapeake Bay) by weight, Maryland landed 31%, Virginia landed 20%, and Massachusetts landed 18%. Additional harvest came from New York (15%), the Potomac River Fishery Commission (PRFC) (10%), Rhode Island (4%), and Delaware (3%).

Ocean commercial size limits, seasons, and gear types vary by state. Along the Atlantic coast, current legal minimum size ranges from 20” to 35”. In general, lower minimum sizes exist in the Mid-Atlantic (where fish are primarily harvested by a combination of drift and anchor gill nets), while New England states have larger minimum sizes and harvest is predominantly hook and line. In the ocean region, only New York currently has a commercial slot size with lower and upper bounds (26–38”). Chesapeake Bay commercial size limits and gear types are more uniform with an 18” minimum size for Bay states, although Maryland has a year-round maximum size (36”) while PRFC and Virginia have seasonal maximum size limits of 36” and 28”, respectively. All three Bay states employ a combination of pound net, drift net, and hook and line gear types.

State commercial sampling programs indicate the mean length, weight, and age of commercially harvested striped bass are higher for the ocean fishery (Table 7). Sub-sampling of commercial striped bass harvest occurs for about 1-5% of all harvested fish in each state, and

these values are assumed to be representative of each state's landings. In the ocean, mean length of harvested fish ranged from 30.2" total length (NY) to 41.1" total length (MD ocean) based on 2022 samples, with corresponding mean weights ranging from 9.9 lbs. to 25.9 lbs. In the Chesapeake Bay, mean length of harvested fish ranged from 22.2" total length (MD Bay) to 36.2" total length (VA Bay hook & line) based on 2022 samples, with corresponding mean weights ranging from 4.6 lbs. to 26.6 lbs.

3.0 PROPOSED MANAGEMENT OPTIONS

This document proposes management changes for the ocean and Chesapeake Bay fisheries. The striped bass ocean fishery (also referred to as "ocean region") is defined as all fisheries operating in coastal and estuarine areas of the U.S. Atlantic coast from Maine through North Carolina, excluding the Chesapeake Bay and Albemarle Sound-Roanoke River (A-R) management areas. The Chesapeake Bay fishery is defined as all fisheries operating within Chesapeake Bay, except for the Chesapeake Bay recreational spring trophy fishery. The Chesapeake Bay recreational spring trophy fishery is part of the ocean fishery for management purposes because it targets coastal migratory striped bass. This document does not propose changes to the A-R fisheries, which are managed separately by the State of North Carolina.

When the Board takes final action on the addendum, there is the opportunity to select any measure within the range of options that went out for public comment, including combining options across issues.

Projecting 2024 Reduction to Achieve the Fishing Mortality Target

The same forward projecting methodology as used in striped bass stock assessments was used to estimate the removals needed to achieve *F* target in 2024 with a 50% probability. The projections were made using 2022 removals data (6.8 million fish total), and estimated 2023 removals accounting for implementation of the 2023 emergency action (an estimated 4.8 million fish total[10]). A new selectivity curve for the 2023 emergency action was also developed to account for the lower selectivity of ages 7-9 fish in 2023 due to the narrower recreational slot limit. Because the calculation of *F* target accounts for selectivity, the *F* target value was re-calculated to incorporate this new 2023 selectivity (*F* target=0.176). Projection results indicate a 14.5% reduction from 2022 total removals is needed to achieve *F* target in 2024. This overall reduction can be achieved, for example, by each sector and area (commercial/recreational and Ocean/Chesapeake Bay) taking a 14.5% reduction. Were the recreational sector to be accountable for achieving the full reduction, a 16.1% reduction from 2022 recreational removals would be needed to achieve the *F* target in 2024.

[10] The TC conducted sensitivity runs to explore different assumptions of the methods used to estimate 2023 removals and the effect on the projections, and found that although the estimates of 2023 removals varied from 4.8 to 5.7 million fish, the necessary percent reduction to achieve the *F* target in 2024 only varied by approximately 1.5%. The June 2023 Technical Committee summaries provide additional details on these methods and results: http://www.asmfc.org/species/atlantic-striped-bass#meetingsummaries

3.1 Recreational Fishery Management

Proposed options for the ocean and Chesapeake Bay recreational fisheries are presented below. All size limits are in total length. Bag limits are per person per day. The Board will choose one option for each region. Options for the recreational fishery are designed to reduce harvest (fishing mortality) to achieve the target F. Although these options were not designed to protect a specific year-class, they may offer protection to one or more strong year-classes.

Note on Conservation Equivalency: Since the stock is currently overfished, if the FMP standard is changed, CE programs will not be approved for non-quota managed recreational fisheries, with the exception of the Hudson River, Delaware River, and Delaware Bay recreational fisheries. The Board has discretion whether to approve CE programs for quota managed fisheries.

The proposed recreational management options were developed using MRIP harvest and live release estimates. A mortality rate of 9% was applied to all live release estimates to estimate release mortality in the recreational fishery. To characterize ocean fish availability for 2024 and develop ocean slot limit options, year-class strength in the ocean was accounted for by using catch-at-length data from 2020. 2020 was used as a proxy for 2024 ocean fish availability because the strong 2011-year class was available in the ocean at age-9 in 2020, just as the strong 2015 year-class catch will be available in the ocean at age-9 in 2024. For the Chesapeake Bay, catch-at-length data from 2021 were used to characterize Bay fish availability in 2024 because that year is assumed to more accurately represent the younger year-classes expected to be present in the Bay in 2024. Specifically, in 2024, the 2018 year-class will be age-6, the same age the 2015 year-class was in 2021. When changes in the bag limit were developed, the average reduction in removals was estimated using data from a period when there was a two-fish bag limit in Chesapeake Bay. For both regions, the same level of non-compliance with size limits as observed in 2021-2022 is assumed to occur in 2024. In the ocean, all harvest below the slot is assumed to continue, as it is a mix of non-compliance and compliance with different, regional size limits in established CE programs and difficult to separate.

3.1.1 Ocean Recreational Fishery Options

All ocean options (besides the status quo) propose a change to the slot limit's maximum size. A revision to the 28" minimum size for the lower bound of the slot limit is not considered given the long-standing nature of this measure (with benefits to compliance) and in consideration of environmental justice issues (e.g., providing access to shore-based anglers to legal-sized fish). The range of options considers a distinct (wider) slot limit for the for-hire fishing mode to address concerns heard from for-hire operators about the potential for increased discards with narrower slots and the general desire for anglers on for-hire trips to harvest a fish. The impact of the wider for-hire slot on the reduction to be achieved is limited due to the small contribution of for-hire removals to total ocean removals (average 6% of ocean recreational harvest and 3% of total ocean removals over the past three years). The wider for-hire slot will provide less protection to the 2015 year-class, which will be age 9 in 2024 with an estimated average length of 34".

For all ocean options (besides the status quo), the Chesapeake Bay recreational spring trophy fishery will be managed by the same size limits as the ocean fishery with the 2022 trophy season

dates. If the status quo option is selected, whether the Chesapeake Bay recreational spring trophy fishery will be managed by the same size limits as the ocean fishery will depend on whether or not the continuation of Addendum VI CEs is allowed.

For all ocean options (besides the status quo), the following states would be required to submit area-specific measures to achieve the same percent reduction in total removals as the selected ocean option (relative to 2022 levels) as part of their state implementation plans:

- *New York: the Hudson River management area*
- *Pennsylvania: all state waters*
- *Delaware: the state's July–August 20–25" slot fishery.*

All state implementation plans are subject to review by the Board, Technical Committee, and Plan Review Team, and should incorporate the best available data for each area (MRIP data are not available for all areas).

Option A. Status Quo: 1 fish at 28" to less than 35" with 2017 seasons (all modes). This option allows for the continuation of the existing Addendum VI CE plans. Status quo has little to no probability of achieving the objective of this addendum.

Option B. 1 fish at 28" to 31" with 2022 seasons (all modes).

Option C. 1 fish at 28" to 31" with 2022 seasons for private vessel/shore anglers; 1 fish at 28" to 33" with 2022 seasons for the for-hire mode.

All ocean Recreational options are summarized in the following table.

Ocean Options	Overall Reduction	Harvest Change	Rec. Release Mortality Change
Option A. 1 fish at 28" to < 35" with 2017 season dates (all modes) or approved CEs.			
Option B. 1 fish at 28" – 31" with 2022 seasons (all modes)	-14.1%	-49.9%	+2.0%
Option C. Private vessel/shore: 1 fish at 28" – 31" with 2022 seasons. For-hire: 1 fish at 28" – 33" with 2022 seasons.	-14.0%	-49.5%	+2.0%

3.1.2 Chesapeake Bay Recreational Fishery Options

All Chesapeake Bay options (besides the status quo) propose a maximum recreational size limit; some options also change the minimum size limit and/or bag limit resulting in additional uniformity within the Bay. Maximum size limits range from 23" to 26"; higher maximum sizes were not considered in order to provide some protection to the above average 2018 year-class, which will be age-6 in 2024 with an average estimated length of just over 26". The range of options considers a distinct (higher) bag limit for the for-hire fishing mode to address concerns heard from for-hire operators about the potential for reduced for-hire angler effort at lower bag limits given the ability to only access smaller fish. In the Chesapeake Bay, for-hire removals are about one-fifth of total Bay removals (average 27% of Bay recreational harvest and 18% of total Bay recreational removals over the past three years), so the impact of the higher for-hire bag limit on the reduction to be achieved is somewhat larger than the wider slot limit proposed for the ocean for-hire fishery.

Option A. Status Quo: 1 fish at 18" minimum size with 2017 seasons for all Chesapeake Bay recreational fisheries. This option allows for the continuation of the existing Addendum VI CE plans. Status quo has little to no probability of achieving the objective of this addendum.

Option B. Apply a standard maximum size limit to the Bay jurisdictions' 2022 minimum sizes, bag limits, and seasons. Maximum size limit options are: B1) 23", B2) 24", B3) 25" or B4) 26".

Option C. Apply a standard minimum size limit and maximum size limit to the Bay jurisdictions' 2022 bag limits and seasons. The minimum size shall be 20". Maximum size limit options are: C1) 23", C2) 24", C3) 25" or C4) 26".

Option D. Apply a standard minimum size limit, maximum size limit, and bag limit to the Bay jurisdictions' 2022 seasons. The minimum size shall be 19" and the bag limit 1 fish. Maximum size limit options are: D1) 23", D2) 24", D3) 25" or D4) 26".

Option E. Apply a standard minimum size limit, maximum size limit, and mode-specific bag limits to the Bay jurisdictions' 2022 seasons. The minimum size shall be 19", the for-hire bag limit 2 fish, and the private vessel/shore angler bag limit 1 fish. Maximum size limit options are: E1) 23", E2) 24", E3) 25" or E4) 26".

All Chesapeake Bay Recreational options are summarized in the following table.

	Min. Size	Max. Size	Bag Limit	Season	Overall Reduction	Harvest Change	Rec. Release Mortality (RRM) Change
Option A	1 fish at 18" minimum size with 2017 seasons, or approved CEs.						
Chesapeake Bay Options with Consistent Maximum Size							
Option B1	Same as 2022: 18" DC, 19" MD, 20" VA & PRFC	23"	same as 2022*	same as 2022[+]	-17.8%	-31.6%	+4.9%
Option B2	Same as 2022: 18" DC, 19" MD, 20" VA & PRFC	24"	same as 2022*	same as 2022[+]	-10.8%	-19.1%	+3.0%
Option B3	Same as 2022: 18" DC, 19" MD, 20" VA & PRFC	25"	same as 2022*	same as 2022[+]	-6.6%	-11.8%	+1.8%
Option B4	Same as 2022: 18" DC, 19" MD, 20" VA & PRFC	25"	same as 2022*	same as 2022[+]	-4.7%	-8.4%	+1.3%
Chesapeake Bay Options with Consistent Minimum and Maximum Size							
	Min. Size	**Max. Size**	**Bag Limit**	**Season**	**Overall Reduction**	**Harvest Change**	**RRM Change**
Option C1	20" (all jurisdictions)	23"	same as 2022*	same as 2022[+]	-24.2%	-43.0%	+6.6%
Option C2	20" (all jurisdictions)	24"	same as 2022*	same as 2022[+]	-17.2%	-30.5%	+4.7%
Option C3	20" (all jurisdictions)	25"	same as 2022*	same as 2022[+]	-13.0%	-23.2%	+3.6%
Option C4	20" (all jurisdictions)	26"	same as 2022*	same as 2022[+]	-11.1%	-19.7%	+3.0%

Chesapeake Bay Options with Consistent Minimum Size, Maximum Size, and Bag Limit							
	Min. Size	**Max. Size**	**Bag Limit**	**Season**	**Overall Reduction**	**Harvest Change**	**RRM Change**
Option D1	19" (all jurisdictions)	23"	1 fish (all modes)	same as 2022[+]	-22.4%	-38.4%	+6.7%
Option D2	19" (all jurisdictions)	24"	1 fish (all modes)	same as 2022[+]	-15.9%	-27.5%	+4.8%
Option D3	19" (all jurisdictions)	25"	1 fish (all modes)	same as 2022[+]	-12.1%	-21.1%	+3.7%
Option D4	19" (all jurisdictions)	26"	1 fish (all modes)	same as 2022[+]	-10.3%	-18.1%	+3.2%
Chesapeake Bay Options with Consistent Minimum Size, Maximum Size, and Mode-Specific Bag Limits (P/S=private vessel/shore anglers and FH= for-hire)							
	Min. Size	**Max. Size**	**Bag Limit**	**Season**	**Overall Reduction**	**Harvest Change**	**RRM Change**
Option E1	19" (all jurisdictions)	23"	1 fish P/S 2 fish FH	same as 2022[+]	-17.9%	-31.4%	+4.9%
Option E2	19" (all jurisdictions)	25"	1 fish P/S 2 fish FH	same as 2022[+]	-11.0%	-19.3%	+3.0%
Option E3	19" (all jurisdictions)	24"	1 fish P/S 2 fish FH	same as 2022[+]	-7.0%	-12.2%	+1.8%
Option E4	19" (all jurisdictions)	26"	1 fish P/S 2 fish FH	same as 2022[+]	-5.1%	-8.9%	+1.3%

****2022 Chesapeake Bay Bag Limits***

MD: 1 fish-private vessel/shore, 2 fish-For-Hire	PRFC: 2 fish for all modes
DC: 1 fish for all modes	VA: 1 fish for all modes

[+]2022 Chesapeake Bay Seasons

MD: C&R only: 1.1-3.31, 12.11-12.31 No targeting: 4.1-4.30 Trophy: 5.1.-5.15 (part of ocean fishery) Open: 5.16-7.15, 8.1-12.10 No Targeting: 7.16-7.31	PRFC: No Harvest: 1.1-4.30 Trophy: 5.1-5.15 (part of ocean fishery) Open: 5.16-7.6, 8.21-12.31 No Targeting: 7.7-8.20
DC: No Harvest: 1.1-5.16 Open: 5.16-12.31	VA: No Harvest: 1.1-5.15 Open: 5.16-6.15, 10.4-12.31 No Harvest: 6.16-10.3

3.1.3 Recreational Filleting Allowance Requirements

State allowances for at-sea/shore-side filleting of recreationally-caught striped bass, especially where racks are not required to be retained for enforcement with size limits or there are not corresponding minimum/maximum fillet lengths, could make it is easier for non-compliance to occur. Enforcement with *maximum* size limits in particular may be more challenging with filleting allowances (i.e., fillets can be trimmed to correspond to maximum fish size). Minimum requirements for states that allow filleting would increase compliance. Appendix 1 lists current state filleting regulations.

Option A. Status quo. No requirement in the Interstate FMP for Atlantic Striped Bass related to at-sea/shoreside filleting.

Option B. For states that authorize at-sea/shore-side filleting of striped bass, establish minimum requirements, including requirements for: racks to be retained; skin to be left intact; and possession to be limited to no more than two fillets per legal fish. States should consider including language about when and where racks may be disposed of, specific to each mode allowed to fillet at-sea/shore.

3.2 Commercial Fishery Management

Proposed options for the ocean and Chesapeake Bay commercial fisheries are presented below. All options use the commercial quotas and commercial size limits in place in 2022 as the starting point for applying a commercial quota reduction (Section 3.2.1) or a commercial maximum size (Section 3.2.2). All commercial quotas are in pounds; all size limits are in total length.

The two types of commercial options—quota reduction and maximum size—are designed to achieve different goals towards rebuilding. A quota reduction would reduce harvest (fishing mortality) towards the goal of achieving the target F but would not aim to protect any specific year-classes. Commercial quota management provides for increased certainty with regards to achieving a harvest reduction, in contrast to the recreational fishery option. However, a reduction in quota does not always translate into the same reduction in harvest (as discussed in more detail under Section 3.2.1). A maximum size limit would protect larger/older fish but would aim to maintain the same overall spawning potential through quota adjustments (up or down) as under the current size limits and quotas. Accordingly, changes to the commercial quotas resulting from a maximum size are not credited towards the goal of achieving the target F. Additionally, there are many areas of uncertainty with the spawning potential equivalency of this approach (as discussed in more detail under Section 3.2.2).

3.2.1 Commercial Quota Reduction Options

All options (besides the status quo) propose implementing a commercial quota reduction for striped bass commercial fisheries in the ocean and Chesapeake Bay. A commercial quota reduction would contribute to the goal of reducing removals to achieve the F target.

Note that reducing commercial quotas by a certain percentage is unlikely to achieve that percentage due to annual quota underages that tend to occur. Quota underages can occur for a

number of reasons including state regulations, market considerations, distribution shifts, and other factors that may affect fishing effort. During several prior management actions, this difference between commercial quota and harvest was more pronounced. However, in 2022, the majority of states with commercial fisheries fully utilized their quota; therefore, quota reductions have the potential to impact those states more so than in previous years when quota was being underutilized. It should be noted, there will always be underages if there are states that choose to not have an active commercial fishery (or re-allocated to the recreational fishery) as is the case in Maine, New Hampshire, and Connecticut. Commercial harvest levels in 2022 are provided for comparison to proposed quota reductions. Reducing quotas from the realized harvest levels is not considered as it would amount to a quota reallocation which is outside the scope of this management action.

Option A. Status Quo: The ocean commercial fisheries and/or Chesapeake Bay commercial fisheries will continue to be managed by their Amendment 7 quotas and size limits (i.e., 18% reduction from 2017 levels with 2017 size limits). This option allows for the continuation of the existing Addendum VI CE plans. Status quo has a reduced probability to achieve the objective of this addendum

Option B. The ocean commercial fisheries and/or Chesapeake Bay commercial fisheries will be managed by quotas representing up to a 14.5% reduction from their 2022 quotas with their 2022 size limits. The Board will select the specific percent reduction between zero and 14.5%.

Commercial quota (in pounds) reduction options for the ocean and Chesapeake Bay are summarized in the table on the next page.

	Option A. Status Quo (Amendment 7 quotas and size limits; CE's not shown but may continue)		Option B. Up to a 14.5% Reduction from the 2022 Quotas with the 2022 Size Limits			2022 Commercial Harvest for Reference
	Quota	**Size Limit**	**Maximum Quota (-0% from 2022)**	**Minimum Quota (-14.5% from 2022)**	**Size Limit**	
ME	154	N/A (28" min)	154	131	N/A (28" min)	0
NH	3,537	N/A (28" min)	3,537	3,024	N/A (28" min)	0
MA	713,247	34"	735,240	628,630	35" min	770,101
RI	148,889	26" min FFT; 34" min GC	148,889	127,300	26" min FFT; 34" min GC	162,434
CT	14,607	N/A (28")	14,607	12,488	N/A (28" min)	0
NY	652,552	28 – 38"	640,718	547,813	26 – 38"	623,304
NJ*	197,877	N/A (28")	215,912	184,604	bonus program 24 – <28"	rec bonus program: 36,807
DE	118,970	28", except 20" for gill nets in DE Bay/River 2.15-5.31	142,474	121,815	28", except 20" for gill nets in DE Bay/River 2.15-5.31	139,221
MD	74,396	24" min	89,094	76,175	24" min	88,069
VA	113,685	28" min	125,034	106,904	28" min	121,723
NC	295,495	28" min	295,495	252,648	28" min	0
MD Ches Bay	2,588,603	18 - 36"	3,001,648	2,566,409	18 - 36"	2,483,438
PRFC		18" min, 36" max during 2.15-3.25			18" min, 36" max during 2.15-3.25	
VA Ches Bay		18" min, 28" max during 3.15-6.15			18" min, 28" max during 3.15-6.15	

* Through a quota managed CE, New Jersey transfers its commercial quota to a recreational bonus program fishery

3.2.2 Commercial Maximum Size Limit Options

All options (besides the status quo) propose implementing a maximum size limit for striped bass commercial fisheries in the ocean and Chesapeake Bay. The intention of this option is not to contribute to the goal of reducing removals to the F target but preserving larger fish that could contribute to the spawning stock biomass. As part of implementing a change in size limits, the commercial quotas would also be adjusted to account for maintaining the same spawning potential as under the current size limits and quotas. Most state quotas would decrease to account for lost spawning potential due to harvesting smaller fish; however, some would increase. The percent change by state varies given the range of current commercial size limits

and fishery selectivity by state. These changes in quota will not be credited towards this addendum's objective of achieving the F target in 2024 given they are designed to accomplish equivalency with the current measures.

The proposed quotas were developed using spawning potential ratio (SPR) analysis. This SPR analysis requires life history information and state-specific information on fishery selectivity. States that already harvest smaller fish see less of a quota reduction, or even a quota increase. The September 29, 2023 Technical Committee memo explains the calculations and the multiple sources of uncertainty in the calculations and the management tool's overall effects. A maximum size limit may increase dead discards of larger fish, produce levels of harvest that are not equivalent to the current quotas and size limits, and is not likely to increase the probability of rebuilding by 2029.

The potential for increases in quota would exist in states that have current maximum size limits (e.g. 38" New York) that are lower than the proposed maximum size limits. It should be noted that the SPR calculations for those states allow the quota to be increased to account for the harvest of larger fish which could result in fewer total fish harvested relative to the lower maximum size limit. However, the fishery may not actually realize harvest of larger fish due to market demands, availability of larger fish, and gear restrictions or limitations. Bottom line is it has the potential to result in higher overall removals under the higher quota.

States would be able to submit CE proposals to further change their size limits using spawning potential analysis to adjust their quotas accordingly (further contributing to changes in quota and size of harvested fish); however, under no circumstance, including in CE programs, will a minimum size below 18 inches or maximum size above the selected maximum size be allowed. States are allowed to submit CE proposals to transfer commercial quota to quota-managed recreational fisheries (i.e., recreational bonus programs), but would not be allowed to exceed the selected maximum commercial size limit. The Board continues to have discretion to decide whether or not to approve a CE proposal if it proposes size limits the Board considers to be inconsistent with the intent of this addendum.

Option A. Status Quo: No commercial maximum size limit is established within the plan; all commercial fisheries maintain 2017 size limits (or Addendum VI approved CE plans). Amendment 7 quotas (and Addendum VI approved CE-adjusted quotas) remain unchanged.

Option B. Ocean Commercial Maximum Size Limit (with a Spawning Potential Quota Adjustment) *(select one sub-option)*

B1. 38-inch maximum size limit for all ocean commercial fisheries.

B2. 40-inch maximum size limit for all ocean commercial fisheries.

B3. 42-inch maximum size limit for all ocean commercial fisheries.

Option C. Chesapeake Bay Commercial Maximum Size Limit (with a Spawning Potential Quota Adjustment) ***(select one sub-option)***

C1. 36-inch maximum size limit for all Chesapeake Bay commercial fisheries, except from January 1 to May 31 when the maximum size limit is reduced to 28 inches to provide extra protection for spawning fish and pre-spawn fish entering the Bay. This option expands Virginia's current 28-inch seasonal size limit and combines it with Maryland's year-round 36-inch size limit.

C2. 36-inch maximum size limit for all Chesapeake Bay commercial fisheries.

Commercial maximum size limit options (with associated quota reductions) for the ocean are summarized in the table below.

	Option A. Status Quo (No maximum size applies)		**Option B1. 42" maximum size limit**		**Option B2. 40" Maximum Size Limit**		**Option B3. 38" Maximum Size Limit**	
	2022 Size Limit	**2022 Quota**	**Size Limit**	**Quota (% change)**	**Size Limit**	**Quota (% change)**	**Size Limit**	**Quota (% change)**
ME	N/A*	154	28 - 42"	129 (-16.2%)	28 - 40"	122 (-20.8)	28 - 38"	113 (-26.6%)
NH	N/A *	3,537	28 - 42"	2,968 (-16.1%)	28 - 40"	2,796 (-21%)	28 - 38"	2,585 (-26.9%)
MA	35" min	735,240	35 - 42"	634,400 (-13.8%)	35 - 40"	581,483 (-21%)	35 - 38"	545,161 (-25.9%)
RI	26" min FFT; 34" min GC	148,889	26 - 42" FFT 34 - 42" GC	133,040 (-10.6%)	26 - 40" FFT 34 - 40" GC	128,735 (-13.5%)	26 - 38" FFT 34 - 38" GC	119,905 (-19.5%)
CT	N/A **	14,607	28 - 42"	10,677(-26.9%)	28 - 40"	11,548 (-20.94%)	28 - 38"	12,259 (-16.07%)
NY	26 - 38"	640,718	26 - 42"	704,286 (9.9%)	26 - 40"	672,744 (5%)	26 - 38"	640,718 (0%)
NJ	bonus program 24 - <28"	215,912	24 - 42"	321,708 (49%)	24 - 40"	303,825 (40.7%)	24" - 38"	284,243 (31.7%)
DE	28", except 20" for gill nets in DE Bay/River 2.15-5.31	142,474	28 - 42", except 20 - 42" for gill nets in DE Bay/River 2.15-5.31	133,506 (-6.3%)	28 - 40", except 20 - 40" for gill nets in DE Bay/River 2.15-5.31	128,252 (-10%)	28 - 38", except 20 - 38" for gill nets in DE Bay/River 2.15-5.31	118,854 (-16.6%)
MD	24" min	89,094	24 - 42"	83,141 (-6.7%)	24 - 40"	78,160 (-12.3%)	24 - 38"	72,563 (-18.6%)
VA	28" min	125,034	28 - 42"	118,768 (-5%)	28 - 40"	113,478 (-9.2%)	28 - 38"	107,008 9 (-14.4%)
NC	28" min	295,495	28 - 42"	275,782 (-6.8%)	28 - 40"	264,820 (-10.3%)	28 - 38"	245,048 (-17.1%)

Commercial maximum size limit options (with associated quota reductions) for the Chesapeake Bay are summarized in the table below.

	Option A. Status Quo (no maximum size applies)		Option E1. 36" Maximum Size		Option E2. 28" Maximum Size Limit Jan - May; 36" Maximum Size Limit Jun - Dec	
	2022 Size Limit	2022 Quota	Size Limit	Quota (% change)	Size Limit	Quota (% change)
MD Ches Bay	18 - 36"	1,445,394	18 - 36"	1,445,394 (0%)	18 - 28" Jan-May; 18 - 36" Jun - Dec	1,407,463 (-2.6%)
PRFC	18" min, 36" max during 2.15-3.25	572,861		558,626 (-2.5%)		554,767 (-3.2%)
VA Ches Bay	18" min, 28" max during 3.15-6.15	983,393		768,978 (-21.8%)		730,240 (-25.7%)

3.2.3 Gill Net Exemption

If a commercial maximum size limit is implemented, there is potential for increased dead discards across all gears. The intended benefit of releasing larger striped bass may be offset by the mortality rate of discarded fish and the resulting need to continue fishing to meet the quota. The greatest concern lies with those gears that are less selective with regards to fish size and/or those gears associated with higher discard mortality rates. Striped bass stock assessments use the following gear-specific discard mortality rates: anchor gill net=45%, drift gill net=6%, hook and line=9%, other=20%, pound net=3%, seine=16% and trawl=26%. Given the relatively high rate of discard mortality associated with gill nets, coupled with the ability to affect the gear's selectivity by way of mesh size, the options below consider provisions specific to gill nets that would implement a maximum mesh size requirement instead of a maximum fish size requirement for that gear.

Changing mesh size will change the selectivity of fish captured in gill nets; larger mesh sizes are intended to capture larger fish. A maximum mesh size requirement (i.e., no mesh larger than x") could greatly reduce how many fish above the maximum size are captured by the gear[11]; however, it would not fully guarantee that such fish wouldn't be captured (e.g., could still be incidentally lip-snagged in smaller mesh). If a maximum mesh size were implemented instead of a maximum fish size limit for gill nets, harvesters would be allowed to keep the occasional incidental catch of large fish so as to prevent new dead discards.

If an exemption is approved through this addendum, additional Board review and approval of any maximum mesh size in lieu of a maximum fish size would be required prior to state implementation. Determination of the appropriate mesh size would take additional time.

Option 1. Status Quo

Gill net fisheries are subject to the same maximum fish size limits as all other commercial striped bass gears.

[11] Hager, C. 2005. Mesh-Specific Catch Compositions and Size Distributions Occurring in Virginia's 2005 Winter-Spring Striped Bass Gill Net Fishery. Submitted to Virginia Marine Resources Commission. VIMS Marine Resource Report No. 2005-7, VSG 05-06.

Option 2. Gill Net Exemption

For states that allow commercial striped bass harvest from gill nets: Gill net fisheries would not be subject to a maximum fish size limit, but instead subject to maximum mesh size requirement. Mesh size requirements would be designed to protect the same size fish as other commercial gears as specified in the addendum. Until such time that the appropriate mesh size requirement would be determined and reviewed by the TC and Board, gill nets would be subject to the selected maximum fish size limit.

States would be required to discern between the fish caught in an exempted gill net fishery from fish caught in a maximum size limit commercial fishery in their state implementation plan (e.g., tags are of gear-specific colors, are inscribed with gear-specific size limits or there are non-overlapping gear specific seasons; tagging at the point of harvest).

Option 3. Gill Net Exemption through Conservation Equivalency

For states that allow commercial striped bass harvest from gill nets: States may submit CE proposals requesting an exemption to maximum fish size limits for gill nets with the addition of maximum mesh size requirements. CE proposals should include sufficient data documenting mesh size selectivity for striped bass and are subject to review and approval by the TC, PRT, and the Board.

States would be required to discern between the fish caught in an exempted gill net fishery from fish caught in a maximum size limit commercial fishery in their CE proposals (e.g., tags are of gear-specific colors, are inscribed with gear-specific size limits or there are non-overlapping gear specific seasons; tagging at the point of harvest).

3.3 Response to Stock Assessment Updates

If an upcoming stock assessment prior to the rebuilding deadline, currently 2029, indicates the stock is not projected to rebuild by 2029 with a probability greater than or equal to 50%:

Option A. Status Quo: the Board would initiate and develop an addendum to consider adjusting management measures.

- An addendum process includes a public comment period with public hearings and an opportunity to submit written comments on the draft addendum document.
- Based on assessment timing and the typical addendum development and implementation process, new measures would likely not be implemented until two years following the assessment. For example, the 2024 stock assessment is expected in October 2024. If the Board initiates an addendum in October 2024, approves it for public comment in February 2025, and then selects final measures in May 2025, the earliest implementation would likely be late 2025 or early 2026.

Option B. The Board could respond via Board action where the Board could change management measures by voting to pass a motion at a Board meeting instead of developing an addendum or amendment and different from the emergency action process.

- Public comment could be provided during Board meetings per the Commission's guidelines for public comment at Board meetings, and/or public comment could be provided in writing to the Board per the Commission's timeline for submission of written public comments prior to Board meetings.
- This option would allow a more expedited response to assessment updates. For example, when the 2024 stock assessment update is complete in October 2024, the Board could change management measures at that October 2024 meeting or a meeting shortly thereafter, which would enable new measures to be implemented for at least part of the 2025 season.

4.0 COMPLIANCE SCHEDULE

If approved, states must implement Addendum II according to the following schedule to be in compliance with the Atlantic Striped Bass Interstate FMP:

[Month, Day, Year]: States submit implementation plans to meet Addendum II requirements.

[Month, Day, Year]: Board reviews and considers approving state implementation plans.

[Month Day, Year]: States implement regulations.

FIGURES

Figure 1. Atlantic striped bass female spawning stock biomass and recruitment, 1982-2021. Source: 2022 Stock Assessment Update.

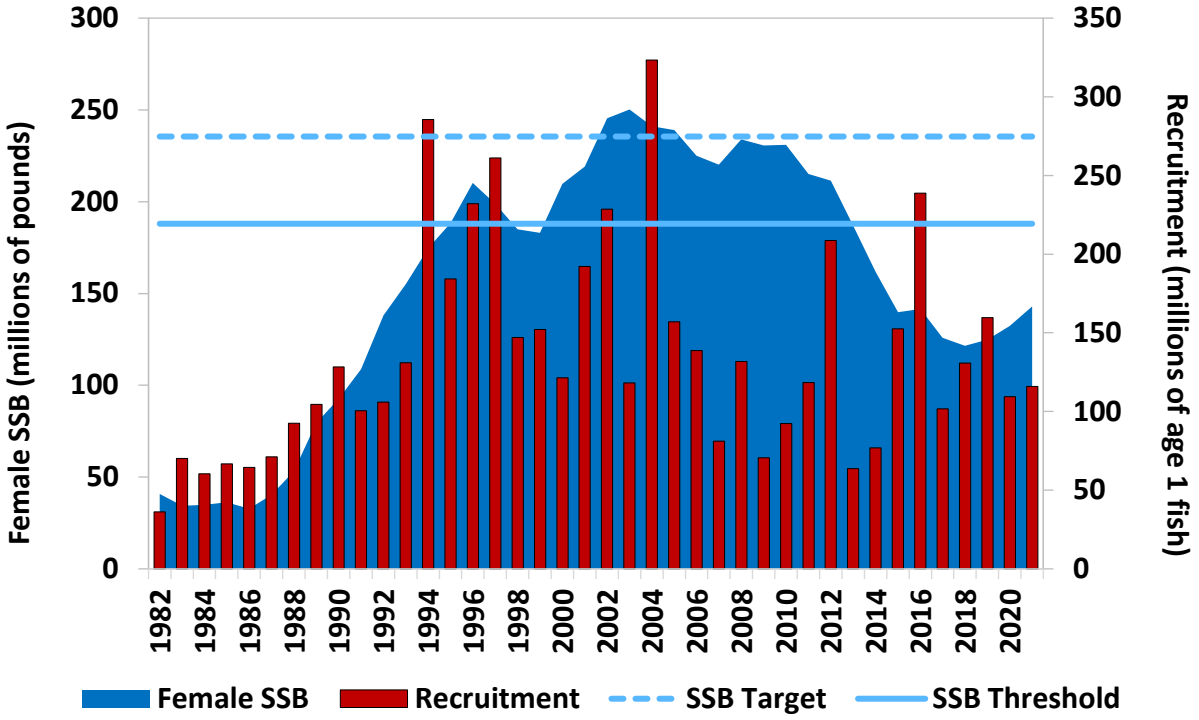


Figure 2. Atlantic striped bass fishing mortality, 1982-2021. Source: 2022 Stock Assessment Update.

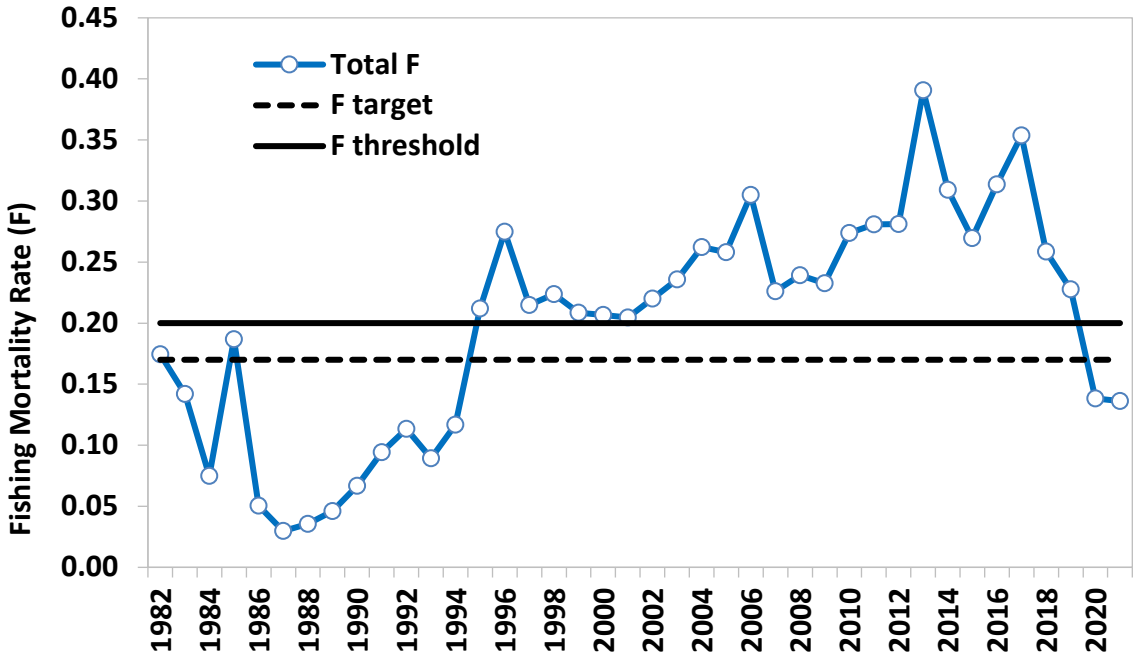


Figure 3. Stock rebuilding projections using 2021 data (from 2022 assessment update) and 2022 data.

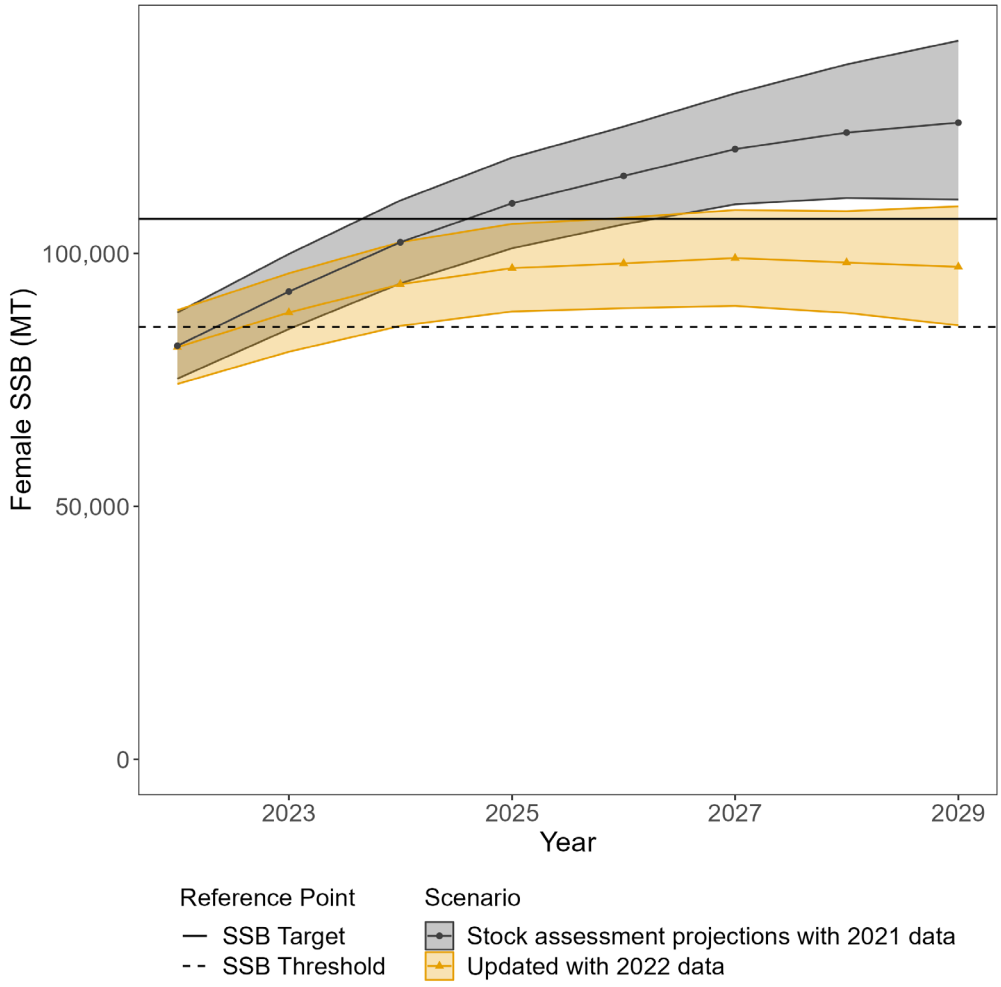


Figure 4. Average size-at-age of the 2015 year-class (not scaled to abundance) from 2022 (top panel), 2023 (middle panel), and 2024 (bottom panel) relative to the Addendum VI/Amendment 7 ocean standard 28”-<35” slot (solid lines) and the emergency action 31” maximum size (dashed line).

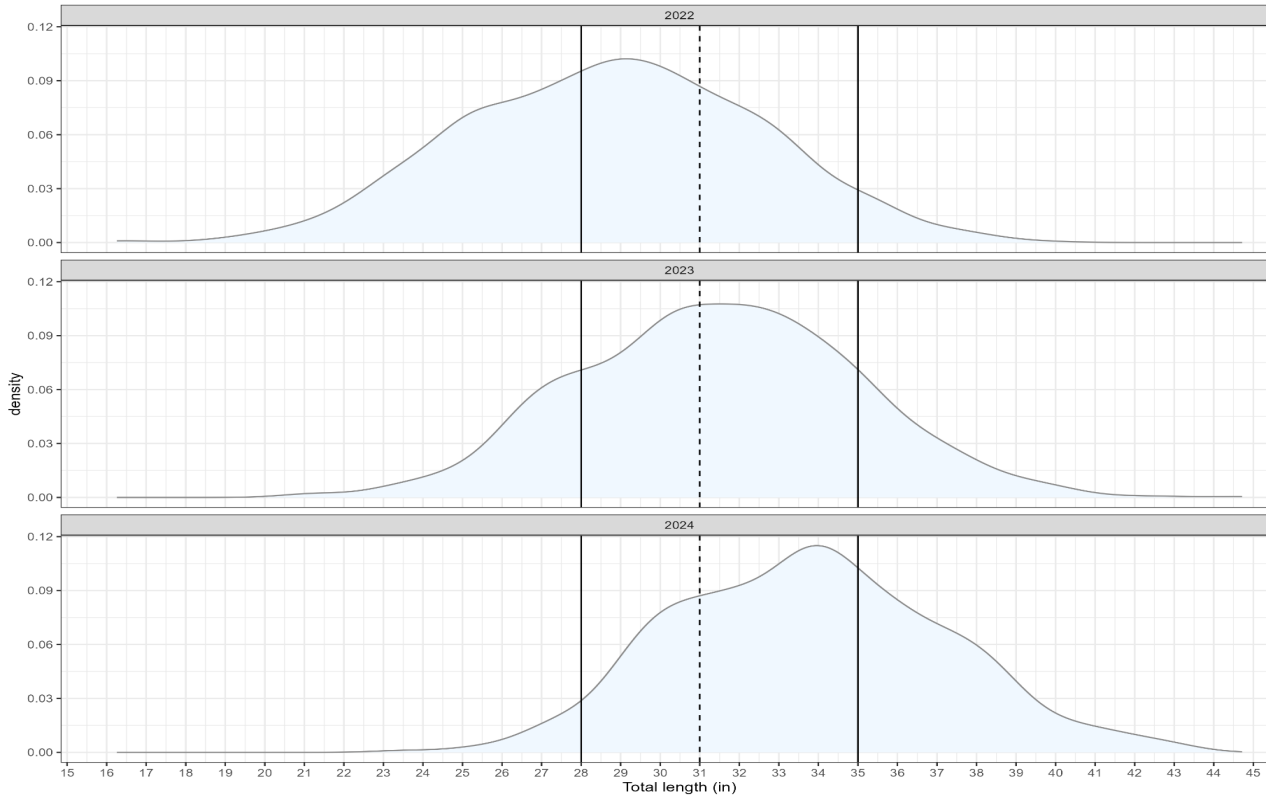
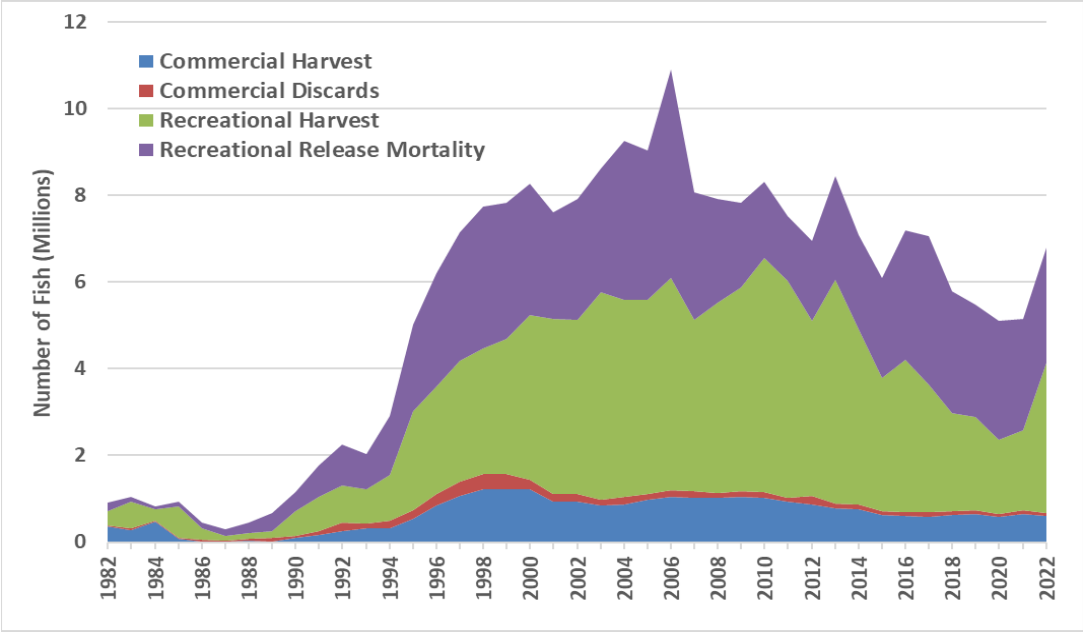


Figure 5. Total Atlantic striped bass removals by sector in numbers of fish, 1982-2022. Note: Harvest is from state compliance reports/MRIP, discards/release mortality is from ASMFC.



TABLES

Table 1. Summary of Atlantic striped bass commercial regulations in 2022. Source: 2023 State Compliance Reports. Minimum sizes and slot size limits are in total length (TL). *Commercial quota reallocated to recreational bonus fish program.

STATE	SIZE LIMITS (TL) and TRIP LIMITS	SEASONAL QUOTA	OPEN SEASON
ME	Commercial fishing prohibited		
NH	Commercial fishing prohibited		
MA	35” minimum size; no gaffing undersized fish. 15 fish/day with commercial boat permit; 2 fish/day with rod and reel permit.	735,240 lbs. Hook & Line only.	6.16-11.15 (or when quota reached); open fishing days of Monday, Tuesday and Wednesday, with Thursday and Friday added on October 1 (if quota remains). Cape Cod Canal closed to commercial striped bass fishing.
RI	Floating fish trap: 26” minimum size unlimited possession limit until 70% of quota reached, then 500 lbs. per licensee per day	Total: 148,889 lbs., split 39:61 between the trap and general category. Gill netting prohibited.	4.1 – 12.31
	General category (mostly rod & reel): 34” min. Five (5) fish per person per calendar day, or if fishing from a vessel, five (5) fish per vessel per calendar day.		6.1-7.5; 7.6-12.31, or until quota reached. Closed Fridays, Saturdays, and Sundays throughout.
CT	Commercial fishing prohibited; bonus program in CT suspended indefinitely in 2020.		
NY	26”-38” size; (Hudson River closed to commercial harvest)	640,718 lbs. Pound Nets, Gill Nets (6-8”stretched mesh), Hook & Line.	5.15 – 12.15, or until quota reached. Limited entry permit only.
NJ*	Commercial fishing prohibited; bonus program: 1 fish/permit at 24” to <28”	215,912 lbs.	5.15 – 12.31 (permit required)
PA	Commercial fishing prohibited		
DE	Gill Net: 20” min in DE Bay/River during spring season. 28” in all other waters/seasons.	Gillnet: 135,350 lbs. No fixed nets in DE River.	Gillnet: 2.15-5.31 (2.15-3.30 for Nanticoke River) & 11.15-12.31; drift nets only 2.15-28 & 5.1-31; no trip limit.
	Hook and Line: 28” min	Hook and line: 7,124 lbs.	Hook and Line: 4.1–12.31, 200 lbs./day trip limit

(Table 1 continued – Summary of commercial regulations in 2022).

STATE	SIZE LIMITS (TL) and TRIP LIMITS	SEASONAL QUOTA	OPEN SEASON
MD	Chesapeake Bay and Rivers: 18–36” Common pool trip limits: Hook and Line - 250 lbs./license/week Gill Net - 300 lbs./license/week	1,445,394 lbs. (part of Bay-wide quota)	Bay Pound Net: 6.1-12.31 Bay Haul Seine: 1.1-2.28; 6.1-12.31 Bay Hook & Line: 6.1-12.31 Bay Drift Gill Net: 1.1-2.28, 12.1-12.31
	Ocean: 24” minimum	Ocean: 89,094 lbs.	1.1-5.31, 10.1-12.31
PRFC	18” min all year; 36” max 2.15–3.25	572,861 lbs. (split between gear types; part of Bay-wide quota)	Hook & Line: 1.1-3.25, 6.1-12.31 Pound Net & Other: 2.15-3.25, 6.1-12.15 Gill Net: 11.9.2021-3.25.2022 Misc. Gear: 2.15-3.25, 6.1-12.15
VA	Chesapeake Bay and Rivers: 18” min; 28” max size limit 3.15–6.15	983,393 lbs. (part of Bay-wide quota)	1.16-12.31
	Ocean: 28” min	125,034 lbs.	
NC	Ocean: 28” min	295,495 lbs. (split between gear types)	Seine fishery was not opened Gill net fishery was not opened Trawl fishery was not opened

Table 2. Summary of Atlantic striped bass recreational regulations in 2022. Source: 2023 State Compliance Reports. Minimum sizes and slot size limits are in total length (TL).

STATE	SIZE LIMITS (TL)/REGION	BAG LIMIT	GEAR/FISHING RESTRICTIONS	OPEN SEASON
ME	≥ 28” and <35"	1 fish/day	Hook and line only and no gaffing of striped bass. Regulations define bait as it pertains to the required use of circle hooks; immediate release w/o unnecessary injury if incidentally caught on unapproved hook type; maintains the circle hook exemption for rubber and latex tube rigs.	All year, except spawning areas are closed 12.1-4.30 and C&R only 5.1-6.30
NH	≥ 28” and <35"	1 fish/day	Gaffing and culling prohibited; Use of corrodible non-offset circle hooks required if angling with bait. If taken contrary to restrictions, return fish to water immediately w/o unnecessary injury.	All year
MA	≥ 28” and <35"	1 fish/day	Hook & line only; no high-grading; gaffs and other injurious removal devices prohibited. Inline circle hook requirement when fishing with bait, except with artificial lures; mandatory release of catch on any unapproved method of take. No filleting at-sea except aboard for-hire vessels provided skin remains and ratio of 2 filets/fish.	All year
RI	≥ 28” and <35"	1 fish/day	Circle required while fishing recreationally with bait for striped bass (except for artificial lures with bait attached); must release if caught on unapproved method of take	All year
CT	≥ 28” and <35"	1 fish/day	Inline circle hooks only when using whole, cut or live natural bait. Exemption of artificial lures/ release of incidental non-circle hook provision. Spearing and gaffing prohibited. If taken contrary to the provisions, shall, without avoidable injury, be returned immediately to the waters.	All year
NY	Ocean and DE River: 28 -35”	1 fish/day	Angling only. Spearing permitted in ocean waters. C&R only during closed season, except no targeting in Hudson River during closed season. Circle hook requirements. No gaffing. Mandatory release of catch on any unapproved method of take.	Ocean: 4.15-12.15 Delaware River: All year
	HR: 18 -28”	1 fish/day		Hudson River: 4.1-11.30

(Table 2 continued – Summary of recreational regulations in 2022).

STATE	SIZE LIMITS/REGION	BAG LIMIT	GEAR/FISHING RESTRICTIONS	OPEN SEASON
NJ	≥ 28 to < 38”	1 fish/day	Circle hooks required when fishing with bait; must release if caught on unapproved method of take	Closed 1.1 – Feb 28 in all waters except in the Atlantic Ocean, and closed 4.1-5.31 in the lower DE River and tribs
PA	Upstream from Calhoun St Bridge: 1 fish/day at ≥ 28” to <35"		Unlawful to take or attempt to take fish unless the method is specifically authorized. Circle hooks required when fishing with bait downstream from Calhoun St. Bridge.	All year
	Downstream from Calhoun St Bridge: 1 fish/day at ≥ 28” to <35 (except 4.1-5.31)			All year. 2 fish/day at 21”-<24”slot from 4.1 – 5.31
DE	≥ 28" and <35"	1 fish/day	Hook & line, spear (for divers) only. Inline circle hooks required when fishing for striped bass using cut or whole natural baits	All year. C&R only 4.1-5.31 in spawning grounds. 20”-25”slot from 7.1-8.31 in DE River, Bay & tributaries
MD	Ocean: ≥ 28" and <35"	1 fish/day	Circle hooks if chumming, live-lining, or bait fishing and targeting striped bass; no gaffing	All year
	Chesapeake Bay and tribs^	C&R only	Circle hook requirement with bait; no eels; no stinger hooks; barbless hooks when trolling; max 6 lines when trolling; no gaffing	1.1-2.28, 3.1-3.31, 12.11-12.31
	Chesapeake Bay: 35" min	1 fish/day	Geographic restrictions apply; Circle hook requirement with bait; no eels bait; no gaffs	5.1-5.15
	Chesapeake Bay: 1 fish/day, 19" minimum size; 2/fish/day for charter with only 1 fish >28"		Geographic restrictions apply; circle hooks if chumming, livelining, or bait fishing and targeting striped bass; no gaffing	5.16-5.31
	Chesapeake Bay and tribs: 1 fish/day, 19" minimum size; 2/fish/day for charter with only 1 fish >28"		All Bay and tribs open; circle hooks if chumming, livelining, or bait fishing and targeting striped bass; no gaffing	6.1-7.15, 8.1-12.10

^ Susquehanna Flats: C&R only Jan 1 – March 31 (circle hooks when bait fishing); 1 fish at 19”-26” slot May 16 – May 31 (circle hooks if chumming, livelining, or bait fishing and targeting striped bass).

(Table 2 continued – Summary of recreational regulations in 2022).

STATE	SIZE LIMITS/REGION	BAG LIMIT	GEAR/FISHING RESTRICTIONS	OPEN SEASON
PRFC	Spring Trophy: 35” minimum size	1 fish/day	No more than two hooks or sets of hooks for each rod or line; no live eel; no high-grading; non-offset Circle Hooks are required when fishing for striped bass using cut or whole natural bait; no spearing or gaffing	5.1-5.15
	Summer and Fall: 20” min	2 fish/day	No more than two hooks or sets of hooks for each rod or line; non-offset Circle Hooks are required when fishing for striped bass using cut or whole natural bait; no spearing or gaffing; any fish caught other than lawful fishing activities immediately released	5.16-7.6 and 8.21-12.31; closed 7.7-8.20 (No Direct Targeting)
DC	18” minimum size	1 fish/day	Hook and line only; unlawful to take fish except as specified	5.16-12.31
VA	Ocean: 28”-36” slot limit	1 fish/day	Hook & line, rod & reel, hand line, spearing only. No gaffing. Circle hooks required if/when using live bait. Unlawful to take/attempt take by any other gear/method	1.1-3.31, 5.16-12.31
	Ocean Spring Trophy: NO SPRING TROPHY SEASON			
	Chesapeake Bay Spring Trophy: NO SPRING TROPHY SEASON			
	Bay Spring/Summer: 20”-28” slot limit	1 fish/day	Hook & line, rod & reel, hand line, spearing only. No gaffing. Circle hooks required if/when using live bait. Unlawful to take/attempt take by any other gear/method	5.16-6.15
	Bay Fall: 20 - 36” slot limit	1 fish/day		10.4-12.31
NC	≥ 28" and <35"	1 fish/day	No gaffing allowed. Circle hooks required when fishing with natural bait	All year

Table 3. CE programs implemented for Addendum VI

State	Recreational Fisheries	Commercial Fisheries
MA	N/A	Changed size limit (35” minimum) with equivalent quota change
NY	Hudson River: Alternative size limit (18” to 28”) to achieve 18% removals reduction in combination with standard ocean slot	Changed size limit (26” to 38”) with equivalent quota reduction
NJ	Alternative size limit (28 to < 38”) to achieve 25% removals reduction	Decreased commercial quota reduction (to 0%) with surplus recreational fishery reduction and transferred commercial quota to recreational bonus program fishery (24 to < 28”, 1 fish/day)
PA	DE River and Estuary downstream Calhoun St Bridge: Alternative size and bag limit on limited seasonal basis (2 fish/day at 21 to <24” during 4.1–5.31) to achieve 18% removals reduction	N/A
DE	DE River/Bay/tributaries: Alternative slot on limited seasonal basis (20" to <25" during 7.1–8.31) to achieve 20.4% removals reduction in combination with standard ocean slot	Decreased commercial quota reduction (to -1.8%) with surplus recreational fishery reduction
MD	Chesapeake Bay: Alternative Summer/Fall for-hire bag limit with restrictions (2 fish, only 1 >28”, no captain retention) through increased minimum size (19”), April and two-week Wave 4 targeting closures, and shorter spring trophy season (May 1–15) to achieve 20.6% removals reduction; ocean: FMP standard slot	Decreased ocean and Chesapeake Bay commercial quota reduction (to -1.8%) with surplus Chesapeake Bay recreational fishery reduction
PRFC	Alternative Summer/Fall minimum size and bag limit (20” min, 2 fish/day) with a no targeting closure (7.7–8.20) and shorter spring trophy season (May 1–15) to achieve a 20.5% removals reduction	Decreased Chesapeake Bay commercial quota (to -1.8%) with surplus recreational fishery reduction
VA	Chesapeake Bay: Alternative slot limits during 5.16–6.15 (20” to 28”) and 10.4–12.31 (20” to 36”) and no spring trophy season to achieve a 23.4% removals reduction (reduction was the result of lowering prior bag limit from 2 to 1-fish per angler); ocean: Alternative slot limit (28” to 36”)	Decreased ocean commercial quota (to -7.7%) and Chesapeake Bay commercial quota (to -9.8%) with surplus recreational fishery reduction

Table 4. Estimated mean striped bass size-at-age based on the 2012-2016 state age data (weighted by state recreational catch) compiled for the 2018 benchmark stock assessment. Note: Size-at-age is highly variable along the coast and there is overlap among age classes.

Age	Estimated Mean Total Length (in)	
0	3.8	
1	6.4	
2	12.7	
3	17.0	
4	20.9	
5	**24.1**	**2018 year class in 2023**
6	**26.4**	**2017 year class in 2023**
7	28.7	
8	**31.6**	**2015 year class in 2023**
9	33.8	
10	35.5	
11	37.2	
12	39.1	
13	41.0	
14	42.2	
15+	44.0	

Table 5. Implementation of 2023 Emergency Action for striped bass (31.0" maximum size limit).

State	Effective Date	Maximum Size Limit
ME	May 18	31.0" max size limit
NH	May 26	<31.0" max size limit
MA	May 26	<31.0" max size limit
RI	May 27	<31.0" max size limit
CT	May 26	<31.0" max size limit
NY	June 20	31.0" max size limit
NJ	July 2	31.0" max size limit
PA	June 3	<31.0" max size limit
DE	May 21	31.0" max size limit
MD	May 16	31.0" max size limit
PRFC	May 16	31.0" max size limit
DC	May 16	31.0" max size limit
VA	July 1	31.0" max size limit
NC	June 1	31.0" max size limit

Table 6. Total removals (harvest plus discards/release mortality) of Atlantic striped bass by sector in numbers of fish, 1993-2022 calendar years. Note: Harvest is from state compliance reports/MRIP (June 2023), discards/release mortality is from ASMFC. Estimates exclude inshore harvest from NC.

Year	Commercial		Recreational		Total Removals
	Harvest	Dead Discards*	Harvest	Release Mortality	
1993	314,526	114,317	789,037	812,404	2,030,284
1994	325,401	165,700	1,055,523	1,360,872	2,907,496
1995	537,412	192,368	2,287,578	2,010,689	5,028,047
1996	854,102	257,506	2,487,422	2,600,526	6,199,556
1997	1,076,561	324,445	2,774,981	2,969,781	7,145,769
1998	1,215,219	346,537	2,915,390	3,259,133	7,736,278
1999	1,223,572	347,186	3,123,496	3,140,905	7,835,158
2000	1,216,812	213,863	3,802,477	3,044,203	8,277,354
2001	931,412	175,815	4,052,474	2,449,599	7,609,300
2002	928,085	187,084	4,005,084	2,792,200	7,912,453
2003	854,326	126,274	4,781,402	2,848,445	8,610,447
2004	879,768	156,026	4,553,027	3,665,234	9,254,055
2005	970,403	142,385	4,480,802	3,441,928	9,035,518
2006	1,047,648	152,308	4,883,961	4,812,332	10,896,250
2007	1,015,114	158,078	3,944,679	2,944,253	8,062,124
2008	1,027,824	108,830	4,381,186	2,391,200	7,909,039
2009	1,050,055	133,317	4,700,222	1,942,061	7,825,654
2010	1,031,448	132,373	5,388,440	1,760,759	8,313,020
2011	944,777	82,015	5,006,358	1,482,029	7,515,180
2012	870,684	192,190	4,046,299	1,847,880	6,957,053
2013	784,379	112,620	5,157,760	2,393,425	8,448,184
2014	750,263	114,065	4,033,746	2,172,342	7,070,415
2015	621,952	88,614	3,085,725	2,307,133	6,103,425
2016	609,028	91,186	3,500,434	2,981,430	7,182,077
2017	592,670	98,801	2,937,911	3,421,110	7,050,492
2018	621,123	101,264	2,244,765	2,826,667	5,793,819
2019	653,807	85,262	2,150,936	2,589,045	5,479,050
2020	583,070	58,641	1,709,973	2,760,231	5,111,915
2021	644,207	85,676	1,841,902	2,583,788	5,155,573
2022	599,615	81,200	3,454,021	2,667,846	6,802,681

* Commercial dead discard estimate for 2022 was estimated using the harvest-to-discard ratio from 2021. The entire time series for commercial dead discards will be re-estimated during the 2024 stock assessment using a generalized additive model (GAM).

Table 7. 2022 Commercial Fishery Size Limits, Gear Types, and Commercial Sampling Results (Source: 2023 Compliance Reports). Note: Sub-sampling of commercial striped bass harvest occurs for about 1-5% of all commercially harvested fish in each state, and these values are assumed to be representative of each state's landings.

State	Size Limits	2022 Percent Landings by Gear Type	Mean Length and Range of Length Samples (TL in)	Mean Weight (lbs)	Mean Scale Age (years)
MA	35" min	100% hook & line	39.9 *Range: 35 - 48*	24.1	10
RI	General: 34" min FFT: 26" min	Conf % hook & line Conf % floating fish trap	34.8 *H&L Range 34 – 52* *FFT Range: 26 - 52*	18.2	8
NY	26-38" slot	62.2% gill nets (mostly sink) 18.3% hook & line 6.7% fixed gear 4.4% trawls	30.2 *Range: 24.1 – 38.7*	9.9	6.6
DE	GN: 28" min, 20" min DE Bay/River 2.15-5.31 H&L: 28" min	88.4% anchored gill net 11.6% drift gill net 0% hook & line	35.0 *Range: 20 - 45*	17.0	10
MD ocean	24" min	100% drift gill net	41.1 *Range: 32.6 – 47.6*	25.9	12
VA ocean	28" min	100% drift/anchored gill net	40.0 *Range 29 – 51*	24.8	14
NC	28" min	Beach seine, gill net, trawl	NA	NA	NA
MD Ches Bay	18-36" slot	53% pound net 42% drift gill net 5% hook & line	22.2 *GN Range: 17.7 - 35* *PN/H&L Range: 17.7 – 33.5*	4.6	5
PRFC	18" min; 36" max 2.15-3.25	67% anchored gill net 23% pound net 9% hook & line	23.8 *Range: 18.3 – 48.0*	6.3	5.7
VA Ches Bay	18" min; 28" max 3.15-6.15	84% drift/anchor gill net 12% pound net 4% hook & line	24.9 GN *GN Range: 18-49* 23.3 PN *PN Range: 17-36* 36.2 H&L *H&L Range: 18-28 and 41-49*	7.5 GN 5.6 PN 26.6 H&L	7.7 GN 5 PN 17 H&L

H&L=hook & line; GN=gill nets, FFT=floating fish traps; PN=pound net

Appendix 1
State regulatory language pertaining to striped bass filleting at sea and/or shore-side

Maine: "It is unlawful to possess striped bass unless the fish are whole with head on, and are between 28 inches and 31 inches, inclusive."
New Hampshire: "Striped bass shall have head and tail intact while on or leaving the waters or shores of the state except as follows: (1) A person may possess up to 2 striped bass fillets so long as they also possess the fish rack that the fillets came from with the head and tail intact and the rack measures at least 28 inches in total length; (2) Any striped bass fillet shall have the skin still attached for the purpose of identification of the fillet as striped bass."
Massachusetts: "Recreational fishermen shall not mutilate any striped bass in a manner that prevents the accurate measurement of the fish...Operators and crew onboard for-hire vessels permitted under the authority of 322 CMR 7.10(5): Permit Requirements Applicable to For-hire Vessels may fillet or process legal sized striped bass for their recreational customers at sea provided that: 1. The skin is left on the fillet; and 2. Not more than two fillets taken from legal striped bass are in the possession of each customer of that trip, representing the equivalent of one fish per angler."
Rhode Island: "There shall be no disposal of fish and fish parts on the bulkhead or in the waters of the State." "It shall be unlawful for any person to place any pollutant in a location where it is likely to enter the waters or to place or cause to be placed any solid waste materials, junk, or debris of any kind whatsoever, organic or non organic, in any waters."
Connecticut: "No person shall land or possess on the waters of this state or on any parcel of land, structure, or portion of a roadway abutting tidal waters of this state any striped bass from which the head or tail has been removed or which has otherwise been rendered unidentifiable as a striped bass or unable to be measured." *Enforced as filleting allowed with rack retained (pers.com. CT DEEP).*
New York: "Except as provided in paragraphs (4) of this subdivision, it is unlawful for any person to possess striped bass from which the head or tail has been removed or that have been otherwise cleaned, cut, filleted or skinned so that the total length or identity cannot be determined; except that it is not unlawful if such fish is being prepared for immediate consumption or storage at a domicile or place of residence.
(4) Any person who holds a valid Marine and Coastal District Party and Charter Boat License issued pursuant to Environmental Conservation Law section 13-0336 may fillet striped bass taken on the permitted party or charter vessel identified on his or her license under the following conditions:
(i) fish may be filleted for customers only; (ii) only fish which are legally possessed may be filleted;
(iii) striped bass may only be filleted prior to customers leaving the vessel or the dock area prior to customers departing the area; (iv) it is unlawful to mutilate any striped bass carcass to the extent that the total length or species of fish cannot be determined; (v) all striped bass carcasses must be retained (unmixed with any other material) in a separate container readily available for inspection until such time as the vessel has docked and all passengers from that trip have left the vessel and the dock area. Any such carcasses are included in the possession limit; (vi) all striped bass carcasses from any previous trip must be disposed of prior to any

person beginning to fish on a subsequent trip; and (vii) all Marine and Coastal District Party and Charter Boat License holders must provide each customer who possesses striped bass fillets with a commercially printed, dated original fare receipt, bearing the boat's name and the owner or operator's Party and Charter Boat License number. Any customer of a party or charter boat operated by a Marine and Coastal District Party and Charter Boat License holder who is in possession of striped bass fillets must possess an original dated receipt from that party or charter vessel.

New Jersey: "Except as provided in (e)2 and (f) below, a person shall not remove the head, tail or skin, or otherwise mutilate to the extent that its length or species cannot be determined, any species with a minimum size limit specified at (b) or (c) above or any other species of flatfish, or possess such mutilated fish, except after fishing has ceased and such species have been landed to any ramp, pier, wharf or dock or other shore feature where it may be inspected for compliance with the appropriate size limit.

(f) Special provisions applicable to a Special Fillet Permit are as follows: 1. A party boat owner may apply to the Commissioner for a permit for a specific vessel, known as a Special Fillet Permit to fillet species specified at (c) above at sea; 2. For purposes of this section, party boats are defined as vessels that can accommodate 15 or more passengers as indicated on the Certificate of Inspection issued by the United States Coast Guard for daily hire for the purpose of recreational fishing; 3. The Special Fillet Permit shall be subject to the following conditions: i. Once fishing commences, no parts or carcasses of any species specified in (c) above and no flatfish parts or carcasses shall be discarded overboard; of the species specified at (c) above, only whole live fish may be returned to the water; ii. No carcasses of any flatfish or species listed at (c) above shall be mutilated to the extent that its length or species cannot be determined; iii. All fish carcasses of species specified at (c) above shall be retained until such time as the vessel has docked and been secured at the end of the fishing trip adequate to provide a law enforcement officer access to inspect the vessel and catch; iv. No fillet of any flounder or other flatfish shall be less than eight inches in length during the period of May 1 through October 31 or less than five inches in length during the period of November 1 through April 30; v. No fish of any species less than the minimum size limit specified in (c) above shall be filleted and no fillet of any species listed below shall have the skin removed and no fillet shall be less than the minimum length in inches specified below.

Species		Minimum Fillet or Part Length
Striped bass	(24 to less than 28 inches)	11 to 20 inches
	(28 to 31 inches)	15 to 22 inches

vi. Spanish mackerel shall be landed with head, tail and fins attached. vii. Fish carcasses from the previous trip shall be disposed of prior to commencing fishing on a subsequent trip; viii. Violation of any of the provisions of the Special Fillet Permit shall subject the captain and permit holder to the penalties established pursuant to N.J.S.A. 23:2B-14 and shall result in a suspension or revocation, applicable to both the vessel and the owner of the Special Fillet Permit according to the following schedule: (1) First offense: 60 days suspension; (2) Second offense: 120 days suspension; and (3) Third offense: Revocation of permit, rendering the vessel and the owner not eligible for permit renewal regardless of vessel ownership.

ix. In calculating the period of suspension or revocation applicable under (f)3viii above, the number of previous suspensions shall be reduced by one for each three-year period in which

the permit holder does not commit any other violation subject to this subsection, provided, however, that if more than one suspension is imposed within a three-year period, only one of those suspensions may be forgiven under this subparagraph; therefore, a permit holder who incurs more than one suspension in a three-year period shall not be considered a first offender under this subsection regardless of the length of any subsequent period without violation. The reduction in suspensions provided in this subparagraph applies only to determination of suspension periods; all prior suspensions shall be taken into account in calculating monetary penalties in accordance with N.J.S.A. 23:2B-14. x. Upon receipt of the notice of suspension but prior to the suspension or revocation of the Special Fillet Permit, the permittee has 20 days to request a hearing from the Department. The hearing shall be conducted pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. and 52:14F-1 et seq., and the Uniform Administrative Procedure Rules, N.J.A.C. 1.1. If a request for a hearing is not received by the Department within 20 days of the permittee's receipt of the notice of suspension, the permit suspension or revocation will be effective on the date indicated in such notice.

Pennsylvania: "(a) Except as otherwise provided in this section, it is unlawful to possess a fish in any form or condition other than in the whole or having the entrails removed while on shore, along the waters of this Commonwealth, onboard a boat or on a dock, pier, launch area or a parking lot adjacent thereto. (b) Fish may be processed fully if they are being prepared for immediate consumption. (d) Provided that the requirements of this subsection are met, this section does not apply to fish processed by a permitted charter boat/fishing guide operation. The charter boat operator or fishing guide may fully process the fish at any time provided the charter boat operator or fishing guide retains the carcass until possession of the fish is transferred to the customer on shore. The charter boat operator or fishing guide shall give the customer who receives the processed fish a signed, dated receipt on the form prescribed by the Commission."

Delaware: "Unless otherwise authorized, it is unlawful to possess any striped bass for which the total length has been altered in any way for the purpose of retaining said striped bass in accordance with §3504."

Maryland: "Filleting Striped Bass. (1) Except as provided in §C(2) of this regulation, a person may only land striped bass dockside as a whole fish. (2) A licensed charter boat captain or mate may fillet striped bass taken on a vessel displaying a current commercial charter boat decal under the following conditions: (a) A striped bass carcass may not be mutilated to the extent that the total length or species of fish cannot be determined; (b) All striped bass carcasses: (i) Shall be retained, unmixed with any other material, in a separate container readily available for inspection until the vessel has docked and all passengers from that trip have left the vessel and the dock area; and (ii) Are included in the possession limit; and (c) All striped bass carcasses from any previous trip shall be disposed of before any person begins to fish on a subsequent trip."

PRFC: "Measurement shall be the greatest distance in a straight line from the tip of the snout to the end of the caudal fin or tail in a natural state, excluding the tail filament of a black sea bass. No person shall alter the natural state of any species of fish listed in (a) above such that its length cannot be measured." *Unclear as to enforcement of filleting at-sea/shore (pers.com. PRFC).*

DC: “It shall be unlawful to… possess aboard any boat, while fishing or while in possession of fishing equipment, any fish for which a size or weight limit is prescribed in § 1504 from which the head or tail has been removed.”

Virginia: “Alteration of finfish to obscure species identification or size prohibited. A. It shall be unlawful for any person to alter any finfish, or to possess altered finfish, aboard any boat or vessel, or on a public fishing pier (except at the fish cleaning station of the pier), such that the species of the fish cannot be determined. B. It shall be unlawful for any person to alter any finfish regulated by a minimum or maximum size limit, or to possess such altered finfish, aboard any boat or vessel, or on a public fishing pier (except at the fish cleaning station of the pier), such that its total length cannot be measured.

Allowances for filleting or cleaning. A. For finfish regulated by a minimum or maximum size limit, filleting at sea will be allowed if the carcass is retained to ensure proper species identification and compliance with size limitations. B. For finfish regulated by a minimum size, cleaning and/or filleting at sea will be allowed if the fillet or cleaned fish exceeds the minimum length for the species and at least one square inch of skin is left intact to assist in identification of the species. C. For finfish not regulated by a size limit, filleting at sea will be allowed if a minimum of one square inch of skin is left on the fillet to assist in identification of the species.”
North Carolina: “It shall be unlawful to possess aboard a vessel or while engaged in fishing any species of finfish that is subject to a size or harvest restriction without having head and tail attached.” *Enforced as filleting allowed with rack retained (pers.com. NC DMF).*

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

KATHY B. RAWLS
Director

MEMORANDUM

TO: ASMFC Striped Bass Management Board
FROM: Chris Batsavage, NC Administrative Proxy
DATE: September 27, 2023
SUBJECT: Albemarle-Roanoke Striped Bass Stock Status and Management Update

The Albemarle Sound-Roanoke River (Albemarle-Roanoke) stock is assessed and managed by the State of North Carolina under the auspices of the Atlantic States Marine Fisheries Commission (ASMFC). This stock is currently managed under Amendment 2 to the North Carolina Estuarine Striped Bass Fishery Management Plan (FMP), which is a joint plan between the North Carolina Marine Fisheries Commission (NCMFC) and the North Carolina Wildlife Resources Commission (NCWRC). The NCMFC is responsible for striped bass management in Albemarle, Croatan, and Roanoke sounds and its tributaries, and the NCWRC is responsible for striped bass management in the Roanoke River and its tributaries.

The 2020 benchmark striped bass stock assessment determined that the stock was overfished and overfishing was occurring in the terminal year of the assessment (2017). Results from the stock assessment update in 2022 (terminal year 2021) indicate the striped bass stock is still undergoing overfishing and the stock is still overfished. The estimate of fishing mortality (F) in 2021 was 0.77, greater than the $F_{Threshold}$ of 0.20, indicating overfishing (Figure 1). The spawning stock biomass (SSB) was 35,566 pounds, less than the $SSB_{Threshold}$ of 275,286 pounds, indicating the overfished status (Figure 2). Evaluation of trends in the survey indices of abundance indicate further concern for the stock. Both observed and predicted recruitment of age-0 fish have been declining and are extremely low in recent years (Figure 3). Female SSB has been declining since 2004. Fishery-independent adult striped bass surveys also support the declining trend in overall population abundance observed since the mid-2000s (Figures 4 and 5).

The total allowable landings (TAL) for the Albemarle-Roanoke striped bass stock was 51,216 pounds from 2021 to 2023 as a result of the 2020 benchmark stock assessment. The commercial and recreational fisheries are each allocated 50% of the TAL with the recreational allocation evenly split between the Albemarle Sound and the Roanoke River management areas. Based on the 2022 stock assessment update, a TAL of 8,349 pounds is necessary to reduce F to the F_{Target}.

The NC Division of Marine Fisheries (NCDMF) and the NCMFC are concerned about the six years of poor juvenile recruitment (2017-2022), and sampling indicates that 2023 will also be a very poor year for juvenile recruitment. Approximately 500,000 juvenile Phase-I (about 2 inches long) striped bass were stocked in the western Albemarle Sound in 2023 in response to the poor recruitment years and stocking will continue for at least the next three years. Future monitoring of the contribution of hatchery-reared fish to the adult population will be evaluated using parental based tagging techniques to evaluate the efficacy of the supplemental stocking. In addition, an 8,349-pound TAL under the allocations in the North Carolina Estuarine Striped Bass FMP is effectively too low to manage. Therefore, the NCDMF will implement a harvest moratorium in the Albemarle Sound Management Area starting in 2024 under the adaptive

management framework in the North Carolina Estuarine Striped Bass FMP. In addition, the 2023 fall recreational and commercial seasons in the Albemarle Sound Management Area will not open because there is little quota remaining and because of stock status concerns. It is currently unknown if the NCWRC will implement a harvest moratorium in the Roanoke River Management Area although the NCWRC is required to implement the moratorium under the NC Estuarine Striped Bass FMP.

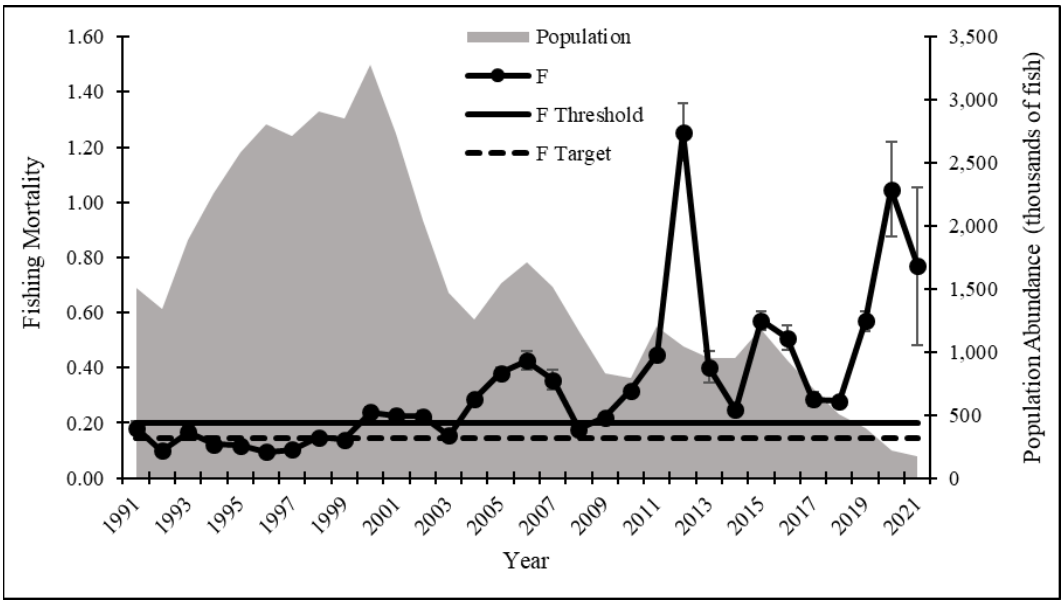


Figure 1. Estimates of fishing mortality (*F*) and population abundance for the Albemarle-Roanoke striped bass stock. Source: Update of the A-R Striped Bass Stock Assessment 2022.

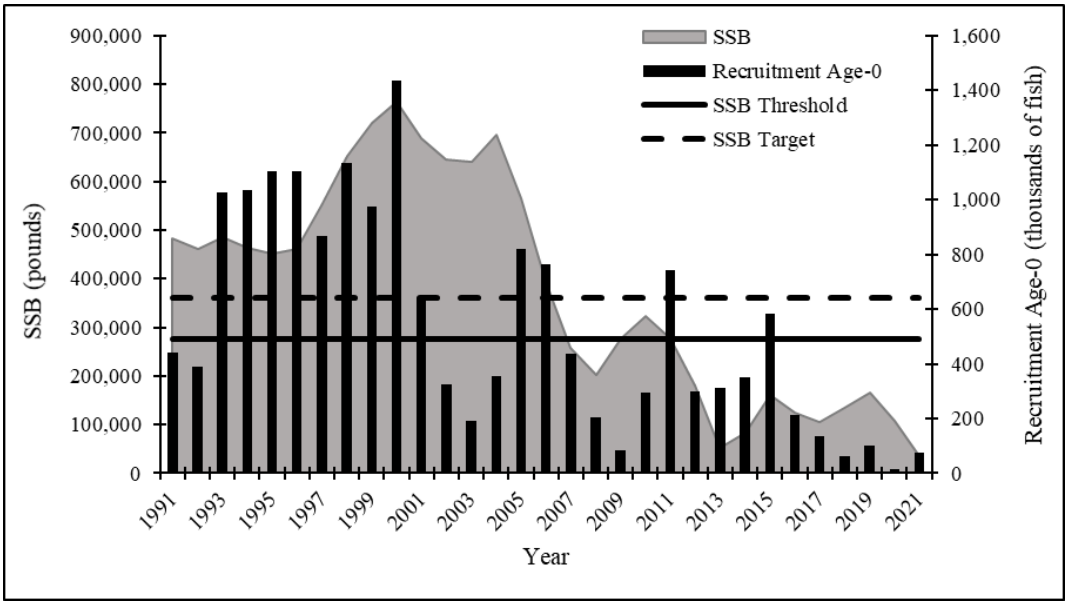


Figure 2. Estimates of spawning stock biomass (SSB) and recruitment of age-0 fish coming into the population each year for the Albemarle-Roanoke striped bass stock. Source: Update of the A-R Striped Bass Stock Assessment 2022.

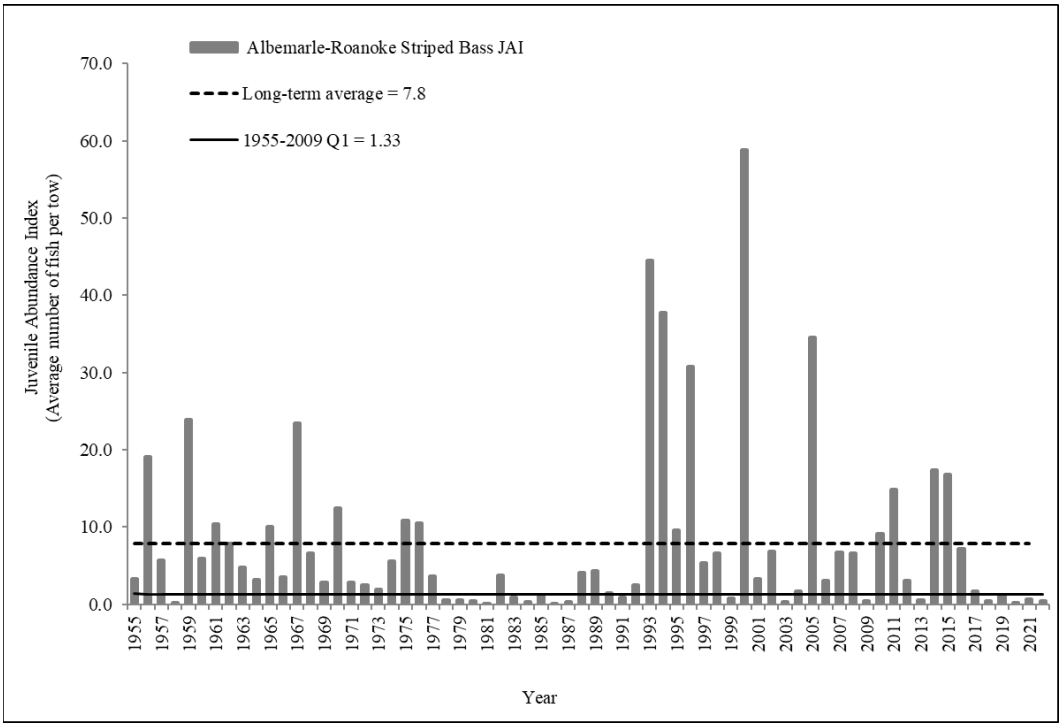


Figure 3. Annual index of relative abundance for young-of-year juvenile striped bass derived from the NCDMF Striped Bass Juvenile Survey, Western Albemarle Sound, 1955–2022. The dashed line is the long term average relative abundance, and the solid line is the first quartile threshold for recruitment failure from Amendment 6 to the ASMFC Striped Bass FMP.

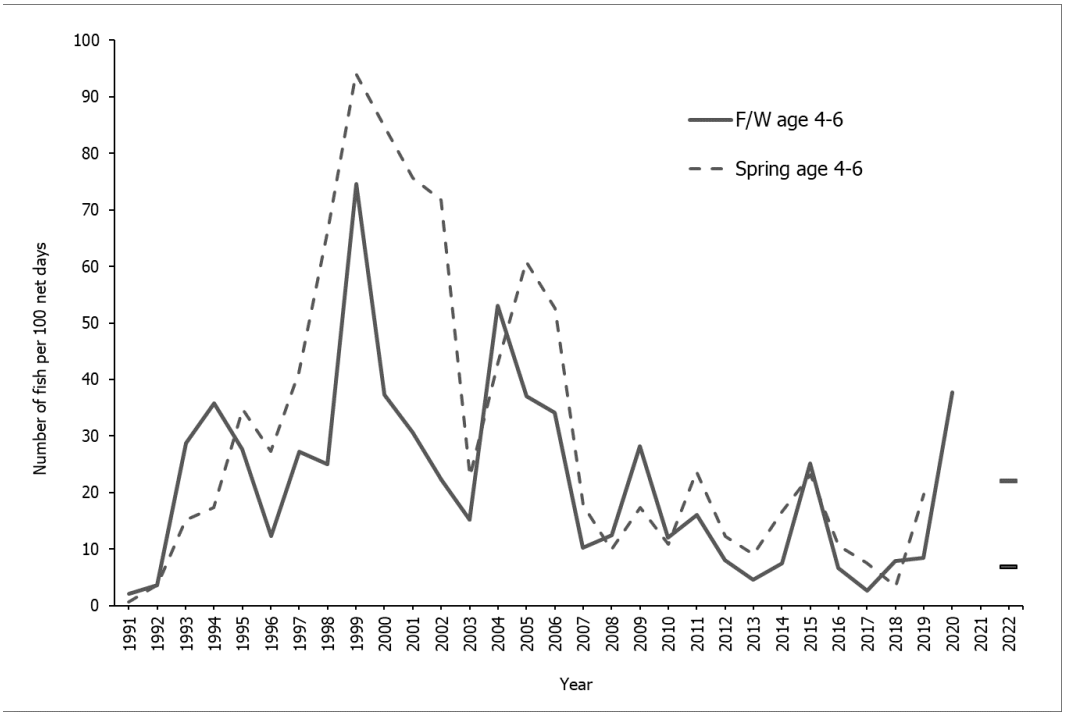


Figure 4. Annual index of relative abundance for ages 4–6 striped bass derived from the NCDMF Fall/Winter (F/W) and Spring Independent Gill Net Abundance Surveys, 1991–2022.

Figure 5. Annual index of relative abundance for ages 9+ striped bass derived from the NCWRC Electrofishing Spawning Stock Abundance Survey, 1991–2022.

From: David Licks
To: Comments
Subject: [External] Chesapeake Striped Bass reproduction rates
Date: Monday, August 14, 2023 8:29:18 AM

If Chesapeake Striped Bass reproduction rates are so unpredictable and often low, why don't we have a hatchery in Virginia?

New Jersey can manufacture 650,000 11" trout on a shoestring budget. What's stopping us from doing the same thing with Striped Bass in the Chesapeake?

Maybe my thinking is oversimplified, but why?

Sent from my iPhone

From: Kerry Boggs
To: Comments
Subject: [External] Rockfish catch restrictions
Date: Wednesday, August 16, 2023 12:44:14 PM

To Whom It May Concern,
I would like to make a quick comment on catch limits for rockfish in the Chesapeake Bay. First, let me say that I am not a fisherman. However I am concerned about commercial and recreational rockfish catch limits. I stopped buying my saltwater license a number of years ago becasue of catch restrictions on striped bass.
The charter captains and recreational fishermen are being hurt because of catch limits while at the same time Omega Protein boats are stripping the Bay clean of menhaden, a primary food source for predatory fish like the striped bass.
I'm a sailor and on a recent trip down the Bay I encountered 6-8 Omega boats fishing on the Bay. This is a common occurrence for us while sailing the Bay.
Wouldn't it make sense to limit menhaden fishing on an industrial scale and leave more of the food source for the striped bass and other predatory fish? If we're concerned about striped bass populations and breeding stock wouldn't it be important, in additon to protecting the striped bass, to also protect their primary food source? Catch limits may preserve some striped bass (over 31" for example) but limiting Omega menhaden fishing would save literally tons of an invaluable food source!!
More food…more fish! We're not over-fishing striped bass…we're over-fishing their food source!
Please, please limit industrial fishing on the Bay and on the near coast of the Delmarva before its too late and the fisheries of the Bay completely collapse!!
Thank you for taking the time to read my comments and for your consideration of my concerns!
Kerry D. Boggs
o2besailing@gmail.com
Bay sailor for over 30 years
Former striped bass fisherman
Concerned citizen

From: Robert Beal
To: Comments
Subject: FW: [External] Action Needed
Date: Thursday, August 24, 2023 10:15:12 AM

From: Jay Ponte <jayponte650@gmail.com>
Sent: Friday, August 11, 2023 10:09 AM
To: Dan Mckiernan <dan.mckiernan@state.ma.us>; Robert Beal <Rbeal@asmfc.org>; Michael Pentony <michael.pentony@noaa.gov>; RUSS DUNN <russell.dunn@noaa.gov>; cokeefe@nefmc.org; Eric Reid <Ericreidri@gmail.com>; Michael J Pierdinock <cpfcharters@yahoo.com>; Rick Bellavance Jr <rickbellavance@gmail.com>
Subject: [External] Action Needed

Dear Director McKiernan:

NOAAs recent findings concerning recreational MRIP data confirmed that annual recreational catch is 30 to 40 percent too high. We have for many years now noted the inconsistency with annual recreational catch for different recreational user types resulting in ongoing cuts to seasons and bag limits to the detriment of the recreational community and for hire fleet that are trying to run a financially viable business. The continued inconsistency with the status of fishery stocks and observations on the water results in lack of confidence in the fishery management process. Annual and ongoing cuts to seasons, sizes and bag limits to black sea bass, summer flounder, scup, cod, haddock and recent striped bass emergency action have significantly impacted bookings especially for those that rely on catching a fish to place food on the table. As a result we request prompt action to address overestimation of the catch and negative impact on the stock status for striped bass and the other species noted above. The timing of such works well to implement separate bag limits for the for hire fleet for the few financially viable operations that remain as result of the ongoing cuts to such the past 10 to 20 years.

Thanks,
Capt Jay Ponte
Sweet & Salty Fishing Charters
Fishing Boston Harbor
Boston, MA

From: Robert Beal
To: Comments
Subject: FW: [External] Emergency action 2024 and Massachusetts commercial fishing.
Date: Thursday, August 24, 2023 10:13:55 AM

-----Original Message-----
From: Rob Savino <robsavino@mac.com>
Sent: Thursday, August 10, 2023 10:08 AM
To: Robert Beal <Rbeal@asmfc.org>; dan.mckiernan@mass.gov; Michael Pentony <michael.pentony@noaa.gov>
Subject: [External] Emergency action 2024 and Massachusetts commercial fishing.

I am writing to demand the 2024 continuation of ASMFC's "emergency" striped bass action be immediately rescinded in light of the just announced data from NOAA fisheries and the Mid Atlantic Fishery Management Council that proves MRIP data is extremely flawed and 30%-40% above previously reported.

This MRIP data was the primary reason for the ASMFC's "emergency" action to reduce the slot limit on striped bass.
The recent report by NOAA only proves what we as fisherman have been claiming all along, that our observations on the water are inconsistent with ASMFC's claims and the newly released proof from NOAA itself of MRIP's flawed data validates such.

You make decisions based on the best available science. However, this emergency action did not take into consideration any science at all. The MRIP data does not support your emergency action.
Observations on the water are not showing any of the depletion of stocks that you are proposing is happening.
But you don't consider observations and fisheries management.

As a charter boat operator, I have noticed a serious drop in bookings this year because of the emergency action.

This "emergency" action was nothing more than fishery management overreach, and an extension of such emergency action is nothing more than just that again, and would only serve to enhance to public's distrust for fishery management even more. Is this a Michael Armstrong's swan song?

The extension of this "Emergency action" should be immediately rescinded based on NOAA's own findings!
I also find it perplexing that Massachusetts harvests 700,000 pounds of striped bass that are 35 inches and over. This goes completely against any striped conservation efforts.
Massachusetts would be better served harvesting 700,000 pounds of smaller fish.
With larger populations of fish between 26 and 28 inches you could easily harvest 700,000 pounds without hurting the year class. I discussed this with Mike Armstrong, and his reply to me was "this is how we've always done it"
Well, maybe harvesting fish 35 inches and over for a commercial fishery is wrong.
I would expect Dan McKiernan to support all Massachusetts fishermen, including charter fisherman. This emergency action has made it difficult for customers to take home a Fish.
This emergency action has also increased my catch and release ratio trying to get fish in the narrow slot, which goes against any thing you are trying to achieve.

I have been involved in fisheries management a long time I've seen managers come and go. It is just recently that I have lost faith in fisheries managers.

Rob Savino (617) 283-5801

From: Robert Beal
To: Comments
Subject: FW: [External] Flawed Data
Date: Thursday, August 24, 2023 10:19:31 AM

From: Matt Fontaine <mattfishsmell@gmail.com>
Sent: Monday, August 21, 2023 3:15 PM
To: Robert Beal <Rbeal@asmfc.org>
Subject: [External] Flawed Data

Dear Bob Beal

NOAAs recent findings concerning recreational MRIP data confirmed that annual recreational catch is 30 to 40 percent too high. We have for many years now noted the inconsistency with annual recreational catch for different recreational user types resulting in ongoing cuts to seasons and bag limits to the detriment of the recreational community and for hire fleet that are trying to run a financially viable business. The continued inconsistency with the status of fishery stocks and observations on the water results in lack of confidence in the fishery management process. Annual and ongoing cuts to seasons, sizes and bag limits to black sea bass, summer flounder, scup, cod, haddock and recent striped bass emergency action have significantly impacted bookings especially for those that rely on catching a fish to place food on the table. As a result we request prompt action to address overestimation of the catch and negative impact on the stock status for striped bass and the other species noted above. The timing of such works well to implement separate bag limits for the for hire fleet for the few financially viable operations that remain as result of the ongoing cuts to such the past 10 to 20 years.
Thank You
Matt Fontaine

From:	Robert Beal
To:	Comments
Subject:	FW: [External] Restrictions
Date:	Thursday, August 24, 2023 10:14:29 AM

From: Rob Moss <lightningboltrockers@yahoo.com>
Sent: Thursday, August 10, 2023 7:34 PM
To: Robert Beal <Rbeal@asmfc.org>
Subject: [External] Restrictions

Sent from my iPhone Letters needed*

email to:
rbeal@asmfc.org
dan.mckiernan@mass.gov
michael.pentony@noaa.gov

Subject:
Unnecessary extension of striped bass emergency action

My letter below, Copy & paste as you wish.
****

I am writing to demand the 2024 continuation of ASMFC's "emergency" striped bass action be immediately rescinded in light of the just announced data from NOAA fisheries and the Mid Atlantic Fishery Management Council that proves MRIP data is extremely flawed and 30%-40% above previously reported.

This MRIP data was the primary reason for the ASMFC's "emergency" action to reduce the slot limit on striped bass.
The recent report by NOAA only proves what we as fisherman have been claiming all along, that our observations on the water are inconsistent with ASMFC's claims and the newly released proof from NOAA itself of MRIP's flawed data validates such.

. This "emergency" action was nothing more than fishery management overreach, and an extension of such emergency action is nothing more than just that again, and would only serve to enhance to public's distrust for fishery management even more.

The extension of this "Emergency Bass restriction needs to be rescind. Moderator commercial striped bass association Robert Moss Chatham Ma

Mid Atlantic fishery management council announced yesterday that MRIP data is on average

30%-40% HIGH ! (aka=WRONG)
This is the data they use to shove these "emergency" regulations down our throat.
Thank you for listening Robert Moss

From:	Robert Beal
To:	Comments
Subject:	FW: [External] Unnecessary extension of striped bass emergency action.
Date:	Thursday, August 24, 2023 10:14:39 AM

From: Vinny Guaetta <vguaetta@yahoo.com>
Sent: Friday, August 11, 2023 8:24 AM
To: Robert Beal <Rbeal@asmfc.org>
Subject: [External] Unnecessary extension of striped bass emergency action.

To whom it may concern,

I am writing to demand the 2024 continuation of ASMFC's "emergency" striped bass action be immediately rescinded in light of the just announced data from NOAA fisheries and the Mid Atlantic Fishery Management Council that proves MRIP data is extremely flawed and 30%-40% above previously reported.

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The extension of this "Emergency action" should be immediately rescinded based on NOAA's own findings!

Regards,

Vincent Guaetta
vguaetta@yahoo.com

From:	Robert Beal
To:	Comments
Subject:	FW: [External] Unnecessary extension of striped bass emergency action
Date:	Thursday, August 24, 2023 10:15:56 AM

From: Boston Fish <atownhomeservices@gmail.com>
Sent: Friday, August 11, 2023 6:53 PM
To: dan.mckiernan@mass.gov; Robert Beal <Rbeal@asmfc.org>; Michael Pentony <michael.pentony@noaa.gov>
Subject: [External] Unnecessary extension of striped bass emergency action

As an active charter captain Bostonfishcharters.com I am having to explain to my clients who want to take home fish why the 31.5 inch fish has to go back . It's ridiculous! In the past 2 years I've gut hooked more fish then I can count with your inclined circle hook rule . Now that 33 incher who inhaled a mackerel is going back dead . Nothing is being conserved. The same mortality rate exists. We are boating 20 bass a trip and watching countless boats do the same this is not a species in decline. I am also Including a copy of Captain Mike's letter as he is far more knowledgeable on the data . PLEASE RECIND IMMEDIATELY.
CAPTAIN JEREMY FURTADO
339-215-4146

I am writing to demand the 2024 continuation of ASMFC's "emergency" striped bass action be immediately rescinded in light of the just announced data from NOAA fisheries and the Mid Atlantic Fishery Management Council that proves MRIP data is extremely flawed and 30%-40% above previously reported.

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The extension of this "Emergency action" should be immediately rescinded based on NOAA's own findings!

Captain Mike Delzingo
Fishbucket Sportfishing, Boston
BOD: Stellwagen Bank Charter Boat Association
Founder: Massachusetts Commercial Striped Bass Association

Mid Atlantic fishery management council announced yesterday that MRIP data is on average 30%-40% HIGH ! (aka=WRONG)
This is the data they use to shove these "emergency" regulations down our throat.

From:	Robert Beal
To:	Comments
Subject:	FW: Unnecessary extension of striped bass emergency action
Date:	Thursday, August 24, 2023 10:13:05 AM

From: Dan Parma <parma81@hotmail.com>
Sent: Wednesday, August 9, 2023 11:41 AM
To: Michael Pentony <michael.pentony@noaa.gov>; Robert Beal <Rbeal@asmfc.org>; dan.mckiernan@mass.gov
Subject: [External] Unnecessary extension of striped bass emergency action

Robert, Dan and Michael,

I am writing to demand the 2024 continuation of ASMFC's "emergency" striped bass action be immediately rescinded in light of the just announced data from NOAA fisheries and the Mid Atlantic Fishery Management Council that proves MRIP data is extremely flawed and 30%-40% above previously reported.

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The extension of this "Emergency action" should be immediately rescinded based on NOAA's own findings!

Thank you

Dan Parma
978-412-6375
Parma81@hotmail.com

Tina Berger

From: Comments
Subject: FW: [External] Unnecessary extension of striped bass emergency action

---

From: Mike Delzingo <ff_boston@yahoo.com>
Sent: Wednesday, August 9, 2023 10:51 AM
To: Robert Beal <Rbeal@asmfc.org>; McKiernan Dan (FWE) <dan.mckiernan@mass.gov>; Michael Pentony <michael.pentony@noaa.gov>
Subject: [External] Unnecessary extension of striped bass emergency action

I am writing to demand the 2024 continuation of ASMFC's "emergency" striped bass action be immediately rescinded in light of the just announced data from NOAA fisheries and the Mid Atlantic Fishery Management Council that proves MRIP data is extremely flawed and 30%-40% above previously reported.

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~~Captain Mike Delzingo~~
Fishbucket Sportfishing, Boston
BOD: Stellwagen Bank Charter Boat Association
Founder: Massachusetts Commercial Striped Bass Association

Atlantic States Marine Fisheries Commission

American Eel Management Board

October 19, 2023
8:30 – 9:30 a.m.
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 *(P. Edwards)*	8:30 a.m.
2.	Board Consent • Approval of Agenda • Approval of Proceedings from August 2023	8:30 a.m.
3.	Public Comment	8:35 a.m.
4.	Progress Update on Development of Draft Addenda to Address Yellow Eel Commercial Quota and Maine Glass Eel Commercial Quota *(C. Starks)*	8:45 a.m.
5.	Advisory Panel Report *(M. DeLucia)*	9:15 a.m.
6.	Other Business/Adjourn	9:30 a.m.

The meeting will be held at Beaufort Hotel (2440 Lennoxville Road, Beaufort, North Carolina; 252.728.3000) and via webinar; click here for details

MEETING OVERVIEW

American Eel Management Board
October 19, 2023
8:30 – 9:30 a.m.
Hybrid Meeting

Chair: Phil Edwards (RI) Assumed Chairmanship: 10/21	Technical Committee Chair: Danielle Carty (SC)	Law Enforcement Committee Representative: Rob Beal (ME)
Vice Chair: Kris Kuhn (PA)	Advisory Panel Chair: Mari-Beth DeLucia (TNC)	Previous Board Meeting: August 1, 2023
Voting Members: ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, PRFC, VA, NC, SC, GA, FL, D.C, NMFS, USFWS (19 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from August 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. Progress Update on Development of Draft Addenda to Address Yellow Eel Commercial Quota and Maine Glass Eel Commercial Quota (8:45-9:15 a.m.)

Background

- The 2023 Benchmark Stock Assessment for American Eel is stock is depleted to historically low levels, and recommended reducing yellow eel fishing mortality.
- In response to the assessment findings, the Board initiated an addendum to consider changes to the coastwide yellow eel harvest cap.
- The Board also initiated an addendum to address the quota for Maine's glass eel fishery for the 2025 fishing year and beyond.
- The Plan Development Teams met in September to begin development of the draft addenda and are seeking guidance from the Board on potential management measures **(Briefing Materials).**

Presentations

- Update on Development of Draft Addenda to Address Yellow Eel Commercial Quota and Maine Glass Eel Commercial Quota by C. Starks

Board Actions for Consideration

- Provide feedback to Plan Development Team

5. Advisory Panel Report (9:15-9:30 a.m.)

Background

- The American Eel Advisory Panel met on September 21, 2023 to review the recent benchmark stock assessment, receive an update on ongoing management actions, and provide comments on the fishery **(Briefing Materials).**

Presentations

- Advisory Panel Report by M. DeLucia

6. Other Business/Adjourn

American Eel

Activity level: Low

Committee Overlap Score: Low

Committee Task List
• Spring 2024: Review preliminary yellow eel landings • July 2024: review of Maine's aquaculture proposal • September 1st: Annual compliance reports due

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

SAS Members: Sheila Eyler (USFWS, SAS Chair), Laura Lee (NC), John Sweka (USFWS), Troy Tuckey (VIMS), Jason Boucher (NOAA), Matt Cieri (ME), Keith Whiteford (MD), Kristen Anstead (ASMFC), Caitlin Starks (ASMFC)

PDT Members: Sheila Eyler (USFWS), Casey Clark (ME), Bradford Chase (MA), Robert Atwood (NH), Jennifer Pyle (NJ), Margaret Conroy (DE), Troy Tuckey (VIMS), Todd Mathes (NC), Danielle Carty (SC), Caitlin Starks (ASMFC)

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

AMERICAN EEL MANAGEMENT BOARD

The Westin Crystal City
Arlington, Virginia
Hybrid Meeting

August 1, 2023

TABLE OF CONTENTS

INDEX OF MOTIONS

ATTENDANCE

Board Members

Megan Ware, ME, proxy for P. Keliher (AA)
Rep. Allison Hepler, ME (LA)
Cheri Patterson, NH (AA)
Doug Grout, NH (GA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)
Dan McKiernan, MA (AA)
Raymond Kane, MA (GA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)
Phil Edwards, RI, proxy for J. McNamee (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)
Justin Davis, CT (AA)
Bill Hyatt, CT (GA)
Rep. Joseph P. Gresko, CT (LA)
John Maniscalclo, NY, proxy for B. Seggos (AA)
Emerson Hasbrouck, NY (GA)
Heather Corbett, NJ, proxy for J. Cimino (AA)
Jeff Kaelin, NJ (GA)
Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)
Tim Schaeffer, PA (AA)
Kris Kuhn, PA, proxy for Rep. Kulik (LA)
Loren Lustig, PA (GA)
John Clark, DE (AA)
Roy Miller, DE (GA)
Lynn Fegley, MD (AA, Acting)
Russell Dize, MD (GA)
Dave Sikorski, MD, proxy for Del. Stein (LA)
Shanna Madsen, VA, proxy for J. Green (AA)
Lewis Gillingham, VA, proxy for B. Plumlee (GA)
Chris Batsavage, NC, proxy for K. Rawls (AA)
Jerry Mannen, NC (GA)
Chad Thomas, NC, proxy for Rep. Wray (LA)
Ross Self, SC, proxy for M. Bell (AA)
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)
Gary Jennings, FL (GA)
Dan Ryan, DC, proxy for R. Cloyd
Ingrid Braun, PRFC, proxy for M. Gary
Chris Wright, NMFS
Rick Jacobson, US FWS

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

Ex-Officio Members

Danielle Carty, Technical Committee Chair
Sheila Eyler, Stk. Assmnt. Subcommittee Chair
Kurt Blanchard, Law Enforcement Committee Rep.

Staff

Bob Beal
Toni Kerns
Madeline Musante
Tina Berger
Jeff Kipp
Tracy Bauer
Chris Jacobs
Caitlin Starks
Alex Dijohnson
Katie Drew
Jainita Patel
Heather Power
Pat Campfield
Chelsea Tuohy

Guests

Debra Abercrombie, US FWS
Max Appelman, NMFS
Robert Atwood, NH F&G
Pat Augustine
Meredith Bartron
Rob Beal, ME Marine Patrol
Mel Bell, SCDNR (AA)
Jessica Best, NYS DEC
Alan Bianchi, NC DMF
Jason Boucher, NOAA
Rob Bourdon, NOAA
Jeffrey Brust, NJ DFW
Scot Calitri, NH
Nicole Caudell, MD DNR
Brad Chase, MA DMF
Benson Chiles, Chiles Consulting
Matthew Cieri, ME DMR
Joe Cimino, NJ (AA)
Casey Clark, ME DMR
Haley Clinton
Allison Colden, CBF
Margaret Conroy, DR DFW
Caitlin Craig, NYS DEC
Russell Dize

Steve Doctor, MD DNR
Wes Eakin, NYS DEC
Tony Friedrich, ASGA
Angela Giuliano, MD DNR
Brendan Harrison
Jaclyn Higgins
Kyle Hoffman, SC DNR
Stephen Jackson, US FWS
James Jewkes
Yan Jiao, Virginia Tech
Blaik Keppler, SC DNR
Robert LaFrance
William Lucey, Save the Sound
Jerry Mannen Jr.
Todd Mathes, NC DMF
Genine McClair
Chris McDonough, SC DNR
Joshua McGilly, VMRC
Robert McGinness
Steve Meyers
Steve Minkkinen, US FWS
Brian Neilan, NJ DEP
Doug Nemeth, US FWS
Jeff Nichols, ME DMR
Marina Owens, FL FWC
Ian Park, DE DFW
Nicole Pitts
Bill Post, SC DNR
Will Poston, ASGA
Max Provencher, META
Jill Ramsey, VMRC
Kathy Rawls, NC (AA)
Kirby Rootes-Murdy, USGS
Christopher Scott, NYS DEC
Somers Smott, VMRC
Renee St. Amand, CT DEEP
Lauren Staples
Elizabeth Streifeneder, NYS DEC
Kevin Sullivan
John Sweka, US FWS
Beth Versak, MD DNR
Keith Whiteford, MD DNR
Patrick Whittle, Associated Press
Taylor Woods, USGS
Emerald Wright, NH F&G
Darrell Young, ME Elver Fishermen Assoc.
Jordan Zimmerman, DE DFW
Erik Zlokovitz, MD DNR
Renee Zobel, NH F&G

The American Eel Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia, via hybrid meeting, in-person and webinar; Tuesday, August 1, 2023, and was called to order at 10:15 a.m. by Chair Phillip A. Edwards III.

CALL TO ORDER

CHAIR PHILIP A. EDWARDS III: Good morning, everyone. I would like to welcome everyone to the American Eel Management Board. I would like to call this meeting to order. My name is Phil Edwards; I am the Rhode Island Administrative Proxy. We meet today as Caitlin Starks and Dr. Kristen Anstead with the Commission, and Dr. Sheila Eyler, the Stock Assessment Chair.

APPROVAL OF AGENDA

CHAIR EDWARDS: I would like to start with the approval of the agenda. Are there any proposed modifications, please raise your hands? Seeing none; the Board approves by consent.

APPROVAL OF PROCEEDINGS

CHAIR EDWARDS: Moving on to the approval of the proceedings from the February, 2023, which was in your materials. Are there any corrections or edits? Seeing none; approved by consent.

PUBLIC COMMENT

CHAIR EDWARDS: Next up is public comment. Are there any public comments on anything that is not on the agenda?

CONSIDER STOCK ASSESSMENT SUBCOMMITTEE REPORT ON ALTERNATIVE ANALYSIS OF INDEX METHODS FOR SETTING MANAGEMENT MEASURES

CHAIR EDWARDS: Okay, moving on to Item four. Next on the agenda, Consider the Stock Assessment Subcommittee Report on Alternative Analysis of Index Methods for Setting Management Measures. We're going to start with a presentation of the Stock Assessment Subcommittee Report by Dr. Sheila Eyler.

PRESENTATION OF STOCK ASSESSMENT SUBCOMMITTEE REPORT

DR. SHEILA EYLER: As a background for the presentation, I will be providing some information on additional analysis and information on the items identified either by the Peer Review Panel or by the American Eel Board at the February meeting. As a reminder, the Peer Review found the assessment addressed the terms of reference, but recommended that additional work be done to test the robustness of I_{TARGET} for setting catch limits.

The Peer Review suggested using management strategy evaluation or MSE for further evaluation of I_{TARGET} for eels, before using this as a management approach. The SAS previously stated that the MSE approach would not be productive for eels, as we do not have much of the data needed for life history parameters across the range.

However, the SAS did some additional sensitivity testing around the MARSS Yellow Eel Index, and reference periods, which will be discussed in this presentation. Regarding stock status, there was a discrepancy between the Peer Review and the SAS, and that will be addressed in this presentation. At the February meeting, the Board expressed concern over the potential influence of specific surveys, particularly the Hudson River Surveys, on the overall trends of the coastwide yellow eel index. The SAS conducted some additional sensitivity testing around the individual surveys to address this concern.

The SAS also considered different configurations for the reference period, the multiplier and the thresholds used in I_{TARGET}. Finally, additional information on the usefulness of habitat models will be presented. As a reminder, the MARSS Index is a coastwide index of yellow eel abundance that is derived from 14 different fishery independent

yellow eel surveys ranging from New Hampshire to South Carolina.

Sensitivity testing evaluated the influence of uncertainty around the individual surveys on the coastwide MARSS Yellow Eel Index and in turn, influenced recommended harvest in I_{TARGET}. These MARSS simulations were conducted by randomly drawing a value for each fishery independent survey for each year that the survey was conducted from a normal distribution for that survey.

After the simulated MARSS Index was developed, I_{TARGET} was rerun. The top graph here shows the base MARSS Yellow Eel Index from the 2023 assessment report, and the bottom graph shows 500 different simulations of the MARSS Index. The takeaway here is that the trends in the simulations of the MARSS Index was similar to the index used in the assessment, indicating that the MARSS Index in the assessment is robust to uncertainty, and individual point estimates of abundance from the surveys included in the MARSS Model.

This figure shows the 500 MARSS simulation runs of recommended catch of American eels using I_{TARGET}, and comparing that to the actual observed landings in the solid red line. The simulation show that actual landings were higher than recommended catch for the entire time series, excluding the low catch year of 2020.

In conclusion, resampling the indices around the respective uncertainties resulted in index trends similar to what was presented in the 2023 assessment report. Recommended catch was also similar between the base and simulated MARSS runs. Ultimately the trends in coastwide yellow eel populations are robust to uncertainty around individual point estimates of relative abundance for fishery independent surveys.

Moving on to additional sensitivity testing. Around the influence of single surveys on the coastwide yellow eel index. This was done to address a Board question about how much the Hudson River Surveys may be influencing the coastwide yellow eel index. Testing involved omitting single surveys out of the MARSS Model Index, as well as omitting groups of surveys, including entire regions, and another run that retained the longest time period per region for a single series.

Regions are depicted here in the figure on the right-hand side that were identified in the 2012 stock assessment. This is the first set of figures in the Leave- One-Out Sensitivity Analysis. The upper left panel in the blue box shows the base MARSS Model Abundance Index with all 14 yellow eel surveys, and that came from the 2023 assessment report. Other panels indicate which survey was omitted from the model fit. Indices have been scaled to a maximum of one to facilitate comparisons. Note that the slide with the blue arrow shows the run where all three Hudson River Surveys were removed, and shows the most drastic change in the index of the Leave-One-Out attempts.

Here are the remaining indices of the Leave-One-Out Sensitivity Analysis. The takeaway here is that the trends for the Leave-One-Out Analysis are similar for nearly all indices, suggesting that no single survey is driving the MARSS output for the coastwide index. An additional run was conducted for the MARSS Index, using the longest time series of surveys for the six geographic regions along the Atlantic Coast.

Instead of doing the 14 surveys coastwide, we had 6 surveys, and those geographic regions were defined in the 2012 assessment report. Again, the results are similar to the base MARSS Index in the 2023 assessment report, with a high abundance in the 1970s and 1980s, with a decline lower abundance in recent years.

In summary, although the MARSS Index is influenced by which surveys are included, and the length of time of those series, removing a single survey had little effect on the MARSS model output.

Note that the Hudson River Surveys are three of the four oldest surveys in the time series of the assessment, so they will drive early population trends.

Because the Hudson River is a large geography within the coast wide range of eels, the surveys from this system should not be discounted in consideration of the assessment of the stock. Also, within the surveys conducted in the Hudson, it's important to note that individual survey trends track each other in the early years, suggesting that observed trends in the early part of the time series were not a fact of observation error in a single survey.

In summary, the MARSS Index is robust to the influence of a single survey, and appears to be an adequate index of coastwide abundance of yellow eel. Moving on to the regime shift analysis. We did some sensitivity testing here, looking at the effect of a single index on the selection of a reference period for use in I_{TARGET}.

The indices from the Leave-One-Out Assessment that we just talked about were evaluated to identify the change points in the time series, using the same method that we used in the 2023 assessment. The SAS conducted 18 sensitivity runs, a total of 13 of those runs resulted in the same regime as that presented int the assessment report. They are only different by one year.

Note that the high abundance regimes are shown in green, and the lower abundance regimes range from orange to dark red. In three runs the sensitivity testing resulted in regimes that were different by the base by more than one year around the original cutoff points. Though these runs still had a pattern of a high regime in the beginning of the time series, a lower regime in the middle and the lowest regime through the terminal year.

When all the Hudson River indices are dropped, the time series was shorter, starting in 1980 instead of 1974, and without the Hudson River indices, the regimes flip, with a 1980 to 1994 being a low regime, and 1995 to 2020 being a high regime. Note that there was only one survey in place from 1980 to 1989 of the low regimes, which was the Delaware River Trawl Survey, and that is the next oldest survey in the time series besides the Hudson River Surveys. When you drop the Hudson River Surveys, it results in a single survey from another area driving the early years of the regime.

Finally, when the MARSS Index was used only on the longest time series of the longest surveys from each region, the results indicate four regimes. Like many of the other sensitivity runs, the first regime in the beginning of the time series is high, followed by a low regime, and then an even lower regime, but then the last regime increases slightly, but is considered low.

In conclusion, since omitting a single survey had little effect on the general coastwide pattern of the MARSS Index for yellow eel, the resulting identified regimes did not differ much from the 2023 assessment. As with the MARSS Index, omitting more than one survey, which is removing all the Hudson River surveys had a greater influence on the identified regimes.

The SAS does not recommend removing any of the current 14 yellow eel surveys from the MARSS model. Moving on to I_{TARGET} configurations. The Board tasked the SAS to conduct some sensitivity testing around the reference period, the multiplier, and threshold values used in I_{TARGET} to provide information on how those values may influence harvest recommendations.

As a reminder, the inputs for the I_{TARGET} model are catch, and the MARSS Yellow Eel Index. For the model you need to specify the reference period, the multiplier, and the threshold values. I'll go through each of these sensitivities on the next slides. The reference period should represent a period of stable or desirable period of abundance in the available time series.

In the assessment report, I_{TARGET} used a reference period of 1974 to 1987. It was a period of high abundance, based on the results of the regime shift analysis, and was further supported by the sensitivity testing around the regime shift analysis. The base run from the 2023 assessment report is shown here in red in the red dash line.

The SAS and the Peer Review Panel both agree that using a high regime as a reference period is appropriate, although the Board had requested sensitivity runs that explored other options. The SAS evaluated different reference period and range of values from 1 to 1.5 for the multiplier in the sensitivity runs, and that is indicated in this graph.

A second reference period was selected from 1988 to 1999, and that was used to eliminate the influence of early years of the Hudson River Indices, and to represent a time when more coastwide surveys were in operation. Since 1988 to 1999 is a low regime, the SAS believes that setting the multiplier, which sets the desired stock abundance to 1.5 instead of 1.25 would be appropriate. The results are in the gray line here.

Note that using a more recent reference period with a 1.5 multiplier provides nearly the same harvest recommendation as the original reference period with a 1.25 multiplier, which again is that red dash line. The graph here also shows using the most recent reference period with a 1.25 multiplier in the orange line, and a 1.0 multiplier in the blue line. Those are less conservative than those that are shown in the gray line. Based on the change in the reference period in the multipliers, the recommended catch in 2020 would range from nearly 200,000 pounds to nearly 450,000 pounds. The SAS continues to recommend that the reference period should be set at the high regime of 1974 to 1987, since that is the period of highest abundance in the time series that we have.

The SAS evaluated different multipliers to set the biomass target to range from 1 to 1.5, using the 1974 to 1987 reference period identified in the assessment. Note that vetting the multiplier to 1.5 is more conservative, while setting it to 1.0 would be less conservative. The SAS used the value of 1.25, since the reference period covers the time when the carrying capacity of the stock had declined due to habitat loss.

However, this was balanced by the knowledge that fishing and exploitation had depleted the stock well before the reference period was established. Both multipliers 1.0 and 1.5 were included as sensitivity runs in the assessment, and are expanded here to show increments of 0.1. Depending on the multiplier used, and using the base threshold of 0.8, the recommended catch in 2020 varied from 140,000 to 316,000 pounds.

The SAS reiterates that that choice of 1.25 as a multiplier for I_{TARGET} was justified, and was supported by the Peer Review Panel. The SAS explored threshold values ranging from 0.5 to 0.8 in 0.1 intervals, 0.5 was selected as the minimum, since the overfished threshold of half of the target is appropriate in many fisheries, and 0.8 was selected as the maximum, as that was the value used by the Northeast Fishery Science Center Report from 2020.

In varying the thresholds but retaining the multiplier of 1.25 in the reference period of 1974 to 1987, which is consistent with the assessment report. The recommended catch for 2020 would have varied from 200 to 2,518 pounds. Included in the supplemental report provided to the Board before this meeting is a table with a range of reference periods, multipliers and thresholds, and subsequent recommended catch that were evaluated by the SAS.

Of the three values to be specified using the I_{TARGET} method which are the reference period, the multiplier and the threshold, the SAS suggested the threshold should be set by the Board, through a PDT to reflect the goals of the fishery, where 0.8

would be a more conservative number, and 0.5 would be less conservative, although still remaining consistent with how other fisheries are managed.

There was a specific question from the February Board meeting, asking if I_{TARGET} can be used to make predictions on abundance increases in response to harvest reductions of the eel stock. The I_{TARGET} method cannot forecast abundance under different harvest scenarios, because the model is a data limited tool, and does not include population parameters such as growth, mortality, and recruitment.

Another matter to bring to your attention today was that in April, 2023, it was noted that an electrofishing survey from South Carolina was omitted from the assessment. The data was submitted in a timely manner from South Carolina, but accidently deleted from the data files, and the omission was not noted until earlier this year, after the assessment was completed. The yellow eel survey from South Carolina was conducted from 2001 to present, and met the requirements for surveys to be included in the assessment. The SAS considered both including the new South Carolina electrofishing survey as an additional survey, or replacing the existing South Carolina survey with the electrofishing survey, and reran the MARSS Index, the regime shift analysis and $I_{TARGET,}$ to see if the index would change the result of the assessment.

Both replacing and adding the new survey influenced little change to the reference period. It would have only changed by one year, and it would result in a slight reduction in the 2020 recommended harvest. The SAS and Technical Committee recommend that if I_{TARGET} is used moving forward, that the South Carolina electrofishing survey be included as an index of relative abundance, and incorporated into the MARS Index for coastwide eel abundance.

At the February Board meeting there was a specific question about how habitat models could help in future assessments. At this time there are data limitations that restrict development of a coastwide habitat model. Although new datasets are becoming available, both for geospatial predictors and also inland fishery data.

One potential use could be to produce an egg-per-recruit model to link a statement of inland silver eels past dams to estimate reproductive output. Moving on to the question about stock status. In the 2023 assessment report the SAS determined the stock was overfished and overfishing was likely occurring.

The Peer Review Panel disagreed, stating that the status should be depleted. After further review of the ASMFC stock status definitions, the SAS agreed with the depleted status as recommended by the Peer Review. Further, the SAS notes that each stock assessment indicates a lower and lower coastwide abundance across multiple analyses.

Although the depletion may be due to many factors, fishing is likely having an effect, and should be decreased. If I_{TARGET} is adopted for management use, overfished and overfishing statuses could be determined in the future. Finally, the Peer Review recommended that the SAS conduct a simulation approach using MSE techniques.

The SAS previously argued that the MSE approach is not possible at this time, because it requires knowledge of important population parameters that we simply don't have for eels. If we had those data, we would not need to use an index-based approach such as I_{TARGET}. I_{TARGET} and index-based models were simulation tested for other species with various life history strategies through their development.

Although eels are different than some of the other species evaluated, the eel's life history strategies that make them different from other species also make their plausible simulation more challenging. In the end, building the simulation and testing

parameters would take significant time and analysis, and should be considered as a long-term research and modeling need for future.

In summary, the simulated MARSS model fits were similar to fits of the 2023 stock assessment report, omitting a single survey from the MARSS index has little effect on the general coastwide abundance pattern regimes identified, or reference periods for $I_{TARGET.}$ Omitting all three Hudson River Surveys, which is not recommended by the SAS, shortens the time period and results in the largest change to the MARSS index and identified regime. Changing the threshold value in I_{TARGET} results in recommended catches from over 202,000 to 518,000 pounds. The choice of configuration should be determined by a Plan Development Team through a management document, to reflect the goals of the fishery.

The SAS does not recommend changing the multiplier or the reference period, only the threshold. Population projections are not possible using the index-based methods such as $I_{TARGET.}$ Data limitations restrict the development of a coastwide habitat model, but future modeling advances may help in this effort, and MSE could be considered during the next benchmark.

But in the meantime, the I_{TARGET} can be used as a tool for management, because it was designed for when traditional assessment models fail. The SAS agrees with the Peer Review that the American eel stock is depleted, and that the coastwide catch should be decreased. If reference points are established through I_{TARGET}, overfishing and overfished statuses could be determined in the future. That concludes my presentation, Mr. Chair.

CHAIR EDWARDS: Great, thank you, Sheila, for the update, and thank you to all the SAS members for working on this. I would like to open it up to questions for Sheila. John Clark.

MR. JOHN CLARK: Thank you for the excellent presentation, Sheila. I have a lot of questions. But just to start with, I was just curious whether it was possible to separate out surveys that were more based in fresh water from those that were based in estuarine waters. I noticed when the regime shift, when you just used the Delaware, which was the second longest survey, and it's exclusively an estuarine survey.

You don't see the same drop that you saw when the Hudson is involved there. I was wondering how much of the Hudson is in what would be considered fully fresh water. We've been seeing this for years, where there seems to be a disconnect between what we see with yellow eels in the estuaries, and what we see in fresh water. I mean a lot of the impetus to start looking at eels was due to the collapse of the Lake Ontario fisheries, which obviously is for several reasons.

But we've seen that in a lot of freshwater areas, the further upstream you go the less we see eels. Yet, I just was looking recently, I guess it was the 2018 assessment update of the Chesapeake. It showed their yellow eel indices were actually significantly increasing. Are you able to tease anything like that out from all these different surveys you have?

DR. EYLER: John, we didn't look specifically at that question. I don't know that there are any specifically fresh water surveys in the assessment, estuarine mostly, I think. But we would have to double check that for sure. But we did not separate any surveys out being more upstream versus less.

MR. CLARK: If I could just follow up briefly. Are you able to tell, like for example the Hudson obviously is a long river, or are these surveys going from the mouth all the way to Albany, for example, or was this more concentrated in a certain area?

DR. EYLER: Yes, John, I don't know off the top of my head, but the maps are in the stock assessment report, so we could get that information from there.

CHAIR EDWARDS: Lynn Fegley.

MS. LYNN FEGLEY: Thank you, Shiela and Kristen, again for all your work on this. I just have a lot of questions. But this question is really about the management process that this tool would lead us to. I'm trying to understand, if we're setting a catch target based on 2020. In the report, right, the recommended 2020 catch level ranges from X to Y.
But the recommended catches vary with the index. My question is, how are we choosing where in time we're setting that recommended catch, and because the threshold is based on the index, how are we going to know when the index has dropped below that threshold, and then we might have to reduce catches further?

I guess really the short question is, if we're going to approach this and use this in management, how often are we running this index, to see where we are, and how are we going to avoid winding up in a situation where we run the index, and we are below whatever threshold we choose.

Then suddenly we have to turn around and make more significant management, or the reverse, which is kind of what I would like to see. How can we offer the fisheries the ability to expand in a timely way, if the index shows that they are able to expand. I'm really interested in what your vision is of how this management process might play out.

DR. KRISTEN ANSTEAD: I'm going to take that one and it's a really good question, and it's something we've talked about as a SAS, and sort of struggled with a little bit. We think that really needs to be a conversation with the PDT as well, like what is reasonable. But some additional information, the index that we're using to kind of determine that catch is a three-year-running average, so it's not just the last data point.

I think there could be some sort of conversation with the PDT about stability for the fishery, as well as keeping on top of this, and what sort of time step makes sense, because if we do it annually, as you probably suspect, you would be bouncing around a lot. Maybe there is some sort of conversation that happens by doing it every three years, and then you're also using a three-year average. But I think that's something we would have to talk about, and it's a good question, but it would have to be discussed further.

MS. FEGLEY: Yes, thank you. Just the three-year average. The three-year average is the index value not the recommended catch value, right? One potential would be to recommend a catch value as a three-year average, is that sort of on the table?

DR. ANSTEAD: It recommends a point average, but maybe that's something the PDT could look into. Like how would the recommendation change if we were taking some sort of average for the catch. Certainly, you would want to look at this more than every decade, because as you said, what if the indices do pick up? That would change management advice. Maybe there is some rounding regime that we come up with that if the recommended catch is below this level, we round up to the nearest hundred thousand, or something like that. Maybe there is something we can work out with management that makes sense and provides some stability, with also checking in on trends.

CHAIR EDWARDS: Are there any other questions? Emerson Hasbrouck.

MR. EMERSON C. HASBROUCK: Thank you, Shiela, for your presentation. Maybe you addressed this and I just missed it. Since we can't determine overfishing or overfished status, and the recommendation is that the stock is depleted, and if we implement a reduction in catch, do we know what effect that is going to have on the resource?

You know if we reduce catch by some amount, is there going to be a positive response in the resource, or are there other things that are complicating a possible rebuilding of the eel resource? You know I'm just wondering if we're getting into a situation similar to what we have with stuff in New England, winter flounder and weakfish,

where there are other factors at work here, in terms of reducing biomass, and reducing fishing mortality may not have much if any impact at all.

DR. EYLER: Thank you for that question. I think when you revert to a depleted status, that leaves the door open to the fact that the population may be influenced by other factors besides fishing, so we have mortality in other sources, hydroelectric dams, for example, are one of those. With the assessment we're not able to tease out which is a significant source and which isn't.

We can't tell you what exactly is driving the population change, if it is all fishery or partly fishery or a myriad of other things. I guess the answer is no, and based on the I_{TARGET} method especially, we cannot tell you that if you implement some level of reduction in harvest that that will result in some change to the abundance of the population, we just aren't able to do that with the rules that we have available to us.

CHAIR EDWARDS: Bill Hyatt.

MR. WILLIAM HYATT: Yes, I just want to make sure that I'm understanding this correctly, because a lot of this is new to me. The highest recommended harvest coming out of this, am I correct that that is 518,000 and some odd pounds? Am I also correct that the harvest that is taking place, the three-year averages, I believe you're talking about, even with 2020, are well above that. Could you repeat those numbers if you would?

DR. ANSTEAD: Currently the coastwide cap is 916. You are correct that of the sensitivity runs we did, the highest recommended catch of those is in the 500 range. There are other sensitivities that could be run, depending on the management goals that could be discussed by the PDT that would result in higher catch. For example, if you want to take the lowest regime as your reference period, which we don't recommend. If you want to take the most liberal threshold, the 0.5, which we think could be a reasonable decision, depending on the other decisions you make, and take the lowest multiplier, which we also don't recommend, because it is not conservative. But if you made all those decisions, you would probably end up with something in the 700 range. There are other decisions that could be discussed by the PDT that would result in higher catch from this tool. They are not recommended to us by the SAS or the TC, but they could still be discussed and presented.

With that said, the catch has been declining well below the coastwide cap in recent years. There is some indication that could be market. There is also COVID influence, and our terminal year of the assessment is 2020. We haven't had time to add kind of the subsequent years. Although I believe it started to pick up a little bit in 2021 to maybe the 400 range. Is that helpful?

CHAIR EDWARDS: Lynn.

MS. FEGLEY: I appreciate a second bite at the apple. I want to be really careful here to Emerson's point, because there is conversation in the peer review about how it is not clear, that changes in fishing mortality are going to address the situation. We cannot tell our public that whatever level we choose the cap to be at is going to actually help ensure that we reach the goal that we choose.

I think that is a super critical point, because in my mind when you implement fisheries management, you want to do something that is going to help. We've had several, there are some conflicting statements about whether fishing is the cause of this or it could be other things. I think we all know that there is a lot of impacts to eels.

I say all that, because we want to be extremely careful, and I also, for full transparency, I come from a state with a large eel harvest. This is an incredibly import fishery to us. Personally, I would like to see you guys run the 0.5 threshold at that

median reference period, because if you aim for the reference period that is the next one up, what we're aiming for is an index that is 1.25 the abundance level of what it was then, and that is a really good step.

If we can get there to start with, rather than trying to get all the way to that top regime, which by the way, when you look at the harvest time series, I feel it is back before that the harvest was quite a bit lower. That is not the index, that is the harvest. But that high regime does represent sort of a fight in what the harvest is doing, so it is not clear.

I worry about aiming for something too high. I really would like to see those higher harvest recommendations, because even if they are higher than the harvest that we have, they still may be lower than the cap. I think we need to be really clear that our goal here, or at least my goal the state of Maryland's goal, would be to provide a guardrail on this thing if the market returns. This is a market issue in Maryland that we're seeing. Right now, this is 100 percent clearly a market issue.

We drive the eel harvest; we have no market. If there is something worldwide that occurs, or the market resurges and there is a gold rush for eels, I would like some boundaries on that. But I don't want to see us shutting down a fishery, an economic opportunity, especially these days, when we can't even say that it is going to be helpful. I really would, just for the record, like to see that run of the 0.5 threshold on that middle 1988 to 1999, I think timeframe. I think that's what it was, 1988 to 1999, yes, thank you.

DR. EYLER: I can appreciate the concern of management from the state. Is it possible to bring the fourth slide in that presentation again? I just want to say from the Assessment Committee's perspective. I just want to remind folks of where we're at with the trend that we see in the yellow eel index.

This index is a yellow eel index based on fishery independent surveys, so this has nothing to do with any commercial fisheries in the states. This is what the SAS has considered in assessing the stock. We're looking at the top page here. What you see, the trends in the population are that it was high in the past, that high regime that we're talking about.

But it has been on a steady decline, and continues decline in recent years. Our 2012 stock assessment was the last benchmark that we did, and now we have the 2023 stock assessment benchmark. In that time the stock has declined, even though we've got this cap on the fishery during that time period.

From the stock assessment perspective, something is going on with the population that is causing this continued decline, whether it's fisheries or not we can't tell you that for sure. It would be up to a Plan Development Team if you wanted to evaluate some of those other management strategies using I_{TARGET}. But this is what we're seeing with the stock.

CHAIR EDWARDS: Shanna Madsen.

MS. SHANNA MADSEN: Thank you, Dr. Anstead and Eyler for your report. It is incredibly easy to read, but very thorough. I think you guys just did a really excellent job here, so I do want to take a second to say thank you for really following up on all of the things that we asked you for last time in such a thorough manner. My question is kind of concerning the section that you wrote on stock status, so Section 9.

I was a little, I guess maybe confused, and was hoping you guys could kind of walk me through this. In the beginning of Section 9, you talk about how when we set stock status, kind of without our usual assessment methods, having an actual model that is able to run estimates of reference points. We're kind of unable to set a stock status, which is kind of where we're at right now with eel. We're in this depleted zone.

We're not quite sure, because we don't have reference points to say whether we're overfished or

overfishing is occurring. But then later, when you talk about the justification for why the stocks felt the need to maybe say that we were either overfished or overfishing, that potentially if we move forward with the I_{TARGET} methodology, that reference points could be established using $I_{TARGET,}$ and be able to give us a stock status. How does that work exactly, just because it was kind of unclear to me how that model would be able to produce those things?

DR. ANSTEAD: That's a good question, and it is certainly something we talked about with the Peer Review Panel, because you all may recall that's how we determined our overfished, likely overfishing in the stock assessment, and the Peer Review Panel did not agree with us, and put us back to depleted. By using I_{TARGET} we could consider that target and threshold as more traditional reference points. It would be a little unusual, and I'm not sure that that has been done before on this type of method.

You know when the SAS really went back, we've reviewed those definitions of how we find these stock statuses, and ultimately agreed with the peer review panel. But we did leave that door open with, if we wanted to think about this more thoroughly, and if we wanted a stock status for eel, maybe we could try to make this tool work for that.

With that said, depleted is a stock status, it's just not one that has a clear management response, which is why we also provided two sections with how the Commission in the past has responded to overfished and overfishing, and some examples of management responses. Then we also provided a section on how the Commission has typically responded to depleted status, to try to kind of help showing that conversation a little more. Does that answer your question?

MS. MADSEN: Yes, it does, so just a quick follow up. That would mean that threshold level that the SAS is recommending, that the Board is sort of able to determine within $I_{TARGET,}$ would then be the one that we would be using to determine overfished, overfishing? Like where does that kind of plug in there?

DR. ANSTEAD: Yes, we would be using the target and threshold to determine stock status, which is what we tried to do, and the Peer Review was not totally comfortable with it, but primarily because the concerns that you all have expressed around this table. Is it fishing, and what will that get us? Again, that is a challenge for this species. If we stop fishing or cut back on fishing, we don't know what that response will be, because we don't have a stock assessment model.

CHAIR EDWARDS: Okay, we're going to take an online question, Russell Dize.

MR. RUSSELL DIZE: What I don't understand, I know the fishermen here in our area in the middle part of the Bay in Maryland, is that we're saying depleted, but in the last five years our eel fishermen, traps are in the yard. They are setting up on land, because the oversea market has dried up. The bait industry doesn't use eel anymore in this area.

They haven't been catching any eels. When you tell our fishermen that they are depleted, they say, well look, we haven't caught eels here for five years in the middle part of the Bay. What is going on? How can it be depleted? Now, I understand we're talking about coastwide. But it's hard to tell fishermen they can't sell the eel, because there is no market for it, that it's a depleted industry.

DR. EYLER: Well, the depleted definition comes from these indexes that we use that are not related to fisheries. The surveys that the states complete that are not related to actual fishing that is happening. The surveys that the states are doing are showing declines in many places. In Maryland, the index is going up. This has tracked over the index we used, but in other places it is still declining. Again, we can't say that it's fishing or not fishing on that.

MR. DIZE: I understand what you're saying, but it's hard to tell a fisherman that it's a depleted resource, when they see lots of eels but they can't catch them. That is the problem we have here.

DR. EYLER: No, I understand that. One thing I would like to say, with respect to the life cycle of eels. Implementing a management change, so harvest has been reduced only for a couple of years. But with the life cycle of eel, and some places in its range take 20 years or more to reach maturity. The time that you're going to see the effect of some of those management changes might be a decade or more.

The fact that the fishery has only been reduced for a couple of years, that is really not long enough for us to see a change in the abundance of fish in the surveys that we're conducting. That may be another reason that we're still in this depleted status. That is also a long-term consideration. We're not looking at just the last couple of years, but we're looking over the long term of the stock in the surveys that we have.

MR. DIZE: Okay, thank you, I appreciate it.

CHAIR EDWARDS: John Clark.

MR. CLARK: Thank you for the second opportunity here. First, I would just like to say, in the estuaries it is rare to see an eel that is over 6 or 7 years old. They definitely reproduce at a much younger age. Our cap right now is an empirical coastal cap. With this high target it is still going to be judgment of the Board, correct?

I mean we're pretty much going to set these numbers where we want, and yet now we'll have these de facto overfishing status points. But I just don't really see that this is really that much of a difference from what we've been doing, because one way or the other it is going to be up to the Board to just decide what is an acceptable catch level, correct? I mean we can set the multiplier at a level where we would actually end up with a coastal cap similar to where we are now, correct?

DR. ANSTEAD: Yes, you could. The Board has asked us through the last several assessment cycles to come up with a quantitative tool to set this, versus the average landings from 1990 to whatever it was that made the last cap. What is a quantitative tool we could use to set a cap, based on abundance in landings? We've done our best and this is the tool we have. Of course, as you know, we tried to come up with a model and we could not. I think it's an improvement over historical average, and it gives you some flexibility to respond to abundance in catch, but your point is taken.

MR. CLARK: Thanks, Kristen, yes, it's still a difficult situation, because I know every time eel comes up for assessment, we just have five more years of the insufficient data to truly assess it. Really the main problem I have with I_{TARGET} is it makes it seem like we have something that is more than just judgment that we're using to set these levels of the cap.

CHAIR EDWARDS: Kris Kuhn.

MR. KRIS KUHN: Thank you, Sheila, for an informative presentation. It was mentioned that habitat-based modeling has been showing promise in New Zealand and Europe, but however, data limitation here are preventing advancing that right now. What data would be needed and what would a timeline be to advance that as a tool for management?

DR. EYLER: That's a great question. I think one of the biggest shortcomings in the habitat modeling is we have a pretty good handle on the environmental parameters for different systems, but what we're missing is the eel data, especially inland eel data. Most states have next to none. As we've been pushing a bit with the assessment, we found quite a bit in the Delaware and Chesapeake Bay ranges. There is a fair amount of inland eel data.

Not so much for the other geographies on the coast, and we're talking about a panmictic

population. We really have to have a better understanding geographically where these fish are. Recently I came across some additional data from Maine that we were not aware was available at the time of the assessment that may have helped with that, but we're still having some pretty big holes in the geography, as far as eel data goes.

Having some inland eel data surveys would be very helpful. Having some silver eel data surveys would be helpful, if they be run counts coming downstream at dams or whatever those are, we are really lacking in some of those pieces of data to really do a habitat model, or really even help with the assessment moving forward, even if it's not the habitat model.

CHAIR EDWARDS: Are there any other questions?

CONSIDER ACCEPTANCE OF 2023 BENCHMARK STOCK ASSESSMENT AND PEER REVIEW REPORT FOR MANAGEMENT USE

CHAIR EDWARDS: Next on the agenda items to Consider the Acceptance of the 2023 Benchmark Stock Assessment and Peer Review Report for Management Use. Then Consider Management Response if Necessary. Shanna Madsen.

CONSIDER MANAGEMENT RESPONSE

MS. MADSEN: I actually have a couple of motions prepared, but I want to dispense with this one first. But to let the Board know my intent, **the first motion that I want to make is to accept the 2023 Benchmark Stock Assessment and Peer Review Report for management use**. Following this discussion, I will be making another motion regarding the use of I_{TARGET} to set catch caps. I will discuss that further at that time. But I wanted to dispense with this motion before that one.

CHAIR EDWARDS: Rick Jacobson.

MR. RICK JACOBSON: I'll offer a second to the motion.

CHAIR EDWARDS: I'm going to read this. **Move to accept the 2023 Benchmark Stock Assessment and Peer Review Report for management use**. Do we have any comments from the maker of the motion? Any other questions or comments? Lynn.

MS. FEGLEY: This might be a question for Shanna. I think from the state of Maryland, while we would support using I_{TARGET} for management use, we would not support using it to create reference points to determine stock status. Is that this motion or the next motion?

MS. MADSEN: That's the next motion. Yes, this one is just to dispense with making sure that the Stock Assessment and Peer Review Report can move forward for management, and then the next one we can kind of have a discussion for perfecting that I_{TARGET} use.

CHAIR EDWARDS: Any other questions or comments? John Maniscalco.

MR. JOHN MANISCALCO: Does this motion also accept the stock being depleted and that overfishing is likely occurring?

MS. MADSEN: I think that at this point it would match what the Peer Review Report says, and what we have in front of us today, which is that the SAS is also recommending what the Peer Review Report said, which is that the stock is depleted.

CHAIR EDWARDS: Okay, are there any other questions? **Is there any opposition to this motion? Seeing none; the motion is approved by Board consent.** Is there another motion?

MS. MADSEN: Yes, Mr. Chair. This one is definitely one that I think will need to be perfected by my colleagues. I just want to get something kind of on the board to start with. **The motion that I would like to make is to form a PDT to draft an addendum to consider using I_{TARGET} to recommend**

various catch caps, using the supplemental report that we were given today as presented today as the starting point. If I get a second, I will speak to it.

CHAIR EDWARDS: Is there a second? John Maniscalco. Would you like to speak for the motion?

MS. MADSEN: I would, thank you very much, Mr. Chair. I really appreciate a lot of the conversation that we've had around the table today. I think we spent a lot of time back in, I guess it was February also, discussing this. I think that the report that the Stock Assessment Subcommittee has provided us is incredibly clear.

At this point, Virginia is probably, I feel for my state next to me in Maryland. Virginia is probably the second highest harvester of yellow eels. However, after three stock assessments saying that this stock is depleted, and then getting to a point where our staff is so uncomfortable with giving us a depleted status that they are considering trying to determine how the stock might be overfished or overfishing is occurring, is really flagging to us at this point, that we need to take some action.

I feel incredibly uncomfortable not using the method that they presented us today to move forward. I know there might be some perfections to how we utilize that method. I know that a PDT will come back with various recommended catch caps. We'll have to debate what we think is appropriate then.

But today, I believe that our SAS is essentially crying out to us to signal that we need to do something other than status quo. Although I recognize that there is a lot of other things impacting the stock, other than fishing. As fisheries managers we only really have that one lever to pull here. I don't want to kick a stock while it's down, so this is my motion, and happy to hear from my colleagues as to any perfections that they might have to that.

CHAIR EDWARDS: Lynn Fegley.

MS. FEGLEY: If I might, **I would like to offer an amendment to this motion, and I think that it would just be adding the word, so the motion would read, move to form a PDT to draft an addendum to consider using I_{TARGET} to recommend various catch caps, and then add, but not use I_{TARGET} to set biological reference points or determine stock status.** I think the amendment would be to specify that we're not using I_{TARGET} to set stock status, and if I can get a second, I'll clarify why I would like to see that in there.

CHAIR EDWARDS: John Clark. Any discussion on the amended motion?

MS. FEGLEY: Yes, thank you, Mr. Chair, if I could just provide some rationale for that quickly. Again, it's really not new information, but I think that it is really important that we make a clear distinction, for the sake of our public, and certainly for our harvesters that we are not entirely clear all of the sources of mortality that are contributing to the dilemma of eels.

I firmly believe that when you add the word overfishing and overfished, it seems to say that there is one way to fix this, and that just is not the case here. I really appreciate the sections in the report that speak to how the Commission responds to a depleted situation versus an overfished situation. But I do think that it is incumbent upon us to recognize the uncertainty in the effectiveness of our effort, and that depleted is a better more accurate way to go.

CHAIR EDWARDS: John Clark.

MR. CLARK: As the seconder, I agree with everything Lynn said. As I brought up before, I think we're still looking at basically an empirical method, and I don't want to use that to set a stock status here, when we really don't know what are the reasons for the reductions we're seeing.

CHAIR EDWARDS: Shanna.

MS. MADSEN: This is the perfection that I was expecting, and I do agree with it at this point. I think it is important to signal that we're not entirely sure of what we're doing here. But I did want to say, the reason that I appreciate the fact that the staff did try so hard to make an overfished or an overfishing status, really was to try to get us to do something.

I really appreciate the fact that this amendment is being made, and hope that it moves forward with the rest of the motion, because the rest of the motion to me is the most important part here, signaling that we are ready to actually do something.

CHAIR EDWARDS: Any further questions on the amended motion? John.

MR. MANISCALCO: I would actually just ask Kristen if she could briefly explain how I_{TARGET} would be used to set a reference point.

DR. ANSTEAD: During our first go at the stock assessment that went to peer review, we used I_{TARGET} and kind of the target and threshold values that it has. We used those to determine that it was overfished. It was below its threshold, and that overfishing was likely occurring. It was a little fuzzy, as far as using those to do that.

It is a time series it is not a model. We interpreted it that way and made an argument for it. That specifically was challenged by the Peer Review Panel, who put us back to depleted. You all had tasked us with kind of reconsidering that. We did concede maybe depleted is more appropriate for this fishery.

I suppose we kept that bullet in our conclusions, in case there was interest in kind of pushing that, because having overfished or overfishing or one or the other, there is usually a more clear path forward for how to respond, where as noted around the table that it is not clear how to respond to depleted. Because there are other contributing factors, fishing could be one of them, and so I don't have a very good answer for you. But we left it open in case there was interest, but it doesn't sound like there is. But we've still provided a tool to move forward, to come up with a more quantitative way to set a catch limit.

CHAIR EDWARDS: Any further comments? Justin Davis.

DR. JUSTIN DAVIS: I'm just curious, what is the benefit of using I_{TARGET} to recommend various catch caps versus just creating an assortment of empirical catch caps, and choosing which one the Board likes the best. I mean what sort of inference are we getting from using I_{TARGET} that we wouldn't get from just sort of selecting a set of empirical catch caps?

DR. ANSTEAD: I think it would provide a way to set the catch limit based on what you have been catching, and what the abundance index says. If the abundance index goes up, the three-year-running average, it could potentially recommend that the harvest is more. If it continues to go down, it would continue to take Hudson harvest. You are using some of the data you actually have versus taking a time period of catch and averaging it, which you are still welcome to do.

Maybe you want that to be part of the PDT task, I don't know. But I think that you're using more information by having the time series. You know that is one reason why we looked at the Northeast Fishery Science Center paper, for when your model fails here are some other methods for setting catch that use the data that you have. I think there is a benefit to using a more quantitative method, but you certainly have other options.

CHAIR EDWARDS: Any other questions? I would like to read the amended motion. Move to amend to add, but not use I_{TARGET} to set biological reference points or stock status after catch caps. Does anybody oppose this amendment? Okay, we're going to do a vote. Does anybody need a time to caucus on this? **All those in favor for the**

amended motion. All those opposed, abstentions, and null votes. The amended motion passes 16 to 2. Now I would like to ask for discussion on the amended motion. John Clark.

MR. CLARK: More just a process question. Does this, going to a new draft addendum, the addendum we're working under now has specific measures that have to be put in place if the cap is exceeded. Will we be looking at a whole new write up of that section, or are we just carrying that over?

MS. CAITLIN STARKS: That would be up to the Board, John. The Board could provide guidance to the PDT on whether you would like to consider different ways to react here if there is an overage. But I think that it would be necessary to talk about it, and to consider potentially looking into how the overall quota is allocated amongst the states. If it's closer to the actual catch that has been occurring, then the Board may want to discuss that as well.

MR. CLARK: But we wouldn't have to put that in a motion, this could just be directions to the PDT. Okay, thank you.

CHAIR EDWARDS: Any other comments or questions? I'll read the full amended motion. **Move to form a PDT to draft an addendum to consider using I_{TARGET} to recommend various catch caps, but not use I_{TARGET} to set biological reference points or stock status after catch caps, using the supplemental report as presented today as a starting point**. Okay, is there any opposition to this motion? **Okay, seeing none; the motion is approved by Board consent.** Would anybody like to address this item, or we'll move on to Item 5? Lynn.

MS. FEGLEY: I just want to, and I don't know that this needs to be a motion, but I just wanted to ensure for the sake of a full and robust discussion on this addendum, that we have the option on catch caps that include status quo, which I think is standard, and also those higher harvest advice values, so that we can see where they fall relative to the cap. Specifically, I mean running these intermediate reference periods, 1988 to 1999, with a 0.5 threshold. I just wanted to repeat that. I think it's on the record, but thank you for your forbearance.

CHAIR EDWARDS: John Clark.

MR. CLARK: Just again, at this point do you need instructions, Caitlin, for the PDT to pretty much consider the management response that we already have in the current addendum, and add anything else, or just if we leave it be is that pretty much up to the PDT?

MS. STARKS: It is certainly helpful to have clear guidance, if that is something you all would like the PDT to talk about.

MR. CLARK: In that case I'll just say that the response that we had in the current addendum, I think is a good starting point. I would just like to see that kept.

CHAIR EDWARDS: Any other questions? Rob Beal.

MR. ROBERT BEAL: Yes, I'm just curious as to what the anticipated expected timeframe on this is or might be.

MS. STARKS: Our typical addendum process can take anywhere from six months to years, in my experience with lobster. It really depends on the complexity of the options that are being considered. I believe our first step would be to form the PDT, to meet and discuss some potential options, and bring a draft addendum back to the Board.

We could potentially do that as soon as the annual meeting, but if there are inputs that the Board would like to add, beyond what we talked about today, then that timeline could extend to considering a final action in the spring or later, so it really depends.

CHAIR EDWARDS: Rick.

MR. RICK BELLAVANCE: I just wanted to take a moment to acknowledge the fine work of the Stock Assessment Subcommittee, and thank them for their diligence in this. I know it was a big lift. We all appreciate the work they did.

CHAIR EDWARDS: Bob.

EXECUTIVE DIRECTOR ROBERT E. BEAL: Back to the timing question. I think initiating an addendum today is not going to be able to affect the '24 fishery, so you've kind of got that cushion where you want to probably get something approved, maybe a year from now, to have states time to implement it and implement it through the '25 fisheries. You know I think hurrying really fast and getting something approved in real early '24, probably doesn't buy you much. It's still going to affect the '25 fisheries. We've got a little bit of time for the PDT to work on it.

REVIEW MAINE GLASS EEL QUOTA PROVISION OF ADDENDUM V

CHAIR EDWARDS: Okay, if there aren't any further question, we'll move on to Item 5. Review the Maine Glass Eel Quota Provision of Addendum V, with Caitlin Starks.

MS. STARKS: I have a very quick presentation to talk about this issue. The context on this is that Addendum V to the Eel FMP established a quota that is specific to Maine's glass eel fishery, and that quota is 9,688 pounds. That was based on Maine's landings in 2014 of glass eels. In Addendum V it establishes that the quota level would be set for three years, so it started in 2019 and went to 2021, and then after that point it could be revisited by the Board before Year 4, which was 2022.

Addendum V also states that if the Board decided to maintain the glass eel quota at the same level, then it could be extended for an additional three years without requiring a new addendum. But that means the quota could only be extended through 2024. In 2021 the Board did decide to extend this quota through 2024, but for 2025 and onward, Maine's glass eel quota has to be established via a new addendum.

For that reason, this issue is just being flagged for the Board to consider now, so that we can have something in place in time for the 2025 fishing year. In the event that just occurred with the other addendum initiated, the Board could consider adding this to that addendum, or initiating a separate addendum. I can take any questions.

CHAIR EDWARDS: Thank you, Caitlin, for the update. Are there any questions for Caitlin? Emerson.

MR. HASBROUCK: I'm just wondering a little bit on history here. How is it that Maine was the only state that ended up with a glass eel fishery, and what are some of the reasons that we should consider continuing that?

MS. STARKS: I'm going to defer to Toni, who has had more time on this species.

MS. TONI KERNS: I believe it was even potentially the original FMP which stated that all states had to maintain their current levels of fishing, and that included the glass eel fisheries. Then that continued again as we went through the management documents, and some states dropped their glass eel fisheries over time if they had existing ones, probably back in the early '80s, or in between the '80s and '90s.

Through those states dropping their glass eel fisheries, and the FMP being revised and it restating that you couldn't have a glass eel fishery unless you had one at the time at that document, those states glass eel fisheries were, I guess weaned out of the system, you may say. There is, Emerson, a small glass eel fishery with that in South Carolina, but it is an insignificant amount of fish that are being harvested. That's kind of how it occurred.

CHAIR EDWARDS: Thank you, Toni, any further questions for Caitlin? Lynn.

MS. FEGLEY: Caitlin, is there an easier way, is there a way that you would prefer that this be in the same addendum with the other, or is there a preferred method for you, for staff?

MS. STARKS: Thanks for that question. It's a little tricky in that this has a limited timeline. Maine can not have a glass eel fishery in 2025 if they don't have a new addendum to establish their quota. It is something that needs to be dispensed with before 2025, and the other addendum, if it ends up being a longer process could potentially delay that. We could put these two items together now, and then if we are seeing that the addendum for the yellow eels is taking longer than expected, then we could split.

MS. FEGLEY: One of the reasons I ask that is, you know the irony is a little rich, you know just that we're talking about the issues with the yellow eel, but then we're also talking about what we're going to do with the glass eel quota. I guess it sounds to me like they may be better separated. But I think again, that is sort of a communication piece here, where yellow eel is troubled, glass eels are not.

CHAIR EDWARDS: Emerson.

MR. HASBROUCK: Thank you, Mr. Chairman, for a second opportunity. Yes, I have to agree with Lynn. We may be going forward here with either one addendum, is that where we are? We may be going forth with one addendum here that at the same time is considering a reduction in harvest for yellow eels, yet it's contemplating to continue harvest for the continuation of the glass eel harvest, or we may end up with two different documents that are going forward at the same time that are doing just that. Contemplating a reduction in the yellow eel harvest but allowing a glass eel fishery to continue at the level it has been continuing. A bit of a dichotomy. I'm having a little trouble accepting that.

CHAIR EDWARDS: Megan.

MS. MEGAN WARE: I think the goal today is to initiate an action to consider what the elver quota is 2025 and beyond, and so I have a motion prepared to do that whenever the Board Chair is ready. Obviously, we have a coastwide stock assessment that is not giving us great advice, or I should say, let me rephrase that.

We have a coastwide stock assessment that is not showing great stock status for the stock. We don't have any quota advice coming from status reference for the elver fishery prepared for us. This fishery is incredibly important to Maine. I don't think I need to over emphasize that. As we'll talk about in the next agenda item.

I would juxtapose what we see in the coastwide assessment with what we're seeing in Maine, which is ICPUEs, old quota utilization, and a young-of-year index that is one of the few that has a positive trend coastwide, and over the last few years has just markedly increased. We'll look at that I think next, but it's a tricky situation trying to balance what we see coastwide versus, I think a pretty different experience we're having in Maine.

There is interest from the industry in increasing the elver quota, I don't think VMR is here advocating for that today, given what we're seeing in the assessment. But our goal today is to initiate an addendum for that elver quota. I think to the timing, we do have a bit of a time limitation on the elver quota, so if we need to split off the addendum we can. But we can see how it's going as we move forward. But again, today is initiating that conversation.

CHAIR EDWARDS: Dan McKiernan.

MR. DANIEL McKIERNAN: Yes, I would be in favor of separating these two into separate addendums, especially since the one Megan is talking about it more time sensitive. It is conceivable that we could

have near status quo, in the first addendum we talked about, so I would be in favor of making them separate.

I would be interested, maybe if the PDT could look at whether the Maine drainages, for which there is a glass eel fishery, might be having an effect on the overall trends in yellow eels. Maybe Kristen you could comment. Are there any Maine drainages in that multisystem index of yellow eels?

DR. ANSTEAD: We don't have a Maine yellow eel index, but one of the requirements of Maine keeping their glass eel quota, is that they do a life-cycle study, and so we will have one. They have been collecting data for that. In a large system we have seen it, it's just not long enough to put in the stock assessment yet.

MR. McKIERNAN: In light of all the work that Maine has done to open up new habitat, I think it is appropriate to keep it separate.

CHAIR EDWARDS: John Clark.

MR. CLARK: Just if we do start a new addendum about the glass eels, of course one of the reasons we've always decided to allow glass eel fishery is because the thought that a very extremely small portion of them actually will make it to yellow and then silver eel. But will this addendum keep the same guidelines or create new guidelines, if other states decided that they wanted to get into the glass eel fishery?

From what I understand, the demand for glass eels just keeps increasing, and we saw the mess they had up in Canada. Not saying that we want to do that, but the demand will be there. That creates a pressure for poaching. You know we have just the sight that we use for our young-of-the-year survey. There have been days where just with one four-foot fyke net we probably caught enough eels to buy a new truck. I mean it's just crazy. Just curious.

MS. STARKS: Just to offer some background context. I believe that the FMP says that any state or jurisdiction can request allowances for commercial harvest of glass eel, based on stock enhancement programs that were done after January 1, 2011. That proposal would have to get reviewed and approved by the Technical Committee and the Board. I believe if any other state wanted to implement a glass eel fishery, they would need to go through that process, unless that has changed in a future addendum.

CHAIR EDWARDS: Okay, are there any other questions? Would someone be willing to put forward a motion? Megan Ware.

MS. WARE: Move to initiate an addendum to address the Maine glass eel quota.

CHAIR EDWARDS: Dan.

MR. McKIERNAN: Second.

CHAIR EDWARDS: Okay, would the makers like to discuss around this motion?

MS. WARE: I think we've had a lot of discussion. At this point we don't have a quota for 2025 and beyond, so we need to have that discussion.

CHAIR EDWARDS: Malcolm Rhodes.

DR. MALCOLM RHODES: Just for information, South Carolina we've talked about before, we allow ten harvesters. It used to be in a one-mile section, one river. It's mainly kind of a CPUE as much as anything. We still have ten harvesters, and I think we're all set. About five of them went out. Do we need to get a new quota? I mean our harvest was 150 pounds.

MR. MEL BELL: We don't work under a quota we work under the cap.

DR. RHODES: We're just under the cap, okay.

MR. BELL: We're under the trigger.

DR. RHODES: That is why I wanted to double check.

MR. DIZE: Our fishery is managed under that 750-pound trigger that would lead to a full life cycle survey requirement, so we maintain it below that level.

CHAIR EDWARDS: Any other questions or comments? Okay, I'll read the motion. **Move to initiate an addendum to address the Maine glass eel quota. Is there any opposition to this motion? Seeing none; the motion approved by Board consent.**

REVIEW MAINE LIFE CYCLE SURVEY REPORT

CHAIR EDWARDS: We're going to move on to Agenda Item Number 6, Review the Maine Life Cycle Report by Danielle Carty, the TC Chair.

MS. DANIELLE CARTY: My name is Danielle Carty, Fisheries Biologist for the South Carolina Department of Natural Resources, and appointed American Eel TC chair. I'll be giving an update on Maine's Life Cycle Study. This study was led by and this presentation prepared by Jason Bartlett and Casey Clark, marine scientists with Maine's Department of Marine Resources.

Casey will be available at the end of this presentation to answer any outstanding questions that you all may have. Maine's studies all occur in the West Harbor Pond. Their glass eel study was initiated in 2001 per ASMFCs requirements for Young-of-Year study. Their yellow eels' studies initiated in 2018, as well as their silver eel study initiated in 2018.

Sampling for yellow eels occurs through pot fishing, and sampling for silver eels occurs through fyke nets, to collect out migrating silver eels. Their glass eel study begins at approximately the same time the commercial season opens, around March 24, and it continues through June. There are two vertical ramps attached to the dam at the outlet of West Harbor Pond.

Fresh water is supplied to the ramps from early flood tide through late ebb tide. Eels ascend the ramp while the water is flowing, and drop in the boxes secured in the pond. Glass eels are separated from elvers. They are counted or weighed, and they are released back into the pond. The number caught varies from year to year, 2022 resulted in the largest catch since the study began.

Over the course of sampling season 60 fish subsamples are taken for individual measurements, and pigment code determination. As you can see in the graph on the right, this depicts data from 2022, and their average individual ranks and weights tend to decrease as the season progresses. That is just giving you a look at their length vs weight. Here you have their number of glass eels caught by year from 2001 to 2023. You can see that huge increase in 2022. It does dip back down in 2023, but it's still around one of the highest catch years that they've had in 2023. Their yellow eel sampling, here is a little Google Earth image, give you a look at West Harbor Pond and where their 24 pots are. Sampling with these baited eel pots begins in July, and continues through September. These 24 pots are deployed every other week for five cycles, and at set locations around the pond.

They are checked after 24 hours, rebaited and deployed again for another 24 hours. Each time the pots are checked, all the eels are removed. They are measured for length and weight. They are scanned for a PIT tag. If they do not have an existing one, they are tagged with a new PIT tag and subsequently released.

To date, 1,019 yellow eels have been tagged, and many have been recaptured at least once. For silver eel sampling a fyke net is set at the outlet of West Harbor Pond. This starts in September, to catch out-migrating silver eels, and sampling continues until December, or when no more silver eels are caught.

All the eels are removed from the trap, and again scanned for PIT tags. A subsample of length and weight measurements are taken. We are told that rain events tend to trigger those silver eels to migrate, and to date 5,888 silver eels have been captured. This graph depicts the number of silver eels caught from 2018, when the study was initiated, to 2022. Of course, this year's silver eel studies are ongoing.

You can see that they had a large increase in 2021 for silver eels caught, and then it did dip back down in 2022. I do recall Casey saying that in 2021 they captured a good number of eels that were still transitioning, yellow to silver, and when they recaptured them again recently, they were actually still in their transition stage.

This is just a quick overview of any additional sampling methods that they all have. They are doing some aging of otoliths. These otoliths are sectioned, polished and stained to count the annuli. The average ages of silver eels leaving West Harbor Pond are 8 years for males and 14 years for females.

The average length of silver eels leaving West Harbor Pond are 297 millimeters for males and 443 millimeters for females. They have also tested for the swim bladder parasite, the invasive eel parasite *Anguillacoloides Crassus* is present in eels living in West Harbor Pond, and over 50 percent of the eels sampled are unfortunately infected with this parasite. Next slide is opening up to any additional questions, and I will pass that to Casey to answer anything you may have.

CHAIR EDWARDS: Thank you for the great presentation. Are there any questions? Megan.

MS. WARE: I just wanted to comment, kind of in reference to my comment on our previous agenda item. If we go back to that young-of-year abundance index. I believe the last year in the assessment, I was just looking it up, was 2019 from that index. Folks can take a look at what we've seen since then. At that time 2017 was our highest value, so 2020, 2022, 2023 have all been higher than that highest value we had in the assessment.

CHAIR EDWARDS: John Clark.

MR. J. CLARK: Thank you for the presentation. Just curious for the yellow eels. Did you see any territoriality in terms of certain eels showing up in the same pots, because from what I understood like down in our part of the country, where the eels are in ponds. A lot of times they seem to be fairly territorial.

MR. CASEY CLARK: Yes, thank you for that question. We've seen a little bit of certain eels getting caught a few more times than other eels, meaning that you know we sort of call them trap happy to some degree. But nothing that would sort of be to the point where we would want to remove those from the population estimate or something like that.

We certainly haven't seen too much of that sort of recapture that maybe you were seeing there. I think maybe some of that has to do with just having as many pots as we have out, and as many eels that are tagged, that we do generally just sort of see a lot of recaptures of the old around the pond.

CHAIR EDWARDS: Any other questions? John Maniscalco.

MR. MANISCALCO: Megan or whoever else could provide some info. But I'm just wondering how West Harbor Pond compares with kind of the spatial extent of the glass eel fishery in Maine.

MS. WARE: I can try, and Casey can fill in. West Harbor Pond is in Boothbay, so Mid-coast Maine. The glass eel fishery spans the coast, so in the middle, I would say. Casey, I don't know if you want to say anything more about that specific habitat or anything that you've noticed.

MR. C. CLARK: No, I think you hit it on the head there. It is very representative of a coastal population, and the access to the ocean and sort of not having any barriers of passage into that pond is

very similar to a lot of places where we see glass eel harvest around the state.

CHAIR EDWARDS: Thank you, any further questions?

CONSIDER APPROVAL OF 2024 MAINE AQUACULTURE PROPOSAL

CHAIR EDWARDS: Okay, we'll move on to Agenda Item Number 7. Consider Approval of the 2024 Maine Aquaculture Proposal. Caitlin Starks.

MS. STARKS: For this year we only have the one aquaculture proposal from Maine, so I will go over that quickly, and the Technical Committee's comments, and then take any questions. The aquaculture provision is established by Addendum IV, and maintained in Addendum V, and it allows states and jurisdictions to develop plans for aquaculture purposes.

Under an approved aquaculture plan, state or jurisdiction can harvest a maximum of 200 pounds of glass eel annually from within their waters for use in a domestic aquaculture facility. But the state has to show that the harvest will occur from a watershed that minimally contributes to the spawning stock of America eel, and those aquaculture request must include the pounds that are requested.

Location of harvest and dates of harvest, prior approval of any applicable permits, and descriptions of the aquaculture facilities, including capacity and husbandry methods, as well as description of markets that the eels will be distributed to, what the monitoring programs will be, and that they have adequate enforcement capabilities and the penalties that would occur for violations. For 2024, Maine has requested 200 pounds of glass eel for aquaculture. They have been granted aquaculture quota since 2019, and that quota has been put towards the company American Unagi, and American Unagi contracts with commercial eel fishermen in Maine. In 2023 the fishery was similar to 2022, 200 pounds were harvested in both of those years.

The same watersheds were fished as 2022, with the addition of three new locations. The proposal also noted that the catch per unit effort in 2022 and 2023 was higher than in previous years. For 2024, there is no change from Maine's request from last year. They are requesting the same amount of harvest and the same location, same facility, and the same monitoring programs and law enforcement program. The TC did not have any concerns with the 2024 proposal and they recommended approval by the Board. With that I can take any questions.

CHAIR EDWARDS: John Clark.

MR. J. CLARK: Seeing that American Unagi wanted the full 200 pounds for the past couple years, is that the full extent of their stocking, or are they actually using more than 200 pounds? Are they growing that much that they need that much glass eels?

CHAIR EDWARDS: Megan.

MS. WARE: Yes, thanks for the question. I think this is kind of an example of a success story here, where Sara has been really great and responsible at using the quota. She started more as, you know pilot concept, but she now has a full facility in Mid-coast Maine. She is using that full 200 pounds. I think the fact that she had the opportunity to use 200 pounds in the beginning and did not, really speaks to how responsible she has been about using this resource responsibly and respectfully, and shown some restraint.

MR. J. CLARK: Does she have to buy extra?

MS. WARE: She also buys, that is correct.

CHAIR EDWARDS: Any other questions for Caitlin or Megan?

MS. STARKS: The action on this item would just be for the Board to consider approval of Maine's aquaculture proposal for 2024.

CHAIR EDWARDS: Megan.

MS. WARE: If there is no other discussion, I am happy to make that motion. **Move to approve the Maine Aquaculture Plan for 2024.**

CHAIR EDWARDS: John. Would the maker or seconder like any further discussion?

MS. WARE: I think I said what is needed.

CHAIR EDWARDS: Any comments or discussion on the motion? **Any opposition to the motion? Seeing none; the motion is approved by Board consent.**

OTHER BUSINESS

CHAIR EDWARDS: Moving on to the last agenda item, Other Business. Is there any other business to come before this Board? Dan.

MR. McKIERNAN: Just a question. How will the PDT be formed?

MS. STARKS: We will send an e-mail to the Board after this meeting to request nominations.

MR. McKIERNAN: Thank you.

ADJOURNMENT

CHAIR EDWARDS: Any other questions? Seeing none; could I have a motion to adjourn this meeting? Raymond, a second? John Clark. Thank you everyone.

(Whereupon the meeting adjourned at 11:53 p.m. on Tuesday, August 1, 2023)

September 29, 2023

American Eel Board
Chairman Phillip Edwards III
Atlantic States Marine Fisheries Commission
1050 N. Highland Street, Suite 200 A-N
Arlington, VA 22201

RE: Additional information for the ASMFC concerning stock enhancement and quota increase for Maine's Glass Eel fishery under Addendum IV to the Interstate Fishery Management Plan for American Eel.

Commissioners,

In July, we provided the rationale for reviewing and increasing the glass eel quota for fishermen in Maine waters. At that time, we provided a summary of restoration activities solely on the main stem of the Penobscot River completed since 2012. Included here is a selected summary of fish passage improvements that have taken place on other waterways in Maine since 2012. Please note, that there have been many other fish passage improvements in the region during this time that are not shown in this table. We plan on submitting further summaries that will help quantify these projects.

The summary attached includes dam removals, fishway constructions, and passage improvements that have impacted 380 miles of river and stream and over 35,000 lake acres. American eels, at various stages of their life cycle, benefit from these projects.

Thank you for reviewing this information and for continuing to consider our request.

On behalf of the Elver Fisherman Association of Maine,

Darrell Young

Darrell Young
President, Maine Elver Fishermen's Association

Selected Summary of Coastal River and Stream Restoration Activities
2012-2023

Restoration Activity	Waterway	River Miles	Lake Acres	Year
Fishway	Flander's Stream	9	534	2012
Patten Stream Fishway	Union River Bay	20	1,200	2016
Wight's Pond Fishway	Bagaduce River		191	2017
Pierce Pond Fishway	Bagaduce River		110	2017
Cooper's Mill Dam Removal	Sheepscot River	20	700	2018
Dam Removal	Smelt Brook, Frenchman Bay	1.5		2018
Dam Removal	Branch Lake Stream, Union River	5		2019
Head tide dam passage	Sheepscot River	95	3,377	2019
Saccarappa Dam removal	Presumpscot River	5		2019
Fishway	Togus Pond		648	2019
Fishway Reconstruction	Pennamaquan River	2.5		2020
Fish passage/dam removal	China Lake	6.8	3,850	2020
Walker Pond Fishway	Bagaduce River		692	2020
Culvert removal	Jellison Brook, Union River	12		2020
Fish passage improvement	Cobbosseecontee River		20	2020
Frost Pond bridge	Bagaduce River	5	144	2021
Fishway construction	Denny's River		10,481	2022
Walton's Mill Dam removal	Temple Stream	52		2022
Seal Cove Pond Fishways	Blue Hill Bay		299	2022
Milltown Dam Removal	Schoodic River	10		2023
Branch Pond Outlet Dam	Sheepscot River		325	2023
Baskahegan Lake	Penobscot River	137	9,000	2023
	Totals:	**380.8**	**31,571**	

Stock Enhancement Activity Summary

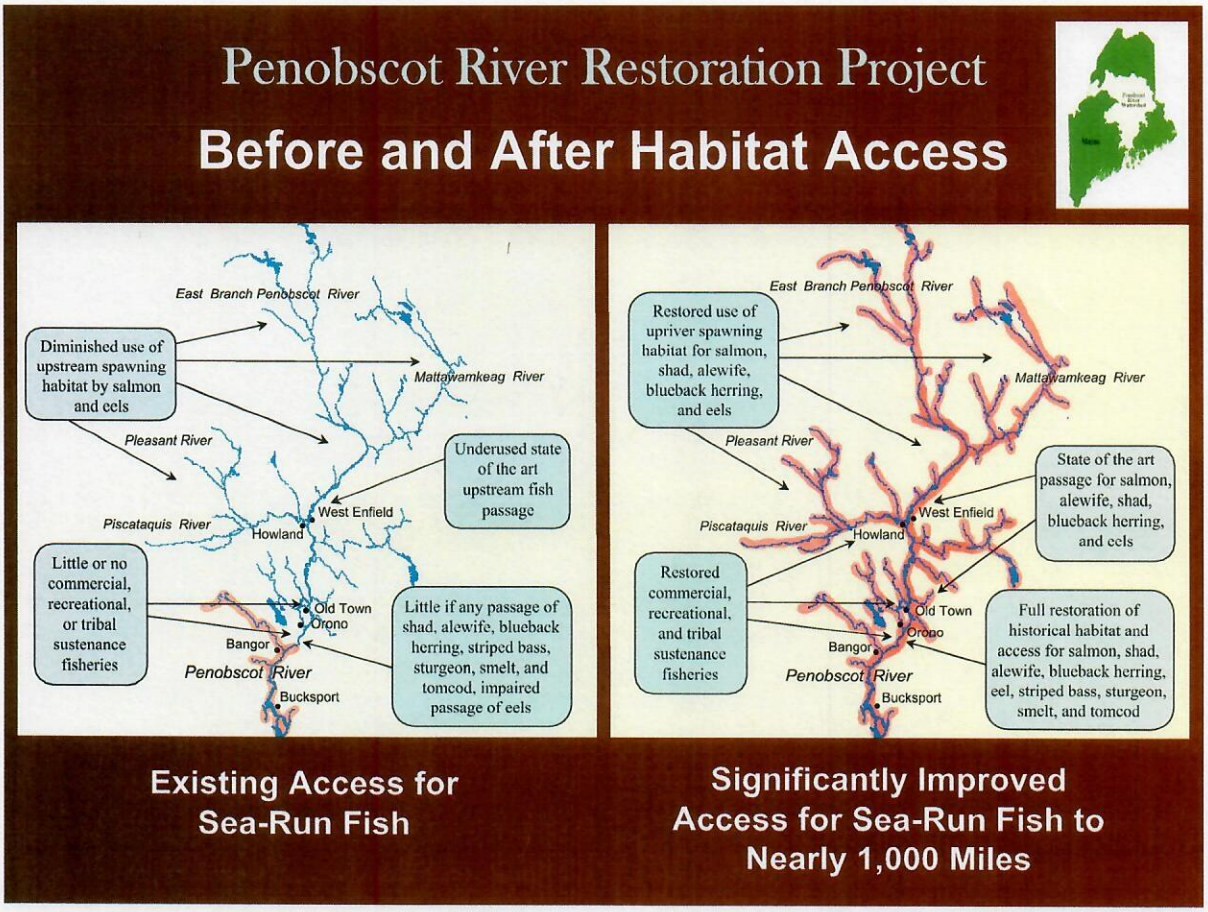
From 2012 to 2016 six major restoration and habitat enhancement activities were completed on the Lower Penobscot River and its major tributaries (the Stillwater and Piscataquis Rivers) as part of the Penobscot River Restoration Project. Collectively these projects directly reconnected over 1,000 river miles and nearly 75% of the area of the Penobscot River Watershed (*Strategic Plan for the Restoration of Diadromous Fishes to the Penobscot River* Maine resource agencies, March 2008*)* and are the result of major investments from State, Federal, and Tribal governments and nongovernmental organizations.

Summary of Major Activities of the Penobscot River Restoration Project:

Activity	Year	Passage Direction
Veazie Dam Removal	2013	up/down
Great Works Dam Removal	2012	up/down
Howland Bypass	2015	up/down
Milford fish lift	2014	up
Orono Dam eel passage	2014	up/down
Stillwater dam eel passage	2016	up/down

These mainstem passage improvements reconnected a watershed drained by over 1,600 miles of river and streams, and over 600 lakes with 254,600 acres of surface area (*Strategic Plan for the Restoration of Diadromous Fishes to the Penobscot River* Maine resource agencies, March 2008*)*.

Supporting work throughout the watershed continues to reconnect smaller tributaries and sub-drainages and is guided and funded by State, Federal, and Tribal governments and nongovernmental organizations.



Map by the Natural Resource Council of Maine:
https://www.nrcm.org/wp-content/uploads/2018/11/HabitatAccessbeforeandafterPRRP.pdf

Sources:

https://webapps2.cgis-solutions.com/MaineStreamViewer/#

https://www.asf.ca/our-work/restoration

https://mainerivers.org/projects/china-lake-outlet-stream-restoration/

https://www.atlanticfishhabitat.org/project/the-sheepscot-river-barrier-removal-whitefield-and-alna-maine/

https://www.mcht.org/conservation-work/initiative/seal-cove-pond-fishways/

https://www.mainesalmonrivers.org/post/fish-passage-dennys-river

https://www.bangordailynews.com/2012/10/01/news/sullivan-culvert-project-aims-to-ease-erosion-fish-access-issues-2/

https://www.toguspond.org/dam

https://70ce26.p3cdn1.secureserver.net/wp-content/uploads/2012/10/ACFHP-project-factsheet-FY15-ME-1.pdf

https://www.pressherald.com/2019/07/16/dam-removal-begins-on-presumpscot-river-in-westbrook/

https://frenchmanbay.org/jellison-brook/

https://70ce26.p3cdn1.secureserver.net/wp-content/uploads/2012/10/ACFHP-project-factsheet-FY17-ME.pdf

https://www.maine.gov/dmr/news/wed-12142022-1200-148-million-national-oceanic-and-atmospheric-administration-grant-bolsters

https://www.fws.gov/story/rallying-round-presumpscot

https://mainerivers.org/projects/china-lake-outlet-stream-restoration/

https://www.fishermensvoice.com/archives/201711AlewifeRestorationProjectPartII.html

https://penobscotbaypress.com/news/2020/apr/23/sedgwick-may-partner-up-to-bring-back-alewife-runs/

https://www.mainebiz.biz/article/dam-upgrade-brings-cobbosseecontee-watershed-closer-to-commercial-fishing

https://atlanticsalmonrestoration.org/projects/walker-pond-bagaduce-river-restoration-project\

Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: **American Eel Management Board**

FROM: **American Eel Plan Development Team for Yellow Eel**

DATE: **October 3, 2023**

SUBJECT: **Request for Feedback on Management Options for Yellow Eel Draft Addendum**

In August, in response to the assessment findings the American Eel Management Board (Board) initiated an addendum to consider changes to the coastwide yellow eel harvest cap. The current coastwide cap of 916,473 pounds was set based on the average landings from 1998 to 2010. The benchmark assessment proposes a new tool, called I_{TARGET} for setting the coastwide cap based on abundance indices and catch. The Plan Development Team (PDT) was tasked with developing a draft addendum that considers using this tool to recommend a range of coastwide caps and management options.

The PDT met twice in September 2023 to discuss potential management options for consideration in the addendum. Below are some preliminary recommendations from the PDT.

- The addendum should include as an option one catch cap based on the stock assessment recommended configuration of I_{TARGET} (1974-1987 reference period, 1.25 multiplier, and 0.8 threshold).
- The addendum should also include an option using the 1988-1999 reference period with different multipliers and thresholds.
- Each option should clearly indicate what target abundance level (relative to the reference period) it is aiming to achieve.
- The addendum should consider some additional options for a management response to exceeding the catch cap, in addition to status quo from Addendum V. It should be noted that landings from Maryland alone could be high enough to exceed some of the caps recommended by I_{TARGET}.
- The catch cap should be reevaluated no sooner than three years after implementation.
- When reevaluating the catch cap, the PDT does not recommend changing the I_{TARGET} configuration, but rather adding additional years of data.

Another management strategy the PDT discussed is considering options that would allow states to explore implementing a glass eel fishery in exchange for significantly reducing yellow eel landings or closing their commercial yellow eel fishery. This idea is grounded in the understanding that the glass eel fishery could withstand a greater amount of fishing mortality than the yellow eel fishery in part due to the greater natural mortality that glass eels experience compared to yellow eels. These options could build off of the Addendum IV (2014)

provision that allowed states to request an allowance for commercial glass eel harvest based on stock enhancement programs. The PDT is interested in further exploring options for states to pursue glass eel harvest as an alternative to yellow eel harvest in order to reduce mortality on the yellow eel life stage.

The PDT is seeking additional guidance from the Board on the development of draft management options. Specifically, the PDT is looking for input on the following questions:

- What levels of abundance should the addendum options aim to achieve? I.e., what multiplier values should be considered (1, 1.25, 1.5)?
- Does the Board want to reconsider the use of state-by-state quotas? If not, how will states control or reduce yellow eel landings to prevent exceeding the coastwide cap?
- Are there bounds on the landings caps the Board is willing to consider?
- Does the Board want to use the same process established in Addendum V if the coastwide landings exceed the cap?
- Should the PDT further explore options for states to pursue glass eel harvest in exchange for reducing or eliminating yellow eel harvest?

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American Eel Yellow Eel Plan Development Team
Meeting Summary

Webinar
September 12, 2023

Plan Development Team Members: Brad Chase (MA), Jen Pyle (NJ), Todd Mathes (NC), Troy Tuckey (VA), Sheila Eyler (FWS), Kirby Rootes-Murdy (USGS), Caitlin Starks (ASMFC)

Additional Attendees: Raymond Kane

The American Eel Plan Development Team (PDT) for yellow eel met via webinar to begin developing a draft addendum to consider using the I_{TARGET} tool recommended in the recent benchmark stock assessment to recommend various catch caps. This addendum was initiated in response to the assessment findings that the American eel stock is depleted, and fishing is likely having a negative impact on the stock.

Staff reviewed the current management program. Sheila Eyler presented on the I_{TARGET} tool and how it can be configured. There are three "knobs" that can be adjusted in the tool.

1. Reference period: the reference period should be a time period where the population is stable or at a desirable abundance level.
2. Multiplier: The multiplier determines the level of abundance that management is aiming to achieve. A multiplier of 1 is equal to the abundance from the reference period, and a multiplier of 1.25 increases the abundance from the reference period by 25%.
3. Threshold: This value reflects goals of the fishery. If landings exceed the threshold, then future landings are reduced. A threshold of 0.5 is less conservative, whereas a threshold of 0.8 was recommended by the NEFSC.

The assessment recommended using a reference period of 1984-1987, which represents a period of high abundance. The management Board also requested evaluating a reference period when more surveys were available (1988-1999). This reference period reflects a lower abundance value relative to the first, but higher than recent years. The stock assessment used a multiplier of 1.25 rather 1.5, because it recognizes that more factors beyond fishing have influenced the stock and it might not be achievable to aim for higher abundance. The Stock Assessment Subcommittee (SAS) recommends using the values recommended in the assessment for the reference period and the multiplier, and using the threshold value to produce alternate catch caps.

The PDT noted that it would be a challenge to update the I_{TARGET} annually because of the timing of data availability. They recommend considering reevaluating the catch cap using I_{TARGET} on the same schedule as assessment updates. It was also noted that this addendum would most likely not be implemented before the 2025 fishing year.

The PDT discussed the merits of considering use of the later reference period. They agreed it should be considered because of data reliability issues in older years, and more surveys being available for the later period.

The PDT agreed on the following preliminary recommendations for the draft addendum:

- Include as an option one catch cap based on the stock assessment recommended configuration of I_{TARGET} (earlier reference period, 1.25 multiplier, and 0.8 threshold)
- The addendum should include some options using the later reference period with different multipliers and thresholds
- It should be clear in each option what the target abundance level is that it is aiming to achieve
- The addendum should consider some additional options for a management response to exceeding the catch cap, in addition to status quo from Addendum V

The PDT discussed the following topics where they feel guidance is needed from the Management Board:

- The Board should provide input on what abundance level they want to aim to achieve
- Does the Board want to reconsider the use of state-by-state quotas? If not, how will states control or reduce yellow eel landings to prevent exceeding the coastwide cap?
- Are there bounds on the landings caps the Board is willing to consider?
- Does the Board want to use the same process established in Addendum V if the coastwide landings exceed the cap?
- How often does the board want to reevaluate the catch cap?
- When reevaluating the catch cap, the PDT does not recommend changing the I_{TARGET} configuration, but rather adding additional years of data.

The PDT identified the following tasks to be completed before the next meeting.

- Draft a memo to the Board with draft options and a request for feedback
- Develop questions and/or options for fishery goals and how to control landings
- Develop language to explain the scientific basis of the “knobs” in I_{TARGET}
- Run additional combinations in I_{TARGET} using the later reference period

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American Eel Glass Eel Plan Development Team
Meeting Summary

Webinar
September 14, 2023

Plan Development Team Members: Brad Chase (MA), Casey Clark (ME), Robert Atwood (NH), Dani Carty (SC), Margaret Conroy (DE) Caitlin Starks (ASMFC)

The American Eel Plan Development Team (PDT) for glass eel met via webinar to begin developing a draft addendum to address the quota for Maine's glass eel fishery. Maine's glass eel quota has been set at 9,688 pounds since 2015. However, a new addendum is needed to establish a quota for the 2025 fishing year and beyond.

Staff reviewed the current management program, the general outline for the addendum, and then the PDT discussed potential management options. All PDT members supported the status quo option. One PDT member would like to see an option included to reduce Maine's glass eel quota, because the assessment indicates the stock is depleted and the Board initiated an action to reduce fishing mortality at the yellow eel life stage.

Other PDT members mentioned that in Maine and Massachusetts glass eel numbers have been relatively high in recent years. Increased CPUE in the Maine fishery and in the life cycle survey have been observed. South Carolina also saw a peak in the glass eel CPUE in 2022.

The PDT decided to investigate the current glass eel provisions further to identify any improvements that could be made through this addendum. In particular they will look into the success of the reporting requirements, the provision for allowing glass eel harvest based on restoration efforts, and the duration of the Maine glass eel quota. They discussed that the reevaluation of the quota could be linked to the stock assessment.

Staff assigned writing tasks to PDT members.

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MEMORANDUM

TO: **American Eel Management Board**

FROM: **American Eel Advisory Panel**

DATE: **September 25, 2023**

SUBJECT: **Advisory Panel Report**

The Advisory Panel (AP) met virtually September 21, 2023 to review the recent benchmark stock assessment, receive an update on ongoing management actions, and provide comments on the fishery. Three AP members were in attendance on the call (see below). Staff recommends that jurisdictions revisit their current AP membership in order to improve attendance and participation.

Participating AP Members: Mari-Beth DeLucia (TNC, Chair), Mitch Feigenbaum (PA), Richard Stoughton (SC)

Additional Attendees: Phil Edwards (RIDEM)

Kristen Anstead provided an overview of the recent benchmark stock assessment for American eel. Caitlin Starks provided an update on the recently initiated Draft Addenda to address Maine's glass eel quota and consider changes to the yellow eel coastwide catch limit. Comments on these topics as well as general comments provided by the advisors are summarized below.

Stock Assessment

Mitch Feigenbaum commented that he thinks the stock assessment results are heavily driven by fishery-dependent data, so the low catches in recent years could be influencing the results that are indicating low abundance of the population. Richard Stoughton commented that he thinks there is not enough data to call the stock "depleted."

Mari-Beth DeLucia commented that she remembers when the glass eel monitoring started, and expected that in 20 years the data would be useful to the stock assessment. However that does not seem to be the case. She suggested that young-of-year (YOY) surveys focus more on quality over quantity, and that states could combine resources on a few index sites where there is life cycle monitoring. Kristen noted that there are ongoing discussions with Canada and Europe to develop recommendations on where to focus time and resources on surveys.

Mitch commented that he agrees with the recommendation that biological sampling of the YOY surveys may not be necessary, but he still thinks the YOY surveys are very important for trend

analysis. Survey results that have "no significant trend" are still important and indicative of stability. The Fish and Wildlife Service's position is that recruitment indices are the best indicator of overall reproductive health of species. Variability with no trend is still telling information. If we know certain YOY surveys are not reliable, then those should be improved, and maybe we should narrow down the YOY surveys to focus on the ones of better quality. The Technical Committee could evaluate them to identify any that are not are not meaningful. He also suggested that genetic work could be done to look into the genetic diversity of the stock, which could give a better picture of how many reproductive eels there are.

Draft Addenda

Mitch Feigenbaum suggested that the yellow eel addendum should include an option for no change. Status quo seems effective, and they should be able to keep fishing at these historically low levels. He feels that catch is not going to increase because there is nothing to drive it up with the change in markets being drive by eel farms.

General Comments

Advisors noted that the current makeup of the AP seems to be fairly inadequate to present opinions or insights on any of the ongoing issues, given that only two commercial fishermen were on the call. It seems that AP participation has been almost nonexistent for the last three or four years.

They emphasized that the Board should know the AP is only lightly functioning, and the states may want to look at their AP membership to get more participation. The reason for low participation could be that the yellow eel fishery in the US has been reduced to almost nothing. Mitch Feigenbaum commented that this reduction is due to eel farms, which have changed the dynamics for eel markets. Now, most of the eel supply for consumptions is being provided by these farms. Worldwide consumption of eel seems to be steady, but the amount produced by wild fisheries is minimal. He added that four years ago, ASFMC responding to the previous stock status determination by imposing a significant coastwide cap that would trigger management if it were exceeded. At the time, the industry expressed concerns that if catches are good and they hit the cap, then they might be punished. But if they fish under the cap, then the assessment is citing those lower catches as evidence of low abundance. Without efforts by the SAS to better understand CPUE and other FI data, he feels they are not getting a fair stock assessment.

Mitch also commented that the price of eels in the worldwide market has gone up over last five to six years, and even more so with inflation. He thinks the low harvests of last five years have no relationship to eel abundance. Rather, the amount of fishing has decreased. The yellow eel fishery has been moribund for a number of years now.

The advisors discussed that the AP Chair role has not changed hands in over six years. They would like to see a new AP Chair be elected. Staff acknowledged this, but noted that the lack of participation is a challenge.

Atlantic States Marine Fisheries Commission

Interstate Fisheries Management Program Policy Board

October 19, 2023
9:45 – 11:45 a.m.
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 *(S. Woodward)*	9:45 a.m.
2.	Board Consent • Approval of Agenda • Approval of Proceedings from July and August 2023	9:45 a.m.
3.	Public Comment	9:50 a.m.
4.	Executive Committee Report (*S. Woodward*)	10:00 a.m.
5.	Consider Approval of Revised Conservation Equivalency Policy and Technical Guidance Document (*T. Kerns)* **Final Action**	10:05 a.m.
6.	NOAA Fisheries update on North Atlantic Right Whale Funding from the Inflation Reduction Act (*J. Hare)*	11:00 a.m.
7.	Committee Updates • Assessment Science Committee **Action** (*J. Patel*) • Law Enforcement Committee (*K. Blanchard*) • Atlantic Coastal Fish Habitat Partnership (*S. Kaalstad*) • Habitat Committee **Final Action** (*S. Kaalstad*)	11:20 a.m.
8.	Review Noncompliance Findings, if necessary	11:45 a.m.
9.	Other Business/Adjourn	11:45 a.m.

The meeting will be held at Beaufort Hotel (2440 Lennoxville Road, Beaufort, North Carolina; 252.728.3000) and via webinar; click here for details

MEETING OVERVIEW

ISFMP Policy Board
Thursday October 19 3, 2023
9:45 – 11:45 a.m.
Hybrid Meeting

Chair: Spud Woodward (GA) Assumed Chairmanship: 10/21	Vice Chair: Joe Cimino (NJ)	Previous Board Meetings: August 3, 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 July and August 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 (10:00-10:05 a.m.)
Background • The Executive Committee will meet on October 18, 2023
Presentations • S. Woodward will provide an update of the Executive Committee's work
Board action for consideration at this meeting • none

5. Review and Consider Changes to Conservation Equivalency: Policy and Technical Guidance Document (10:05-11:00 a.m.) Final Action
Background • The Executive Committee (EC) tasked the Management and Science Committee (MSC) to review the *Conservation Equivalency: Policy and Technical Guidance Document*. The Executive Committee requested a series of question regarding conservation equivalency. A sub group of the MSC members and others addressed the EC's questions. Based on these questions and guidance from the EC staff has revised the

guidance document. The changes provide more structure and details to the document.
- The Board reviewed draft changes and provided feedback to staff to make changes to the document.
- Staff drafted a revised draft based on Board feedback with options for the Board to consider in October (**Meeting Materials**)

Presentations
- T. Kerns will review a draft to the *Conservation Equivalency: Policy and Technical Guidance Document*.

Board action for consideration at this meeting
- Consider changes and options presented in the draft document.
- Approve final changes to the *Conservation Equivalency: Policy and Technical Guidance Document*.

6. NOAA Fisheries update on North Atlantic Right Whale Funding from the Inflation Reduction Act (11:00-11:20 a.m.)

Background
- The Department of Commerce and NOAA announced next steps to conserve and recover endangered North Atlantic right whales (NARW) with $82 million in funding
- New funding will support the application of existing technologies (e.g. PAMs) and the development and implementation of technologies to enable vessels to detect and avoid NARW and other large whales.
- NOAA Fisheries will continue to develop and evaluate new technologies—such as those that use high-resolution satellite information—to transform NARW monitoring and improve understanding of the whales' distribution and habitat use.
- NOAA will invest in four major areas over the next 3 years to include monitoring and computer modeling of whale distribution, vessel strike risk reduction, on-demand fishing gear, and enforcement efforts.

Presentations
- J. Hare will provide an update on NOAA's plans for allocating the $82 million

Board action for consideration at this meeting
- None

7. Committee Reports (11:20-11:45 a.m.) Final Action

Background
- The Assessment Science Committee met in September and discussed changes in the assessment schedule for river herring and spot.
- The Law Enforcement Committee (LEC) will meet on October 16-17
- The Atlantic Coast Fish Habitat Partnership (ACFHP) will meet on October 16-17.
- The Habitat Committee will meet on October 18-19. The committee has completed the Fish Habitats of Concern (FHOC) document. The document describes the regulatory and policy context for habitat descriptions in Commission Fishery Management Plans; and it provides descriptions of FHOC for species managed only by the Commission, plus Atlantic sturgeon.

Presentations • J. Patel will present the changes to the assessment schedule • K. Blanchard will present an update on the LECs work • S. Kaalstad will provide an update of the ACFHP's work • S. Kaalstad will present the Fish Habitats of Concern document for Board review
Board action for consideration at this meeting • Approve the Commission's Assessment Schedule • Approve the Fish Habitats of Concern Document

8. Review Non-Compliance Findings, if Necessary Action

9. Other Business

10. Adjourn

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

ISFMP POLICY BOARD

Webinar
July 11, 2023

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Draft Proceedings of the ISFMP Policy Board – July 2023

ATTENDANCE

Board Members

Pat Keliher, ME (AA)
Cheri Patterson, NH (AA)
Dennis Abbott, NH proxy for Sen. Watters (LA)
Dan McKiernan, MA (AA)
Raymond Kane, MA (GA)
Jason McNamee, RI (AA)
Justin Davis, CT (AA)
Bill Hyatt, CT (GA)
Jim Gilmore, NY, proxy for B. Seggos (AA)
Emerson Hasbrouck, NY (GA)
Joe Cimino, NJ (AA)
Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)
Kris Kuhn, PA, proxy for T. Schaeffer (AA)
John Clark, DE (AA)
Lynn Fegley, MD (AA, Acting)
Pat Geer, VA, proxy for Jamie Green (AA)
Chris Batsavage, NC, proxy for K. Rawls (AA)
Mel Bell, SC (AA)
Doug Haymans, GA (AA)
Spud Woodward, GA (GA)
Erika Burgess, FL, proxy for J. McCawley (AA)
Marty Gary, PRFC
Mike Ruccio, NOAA
Chris Wright, NOAA

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

Staff

Robert Beal
Toni Kerns
Tina Berger
Madeline Musante
Patrick Campfield
Tracey Bauer
Geoff White
Julie DeFilippi Simpson

Guests

Megan Ware, ME DMR
Renee Zobel, NH F&G
Nichola Meserve, MA DMF
Max Appelman, NOAA
Pat Augustine, Coram, NY
Jeff Kaelin, Lund's Fisheries
Mike Celestino, NJ DEP
Ryan Silva, NOAA
Scott Travers, Rhode Island Saltwater Anglers Association
Jesse Hornstein, NYS DEC
Todd Smith, NOAA
Scott Curatolo-Wagemann, Cornell
Maureen Davidson, NYS DEC
Michelle Duval, MAFMC
Robert Gill
Tara McClintock, Cornell
S Meyer
Brandon Muffley, MAFMC
Brian Neilan, NJ DEP

The Interstate Fisheries Management Program Policy Board of the Atlantic States Marine Fisheries Commission convened via Webinar, Tuesday, July 11, 2023, and was called to order at 1:00 p.m. by A.G. "Spud" Woodward.

CALL TO ORDER

CHAIR SPUD WOODWARD: Good afternoon, everybody. This is Spud Woodward; Governor's Appointee Commissioner from Georgia, and Chair of the ISFMP Policy Board, and I want to call this meeting of the Board to order.

APPROVAL OF AGENDA

CHAIR WOODWARD: Our first item of business is consent with the agenda. That is a pretty straightforward one item agenda. Are there any recommendations from the Board to modify the agenda? If so, signify by raising your hand, and Toni can recognize you. Give everybody a second or two. Do we have anything, Toni?

MS. TONI KERNS: I have no hands, Mr. Chair.

CHAIR WOODWARD: All right, then we'll consider the agenda accepted by unanimous consent.

PUBLIC COMMENT

CHAIR WOODWARD: Next agenda item is public comment. Do we have any members of the public who are listening in, who wish to comment on the item on this agenda? Again, signify by raising your hand, and you'll be recognized.

MS. KERNS: We have one person; it is Robert Gill.

CHAIR WOODWARD: All right, Mr. Gill, I'll give you a couple three minutes to make your comments, so go ahead.

MR. ROBERT GILL: Thank you, Mr. Chairman, my name is Bob Gill, and I appreciate this opportunity. I'll only take a couple minutes. I am a member of the Gulf of Mexico Fishery Management Council, and for those of you that don't know, we are in the very early stages of looking at whether an RSA program might be appropriate for the Gulf.

Brandon gave us a layout of the Mid-Atlantic's current status, it seems like forever ago, but we're looking closely at what you all are doing, and hopefully that will provide us some guidance on what may be suitable for us. With that, thank you, Mr. Chairman.

CHAIR WOODWARD: Thank you, Bob, and glad to have you listening in. Certainly, if you have some questions later on during the presentation, just let me know, and we'll make sure you get an opportunity to ask those questions. All right, we'll move on to our action item in the agenda, and for that I'm going to call on Bob, to sort of give us some background and context. Then he will allow Brandon Muffley to come in and give us a presentation on the topic for our consideration, so Bob, are you ready to go?

DISCUSS AND MAKE A RECOMMENDATION ON THE FUTURE OF MID-ATLANTIC FISHERY MANAGEMENT COUNCIL'S RESEARCH SET-ASIDE PROGRAM

EXECUTIVE DIRECTOR ROBERT E. BEAL: Yes, thank you, Mr. Chairman. I'll make this very brief. I think Brandon is going to hit a lot of the highlights on, you know where this program has come from and what the potential options moving forward are. The Policy Board has discussed this issue a couple times, and really hasn't decided the direction they want to move forward.

There is, as everyone knows, RSA Program existed for a number of years, and Brandon will talk about the good parts and the bad parts of the previous incarnation of the Research Set-aside Program that ASMFC and the Mid-Atlantic Council implemented. Ultimately, it is really a Council program, but a lot of the pieces of this fall on the Commission.

Actually, fall on the member states of the Commission through enforcement and administrative activities, including licensing, et cetera. Then our species management board had also mirror actions by the Councils to set aside a portion of the quota, so that we're working with the same quotas from year to year.

As Brandon will mention, there were a number of enforcement and administrative burdens that concern the states. There was some concern that the science that was generated through this program wasn't directly contributing to, or all of it was. Some of it was not contributing is the best way to say it.

Some of the science was not contributing to improving the management of the species that were being set aside and used to support the program. Given the enforcement concerns and the concerns about the quality and end-use of some of the science, the program was discontinued in 2015, and it has been idle since then.

The Mid-Atlantic Council spent a lot of time and a number of workshops trying to explore options on, you know if this program moves forward, how should it be modified to address those concerns of the last iteration of this program? The question for the Policy Board today, and we'll have a couple slides on this at the end of Brandon's presentation, is what does the Commission want to say to the Mid-Atlantic Council regarding the future of this program?

Do we want to sort of wholeheartedly say go forward, and continue exploring ways to reinstate the RSA Program? Are there concerns from the states that you want to do the opposite, which is encourage the Mid-Atlantic Council not to move forward with this, due to the administrative burdens, or is there somewhere in the middle?

Where you limit the number of species, or limit the number of participants, or conduct a program significantly different than the last time, to make it workable and enforceable, but still producing valuable science that is needed across all these species? I think with that, Mr. Chairman, I'm happy to answer any questions. But I think the presentation by Brandon will really highlight all the details that I kind of went through very quickly here.

CHAIR WOODWARD: All right, thank you, Bob, any questions for Bob about the background and sort of the context for what we're trying to accomplish this afternoon? No hands?

MS. KERNS: No hands.

CHAIR WOODWARD: Very good. All right, Brandon, I'll turn it over to you.

OVERVIEW OF RESEARCH SET-ASIDE PROGRAM

MR. BRANDON W. MUFFLEY: Great, and thank you, Mr. Chairman, and thanks to the Policy Board for giving me an opportunity to talk to you today. It's good to hear your voices, and talk through this. I think as Bob had indicated, this work is really critical, you know the collaboration with the Commission and state partners on the RSA Program is really critical, in order for the program to be successful and for it to be carried out.

I appreciate the time on the agenda today, and that you all are talking about it to provide the Council with some feedback, in regards to where we want to go. Hopefully, this won't be too long, but I do want to rehash some of the things that Bob had talked about, some of the things that Bob had covered in some previous presentations to the Policy Board.

But to give you a general sense of how the program operated, the work that the Council took in 2021 and '22, to really dive into the issues and see if we could come up with ways to resolve it, and then where the Council is in regards to the continuing redevelopment of the program. We'll start by taking a step back, in regards to when the program was first developed.

This is really one of the first big omnibus actions for the Council. This was Framework 1 to all of our

different fishery management plans. Almost all of our Council species have an RSA program, except for our two clam species, they already had an ITQ Program set up, and they were not included in the RSA Program, but all of our other species were, including those that we jointly managed with the Commission.

We were really trying to with the program, to meet the unaddressed research needs that we had. Right, we all have long lists of research that needs to get done for all of our different fisheries, but not enough money to carry out all of those research needs. But I think the second part of the sentence was really important too, was part of the goal of the RSA Program was really to get scientists and industry together, and talking about ways to improve the science that stakeholders believed in, and trusted in making management decisions.

I think that was a really critical component of why the RSA Program was started, and some of the reasons why I think we sort of lost sight of that. I'll get into that in a little while. But the Framework was approved in 2021, and the first projects funded under the RSA Program started in 2002.

The RSA Program itself, the founding of it, doesn't have any money associated with it, right? We have fish. The Council doesn't have money to be able to hand out to research, but there are fish available. What the RSA Program does is converts those fish that we do have, and converts them into funding.

As Bob had said, what we typically did, particularly for those jointly managed species, when you all meet in August. You would agree to how much of the overall quota or ABC you would set aside for the RSA Program, and that was anywhere from 0 to 3 percent, and that was consistent across all of our species. Every year the Council, during their Spec Setting Cycle for whatever species they were looking at, they would set aside some portion, up to 3 percent, of the quota for research. But again, we still have fish. We don't have money yet, and the way we generate money is through compensation fishing, which is actually defined under Magnuson.

It's really just trying to, allowing for fishing operations to occur, but that offset the cost of research that has direct application to management. We need incentives for fishermen to actually pay to go out to go fishing, right? They already can go out and go fishing for the species that they have permits for, why would they pay to go out and do that?

There are incentives to allow for that to provide for the funding for the research. The incentives really that we have at our disposal are allowing vessels to fish during closed seasons, or when there is a directed quota. When a state closes a particular quota for a particular period, the RSA Program would allow vessels participating in the RSA Program to fish when it was closed, or it allowed vessels to have higher possession limits or trip limits.

Those were the things that fishermen were actually paying for, were to get these incentives to have additional opportunities to harvest fish. Given those incentives, right allowing for folks to fish outside of the season, or have higher possession limits, it required both federal exempted fishing permits to be issued, and typically the state to also have their own exempted fishing permit equivalent, right?

I know when I was in New Jersey, we didn't have anything exactly an exempted fishing permit, but there was a permit available to allow vessels to come in and participate in the RSA Program. How did people participate in the program, and how do we generate those funds? We had grant recipients, which were principal investigators.

They would submit a proposal to do a particular type of a research, and depending upon the research that they were interested in, and the species that they were interested, they were given quota that the Council and the Commission may have set aside for the particular species. Then it was up to the principal investigator to identify partners or fishing vessels to participate, and how they would actually generate the funds. It was really all up to the principal

investigator to decide that, and they really had two options.

The first was these bilateral agreements between the principal investigator and the vessel. This really happened when the vessels and the principal investigator were working together on the research. The research was happening at the same time that these compensation fishing trips were taking place. There was either an agreement between the vessel and the principal investigator about how much a particular species the vessel would pay, or they would split the proceeds from the landings on that research trip, and to help fund the particular research.

That was one way to provide funds. The other was, the principal investigator could take their pounds of fish that they were allocated to support the research, and give it to a third-party auction. There, vessels then would bid on these specific quota lots. For example, a thousand pounds of summer flounder, or 500 pounds of bluefish. A vessel that is not participating in compensation fishing or working directly with a researcher, they would just buy those lots of quota, and allow them then to go out and utilize their 1,000 pounds of summer flounder how they wanted to, either outside of the season or above a state trip limit. Still, the money raised through the auction then, then covered the particular research that was taking place. I think an important note on the third-party auction was that the National Marine Fisheries Service of the Council don't have any authority in regards to the third-party auction. That was happening independently.

The rules and sort of the regulations, and how that was all conducted, was being done independently, because we don't have a mechanism to sort of oversee that third-party auction party. Who participated? It was primarily in the beginning was really commercial vessels. But by the end of the program for-hire vessels were participating, primarily through this third-party auction process, and both state and federally permitted vessels were participating.

I just wanted to step through this. I think Bob had showed this to you at our last when you all met back in May. But I think this is really important for folks to understand who had what roles. This is really a collaborative effort in order for the RSA Program to operate. The Council has very specific areas that they deal with, and it's really the program creation and how it's going to operate, setting aside those quota specifications.

They are also involved in what the research priorities should be and reviewing proposals. NOAA Fisheries, through GARFO and the Northeast Fishery Science Center, they are really overseeing the program administration. All the stuff from the science side, from the permitting side, they are providing technical support.

They are actually the ones selecting the projects at the end of it that actually are going to get funded and be implemented. They provide all of the results, so they are sort of the oversight folks. Then the states and the Commission, sort of everything that's happening, you know on land as those vessels that are participating are bringing home those RSA landed fish.

All of the dockside enforcement that needs to take place, any of the state-specific permitting that needs to take place. There is a lot of quota monitoring that is going on, because there are mixed trips, or someone is going out and landing summer flounder. Some of the summer flounder may be going towards the state-specific quota, some of those landings are going to RSA, so the states need to keep track of where the RSA landings are going.

There is a lot of work from a lot of the different entities in order to make this program happen. Throughout the course of the program from 2022 to 2024, we on average funded 2-5 projects a year. We generated anywhere from a million to two million dollars. Over the course of the program, 39 projects were funded, covering 16 million dollars.

The diagram down there at the bottom is actually all of the RSA Programs that are in place. New England has three different RSA Programs for herring, monkfish and scallops. The blue line that is the scallop RSA, which is really that is sort of the gold standard for how the RSA Program is operated, and the green bar is what the Mid-Atlantic Council revenues were generating on an annual basis. It did produce some quality research, some stuff that was really informative, particularly when it comes to gear related issues, looking at vent sizes and vent shapes to support the appropriate escapement for scup and black sea bass. The RSA Program really funded the NEMAP Program as it was just getting started, so I don't know if we would have a NEMAP Program that we have today without the RSA Program supporting that when it was first getting started, so it was really important to NEMAP. There were some examples of where the research that came out of it was really helpful to management and to the science that we're interested in collecting.

But when you're looking at the species that are available through the RSA Program, not all species have the same value, and I mean value in a few different ways, right? Other than the actual price, some species are worth a lot more at the dock than other species, and not all species have the same incentives.

If a fishery, if the quotas are never met or trip limits aren't binding, or there aren't closed seasons, well, there is a lot fewer incentives in place for some of our species than you have for some of our other ones. Someone is not going to buy a particular species if there is not advantage being give to go out and fish, you know to have a higher possession limit or the ability to fish in a closed season.

But all of our species need research, even the ones that are only worth a few cents at the dock, we're still managing them, and they have research needs, so how do we take advantage of those species that are bringing in money, and still support the research needs of species that aren't generating a lot of funds.

The old RSA Program did allocate some things that 75 percent of the funds that were raised for a particular species, so for summer flounder for example, were supposed to be targeted on summer flounder research, and 25 percent of those funds could be used for other species. There were exemptions for multi-species research like NEMAP.

That is collecting information on all of our different fisheries, and so there wasn't some of these making sure the allocations were split 75/25. But it's also worth noting that the value of our fisheries changes over time. As quotas change the values may change, as incentives change over time. What might be valuable today may not be as valuable in the future, or something that was less valuable in the past may be more valuable in the future.

Trying to keep track of where the values in our fisheries are is going to be challenging, given how things change over time. There were a number of strengths. It did allow for high priority research to be done that didn't require any federal dollars. In order for that to happen, it allowed mangers to participate in deciding what those research priorities were. Again, this goal of really trying to get fishermen and researchers together and working collaboratively, so that folks trust the science that is going into it.

You know, and allow for us to figure out some of the issues that we have with our fisheries. However, as Bob had mentioned, we had a number of issues with the program, and I'm not going to go into all of these. But certainly, there were administrative enforcement costs that when the program was first developed, we never, by the end of the program and how things had changed, never envisioned how much those costs were actually going to be, particularly at the state level.

Maybe those costs began to outweigh the benefits that we were actually receiving. There were a number of different enforcement incentives. There were hundreds of dealer reports that were falsified, and VTRs that were falsified, accounting for hundreds of thousands of underreported summer flounder, which may have led to issues within our

stock assessment, that is why National Standard 1 is there.

That was certainly the most egregious issue, but there were other areas. Like I said, we allowed for-hire vessels to begin to participate in the RSA Program. Well, there is not way to verify what those recreational vessels are landing, because they are not sending any of that information to a dealer, so how do we account for landings that are taking place on the for-hire vessels?

We were getting more and more vessels participating, it said in 2014 that 103 vessels were in the program, that accounted for more than 2,000 trips. That's a lot of enforcement, if you were to try to monitor all of those trips individually, and the research. There were a number of research outcomes that failed peer review, and I think there was some frustration amongst principal investigators.

While NEMAP was really important to fund, and people were behind that. The NEMAP Program utilized almost all of the funds that were available, and so there was little funding for other researchers, and so I think some researchers felt, you know, well what is the point of the program? You know, I'm not going to get any funds, because all the money is going to go to the NEMAP Program.

I think folks were also beginning to get a little bit disenfranchised by the program that was actually in place and the research that was getting funded. That, as Bob had mentioned, led to the suspension of the program in 2015. The Council really started to think about the RSA Program again in 2019, 2020. We still have research needs. We still have a lot of priorities. We still need funds to cover many of those needs. The Council started with a series of exploration workshops in 2021 and 2022, really digging into what were the issues under the old program.

We focused on some of these broader themes of research, funding, law enforcement, monitoring and administration. Out of all of those workshops were sort of recommendations or best practices. A lot of ideas came out of that and sort of that is what the last workshop was, was to sort of synthesize all of the information we got from those first three workshops.

See if we could come up with some initial recommendations that could go to the Research Steering Committee, who oversaw the development of these workshops, and held at the same time a series of their own meetings to really dive into these issues, and the recommendations that were coming out of the workshops.

We also called in our SSC, and we had an SSC Economic Workgroup that was really engaged in all of these workshops and all of our Research Steering Committees, to really dive into the issues. They provide us a lot of science advice, in regards to some of the tradeoffs we might be thinking about in regards to the program, and some of the economic considerations we want to work with. The Research Steering Committee took all of this and tried to come up with a potentially revised program that might address all of these issues that the old program suffered from. I'm not going to spend any time sort of going through this, but the Committee did come up with a series of four goals, and under each goal came up with a number of objectives to meet those goals, again, focusing on some of these larger issues. First one deals with, Goal 1 deals with research, that being the most important thing. We're trying to get research out of our RSA Program, and that should still be our focus. But Goal 2 and Goal 3 get at some of those other issues that we saw under the old program, dealing with enforcement, administration and funding.

Then Goal 4 gets back to that, how do we build collaboration and trust between scientists and our fishing communities. But these goals sort of, you can't maximize all of these things. You can't maximize funding for research while at the same time maximizing the amount of participants you want in the program, because that's going to really increase your administrative and enforcement cost.

There is a lot of tradeoffs behind like, what is the right amount of funding that you need, but allows you to appropriately enforce and monitor the program in view of those things? You can't just let everybody in the program to try to maximize funds, because then you'll never be able to enforce the program again.

It's really trying to understand what those tradeoffs might be, and where the right amount is within each of these goals. Again, I don't plan to go into all of these, I'm just trying to give you a sense that the workshops and the Steering Committee really tried to dive into all of the particular issues that the first program suffered from.

We spent a lot of time on each of these, this is just a list of some of the areas that we sort of dove into and tried to come up with recommendations for the Council to consider. I'll just touch upon; these are some specific proposed changes under those different topics that I just showed on the previous slide.

There is a lot of additional under administrative and enforcement, a lot of additional notification requirements, pre-trip and pre-landing notifications, and maybe the potential to limit where those off-loadings occur, and at what time those off-loadings occurred, not mixing trips. Maybe vessels that are participating need to have some sort of monitoring system on their vessel, either VMS or AIS. We talked a lot about where the states fit in to all of these different components.

One of those under the administration was allowing states maybe to opt in or opt out of participating in the program, similar to, although slightly different to the way we have things under the black sea bass Wave 1 fishery, where folks opt in to participate, and so maybe there are opportunities there for states to view or weigh in, whether or not they want to actually commit the resources to participate in. Why all of this? Why presenting to you?

Like I've said and hopefully made clear, and as Bob had said, any potential future program is really going to require both the Commission and state support and cooperation, in order for any of this to take place. We called out, and I think there was in the background materials, the summary tables. I tried to call out all of those areas where either decisions would be made to the states, or areas where it's going to require a lot of different state investment, so I set this opt in or opt out provision. Whether or not states want to limit the number of vessels and the types of vessels that are going to participate in the program. Do you want to limit where off-loading could take place? Do states want to put observers on these recreational, on these for-hire vessels, to make sure we're appropriately tracking harvest that comes off of those vessels. Using the Commission's Law Enforcement Committee to help develop best practices and standards across all of the different states, in terms of how we're monitoring and dealing with it.

Obviously, there is a lot of state engagement and involvement there. It would likely require, if we were to move forward, a joint management action, either through our framework in an addendum, or an amendment process. It depends on how detailed and how many changes we would actually make to the program, to determine if it would meet an addendum or an amendment. All of those things still need to take place, depending on where do we go with the program. I'm almost done, I think this is my last slide. Where is the Council?

I presented this, this all happened last June, June of 2022. This was all presented to the Council, and actually shortly after that meeting, I actually talked to Bob and the Gulf Council, in regards to where we are. We haven't done a whole lot since June of 2022, and so during that meeting the Council supported the continued redevelopment of the RSA Program, but also recognized there is a lot of work that still needs to happen.

There are still a lot of unresolved issues before they were to make any final decision. We've already identified a number of the critical issues that we still need to work through. There are a lot of specifics

that we need to talk through. But all of that is going to take a lot of time, and it's going to take a lot of resources.

Not only from the Council but also the Commission, the states, from National Marine Fisheries Service, right? This is something now that GARFO, although they did in the past, they haven't been implementing an RSA Program in the Mid-Atlantic, so that is going to require commitments. There are a lot of things that both in the short term to figure out if and how a new program would be run.

Then going forward, it's a lot of work to keep the RSA Program going and operating into the future. There is sort of these long- and short-term cost and resource commitments that we want to make sure that we are all onboard with, before we continue to go down this road, just given the amount of resources it takes to get this program going. That is my last slide, I'm happy to take any questions, and I am looking forward to the discussion.

CHAIR WOODWARD: Thank you, Brandon, appreciate that very comprehensive overview of a complicated subject. But at this point I'm going to open it up to Board members for questions for Brandon. Opportunity to maybe dive a little deeper in to some of the content of these slides. Just raise your hand and then between Toni and I, we'll try to keep things flowing along here.

MS. KERNS: When we're done with questions, I have a couple of slides for the Board to consider as we make a recommendation to the Council. I'm not seeing any hands yet, okay I have one hand. Emerson, you have a question?

MR. EMERSON C. HASBROUCK: Yes, thank you. Actually, with the Chair's permission, I have two very quick questions.

CHAIR WOODWARD: Go right ahead, Emerson.

MR. HASBROUCK: Brandon, I just wanted to verify that back in 2014, the program was suspended not eliminated. Is that correct?

MR. MUFFLEY: Yes, thanks, Emerson. If I had indicated that or said that, that was a mistake. It was just suspended. The program is still in our regulations, it's still there, it still exists, it hasn't been removed from our ability to implement it.

MR. HASBROUCK: Yes, thank you, I just wanted to verify that. Then the second question is, you mentioned in 2022 the Mid-Atlantic Council voted to continue the process to explore the redevelopment of RSA. If I recall, that was a unanimous vote, wasn't it?

MR. MUFFLEY: I would have to go back and doublecheck to verify, Emerson, but I believe so. I believe it was a unanimous vote.

MR. HASBROUCK: Thank you, Brandon. Mr. Chair, I know you're not ready yet, but when you are ready, I do have a motion to offer to the floor. Thank you.

CHAIR WOODWARD: Any other hands up, Toni?

MS. KERNS: We have Lynn Fegley, followed up by John Clark.

CHAIR WOODWARD: All right, go ahead, Lynn.

MS. LYNN FEGLEY: I have a lot of questions, but I guess if I may ask two quick ones. I'm sort of curious, because certainly a concern from our end is the administrative end of that. I mean in Maryland we just simply don't have the bandwidth to add another layer onto quota monitoring.

My question was, I actually maybe wanted to hear from a state who, maybe with the scallop or the monkfish fishery, and just hear a little bit about what sort of effort that they need to put in. Then the other question I had was, if the workgroups at all had any ideas to disentangle the value of the fish from the amount of money that is generated for research, because it seems like, as Brandon pointed out,

different species are worth very different amounts, but all the research is expensive.

If you fish a cheap fish, that PI, you know if he or she is trying to sell quota to a ten cent per pound fishery, they are going to have a much harder time achieving the same level of research than maybe the scallop fishery would. It seems like it would be in a perfect utopic world, the amount of money that is generated for the RSA would be consistent among the critters, and I just wondered if there were any ideas on how to separate those two.

CHAIR WOODWARD: Go ahead, Brandon, if you've got an answer.

MR. MUFFLEY: Yes, I'll try to. Lynn, I can't speak to actually how scallops or monkfish work, but I just will point out, and it was one of the slides that I had put in for the Gulf Council, like scallops operate quite differently than summer flounder, for example. You know it's all federally managed.

It primarily takes place in federal waters. It's primarily from one specific gear type. I'm not saying it's easy. There is a lot of work that goes into the scallop RSA, and it's worth a lot of money, which also makes it more advantageous to support research. But versus, you know where are you with dealing with summer flounder.

Well, we have fishing that is taking place in state and federal waters. You have different types of vessels that are participating, different gear types that are participating. It can be a lot more complex to sort of view it within a particular state, and just speaking from my old experience, when I was in New Jersey and issuing the permits under the RSA Program, just tracking the number of vessels that are participating, because quota can get transferred from vessel to vessel throughout the year.

Knowing how much quota is on a particular vessel for what particular species, it can be quite time consuming, and obviously all of the enforcement that goes into making sure that those things work out. Like I said, and the quota monitoring piece of it, because under the old program, you could land a mixed bag of summer flounder of black sea bass.

Some of those would be going to your state-specific quota, some of those would be going to the RSA, and making sure that RSA landings weren't getting counted against your state quota. Now one of the resolutions, or one of the options that the Research Steering Committee talked about was not allowing for that anymore, that if you were going to go out, use black sea bass RSA, that you could still land other species if you had the appropriate permits for them.

But if you were going out on an RSA trip for black sea bass, all of your black sea bass that you would be bringing in, all had to get counted against your RSA. It couldn't get some of it towards the state quota, no more of that, because that makes things a lot more challenging to sort of monitor and keep track of.

In regards to the different fishing values. I mean that is the hard part, like you said. I mean dogfish isn't worth a whole lot back at the dock, or even bluefish. You know we could get some reasonable amounts of money raised for bluefish, but you saw that bar graph. Almost all of the money generated is through summer flounder and black sea bass.

That is where the value is, that is where the incentives are, because we are fully utilizing those two fisheries. People are willing to pay to take advantages under those two particular species. But recognizing that all of our species have needs, and some of them are never going to generate the amount of money needed for research. But like the scallop program, the scallop RSA only funds research on scallops. The monkfish RSA only funds research for monkfish, where here in the Mid-Atlantic we have utilized that, where recognizing that our species are a little different, we utilize those funds to support research for other species.

CHAIR WOODWARD: All right with Brandon on that?

MS. KERNS: It doesn't look like Lynn had follow up, and then John Clark was next.

CHAIR WOODWARD: Go ahead, John.

MR. JOHN CLARK: Thank you for the presentation, Brandon. My interest was similar to what Lynn asked. Just curious as to, from that experience, the RSA just really seems to work best on high value fisheries, and how does that help offset, obviously the administrative costs are going to be similar across species, or does it vary by species?

It seems like with scallops you were saying, since it's a very directed offshore fishery, maybe that gets folded into the administrative cost easier than it would for some of these lower value fisheries that are pursued more widely, as we have here in the Mid-Atlantic.

CHAIR WOODWARD: Go ahead, Brandon.

MR. MUFFLEY: It's tough for me to speak about the scallop one. Then I will also say about scallops. If you recall, we have in the Mid-Atlantic those two different funding mechanisms that we generally use, right, the auction and those bilateral agreements, where the researchers and industry are working together.

That partnership, that is primarily, from my understanding, how things operate on the scallop RSA, is where those researchers and the industry are working collaboratively. The setup is quite different, you know even just in terms of how things are operated and how the funds are generated for the research there.

I don't know if anybody from GARFO has additional information in regards to like how the administration of that operates differently, and what the associated costs are. But the programs just given the value, given how our fisheries operate in the Mid-Atlantic are just very different than scallops, and so it doesn't lend itself to all of the sort of smoothness that scallops may provide.

CHAIR WOODWARD: Any other hands up, Toni?

MS. KERNS: Mr. Chair, Ryan Silva, who has managed the RSA Program in the GARFO Office of NOAA has his hand up.

CHAIR WOODWARD: All right, go ahead, Ryan.

MS. KERNS: Ryan, you should be able to unmute now.

MR. RYAN SILVA: Good afternoon and thank you. Ryan Silva, GARFO. I do still manage the Research Set-aside Programs. Just to add a little bit more detail to Brandon's explanation. I think he captured it in that when the Mid-Atlantic Program was functioning, I think the administrative burden derived largely from the amount of vessel activity, the number of vessels involved, and the interaction between the federal and state regulations.

You know if the scallop fishery and the monkfish fishery, we monitor the harvest of set-aside, so the reporting requirements are largely the same between programs. We get notification before they leave, before they come back, what was harvested, other information that allows us to correlate the vessel reports with other data sources like VTR and dealer data.

It's just the volume of trips is much lower in the Scallop RSA Program, and then the regulations that those vessels are exempted from are also fewer. I think it's just the nature of the multiple fisheries that interface with the state regulations and the number of the vessels involved.

CHAIR WOODWARD: Thanks, Ryan. Any other hands up for questions, Toni?

MS. KERNS: I do not have any other hands.

CHAIR WOODWARD: I've got one for you, Brandon. Back when the program was operational, and when circumstances arose and people had obviously violated against the terms and conditions of the program, and I guess possibly applicable state laws.

I mean what were the consequences to those individuals that did that?

MR. MUFFLEY: That is a good question, Spud. Those large violations, the ones that I've talked about in regards to summer flounder, those were out of New York. Those individual dealers and fishermen were prosecuted. I don't remember exactly what the fines were, but they were pretty substantial, and loss of licenses and those things. It can be pretty substantial. Some of them though, again, this was one of the points that I had made. Each state has a different type of what you would call an exempted fishing permit.

In order to have these vessels land above your state-specific possession limit, or outside of the season, the states generally need to issue a permit in order for those vessels to come in and offload in your particular state. It's quite varying in regards to what the authority is on those different permits, and what you can actually do. In New Jersey it is not very much.

You could just remove them from that permit, but it really wouldn't carry much else. Those are things where getting feedback from the Law Enforcement Committee, make sure some of these additional permits have the teeth to carry substantial penalties if someone is violating. Certainly, there is opportunities under the federal exempted fishing permit to do that, but some of the state permits are quite varying that allow vessels to do this, and making sure that those have some weight to penalize vessels that break the RSA rules is really going to be important.

CHAIR WOODWARD: Alright, last call for questions for Brandon, if there are not any, I'll turn it back to you, Toni and you and Bob for the questions back to the Board.

MS. KERNS: We have one more hand raised, and that is Jim Gilmore.

CHAIR WOODWARD: All right, go ahead, Jim.

MR. JAMES J. GILMORE: Just to follow up on a little more detail on Brandon's last statement, and the deterrent, in terms of what the fines were. The most egregious in New York, I don't remember the exact numbers, but the penalty was in major dollars of hundreds of thousands of dollars, if not even up to a million, I think.

There was also the individual lost every permit. He had to close his business, was out of the business, and went to federal prison in a maximum-security ward for four months. As bad as it was, the penalties that the individual got was substantial. Hopefully that would be enough of a deterrent that if we go back into this program there are serious consequences if somebody doesn't play by the rules.

CHAIR WOODWARD: All right, Toni, I'll turn it back to you and Bob for questions back to the Board.

MS. KERNS: I think for the rest of the day today, of this call, the time we have allotted. I have a couple of questions for the Board, and trying to determine whether or not the Commission wants to recommend to the Mid-Atlantic Fishery Management Council if the RSA Program continues or not.

A very important question in that portion of the recommendation is, do the states have the administrative capacity to carry out and enforce the program? If the states do not have the administrative capacity, as Brandon highlighted, is that this cooperation between the states and NOAA Fisheries in carrying out this program is essential.

If we do have that capacity, and the Commission does want to make a recommendation to move forward with the program, do we want to have some specifics in our recommendation. Some things just to think about and consider, Brandon went over a bunch of different thoughts that the Research Steering Committee discussed, but a couple of highlights.

Should the program include both the commercial and the for-hire sectors, or only just one of those sectors in moving forward? Should the program be

limited to a specific species or a series of species, if so which ones? Should the program be limited to specific ports and/or dealers, and should a state be able to opt in or out of the program? Meaning, can a state not allow RSA quota to be landed in their state? Those are the questions that I had for the Board to think about, Mr. Chair.

CHAIR WOODWARD: All right, thanks, Toni. I know Emerson, you have a motion pursuant to this first question. Before we get there though, I would like to just open it up for feedback from state folks to this question. Sort of the big question here of, you know are the states that would bear the burden of making this program successful, do they have the capacity to do it? I'll just open up the floor for some feedback on this first question, and then depending on where we go with that and any subsequent motions, we'll perhaps dive a little deeper into those other questions. With that I'll just open the floor up.

MS. KERNS: Okay, I have Dan McKiernan, Bill Hyatt, Jason McNamee.

MR. DANIEL McKIERNAN: From my perspective, Massachusetts does not have the resources to carry out a Mid-Atlantic RSA Program, as was designed in the past. I have a motion as well, and I suggest that it should be specific to the federally managed species, those that are exclusively managed that the Mid-Atlantic Council oversees. Lynn Fegley asked a question about, you know how do these other successful RSA Programs run by New England, what is the state burden in that setting? It's zero.

Those programs don't require my state of Massachusetts to do anything for the scallop set-aside, for the herring set-aside. Although we have been beneficiaries of that. We've worked with some of the vessels. But it doesn't require us to exert any enforcement or compliance or monitoring. I'll just stop there, but I have a whole lot of other points I would like to make, but that is my first point I would like to make at this time.

CHAIR WOODWARD: Bill Hyatt, and then I'll go to J. Mac.

MR. WILLIAM HYATT: This is just a question that I probably should have asked a few moments ago. If it proceeds such that the state has the option of opting out, is it safe to say that their quota, their allocation would not be affected, or is it assumed that the cut for the RSA would come off the top, and that the states would have a diminishment in quota allocation anyways? I ask that primarily, because I was not involved at all in any of the preceding program, and just wondering how it's envisioned that would unfold.

CHAIR WOODWARD: Brandon, I'll let you respond to that if you can.

MR. MUFFLEY: I mean the way it has operated in the past, and I think the Research Steering Committee had some suggestions for how we would maybe do things a little bit differently. But the RSA quota would essentially, it comes off the top. If the Council and the Board agree to take 3 percent of the ABC for, and maybe it's not the ABC.

I don't remember exactly where it gets deducted, but it gets deducted before it gets sent to all of the different states if there are state-specific quotas. If you take 3 percent of summer flounder off everybody's, allocation essentially is going down, because you are taking that off the top before it gets allocated down. Does that make sense, Bill?

MR. HYATT: Yes, thank you. It basically told me it's not just taken from those who opt into the program if they have that option.

MR. MUFFLEY: That's correct, yes.

CHAIR WOODWARD: Go ahead, Jay.

DR. JASON McNAMEE: I'll try not to get too far into the specifics. I think maybe that is for later. But generally, I thought, so we had a lot of RSA, Mid-Atlantic RSA landings in Rhode Island when the program was going on. I felt like we had a decent

system. We had decent accountability. There were things that kind of evolved back then as well.

Like I believe SAFIS has, you know a switch or something in it that you can hit if it is an RSA landing versus a regular state quota landing, so you can differentiate the catch in the electronic dealer reporting. I felt like we had the capacity back then. I feel like we have the capacity now. Although I do think we've learned a lot, and can improve the program.

We can probably get pretty close to the situation that Dan McKiernan was talking about, where the states don't have as much administrative burden if these things are automated to the extent possible. You know I think the RSA in that summary document, I think they identified a lot of the core areas that need to be tightened up.

I guess I have more optimism than some of the comments we've heard so far, that we could redevelop this program. We could do it in a way that doesn't have a huge amount of administrative burden on the states. I think there is a lot of benefits, both to the fishing industry, as well as the state that gets the landings, or gets the outcomes of the research or what have you.

Some of the things I just wanted to mention really quick that they are kind of in some of the background materials, but I just want to emphasize. One of the things that we could do is require any vessel participating in RSA have electronic vessel monitoring of some sort. That is a good technique for having a really high accountability.

Then one other comment I will make is, you know we heard comments about the idea that the research wasn't relevant or wasn't related to the species, and things like that. I agree with that. I think there was a lot of great stuff that came out of it, and Brandon mentioned NEMAP is sort of like the crowning achievement. But there is other good work that came out of the program. You know I think one thing we may need to think about, and I don't remember, this may have been in the background materials,

I don't remember seeing it. But to have like a Research Steering Committee or something like that, that can better kind of look at a proposal, and determine whether or not it meets the objectives of the program. Just I wanted to give a little bit more optimism than some of the other folks who have commented, and offer those couple of specific things to the second slide that Toni talked about.

CHAIR WOODWARD: Any other hands up now, Toni?

MS. KERNS: We have Emerson Hasbrouck, Jim Gilmore, followed up by Dan McKiernan.

CHAIR WOODWARD: All right, go ahead, Emerson.

MR. HASBROUCK: Jason actually mentioned a bit of what I was going to say. But also, if one would look at the background materials that were available for this meeting, the Research Steering Committee Report of the Workshop has a range of options to reduce the administrative and enforcement burden of the states. There are a lot of technologies that are available now that were not available previously, that can help to reduce the administrative burden. Jason just mentioned a couple of them. Also, what's possible is some assistance for the states from the RSA Principal Investigators.

For instance, I had a Cornel staff member in the DEC Office for a couple of years, to assist them with that administrative burden. That was mostly a paperwork burden, because everything was paperwork then. You know there was not eVTRs, there was not electronic dealer reporting. There are those electronic technologies, and additional electronic technologies that can be brought to bear on this.

CHAIR WOODWARD: Who was next, Toni, was it Jim or Dan?

MS. KERNS: It was Jim followed by Dan.

CHAIR WOODWARD: All right, go ahead, Jim.

MR. GILMORE: Emerson touched on it a little bit, but it's a two-part question, and the first part, which I would assume that the states wouldn't be precluded in using some parts of revenue, or whatever, to beef up the administrative parts of it. Whether they wanted to use their own revenues or part of whatever was in the RSA Program, that would still be feasible. Because Emerson was right.

We had staff from Cornell that was in our office, and we've already ramped up quite a bit our data group, in particular vessel trip reports, so we've kind of increased that already. The other part of it though, and Brandon, you may have covered this, maybe I missed it. I forget the name of the organization that was doing.

You know when we got to the part where they were handing it out to the individual fishermen, whatever, that helped fund them. I forget the name of it again, but what was the funding behind that? There was a third party that was acting as an intermediary to put whatever quota you were going to bid on. How did that get funded?

CHAIR WOODWARD: Yes, go ahead, Brandon.

MR. MUFFLEY: I am completely drawing a blank, now that you said it, Jim, on the name of the organization that ran the auction. There were a few different ways, in terms of how they were supported. In order for a vessel or an individual to bid on an auction, to bid on an auction, they had to pay to be a member of this organization, the organization that ran the auction itself.

That is something, I don't remember what the exact costs are. They did bring it down quite a bit as more people were getting into the auction bidding process. That is one way that funds were generated to support this third party, was that you had to pay to be a part of it, and you had to be a part of it in order to bid on the auction. Then they also, they took an administrative fee. Out of those fees generated from the auction, they, and I don't remember what it was, 15 percent or 8 percent of something like that of the fees generated were used to support the administrative cost of running the auction. Those folks, it wasn't just running the auction, I mean that was the major part of it, but those folks were also dealing with quota that would be getting transferred between vessels as well, that had participated in the program. There was a number of administrative issues that they were sort of dealing with as they were tracking through the program.

MR. GILMORE: Okay, thanks, Brandon, that is helpful. I just got this shotgun blast, it was the National Fisheries Institute people, so thanks.

CHAIR WOODWARD: Dan, go ahead.

MR. McKIERNAN: I would like to follow up on Jason's comments about the commercial landings and SAFIS. I agree with Jason, and I would applaud the state of Rhode Island's quota monitoring system. They do an outstanding job. But what I'm concerned about is the old program evolved to the point where the for-hire sector became the majority holders of these essentially quotas.

If you think about this in modern times, compared to back 10 or 15 years ago, back then all the species, you know, scup, sea bass, fluke were overfished, and the quotas were a limiting factor. But today, we have a huge surplus of scup quota. We have a lot of unused fluke quota. I don't think the revenues are going to be there from the commercial sector.

But what you're going to have, because of the sharing the percentages that are built into the Mid-Atlantic Council's plans. You have a desperate need for more recreational allocation. The new systems are going to be predominantly party charter purchases, and we cannot manage that through SAFIS. They are not reporting to SAFIS.

We don't have the ability to monitor all the folks who would want to buy quota to fish out of compliance, with a slightly higher bag limit or during a closed period. It would be incompatible. I have some still

serious concerns. I just want everybody to think that through. We just can't turn back the clock and tweak a few features, we have to think about this in the modern conditions of where quota is desired and who is going to buy these quotas, if we proceed with a system where auction is the preferred or the selected method.

CHAIR WOODWARD: Toni, any other hands?

MS. KERNS: I have no other hands at this time.

CHAIR WOODWARD: All right, well I think in the interest of moving forward, I know Emerson had a motion that you wanted to offer for consideration, so I think maybe that will help us focus our remaining time we have. I know, Dan, you've got one, so we can dive into this and see if we can move things forward. We've got a draft motion, Emerson, I will let you read it into the record, and then we'll see if we can get a second.

MR. HASBROUCK: Move that the Atlantic States Marine Fisheries Commission ISFMP Policy Board support the Mid-Atlantic Fishery Management Council's activities to continue the process of exploring the redevelopment of the Mid-Atlantic Research Set-aside Program using the program framework outlined by the Mid-Atlantic Fishery Management Council's Research Steering Committee, and based on their four RSA workshops, to inform a possible future management action. Such redevelopment activity should address the alternatives and ameliorate the concerns and problems identified by the RSA and the recent RSA workshops, and in the July 30, 2014 Mid-Atlantic Fishery Management Council staff RSA memo. I would be happy to provide my justification if I get a second. Thank you, Mr. Chairman.

CHAIR WOODWARD: Do we have a second? If so, raise your hand and signify.

MS. KERNS: You have Jason McNamee.

CHAIR WOODWARD: All right, so we have a motion and we have a second, so I'll go back to you, Emerson, as the maker of the motion for some further explanation.

MR. HASBROUCK: The RSA Program was a valuable program providing funding to address research priorities for several species. Other funding was not adequate to address those research priorities, and in fact it's still not adequate. Not only did the RSA Program provide research funding, it also encouraged researchers in the fishing industry to work together in a cooperative approach.

Now admittedly, there were problems with the old RSA Program, which is why it was suspended. But the Research Steering Committee has accomplished significant work in examining and identifying those previous problems, and developing draft recommendations to address those previous problems and shortcomings, and a lot of that information is in the meeting material that were posted for this meeting.

Other than having funding for fisheries research, and conducting that research, a new redeveloped program will not look like the previous program, it can't and it won't. When you look at the slides that Brandon presented, you can see that many of the problems that were identified, the problems of the previous program that were identified, and the solutions to those problems, are addressed through the Research Steering Committee.

In fact, I would direct people's attention to the administrative and enforcement section that I think addresses most state's critical concerns. Specifically, you know those recommendations are related to, a lot of them are related to administrative and enforcement burden. The issues raised in Toni's slide actually are addressed in the Research Steering Committee information, including, consider limiting offloading times and ports and dealers.

The use of electronic technology to reduce administrative and enforcement burden. There are many new technologies that are available now that were not available previously. Also, the Research

Steering Committee has recommended that state's decide participation by sector and number of vessels. If a state doesn't want to have a particular sector to participate, or wants to limit the number of vessels, those options are currently in the draft document that has been developed. Also, you know the other objectives address some of the other concerns that have been raised. I therefore encourage the Policy Board to support and be involved in the Mid-Atlantic Fishery Management Council's efforts to continue the process of exploring the redevelopment of the RSA Program. This is not a final approval of implementation of the RSA Program.

We'll be able to weigh in on that in the future, when the Research Steering Committee has completed its work. Then just lastly, it's up to the PI to decide how they are going to turn fish into dollars. It doesn't have to go into an auction, in fact it cannot be mandated selling to an auction, nor does it have to be individual agreements between the PI and the commercial fishing vessels involved. That is up to the PI. That is what I have for now.

CHAIR WOODWARD: Jason, as the seconder, anything you would like to add to that?

DR. McNAMEE: I think Emerson did a great job, so I won't offer too much more than he did. I think there are a lot of benefits. I really appreciated Dan McKiernan's comments about, you know the kind of recreational version of it. Now, I'm not saying I'm opposed to the recreational version of it, but these are the things I feel like we have had a group that has spent a lot of time thinking, generating information.

Generating the lessons learned from the previous version of it. I feel like let's put a framework together. Let's get a look at it before we rush to judgment. I think we might be more comfortable when we see what the new version of the program looks like. I fully support continuing the development of this, because I'm really interested in seeing what that more perfected program looks like.

CHAIR WOODWARD: All right, I'm going to open it up to the Board for comments, either for or against. Toni, any hands?

MS. KERNS: You have Mel Bell.

CHAIR WOODWARD: Go ahead, Mel.

MS. KERNS: Followed by Dan.

MR. MEL BELL: Obviously not from the Mid, but I heard a couple people point out that perhaps one of the things that would be considered, in terms of kind of making a new and improved program would be, perhaps reliance on some other different degree of law enforcement involvement, related to offloading and timing, and perhaps offloading places, and then use of VMS. I would just from experience, we have a fishery in the South Atlantic, it's wreckfish, which some of that exists.

It is a little more complex than it sounds, perhaps, and it even kind of results in the need to bring the states, in terms of law enforcement capabilities, into managing something like that. I am certainly not in opposition to, you know if folks want to further explore this and look at it in the Mid that is fine, it makes sense. I would just encourage that it definitely involves law enforcement in the discussions of how you might wire this thing, in terms of if you want to have some of those additional capabilities in exploring offloading and timing and VMS and that sort of thing, because it isn't perhaps as easy as it sounds. We just experienced that from one simple fishery, a very small fishery actually in the South Atlantic. I would just encourage to definitely keep law enforcement in the discussions on this from the very beginning. That's it, thanks.

CHAIR WOODWARD: All right, Dan, back to you.

MR. McKIERNAN: I'm opposed to this motion. At some point I would like to make a substitute to only go with those species that are managed in the New England style, which is where the states don't co-

manage those species, which would include the ocean quahogs, the squids, et cetera. But just a few rhetorical questions.

I don't think it's lawful to exclude, or maybe it is, the for-hire sector from buying some of this quota. I think that's probably why we wound up accommodating all the for-hire interest, because of issues of fairness. But I guarantee you that is what undermined this program, and I think that is just going to create an unenforceable and unmanageable end product.

In my view, this is going to go down the path of IFQs for the recreational fishery. As far as Massachusetts goes, we have 84 offices, half of them is assigned to the coast. That 84 number is down from a high of about 140. I don't necessarily have a lot of enforcement resources in Massachusetts that can be diverted to this new program.

Finally, as long as we keep looking back to RSA, because it worked once, and I understand the folks at Rutgers and the folks at Cornell really enjoy those benefits. But as long as we keep looking to this flawed program, we're never going to do what needs to be done, which is to go get less complicated funding sources, whether it be an expanded SK Program of another Congressional Appropriation.

Twenty years ago, there was something called the Northeast Consortium, and the New Hampshire Congressmen shoveled tons of money to do cooperative research. There are other avenues, there are other means to get funding for cooperative research. I don't want to be perceived as not wanting to encourage cooperative research and to develop great working relationships with the stakeholders.

I just think this thing is just so terribly complicated, and so having said that, I would like to make the substitute motion, which is, I don't know if this is the time, Mr. Chairman, but it would be to go with this alternative, only those species not jointly managed with the Commission and the states. I just think that the burden is too great on the states to pull this off.

CHAIR WOODWARD: All right, Dan, we'll go ahead and read that motion into the record, and we'll see if we get a second.

MR. McKIERNAN: Motion to substitute to recommend to the Mid Atlantic Council to consider future RSA Programs only for those species not jointly managed with the ASMFC. This would preclude RSA Programs being conducted for summer flounder, black sea bass, scup, dogfish and bluefish.

CHAIR WOODWARD: We've got a motion, do we have a second, if so, raise your hand and signify so.

MS. KERNS: John Clark.

CHAIR WOODWARD: All right we have a second by John Clark. We have a substitute motion now before the Board, so I will open up. I think Dan, you sort of go ahead and lay the groundwork for the rationale behind this, but John, I'll give you an opportunity as the seconder to speak to the motion.

MR. CLARK: I think Dan has made all the points. I agree with what Dan said, and his reasons for making the motion, thank you.

CHAIR WOODWARD: At this point I'll open it up for the Board for discussion on this substitute motion. Just raise your hand and I'll call on you.

MS. KERNS: The first hand, I have Erica, Cheri, and Dan, your hand is still up. I'm not sure if you want to speak again or not, all right, you put it down, so Erica followed by Cheri, and then lastly Lynn.

CHAIR WOODWARD: All right, go ahead, Erika.

MS. ERIKA BURGESS: I appreciate Dan's comments and his making of this motion. Given that Florida only had one species that could potentially be impacted by this, I felt uncomfortable voicing strong opposition to the interest of the Mid-Atlantic Council to explore options for their fishery. But because

bluefish would be removed from the discussion, I'm supportive of this motion.

CHAIR WOODWARD: All right, Cheri.

MS. CHERI PATTERSON: Yes, I support this motion also. I think that there is just a lot of effort involved in RSA programs when it comes to including the states in any sort of federal fisheries. I've seen success happen at the New England Fisheries Management Council level with scallops, so I know that there are successes to this. But I also know that we had an RSA Program for the northern shrimp, and that was very, very labor intensive. Not sure that that really benefited any sort of research that came out of that. I am in support of this motion.

CHAIR WOODWARD: Lynn.

MS. FEGLEY: I support this substitute motion. I think it really sort of threads the needle and let some of this work proceed and grow, and provides us an opportunity to learn from what's happening on the federal end. As a state, I have so many concerns about this. To Dan's point, all of us think that we may have some problems of authority and legality as well. If we have, you know principal investigators for projects, you are singling out vessels that may have a financial advantage. You know in Maryland we can't really run programs that offer financial advantages to stakeholders, to commercial fishermen or recreational fishermen, without creating some sort of, you know everybody has to sort of be able to apply under the same criteria. I worry that it would sort of open up a ball, a can of worms, so I support the motion.

CHAIR WOODWARD: Yes, I think a ball of worms is worse than a can of worms, but yes. All right, Toni, any other hands raised?

MS. KERNS: I have Emerson, Jim Gilmore, Joe Cimino, Pat Keliher, and then Ryan Silva. Ryan put his hand up as Lynn spoke. I guess, I don't know if you would indulge him, if he had to raise a point too. Ryan, if you're just commenting generally, we'll keep you in line, but if you were responding to a point Lynn made, then maybe go ahead.

MR. SILVA: No, it is more relative to the motion and the implication for funding and what the program might support under this scenario. Happy to speak now or later.

MS. KERNS: It's up to the Chair, so I'll wait for him.

CHAIR WOODWARD: Well, I'll tell you what. While we've got you queued up, let's go ahead, and that way it might actually help inform the further discussion. Go ahead, Ryan.

MR. SILVA: Thank you, Mr. Chair, just relative to Brandon's presentation that he provided earlier. You know I think it's important to keep in mind, you know the primary goal of the Program is to support research to help with the Council's and Commission's management programs.

Those prior research projects were almost entirely funded through summer flounder, black sea bass and scup. I think we would have some concern from the Fishery Service about trying to redevelop a program where it's not clear that there is viable funding in order to support the research. Something I think that would give us pause with this motion, thank you.

CHAIR WOODWARD: All right, I'm going to go back to my list and let's see we've got Emerson and then it will be Jim Gilmore.

MR. HASBROUCK: Obviously I'm opposed to this substitute motion. I think we should give the Mid-Atlantic Council and its Research Steering Committee the ability to continue the process of exploring the redevelopment of the RSA Program. Give them the opportunity to address the problems that have been identified by the Research Steering Committee that have been identified back in 2014 by Mid-Atlantic Council staff, that have been identified today by my fellow Commissioners.

Let's give them the opportunity to do that, and let's see what comes out the other end. As I said before,

this is not a final vote on reimplementing the RSA Program. This is just a vote to provide support to the Council to further develop the options. Essentially, let's not kill it now. Let's give the Research Steering Committee the opportunity to go through this process, and see what comes out the other end, and choose what we like and maybe not choose what we don't like.

CHAIR WOODWARD: All right, Jim Gilmore, and then I'll go to Joe Cimino.

MR. GILMORE: You know along with what Emerson just said, I think this is premature. The whole concept of this was to look at it again, and now we're essentially taking off some of the more variable species off of this that would actually probably help the program work. At some point if we find out that, you know maybe it is too complicated, that we would maybe entertain such a motion.

But at this point, I just think it's premature or prejudging things before we have really looked into it. Remember the RSA Program got suspended almost 10 years ago. It was using technology that was done 15 years or more before that. As Emerson had said before, we've got a lot more tools now, and a lot more monitoring capability than we had back then.

The new RSA Program, I think is going to be a lot, well it's going to be difficult, but there still is a lot more tools that we'll be able to track and monitor it. Again, I'm opposed to the motion, because I just think it's premature at this point. We really need to flesh this out before we start taking chunks of fisheries out of this.

CHAIR WOODWARD: All right, Joe, and then I'll go to Pat Keliher.

MR. JOE CIMINO: Somehow it seems like we might be doing a little (muffled), because I sympathize with where Emerson and Jim are. But given the species that we're talking about that are jointly managed, even though I think dogfish might be a great candidate, and maybe someday bluefish. You know those stocks are not in a place where we're going to be looking at really additional quota as being on the table.

Then I very much share Dan's concerns with flounder, scup and sea bass and the for-hire fleets. You know there is no time limit set on this recommendation for only dealing with these species, and I think that this motion by Dan has a better chance of passing instead of nothing happening again. I'm supportive of the motion, and I think at some point in time we can reconsider, as Lynn mentioned, maybe we can learn from some of this as we move forward.

CHAIR WOODWARD: All right, Pat Keliher.

MR. PATRICK C. KELIHER: I was going to stay completely out of this conversation. Obviously, we don't have a dog in this fight. However, as the conversation has unfolded, and after hearing about the concerns from an administrative standpoint and a law enforcement standpoint. I do garner a little bit of sympathy for the states that are in that position.

We've certainly run into that in Maine with the Herring RSA, where the PI was not communicating with the state, and then vessels were landing in Maine, outside of the days at sea that were established through the Herring Committee. Those things do exist. There are burdens to the states, and to me Dan is, to use Lynn's term, has threaded the needle here a little bit. I would support this motion to substitute. Thank you.

CHAIR WOODWARD: Toni, do you want to update my list of hands?

MS. KERNS: It's empty.

CHAIR WOODWARD: It's empty? Okay, we've had some good back and forth discussion on this. I think it's time to call the question to deal with the substitute motion. I know it's kind of hard to do this caucusing virtual world, but we had to do it for a couple years, so I'm just going to pause for a minute or two, in case folks need to caucus via text or whatever, and then we'll come back and have a vote.

Toni, how are we going to do this vote? Just call out the states?

MS. KERNS: I'll do it just like I do Board meetings, if you will just ask for the yesses and I'll say the state names out loud.

CHAIR WOODWARD: Okay, sounds good. I'll give everybody a couple of minutes to bring any caucus needs.

MS. KERNS: I started a clock, I'll let you know when a few minutes is up.

CHAIR WOODWARD: All right, very good, thank you.

MS. KERNS: Mr. Chairman, I think we are ready to call the question, or ask the question.

CHAIR WOODWARD**: All those Policy Board members in favor of the substitute motion signify by raising your hand**, and then Toni will name off the states represented.

MS. KERNS: I'm just going to give the hands a second to settle. **I have Connecticut, South Carolina, Delaware, Georgia, New Hampshire, Massachusetts, Pennsylvania, Maryland, New Jersey, Florida and Maine.** If I missed anyone, speak up, otherwise I'll put your hands down for you.

CHAIR WOODWARD: All right, are you ready for the noes?

MS. KERNS: I am.

CHAIR WOODWARD: Those opposed to the substitute motion, signify by raising your hand.

MS. KERNS: I have Virginia, Rhode Island, New York, North Carolina and Potomac River Fisheries Commission.

CHAIR WOODWARD: All right, are there any abstentions?

MS. KERNS: I had to put the hands down, now for the abstentions, if you could raise the hand, sorry about that. **Ryan, I'm assuming you're voting for NOAA here.**

MR. SILVA: Oh, that's right, thanks, Toni.

MS. KERNS: Yes, I just wanted to doublecheck. **One abstention, NOAA Fisheries.**

CHAIR WOODWARD: All right and null votes, any null votes signify by raising your hand.

MS. KERNS: I have no hands.

CHAIR WOODWARD: All right, so no null votes. According to my count that is 11 yesses and 5 noes, and 1 abstention, is that correct?

MS. KERNS: That is what I have as well, Mr. Chair.

CHAIR WOODWARD: **The substitute motion now becomes the main motion.** All right, before we call for votes on what is now the main motion, I wanted to just afford one last opportunity for any questions, because I think again, I will certainly take the opportunity to make it clear that what we're doing is providing advice to the Mid-Atlantic Council. It is my understanding, and you know Brandon, Toni, Bob, whoever, correct me.

That we're providing this advice to the Mid-Atlantic Council, but this motion in and of itself is not limiting or binding on the Mid-Atlantic Council, other than the fact that if they realize that the states that would be required to participate in RSAs on a certain species are not likely to do it, I guess that certainly would change the nature of the discussion, as Ryan had already commented on. Anyway, are there any questions about the intent and the effect of this motion before we vote on it? Any hands, Toni?

MS. KERNS: I do not see any hands, Mr. Chair.

CHAIR WOODWARD: Any discussion on this motion before we vote?

MS. KERNS: I have no hands.

CHAIR WOODWARD: All right, then at that point we'll conduct a vote on what is now the main motion, so all those in favor of the motion. Does this need to be read back into the record, Toni?

MS. KERNS: I believe yes, it would be helpful.
CHAIR WOODWARD: All right, I'll read it if that's okay. We have a **motion to recommend to the Mid Atlantic Council to consider future RSA Programs only for those species that are not jointly managed with the ASMFC. This would preclude RSA Programs being conducted for summer flounder, black sea bass, scup, dogfish and bluefish.** All those in favor of this motion, signify by raising your hand.

MS. KERNS: Again, I'm just going to let the hands settle for a second. **I have Connecticut, South Carolina, Delaware, Virginia, Georgia, New Hampshire, Massachusetts, Pennsylvania, Maryland, New Jersey, Potomac River Fisheries Commission and Florida and Maine.** If I missed anybody, please call out, and I will put the hands down.

CHAIR WOODWARD: All right, let me know when you're ready for the call for no votes.

MS. KERNS: I'm ready.

CHAIR WOODWARD: All right, **all those opposed to the motion, signify by raising your hand.**

MS. KERNS: I have Rhode Island, New York and North Carolina.

CHAIR WOODWARD: Okay, any null votes?

MS. KERNS: No null votes.

CHAIR WOODWARD: Any abstentions?

MS. KERNS: NOAA Fisheries.

CHAIR WOODWARD: Let me count this up. I have 12 yes votes, 3 no votes and 1 abstention. Does that match your count, Toni?

MS. KERNS: I think I had 13 yesses, Bob, did you get 13 yesses?

EXECUTIVE DIRECTOR BEAL: Yes, I got 13 also.

MS. KERNS: I have 13, 3, 0, 1.

CHAIR WOODWARD: All right, just in the time we've got remaining between now and three o'clock, I would like to go back to that second set of questions that Toni had read before, just to see if there are some particularly strong feelings from the Board about responses to the questions. We've actually addressed Number 2. How about Number 1? I think Number 1 is one that would be interesting to have some feedback on. Does anybody want to comment on that?

MS. KERNS: Dan McKiernan.

CHAIR WOODWARD: All right, go ahead, Dan.

MR. McKIERNAN: Pardon me for being redundant, but the comments I made earlier about the for-hire sector being recipients of quota creates a serious incompatible management system. I guess I have an open question, maybe it's for Ryan, as to whether or not a program could go forward, where we could exclude the for-hire sector from obtaining this RSA quota in the fashion that it was done in the past. Maybe Ryan could speak to that.

CHAIR WOODWARD: Yes, go ahead, Ryan.

MS. KERNS: Ryan, I don't know if you're still with us or not.

CHAIR WOODWARD: Obviously, again, this is a work in progress, so there are going to be some further discussions I'm sure, as this continues to evolve. Yes, because I had a question about, I'm sure there is some critical mass of where you've got to have enough states to opt in to make something be feasible.

I guess that is another issue that would be dealt with on a species-by-species or fisheries-by-fisheries basis as to whether or not an RSA would be feasible, based

on the number of states that opt in or opt out. Again, I think we're giving, I think guidance to the Mid, clearly about our concerns, but again it's advice and it is guidance. Brandon, just to, I mean we can sort of wrap this up. This will be taken back to the Mid and incorporated in future discussions, is that correct?

MR. MUFFLEY: Yes, thanks, Mr. Chair, correct. This will be discussed at the August Council Meeting, so there is time on the agenda, not a ton of time, but sort of just where the Council is, and obviously the big, I think focus of the discussion will be, is the feedback that you all provided here. I think the Council will have at least some initial general discussions about how they want to move forward. But this will be on the August agenda for the Council.

CHAIR WOODWARD: Yes, go ahead, Toni.

MS. KERNS: I was just going to say, Bob has his hand up, Mr. Chair, and Mike Ruccio put in the comments that just in response to Dan's question earlier about the recreational fishery. He thinks that the answer is, it depends. It's how the program is resurrected, and what type of direction is provided to the Agency, just as an FYI. But Bob had his hand up.

CHAIR WOODWARD: All right, thanks, go ahead, Bob.

EXECUTIVE DIRECTOR BEAL: I just wanted to follow up on a couple of the comments about, you know these species, the jointly managed species in particular now. You know I do have a number of research priorities that are unanswered, and no one on this call has really spoken against the value of cooperative research.

I think everybody has highlighted the value of cooperative research. You know I think moving forward, as the Commission has its conversations about future budget priorities and priorities to Capital Hill. You know I think this notion of finding money for cooperative research is something we need to put that higher on our list of priorities, or budget priorities for the Commission.

I think there is a lot of good work that could be done through this joint, you know cooperative projects with the industry. RSA, you know based on the vote it appears the shortcomings of the RSA aren't the avenue to consider to fund this research. I think unless someone disagrees, as I work on these lists of priorities, and talk with folks on Capitol Hill. This will be one of the items that I add to the list of our priorities, is cooperative research and the need for increased support to get a better understanding of what is going on in these fisheries, and support for management. Just a sort of editorial comment that I'm happy to help folks pursue, you know state help is always useful when we're talking to Congressional delegations on funding as well. Just wanted to bring that up, Mr. Chair.

CHAIR WOODWARD: Bob and I talked the other day about, you know we're coming to the end of a strategic plan, and we're going to be involved in another strategic planning process. You know this is the kind of thing that I think the Policy Board is certainly going to have to consider is, how do we go forward to ensure that we're getting the best underlying science-based information we can?

If I recall correctly, I think the concept of study fleets was a pretty high ranking when we were going through the Scenario Planning. Again, there is a lot of value from cooperative research, but again, it's how do you fund it adequately and with enough stability to produce meaningful results? Thanks for that, Bob. All right, I think we're at the point where we can wrap up. Is there any other business to come before the Policy Board? We've got a few minutes.

MS. KERNS: I do not see any hands raised, Mr. Chairman.

CHAIR WOODWARD: All right, I want to thank everybody, good conversation, discussion, and again this is a process that we're still in the middle of. I'm sure there will be additional opportunities for the Commission to weigh in, as the Mid continues to deliberate on this. I want to thank Brandon for being

here and Ryan as well, and I thank you all for your participation.

ADJOURNMENT

CHAIR WOODWARD: If there is no opposition, I will adjourn the meeting of the ISFMP Policy Board. I hope everybody has a good rest of your day.

(Whereupon the meeting adjourned at 2:40 p.m. on Tuesday, July 11, 2023)

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

ISFMP POLICY BOARD

The Westin Crystal City
Arlington, Virginia
Hybrid Meeting

August 3, 2023

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Draft Proceedings of the ISFMP Policy Board – August 2023

ATTENDANCE

Board Members

Pat Keliher, ME (AA)
Allison Hepler, ME (LA)
Cheri Patterson, NH (AA)
Dennis Abbott, NH proxy for Sen. Watters (LA)
Doug Grout, NH (GA)
Dan McKiernan, MA (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (RI)
Robert LaFrance, CT, proxy for B. Hyatt (GA)
John Maniscalco, NY, proxy for B. Seggos (AA)
Emerson Hasbrouck, NY (GA)
Joe Cimino, NJ (AA)
Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)
Jeff Kaelin, NJ (GA)
Kris Kuhn, PA, proxy for T. Schaeffer (AA)
Loren Lustig, PA (GA)
John Clark, DE (AA)
Roy Miller, DE (GA)
Lynn Fegley, MD (AA, Acting)
David Sikorski, MD, proxy for Del. Stein (LA)
Russell Dize, MA (GA)
Pat Geer, VA, proxy for J. Green (AA)
Shanna Madsen VA, proxy for M. Mason (LA)
Bryan Plumlee, VA (GA)
Ben Dyar, VA, proxy for Sen. Cromer (LA)
Kathy Rawls, NC (AA)
Mel Bell, SC (AA)
Doug Haymans, GA (AA)
Spud Woodward, GA (GA)
Erika Burgess, FL, proxy for J. McCawley (AA)
Gary Jennings, FL (GA)
Marty Gary, PRFC
Mike Ruccio, NOAA
Chris Wright, NOAA

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

Staff

Robert Beal
Toni Kerns
Tina Berger
Madeline Musante
Lindsey Aubart
Tracey Bauer
Alexander Law
Chris Jacobs
Trevor Scheffel
Katie Drew
James Boyle
Caitlin Starks
Chelsea Tuohy
Kurt Blanchard

Guests

Michael Academia, CCB
Max Appleman, NOAA
Mike Armstrong, MA DMF
Robert Atwood, NH F&G
Pat Augustine
Chris Batsavage, NC DEQ
Carolyn Belcher, GA DNR
Alan Bianchi, NC DMF
Jeff Brust, NJ DEP
Nicole Caudell, MD DNR
Mike Celestino, NJ DEP
Peter Clarke, NJ DEP
Haley Clinton, NC DEQ
Kiley Dancy, MAFMC
Jamie Darrow, NJ DEP
Donald Dicostanzo
Bill Dunn
Cynthia Ferrio, NOAA
James Fletcher, United National Fisherman's Association
Jared Flowers, GA DNR
Thomas Fote, Jersey Coast Anglers Association
Tony Friedrich, ASGA
Alexa Galvan, VMRC
Angela Giuliano, MD DNR
Hannah Hart, MAFMC
Jay Hermsen, NOAA
Jesse Hornstein, NYS DEC
Yan Jiao, Virginia Tech
Emily Keiley, NOAA
Blaik Keppler, SC DNR
Tom Lilly
Michael Luisi, MD DNR
Chip Lynch, NOAA
Nichola Meserve, MA DMF
Chris McDonough, SC DNR
Joshua McGilly, VMRC
Kevin McMenamin, Annapolis Anglers Club
Steve Meyers
Brandon Muffley, AFMC
Allison Murphy, NOAA
Thomas Newman
Nicole Pitts, NOAA
Will Poston, ASGA
Jill Ramsey, VMRC
Kirby Rootes-Murdy, USGS

These minutes are draft and subject to approval by the ISFMP Policy Board.
The Board will review the minutes during its next meeting

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Guests (continued)

Erin Schnettler, NOAA
Alexandra Schwaab, AFWA
Christopher Scott, NYS DEC
McLean Seward, NC DMF
Ethan Simpson, VMRC
Somers Smott, VMRC
Renee St. Amand, CT DEEP
Kevin Sullivan, NH F&G
Chad Thomas, NC Marine & Estuary Foundation
Mike Waine, ASA
Megan Ware, MA DMF
Craig Weedon, MD DNR
Kelly Whitmore, MA DMF
Kate Wilke
Angel Willey, MD DNR
Phil Zalesak, SMRFO
Renee Zobel, NH F&G

The Interstate Fisheries Management Program Policy Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia, a hybrid meeting, in-person and webinar; Thursday, August 3, 2023, and was called to order at 9:10 a.m. by A.G. "Spud" Woodward.

CALL TO ORDER

CHAIR SPUD WOODWARD: We'll get everything going here this morning, call the meeting of the Atlantic States Marine Fisheries ISFMP Policy Board to order. Good morning, everybody. For those of you that are online, this is Spud Woodward, Governor's Appointee from the state of Georgia, and current Chair.

Before we get into our business, I've got a couple of things. One is very important. On my right here sits Toni Kerns, and this is Toni's 20th year. We hired here when she was three. (Applause.) She was directly recruited out of daycare, and brought onboard. I believe that there are going to be commemorative doughnuts in the room. Lisa is back there in the back. Please, as you choose, help yourself. Toni has been with us a long time, and everybody in this room has worked with here.

She is a great asset to the Commission, and we're very proud to have her. I mean anybody that can get up and go rowing in the morning, and then be here early and get everything going, I mean that's an inspiration to all of us. Thank you, Toni, for all your service, and we hope you'll continue to hang with us. Bob has got one other thing he wanted to mention, just kind of a housekeeping thing about travel reimbursements.

EXECUTIVE DIRECTOR ROBERT E. BEAL: Not as important as recognizing Toni's 20 years. But any Commissioners or anyone that participates in these meetings that would want to switch over to electronic deposit, rather than receiving an actual paper check, and having to deposit that and everything else, we can do that. We would rather do that.

We would rather not send out checks, we would rather do electronic deposit. We are going to send the ACH Electronic Deposit Form out to all the Commissioners and participants in these meetings. If you haven't already switched over and you want to, fill out the form and get it back to us, it will save time and money for everybody involved, and just a quicker and more secure way to move money around.

If you want to do that, we'll give you the opportunity to do it. You can extend the same offer to any of your staff that participates in technical committees and other things that travels for the Commission, just to save time and money for everybody. Just as Spud said, a housekeeping thing that will make things more efficient.

CHAIR WOODWARD: If you would like your reimbursement in cash, you have to meet Laura on a certain designated street corner in Arlington, at a certain hour of the evening. But anyway, yes, everybody avail yourself of that opportunity, if you choose to. Moving along, you've got an agenda in front of you. We've got a couple little things under Other Business; I just want to mention.

One will be, Toni is going to talk a little bit about the spot and croaker assessment. Everybody should have gotten an update about that, and the need to try to recruit some stock assessment support, so she's going to mention that. Then I'm going to call on Dan for a little bit of discussion to follow up on some things we talked about at Executive Committee on what appears to be a diminishing commitment to some of these important surveys that we rely on for Interstate Fisheries Management, so I'm going to call on Dan for that.

APPROVAL OF AGENDA

CHAIR WOODWARD: Any other additions to the agenda? Any opposition to accepting the agenda as modified? Seeing none; we will consider the agenda accepted by unanimous consent.

APPROVAL OF PROCEEDINGS

CHAIR WOODWARD: You also have the proceedings from our May, 2023 meeting. Are there any corrections, modifications to the proceedings? Seeing none; we'll consider that accepted by unanimous consent.

PUBLIC COMMENT

CHAIR WOODWARD: This is the time in our meeting when we allow public comment. We have ten minutes set aside for public comment. If there is anyone here that wishes to comment, you can step up to the public microphone. I just appreciate it if you would keep it to three minutes. Just identify yourself and who you're affiliated with, thank you.

MR. PHIL ZALESAK: Good morning, my name is Phil Zalesak; President of the Southern Maryland Recreational Fishing Organization. Chairman, first on June 29 at the Maryland department of Natural Resources Tidal and Recreational Fishing's Committee meeting, I made a motion, which was seconded by Lenny Rudow the Committee Chairman, which reads as follows.

The Maryland delegation to the Atlantic States Marine Fishery Commission and Atlantic Menhaden Management Board, needs to put forth a motion which states, the Atlantic menhaden reduction fishery shall be limited to federal waters east of the western boundary of the Exclusive Economic Zone, beginning at three nautical miles from the Atlantic Coast.

There were no objections and one abstention. The Committee represents thousands of Maryland fishermen, both recreational and charter captains. The Committee based this decision on a 20-minute presentation covering the latest science and empirical data regarding localized depletion of Atlantic menhaden in Virginia waters.

Who else supports this motion? Steve Atkinson, President of the Virginia Saltwater Sports Fishing Association, Captain Bill Pathos, whose sworn testimony last December represents over a dozen Virginia Beach charter captains. Dr. Bryan Watts of the College of William and Mary, who has been documenting 50 years of decline of osprey in the Chesapeake Bay, to the lack of available menhaden.

Michael Academia of the Center of Conservation Biology, who is sitting behind me, who has conducted the most recent osprey research by quantifying their dependency on Atlantic menhaden for their survival. That is my first point. Second point, there is no reason to ever cancel a quarterly meeting, when the public has only four opportunities a year to express their concern about a fishery. In limiting public comment to under 30 minutes each meeting, leaves a perception that public comment is something to be tolerated rather than embraced by those supposedly serving the public.

Third, there is no science or logic to support the industrial harvesting of three-quarters of a billion menhaden the size of my hand in Virginia waters. All other states have ended this destructive policy. The Atlantic Menhaden Management Board needs to end Atlantic menhaden reduction fishery in Virginia waters at the October meeting with an effective date of January 1, 2024.

Oh, by the way, you may want to go to Facebook to something called Menhaden, Little Fish, Big Deal. Seven industrial reduction fishery boats were off the coast of New York and New Jersey. If there are plenty of menhaden in the Chesapeake Bay, why are they there? You can also go this morning and take a look. They can't find any menhaden in Chesapeake Bay this morning, and I suspect they are going to be going back out off of New York and New Jersey today. I thank you for your time, Mr. Chairman.

CHAIR WOODWARD: Thank you, Mr. Zalesak. I believe I saw another hand back there. Just come on up to the public microphone and just identify yourself, please, and your affiliation.

MR. MICHAEL ACADEMIA: Thank you for your audience. My name is Michael Academia; Scientist with the Center for Conservation Biology, and William and Mary. This year we have documented

the highest rate of osprey nest failure every recorded within the lower Chesapeake Bay. Only 17 of 167 nests monitored during the season, produced any young. The nesting population produced only 21 young, resulting in a reproductive rate of 0.12 young per pair.

This rate is the below that recorded during the height of the DDT era. In order for the population to sustain itself, pairs should produce 1.15 young per active nest. The poor reproductive performance documented this year is a trend that has been observed for the past 15 years. In Mobjack Bay, productivity peaked during the 1980s, and has declined to the present day.

We believe that the ongoing decline in young production is driven by localized depletion of Atlantic menhaden. Within osprey pairs, males are responsible for hunting and providing fish to broods. Between 1985 and 2021, the rate of menhaden captures by male osprey declined from 2.4 fish per 10 hours, to only 0.4 fish per 10 hours, a decline of more than 80 percent.

Although osprey do feed on other fish species within the lower Chesapeake Bay, none of these species offer comparable nutritional content. Atlantic menhaden is a keystone species that osprey depend on during the nesting season. We conducted a supplemental feeding experiment in 2021, by providing osprey broods with menhaden, and demonstrated that reproductive rates could be driven back to sustainable levels.

On a broad scale, recovery of reproductive rates will require the restoration of the menhaden stock. Osprey, as an ecological reference point within the lower Bay, are increasingly demonstrating that our choices about harvest policy are having consequence for the broader Chesapeake Bay ecosystem. Thank you.

CHAIR WOODWARD: Thank you, Mr. Academia, thank you both for your comment. We certainly appreciate it. We distribute all the information that is provided to the Commission as broadly and quickly as we can. It is very important, and all this information is certainly incorporated into our decision making as we move forward with menhaden management.

We certainly do appreciate the comment, and your efforts to bring it to us. Any other public comment, anything online? None online, all right, we will move along.

EXECUTIVE COMMITTEE REPORT

CHAIR WOODWARD: Next on the agenda is my Executive Committee Report. I'll move through this pretty quickly. Executive Committee met yesterday morning. We discussed a variety of topics after we approved the agenda and the meting summary from our May, 2023 meeting.

First was a report from Laura and Bob on the consolidated preparation of that, because with CARES, CARES 1 is almost completely expended. There is approximately $159.00 and some change that will be returned to the federal government, so kudos to everybody at the states and at the Commission for very efficiently spending a tremendously large sum of money, with little preparation.

Then CARES 2, plans are underway to extend that down to as close to zero as possible. Those states that are still actively executing spend plans, will keep moving forward with that. Then there needs to be some adjustments and tweaks, and we'll probably talk about that at the annual meeting. Next was review of findings of the legislative and governor appointee Commissioner Survey regarding stipends.

We had 14 respondents to that survey, of that 10 of those individuals said that they would be eligible to receive a stipend per the conditions that we had discussed, and only 6 said that they would. That matter is concluded for the time being. It is certainly something that can be brought back up and discussed in the future, but for now that matter is concluded.

Then Alexander gave us an update on activities of the Legislative Committee, as relates to federal legislation. There are two things, and you'll be hearing more about them later on in the meeting, so I won't get into a lot of detail, but what's called the NOAA Organic Act and the Fish Act, so Alexander will be talking about those a little later in our agenda.

Then we had a conversation about per diem rates. There is some interest in possibly increasing that Commission's per diem rates. A sort of preliminary analysis was done about if we did that, you now increased them by 30 percent, and had that applied to the four quarterly meetings for Commissioners.

It would be a fairly nominal physical impact, but the discussion led to a recommendation that staff go back and look at a 30 percent increase, and applying that across all Commission reimbursement travel. That would be Technical Committees, Stock Assessment Subcommittees, and so forth and so on. At the next meeting the Executive Committee will look at that number and be making some decisions about whether we want to consider making adjustments in the per diem rate. We also had a pretty good discussion about some things that came up during the NOAA Fisheries State Directors Meeting, and Dan is going to have some more detailed discussion about that. But I'll just sort of summarize by saying that their great concern that some of these longstanding surveys are diminishing in their temporal and spatial coverage, and there are consequences to that that are pretty dire, when we look at uncertainty in our fisheries management decisions.

The culmination of that discussion is that the Commission needs to really come up with a focused strategy on how do we influence the funding decisions, to make sure that the priorities of the Commission are being addressed, as well as it can be. I mean it's 15 states. We have a lot of power, in terms of advocacy, but we've got to make sure that we're focusing that.

I kind of liken it to, do you want to shoot a target with a shotgun, or do you want to shoot it with a bullet? Bullets have a tendency to go to the bullseye, where the shot scatters. Right now, I think sometimes we're more of shotgun than a bullet, so we need to focus our efforts. We're going to have some further discussions about that at our next meeting about some sort of actionable things we can do to improve our advocacy for funding for these surveys that are fundamental to our ability to make good decisions.

Then Bob talked briefly about sort of a reality check that happened accidently. You know the Commission hires folks and puts them out in the field in various states to do APAIS interviews, and things of that nature. Unfortunately, there was kind of a rude surprise when we found out that somebody standing on the dock talking to fishermen, is considered by insurers as the same thing as a stevedore who is driving forklifts and handling heavy cargo.

That ended up with some consequences, as far as workers comp and all goes. They worked their way through it, but that does mean that there are some additional costs that will be associated with positioning those folks out in those state work forces. Just kind of a heads up to folks, to let them know that some of that cost may have to be transferred out to those states.

Nothing catastrophic, we're not talking about anything major, but yet it is just part of doing business. That's pretty much what we covered during the Executive Committee. If there is anybody on the Executive Committee wants to add anything to it or have any questions, please feel free to do so. All right, I don't see anybody, we'll move forward.

REVIEW AND CONSIDER CHANGES TO CONSERVATION EQUIVALENCY: POLICY AND TECHNICAL GUIDANCE DOCUMENT

CHAIR WOODWARD: I'm going to go to Toni, and talk about the Conservation Equivalency Policy and Technical Guidance Document.

You see possible action. It would be nice if we can get this across the finish line. We don't want to do it prematurely. We want everybody to be as comfortable as they can. I mean we start changing words like should to will, sometimes that makes people a little nervous. I think we've had a chance to recover it a little bit. This will be another opportunity to decide if we're ready to make some definitive decisions here. Toni, it's all yours.

MS. TONI KERNS: The Policy and Guidance Document was included in your supplemental materials, and I'm going to go through all those wills and should today, since we only had it on supplemental, and I want to make sure everybody is comfortable. Just a reminder that the application of conservation equivalency is defined in the ISFMP Charter, and the guidelines are in the Conservation Equivalency Policy and Technical Guidance Document. We've been working on this policy for quite some time. At the Executive Committee a subset of the Management and Science Committee have been providing information over the course of the last, probably year and a half, maybe two years that have led to the revisions that staff has made to the Guidance Document and was in your materials.

First off, in the original guidance it provided guidance on using conservation equivalency in an FMP document itself, and then outside of the FMP document process. We have not in the, probably 20 years that I have worked here at the Commission, used conservation equivalency in the FMP itself. We suggested, and have struck reference to conservation equivalency development within the FMP.

That would be and what's online, it should be the entire third paragraph should have been deleted, not just the last sentence, as well as the first sentence under the review process on Page 6, and that is just because it is referencing the FMP itself. The revisions require states to include a single more restrictive measure in compliance reports.

It doesn't have to be approved by the Board, but we just want to make sure we're informed of those. If a state is going to do multiple measures that are more restrictive, those still need to be approved by a management board. Previously, we had just said if a state wants to do something that is more restrictive, they can always do that on their own.

But there was a concern that if a state put forward multiple measures, one of the measures could be in opposition of a coastwide measure, depending on how the combinations of those measures added up. In addition, one of the proposed changes is that conservation equivalency programs would be required to be described and evaluated in the annual compliance review, unless the Board set some alternative timeline.

Conservation equivalency programs will have a length of time that it is set in place in the proposed plan. Plan Review Team review proposals, they do not approve proposals. A decision point that we will need to make today is when conservation equivalency should be allowed. There are four options that are outlined in the document.

Should it be allowed if the stock is overfished? Should it be allowed if overfishing is occurring? Should it be allowed if it is overfished and overfishing is occurring, or should it be left to the Board's discretion? The document specifies additional language that we give as guidance if it is left to the Board discretion. I will not read it out loud for you all.

The next proposed changes are that measures that cannot be quantified are not permitted in conservation equivalency, if their sole purposed purpose is for credit for a reduction. There is a series of guidelines that follow this. This is something that is new to the document. It is required that states show measurable reductions in their plans.

Non-measurable reductions could be used as buffers. The Technical Committee would determine if something is non-measurable or nonquantifiable. It provides the examples of items that we currently cannot measure, circle hooks, no-targeting zones,

gaffing, outreach promoting best practices, are some. If there is a target coastwide reduction needed, it cannot be achieved through a combination of some states implementing the coastwide measure and some states implementing a coastwide percent reduction at the state levels. The Board is allowed to cap the number of options that a state can present in a proposal.

We ask that states keep it to a reasonable level. In the past we've had some states submit up to 20 options, which can make it difficult for the Plan Review Team and the Technical Committee to review those in a timely fashion, depending on how complex each of the options are. The requirements that have been identified in the guidance document are requirements now, they are not things that should be included in the proposals.

The document also provides recommendations for minimum data standards. These are not requirements, as we recognize that each species has different types of data that are available to them. It allows the Technical Committee to put forward standards that they know meets the needs of that species, and the data that are available to them. The document requires the availability to be considered when the TC is analyzing closed seasons.

The document requires that proposals will include timeframes for the length of the proposal, and it requires that the proposal is reviewed annually. It also allows for extensions of the timeframe in the proposal, but it recommends that it not go beyond the next benchmark stock assessment, and that in the discussion that we had with the Management and Science folks, they said it would be best that all proposals were finished at the time of the next benchmark, and would need to be reviewed with a new stock status.

It also identifies steps in the process. It identifies the steps for the review process are all required, before they were just suggested. It also includes changes in the review timeline. One is that proposals cannot be submitted less than three weeks before the Board meets, and then there is a question for the Policy Board, in terms of when submissions are allowed.

Is it two months prior to the Board meeting, or three months prior to the Board meeting? We put forward these new requirements in particular in the proposals which have a lot of information that the state has to provide to the TC, and then the TC is required to go through to make sure each of the plans are following the requirements.

We are a little concerned that if it is only two months that all of the committees have to review, it may be tight. We're trying to figure out if it's best to do two months prior to or three months prior to. Three months is typically the timeframe between meetings. Then lastly, we'll be looking, possibly, for consideration of approval of the document as we modify it today. I will take questions.

CHAIR WOODWARD: Start off with John Maniscalco.

MR. JOHN MANISCALCO: Toni, I just have a question about one of the points you made late in your discussion. You're talking about post benchmark. Post benchmark assessments that every CE proposal would kind of have to be re-reviewed. I'm just wondering, especially in relation to that discussion that occurred during striped bass. Does everything kind of revert back to the FMP standard, and then we proceed from there? A little more clarity would be great, thank you.

MS. KERNS: I think it's making the recommendation that a Board not approve a conservation equivalency plan that goes beyond the next benchmark, so it sunsets at the timing of that next benchmark, or a timing that allows the new measures to be put in place after the benchmark stock assessment. I don't think it needs to expire on the date of the benchmark, but a reasonable amount of time afterwards, to develop a new program, if necessary. But say a Board says you can't put in CE if the stock is overfished, and that new benchmark says the stock is overfished.

Then whatever measures get put in place to address that overfished status is what that state would then go to, because CE wouldn't be allowed any more, and if CE is still allowed under the new assessment, then the state would need to bring forward a new proposal for conservation equivalency. It could be the same measures, but you still need to bring forward a new proposal that uses that new assessment information, and how those new measures coincide with what the assessment found.

CHAIR WOODWARD: You've got Roy and then Jason and then Justin.

ROY W. MILLER: I wonder if I could probe that question that John raised a little more, Toni. Specifically, thinking of striped bass as a specific example. We have some conservation equivalency measures that have been around since the 1990s. Are we saying now, do I understand this document to mean that every time there is a benchmark stock assessment, those conservation equivalency measures that have been grandfathered in for all those years, will have to be reevaluated and resubmitted? Is that what we're saying?

MS. KERNS: Roy, I would say that is the Board's discretion to determine. But this policy would suggest yes. If the Board is going to provide some grandfathers, then that is the prerogative of that Board to do so. I think it just needs to provide rationale for why it is deviating from the policy.

MR. MILLER: That gives me a measure of discomfort. I just wonder if that's what we really intend to do.

EXECUTIVE DIRECTOR BEAL: I think that is the whole point of this discussion, is how much, or even backing up. The last time this Policy Board discussed this, it's trying to find a sweet spot of flexibility versus accountability. Apparently, it's really hard to do. It seems reasonable to check in on conservation equivalency proposals at some interval, and make sure they are working and achieving what they're supposed to do.

But I take your point. Some of these have been in place for a long time. On the striped bass commercial quotas, for example, length and size limit, those are more mechanical and you know on direct calculations they seem to work well. Some of the recreational ones, the impact and effectiveness of those changes over time as fishing patterns change, and availability of fish change and that sort of thing. You know I think that's the question here is, how prescriptive do you want this policy to be, versus how much flexibility do you want to provide the individual boards? It's a hard thing to put on paper. But I think that's what this conversation is all about.

MR. MILLER: I would agree with you, Bob, if I may. I think the Board needs some flexibility in this regard. I don't think it should be overly prescriptive. We're going to be reinventing the wheel a lot, particularly with a species like striped bass, where CE has been in place for so long.

MS. KERNS: Roy, like I said, it's the Board's discretion to deviate, and they would just need to identify where they're deviating and the rationale for that. You could still have those plans, and the Board just needs to identify those.

CHAIR WOODWARD: Yes, I think this is the sort of paradox we always deal with, and that is like the concept of nimbleness. It's like flexible stability, do those two things exist in the same universe? I think that is what we always struggle with is, we want to preserve the spirit of conservation equivalency.

But how do we do that and ensure that we as the decision makers, and the public we serve, has confidence that it is not being used as an escape from doing the difficult things. I think that is what we're trying to achieve with this. It is not easy to get there, and I think it's not unlike de minimis. I mean we sort of found our way through the maze of de minimis, to a place that we thought we could live with. The question for this is, can we do the same? I'm going to you, Jason, and then Justin.

DR. JASON McNAMEE: I was still pondering flexible stability, that's awesome. Toni, one of our decision points is not allowing CE under certain stock status conditions. What I was wondering, with respect to that is, I think it makes sense in like certain instances, where you have kind of standard coastwide measures. I wonder how does this apply to something like summer flounder, where that CE is the management process. Maybe you've thought about how that interacts here already.

MS. KERNS: I really wish in summer flounder, scup, black sea bass and bluefish we had called that something different than conservation equivalency. In all aspects of how I think about what we do in summer flounder, scup and black sea bass, it's an aspect of the FMP that is a specific directive.

It is not conservation equivalency, as pertained in this guidance document. It is how we set the recreational measures, and it happens to be called conservation equivalency, unfortunately. I don't see that at all following this plan. Now, if a state decided they wanted to try to deviate from whatever the standard set of recreational measures were identified in summer flounder, as the Board and Council approved it, for an alternative set of regulations through this process.

It is possible, I guess for a state to do that, unless the Board said outright, CE under the Commission's plan is not allowed for the recreational measures in summer flounder, scup, black sea bass and bluefish. Any Board can do that for any set of measures. But that would be the prerogative of the Board. We can identify measures that are not allowed to be used for CE if a Board wants. But in that process, this is not what we do there.

DR. McNAMEE: Got you, okay. I appreciate that. It's kind of like it's what we do there. It's not like there is some other option that we're deviating from. That makes sense to me.

CHAIR WOODWARD: All right, Justin, and then I'm going to go to Adam online.

DR. JUSTIN DAVIS: To Roy's concern. I mean it seems reasonable to me to expect that any time we get a new stock assessment, and we're undertaking a management action and considering revising FMP standards, that we should take a holistic look at whatever CE programs are in place.

I don't think what that would contemplate, particularly given the advice that the Board could always decide not to put some CE programs up for reconsideration. It doesn't seem too much different than what we're doing now. Like I'm thinking about Amendment 7 for striped bass, where we sort of grandfathered in the Delaware Bay and the Huson River CE programs, and said, even though we're not going to allow CE when the stock is overfished, but those CE programs are okay.

It seems like any Board would have the discretion to sort of take certain CE programs and say, these are not up for reconsideration. If the Board wanted to reconsider those CE programs, it's probably because they think they're incompatible with whatever is going on with the stock at the moment, or what we're trying to do.

In another comment to the question of two months or three months, the deadline for submitting. I mean I can understand the concern about the closer you submit them to a meeting, the less time the TC has to review them. But I just can't, given that three months is the gap between meetings, I can't see that as workable.

Because if we have one meeting where we take final action on a document, create the new FMP standard, that is when a state will probably know whether or not it wants to pursue CE, and that it needs some time to develop those proposals. I just can't see the three-month deadline being workable, really.

CHAIR WOODWARD: All right, Adam, I'm going to go to you.

MR. ADAM NOWALSKY: I appreciate the last comments that specify that what we're doing for summer flounder, scup, black sea bass and bluefish is in traditional CE, as described in this document. I would support some addition somewhere, a footnote or something that clearly sets that out moving forward, so people don't have to go back and dig through audio from these meeting materials, to find out that it had been stated on this date that summer flounder, scup, black sea bass, bluefish process doesn't in fact apply.

With regards to the timeframes here. Was there any discussion about how these timeframes for submission of proposals could be altered, or have some flexibility where evaluation of them is done outside of our TC process? I understand that we just established that the recreational measures for a number of our recreational species aren't part of CE. But when I see work that the Science Center is doing on developing the decision support tool, a lot of people around the table haven't seen it yet. But there is work ongoing for summer flounder, scup, black sea bass, for basically evaluating size, season and bag limits. I can see tools like that coming about for other species as well. When those evaluations are outside of our state biologist to be able to evaluate outside of our TCs or perhaps even ASMFC staff to evaluate. What do we do when those evaluations are dependent on some third party to do that data analysis for us?

MS. KERNS: To your first question, Adam. I'm not 100 percent sure if you were asking this. But we do have language in the document that allows states to ask for submission less than two months, and then it's the discretion of the Chair whether or not we can get to that proposal in time for the next board meeting. Sometimes proposals are not very complicated, and the TC can review them and all the other committees can review them quickly, and so we can make that work.

For review that relies on an outside source for that review, I still believe the way the document reads, and to the discretion of the Board that those outside sources would need to be presenting that information to the species Technical Committee, to make sure that it fits within the framework of that species FMP. It's not to say that we can't utilize those outside resources, but it's still our species committees that are providing feedback to the management board.

CHAIR WOODWARD: Any follow up on that, Adam?

MR. NOWALSKY: No, I appreciate that feedback, and again I just think adding some footnotes here that makes clear that our recreational stuff that we're doing on the species mentioned, hopefully that can be done through consensus. If there is some other way to add that, I just think it's important to have clear, so we don't have to have this debate or ask this question, Mr. Chair when those species come up. Thank you again.

CHAIR WOODWARD: I'm going to go to Doug Haymans and then Joe Cimino.

MR. DOUG HAYMANS: Similar to my issues with de minimis over the last couple years. I think conservation equivalency should be part of every management plan options, regardless of fishery status. However, I think that the status of the fishery in an assessment, whether it's overfished, overfishing, should be the trigger to review conservation equivalency.

It seems reasonable that if a stock all of a sudden, pops overfished, well what are the causes for that, and could a states conservation equivalency be lending itself towards that? But I think that we shouldn't limit a Board's ability to offer conservation equivalency. If we do, then something like bluefish, I'll be forced into something that is very unpalatable to the state of Georgia, which is sector separation. I think that needs to remain on the table regardless of status.

CHAIR WOODWARD: Joe and then I'll go to Mike Ruccio.

MR. JOE CIMINO: I think I'll keep my comments to this part of it. In general, I agree with Doug that this should be Board discretion. We do a great job in managing commercial quotas. We struggle with MRIP estimates, and so for a lot of our species we'll see overfishing based on those MRIP estimates, and sometimes it could just be a rather anomalous spike near the terminal year that puts us in an overfishing status. Overfished is a bigger concern. I would be more comfortable if we had to lean towards Option 1. Not everyone here, in fact a lot of people don't sit on the Coastal Pelagic Board, but I'll rehash briefly what John Carmichael explained happened with the Spanish mackerel stock, and that is it's only been getting updates for some time now, and they haven't been able to tweak something like natural mortality, even though a lot has changed with how we deal with natural mortality since 2011.

There, if you have an M estimate that is inaccurate, it really impacts the productivity of the stock. By simply getting a more accurate estimate, you can take a stock out of overfished status, just be being more accurate with your M estimate. The schedule has not allowed us to do that for that species. We could be sitting here in a situation, if we decide to choose Option 1, that we don't have Board discretion on something we know is inaccurate. I'm leaning towards Option 4 here.

CHAIR WOODWARD: Mike, then I'll go to Dan McKiernan.

MR. MIKE RUCCIO: First of all, congratulations, Toni. I really have valued this conversation so far. I think the document is in a really good spot. There are a lot of things in there that I think are good, particularly valued the unquantifiable metrics, and just how those do or don't play nicely with CE.

The comments already made about clarifying how this works with joint FMPs I think is really good and important, and would like to see that included in the document, just for clarity. On this discussion about decision points relative to stock status. We've had a lot of conversations around this. I think getting clarity on joint managed FMPs helps considerably.

The one thing that I would offer that I haven't heard yet, kind of in this discussion about Option 1, overfished vs Option 4 Board discretion. It may be unpopular to say, but I recognize it is very difficult in the moment to make good decisions when backs are against the wall. The flip side to that is, if we do adopt something like Option 1, then that also paints us a little bit into a corner.

I get this conversation about flexibility vs accountability. I think, my inclination is to whether or not CE is allowed when a stock is overfished, to certainly have a decision point, some kind of forcing function associated with that, to evaluate whether or not CE is appropriate moving forward. I think relative to Option 2, overfishing, those are warning signs.

One of the things, and I think this was part of what Joe was commenting on. We see a lot of oscillation in where F is in any given year. I think if we went so far as to say, you can't use CE when you get an overfishing determination. I would be concerned about how often that signal might change, and whether or not it is in fact a true signal, or we're chasing noise, and what that would do to the management system.

But even there again, I think that is a warning shot when something is subject to overfishing, we should be paying attention and evaluating whether or not CE is still efficacious, in terms of what our management objectives are. I would value some more conversation on this. I would be in favor of moving to Option 1, with perhaps the caveat being not just taking CE completely off the table, but having some kind of forcing mechanism that makes a deliberate evaluation as to whether or not it is still appropriate. You could argue that maybe that's the same thing as Board discretion, but I think in my mind at least it's a little bit different, and if that's not clear, because I haven't explained it well.

CHAIR WOODWARD: I'm going to go to Dan and then to Dennis, and then Doug Grout and then Erika, you are on the list.

MR. DANIEL McKIERNAN: Spud, I'm going to hold.

CHAIR WOODWARD: Okay, well Dennis, I'll go to you and then it will be Doug Grout.

MR. DENNIS ABBOTT: I would like to address the part about grandfathering in previous CE measures. While we were talking, I Googled up the definition of grandfathering. The definition is it's a clause creating an exemption based on circumstances previously existing. We have to consider that the conditions on which that CE might have been allowed many years ago may not exist.

I don't think that asking anyone that has one of these old grandfather clauses to provide justification after an assessment, of why that CE should exist. If it was good then and it's good now, then I'm sure the Board would believe it. But another example they gave of grandfathering was how in the 1800s we disenfranchised black voters by grandfathering in white people who couldn't read or write, but making it a requirement for black people to be able to do so.

I think that having someone required to reapply for conservation equivalency, if nothing else, it makes them show compliance with our latest regulations or guidelines that we're proposing here. If it's good then and it's good now, we'll be okay. But I don't think that we should just say, because you had it a long time ago you should have it now.

They gave another example of, you know having a subscription to a magazine from 20 years ago, and still be paying the same price today, because you were grandfathered in. Things change, and we have to change with it. That's what we're doing with this conservation document that some of us have worked quite a number of years on seeing this done, to tighten up the conservation equivalency program.

CHAIR WOODWARD: Doug Grout, and then I'll go to Erika after Doug.

MR. DOUGLAS E. GROUT: I too would like to have some kind of a trigger mechanism after a stock assessment, which would force a Board to consider whether or not to allow conservation equivalency, or to continue to allow it if they already have it in there, as opposed to just saying overfished means no conservation equivalency.

But something where there would have to be an actionable item on the board, in making a decision one way or the other, what they are going to do with it. There is a lot of very good things here that I think in the document, that will tighten things up on what will be effective conservation equivalency, and I hope we keep all those tightening up of will, as opposed to might. The other thing that I think is very important in this is the review process. I think from my perspective, I think we should be reviewing even some of the historical ones. I think a lot of the conservational equivalency measures we've had in striped bass were very good. They helped us get through management of this species. But I think every conservation equivalency also needs to be reevaluated on a periodic basis. I think that is an important concept that we need to keep in here.

CHAIR WOODWARD: Erika and then Lynn.

MS. ERIKA BURGESS: I was hoping to jump in earlier, because I have questions about the document that I think would inform some of this. I'll leave it to you. Do you want to settle discussion on this decision point, or is it all right if I bring up my question?

CHAIR WOODWARD: I don't think we're quite where we need to make a decision about when it's permitted. I think we're having some good discussion, and hopefully leading towards that, because it sounds to me like we may not be able to get this thing across the finish line. But we need to at least get certain components of it across the finish line, and that one seems to be the one that is

probably going to be the most difficult one to reconcile. Let's continue to have some discussion on that. Is there anything you want to add at this point then? Do you have another question?

MS. BURGESS: Yes, so I had multiple questions throughout the document, if you will allow me to go through.

CHAIR WOODWARD: Yes, go ahead.

MS. BURGESS: In the paragraph underneath the options for when conservation equivalency will not be permitted. The tone of this paragraph sounds like conservation equivalency would be required to reduce harvest below the FMP requirements. But I believe the expectation and the tradition of conservation equivalency is that it would be equivalent to the requirements of the FMP.

I'm speaking specifically to the third line; it ends with a measurable reduction in harvest. It may not be that the intended element of an FMP is to reduce harvest, but to constrain harvest to a certain goal. I don't think that is captured by the language in this document, and there are a few other places where it seems like idea of conservation equivalency is very narrow in scope, where it's not about in generally being equivalent but forcing a reduction in harvest.

MS. KERNS: Erika, that paragraph is specific to nonquantifiable measures, and so when we do conservation equivalency, is to do a different set of measures for what the plan is putting in place. I would say that 99.9 percent of the time it is a reduction that is occurring, because you don't have to do conservation equivalency programs for liberalizations.

I think what we're trying to get at here in particular, is that if it cannot be quantified, we cannot use it, and we're trying to drive the point home about that you have to be able to find a measurable reduction out of it, or I can change it to a measurable change if that is more helpful.

MS. BURGESS: No, I understand the concerns for some of the other boards, but I think about some of the species managed by the Sciaenids Board, red fish for example. There is a conservation equivalency that Georgia has. We're not aiming to reduce the harvest of redfish, there is nothing driving that. But they have regulations that are very different, and I would like to think about all the species that the ASMFC manages, not just the problem children, when we think about conservation equivalency.

MS. KERNS: I guess I would say that when that measure was originally put in place it was for a reduction, most likely, right or no?

MS. BURGESS: Redfish had a goal for everyone to achieve a certain SPR. We weren't trying to reduce, it was set your regulations, and this was on both the Gulf and Atlantic Coast. We have a desired SPR for this fishery, come up with a set of regulations that will achieve this SPR. Although the default regulation would be a certain bag limit and size limit.

MS. KERNS: Does measurable change work?

MS. BURGESS: But that state might not need a change, so Georgia might be or Florida might be implementing or having regulations that hold their stated status quo, because their harvest is currently at an acceptable level to meet the coastwide goals.

MS. KERNS: As I sit here, I will try to think about a way to revise this sentence, but make sure, I mean we are trying to drive a point that it needs to be measurable. I don't want there to be any leeway in what measurable means. I think it was a huge concern of the committees, because of some plans that have been put in the past. I'll try to figure out a way to say it differently and bring it back to the Board.

MS. BURGESS: Then in that same paragraph at the end, it says nonquantifiable measures could include circle hooks, nontargeting zones. No gaffing. I think this list of very specifics isn't necessary, and I would recommend removal, to be less prescriptive in this document. Again, combining coastwide and

conservation equivalency in the next paragraph is too focused on achieving reductions.

I would like to see that made broader. Then again, underneath standards for state conservation equivalency proposals, the second bullet, second sub-bullet, it says any closed period must come from a period of high availability and include at least two consecutive weekend periods, Friday, Saturday and Sunday. I think that is also too specific and prescriptive.

We could achieve the same amount of reduction with a longer season over less popular periods or less availability periods, I understand that. No weekend is equivalent throughout the year, a weekend and a weekday are not equivalent, but there is some way that you could craft a formula that would allow a closed season to be on or include, not the peak of availability. Those are the points I would like to bring up and consider, and it's for this policy.

MS. KERNS: I think it would be helpful, if we're going to make these kinds of changes, if we make motions to either change them or not change them. In particular, the evaluation group for the second half of that sentence, the two-week periods, was super important to the committees, because anything less than two weeks they felt recruitment would make the closure not mean anything. That is why they put that information in there. If you are looking for something less than two weeks and not including that specific language to make that change, I think it would be good to have a motion.

MS. BURGESS: I'll need some time to craft a motion and think about it, but it wasn't the concern about two weeks, it was saying it must include at least two weeks. I think that is saying something different than what I heard you just verbalize, or at least I'm interpreting it differently.

Mr. Chair, I've gone through several points that I think are kind of all over the board, but are important to Florida, in regards to the conservation equivalency. I will defer to you whether you would like me to handle these with motions now, or let the conversation about the item on the board continue.

CHAIR WOODWARD: Yes, why don't you work on articulating these in motions. I think it will help everybody else understand what the intent is, and then we'll move along. We can circle back on that. Go to you, Lynn, and then Shanna.

MS. LYNN FEGLEY: I appreciate Erika's point about the document, maybe being inspired by the problem children. But I think I like the document. I think to Erika's point on this proposed change on the slide. Board discretion is going to be important, and I think that the backstops that are presented in the document in these other places.

What kind of data can be used? Is it measurable? You know sort of these specifics really sort of solve some of these other concerns, you know that were brought up about having people's backs against the wall, and not making great decisions in the heat of the moment. I think having those facts up in the document helps.

To Erika's point, if there is Board discretion, then that may provide you know some flexibility if some of those particulars are really inappropriate for a particular species at a particular time. I also, after sitting through yesterday's climate scenario building session, and thinking about climate ready fisheries.

You know I sort of feel like this conservation equivalency may be important for species boards in that regard, because to me it almost is a mechanism to be more nimble when things change, in terms of fish distribution when we're not ready for it. It maybe allows us to act a little more quickly, and that sort of brings me to the point that to me there is a bit of a fine line between conservation equivalency and regional management.

I mean we've done conservation equivalency in the Bay for striped bass, because we truly have a different segment of the population in the Bay that our size, everything is different. Therefore, we sort

of need a different management framework. I guess that's a long-winded way of saying, you know I like the document. I appreciate that we need to also remember the fish that are working well, and I think Board discretion is going to be important going forward. I also just made a note into Erika's point about measurable harvest reduction. Maybe a phrase that would work would be measurable impact on harvest to achieve FMP goals. Just of note, maybe that would fix it.

CHAIR WOODWARD: Thank you, Lynn, Shanna and then I'll go to John Clark.

MS. SHANNA MADSEN: I'm going to stick to, I think the decision points that we've got before us today. I kind of was struck by Mike's comments and Doug's following Mike's. I think that some combination of Option 1 and 4 is where I'm going to feel most comfortable. I do think it's really important for us to have some level of transparency in our decision making.

I think stopping, like providing some sort of backstop that says, at the point when the stock is overfished, the Board is going to consider why that stock is overfished, and whether or not CE should be allowed. I think that sort of gets to the point that Joe was making previous to those comments, where if it's something that we're recognizing is an issue, either in the data or in the terminal year or something like that.

I think that it's incredibly important for us to state that on the record, before moving forward with conservation equivalency. I find that Option 4 kind of doesn't provide a backstop, and at least keeping us accountable and making sure that we're being transparent in our decisions makings.

I know that sometimes you know obviously in a Board meeting we get there eventually, I think with the conversations, but this makes a spot where we have to have that conversation. When a stock is overfished, I think it's really important for us to have that conversation. For me, some sort of combo between 1 and 4 would be great.

I don't know quite how to get there, but Toni, I trust your discretion there on that one. The other comment that I wanted to make was towards the timing of when things are brought forward to the committees. I think in the document for the review process, it says that if you need to submit something outside of that, like two-month timeframe, that it is up to the discretion of the species board chair.

I would love to see something in there that might say, up to the discretion of the species management board chair, in consultation with either the TC Chair or the coordinator, because I think it's really important to make sure that we take a step back and talk to our TCs, and understand kind of where they're at.

Sometimes there is a disconnect between, you know the Board and its understanding of what all of the tasks that the TC is currently working on looks like. The TC is probably best to determine whether or not looking at a conservation equivalency proposal is going to be a really, really heavy lift, or if like Toni was saying, it's something a little bit more simple. They don't really need that whole two months to review the timeline. But I think that it's important for us to make sure that we're consulting with our TCs to really make that determination.

CHAIR WOODWARD: I'm going to go to John Clark and then to Dave Sikorski online.

MR. CLARK: I didn't think we would be ready to finalize this today in hearing the discussion. I would really like to see whatever changes we make today before we consider finalizing. But if we are going to dispose of this decision point, and you would like to have a motion up there, I would move to accept Option 4.

I still think that Board discretion is something we're going to need for CE, regardless of the species or situation. If we need something like that, just to discuss whether we're going to move on from this decision point, or whether we're coming back next

time to continue discussing this decision point, I would be glad to make that. But I'll just leave it at that for now.

CHAIR WOODWARD: Okay, let me work through the other two names we've got on here, and then I would be maybe ready for that. Dave, I've got you online, can you hear us? Go ahead.

MR. DAVID SIKORSKI: Members, I wish I was still in the room, but couldn't do that. I'm generally in support of Option 1 and Option 4. I think Lynn and Shanna's comments were spot on. One that stands out in Lynn's comments was having backs against the wall. You know coming from Maryland, I think we've had a couple tough conservation equivalency challenges recently.

I think the public has reflected that, or has responded in certain ways, you know positive or negative. Those were backs against the wall situations, and I think they were both backs against the wall ecologically, or what's going on with the status of the stock, but also politically, where folks are grasping at different chunks of the fishery and trying to hold the line and not, not participate in conservation on striped bass.

That is just the nature of the beast, and that is why the stock of the fishery matters. I'm sorry, the status of the stock absolutely matters. Overfishing is a concern, but if we're going to have a blanket policy, we need to recognize how different these fisheries are and the data sources and such. I know that's been discussed this morning.

But ultimately, there is no question that conservation equivalency is an important tool. I guess I have a question. The four example items that were mentioned previously, no targeting, circle hooks, gaffing. Those are the nonquantifiable things that frankly have given me some heartburn, in the way we've been given credit for them in Maryland, not knowing that we're saving fish in this time of conservation.

When I think those being listed somewhere, whether it's within the species-specific plans or as a blanket statement are a good thing, because they can provide that history that, hey these are the things that have been a bit of a red flag, whether from a science perspective, or even from a political perspective, whether or not they meet the goals that we have in our management plans.

I think that can allow us to find that flexibility and stability if we have these types of four examples clearly spelled out, so we don't lose them to history. There is a lot of good stuff that has been done in the past with CE. There is some stuff we want to avoid, and so that again goes back to where I have confidence in board discretion, as long as we have the boundaries that are based on the biology of the stock. I guess I have a question just to make it clear, about where those four examples may live, if they don't already. I'm not 100 percent certain if they kind of live in perpetuity in the management plan.

MS. KERNS: I'm not sure if they live in, for example the striped bass FMP, I cannot remember. I don't believe they are. Here on Page 3, where it is in the plan or in the guidance document. It says nonquantifiable measures could include, because I recognize that at some point one of these measures could become quantifiable.

But at this time, you know they are not, and we were trying to provide examples so that folks understood what these measures may be. That was the purpose of having them here. If a Board decides they want to identify constraints within their plans, they can do that. Striped bass has constraints within their plan about what you can and cannot do, and how you can do it for conservation equivalency, and that is allowed within an FMP.

MR. SIKORSKI: Thank you, I'll follow up offline. I have some different ideas. I don't want to clog up the conversation here, but I really appreciate that, thank you.

CHAIR WOODWARD: We'll go to Dan McKiernan and then Mel and then Doug Haymans.

MR. McKIERNAN: I've heard a couple of speakers favor a combination of 1 and 4. I'm wondering if it would be viable to craft a motion with 1 and 4, but the Board discretion would have to be like a super majority. Thinking about Doug Hayman's comment about his conservation equivalency, if he didn't get it, he would have to go to sector separation.

I'm guessing that majority of the Board would want to give him that relief. Given the number of really close striped bass votes we often have, I'm wondering if it would make sense to have a stronger majority on the Board discretion, such as Option 1, if the stock is overfished it wouldn't be allowed, unless the Board approved it by a three-quarters majority, or something like that.

CHAIR WOODWARD: I think when we get to the point of a motion, which I want to move to pretty quickly here after these next couple speakers, that that is when we can maybe fine tune this content of 4 to reflect what the will of the Board is, in terms of sort of blending 1 and 4. Mel, and then I'll go to Doug.

MR. MEL BELL: Yes, I really like the path that Mike sort of started us on, and then followed up with the blending of 1 and 4. I agree with that. I think if you consider that what we're talking about is a tool, and I appreciate Lynn's comments related to having that tool in our toolbox as we approach, potentially, more uncertainty in what things may be going on in fisheries in the future.

I wouldn't want to be too restrictive now and throw the tool out of the toolbox, or over prescribe the tool at this point. I'm thinking we're at a point where we need to do a good bit more tweaking with this before we would have something for approval. But I kind of like that approach of the 1 and 4 blending, appropriately worded.

CHAIR WOODWARD: All right, go ahead, Doug.

MR. HAYMANS: Dan expressed my concerns exactly, and I'm in favor of some blend where a majority vote overrides, because bluefish is my example. Thank you, Dan.

CHAIR WOODWARD: All right, we've got a couple more folks that hands have been raised. After that I would really like to move to see if we can dispense with this particular part of this, and I'll go back to you John, to start that. I've got Pat Keliher, then I'll go back to you, Dennis.

MR. PATRICK C. KELIHER: I'm sorry I'm not there in person today. I too am leaning towards a combination of Option 1 and 4, but Dan McKiernan's comments around a super majority has really kind of piqued my interest. I think it really helped me become more comfortable with that type of an approach. You know we've taken some lumps on CE, and I think maybe if we're going to go in that direction, maybe a super majority vote from a Board moving the direction of CE would be appropriate.

CHAIR WOODWARD: Dennis.

MR. ABBOTT: I think the public has weighed in on conservation equivalency strongly, and therefore, I think that if we went to Option 4, we're basically back to where we were before we even started this exercise. I think that needs to be more of a stoplight in that when a certain event is occurring, be it overfished or overfishing occurring, that that is a stoplight and you can't have conservation equivalency.

Having Board discretion concerns me that it just puts us back where we are, where we have states with different views on particular issues and we're back to ground zero. Again, I would favor seeing something along the lines of a 1 and a 4, and again going along with Dan McKiernan's idea of requiring a super majority to have Board discretion be the determining factor, I think is important. Because using striped bass as an example, we've had too many close votes, you know not a good place to be.

CHAIR WOODWARD: Erika is that to this?

MS. BURGESS: I'm prepared to offer a motion for you.

CHAIR WOODWARD: On this topic? Well, John was going to offer one too. Let me let John have the first say, and we may need to modify it with yours. John, go ahead.

MR. CLARK: Yes, hearing the conversation, Mr. Chair, I think it will be modified. But to get the conversation started then we once again reiterate where I'm coming from. I **move to approve Option 4, board discretion for allowing Conservation Equivalency.** Thank you.

CHAIR WOODWARD: All right, so we have a motion, do we have a second? Okay, so is that a second, Erika? We have a motion and a second. Now we have a motion that belongs to the Policy Board for discussion. Do you want to follow that up, John, with some discussion.

MR. CLARK: Yes, just I believe that I understand the concern about Option 1, but I believe Board discretion includes the discretion to not allow CE if the stock is overfished. I believe the Board can make these decisions. I understand the concerns about that, but as a state that has used CE for several species, and found it critical to keep our fisheries open. I would really like to see it kept at the point where each board can decide whether a state's proposals are valid, and I'll give you an example of Addendum VI for striped bass.

We reached the 18 percent reduction by taking less from the commercial fishery and more from the recreational fishery, and in 2020 we were a little above 18 percent of the reduction. The proposals can be crafted. I think CE can be done in a way that meets the goals of the Board. I would just like to keep the Board having the discretion.

CHAIR WOODWARD: As the seconder, Erika, do you have any comments?

MS. BURGESS: Nothing to add, thank you.

CHAIR WOODWARD: Now we're going to have discussion on this motion, so John, and then I'll go to Jason.

MR. MANISCALCO: CE is an important tool, but when a situation like a stock being overfished is occurring, I think the bar has to be higher. I think proposals need to be more rigorous, need should be demonstrated, and I think some other people around this table have come up with some good suggestions on how we can accomplish that. I would like to hear from them.

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

DR. McNAMEE: Yes, I appreciated everything John offered, and his feeling that option for us kind of inclusive of Option 1. However, I was really compelled by what Shanna brought up earlier in this idea that to kind of get to that Board discretion piece you have to be really explicit about why you're doing that, in order to kind of override Option 1. I'm not in support of this currently, I just wanted to offer that.

CHAIR WOODWARD: Dan.

MR. McKIERNAN: I would like to offer a motion to substitute.

CHAIR WOODWARD: Proceed.

MR. McKIERNAN: Motion to substitute to adopt Option 1 with an allowance for a 2/3 majority of the Board to override.

CHAIR WOODWARD: I'll ask for a second. That would be to override the prohibition, so it would be a 2/3 majority vote to override on CE under that condition. All right, have a second, Cheri. All right we have a second, so now let's have some discussion on this substitute motion. Just follow up if you would, Dan.

MR. McKIERNAN: I think it's probably reflective of some of the sentiment we've had around the table today that a lot of us do like the idea of having a more rigid standard. But given the idiosyncrasies of

different species, different situations, two-thirds does give the Board a lot of discretion. I think that is consistent with what John Clark was looking for, in spirit.

CHAIR WOODWARD: All right, further discussion on the substitute motion. We did, I got a second from Cheri. Cheri, would you like to make some comments?

MS. CHERI PATTERSON: No, nothing really further other than I was crafting something real similar to what Dan had indicated, based on the conversation around the table.

CHAIR WOODWARD: All right, I have a couple of folks that raised their hand out in the public world of cyber space. I'm going to ask them if they want to make comments to this substitute motion, just to give them an opportunity. I have Mike Waine, Mike do you wish to comment on this motion before the Policy Board?

MR. MIKE WAINE: Mr. Chairman, I just had a question, so I'll hold until you allow me that opportunity, thanks.

CHAIR WOODWARD: I tell you what, just go ahead while we've got you on the microphone.

MR. WAINE: Okay, thanks. My question is, does the new policy allow states to circumvent Board action? What I mean when I say that is the example that John Clark gave as his justification for the motion, where some states and jurisdictions chose to take more of a reduction from one sector over another.

That actually flew in the face of a vote by the entire Board to take it equally. I guess my question is, like that frustrated some of the advocacy space, because what is the point in voting at the Board level if conservation equivalency can be used to just circumvent that vote? I was just looking for a little clarity about whether the new policy addresses that.

MS. KERNS: Mike, I think that you could argue that any measure that a state proposes under conservation equivalency is different than that of what the Board voted on. A Board can make the decision to allow a state to do something different, if that is something that they want to do with the conservation equivalency program, or they can say no, that is not going to be allowed.

If the Board did not want to allow, in the example you provided, states to switch up how the reduction was taken, then they could have said, you cannot use CE against this measure. I wouldn't say that using CE is circumventing what a Board did, it is allowing a state to provide a different alternative to get at what the plan has required.

MR. WAINE: Just a quick follow up for clarity. Given what happened this week with striped bass, if the Board voted to not allow mode splits to occur, then they would also have to specify that states couldn't use conservation equivalency to achieve mode splits? Is that what I'm hearing?

MS. KERNS: Yes. But in the example of striped bass right now, CE is not allowed in recreational measures, so they can't do it right now.

CHAIR WOODWARD: Thanks, Mike, also we had Thomas Newman. Thomas, do you have a comment related to this motion before the Board? I think your hand might have gone down, okay, we'll move forward. If it comes back up, I'll give you a chance. We have a substitute motion before the Board. Is there any more discussion before I give us an opportunity to, Roy.

MR. MILLER: I appreciate the opportunity to comment twice on this matter. I think with the substitute motion we've sort of lost track of where I thought we were going. Comments from Mike and Shanna, with a combination of 1 and 4, because if I had my druthers, I would have said if a stock is overfished that will trigger Board review of conservation equivalency measures to determine if those measures shall continue, as long as the stock is overfished.

I think that sort of encompasses what they were getting at, that there would be a specific time when Board discretion would be allowed, or would be triggered, and that would be when the stock is considered overfished. I don't know how to get back to that now. You could even throw in the two-thirds majority in that for overriding that Dan suggested.

CHAIR WOODWARD: Yes, I think we've got a situation here where what would happen under Option 4 happens anyway. It's kind of like a Board is always going to sit there and discuss the various alternatives that are before it, to deal with an issue, whether it's overfishing, overfished, whatever it might be, and that there is always going to be Board discretion.

I think what, and again, Dan, maybe I've got it wrong. But what this motion does, it says if after that discussion you have to have a two-thirds majority to say we're not going to allow conservation equivalency in that overfished situation. If this Board believes that we need to be more prescriptive about review, because I think we're talking about review of conservation equivalency pursuant to the condition of a fishery.

This doesn't really specifically address that per se. I mean it's kind of like allocation, like having an allocation review policy that says if this, then we will review. You know if you have a change in the status of a stock as a result of a stock assessment, and the Board is going to always review management of that stock in its deliberations.

I would assume that if a reduction is necessary, a reduction in fishing mortality, whatever, you almost have to review conservation equivalency to determine whether or not a state is still capable of meeting those requirements. I think that is what we're kind of struggling with is, we've got a policy that talks about using conservation equivalency, how you use it, that kind of thing. I'm not sure, maybe it's not, is it clear about when conservation equivalency has to be reviewed? Maybe it's there and we need to be more explicit about it, I don't know.

MS. KERNS: Under the motion that is up for substitute. As soon as the stock is overfished, conservation equivalency is off the board for any species FMP, unless the Board by two-thirds majority vote puts it back on the table. That is what this motion would do.

CHAIR WOODWARD: Okay, John, go ahead.

MR. MANISCALCO: I mean with that interpretation, I guess I'm inclined to consider proposals on a case-by-case basis, and apply that two-thirds majority, not conservation equivalency is or is not okay. I think again, it's based upon demonstration of need, how vigorous that proposal is, how uncertain the data and the results are. If we need to modify the motion, I would be willing to do that.

CHIAR WOODWARD: Yes, I think we're kind of getting tangled up here in what our intent is. I think we're trying to find something that is specific yet general. I think that is always a challenge when you're trying to make decisions. Dan, go ahead.

MR. McKIERNAN: Yes, when I made the motion, I was kind of thinking about future actions. I wasn't necessarily thinking it through. Like as soon as a stock status was changed, all of a sudden, things were going to be wiped out. I'm thinking kind of like back to the last striped bass addendum before the amendment, when a vote was taken and then at least one state went for conservation equivalency to alleviate the pain of that particular action. I was thinking in that route, I wasn't really cognizant that this would require a wipe out of existing management measures.

MS. KERNS: Dan, I wasn't trying to say it wiped out existing management measures, I was trying to say that you can no longer move forward with conservation equivalency plans. The document does recommend, as it does say should, evaluate all conservation equivalency programs after a benchmark. It also recommends that the Board not

approve conservation equivalency programs beyond a benchmark, it does not require.

CHAIR WOODWARD: We've got several hands up now. I've got Pat Geer, and then I'll go to Lynn, and then you, Justin.

MR. PAT GEER: Just a thought. What if we reversed this and we said adopt Option 4, unless the stock is overfished and we need a two-thirds majority override? Boy that was deep.

CHAIR WOODWARD: It's been a long week, and we're getting into abstract thinking here, and that's always a challenge, you know when your brain has already been a little tasked.

MR. GEER: The thought is it would be discretionary if the stock wasn't overfished, but if it was overfished, you would need a two-thirds majority to approve CE. The default would be it's up to the Board's discretion.

CHAIR WOODWARD: Yes, I think we've kind of a got a glass half full, glass half empty, but the same amount of water in the glass kind of thing going here.

MR. GEER: the way Toni defined this; this option would do away with CE.

MR. WOODWARD: Well, as I understand it, no what it would do is it would say, unless you had a two-thirds vote going forward. If you had an existing CE in place, and that CE was still compatible with future management, it would not abolish that preexisting CE. What it would say is going forward, if a new CE proposal was brought before, you would have to have a two-thirds majority vote of that Board to proceed with the new CE. I could have this wrong, but that's the way I, is that?

MS. KERNS: I was not interpreting this that way. I was interpreting this as, the Board is saying, we do not want to allow conservation equivalency plans if the stock is, is it overfished or overfishing, I can't remember anymore? If the stock is overfished. If the Board wants to allow conservation equivalency plans for that FMP, then they need a two-thirds majority vote when you approve the stock assessment, or whenever it may be, to say no, we are going to actually allow CE.

I don't interpret this as a plan-by-plan basis. I see it as for this FMP you are going to allow CE, even though the stock is overfished. You make that statement when you have the stock assessment come to you. Then you can continue moving forward following your guidelines. That is how I interpreted this, because I think you need a definitive guidance for all of the states to know whether or not they can bring forward proposals or not.

CHAIR WOODWARD: All right, we've gotten ourselves stuck in the tar pit here and we're running out of time. I've got a few more speakers, I think maybe it's best, good points and good concerns have been brought up here. But it might be best that those get processed, go back to the drawing board, craft some of this into some new content, so that we can focus our deliberations more specifically, because I think we're trying to grab at things and kind of stick them in now. I that is not being a very productive use of our time. I had Lynn and then Justin and then Mike Ruccio.

MS. FEGLEY: That is where I was going. I think we are trying to rewrite the policy with a motion, and we're really tangled in striped bass. I might be out of procedural order, but I was going to **move to postpone until the next meeting**, so that we can maybe have some conversations about this offline, and submit our comments. Then we can take it up again when we're a little more clear headed.

CHAIR WOODWARD: All right, so I'll take **that that is a motion to postpone deliberations on this motion to the next meeting.** Do I have a second? Okay, multiple seconds here, so I'm going to say second from Marty. **Any discussion on that motion? Any opposition to that motion?** John.

MR. CLARK: I was just going to ask if Toni might send the actual Word version of the marked-up copy there, so it would be easier to see, so I could accept

the changes and see how it turns out with that, and all those things. Thanks.

MS. KERNS: I would be happy to do so. If folks want alternative language, if you can send me that alternative language, and when I bring it back to the Board, I will provide options for the alternative language that folks are looking for.

CHAIR WOODWARD: It's more than just this particular topic. Anything in there right now that is causing heartburn, if you think there is a better way to say it so that it is more clear, and that we accomplish our end goal here, which is preserving the spirit of conservation equivalency, but also increasing the accountability.

You know we certainly want this to be as perfected as it can be, you know given the complexities of trying to apply one size shoe across a lot of different feet. **If everybody is comfortable with that, we'll just suspend discussion on this topic. Is everybody okay with that? Thank you, I appreciate the good discussion. Jason.**

DR. McNAMEE: Just noting that Rhode Island would be a null on that.

UPDATE ON THE RISK AND UNCERTAINTY POLICY DEVELOPMENT

CHAIR WOODWARD: All right. Well, while you have the microphone warmed up, go ahead, you're our next agenda item, Update on the Risk and Uncertainty Policy.

DR. McNAMEE: Mr. Chair, while they are kind of tidying up there, I can sort of ramble on for a minute or two until the presentation comes up.

CHAIR WOODWARD: Sure.

DR. McNAMEE: Thanks for the time, Mr. Chair. We haven't talked in a little while about the Risk and Uncertainty Decision Tool, and there has also been a change in staff at the ASMFC with the staff member that had been managing this, Sara, left. Now Jainita is here, and shortly after she got herself settled in, I started pestering her about risk and uncertainty.

We talked a little bit, and thought it might be good to just kind of check in with the Board. We had another thought as we were discussing this with Toni and Katie Drew as well. We are going to talk, just a reminder, that the risk and uncertainty decision tool is still a thing, and just some thoughts on the best next step here.

Just a quick reminder of what I'm talking about. We have a draft risk and uncertainty policy and decision tool, and the point of this tool is it provides a method for arriving at an appropriate risk tolerance level for a stock, given some management action that you want to take. You generate a risk tolerance level, and you can then use that to select, for instance, a harvest level based on some projections, or something similar to that.

Just a reminder that this isn't management strategy evaluation, this is a different sort of thing. This is more, I think a really good example is menhaden. Often what people will do is they will ask for a whole series of differing, we want a 50 percent probability of achieving our F, how about 55, how about a 45. Then we end up asking the technical folks to do like 15 different versions.

When really what we should be doing is basing that 50 percent or 55 percent or 45 percent on specific criteria. That is what the tool does for us. The way that it works, if you recall we asked the technical folks to kind of take the first cut at generating, so the tool is basically a series of questions. We populate those questions with information, and we get the initial cut at that from the Technical Committee, as well as the Committee for Economic and Social Sciences. Well, within the tool there is information on stock status, model uncertainty, management uncertainty, ecosystem importance, and then there is a series of socioeconomic considerations as well. The Board plays an important role by weighting the importance of each of these factors.

If you recall in the tautog exercise that we did, the Board got together and did those weightings kind of a priori, and that's how that part works. That is where the Board can have influence. Then the Board can also have influence by correcting if they disagree with one of the things that the technical group put in there. They have some leeway to offer changes there as well.

The risk and uncertainty tool provides the recommended probability of achieving fishing mortality or spawning stock biomass reference points for setting specifications. We gave this a shot with tautog. We recommended using tautog as kind of our pilot case. We had done a couple of like mock cases prior to the tautog, but the tautog exercise is going to be the first time that we really applied the tool to an actual stock during an actual management process.

We did that back in August of 2021. We developed the preliminary risk and uncertainty decision tool information, and we did that, if you recall tautog has four separate regions within it, so we did that for all four regions. We got information from the Board, the Technical Committee, the Committee for Economic and Social Science.

The Board reviewed the decision tool in the preliminary tautog risk and uncertainty report, and then everything was good with tautog, which is good, but not for our risk and uncertainty exercise. We ended up just sort of developing some kind of scenarios based on tautog, things that could have happened if everything wasn't great with tautog.

We ran through the process and then kind of didn't get to do it, in sort of the real way that we had anticipated. After that happened, we met with you all, and talked about what the next step should be. We had identified cobia as maybe the next viable opportunity to kind of run through the decision tool process again.

It feels like kind of a ways off, so that is one of the things that Katie, Jainita and I talked about was, is there something that is coming up quicker that might also be a good candidate. My concern was, you know I didn't want it to get so far off that everybody forgets about it, and we have to kind of relearn everything that we've kind of gone through, which is sort of what keeps happening to the risk and uncertainty policy over time.

We identified red drum as a good candidate for our next test case. We checked in, I think it was Jeff Kipp might be the lead on that, so we talked with Jeff as well. Some of the attributes of red drum is it is data rich, has a stock assessment that is scheduled for about a year from now. There is a chance of management action needed in the near future.

I'll just note, it's kind of funny, like hoping for bad results to come out of a stock assessment. That is not what I'm doing here, but there is the potential that we actually have to use the risk and uncertainty tool for red drum, and the management framework aligns with the tool output, so it doesn't have a quota. But if a reduction in removals is necessary, we can use the tool to help us with that. Next steps, and the point of giving you this is both to inform you, but also to offer an opportunity if anybody thinks that this is a terrible idea to use red drum. I'm hoping that is not the case. Our next steps, if it's okay with the Board, would be to reconvene the Risk and Uncertainty Working Group to begin the process.

Jainita will then reach out to the Red Drum Technical Committee, and the Committee for Economic and Social Science to provide those technical inputs, and then the Red Drum Board will provide input on the weighting, so we'll do that exercise again with the Red Drum Board. That's it, so happy to take any questions, Mr. Chair.

CHAIR WOODWARD: Thank you, Justin, any questions for Justin, any concerns about the plans to use red drum? Nobody shot any flares up or anything, so I guess they're good to go. Thank you.

COMMITTEE REPORTS

CHAIR WOODWARD: All right, we've got a couple of committee reports. We're going to start off with

Atlantic Coast Fish Habitat Partnership, and Simon, you're up.

ATLANTIC COAST FISH HABITAT PARTNERSHIP

MR. SIMON KAALSTAD: Hi there, good morning. I'm Simon Kaalstad; I'm the Habitat Coordinator here at ASMFC, as well as the Coordinator for the Atlantic Coastal Fish Habitat Partnership, also the Coordinator for the Habitat Committee, so I'm the Habitat Guy. Just wanted to give you guys a brief update about what ACFHP has been up to recently.

Last week the Steering Committee met in Philadelphia, Pennsylvania, and we got through a number of items that have been sort of put on hold during the transition of me starting here. But we got through the Strategic Plan, so we now have a five-year Strategic Plan approved, conservation objectives and strategies, as well as we got through the action planning, so more specific to your plan on what we will accomplish.

We also decided on the recipient for the 2023 Melissa Laser Habitat Conservation Award, and then in addition to those we discussed a number of items, including the recent BIL and IRA funding opportunities. We have discussed that we will be applying for the NOAA Climate Resilience Regional Challenge, so we're sort of in the process of combining heads and putting together a letter of intent for that, as well as the next annual RFP for FY'25, which will be released around September and October.

Then we were also fortunate enough to have Alex Atkinson from NOAA, who is on the National Fish Habitat Partnership Board join us in Philadelphia, and clarified some issues with the Beyond the Pond fundraising, as well as the Congressional designation, which is a requirement by the ACE Act. The Congressional designation process is a pretty straightforward process. The Fish Habitat Partnerships will submit a draft application to the NFHP Board by the end of this year.

Then from then until about June 1st, we will submit and work with the NFHP Board to finalize that application. Then at the end of June they will vote on the finalist of FHPs to recommend for Congressional designation, and then in 2025, ideally, funding will continue through the U.S. Fisheries and Wildlife Service. For this past RFP that was put out, we have two on the ground projects plus operational support. There is one dam removal project in New Jersey, removal of the Upper Collins Dam on the Pequest River, as well as there is a salt marsh restoration in Maryland, sort of short name, Maryland Coastal Bay Salt Marsh Restoration, it's a multiple-phase project. For this funding cycle, ACHFP does remain in the top tier of funding, and we expect to receive approximately $300,000 in funding through NFHP for FY'24. The first project, just a brief overview, the removal of the Upper E.R. Collins Dam.

It is headed by the Nature Conservancy, and the objective is to restore three miles of Pequest River spawning and foraging habitat, since this is an important tributary to the Delaware River, and it, I guess, covers a number of priority species, including American shad, American eel, herring and sea lamprey.

This is just a photo of the site. The upper and lower dams are very close to each other, so it has been sort of proposed as a single project. One part was funded in the previous funding cycle, the Upper Dam will be funded in this cycle. Then the second project that is in the works is the Maryland Coastal Bays Salt Marsh Restoration Project.

This is headed by the Delmarva Resource Conservation and Development Council, and the objective there is to restore 39 acres of salt marsh, using a number of restoration techniques, including you know sediment addition, to nourish the degraded marsh from grit ditching, filling manmade ditches, creating meandering channels for drainage, and planting marsh grasses to revegetate pools.

It also hits a number of priority species such as Silverside, red drum, summer flounder, winter flounder, blue crab, spot, Atlantic croaker and Atlantic needlefish. This is also just an image. There

are two different sites. This is private land, but it will be opened up, I think some sections, to the public.

But primarily, these two different sites have a number of issues, and here you can see sort of the examples of the ditches and the marshes that will be restored, to sort of return back to normal marsh processes. That is all I have; I am happy to take any questions. Thank you for your time.

EXECUTIVE DIRECTOR BEAL: Great, thanks, Simon, appreciate it. The Chair briefly stepped out, but he'll be back. Any questions for Simon, the self-proclaimed Habitat Guy. All right, seeing none, thank you. While I'm speaking, well, we have relatively new staff. I don't know if everyone has met Jainita.

Jainita is in the back there waving her hand. She is the new Science Program Projects Coordinator. You know she will be onboard. Please introduce yourself. She's got a pretty wide portfolio of things, so you guys will all start interacting with her more. With that, the Chairman has come back, so I'm off the hook, and you're up to the Legislative Update.

CHAIR WOODWARD: Alexander, are you ready to go?

MR. ALEXANDER LAW: Yes, I am.

LEGISLATIVE

MR. LAW: Good morning, everyone. During the Executive Committee, I updated everyone on the NOAA Organic Act and the Fishes Act. As a reminder, the NOAA Organic Act would remove NOAA from under commerce, making them an independent agency. The Fishes Act would clarify OMBs role in complying with timelines in the Fishery Resource Disaster Improvement Act. We heard an update from Ms. Wallace about the new timelines on fisheries disaster relief. It is unclear if OMB thinks they comply with or fall under those new timelines. This is a bill that would institute a 30-day timeline on OMB for approving spend plans. This goes beyond the 90-day timeline in the Fisheries Resource Disaster Improvement Act. In the supplemental materials 2, you'll find the letter of opposition to the NOAA Organic Act. It goes over some of the main issues that we have with the bill.

There is not a clear priority of fisheries management as an independent agency. It also brings up issues with funding and a complication of regulations, and how an independent NOAA would interact with Magnuson and the Atlantic Coastal Act. I'll be looking for approval to send the letter to the appropriate House and Senate Committees.

House of Natural Resources staff has asked us to send the letter as soon as possible, should we choose to send it out. The Gulf Committee has already sent a letter of opposition on this bill. I'll also be looking for direction on the Fishes Act, should we choose to respond or address the bill. I can draft a letter and circulate it to this body later on. Happy to take any questions on this at this time.

CHAIR WOODWARD: Any questions for Alexander? Erika. No questions. All right, so you had a draft letter related to the NOAA Organic Act in the supplemental materials. Is there any opposition to sending that letter? Anybody online? We'll get that letter out as soon as we can. Is there any opposition to having staff draft up a letter of support for the Fishes Act? Again, what that would do is make it abundantly clear what OMBs timelines are within the context of a Fisheries Disaster Declaration Review Process.

Because as Alexander said, that is sort of a vulnerable point in the process right now, and this will make that very specific of what they are required to do. We will draft that up and circulate it around for everybody's review, before we would send it out. Is that okay to everybody? We're good to go, then. Thank you, Alexander, Toni, you're up next.

UPDATE ON THE RECREATIONAL SECTOR SEPARATION AND CATCH ACCOUNTING

AMENDMENT TIMELINE

MS. KERNS: I will be brief. We have the Sector Separation and Catch Accounting Amendment for the Summer Flounder, Scup, Black Sea Bass and Bluefish FMPs that we are working in conjunction with the Mid-Atlantic Council on. The Mid-Atlantic Council is suggesting we delay ever so slightly this document, due to staff workloads.

The formation of the FMAT and the PDT would shift from spring/summer of this year to summer/fall of this year. The timing of the FMAT and PDT developing issues for consideration, and drafting the document, shifts the fall of '23 to early 2024, and in the scoping for the PDT, we'll be seeking individuals with expertise in recreational data collection, the use of recreational data management, and the for-hire and private fisheries, just as an FYI.

I will send an e-mail out asking for members, but that is the kind of expertise we'll be looking for. The Board and the Council approving the PID for public comment will shift from December of '23 to the spring of '24. Then the public hearings shift from spring of '25 to the winter of '25, and final action shifts from August of '25 to spring of '26. We're still good to work with NOAA Fisheries and the Council on an effective date that is usually a little bit harder to determine, just with review processes and such going through NOAA Fisheries. It's not too much of a delay, but it is a little bit of a delay. We just wanted to inform the Board and see if the Board had any issues with this. If so, we can bring that back to the Mid-Atlantic Council.

CHAIR WOODWARD: Any questions, concerns over this? I don't see any hands or heads nodding, so okay, thanks for that update.

OTHER BUSINESS

CHAIR WOODWARD: We do not have any noncompliance findings, thankfully, so we'll move on to our Other Business items, and you're going to do the Spot and Croaker.

SPOT AND CROAKER ASSESSMENT

MS. KERNS: The spot and croaker assessments are ongoing. We had planned to do those two assessments side by side. The individual that I believe was working on the spot assessment, if I'm remembering this correctly, the lead scientist to do this, has taken another job, and will no longer be working in a capacity where they can work on stock assessments for the Commission.

We are down a lead modeler. I am asking this Policy Board today if anybody has a scientist that might be familiar with stock synthesis, even if you don't have stock synthesis, scientists, anybody that has the capability of reading a model, it would be wonderful if that individual could help the spot and croaker assessment.

If we cannot find a new lead modeler, it is likely that we will split these two assessments, and work on them in different timeframes. Then it will delay potentially both of the assessments. We'll have to make some decisions on whether or not we do one and then do the other one and then peer review them together, or if we peer review one, the one that we get done first, and then peer review the one we get done second.

These decisions will all have budget implications, and we'll figure that out down the line. But we are just hoping that a state, it doesn't have to be a state that has spot or croaker in their waters. We are just looking for someone with the expertise in stock synthesis if we got it, to help out this committee. As Katie alluded to during striped bass, we will be seeking some additional assessment help.

CHAIR WOODWARD: Lynn.

MS. FEGLEY: Toni, can you, if you already did this I'll go back to my inbox. But can you provide some idea of timing and intensity of this work, you know like what the timeline is, and sort of your best estimate of, are we talking 40 hours a week, you know what is sort of the time demand. We have some assessment scientists, but we would have to, like everybody,

move stuff around. It would be helpful to kind of understand when and how much.

MS. KERNS: Can I do that, Katie, or Jeff.

DR. KATIE DREW: Great question. The current plan was to have both of those peer-reviewed by the end of 2024, i.e., next year, so we would need to be working on them pretty heavily, both together through 2024, in order to present at the November annual meeting in 2024. We are heavily into the work right now. It would be, if we were able to add somebody, we would be still sort of focused on that timeline, maybe shift it back one meeting cycle, but basically, the majority of the work would be occurring between now and probably the next year, next 15 months. In terms of hours per week, I don't think we have a specific number on that. But we would be looking for somebody to take on the lead analyst role for one of those species.

Probably several hours a week, it's not a full-time job, obviously, but several hours a week, peaking up to much more than that, attending the workshops, things like that during intensive periods, but for sure several hours a week out of their time. I think it also depends on sort of how we can allocate workload. Are we going to pause spot anyway, and things like that. If you have maybe some ideas about the resources within your state. If it's not a hard yes or a hard no, definitely reach out and we can talk about how to accommodate the availability of your analyst's time.

CHAIR WOODWARD: Jason, you good, okay, Shanna.

DIMINISHING COMMITMENT TO SURVEYS FOR ISFMP

MS. MADSEN: I think this is maybe a topic for another day, but I do think it's important for perhaps the Policy Board or another group of the ASMFC to start to have a conversation about some of the issues I feel like we're kind of running into with stock assessment scientists and the states being able to provide.

I don't think that falls on the Commission, I think that falls on the states. I do think that we need to have some conversations around the table of what we're able to give to stock assessments, because it's incredibly important for us to be getting, you know we ask more and more and more, I feel like of our stock assessment scientists.

We want our benchmarks faster, we want our updates faster. But I think in a lot of places where we're not donating the resources to the Commission that I hope that we could. I would love for us to have kind of an open conversation amongst the states, kind of talking about what they can and can't provide.

What might be able to help them to bring in more stock assessment scientists, lessons learned, things like that. Because I feel like this is starting to be a little bit of a pattern with some of our species, that we're struggling to fully populate our SASs, and I think the states should be discussing that, and figuring out how best to support ASMFC.

CHAIR WOODWARD: Yes, there were some discussions about that at the State Directors Meeting about strategies, short term and long-term strategies, but that is a good segue, because I think that is sort of what Dan encapsulated. Are you ready?

MR. DANIEL McKIERNAN: Thank you, I'll be brief. Earlier this week we've had numerous conversations about what many perceive as an erosion of core services by NOAA Fisheries in the area of surveys and port sampling. I was hoping that through ASMFC leadership we could maybe convene other interested parties that are in the same conversation, such as Council leadership here on the east coast.

I think at the end of it all, some kind of a white paper would be really valuable, so that in our dealings with Congress, you know trying to get NOAA Fisheries a budget increase. We all know that level funded budgets or level funded budgets toward certain

activities is in fact a functional cut, as you move forward with cost-of-living increases. We have a lot of concern at home. I've heard a lot of concern among our Council delegation, and to that end I have a motion.

The motion is to **move that the Commission leadership reach out to the three Atlantic Coast Councils and schedule a meeting to discuss diminished data collection and stock assessment capacity. The discussion will explore options for developing an inventory of data collection deficiencies and impacts to the effective fisheries management.**

CHAIR WOODWARD: All right, thanks, Dan, do I have a second? I have a second from Mel. I think that is one of those ones we can all agree on. Any comments, further comments? I think that is pretty self-explanatory. Mike Ruccio.

MR. RUCCIO: I'll just be very brief. I listened, both during the State Directors Meeting and then again during the Executive Committee session. I'll abstain on this, but we welcome this evaluation. You know there were things in that conversation that were really difficult to hear and to acknowledge, very real concerns. It's not an easy situation for us to be in. Just know that we are talking a lot about it. There are things that we can control and things we can't, but we would welcome this evaluation and look at it as a way to be productive and proactive.

CHAIR WOODWARD: Any other comments? Kirby.

MR. KIRBY ROOTS-MURDY: I'll be brief, and maybe just a consideration for the motion makers. USGS today is not in a position to offer a stock assessment to help out on these assessments that Toni spoke to. But if the Board sees us as a priority, we would be willing to discuss this idea further with our USGS Cooperative Research Unit Director.

If you're not familiar, the Cooperative Research Unit was established back in 1935, and it enhances graduate education, opportunities in fisheries and wildlife sciences to facilitate research between national resource agencies and universities. There are about 40 cooperative research units in 38 states, and the nice thing is there is actually a little bit of a history at ASMFC of leveraging that for some assessments such as horseshoe crab.

We've had a variety of scientists, not just at the Science Center I work at, the Eastern Ecological Science Center, but other cooperative research units take part in that. Just a consideration for this Board that if it is a high priority, USGS would like to find ways to support that, and we would be happy to discuss further if helpful.

CHAIR WOODWARD: Thank you, Kirby, I think we all agree that we need to leverage all the resources available to us to move things forward. We certainly appreciate having you there to continue to make us aware of those opportunities. Sometimes you know we get tunnel vision, and we need to be reminded that there is something else out there that we can take advantage of. Mel.

MR. BELL: Yes, I appreciate Dan making the motion, and I will say being on both the Council and the Commission, this is something that comes up frequently, and I appreciate the sensitivities to it and all. But I will say it's not only diminished data collection, stock assessment capacity, it's making sure we have sufficient capacity from here on out to deal with what will be becoming even more and more demanding environment for this need. I think this is warranted, in terms of let's take a look at what we've got and what our deficiencies are, and also be thinking about the future, because it's only going to get more and more demanding as we deal with climate change, wind energy, all this stuff going on. I appreciate it Dan.

CHAIR WOODWARD: Any other questions or discussion? **Any opposition to this motion? Want to make sure we get everybody accounted for. We don't have any hands, so we'll consider this approved by unanimous consent,** and we'll work and see what we can get set up. If we can maybe get

something done before the end of the year, we'll see, but we'll put it on the short-term planning process, not something and let it linger. **Motion carries with one abstention, which is NOAA Fisheries**. I think we've finally made it to the end of our agenda. Is there anything else for the good of the policy board? Seeing none, thanks everybody.

ADJOURNMENT

CHAIR WOODWARD: It was a good meeting. We got a lot accomplished. I look forward to the annual meeting up in Beaufort. My understand is that's a great time for fishing in the outer banks area so those of you who are interested in it need to be prepared. I'm sure we'll being hearing a little bit more from our hosts in North Carolina about those opportunities and all. Thank you everybody and we'll stand adjourned.

(Whereupon the meeting adjourned at 11:23 a.m. on Thursday, August 3, 2023)

Atlantic States Marine Fisheries Commission

DRAFT CONSERVATION EQUIVALENCY:
Policy and Technical Guidance Document

First Edition Approved May 2004
Revised and Approved October 2016
Draft Revisions for Policy Board Review October 2023

Introduction

The purpose of this document is to provide policy and technical guidance on the application of conservation equivalency in interstate fisheries management programs developed by the Atlantic States Marine Fisheries Commission. The document provides specific guidance on development, submission, review and approval of conservation equivalency proposals.

Background

The Atlantic States Marine Fisheries Commission (Commission) employs the concept of conservation equivalency[1] in a number of interstate fishery management programs. Conservation equivalency allows states/jurisdictions (hereafter states) flexibility to develop alternative regulations that address specific state or regional differences while still achieving the goals and objectives of Interstate Fishery Management Plans (FMPs). Allowing states to tailor their management programs in this way avoids the difficult task of developing one-size-fits-all management measures while still achieving equivalent conservation benefits to the resource.

Conservation equivalency is defined in the Interstate Fisheries Management Program (ISFMP) Charter as:

> *"Actions taken by a state which differ from the specific requirements of the FMP, but which achieve the same quantified level of conservation for the resource under management. One example can be, various combinations of size limits, gear restrictions, and season length can be demonstrated to achieve the same targeted level of fishing mortality. The appropriate Management Board/Section will determine conservation equivalency." The application of conservation equivalency is described in the document Conservation Equivalency Policy and Technical Guidance Document*

In practice, the Commission frequently uses the term "conservation equivalency" in different ways depending on the language included in the plan. Due to concerns over the lack of guidance on the use of conservation equivalency and the lack of consistency between fishery management programs, the ISFMP Policy Board approved a policy guidance document on conservation equivalency in 2004. In 2016, the Policy Board recognized some of the practices of the Commission regarding conservation equivalency

[1] At the time of approval of this policy, the Summer Flounder, Scup and Black Sea Bass FMP includes conservation equivalency provisions that allow the Board and MAFMC set state specific/regional recreational measures in leu of a coastwide measure. This application of conservation equivalency is different than the conservation equivalency described in this document and the guidelines in this document do not apply to that specific application of conservation equivalency in the Summer Flounder, Scup and Black Sea Bass FMP.

had changed and revised the guidance. The Policy Board is again considering revision to the guidance to include requirements in how conservation equivalency is used.

General Policy Guidance

The use of conservation equivalency is an integral part of the Commission management process that allows the use of alternative management programs from FMP standards.

During the development of a management document the Plan Development Team (PDT) should recommend if conservation equivalency should not be permitted for that species action The default is that any management measure is subject to conservation equivalency unless otherwise specified in the FMP. The board will provide a specific determination if conservation equivalency is not allowed for the measure approved in the fishery management document, since conservation equivalency may not be appropriate or necessary for all management actions. The PDT should consider stock status, stock structure, data availability, range of the species, socio-economic information, and the potential for more conservative management when stocks are overfished or overfishing is occurring when making a recommendation on conservation equivalency. During the approval of a management document the board will make the final decision on the exclusion of conservation equivalency.

Commented [TK1]: Note: depending on PB actions below this could change

The PRT will collect all necessary input from the appropriate committee (e.g., the technical committee, Law Enforcement Committee, Committee on Economics and Social Sciences and the Advisory Panel). The PRT will compile input and forward a report to the management board.

States have the responsibility of developing conservation equivalency proposals for submission to the Board Chair (see standards detailed below) and the the Plan Review Team (PRT) will serve as the "clearing house" for review of conservation equivalency proposals. Upon receiving a conservation equivalency proposal, the PRT will initiate a formal review process as detailed in this guidance document. The state submitting the proposal has the obligation to ensure proposed measures are enforceable. If the PRT has a concern regarding the enforceability of a proposed measure it can task the Law Enforcement Committee with reviewing the proposal. Upon approval of a conservation equivalency proposal, the implementation of the program becomes a compliance requirement for the state. Each of the approved programs will be described and evaluated in the annual compliance review and included in annual FMP Reviews, unless different timing is approved by the board.

Management boards should place a limit on the length of time that a conservation equivalency program can remain in place without re-approval by the board. The board will evaluate CE programs after stock assessments if the stock status has changed. Some approved management programs may require additional data to evaluate effects of the management measures. The burden of collecting the data falls on the state that has

implemented such a conservation equivalency program. Approval of a conservation equivalency program may be terminated if the state is not completing the necessary monitoring to evaluate the effects of the program.

Conservation equivalency proposals and board approval are not required when states adopt a single more restrictive measure than those required in the FMP (e.g., higher minimum size, lower bag limit, lower quota, lower trip limit, closed or shorter seasons). These changes to the management program will be included in a state's annual compliance report or state implementation plan. If states intend to change more than one regulation where one is more restrictive but the other is less restrictive, even if the combined impact is more restrictive, states must submit a conservation equivalency proposal for Board approval due to unexpected consequences that may arise (e.g., a larger minimum size limit could increase discards).

When Conservation Equivalency will not be Permitted

The Policy Board will need to pick one of the options presented below. Based on the option choosen the text in the stock status paragraph will be revised appropriately

Stock Status Conditions

The board will consider if a change in the use of conservation equivalency is necessary after each stock assessment where *insert option chosen by Policy Board here*. If the board determines conservation equivalency is not permitted, it will apply to future actions of the board. The board can determine if conservation equivalency is not permitted across the entire FMP or for a specific sector of the fishery within the FMP, (e.g., commercial measures or recreational measures).

Option 1. Conservation Equivalency is not permitted if the stock is overfished

Option 2. Conservation Equivalency is not permitted if the stock is overfished, depleted or unknown

Option 2: Conservation Equivalency is not permitted if the stock is overfished, unless allowed by the board through a 2/3 majority vote (the rules on voting in Article II. Section 1. Quorum of the Rules and Regulations apply).

Option 3. Board Discretion: Each species board will consider the use of CE programs based on stock status (e.g. CE is not allowed if overfishing is occurring). If a board implements a stock status restriction for CE, it may choose to apply that restriction to the entire fishery or to some parts of the fishery (e.g., specific sector). If a board decides not to implement a stock status restriction for CE, the board will provide rationale (via meeting proceedings) as to why such a CE restriction is not needed for that species.

Commented [TK2]: This section will be modified based on outcome of the Policy Board discussion.

Also note that regardless of the option chosen in this section, Existing CE programs can continue to its pre-determined end date or an end date as determined by the Board. Meaning just because the PB changes the CE Policy it does not mean existing CE programs terminate immediately. Boards will need to address how to move forward with those programs.

Measures that cannot be Quantified

Only measures that have a quantifiable impact on achieving the FMP standards will be considered when calculating and approving CE proposals. Measures that can't be quantified can be implemented as a buffer but will not be considered in CE calculation credit. The state submitting a proposed measure for credit must be able to demonstrate, to the satisfaction of the TC, the measure has a measurable impact on the removals or management target the action is intended to achieve. The TC will provide feedback to the board if a measure is quantifiable or non-quantifiable. ***Non-quantifiable measures could include circle hooks, non-targeting zones/period, no gaffing, outreach promoting best practices for release, and other measures expected to reduce release mortality or overall discards.***

Option1: Include the bolded/italicized sentence above

Option2: Do not include the bolded/ italicized sentence above

Combining Coastwide and Conservation Equivalency

Coastwide measures are intended to achieve a specific result when all states implement the measures. However, at the state level the impact on removals or other metric may be different, therefore, if a state proposes CE, that CE proposal must demonstrate equivalency with the state level impact of the coastwide measure, if the coastwide measure were implemented in that state. For example, a coastwide measure may be projected to achieve a 10% coastwide reduction. However, in a particular state, the coastwide measure may be projected to achieve a 15% reduction in that state alone. If that state wants to propose a CE program, that CE program must demonstrate a 15% reduction, not a 10% reduction.

Standards for state conservation equivalency proposals

The state seeking conservation equivalency has the burden of proving that its proposed measure provides at least as much conservation as the FMP standard. Each state seeking to implement a conservation equivalency program must submit a proposal to the Bard Chair for board review and approval. Proposals will keep the number of options to a reasonable limit, those proposals that include an excessive number of options may delay timely review by the PRT and other groups and may ultimately delay the report to the board. Boards may set a cap on the number of options submitted.

State conservation equivalency proposals will contain the following information:

1. Rationale: Why or how an alternate management program is needed in the state. Rationale may include, but are not limited to, socio-economic grounds, fish distribution considerations, size of fish in state waters, interactions with other fisheries, protected resource issues and enforcement efficiency.

2. Description of how the alternative management program meets all relevant FMP objectives and management measures (FMP standards, targets, and reference points). States are responsible for supplying adequate detail and analysis to confirm conservation equivalency based on the most recent stock assessment.

3. A description of:
    - Available datasets used in the analysis and data collection method, including sample size and coefficient of variation, explicitly state any assumptions used for each data set.
    - Limitations of data and any data aggregation or pooling.
        - If data allows, the TC should establish minimum standards for the types and quality of data that can be used in a proposal. Examples include, but should not be limited to: minimum sample size, amount of imputed/borrowed data points, limit on PSE, types of data allowed and minimum number of years, survey design, data caveats and analytical assumptions, and consider previous CE proposals and build on their strengths (e.g., length of closed season). Some states may not be able to participate in CE because their data will not meet the standards established by the TC. The TC may suggest the state consider alternative criteria, or states alternatives, such as submitting a joint proposal with neighboring states. It remains the states responsibility to draft the proposal it seeks to advance to the board.
        - When evaluating closed periods, availability will be considered (even within a month, availability can be very different, particularly when comparing the beginning and end). **Any closed period must come from a period of high availability and include at least two consecutive weekend periods (Friday, Saturday and Sunday).** Pooling of several years' worth of data should be encouraged for evaluation.
            - **Option 1: Delete the bolded closed period should come from a time of high availability**
            - **Option 2: Keep the bolded closed period should come from a time of high availability**

    - The length of time the state is requesting conservation equivalency and a review schedule for the length of the program. Proposals will identify the length of time measures are intended to be in place and the timing of the review of the specific measures, which is required annually. It is encouraged to review the measures in conjunction with the FMP Review. A request for an extension may be made to the board prior to the programs end, if the CE program has demonstrated it has achieved its equivalency requirement.

Commented [TK3]: If annual CE reviews are completed and enforced, is it necessary to put a time limit on the CE measure?

4. Each proposal must justify any deviations from the conservation equivalency procedures detailed in this document. The state should conduct analyses to compare new procedures to procedures included in the plan, as appropriate, including corroborative information where available.

5. Include a plan describing the monitoring schedule, reporting requirements and documentation process of evaluating the impacts of the conservation equivalency measures.

Review Process

The following is a list of the steps and timelines for review and approval of conservation equivalency proposals.

1. Conservation equivalency will be approved by the board and where possible implemented at the beginning of the fishing year.

2. If a state is submitting a proposal outside of an implementation plan process, it will provide the proposal at least two months in advance of the next board meeting to allow committees sufficient time to review the proposal and to allow states to respond to any requests for additional data or analyses. States may submit conservation equivalency proposals less than two months in advance of the next board meeting, but the review and approval at the upcoming board meeting is at the discretion of the Board Chair (the Chair will consult with the appropriate committee if necessary). Proposals submitted less than two weeks before a meeting will not be considered for approval at that meeting.

3. The Board Chair will submit the proposal to the Plan Review Team (PRT) for review. The PRT will notify the state if the proposal is missing required components.

4. Upon receipt of the proposal, the PRT will determine what additional input will be needed from: the Technical Committee (TC), Law Enforcement Committee (LEC), or Committee on Economic and Social Sciences (CESS). The PRT will distribute the proposal to all necessary committees for comment. The review should include a description of the impacts on or from adjoining jurisdictions or other management entities (Councils and/or NMFS). If possible, this description should include qualitative descriptions addressing enforcement, socio-economic issues and expectations from other states perspective (shifts in effort). The review should highlight efforts to make regulations consistent across waterbodies.

5. The PRT will compile all of the input and forward the proposal and comments to the Advisory Panel when possible. However, when there are time limitations, the

AP may be asked for comments on a proposal prior to completion of other committee reviews. The chair of the Advisory Panel (AP) will compile the AP comments and provide a report to the board.

6. The PRT will forward to the board the proposal and all committee reviews, including any minority reports. The PRT will provide comment on whether the proposal is or is not equivalent to the standards within the FMP. If possible, the PRT will identify potential cumulative effects of all conservation equivalency plans under individual FMPs (e.g. impacts on stock parameters).

7. The PRT reviews will address whether a state's proposal followed the CE standards outlined in this policy, and any additional specifications included in the FMP.

8. The board will decide whether to approve the conservation equivalency proposal and will set an implementation date, taking into account the requested implementation date in the proposal. Board action should be based on the PRT report as well as other factors such as impacts to adjoining states and federal management programs. Ultimately, the board must determine whether the proposed action provides at least as much conservation as the measure the proposals intends to replace. When a board cannot meet in a timely manner and at the discretion of the board and Commission Chair, a board has the option to have the ISFMP Policy Board approve the conservation equivalency proposal.

Plan Review Following Approval and Implementation

1. Annually thereafter, states will evaluate the performance of the approved conservation equivalency programs in their compliance reports submitted for annual FMP Reviews, unless otherwise specified.

2. The PRT is responsible for evaluating all conservation equivalency programs during annual FMP reviews to determine if the conditions and goals of the FMP are maintained, unless a different timeline was established through board approval. If the state is not completing the necessary monitoring to evaluate their approved conservation equivalency program, this may be grounds for termination of the plan. The PRT will report to the board on the performance of the conservation equivalency program, and can make recommendations to the board if changes are deemed necessary.

Coordination Guidance

The Commission's interstate management program has a number of joint or complementary management programs with NOAA Fisheries and Regional Fishery

Management Councils. Conservation equivalency creates additional burden on the Commission to coordinate with our federal fishery management partners. To facilitate cooperation among partners, the Commission should observe the following considerations.

- The Commission's FMPs may include recommendations to NOAA Fisheries for complementary EEZ regulations. Conservation equivalency measures may alter some of the recommendations contained in the FMPs, which would require the Commission notify NOAA Fisheries of any changes. The Commission should consider the length of time that it will take for regulations to be implemented in the EEZ, whether NOAA Fisheries considers federal regulation possible under the National Standards and try to minimize the frequency of requests to the federal government.

- The protocol for NOAA fisheries implementing changes varies for the different species managed by the Commission. The varying protocols need to be considered as conservation equivalency proposals are being developed and reviewed.

- When necessary for complementary management of the stock, the Commission Chair will request federal partners to consider changes to federal regulations.

Long-Term Stock Assessment Schedule (Approved May 2023)

Species	2018	2019	2020	2021		2022	2023	2024	2025	2026
American Eel						Benchmark				
American Shad			Benchmark							
American Lobster			Benchmark						Benchmark	
Atlantic Croaker								Benchmark		
Atlantic Menhaden		Benchmark				Update			Update	
Atl. Menhaden ERPs		Benchmark							Benchmark	
Atlantic Sea Herring	Benchmark		Update			Update		Update	Benchmark	Update
Atlantic Striped Bass	Benchmark					Update		Update		*Update
Atlantic Sturgeon								Update		
Black Drum						Benchmark				
Black Sea Bass	Update	Update		Update			Benchmark		Update	
Bluefish	Update	Update		Update		Benchmark	Update		Update	
Coastal Sharks			Benchmark				Benchmark			
Cobia		Benchmark							Update	
Horseshoe Crab		Benchmark						Update		
Horseshoe Crab ARM				Benchmark			Update	Update	Update	Update
Jonah Crab							Benchmark			
Northern Shrimp	Benchmark			Update				Update		
Red Drum						Benchmark		Benchmark		
River Herring								Benchmark		
Scup	Update	Update		Update			Update			
Spanish Mackerel						Update				
Spiny Dogfish	Update					Benchmark				Update
Spot									Benchmark	
Spotted Seatrout										
Summer Flounder	Benchmark			Update			Update		Update	
Tautog				Update					Update	
Weakfish		Update							Update	
Winter Flounder			Update			Update		Update		Benchmark

Notes:

Coastal Sharks	Hammerhead benchmark assessment 2023
Spotted Seatrout	States conduct individual assessments
Striped Bass	2027 Benchmark Assessment
Sturgeon	2027 Benchmark Assessment

ASMFC Peer Review
NRCC Peer Review (Research Track)
SEDAR Peer Review (Research Track)
Completed

**Italics = under consideration, not officially scheduled*

Fish Habitat of Concern Designations for Fish and Shellfish Species Managed by the Atlantic States Marine Fisheries Commission

September 2023
Prepared by the ASMFC Habitat Committee and Habitat Program Coordinator

Introduction

The Atlantic States Marine Fisheries Commission (Commission or ASMFC) serves as a deliberative body that coordinates the conservation and management of the Atlantic coastal states' shared fishery resources for protection and sustainable use. The Commission's Habitat Committee functions to promote and support cooperative interstate conservation, restoration, and protection of vital habitats for Commission-managed species. One of these functions includes the development of recommendations for Habitat Areas of Particular Concern (HAPC) for each species. The Commission renamed HAPCs 'Fish Habitats of Concern' (FHOC) in October 2017 to distinguish the Commission term from the federal term defined by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson Act). FHOCs are a subset of fish habitat that are particularly ecologically important, sensitive, vulnerable to development threats, and/or rare. FHOCs are defined based on the same criteria as federally designated HAPCs, but since species managed only by the Commission do not fall under the Magnuson Act, their habitats are not afforded federal legal protection and no consultation with the National Marine Fisheries Service (NMFS) is required. Defining HAPC and FHOC for federally- and Commission-managed species, respectively, is intended to focus conservation efforts on specific habitats that are most ecologically important, vulnerable, and/or necessary to support each life stage of a species.

Goals

This report has two primary goals:

1. To describe the regulatory and policy context for habitat descriptions in Commission Fishery Management Plans;
2. To draft text descriptions of FHOC for species managed only by the Commission, plus Atlantic sturgeon. Atlantic sturgeon management will become the responsibility of the Commission once it is declared recovered. Given that the Commission wishes to affirm NMFS's designation of Critical Habitat (CH) for the species, the Habitat Committee elected to includes the species in this document.

Commission Policy on Habitat Descriptions in Fishery Management Plans

The Commission recognizes the importance of habitat conservation as a critical component of fisheries management and that thriving habitats produce abundant fish populations. While the Atlantic Coastal Fisheries Cooperative Management Act does not grant the Commission regulatory authority over habitat of Commission-managed species, the Commission does require habitat descriptions be included as part of each Commission Fishery Management Plan (FMP) in recognition of the critical role habitat plays in fisheries production and ecosystem function.

Guidance and process for the development of habitat sections to be included in FMPs is outlined in the ASMFC's Habitat Committee Guidance Document (2013).

The basic elements of an FMP's habitat section include:

1. Description of the Habitat;
2. Identification and Distribution of Habitat and HAPC (*since re-named FHOC*);

3. Present Condition of Habitats and HAPCs (*since re-named FHOC*);
4. Recommendations and/or Requirements for Fish Habitat Conservation/Restoration; and Information Needs/Recommendations for Future Habitat Research.

This document focuses on designations under Section 2: Identification and Distribution of Habitat and HAPC (*since re-named FHOC*), and under Section 3: Present Condition of Habitats and HAPCs (*since re-named FHOC*) where appropriate.

Commission-managed species are not subject to requirements imposed by the Magnuson Act which mandate designation of Essential Fish Habitat (EFH) and evaluation of federally-permitted projects that may impact that habitat[1]. However, the NMFS and U.S Fish and Wildlife Service (USFWS) do have obligations to consult on a broader array of trust resources under the Fish and Wildlife Coordination Act, which includes Commission-managed species.

Guidelines for Identifying Fish Habitat of Concern, formerly known as HAPCs
The Commission's guidelines for identifying FHOCs (formerly HAPCs) in FMPs are stated in the box below. The subsections were combined to create the current designations.

The text is taken from Appendix 3 to the Habitat Committee Guidance (2013, pp. 30-31). *Note: "Habitat Area of Particular Concern" has been changed to "Fish Habitat of Concern" in the text below where appropriate.*

1.4.1.2: Identification and Distribution of Fish Habitat of Concern

The intent of this subsection is to identify habitat areas or [fish] habitat area of concern that are unequivocally essential to the species in all their life stages, since all used habitats have already been identified in Subsection 1.4.1.1.

Habitat Areas of Particular Concern, or HAPCs, are areas within EFH that may be designated according to the Essential Fish Habitat Final Rule (2002) based on one or more of the following considerations: (i) the importance of the ecological function provided by the habitat, (ii) the extent to which the habitat is sensitive to human-induced environmental degradation, (iii) whether, and to what extent, development activities are, or will be, stressing the habitat type, or (iv) the rarity of the habitat type. Descriptions of EFH are not currently being included in FMPs prepared for species solely under Commission management. The definition of FHOC is therefore modified to be areas within the species' habitat that satisfy one or more of the aforementioned criteria. ***When an FHOC is described for a species solely under the management of the Commission, the designation does not have any regulatory authority. Please refer to the ASMFC HAPC document for a list of species under Commission management only and description of the corresponding HAPC (ASMFC 2013b)[2].***

[1]Federal agencies proposing or authorizing projects within EFH areas are required to consult with NMFS to determine the impact of those projects on EFH. This EFH consultation is required only for federally managed species, not for species solely under the management authority of the Commissions. Regulatory guidelines for EFH consultations can be found at 50 C.F.R. §600.905 2015.

[2] The referenced document is referring to this current document (ASMFC 2022).

A FHOC is a subset of the "habitats" described in Subsection 1.4.1.1, and could include spawning habitat (e.g., particular river miles or river reaches for striped bass populations), nursery habitat for larvae, juveniles and subadults, and/or some amount of foraging habitat for mature adults. FHOC are geographic locations which are particularly critical to the survival of a species. Determination of the amount of habitats (spawning, nursery, subadult, adult residence, and adult migration routes) described in Subsection 1.4.1.1 that should be classified as FHOC may be difficult.

Examples of FHOC include: any habitat necessary for the species during the developmental stage at which the production of the species is most directly affected; spawning sites for anadromous species; benthic areas where herring eggs are deposited; primary nursery areas; submerged aquatic vegetation in instances when species are determined to be "dependent" upon it; and inlets such as those located between the Atlantic Ocean and bays or sounds, which are the only areas available for providing ingress by larvae spawned offshore to their estuarine nursery areas.

The extent of habitats or FHOC for a species may depend on factors such as habitat bottlenecks, the current stock size and/or the stock size for which a species Management Board and Technical Committee establishes targets, etc. Given the current state of knowledge with regard to the relationship between habitat and production of individual species, this information may not be available for many species.

If known, the historical extent of FHOC should also be included in this subsection, in order to establish a basis for Subsection 1.4.1.3. Use of GIS is encouraged to depict the historical and current extent of HAPCs, and determine the amount of loss/degradation, which will assist in targeting areas for potential restoration.

1.4.1.3: Present Condition of Habitats and Fish Habitat of Concern

This subsection should include, to the extent the information is available, quantitative information on the amount of habitat and FHOC that are presently available for the species, and information on current habitat quality. Reasons for reduction in areal extent (either current or historical), should be addressed, for example, "dam construction has eliminated twenty percent of historical spawning habitat" (ASMFC, 2008), "forage habitat bottleneck has reduced the young-of-year populations by thirty percent", or "fishing gear continues to disturb fifty percent of the forage habitat", etc.

Any habitats or FHOC that have diminished over time due to habitat bottlenecks should be incorporated to the extent information is available. Habitat bottlenecks can occur due to natural disasters, fishing disturbance, impacts of development, or other complex processes that can cause habitat shifts. This subsection can further address options to reverse or restore current known habitat bottlenecks. All current threats to the species' habitat should be discussed in this subsection. If known, relative impacts from these activities should be identified and prioritized. For example, addressing hydrological alterations and their impacts are a high priority for anadromous species. These may include freshwater inflow/diversions; changes in flows due to hydropower, flood control, channel modifications, or surface/aquifer withdrawals; and saltwater flow or salinity changes due to reductions in freshwater inflows or deepening of navigation channels, which facilitate upstream salinity increases. Threats should also be assessed for their effect on the ability to recreationally and commercially harvest, consume, and market the species (e.g., heavy metals or chemical contamination which results in the posting of consumption advisories, or prohibition of commercial fisheries for a species, e.g. striped bass in the Hudson River, NY).

This subsection will serve as a basis for the development of recommended or required actions to protect the species' habitat, which will be outlined in Section 4.4. For example, the effectiveness of water quality standards should be reviewed in this subsection. If they are ineffective or inappropriate at protecting water quality at a level appropriate to assure the productivity and health of the species, then a recommendation should be included under the recommendations section (Section 4.4) for improvement of water quality standards.

Purpose of this Report

Although habitat information is required for each FMP, the amount of information compiled for each species varies, as does the extent of the underlying habitat-related science. Also, FMPs are written and amended as management needs arise, and the frequency of updates is not consistent between plans. Consequently, FHOC designations range from non-existent to specific and recent. This report was initiated to assess the current FHOC designations and make updates, clarifications, and improvements where possible.

The Habitat Committee drafted text descriptions of FHOC for each Commission-managed species drawing on information from the current description of FHOC in the FMPs, species fact sheets, other ASMFC publications, and current literature. Descriptions were reviewed and modified by the species technical committees for accuracy and approval.

FHOC will not be designated for species managed jointly with the Councils, instead deferring to federal designations for EFH and HAPCs. FHOCs will be designated on a case-by-case basis for ASMFC species which may be listed under the Endangered Species Act (the presumption being that ASMFC would still be responsible for management of the species, once it is declared recovered).

As FMPs and other Commission documents are updated, 'Habitat Areas of Particular Concern (HAPC)' will be replaced with 'Fish Habitats of Concern (FHOC)' as appropriate.

American Eel Fish Habitats of Concern

Although no current anthropogenic threats to the functional health of the Sargasso Sea have been reported (aside from climate change), it is a FHOC for spawning adults and their eggs. Reproduction for the panmictic population exclusively occurs in this region. The drift of leptocephalus larvae from the Sargasso Sea towards the Atlantic coast may be affected by climate change-induced alterations in ocean currents (Knights 2003; Caesar et al. 2018; Thornalley et al. 2018; Peng et al. 2022). The impact of these changes on larval drift dynamics is currently unknown, but the predicted weakening and shifting of the Gulf Stream (Ezer 2015, Rypina et al. 2016) may reduce larval transport to coastal and fresh waters. Currents, primary production, and the transfer of toxins from adults to eggs all influence the success of hatching, larval migration, feeding, and growth.

Sargassum seaweed was previously harvested in U.S. waters through surface trawling, primarily by one company. However, such harvesting has now ceased. The harvesting of Sargassum began in 1976 but was limited to the Sargasso Sea starting from 1987. Approximately 44,800 dry pounds of Sargassum were harvested since 1976, with 33,500 pounds coming from the

Sargasso Sea (SAFMC 1998). It is unknown whether this harvest directly or indirectly influenced American eel mortality as the extent of eel bycatch in these operations was not documented. The South Atlantic Fishery Management Council adopted a management plan in 2001, which led to the elimination of Sargassum harvesting in the South Atlantic Exclusive Economic Zone and state waters (SAFMC 1998).

The survival and abundance of glass eels along the continental shelf are likely influenced by various human activities. Channel dredging, shoreline alterations, and the disposal of dredged material overboard are common practices along the Atlantic coast, but their effects on glass eels are currently unknown. Furthermore, these activities, along with the impact of mobile fishing gear, may damage the benthic habitat of American eels. However, the significance of these impacts also remains unknown. Changes in salinity within embayments resulting from dredging projects could potentially alter the distribution of American eels.

Tributary headwaters are another Fish Habitat of Concern (FHOC) for American Eel. Nearshore areas, embayments, and tributaries provide vital nursery and feeding habitats to support the growth and recruitment of all elver, yellow, and silver eel life stages. The availability of these habitats influences eel density and may also impact sex determination. Therefore, it is crucial to protect and restore the quantity and quality of these habitats, including providing upstream access. Fish that successfully reach upstream areas may also face significant challenges during downstream migration. For example, if eels have to pass through turbines, mortality rates can vary drastically.

The abundance of elver and yellow eel stages is affected by physical changes in these coastal tributary habitats. Dams that block or restrict upstream migration reduce access to and availability of the habitat necessary for eel distribution and growth. The direct loss of wetlands or access to wetlands, as well as restricted access to the upper reaches of tributaries, has significantly reduced the availability of these important habitats. Wetland loss is estimated at 54% (Tiner 1984), and access to Atlantic coastal tributaries for American eel nursery habitats is estimated to have decreased or been restricted by 84% (Busch et al. 1998).

Literature Cited

Busch, W., Larry, S., and C. Castiglione. 1998. Evaluating stream habitat for diadromous fish in Atlantic coast watersheds: a preliminary assessment. Habitat Hotline Atlantic 27:1-3.

Caesar, L., Rahmstorf, S., Robinson, A., Feulner, G., and V. Saba. 2018. Observed fingerprint of a weakening Atlantic Ocean overturning circulation. Nature 556:191-196.

Colombo, G. and R. Rossi. 1978. Environmental influences on growth and sex ratio in different eel populations (Anguilla Anguilla L.) of Adriatic coasts. In D.S. McLusky and A.J. Berry (Eds.) Physiology and Behavior of Marine Organisms:313-320.

Ezer, T. 2015. Detecting changes in the transport of the Gulf Stream and the Atlantic overturning circulation from coastal sea level data: The extreme decline in 2009–2010 and estimated variations for 1935–2012. Global and Planetary Change 129:23-36.

Holmgren, K. and H. Mosegaard 1996. Implications of individual growth status on the future sex of the European eel. Journal of Fish Biology 49(5): 910-925.

Knights, B. 2003. A review of the possible impacts of long-term oceanic and climate changes and fishing mortality on recruitment of anguillid eels of the Northern Hemisphere. The Science of the Total Environment 310:237-244.

Krueger, W. and K. Oliviera. 1999. Evidence for environmental sex determination in the American eel (Anguilla rostrata). Environmental Biology of Fishes 55:381-389.

Liew, P.K.L. 1982. Impact of the eel ladder on the upstream migrating eel (Anguilla rostrata) population in the St. Lawrence River at Cornwall: 1974-1978. In K.H. Loftus (Ed.). Proceedings of the 1980 North American Eel Conference. p. 17-22. Toronto, Ontario, Canada.

Peng, O., Xie, S., Wang, D., Huang, R.X., Chen, G., Shu, Y., Shi, J., and W. Liu. 2022. Surface warming-induced global acceleration of upper ocean currents. Science Advances 2022 8(16):eabj8394.

Roncrati, A., Melotti, P., Mordenti, O. and L. Gennari. 1997. Influence of stocking density of European eel (Anguilla anguilla, L.) elvers on sex differentiation and zootechnical performances. Journal of Applied Ichthyology:131-136.

Rypina, I.I., Pratt, L.J., and M.S. Lozier. 2016. Influence of ocean circulation changes on the inter-annual variability of American eel larval dispersal. Limnology and Oceanography 61(5):1574-1588.

South Atlantic Fisheries Management Council. 1998. Final Fishery Management Plan for Pelagic Sargassum Habitat of the South Atlantic Region. Including a Final Environmental Impact Statement, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 1 Southpark Circle, Suite 306, Charleston, SC 29407-4699. 382pp.

Thornalley, D.J.R., Oppo, D.W., Ortega, P., Robson, J.I., Brierley, C.M., Davis, R., Hall, I.R., Moffa-Sanchez, P., Rose, N.L., Spooner, P.T., Yashayaev, I., and L.D. Keigwin. 2018. Anomalously weak Labrador Sea convection and Atlantic overturning during the past 150 years. Nature 556:227-230.

Tiner, R.W. 1984. Wetlands of the United States: Current Status and Recent Trends. Washington, DC: U.S. Fish and Wildlife Service. Technical Report.

Vladykov, V. 1966. Remarks on the American eel (Anguilla rostrata LaSueur). Sizes of elvers entering streams; the relative abundance of adult males and females; and present economic importance of eels in North America. SIL Proceedings, 1922-2010 16(2):1007-1017.

American Lobster Fish Habitats of Concern

There have been widespread increases in the area and duration of stressful water temperatures (>20°C) throughout inshore waters of Southern New England (ASMFC 2010, ASMFC 2020). This loss of optimal thermal habitat in the region has caused the American Lobster stock to contract into deeper waters. Additionally, young-of-year recruitment in historically productive inshore areas has shown dramatic declines over the past two decades, reaching sustained low levels. Consequently, much of the Southern

New England fishery has moved to deeper offshore areas. The reduction of optimal thermal habitat due to rising ocean temperatures in Southern New England is a major concern for this species.
Although the Gulf of Maine still falls within the optimal temperature range for American lobsters, it is warming at unprecedented rates, and recent years have seen declines in young-of-year recruitment and older juvenile indices (ASMFC 2015, ASMFC 2020). While the Gulf of Maine/Georges Bank stock remains at a relatively high level of reference abundance, the declines in recruitment and other indices of older life stages has prompted ASMFC to consider management changes to protect spawning stock biomass. Close monitoring of the Gulf of Maine population will be crucial in detecting population changes in the coming years, but overall, it is currently in generally good condition. In contrast, the Southern New England population of American Lobsters is at historic low levels, and the lack of optimal thermal habitat for all life stages is a major concern.

Other FHOCs for American lobsters include gravel, cobble, boulder, and embedded rock for young-of-year, juvenile, and adult life stages. Areas where these habitats are limited and in close proximity to offshore shoals are susceptible to various types of anthropogenic impact. Research has shown that American lobsters undergo metamorphosis through four larval stages before settling to the bottom, and they require shelter to protect them from predators during this vulnerable time (Wahle and Steneck 1991, Wahle and Incze 1997). It is critical to protect these shallow water cobble/boulder areas from coastal development. Furthermore, egg-bearing female lobsters tend to aggregate in offshore and nearshore shoal areas (Campbell 1990, Carloni and Watson 2018, Jury et al. 2019). These areas likely provide access to warm water for brooding eggs and close proximity to deep offshore areas for releasing larvae. Areas such as Grand Manan, Canada; Monhegan Island, Maine; Isles of Shoals, Maine/New Hampshire; and Georges Bank have all documented large aggregations of female reproductive lobsters. Therefore, these areas need to be taken into consideration when planning any coastal development.

Literature Cited

Atlantic States Marine Fisheries Commission (ASMFC). 2010. Recruitment failure in the Southern New England lobster stock. ASMFC American Lobster Technical Committee. 298 pp.

Atlantic States Marine Fisheries Commission (ASMFC). 2015. Stock Assessment Report No. 15–01 (Supplement) of the Atlantic States Marine Fisheries Commission. American Lobster Stock Assessment for Peer Review. ASMFC American Lobster Stock Assessment Subcommittee. 438p.

Atlantic States Marine Fisheries Commission (ASMFC). 2020. Stock Assessment Report of the Atlantic States Marine Fisheries Commission. American Lobster Stock Assessment for Peer Review. ASMFC American Lobster Stock Assessment Subcommittee.

Campbell A. 1990. Aggregations of Berried Lobsters (Homarus americanus) in Shallow Waters off Grand Manan, Eastern Canada. Can. J. Fish. Aquat. Sci., 47: 520-523.

Carloni J.T., Watson WH 2018 Distribution of ovigerous American lobsters near the Isles of Shoals, New Hampshire. Bull Mar Sci 94:555-570.

Jury, S.H., Pugh, T.L., Henninger, H, Carloni, J.T., and Watson, W.H. 2019. Patterns and possible causes of skewed sex ratios in American lobster (Homarus americanus) populations. Invertebrate Reproduction and Development 63(3): 189-199.

Wahle, R.A. & Steneck, R.S., 1991. Recruitment habitats and nursery grounds of the American lobster Homarus americanus: a demographic bottleneck? Marine Ecology Progress Series, 69, pp. 231-243.

Wahle, R.A. & Incze, L.S., 1997. Pre- and post-settlement processes in recruitment of the American lobster. Journal of Experimental Marine Biology and Ecology, 217 (1997), pp. 179-207.

Atlantic Croaker Fish Habitats of Concern

FHOCs for juvenile Atlantic croaker include low salinity estuarine habitats along the Atlantic coast in early spring to higher salinity estuarine habitats in summer and early fall. These habitats feature mud and detrital bottoms that are rich in benthic prey and maintain dissolved oxygen (DO) levels higher than 2.0 mg/L. Estuaries such as Pamlico Sound and Chesapeake Bay serve as important nursery and spawning areas for Atlantic Croaker (Schloesser and Fabrizio 2018). Adult Atlantic croaker also depend on estuarine habitats during spring through fall, in areas with salinities ranging from 3-27 ppt and DO greater than 2.0 mg/L. However, unlike juveniles, adults are less restricted by bottom substrate type due to an ontogenetic diet shift.

Along the Atlantic coast, juvenile Atlantic croaker are typically found in estuaries. Young-of-year individuals less than 50 mm total length (TL) inhabit low salinity or upriver areas (Haven 1957; Dahlberg, 1972; Chao and Musick 1977; White and Chittenden 1977; Miller et al. 2003). Juveniles show a positive correlation with mud bottoms that contain abundant detritus and benthic prey (Cowan and Birdsong 1985). As they develop, juveniles migrate downstream, and by late fall, most of them move out of the estuaries and into coastal ocean habitats (Miglarese et al. 1982). From spring (after spending winter in the coastal ocean) through fall, adult Atlantic croaker can be found in estuaries over muddy and sandy substrates, seagrass beds, and near oyster, coral, and sponge reefs (White and Chittenden 1977; TSNL 1982).

Studies have indicated that Atlantic croaker are virtually absent from waters with DO levels below 2.0 mg/L, suggesting they are very sensitive to DO concentrations (Eby and Crowder 2002). This sensitivity to DO levels can limit the quantity and quality of habitat during the warmer summer months in estuarine systems experiencing nutrient enrichment and eutrophication issues. Additionally, the use of bottom-tending fishing gear can impact FHOC's for Atlantic croaker (Able et al. 2017, Odell et al. 2017).

Literature Cited

Able, K., Cass-Calay, S., and M. Wilberg. 2017. 2017 Atlantic Croaker Stock Assessment Peer Review. Atlantic States Marine Fisheries Commission, Arlington, VA. 10 pp.

Chao, L.N., and J.A. Musick. 1977. Life history, feeding habits, and functional morphology of juvenile sciaenid fishes in the York River estuary, Virginia. Fishery Bulletin 75(4):657-702.

Cowan, J.H., and R.S. Birdsong. 1985. Seasonal occurrence of larval and juvenile fishes in a Virginia Atlantic coast estuary with emphasis on drums (Family Sciaenidae). Estuaries 8(1):48-59.

Dahlberg, M.D. 1972. An ecological study of coastal fishes. Fishery Bulletin 70:323-354.

Eby, L.A., and L.B. Crowder. 2002. Hypoxia-based habitat compression in the Neuse River Estuary: context-dependent shifts in behavioral avoidance thresholds. Canadian Journal of Fisheries and Aquatic Sciences 59:952-965.

Haven, D.S. 1957. Distribution, growth, and availability of juvenile croaker, *Micropogonias undulatus*, in Virginia. Ecology 38(1):88-97.

Miglarese, J.V., McMillan, C.W., and M.H. Shealy Jr. 1982. Seasonal abundance of Atlantic croaker (*Micropogonias undulatus*) in relation to bottom salinity and temperature in South Carolina estuaries. Estuaries 5:216-223.

Miller, M.J., Nemerson, D.M., and K.W. Able. 2003. Seasonal distribution, abundance, and growth of young-of-the-year Atlantic croaker (*Micropogonias undulatus*) in Delaware Bay and adjacent marshes. Fishery Bulletin 101(1):100-115.

Odell, J., Adams, D.H., Boutin, B., Collier II, W., Deary, A., Havel, L.N., Johnson Jr., J.A., Midway, S.R., Murray, J., Smith, K., Wilke, K.M., and M.W. Yuen. 2017. Atlantic Sciaenid Habitats: A Review of Utilization, Threats, and Recommendations for Conservation, Management, and Research. Atlantic States Marine Fisheries Commission Habitat Management Series No. 14, Arlington, VA. 137 pp.

Schloesser, R.W., and M.C. Fabrizio. 2018. Nursery habitat quality assessed by the condition of juvenile fishes: not all estuarine areas are equal. Estuaries and Coasts 42:548-566.

Texas System of Natural Laboratories (TSNL). 1982. Ecological Atlas of Texas, Fishes of Texas Waters Matrix Manuscript. A species profile: *Micropogonias undulatus*, Atlantic croaker. (ed.) TSNL Austin, TX.

White, M.L., and M.E. Chittenden Jr. 1977. Age determination, reproduction, and population dynamics of the Atlantic croaker, *Micropogonias undulatus*. Fishery Bulletin 75(1):109-123.

Atlantic Menhaden Fish Habitats of Concern

Estuarine-subtidal and riverine-tidal systems are FHOCs for the larval and early juvenile life stages of Atlantic menhaden. Atlantic menhaden production relies heavily on these systems, specifically within the upstream limit of the tidal zone. However, the water quality of these systems is threatened by various factors such as climate change, toxicants, nutrient pollution, and altered freshwater flows. Climate change, in particular, contributes to lower dissolved oxygen (DO) levels in estuarine waters due to increasing average annual temperatures. Both the Neuse River Estuary and Chesapeake Bay have experienced hypoxic or anoxic conditions during the summer (Cooper and Brush 1991), leading to significant episodic mortality of juvenile Atlantic menhaden, particularly in the Neuse (Carpenter and Dubbs 2012). These adverse conditions are detrimental to the survival of young Atlantic menhaden. Therefore, it is crucial to address the threats to estuarine water quality in order to protect the habitat and ensure the sustainability of Atlantic menhaden populations.

Literature Cited

Carpenter, D.E., and L. Dubbs (editors). 2012. 2012 Albemarle-Pamlico Ecosystem Assessment. Albemarle Pamlico National Estuary Partnership, Raleigh, North Carolina. 261 pp.

Cooper, S.R., and G.S. Brush. 1991. Long-term history of Chesapeake Bay anoxia. Science 254:992-996.

Atlantic Striped Bass Fish Habitats of Concern

Adult striped bass are highly concentrated and most vulnerable to exploitation in their offshore wintering grounds. Historically, these grounds stretched from the Outer Banks of North Carolina northward through Virginia and Maryland waters. However, in recent years, they have shifted more northward and further offshore. Riverine spawning areas also play a crucial role in the life cycle of striped bass. For the Atlantic migratory stock, these areas include major coastal rivers from the Roanoke in North Carolina through the Kennebec in Maine. Exploitation of striped bass aggregations impacts the spawning stock, but survival of their eggs and larvae is the key factor influencing striped bass abundance, known as year class strength. Therefore, spawning areas are considered FHOCs for striped bass.

Striped bass spawn in freshwater or nearly freshwater areas of Atlantic Coast rivers and estuaries. Such sites provide the critical ecological function of reproduction, but are highly sensitive to anthropogenic impacts such as dam emplacement, nutrient and sediment loading, pollution, navigational dredging, and other coastal development. Moreover, spawning areas are relatively small in extent and extremely rare compared to other migratory habitats for striped bass. According to Hill et al. (1989) and the citations within, striped bass spawn varies across locations. For example, spawning occurs above the tide in mid-February in Florida but takes place in June or July in the St. Lawrence River. Striped bass spawn in turbid areas, with some populations spawning as far as 320 km upstream from the tidal zone. While the Chesapeake Bay tributaries serve as the primary spawning areas for migratory striped bass, other major areas include the Hudson River, Delaware Bay, and the Roanoke River. Spawning occurs between 10 and 23°C and is triggered by increased water temperature, with the optimal temperature range for spawning being between 17 and 19°C.

A temperature range of 17-19°C is important for egg survival and maintaining appropriate DO levels (Bain and Bain 1982). Minimum water velocities of 30 cm/s are necessary to keep the eggs suspended, and fluctuations in water velocity can affect the size of the oil globule surrounding the eggs (Albrecht 1964). If the buoyancy is lost, the eggs may sink to the bottom, where sediment can smother them. While eggs can still hatch in coarse, non-sticky, or muddy sediment, their survival is limited (Bayless 1968). The hatching time for eggs varies depending on water temperature, ranging from about 30 hours at 22°C to approximately 80 hours at 11°C (Hill et al. 1989).

Literature Cited

Albrecht, A.B. 1964. Some observations on factors associated with survival of striped bass eggs and larvae. Calif. Fish and Game 50:100-113.

Bain, M.B., and J.L. Bain. 1982. Habitat suitability index models: coastal stocks of striped bass. U.S. Fish and Wildlife Service, Office of Biological Services, Washington, D.C. FWS/OBS 82/10.1. 29 pp.

Bayless, J.D. 1968. Striped bass hatching and hybridization experiments. Proceedings of the Annual Conference Southeastern Association of Fish and Wildlife Agencies 21:233-244.

Hill, J., Evans, W., and M.J. Van Den Avyle. 1989. Species profiles: life histories and environmental requirements of coastal fisheries and invertebrates (South Atlantic) striped bass. U.S. Fish Wildlife Service Biological Report 82(11.118). U.S. Army Corps of Engineers TR EL-82-4. 35 pp.

Atlantic Sturgeon Fish Habitats of Concern

The FHOCs for Atlantic sturgeon include the National Marine Fisheries Service Critical Habitat (NMFS CH) designations for the five discrete population segments (DPS) comprising the species range. The designations can be found here: https://www.fisheries.noaa.gov/action/critical-habitat-designation-atlantic-sturgeon. They include the reaches of Atlantic Coast rivers where spawning migrations, egg deposition, and larval and early juvenile nursery habitats occur. Threats to these habitats are multiple and include altered river flows and thermal regimes due to hydropower operations, water withdrawals, and increased incidence of storms owing to climate change; low dissolved oxygen (DO), ocean acidification, altered salinity due to navigational dredging, and ship strikes, among others.

Information regarding Atlantic sturgeon use of spawning reaches at a finer scale has increased since the CH designation in 2017, as a result of ongoing long-term studies using acoustic telemetry of sexually mature Atlantic sturgeon (e.g., see Breece et al. 2021 for the Hudson River population; Hager et al. 2020 for the York River population in Virginia; and additional information is currently being gathered for North Carolina rivers under an NMFS Section 6 grant, see McCargo et al. 2019). These studies may allow further refinement of Atlantic sturgeon FHOCs beyond what is presently designated as CH by NMFS.

When the initial CH designations were made, NMFS indicated that inadequate data prevented the designation of estuarine or offshore habitats where sturgeon aggregations occurred as CH, mainly because there were no specific physical or biological features unequivocally associated with these areas. However, the Atlantic States Marine Fisheries Commission (ASMFC) believes that there is now sufficient justification and data available to designate certain habitats as FHOC for ASMFC purposes. This is especially relevant to Atlantic sturgeon nursery habitats within estuaries that fall outside the current NMFS CH designations, where consistent fishery-independent sampling has shown the presence of juvenile sturgeon. Recommendations are based in large measure on the comprehensive review of Atlantic sturgeon life history by Hilton et al. (2016) and supplemented by additional published information.

Most rivers serving as natal habitats discharge into estuaries, making these areas highly important in the migratory pathway for juvenile sturgeon as they journey from their birthplaces to the ocean. In many cases, NMFS CH designations already encompass the estuarine portions of these rivers. For instance, Haverstraw Bay, recognized as a significant Atlantic sturgeon nursery area (Pendleton and Adams 2021), and the Delaware River estuary (Hale et al. 2016) are already included in NMFS CH designations. However, we propose that additional estuarine areas downstream also deserve FHOC status. This recommendation is based on the persistent and documented presence of juvenile Atlantic sturgeon within these estuaries and their vital role in the migratory pathway from local rivers and other spawning populations (Waldman et al. 2013).

Specifically, these estuarine FHOC areas, moving from north to south, encompass:

1. **Long Island Sound** (Dunton et al. 2010, citing Bain et al. 2000 and Savoy and Pacileo 2003).
2. **Delaware Bay** (Dunton et al. 2010; Brundage and O'Herron 2009; Breece et al. 2018).
3. **Chesapeake Bay**, including the **Nanticoke River-Marshyhope Creek estuary** (Musick 2005; Greenlee et al. 2017; Secor et al. 2022).
4. **Western Albemarle Sound**, supported by a decades-long time series documenting young-of-year production and subadult habitat use (Armstrong 2003; ASMFC 2017).

5. **Pamlico Sound**, where Atlantic sturgeon use has been documented through various sources (ASSRT 2007; Oakley and Hightower 2007; McConnaughey et al. 2019; Boyd 2015-2018; Byrd and Pensinger 2022).

6. **Brunswick River** (tributary to the Cape Fear River, NC, Post et al. 2014).

7. **Winyah Bay** (Collins et al. 2000; Simpson et al. 2015; Crane 2021).

Furthermore, long-term fishery-independent data time series (Laney et al. 2007 and unpublished data; Dunton et al. 2010) and analysis of fishery-dependent data derived from the observation of Atlantic sturgeon bycatch (e.g., Stein et al. 2004; ASMFC 2007; NMFS 2022) have consistently documented aggregation sites for subadult and adult Atlantic sturgeon in the nearshore marine environment. These offshore aggregation sites meet one or more of the criteria for FHOC as stated in the introduction to this document.

These sites are relatively few in number, yet they are of great importance for winter aggregation and foraging. They are, however, subject to multiple anthropogenic threats, including activities such as sand mining, depositions of olivine sand for carbon sequestration, oil and gas exploration, and shipping (with concerns regarding oil spills and ship strikes).

Specific nearshore FHOC sites include:

1. **Rockaway** (Dunton et al. 2010, Figure 9B, p. 460).

2. **Sandy Hook** (Dunton et al. 2010, Figure 9B, p. 460).

3. **Kennebec River delta** (Dunton et al. 2010, Figure 9A, p. 460).

4. **Areas off Duck**, mapped in dark red with sturgeon counts ranging from 25-46/km^2, as described in Wickliffe et al. 2019 (p. 126).

Notably, during the spring and fall, juveniles are found off Rockaway, Sandy Hook, and off the Kennebec River delta (Dunton et al. 2010, 2015, and unpublished acoustic data). Stein et al. (2004) mapped multiple areas from Cape Hatteras northward, and Dunton et al. (2010) also identified multiple sites. Analysis of the complete time series (1988-2016) of data from Atlantic sturgeon captures during the Cooperative Winter Tagging Cruises (see Laney et al. 2007) by Wickliffe et al. (2019) further documents the Atlantic sturgeon 'hot spot' in the nearshore Atlantic Ocean off North Carolina, near Duck.

These aggregation sites are not only used by sturgeon from nearby natal rivers but are also frequented by sturgeon from other Distinct Population Segments (DPSs) as well (Wirgin et al. 2015; Kazyak et al. 2021). In reference to the sites documented and mapped by Dunton et al. (2010), they emphasized, “Specifically, Sandy Hook (NJ), Rockaway (NY), and Kennebec (ME), which are hotspots of Atlantic sturgeon captures, as identified by this study, should be protected.” They further emphasized that the Kennebec 'hotspot' is particularly important because Atlantic sturgeon captured in Maine river systems have been shown to represent a separate DPS (Grunwald et al. 2008).

More recently, acoustic telemetry has been conducted on the New York Wind Energy Lease area (see Frisk et al. 2019, and Ingram et al. 2019). The study documented the presence of juvenile, subadult and adult Atlantic Sturgeon within the wind lease area throughout much of the year (during the period November 2016 through early February, 2018). While the study successfully demonstrated the high utility of acoustic telemetry for determining the abundance and distribution of Atlantic Sturgeon within

the study area, its temporal duration was shorter than the studies which are cited above that employed longer observer or survey time series and identified persistent aggregations across years. Therefore, we are *not* recommending at this time that the habitat within the NY Wind Lease Area be designated as FHOC for Atlantic Sturgeon.

Literature Cited

ASMFC. 2007. Special Report to the Atlantic Sturgeon Management Board: Estimation of Atlantic Sturgeon Bycatch in Coastal Atlantic Commercial Fisheries of New England and the Mid-Atlantic. August 2007. 95 pp.

Atlantic Sturgeon Status Review Team. 2007. Status Review of Atlantic sturgeon (*Acipenser oxyrinchus*). Report to National Marine Fisheries Service, Northeast Regional Office. February 23, 2007. 174 pp.

Armstrong, J.L. 2003. Movement, Habitat selection and growth of early life stage Atlantic sturgeon In Albemarle Sound, North Carolina. MS thesis, North Carolina State University, Raleigh, NC. 87 pp.

Bain, M.B., Haley, N., Waldman, J.R., and K. Arend. 2000. Harvest and habitats of Atlantic sturgeon *Acipenser oxyrinchus* Mitchill, 1815 in the Hudson River estuary: lessons for sturgeon conservation. *Boletin – Instituto Espanol de Oceanografia* 16(1-4):43-55.

Boyd, J. 2015. Annual Atlantic Sturgeon Interaction Monitoring of the Gill-Net Fisheries in North Carolina for Incidental Take Permit Year 2014. Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 18102. North Carolina Department of Environmental Quality, Division of Marine Fisheries, Protected Resources Section, Morehead City, NC. 21 pp.

Boyd, J. 2016. Annual Atlantic Sturgeon Interaction Monitoring of the Gill-Net Fisheries in North Carolina for Incidental Take Permit Year 2015. Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 18102. North Carolina Department of Environmental Quality, Division of Marine Fisheries, Protected Resources Section, Morehead City, NC. 39 pp.

Boyd, J. 2017. Annual Atlantic Sturgeon Interaction Monitoring of the Anchored Gill-Net Fisheries in North Carolina for Incidental Take Permit Year 2016. Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 18102. North Carolina Department of Environmental Quality, Division of Marine Fisheries, Protected Resources Section, Morehead City, NC. 72 pp.

Boyd, J. 2018. Annual Atlantic Sturgeon Interaction Monitoring of the Gill-Net Fisheries in North Carolina for Incidental Take Permit Year 2017. Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 18102. North Carolina Department of Environmental Quality, Division of Marine Fisheries, Protected Resources Section, Morehead City, NC. 76 pp.

Breece, M.W., Fox, D.A., and M.J. Oliver. 2018. Environmental drivers of adult Atlantic sturgeon movement and residency in the Delaware Bay. Marine and Coastal Fisheries 10(2):269-280. https://doi.org/10.1002/mcf2.10025

Breece, M.W., Higgs, A.L., and D.A. Fox. 2021. Spawning intervals, timing, and riverine habitat use of adult Atlantic sturgeon in the Hudson River. *Transactions of the American Fisheries Society* 150:528-537.

Brundage III, H.M., and J.C. O'Herron II. 2009. Investigations of juvenile shortnose and Atlantic sturgeons in the lower tidal Delaware River. *Bulletin: New Jersey Academy of Science* 54(2):1-8.

Byrd, B.L. and L.G. Pensinger. 2022. Annual Atlantic Sturgeon Interaction Monitoring of Anchored Gill-Net Fisheries in North Carolina for Incidental Take Permit Year 2021 (1 September 2020–31 August 2021). Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 18102. North Carolina Department of Environmental Quality, Division of Marine Fisheries, Protected Species Program, Morehead City, North Carolina. 37 pp.

Collins, M.R., Rogers, S.G., Smith, T.I.J., and M.L. Moser. 2000. Primary factors affecting sturgeon populations in the southeastern United States: Fishing mortality and degradation of essential habitats. *Bulletin of Marine Science* 66(3):917-928.

Crane, D. 2021. Atlantic Sturgeon: The Grand Strand's Living Fossil. Coastal Carolina University, Progression Magazine, 2021 Summer 16:5-9. https://digitalcommons.coastal.edu/progression/16

Dunton, K.J., Jordaan, A., McKown, K.A., Conover, D.O., and M.G. Frisk. 2010. Abundance and distribution of Atlantic sturgeon (*Acipenser oxyrinchus*) within the Northwest Atlantic Ocean, determined from five fishery-independent surveys. *Fishery Bulletin* 108:450-465.

Frisk, M.G., E.C. Ingram and K. Dunton. 2019. Monitoring Endangered Atlantic Sturgeon and Commercial Finfish Habitat Use in the New York Lease Area. *Stoney Brook (NY): US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM* 2019-074. 88 p.

Greenlee, B., Secor, D.H., Garman, G.C., Balazak, M., Hilton, E.J., and M.T. Fisher. 2017. Assessment of Critical Habitats for recovering the Chesapeake Bay Atlantic sturgeon distinct population segment. *Virginia Institute of Marine Science, William & Mary*. http://dx.doi.org/doi:10.21220/m2-3gvk-6j03

Grunwald, C., L. Maceda, J. Waldman, J. Stabile and I. Wirgin. 2008. Conservation of Atlantic sturgeon (*Acipenser oxyrinchus*): delineation of stock structure and distinct population segments. *Conservation Genetics* 9:1111-1124.

Hager, C.H., Watterson, J.C., and J.E. Kahn. 2020. Spawning drivers and frequency of endangered Atlantic sturgeon in the York River System. *Transactions of the American Fisheries Society* 149:474-485.

Hale, E.A., Park, I.A., Fisher, M.T., Wong, R.A., Stangl, M.J., and J.H. Clark. 2016. Abundance estimate for and habitat use by early juvenile Atlantic sturgeon within the Delaware River Estuary. *Transactions of the American Fisheries Society* 145(6):1193-1201. https://doi.org/10.1080/00028487.2016.1214177

Hilton, E.J., Kynard, B., Balazik, M.T., Horodysky, A.Z., and C.B. Dillman. 2016. Review of the biology, fisheries, and conservation status of the Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus Mitchill, 1815*). *Journal of Applied Ichthyology* 32(Suppl. 1):30-66. doi: 10.1111/jai.13242

Ingram, E.C., R.M. Cerrato, K.J. Dunton and M.G. Frisk. 2019. Endangered Atlantic Sturgeon in the New York Wind Energy Area: implications of future development in an offshore wind energy site. *Nature: Scientific Reports* | (2019) 9:12432 | https://doi.org/10.1038/s41598-019-48818-6 13

Kazyak, D.C., White, S.L., Lubinski, B.A., Johnson, R., and M. Eackles. 2021. Stock composition of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) encountered in marine and estuarine environments on the U.S. Atlantic Coast. *Conservation Genetics* 22:767–781. https://doi.org/10.1007/s10592-021-01361-2

Laney, R.W., Hightower, J.E., Versak, B.E., Mangold, M.F., Cole Jr., W.W., and S.E. Winslow. 2007. Distribution, habitat use, and size of Atlantic sturgeon captured during Cooperative Winter Tagging Cruises, 1988–2006. *American Fisheries Society Symposium* 56:167-182.

McCargo, J., Scharf, F., Garman, G., Balazik, M., Hager, C., and J. Kahn. 2019. Demography and recruitment dynamics of Atlantic sturgeon populations in North Carolina coastal rivers. *Species Recovery Grants to States ("Section 6 Program"), NOAA-NMFS-PRPO-2020-2006174*. Final Proposal to National Marine Fisheries Service, Southeast Region, St. Petersburg, Florida. 17 pp.

McConnaughey, J., J. Boyd and L. Klibansky. 2019. Annual Atlantic Sturgeon Interaction Monitoring of the Gill-Net Fisheries in North Carolina for Incidental Take Permit Year 2018. Annual Completion Report for Activities under Endangered Species Act Section 10 Incidental Take Permit No. 18102. North Carolina Department of Environmental Quality, Division of Marine Fisheries, Protected Resources Section, Morehead City, NC. 68 pp.

Musick, J.A. 2005. Essential Fish Habitat of Atlantic sturgeon Acipenser oxyrinchus in the southern Chesapeake Bay. *VIMS Special Scientific Report No. 145. Virginia Institute of Marine Science, College of William and Mary*. https://doi.org/10.25773/23s5-8f74

National Marine Fisheries Service (NMFS). 2022. Draft - Action Plan to Reduce Atlantic Sturgeon Bycatch in Federal Large Mesh Gillnet Fisheries, The Atlantic Sturgeon Bycatch Working Group, May 27, 2022: https://media.fisheries.noaa.gov/2022-05/Draft-Action-Plan-to-Reduce-Atlantic-Sturgeon-Bycatch.pdf

Oakley, N.C. and J.E. Hightower. 2007. Status of Shortnose Sturgeon in the Neuse River, North Carolina. *American Fisheries Society Symposium* 56:273–284

Pendleton, R.M., and R.D. Adams. 2021. Long-term trends in juvenile Atlantic sturgeon abundance may signal recovery in the Hudson River, New York, USA. *North American Journal of Fisheries Management* 41:1170-1181. ISSN: 0275-5947 print / 1548-8675 online DOI: 10.1002/nafm.10622

Post, B., T. Darden, D.L. Peterson, M. Loeffler, and C. Collier. 2014. Research and Management of Endangered and Threatened Species in the Southeast: Riverine Movements of Shortnose and Atlantic Sturgeon, South Carolina Department of Natural Resources: 274 p.

Savoy, T., and D. Pacileo. 2003. Movements and important habitats of subadult Atlantic sturgeon in Connecticut waters. *Transactions of the American Fisheries Society* 132:1-8.

Secor, D.H., O'Brien, M.H.P., Coleman, N., Horne, A., Park, I., Kazyak, D.C., Bruce, D.G., and C. Stence. 2022. Atlantic sturgeon status and movement ecology in an extremely small spawning habitat: The Nanticoke River-Marshyhope Creek, Chesapeake Bay. *Reviews in Fisheries Science and Aquaculture* 30(2):195-214. doi: 10.1080/23308249.2021.1924617

Simpson, R.G., Allen, D.M., Sherman, S.A., and K.F. Edwards. 2015. Fishes of the North Inlet Estuary: a guide to their identification and ecology. *Belle W. Baruch Institute Special Publication. University of South Carolina*. 143 pp.

Stein, A.B., Friedland, K.D., and M. Sutherland. 2004. Atlantic sturgeon marine distribution and habitat use along the northeastern coast of the United States. *Transactions of the American Fisheries Society* 133:527-537.

Waldman, J.R, King, T., Savoy, T., Maceda, L., Grunwald, C., and I. Wirgin. 2013. Stock origins of subadult and adult Atlantic sturgeon, Acipenser oxyrinchus, in a non-natal estuary, Long Island Sound. *Estuaries and Coasts* 36:257-267. doi:10.1007/s12237-012-9573-0

Wickliffe, L.C., Rohde, F.C., Riley, K.L., and J.A. Morris Jr. (editors). 2019. An Assessment of Fisheries Species to Inform Time-of-Year Restrictions for North Carolina and South Carolina. *NOAA Technical Memorandum NOS NCCOS* 263. 268pp. https://doi.org/10.25923/7xdd-nw91

Wirgin, I., Breece, M.W., Fox, D.A., Maceda, L., Wark, K.W., and T. King. 2015. Origin of Atlantic sturgeon collected off the Delaware coast during spring months. *North American Journal of Fisheries Management* 35:20-30. ISSN: 0275-5947 print / 1548-8675 online doi: 0.1080/02755947.2014.963751

Black Drum Fish Habitats of Concern

Black drum are habitat generalists, so no FHOCs are designated at this time. They can be found at various life stages in the following habitats: tidal freshwater, estuarine emergent vegetated wetlands (flooded salt marshes, brackish marshes, and tidal creeks), estuarine scrub/shrub (mangrove fringe), submerged rooted vascular plants (seagrasses), oyster reefs and shell banks, unconsolidated bottom (soft sediments), ocean high salinity surf zones, and artificial reefs. The estuarine system as a whole serves as the species' primary nursery area. In the future, we may elect to specify documented spawning sites as FHOC for black drum, should acoustic surveys be able to accurately pinpoint such habitats (e.g., see Rice et al. 2016).

Literature Cited

Rice, A.N., Morano, J.L., Hodge, K.B., and C.A. Muirhead. 2016. Spatial and temporal patterns of toadfish and black drum chorusing activity in the South Atlantic Bight. Environmental Biology of Fishes doi:10.1007/s10641-016-0511-z

Cobia Fish Habitats of Concern

Important habitats for cobia include estuarine and nearshore spawning areas, as well as live reefs and artificial structure. Good water quality is critical for the sub-population of cobia that spawn inshore, particularly in high salinity sounds in South Carolina and Virginia where spawning aggregations occur, and where eggs and larvae develop. Oceanic spawning sites off Virginia to Georgia may extend from just outside inlets and sounds to the Gulf Stream (Brown-Peterson et al. 2001). Although the exact locations of offshore spawning sites are unknown, cobia are often associate with structures provided by live reefs, artificial reefs, oil platforms, and navigation markers.

Designation of FHOCs should be considered for Port Royal Sound, St. Helena Sound, Beaufort Inlet, Barden's Inlet, Hatteras Inlet, Pamlico Sound, and the mouth and lower portion of the Chesapeake Bay,

especially during the months of April through June, when extensive eggs and larvae have been documented (Lefebvre and Denson 2012). Movement data show that cobia can exhibit site fidelity to spawning areas, returning to the same sites across multiple years. There are four genetically distinct groups of cobia found along the Atlantic coast, with two of these groups associated with inshore spawning in South Carolina and Virginia/North Carolina (Darden et al. 2018), which further supports the aforementioned areas. As research on cobia spawning habitat and movements expands, additional locations may be considered as potential FHOCs in the future.

As for many species, protection of spawning habitat can help to ensure population viability. Seasonal cobia migrations along coasts and between inshore and offshore waters are driven by water temperature; thus, interannual variation in water temperature and climate change could potentially affect the timing of spawning and recruitment (Crear 2021). Protection of spawning habitat is warranted in areas that are subject to urbanization, eutrophication, and dredging. In the Chesapeake Bay, one of the cobia spawning sites, the combination of excess nutrient loading and warmer water has led to more frequent and severe hypoxic events (e.g., Hagy et al. 2004).

Along the Atlantic coast, cobia are divided into two stocks at the Florida/Georgia border (GMFMC 2014), with a mixing zone from southern Georgia to Cape Canaveral, FL (Darden et al. 2014, Perkinson et al. 2019). The east coast of Florida is considered a migratory zone and is managed by the Gulf of Mexico Fishery Management Council. Hence, Florida is not considered in the habitats of concern for the Atlantic States Marine Fisheries Commission (ASFMC).

Literature Cited

Brown-Peterson, N.J., Overstreet, R.M., Lotz, J.M., Franks, J.S., and K.M. Burns. 2001. Reproductive biology of cobia, *Rachycentron canadum*, from coastal waters of the southern United States. Fisheries Bulletin 99:15-28.

Crear, D.P., Watkins, B.E., Saba, V.S., Graves, J.E., Jensen, D.R., Hobday, A.J., and K.C. Weng. 2020. Contemporary and future distributions of cobia, *Rachycentron canadum*. Biodiversity Research 26:1002-1015.

Darden, T.L., Walker, M.J., Brenkert, K., Yost, J.R., and M.R. Denson. 2014. Population genetics of Cobia (*Rachycentron canadum*): implications for fishery management along the coast of the southeastern United States. Fishery Bulletin 112:24-35.

Darden, T., Walker, M., Jamison, M., Denson, M., Sinkus, W., and K. Kanapeckas. 2018. Population genetic analyses within U.S. Coastal waters. SEDAR58-SID-04. SEDAR, North Charleston, SC. 9pp.

Gulf of Mexico Fishery Management Council. 2014. Final Amendment 20B to the Fishery Management Plan for the Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region. 239 pp.

Hagy, J.D., Boynton, W.R., Keefe, C.W., and K.V. Wood. 2004. Hypoxia in Chesapeake Bay, 1950-2001: long-term change in relation to nutrient loading and river flow. Estuaries 27:634-658.

Lefebvre, L.S., and M.R. Denson. 2012. Inshore spawning of cobia (*Rachycentron canadum*) in South Carolina. Fishery Bulletin 110(4):397-412.

Perkinson, M., Darden, T., Jamison, M., Walker, M.J., Denson, M.R., Franks, J., Hendon, R., Musick, S., and E.S. Orbesen. 2019. Evaluation of the stock structure of cobia (*Rachycentron canadum*) in the southeastern United States by using dart-tag and genetics data. Fishery Bulletin 117(3):220-233.

Horseshoe Crab Fish Habitats of Concern

Habitat requirements for horseshoe crab change throughout their life cycle. They extend from intertidal beach fronts and tidal flats in coastal embayments for eggs and larvae to the edge of the continental shelf for adults. The distribution of high-quality spawning beaches, which are minimal affected by human disturbance, presents a potential bottleneck to reproductive success for this species. Beach areas that provide spawning habitat are Fish Habitats of Concern (FHOC) for adult horseshoe crabs. Spawning adults prefer sandy beaches in low wave energy areas, usually within bays and coves. The ideal beach habitat for spawning horseshoe crabs includes a sufficient depth of porous, well-oxygenated sediments that provide a suitable environment for egg survival and development. However, nest depth and location on the beach vary among the Atlantic states depending on local spawning habitats available. Spawning beach characteristics can vary along the coast, with beaches in Florida typically having a finer grain size and larger area of tidal inundation and saturated zones. As a result, the sediment holds more water, although these beaches have also shown to hold oxygen farther from the water line than in Delaware (Penn and Brockman 1994).

Juvenile horseshoe crabs utilize nearshore shallow waters and intertidal flats as they develop. Larger juveniles and adults utilize deep water habitats for foraging but these are not considered Fish Habitats of Concern. Among these habitats, beaches are the most critical (Shuster 1996). Optimal spawning beaches may limit the reproductive success of the horseshoe crab population.

In New Jersey, the highest concentrations of horseshoe crabs occur on small sandy beaches surrounded by salt marshes or bulkheaded areas (Loveland et al. 1996). The spawning beaches within Delaware Bay are critical habitats as they support the highest density of spawning horseshoe crabs along the U.S. Atlantic Coast. Prime spawning beaches within Delaware Bay consist of sand beaches between the Maurice River and the Cape May Canal in New Jersey, and between Bowers Beach and Lewes in Delaware (Shuster 1996). Horseshoe crab eggs play an important ecological role in the food web for migrating shorebirds, and the Delaware Bay is an important stopover location for the threatened red knot. Good spawning habitat is widely distributed throughout Maryland's Chesapeake and coastal bays, including tributaries. In South Carolina and Georgia, horseshoe crabs spawn in substantial numbers on various substrates, including sandy beaches, salt marshes, and coarse-grained oyster shells. These sites are also known stopover locations for red knots. While the viability of eggs deposited in salt marshes is slightly reduced compared to sandy beaches, horseshoe crabs apparently use these habitats frequently for spawning in South Carolina (Kendrick et al. 2021). Florida has less dense concentrations of horseshoe crabs, but there are still prominent spawning populations on both the Atlantic and Gulf Coasts. The Indian River Lagoon has the highest densities of horseshoe crabs in Florida.

Literature Cited

Kendrick, M.R., Brunson, J.F., Sasson, D.A., Hamilton, K.L., Gooding, E.L., Pound, S.L., and P.R. Kingsley-Smith. 2021. Assessing the viability of American horseshoe crab (*Limulus polyphemus*) embryos in salt marsh and sandy beach habitats. Biological Bulletin 240:145-156.

Loveland, R.E., Botton, M., and C. Shuster. 1996. Life history of the American horseshoe crab (*Limulus polyphemus* L.) in Delaware Bay and its importance as a commercial resource. In: J. Farrell and C. Martin (Editors). Proceedings of the Horseshoe Crab Forum: Status of the Resource. p. 15-22. University of Delaware Sea Grant College Program, Lewes, DE.

Penn, D. and H.J. Brockmann. 1994. Nest-site selection in the horseshoe crab, *Limulus polyphemus*. Biological Bulletin 187(3):373-384.

Shuster, C. 1996. Abundance of adult horseshoe crabs, Limulus polyphemus, in Delaware Bay, 1850-1990. In: J. Farrell and C. Martin (Editors). Proceedings of the Horseshoe Crab Forum: Status of the Resource. p. 5-14. University of Delaware Sea Grant College Program, Lewes, DE.

Jonah Crab Fish Habitats of Concern

Currently there is not enough information available to designate Jonah crab FHOC.

Northern Shrimp Fish Habitats of Concern

Deep, muddy basins (generally 90-180 m, but found down to 300 m) in the southwestern region of the Gulf of Maine act as cold-water refuges (4-6°C) for adult shrimp during periods when most water in the Gulf reaches sub-optimal temperatures. These basins are therefore designated as a FHOC. Sub-optimal temperatures are considered to be over 8°C, with temperatures over 12°C being highly stressful for northern shrimp and potentially causing mortality if exposed to these temperatures for longer periods (ASMFC 2017, Richards and Hunter 2021). Temperature serves as a habitat bottleneck for this species (Apollonio 1986).

Nearshore water provides habitat for the larval and juvenile stages of northern shrimp, but their specific habitat requirements and spatial distribution are not well known (ASMFC 2017). For more details, please refer to Figure 10 in Amendment 3 of the northern shrimp Fishery Management Plan (ASMFC 2017) and Figure 6 in Richards and Hunter 2021, which show temperature regimes and shrimp populations, respectively, beyond 10 miles from the shore. Additionally, you can find a general discussion on "Offshore Habitat Preferences" in Apollonio et al. 1986, page 18.

Literature Cited

Apollonio, S., Stevenson, D.K., and E.E. Dunton. 1986. Effects of temperature on the biology of the northern shrimp, *Pandalus borealis*, in the Gulf of Maine. NOAA Technical Report, NMFS 42. 22 pp.

Atlantic States Marine Fisheries Commission (ASMFC). 2017. Amendment 3 to the Interstate Fishery Management Plan for Northern Shrimp. 102 pp.

Richards, R.A., and M. Hunter. 2021. Northern shrimp, *Pandalus borealis,* population collapse linked to climate-driven shifts in predator distribution. PLoS ONE 16(7):e0253914. https://doi.org/10.1371/journal.pone.0253914

Red Drum Fish Habitats of Concern

FHOCs for Red drum vary based on life stage. For **early juveniles** FHOCs include protected marshes (tidal fresh, brackish, and salt water) and tidal creek habitat (Peters and McMichael 1987; Wenner, 1992;

FWCC 2008). **Subadults**, while they can use a wide range of estuary habitats, exhibit the highest abundances and apparent productivity in association with submerged aquatic vegetation, oyster reef, tidal creeks, and marsh (tidally fresh, brackish, and salt) habitats (Pafford et al. 1990; Wenner 1992; Adams and Tremain 2000). The highest concentrations tend to be found in areas with dense reefs and/or shell hash in association with tidally flooded marsh habitats where these habitats exist. FHOCs for **adults** include inlets, channels, sounds, outer bars, and within estuaries in some areas (e.g., Indian River Lagoon, FL) due to their importance for red drum spawning activity (Murphy and Taylor 1990; Johnson and Funicelli 1991; Reyier et al. 2011).

Nursery areas, essential for the continuing existence of a species, can be found throughout estuaries for red drum. Larvae and early juveniles prefer shallow waters of varying salinities that offer a certain degree of protection. These areas include coastal marshes, shallow tidal creeks, bays, tidal flats of varying substrate, tidal impoundments, and seagrass beds (Pattillo et al. 1997; Holt et al. 1983; Rooker and Holt 1997, Rooker et al. 1998; Levin et al. 2001). Since red drum larvae and juveniles are ubiquitous in such environments, it is impossible to designate specific areas as deserving more protection than others. Moreover, these areas serve as nursery habitats not only for red drum but also for numerous other resident and estuarine-dependent species of fish and invertebrates, especially other sciaenids. Similarly, subadult red drum habitat extends over a broad geographic range and adheres to the criteria that define HAPCs and FHOCs. Subadult red drum are found throughout tidal creeks and channels of southeastern estuaries. They utilize submerged aquatic vegetation, tidal creeks, oyster reefs, as well as tidally fresh, brackish, and salt marshes (Pafford et al. 1990; Wenner 1992; Adams and Tremain 2000). The entire estuarine system, from the lower salinity reaches of rivers to the mouth of inlets, is vital to the continuing existence of this species.

While there is currently no supporting evidence to suggest that a particular habitat type limits red drum populations, it should be noted again that seagrass beds are vitally important for newly settled individuals, and oyster reefs, tidal creeks, and coastal rivers are of critical importance to red drum during the juvenile and subadult life stages. Data from Georgia's Marine Sportfish Health Survey indicate that over 80% of juvenile red drum in Georgia waters are associated with shell habitats. Changes in water flow and conditions due to watershed activities may also limit the recruitment of larvae at a local scale.

Literature Cited

Adams, D.H. and D.M. Tremain. 2000. Association of large juvenile red drum, *Sciaenops ocellatus*, with an estuarine creek on the Atlantic coast of Florida. Environmental Biology of Fishes 58:183-194.

Fish and Wildlife Conservation Commission (FWCC). 2008. Red Drum, *Sciaenops ocellatus* Stock Assessment. Florida Fish and Wildlife Conservation Commission: Red Drum 61.

Holt S.A., Kitting, C.L., and C.R. Arnold. 1983. Distribution of young red drums among different sea-grass meadows. Transactions American Fisheries Society 112:267-271.

Johnson, D.R. and N.A. Funicelli. 1991. Estuarine spawning of the red drum in Mosquito Lagoon on the east coast of Florida. Estuaries 14:74-79.

Levin S.P., Minello, T.J., and G.W. Stunz. 2001. Selection of estuarine nursery habitats by wild-caught and hatchery-reared juvenile red drum in laboratory mesocosms. Environmental Biology of Fishes 61:305-331.

Murphy, M.D. and R.G. Taylor. 1990. Reproduction, growth and mortality of red drum, *Sciaenops ocellatus* in Florida waters. Fishery Bulletin 88(4):531-542.

Pafford J.M., Woodward, A.G., and N. Nicholson. 1990. Mortality, movement and growth of red drum in Georgia. Final report. Georgia Department of Natural Resources, Brunswick, GA. 85 pp.

Pattillo, M.A., Czapla, T.E., Nelson, D.M., and M.E. Monaco. 1997. Distribution and abundance of fishes and invertebrates in Gulf of Mexico estuaries. Volume II: Species life history summaries. ELMR Per. No. 11. NOAA/NOS Strategic Environmental Assessments Division. Silver Spring, MD. 377 pp.

Peters, K.M. and R.H. McMichael. 1987. Early life history of the red drum, *Sciaenops ocellatus* (Pisces: Sciaenidae), in Tampa Bay, Florida. Estuaries 10(2):92-107.

Reyier, E.A., Lowers, R.H., Scheidt, D.M., and D.H. Adams. 2011. Movement patterns of adult Red Drum, *Sciaenops ocellatus*, in shallow Florida Lagoons as inferred through acoustic telemetry. Environmnental Biology of Fishes 90:343-360.

Rooker, J.R. and S.A. Holt. 1997. Utilization of subtropical seagrass meadows by newly settled red drum *Sciaenops ocellatus*: patterns of distribution and growth. Marine Ecology Progress Series 158:139-149.

Rooker, J.R., Holt, S.A., Sota, M.A., and G.J. Holt. 1998. Post-settlement patterns of habitat use by sciaenid fishes in subtropical seagrass meadows. Estuaries 21:315–324.

Wenner, C. 1992. Red Drum: Natural History and Fishing Techniques in South Carolina. Marine Resources Research Institute. Report No. 17.

River herring and Shad: Alewife (*Alosa aestivalis*), Blueback Herring (*Alosa pseudoharengus*), American Shad (*Alosa sapidissima*), and Hickory Shad (*Alosa mediocris*) Fish Habitats of Concern

NOTE: Due to the dearth of information on FHOCs for alosine species, this information is applicable to American shad, hickory shad, alewife, and blueback herring combined. Information about one alosine species may be applicable to other alosine species and is offered for comparison purposes only.

Metapopulation structure, meaning groups of the same species that are spatially separate, but may interact at some level, is evident in river herring. Metapopulation structure is important because individuals may be locally adapted. Adults frequently return to their natal rivers for spawning but some limited straying occurs between rivers (Jones 2006, ASMFC 2009). Critical life history stages for American shad, hickory shad, alewife, and blueback herring, are the egg, prolarva (yolk-sac or pre-feeding larva), post-larva (feeding larva), and early juvenile (through the first month after transformation) (Klauda et al. 1991a, b). Spawning grounds and nursery habitat where these critical life stages grow and mature broadly includes freshwater ponds, rivers, tributaries, and inlets. The substrate preferred for spawning varies greatly and can include gravel, detritus, and submerged aquatic vegetation. Blueback herring prefer swifter moving waters than alewives do (ASMFC 2009). Nursery areas include freshwater and semi-brackish waters. Access to these spawning and nursery habitats may be blocked or impeded by dams or other barriers. Juvenile alosines, which leave the coastal bays and

estuaries prior to reaching adulthood, also use the nearshore Atlantic Ocean as a nursery area (ASMFC 1999).

See Greene et al. 2009 for tables that detail environmental, temporal, and spatial values/factors affecting the distribution of alewife, blueback herring, American shad, and hickory shad.

Habitat quantity

Thousands of kilometers of historic anadromous alosine habitat have been lost due to development of dams and other obstructions to migration. In the 19th century, organic pollution from factories created zones of hypoxia or anoxia near large cities (Burdick 1954, Talbot 1954, Chittenden 1969). Gradual loss of spawning and nursery habitat quantity and quality and overharvesting are thought to be the major causative factors for population declines of American shad, hickory shad, alewife, and blueback herring (ASMFC 1999).

It is likely that American shad spawned in all rivers and tributaries throughout the species' range on the Atlantic coast prior to dam construction in this country (Colette and Klein-MacPhee 2002). While precise estimates are not possible, it is speculated that at least 130 rivers supported historical runs; now there are fewer than 70 systems that support spawning. Individual spawning runs may have numbered in the hundreds of thousands. It is estimated that runs have been reduced to less than 10% of historic sizes. The 2020 American Shad Benchmark Stock Assessment Summary reported that the percentage of historic riverine habitat that is currently unobstructed varies from 4-100% in 23 river systems from Maine to Florida, with 12 systems at 75% or less unobstructed and seven river systems at 50% or less unobstructed (see table in ASMFC 2020a). One recent estimate of river kilometers unavailable for spawning is 4,360 km compared to the original extent of the runs. This is an increase in available habitat as compared with estimates from earlier years, with losses estimated at 5,280 km in 1898 and 4,490 km in 1960. The increase in available habitat has largely been due to restoration efforts and enforcement of pollutant abatement laws (Limburg et al. 2003).

Some states have general characterizations of the degree of habitat loss, but few studies have actually quantified impacts in terms of the area of habitat lost or degraded (ASMFC 1999). It has been noted that dams built during the 1800's and early to mid-1900's on several major tributaries to the Chesapeake Bay have substantially reduced the amount of spawning habitat available to American shad (Atran et al. 1983, CEC 1988), and likely contributed to long-term stock declines (Mansueti and Kolb 1953). North Carolina characterized river herring habitat loss as "considerable" from wetland drainage, stream channelization, stream blockage, and oxygen-consuming stream effluent (NCDENR 2000). Sixteen state and cooperative river basin habitat plans that provide greater local detail on American shad habitat and are available at http://www.asmfc.org/species/shad-river-herring.

Some attempts have been made to quantify existing or historical areas of anadromous alosine habitat, including spawning reaches. Most recently, the American shad benchmark assessed and compared the amount of currently available habitat for American shad in Atlantic coast rivers to historic habitat availability (ASMFC 2020b). See section 2.7.2 for a description of this analysis. Results are presented for individual systems in each system stock section (Section 3), and overall coastwide results are provided in section 4.4.2. Previously, Maine estimated that the American shad habitat area in the Androscoggin River is 2,111 acres. In the Kennebec River, Maine, from Augusta to the lower dam in Madison, including the Sebasticook and Sandy rivers, and Seven Mile and Wesserunsett streams, there is an estimated 6,510 acres of American shad habitat and 24,606 acres of river herring habitat. Lary (1999) identified an estimated 1,877 acres of suitable habitat for American shad and 6,133 acres for alewife between Jetty

and the Hiram Dam along the Saco River, Maine. Above the Boshers Dam on the James River, Virginia, habitat availability was estimated in terms of the number of spawning fish that the main-stem area could support annually, which was estimated at 1,000,000 shad and 10,000,000 river herring (Weaver et al. 2003).

Although many stock sizes of alosine species are decreasing or remain at historically low levels, some stock sizes are increasing. It has not been determined if adequate spawning, nursery, and adult habitat presently exist to sustain stocks at recovered levels (ASMFC 1999).

Habitat quality

Concern that the decline in anadromous alosine populations is related to habitat degradation has been alluded to in past evaluations of these stocks (Mansueti and Kolb 1953, Walburg and Nichols 1967). This degradation of alosine habitat is largely the result of human activities. However, it has not been possible to rigorously quantify the magnitude of degradation or its contribution to impacting populations (ASMFC 1999).

Of the habitats used by American shad, spawning habitat has been most affected. Loss due to water quality degradation is evident in the northeast Atlantic coast estuaries. In most alosine spawning and nursery areas, water quality problems have been gradual and poorly defined; it has not been possible to link those declines to changes in alosine stock size. In cases where there have been drastic declines in alosine stocks, such as in the Chesapeake Bay in Maryland, water quality problems have been implicated, but not conclusively demonstrated to have been the single or major causative factor (ASMFC 1999).

Toxic materials, such as heavy metals and various organic chemicals (i.e., insecticides, solvents, herbicides), occur in anadromous alosine spawning and nursery areas and are believed to be potentially harmful to aquatic life, but have been poorly monitored. Similarly, pollution in nearly all of the estuarine waters along the East Coast has certainly increased over the past 30 years, due to industrial, residential, and agricultural development in the watersheds (ASMFC 1999).

Literature Cited

Atlantic States Marine Fisheries Commission (ASMFC). 1999. Amendment 1 to the Interstate Fishery Management Plan for Shad and River Herring. ASMFC Fishery Management Report No. 35, Washington, DC.

Atlantic States Marine Fisheries Commission (ASMFC). 2009. Amendment 2 to the Interstate Fishery Management Plan for Shad and River Herring. Atlantic States Marine Fisheries Commission, Washington, DC.

Atlantic States Marine Fisheries Commission (ASMFC). 2020a. American Shad Stock Assessment Overview. Atlantic States Marine Fisheries Commission, Arlington, VA.

Atlantic States Marine Fisheries Commission (ASMFC). 2020b. 2020 American Shad Benchmark Stock Assessment and Peer Review Report. Atlantic States Marine Fisheries Commission, Arlington, VA.

Atran, S.M., Loesch, J.G., and W.H. Kriete Jr. 1983. An overview of the status of Alosa stocks in Virginia. Virginia Institute of Marine Science, Marine Resources Report No. 82-10, Gloucester Point, VA.

Burdick, G.E. 1954. An analysis of the factors, including pollution, having possible influence on the abundance of shad in the Hudson River. New York Fish and Game Journal 1:188-205.

Chesapeake Executive Council (CEC). 1988. Strategy for removing impediments to migratory fishes in the Chesapeake Bay watershed. Chesapeake Executive Council, Annapolis, MD.

Chittenden Jr., M.E. 1969. Life history and ecology of the American shad, *Alosa sapidissima*, in the Delaware River. Doctoral dissertation. Rutgers University, New Brunswick, NJ.

Collette, B., and G. Klein-MacPhee (Editors). 2002. Bigelow and Schroeder's Fishes of the Gulf of Maine, 3rd edition. Smithsonian Institution Press, Washington, DC.

Greene, K.E., Zimmerman, J.L., Laney, R.W., and J.C. Thomas-Blate. 2009. Atlantic coast diadromous fish habitat: A review of utilization, threats, recommendations for conservation, and research needs. Atlantic States Marine Fisheries Commission Habitat Management Series No. 9, Washington, DC.

Jones, C.M. 2006. Estuarine and diadromous fish metapopulations. In Marine Metapopulations. p. 119-154. Academic Press.

Klauda, R.J., Fischer, S.A., Hall Jr., L.W., and J.A. Sullivan. 1991a. Alewife and blueback herring *Alosa pseudoharengus* and *Alosa aestivalis*. In: S.L. Funderburk, Mihursky, J.A., Jordan, S.J., and D. Riley (Editors). Habitat Requirements for Chesapeake Bay Living Resources, 2nd edition. p. 10.1–10.29. Living Resources Subcommittee, Chesapeake Bay Program, Annapolis, MD.

Klauda, R.J., Fischer, S.A., Hall Jr., L.W., and J.A. Sullivan. 1991b. American shad and hickory shad. In: S.L. Funderburk, Mihursky, J.A., Jordan, S.J., and D. Riley (Editors). Habitat Requirements for Chesapeake Bay Living Resources, 2nd edition. p. 9.1-9.27. Living Resources Subcommittee, Chesapeake Bay Program, Annapolis, MD.

Lary, S.J. 1999. State of Maine recovery plan for American shad and river herring. Maine Department of Marine Resources, Augusta, ME.

Limburg, K.E., Hattala, K.A., and A. Kahnle. 2003. American shad in its native range. In: K.E. Limburg and J.R. Waldman (Editors). Biodiversity, Status, and Conservation of the World's Shads. p. 125-140. American Fisheries Society Symposium 35, Bethesda, MD.

Mansueti, R.J., and H. Kolb. 1953. A historical review of the shad fisheries of North America. Chesapeake Biological Laboratory Publication No. 97, Solomons, MD.

Talbot, G.B. 1954. Factors associated with fluctuations in abundance of Hudson River shad. U.S. Fish and Wildlife Service Fishery Bulletin 56:373-413.

North Carolina Department of Environment and Natural Resources (NCDENR). 2000. North Carolina Fishery Management Plan: Albemarle Sound Area River Herring. North Carolina Division of Marine Fisheries, Morehead City, NC.

Walburg, C.H., and P.R. Nichols. 1967. Biology and management of the American shad and status of the fisheries, Atlantic coast of the United States, 1960. U.S. Fish and Wildlife Service Special Report No. 550, Washington, DC.

Weaver, L.A., Fisher, M.T., Bosher, B.T., Claud, M.L., and L.J. Koth. 2003. Boshers Dam vertical slot fishway: A useful tool to evaluate American shad recovery efforts in the upper James River. In: K.E. Limburg and J.R. Waldman (Editors). Biodiversity, Status, and Conservation of the World's Shads. p. 339-347. American Fisheries Society Symposium 35, Bethesda, MD.

Spot Fish Habitats of Concern

FHOCs for larval spot include brackish and saltwater marsh as well as submerged aquatic vegetation in mesohaline and polyhaline waters. From Delaware to Florida, primary nursery habitat for juveniles includes low salinity bays and tidal marsh creeks with mud and detrital bottoms that contain their epifaunal and infaunal prey. Seagrass habitats, where present, appear to be most important for young-of-year spot in early spring. In the Chesapeake Bay and North Carolina, juveniles can be found in eelgrass. FHOCs for adult spot include tidal creeks and estuarine bays with mud and detrital substrates which support abundant prey (epifauna and benthic infauna). Bottom-tending fishing gear may impact spot FHOCs (Odell et al. 2017).

Literature Cited

Odell, J., Adams, D.H., Boutin, B., Collier II, W., Deary, A., Havel, L.N., Johnson Jr., J.A., Midway, S.R., Murray, J., Smith, K., Wilke, K.M., and M.W. Yuen. 2017. Atlantic Sciaenid Habitats: A Review of Utilization, Threats, and Recommendations for Conservation, Management, and Research. Atlantic States Marine Fisheries Commission Habitat Management Series No. 14, Arlington, VA. 137 pp.

Spotted Seatrout Fish Habitats of Concern

Submerged aquatic vegetation, salt marsh, and oyster reefs, especially where submerged aquatic vegetation is not available, are FHOCs for spotted seatrout. Seagrass beds provide important habitat for both juvenile and adult spotted seatrout, but are in decline along much of the Atlantic coast (Orth et al. 2006; Waycott et al. 2009; Adams et al. 2019; Morris et al. 2022). Salt marsh and oyster reef habitats provide FHOCs for juvenile and adult spotted seatrout, particularly in areas where submerged aquatic vegetation naturally does not occur. These habitats are also in decline, and are under continuing threats due to coastal development, sea level rise, and ocean acidification. Spawning takes place on or near seagrass beds, as well as sandy banks, natural sand, shell reefs, near the mouths of inlets, and off the beach (Daniel 1988; Brown-Peterson and Warren 2002). Environmental conditions in spawning areas may affect growth and mortality of egg and larvae, as sudden salinity reductions cause spotted seatrout eggs to sink, thus reducing dispersal and survival (Holt and Holt 2002).

Literature Cited

Adams, D.H., Tremain, D.M., Paperno, R., and C. Sonne. 2019. Florida lagoon at risk of ecosystem collapse. Science 365:991-992.

Brown-Peterson, N.J. and J.W. Warren. 2002. The reproductive biology of spotted seatrout, *Cynoscion nebulosus*, along the Mississippi Gulf Coast. Gulf of Mexico Science 19(1). https://doi.org/10.18785/goms.1901.07

Daniel III, L.B. 1988. Aspects of the biology of juvenile red drum, *Sciaenops ocellatus* and spotted seatrout, *Cynoscion nebulosus* (Pisces: Sciaenidae) in South Carolina. M.S. Thesis, College of Charleston, Charleston, SC. pp 58.

Holt, G.J. and S.A. Holt. 2002. Effects of variable salinity on reproduction and early life stages of spotted seatrout. In: S. Bortone (Editor). Biology of the Spotted Seatrout. p. 135-145. CRC Press, Washington, DC.

Morris, L.J., Hall, L.M., Jacoby, C.A., Chamberlain, R.H., Hanisak, M.D., Miller, J.D., and R.W. Virnstein. 2022. Seagrass in a changing estuary, the Indian River Lagoon, Florida, United States. Frontiers in Marine Science 8:789818. doi:10.3389/fmars.2021.789818

Orth, R.J., Carruthers, T.J.B., Dennison, W.C., Duarte, C.M., Fourqurean, J.W., Heck Jr., K.L., Hughes, A.R., Kendrick, G.A., Kenworthy, W.J., Olyarnik, S., Short, F.T., Waycott, M., and S.L. Williams. 2006. A global crisis for seagrass ecosystems. Bioscience 56(12):987-996.

Waycott, M., Duarte, C.M., Carruthers, T.J.B., Orth, R.J., Dennison, W.C., Olyarnik, S., Calladine, A., Fourqurean, J.W., Heck Jr., K.L., Hughes, A.R., Kendrick, G.A., Kenworthy, W.J., Short, F.T., and S.L. Williams. 2009. Accelerating loss of seagrasses across the globe threatens coastal ecosystems. Proceedings of the National Academy of Sciences of the United States of America. 106(30):12377-12381.

Tautog Fish Habitats of Concern

All structured habitats that are used by juvenile and adult tautog (e.g., outcrops, rock piles, boulders, shells, reef, hard and soft corals, and sea whips), as well as inlets adjacent to estuaries serving as important refuge and spawning sites are FHOCs (Dorf and Powell 1997; Arendt and Lucy 2001; ASMFC 2002, 2017). Submerged aquatic vegetation is a FHOC for larvae, young-of-year, and juveniles (Steimle and Shaheen 1999; Wong 2001).

Literature Cited

Arendt, M.D. and J.A. Lucy. 2001. Seasonal occurrence and site-utilization patterns of adult tautog, *Tautoga onitis* (Labridae), at manmade and natural structures in lower Chesapeake Bay. Fishery Bulletin 99:519–527

Atlantic States Marine Fisheries Commission (ASMFC). 2017. Amendment 1 to the Interstate Fishery Management Plan for Tautog.

Atlantic States Marine Fisheries Commission (ASMFC). Tautog Plan Review Team. 2002. Fishery Management Report No. 25c of the Atlantic States Marine Fisheries Commission: Addendum III to the Fishery Management Plan for Tautog. Atlantic States Marine Fisheries Commission, Arlington, Virginia. 17 pp.

Dorf, B.A. and J.C. Powell. 1997. Distribution, abundance, and habitat characteristics of juvenile tautog (*Tautoga onitis*, Family Labridae) in Narragansett Bay, Rhode Island, 1988–1992. Estuaries 20:589–600.

Steimle, F.W. and P.A. Shaheen. 1999. Tautog (*Tautoga onitis*) Life History and Habitat Requirements. NOAA Technical Memorandum NMFS-NE-118.

Wong, R.A. 2001. Habitat preferences of young-of-the-year tautog (*Tautoga onitis*):

Hard structure, macroalgae, and eelgrass (*Zostera marina*) as nursery habitats. University of Delaware, MS thesis. 100 pp.

Weakfish Fish Habitats of Concern

Important habitats for weakfish include estuarine and oceanic nursery and spawning areas distributed along the coast from Maine through Florida. The principal spawning area is from North Carolina to Montauk, NY (Hogarth et al. 1995). Additionally, extensive spawning and presence of juveniles have been observed in the bays and inlets of Georgia and South Carolina (D. Whitaker, South Carolina Department of Natural Resources, personal communication), as well as in nearshore areas off North Carolina and Virginia (ASMFC and USFWS, unpublished data; Osborne 2018).

Spawning sites include coastal bays, sounds, and the nearshore Atlantic Ocean, while nursery areas include the upper and lower portions of the rivers and their associated bays and estuaries, as well as nearshore areas in the Atlantic Ocean. Disturbance to a nursery area will affect the overall coastal weakfish population, but it would have the greatest impact on the specific sub-population and the local fisheries that depend on it. Notably, weakfish have been found to engage in natal homing (Thorrold et al. 2001). Their spawning site fidelity ranges from 60 to 81%, similar to estimates of natal homing in birds and anadromous fishes (Thorrold et al. 2001). As a result, estuaries with significant concentrations of weakfish juveniles should be designated as FHOCs (i.e., Pamlico Sound in North Carolina; see Barbieri 2016). Egg and larval habitats include the nearshore waters, bays, estuaries, and sounds where they are transported by currents or in which they hatch.

Juvenile weakfish inhabit the deeper waters of bays, estuaries, and sounds, including their tributary rivers. They also use the nearshore Atlantic Ocean as a nursery area (Osborne 2018). In states like North Carolina, they are associated with sand or sand/seagrass bottom. In Chesapeake and Delaware Bays, they migrate to the Atlantic Ocean by December.

Adult weakfish can be found in both estuarine and nearshore Atlantic Ocean habitats. Warming of coastal waters in the spring triggers migration inshore and northward from the wintering grounds to bays, estuaries and sounds. Larger fish move inshore first and tend to congregate in the northern part of their range. Catch data from commercial fisheries in Chesapeake and Delaware Bays and Pamlico Sound indicate that larger fish are followed by smaller weakfish in summer. Shortly after their initial spring appearance, weakfish return to the larger bays and nearshore ocean to spawn. In northern areas, a greater portion of the adults spend the summer in the ocean rather than estuaries. Weakfish form aggregations and move offshore as temperatures decline in the fall. They generally move offshore and southward. The Continental Shelf from Chesapeake Bay to Cape Lookout, North Carolina, appears to be the major wintering ground. Winter trawl data indicate that most weakfish were caught between Ocracoke Inlet and Bodie Island, NC, at depths of 18-55 m (59-180 ft). Some weakfish may remain in inshore waters from North Carolina southward.

The quality of weakfish habitats has been largely compromised by human activities. Although it is generally assumed that estuarine weakfish habitats have undergone some degree of loss and degradation, few studies quantify the impacts in terms of the area of habitat lost or degraded. Estuarine nursery habitat is impacted by bottom-tending gear (Odell et al. 2017).

Evidence of water quality degradation is evident in the northeast Atlantic coast estuaries. For example, the New York Bight is one area that has regularly received deposits of contaminated dredged material,

sewage sludge, and industrial wastes, leading to oxygen depletion and the creation of large masses of anoxic waters during the summer months (i.e., “dead zones”).

Likely, habitat losses have occurred due to intense coastal development over the last several decades, although no quantification has been done. Losses and/or degradation may have resulted from dredging and filling activities that eliminated shallow water nursery habitat and negatively impacted weakfish spawning activity. Further functional losses are likely occurred due to water quality degradation from point and non-point source discharges. Intensive conversion of coastal wetlands for agricultural use may also have contributed to functional loss of weakfish nursery area habitat.

Changes in water discharge patterns resulting from withdrawals or flow regulation likely facilitated the functional loss of riverine and estuarine areas. Estuarine nursery areas for weakfish, as well as adult spawning and pre-spawning staging areas, may be affected by prolonged extreme conditions resulting from inland water management practices.

Power plant cooling facilities continue to impact weakfish populations. The Environmental Protection Agency Recent and recent rules regarding these facilities estimate that the number of total weakfish age 1 equivalents lost as a result of entrainment at all transition zone cooling water intake structures in the Delaware Bay is over 2.2 million individuals. Other threats stem from the continued alteration of freshwater flows and discharge patterns to spawning, nursery, and adult habitats in rivers and estuaries. Threats in the form of increased mortality resulting from the placement of additional municipal water intakes in spawning and nursery areas will occur, although the impacts may be mitigated to some degree with proper screening.

Literature Cited

Barbieri, L. 2016. Technical Review: The need to reduce fishing mortality and bycatch of juvenile fish in North Carolina’s estuaries. Report to the North Carolina Marine Fisheries Commission. 23 pp.

Hogarth, W.T., Meyer, T., Perra, P. and R.H. Shaefer. 1995. Final environmental impact statement and draft regulatory impact review for a regulatory amendment for the Atlantic Coast weakfish fishery in the Exclusive Economic Zone (EEZ). U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Fisheries Conservation and Management, Recreational and Interjurisdictional Fisheries Division, Silver Spring, MD. 84 pp.

Odell, J., Adams, D.H., Boutin, B., Collier II, W., Deary, A., Havel, L.N., Johnson Jr., J.A., Midway, S.R., Murray, J., Smith, K., Wilke, K.M., and M.W. Yuen. 2017. Atlantic Sciaenid Habitats: A Review of Utilization, Threats, and Recommendations for Conservation, Management, and Research. Atlantic States Marine Fisheries Commission Habitat Management Series No. 14, Arlington, VA. 137 pp.

Osborne, J.H. 2018. Fish assemblage and habitat use in North Carolina and Virginia waters during the annual Cooperative Winter Tagging Cruise, 1988-2013. M.S. Thesis, East Carolina University, Greenville, NC. 1059 pp.

Thorrold, S.R., Latkoczy, C., Swart, P.K., and C.M. Jones. 2001. Natal homing in a marine fish metapopulation. Science 291: 297-299.

Atlantic States Marine Fisheries Commission

Sciaenids Management Board

October 19, 2023
12:15 – 1:30 p.m.
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 *(C. Batsavage)*	12:15 p.m.
2.	Board Consent • Approval of Agenda • Approval of Proceedings from May 2023	12:15 p.m.
3.	Public Comment	12:20 p.m.
4.	Review Annual Update to Black Drum Indicators (*H. Rickabaugh*) **Possible Action**	12:30 p.m.
5.	Consider Approval of Atlantic Croaker, Red Drum, and Spotted Seatrout Fishery Management Plan Reviews and State Compliance for the 2022 Fishing Year *(T. Bauer)* **Action**	12:55 p.m.
6.	Progress Update on the 2024 Red Drum, Atlantic Croaker, and Spot Benchmark Stock Assessments (*J. Kipp*) **Action** • Review and Consider Recommendation for Changes to the Timeline for the Spot and Atlantic Croaker Benchmark Stock Assessments • Review and Populate Atlantic Croaker and Spot Stock Assessment Subcommittee Membership	1:15 p.m.
7.	Other Business/Adjourn	1:30 p.m.

The meeting will be held at Beaufort Hotel (2440 Lennoxville Road, Beaufort, NC; 252.728.3000) and via webinar; click here for details

MEETING OVERVIEW

Sciaenids Management Board
October 19, 2023
12:15 p.m. – 1:30 p.m.
Hybrid Meeting

Chair: Chris Batsavage (NC) Assumed Chairmanship: 02/22	Technical Committee Chairs: Black Drum: Harry Rickabaugh (MD) Atlantic Croaker: Somers Smott (VA) Red Drum: Ethan Simpson (VA) Spot: Harry Rickabaugh (MD)	Law Enforcement Committee Representative: Col. Matthew Rogers (VA)
Vice Chair: Doug Haymans (GA)	Advisory Panel Chair: Craig Freeman (VA)	Previous Board Meeting: May 1, 2023
Voting Members: NJ, DE, MD, PRFC, VA, NC, SC, GA, FL, NMFS (10 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from May 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. Review Annual Update to Black Drum Indicators (12:30-12:55 p.m.) Possible Action

Background

- Empirical stock indicators were developed as part of the 2023 black drum benchmark stock assessment, to be monitored annually to detect any concerning trends in the black drum stock. At their May 2023 meeting, the Sciaenids Board approved the indicators to be reviewed and presented annually by the Black Drum Technical Committee to inform the need for a new stock assessment.
- For this year's annual update, the indicators were updated with two additional years of data, 2021 and 2022.
- The Black Drum Technical Committee (TC) met on September 26 to review the results of the data update to the indicators and make recommendations (**Briefing Materials**). Overall, indicators show mixed signs of stability and declines since the assessment. The TC did not believe the updated indicator values deviated far enough outside of the historical range to cause concern. The TC recommended no change to the current assessment schedule.

Presentations

- Presentation of Black Drum Indicators by H. Rickabaugh

Board actions for consideration at this meeting

- Consider management action (if necessary)

5. Consider Approval of Atlantic Croaker, Red Drum, and Spotted Seatrout Fishery Management Plan Reviews and State Compliance for the 2022 Fishing Year (12:55-1:15 p.m.)

Background

- Red Drum state compliance reports are due on July 1. The Red Drum Plan Review Team (PRT) has reviewed state reports and compiled the annual FMP Review. New Jersey and Delaware have requested continued *de minimis* status (**Briefing Materials**).
- Atlantic Croaker state compliance reports are due on July 1. The Atlantic Croaker Plan Review Team (PRT) has reviewed state reports and compiled the annual FMP Review. New Jersey and Delaware requested *de minimis* status for both their recreational and commercial fisheries, and South Carolina and Georgia requested *de minimis* status for their commercial fisheries (**Briefing Materials**).
- Spotted Seatrout state compliance reports are due on September 1. The Spotted Seatrout Plan Review Team (PRT) has reviewed state compliance reports and compiled the annual FMP Review. New Jersey and Delaware have requested continued *de minimis* status (**Briefing Materials**).

Presentations

- 2022 FMP Reviews for Red Drum, Atlantic Croaker, and Spotted Seatrout by T. Bauer

Board actions for consideration at this meeting

- Consider approval of the 2022 FMP Review, state compliance reports, and New Jersey and Delaware's *de minimis* requests for Red Drum.
- Consider approval of the 2022 FMP Review, state compliance reports, and New Jersey, Delaware, South Carolina, and Georgia's *de minimis* requests for Atlantic Croaker.
- Consider approval of the 2022 FMP Review, state compliance reports, and New Jersey and Delaware's *de minimis* requests for Spotted Seatrout.

6. Progress Update on the 2024 Red Drum, Atlantic Croaker, and Spot Benchmark Stock Assessments (1:15-1:30 p.m.)

Background

- Work on the red drum benchmark stock assessment was initiated in late 2022/early 2023. A Data Workshop was held virtually June 7-8, 14, 2023. An in-person Assessment Workshop will be held November 6-9, 2023. The assessment is scheduled for completion in the fall of 2024.
- Work on the Atlantic croaker and spot benchmark stock assessments was initiated in early 2023. A Data Workshop was held virtually May 15-18, 2023. An Assessment Workshop was held virtually September 11-14, 2023. The next Assessment Workshop is planned for February 2024.
- The lead modeler for Atlantic croaker and supporting modeler for spot, who was the SAS's expert in Stock Synthesis (SS), accepted a new position and will no longer be able to contribute to these two assessments. Due to the loss of this SAS member, the SAS is recommending to decouple the spot and croaker assessments, and focus on the croaker assessment first, to be peer reviewed in 2024. Work on the spot benchmark stock assessment would follow, to be peer reviewed in 2025.

Presentations

• Stock assessment update by J. Kipp
Board actions for consideration at this meeting • Consider approval of Spot and Atlantic Croaker Stock Assessment Subcommittee nomination for Trey Mace.

6. Other Business/Adjourn

Sciaenids Management Board

Activity level: High

Committee Overlap Score: Moderate (American Eel TC, Cobia TC, Horseshoe Crab TC, Weakfish TC)

Committee Task List

- Red Drum SAS – Conduct Red Drum Benchmark Assessment
- Atlantic Croaker and Spot SAS – Conduct Atlantic Croaker and Spot Benchmark Assessments
- Black Drum TC – Update annual indicators
- Red Drum TC – Gather data and assist with the Red Drum Benchmark Assessment
- Atlantic Croaker TC – Gather data and assist with Atlantic Croaker Benchmark Assessment
- Spot TC – Gather data and assist with Spot Benchmark Assessment
- Atlantic Croaker TC/PRT – July 1: Compliance Reports Due
- Red Drum TC/PRT – July 1: Compliance Reports Due
- Black Drum TC/PRT – August 1: Compliance Reports Due
- Spotted Seatrout PRT – September 1: Compliance Reports Due
- Spot TC/PRT – November 1: Compliance Reports Due

TC Members:

Atlantic Croaker: Somers Smott (VA, Chair), Kristen Anstead (ASMFC), Tracey Bauer (ASMFC), Stacy VanMorter (NJ), Devon Scott (DE), Harry Rickabaugh (MD), Ingrid Braun (PRFC), Willow Patten (NC), Margaret Finch (SC), Dawn Franco (GA), Halie OFarrell (FL)

Black Drum: Harry Rickabaugh (MD, Chair), Jeff Kipp (ASMFC), Tracey Bauer (ASMFC), Craig Tomlin (NJ), Jordan Zimmerman (DE), Ethan Simpson (VA), Chris Stewart (NC), Chris McDonough (SC), Ryan Harrell (GA), Shanae Allen (FL)

Red Drum: Ethan Simpson (VA, Chair), Jeff Kipp (ASMFC), Tracey Bauer (ASMFC), Alissa Wilson (NJ), Matthew Jargowsky (MD), Cara Kowalchyk (NC, Vice-Chair), Joey Ballenger (SC), Chris Kalinowsky (GA), Sarah Burnsed (FL), Roger Pugliese (SAFMC)

Spot**:** Harry Rickabaugh (MD, Chair), Jeff Kipp (ASMFC), Tracey Bauer (ASMFC), Stacy VanMorter (NJ), Devon Scott (DE), Ingrid Braun (PRFC), Somers Smott (VA), Willow Patten (NC), Michelle Willis (SC), BJ Hilton (GA), Halie OFarrell (FL)

Plan Review Team Members:

Atlantic Croaker: Harry Rickabaugh (MD), Ingrid Braun (PRFC), Ethan Simpson (VA), Willow Patten (NC), Chris McDonough (SC), BJ Hilton (GA), Tracey Bauer (ASMFC)

Black Drum: Jordan Zimmerman (DE), Chris Stewart (NC), Chris McDonough (SC), Tracey Bauer (ASMFC)

Red Drum: Matthew Jargowsky (MD), Ethan Simpson (VA), Cara Kowalchyk (NC), Joey Ballenger (SC), Ray Rhodes (COFC), Matt Kenworthy (FL), Tracey Bauer (ASMFC)

***Spot*:** Harry Rickabaugh (MD), Ethan Simpson (VA), Chris McDonough (SC), Dawn Franco (GA), Tracey Bauer (ASMFC)

***Spotted Seatrout*:** Tracey Bauer (ASMFC), Samantha MacQuesten (NJ), Lucas Pensinger (NC), Brad Floyd (SC), Chris Kalinowsky (GA)

SAS Members:

Red Drum: Joey Ballenger (SC, Chair), Jeff Kipp (ASMFC), Tracey Bauer (ASMFC), Angela Giuliano (MD), CJ Schlick (NC), Jared Flowers (GA), Chris Swanson (FL), Ethan Simpson (VA)

Atlantic Croaker and Spot: Kristen Anstead (ASMFC), Jeff Kipp (ASMFC), Tracey Bauer (ASMFC), Linda Barry (NJ), Harry Rickabaugh (MD), Brooke Lowman (VA), Somers Smott (VA), Margaret Finch (SC)

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

SCIAENIDS MANAGEMENT BOARD

The Westin Crystal City
Arlington, Virginia
Hybrid Meeting

May 1, 2023

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ATTENDANCE

Board Members

Jeff Brust, NJ, proxy for J. Cimino (AA)
Tom Fote, NJ (GA)
John Clark, DE (AA)
Roy Miller, DE (GA)
Craig Pugh, DE, proxy for Rep. Carson (LA)
Lynn Fegley, MD, Administrative proxy
Russell Dize, MD (GA)
Dave Sikorski, MD, proxy for Del. Stein (LA)
Pat Geer, VA, proxy for J. Green (AA)
Chris Batsavage, NC, proxy for K. Rawls (AA)
Chad Thomas, NC, proxy for Rep. Wray (LA)
Mel Bell, SC (AA)
Malcolm Rhodes, SC (GA)
Chris McDonough, SC, proxy for Sen. Cromer (LA)
Spud Woodward, GA (GA)
Carolyn Belcher, GA, proxy for Rep. Rhodes (LA)
Erika Burgess, FL, proxy for J. McCawley (AA)
Gary Jennings, FL (GA)
Jack McGovern, ,NMFS

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

Ex-Officio Members

Somers Smott, Chair, Atl. Croaker Technical Committee
Harry Rickabaugh, Chair, Black Drum & Spot Technical Committees
Ethan Simpson, Chair, Red Drum Technical Committee
Matthew Rogers, Law Enforcement Representative

Staff

Robert Beal
Toni Kerns
Tina Berger
Tracey Bauer
Lindsey Aubart
Kurt Blanchard
James Boyle
Emilie Franke
Chris Jacobs
Mike Rinaldi
Chelsea Tuohy
Anna-Mai Christmas Svajdlenka

Guests

Dennis Abbott, NH
Sydney Alhale, NOAA
Shanae Allen, FL FWC
Steve Atkinson
John Bello
Alan Bianchi, NC DENR
Andrew Button, VMRC
Debbie Campbell
Benson Chiles
Matt Cieri, ME DMR
Haley Clinton, NC DENR
Allison Colden, CBF
Margaret Conroy, DE DFW
Caitlin Craig, NYS DEC
Robert Crockett
Scott Curatolo-Wagemann
Sarah Cvach, MD DNR
Montgomery Deihl
Sam Duggan, NOAA
Bill Dunn
Jacob Espittia, FL FWC
Julie Evans
Glen Fernandes
James Fletcher
Anthony Friedrich, SGA
Erika Fuller, CLF
Alexa Galvan, VMRC
Matt Gates, CT DEEP
Shaun Gehan, Gehan Law
Lewis Gillingham, VMRC
Angela Giuliano, MD DNR
Kurt Gottschall, CT CEEP
Emerson Hasbrouck, NY (GA)
Jaclyn Higgins, TRCP
Peter Himchak, Cooke Aqua
Harry Hornick, MD DNR
Jesse Hornstein, NYS DEC
Todd Janeski, VCU
Jeff Kaelin, Lund's Fisheries
TJ Karbowski
Keilin Gamboa-Salazar
Blaik Keppler, SC DNR
Adrianne Kotula, Ches. Bay Comm
Kris Kuhn, PA F&B
Ben Landry, Omega Protein

Guests (continued)

Wilson Laney
Tom Lilly, Forage Matters
Brooke Lowman, VMRC
Pam Lyons Gromen, Wild Oceans
Patrice McCarron, ME Lobstermen
Genine McClair, MD DNR
Joshua McGilly, VMRC
Jack McGovern, NOAA
Dan McKiernan, MA (AA)
Kevin McMenamin, Annapolis
Jason McNamee, RI (AA)
Nichola Meserve, MA DMF
Steve Meyers
Chris Moore, CBF
Thomas Newman
Thomas Newman
Jeff Nichols, ME DMR
Gerry O'Neill, CapeSeafoods
Nicole Pitts, NOAA
Marisa Ponte, NC DENR
Will Poston, SGA
Jill Ramsey, NYS DEC
Marcel Reichert, SC DNR
Jeff Renchen, FL FWC
Paul Risi, City Univ. NY
Tara Scott, NOAA
Alexei Sharov, MD DNR
Kyle Shreve
Melissa Smith, ME DMR
David Stormer, DE DFW
Mary Beth Tooley
Jim Uphoff, MD DNR
Beth Versak, MD DNR
Jesica Waller, ME DMR
Craig Weedon, MD DNR
Tim Wheeler, *Bay Journal*
Ritchie White
John Whiteside
Angel Willey, MD DNR
Chris Wright, NOAA
Erik Zlokovitz, MD DNR
Renee Zobel, NH F&G

The Sciaenids Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia, a hybrid meeting, in-person and webinar; Monday, May 1, 2023, and was called to order at 4:50 p.m. by Chair Chris Batsavage.

CALL TO ORDER

CHAIR CHRIS BATSAVAGE: Welcome everyone. I'll go ahead and call the Sciaenids Management Board meeting to order. My name is Chris Batsavage; and I'm the Administrative Proxy from North Carolina, and I'll be serving as Chair.

APPROVAL OF AGENDA

CHAIR BATSAVAGE: We'll start off by approval of the agenda, just to see if there are any modifications or changes or additions to the agenda.

MS. TONI KERNS: There are no hands.

CHAIR BATSAVAGE: Great, okay we will consider the agenda approved.

APPROVAL OF PROCEEDINGS

CHAIR BATSAVAGE: Next is the approval of the proceedings from the August, 2022 Board meeting. Are there any changes, edits, modifications to the proceedings?

MS. KERNS: There are no hands.

CHAIR BATSAVAGE: Thanks, we will also consider those approved.

PUBLIC COMMENT

CHAIR BATSAVAGE: Next up is Public Comment. This is an opportunity for members of the public to provide any comments on items that are not on today's agenda. See if there are any members of the public in person or online that would like to comment.

MS. KERNS: We just have Jim Fletcher online.

CHAIR BATSAVAGE: James, we're running a little bit behind schedule, so if you can keep your comments to a minute, that would be great. The floor is yours.

MR. JAMES FLETCHER: As I mentioned earlier today, we need to be looking at the chemicals in the water. Camp Lejeune, North Carolina, the croakers that were down there and the trout that were down there are not in that area any longer, and we need to look at the chemicals in the water, not so much affecting the reproduction of the fish, and the eggs of the fish, the ability for them to grow, the protein around the outside of the egg. It's no good to manage the fish and not manage the reproduction. Thank you.

CHAIR BATSAVAGE: Thank you, James, I appreciate the comments. Any other comments from members of the public?

MS. KERNS: I have no hands.

CONSIDER 2023 BLACK DRUM BENCHMARK STOCK ASSESSMENT AND PEER REVIEW REPORT

CHAIR BATSAVAGE: All right, we will move on to the next item, which is Consider the 2023 Black Drum Benchmark Stock Assessment. This is an action item, and so a culmination of a lot of hard work by the Stock Assessment Subcommittee and the Technical Committee over the last, I guess year or two. We will start off, I think, with a presentation of the Stock Assessment Report by Chris McDonough. Chris, whenever you're ready, take it away.

MR. CHRIS McDONOUGH: I think, we were discussing this before, but I think we're going to hold questions until after both the assessment presentation as well as the peer review presentation, just so folks know.

PRESENTATION OF STOCK ASSESSMENT

MR. McDONOUGH: I want to start off first by acknowledging members of both the Stock Assessment Committee and the Technical Committee, without whom none of this stuff could have been done. It was quite a bit of work, as Chris mentioned.

A little bit of life history on black drum, they are the largest member of the Sciaenid family. They are found along the Atlantic Coast of the U.S., primarily along the central coast from Florida up to New York, although they can be found all the way down to Argentina, as well as up into the Canadian Maritimes on occasion. But they are most common along that Mid-Atlantic coast.

The Black Drum management zone extends from New Jersey to Florida. Historically there has been considered three distinct populations of black drum in U.S. waters, one in the Atlantic and two in the Gulf. More recent evidence indicates genetically distinct populations in the Gulf of Mexico and Atlantic Coast of the U.S., which supports the management of black drum as a unified stock along the Atlantic Coast.

There is a weak but significant genetic divergence among the southern states from the Carolinas through Florida, but a lack of divergence with the Mid-Atlantic, and this is likely influenced by the migratory aspects of their life history. Tagging data has also shown movement of large adults from Florida through the Chesapeake, indicating mixing in the Atlantic Coast stock.

Age and growth. Black drum are considered fast growing, they reach 80 percent of their potential growth within 20 percent of their lifespan. The growth analysis did not detect any significant difference in growth between sexes and between regions. This again is supporting the use of a single growth function for the coast for black drum.

There was very little difference in the growth parameter estimates with a 2014 stock assessment, and the current assessment, even using the updated datasets. The growth was estimated using Von Bertalanffy growth curve, but because there wasn't a great deal of change in that, it was very similar to the previous assessment.

There was some differentiation in the length to weight models, basically the black drum in Virginia tended to be heavier, compared to comparably length fish in Florida. Reproduction at maturity, the estimated length at 50 percent maturity was 675 millimeters, with full maturity being reached typically by about 850 millimeters.

Both males and females reached 50 percent maturity at Age 4, and full maturity by Age 7. Given their age range, black drum mature relatively early in their life span, so they have a great deal of reproductive potential, given how long they can potentially live. Spawning in the Atlantic Coast ranges from November to June, depending on the region. Typically, South Atlantic is November through April, and Mid-Atlantic is April through June. Total fecundity has been estimated between 5.5 to a little over 26.5 million eggs per female, and that is a function of fish size, spawning season, spawning frequency and batch fecundity.

Natural mortality. In the 2015 assessment, natural mortality was estimated using Hoenig's 1983 estimated with a maximum age observed of 67 years. We had a natural mortality estimate of 0.63. For this assessment, the TC decided transition to the Then at al. model, which uses the non-linear least squares estimator of natural mortality. It's a much more robust dataset than what was used by Hoenig in his 1983 paper.

The Then at al. estimator resulted in a higher estimate of natural mortality, using the same maximum age, because we were still using this age data of 67 years old, but a natural mortality estimate of 0.104.

Black drum habitat. As I said, black drum spawning from April through June in the northern range. Typically, it's been documented in the mouth of the Chesapeake and the seaside inlets on the Eastern Shore. Evidence from Florida to Carolina suggests spawning occurs in deeper waters inshore or near inlets from November through April, with peaks in February and March. Larval black drum tend to settle in salt marshes and estuaries with a full range of estuarine salination 22 to 30 parts per thousand.

With juveniles and adults, juveniles are found throughout salt marshes in estuaries along the coast, as these areas serve as nurseries for the life stages through sub-adults. Juveniles tolerate a wide range

of salinities and temperatures, and have been found often in low to medium salinities over mud bottoms, as well as near vertical structure.

Adults move between estuaries and nearshore shelf waters, although they do tend to move into deeper channel areas in estuaries as they mature and grow. Then evidence does support an age-specific migration in the Mid-Atlantic with a northward and inshore movement in the spring, and southward and offshore in the fall. Then they do move offshore as they are into deeper waters and offshore as they mature sexually.

For our datasets that we examined, we looked at 4 different datasets in the Mid-Atlantic for young of the year. Those were the two Delaware Trawl Surveys, the 16-foot trawl survey and the 30-foot trawl survey. The Maryland Seine Survey and the PSEG Survey, and that's all in that upper left-hand corner, very similar trends amongst most of those indices. The south, in the South Atlantic we examined the North Carolina gillnet survey and the South Carolina trammel net survey. Those showed variation year to year, with not a great deal of overall trends, other than annual peaks in abundance with larger year classes.

Also, we included in the upper right-hand corner the Georgia trammel index, which was the young of the year index. This was a lone young of the year index in the South Atlantic. It is included on a separate panel because the trend in this particular survey was very different from the others, showing a decline, and did not correlate at all with any Mid-Atlantic young of the year indices. Then finally, in the lower left-hand corner, we have the MRIP CPUE Index, which was a coastwide index. This was additional dataset, the New Jersey Trawl Survey. Although this was not considered for the model, it is included as a potential indicator dataset, as well as presenting potential evidence of a range expansion of black drum in the Mid-Atlantic in recent years, or basically since 2000.

The index shows some very highly variable values, but you see that steady incline in New Jersey. In the fishery dependent data, the recreational harvest in the Mid-Atlantic was relatively consistent across time, with no clear trends except for the peaks in 2008, 2009. While the recreational harvest in the South Atlantic shows a steady increase over the four-year time series of 1982 to 2020.

For the released alive fish or the recreational released alive, it would be 2 fish, showed only a slight increase over time in the Mid-Atlantic, well at least compared to the South Atlantic, although we're using the same Y-axis scale. If you bump that up it would show a little bit more of a line going up.

However, in the South Atlantic we see a significant increase in released fish, but particularly after 2007. The main reason for this is likely due to increased regulation during the 2000s and the 2010s. Then we assumed a discard mortality rate of 0.08 on these recreationally released fish.

Commercial fishery, their landings were highly variable and typically highly seasonal, depending on the area of the coast. Landings in the Mid-Atlantic typically are adult fish, Age 4 or older, while the South Atlantic fishery is primarily sub-adults, age 3 or less.

Okay, now I'm going to go into our models and the different methods of models and what we looked at. The preferred model, which was the JABBA-Select model, incorporates abundance information and differentiates between exploitable biomass and spawning biomass.

Alternatively, we did consider some other models, two index models, the Itarget model, which was complicated by one-way trip datasets, and uncertainty in the appropriate multiplier, and then the Skate model which was also complicated by the one-way trip datasets, and uncertainty in the appropriate reference period used.

The DB-SRA, or the Depletion-Based Stock Recruitment Analysis, which was the preferred model in the previous assessment.That one does not incorporate abundance information from the index, and then Simple Stock Synthesis, which was basically a DB-SRA model in Stock Synthesis, did not also incorporate abundance information from that index.

Then Stock Synthesis needs further development for use in future assessments, there's just not enough data with black drum to carry out that type of model.

The JABBA-Select was the preferred model, mainly due to the fact that it required one less assumption about biomass levels than DB-SRA and the Simple Stock Synthesis, does not require use of earlier uncertain catch data, as the DB-SRA used, and it counts for changes in fishery selectivity through time, and impacts the productivity. The JABBA-Select model was developed as an extension to the, Just Another Bayesian Biomass Assessment, which JABBA stands for, which is a surplus production modeling framework, as a means of incorporating life history data, fishery selectivity information, and an age-structured population type model. The JABBA is a state space Bayesian modeling framework. It is well suited to handle both observation and process error in the dynamics of the modeled stock through state space formulations, while incorporating existing information and uncertainty about the model parameters, through use of Bayesian prior distributions.

As far as the index methods went, you know as I've said, for the Itarget there were concerns with setting the index multiplier. Typically, the index multiplier is at or near that 1.0 justified for stock near carrying capacity, and a higher index multiplier is justified by more depleted stock. The depletion on black drum stock was believed to range between 0.4 and 1, and higher multipliers setting that target catch levels at lower levels than landings were at within the last decade.

For the Skate method, catch advice using the full time series was actually lower than the landings for the last 14 years. This conflicts with the not overfishing determination, using comparisons of the previous and current index CVs. Catch advice using only the time period from 2000 to 2012, did yield advice more closely aligned with the catch history.

However, there was no real good explanation for the change in the exploitation rate after 1999, and exclusion of years before 2000 could be considered arbitrary. Both methods were ultimately rejected due to uncertainties related to the lack of fisheries independent index of relative abundance, specification of the actual depletion status of the stock, defining the appropriate index multiplier for Itarget, and then conflicting stock status between the index and the catch history for the Skate method.

For the DB-SRA model, which was used in the previous assessment and the Simple Stock Synthesis model, both assumed the black drum population started in an unexploited state in 1900, and abundance was at 70 percent on average of the unexploited state, at or near the end of the time series.

When combined with the increased removals, especially in the last 20 years, no information on abundance changes. This assumption and the structure of these two models resulted in a declining trend in abundance over time. For both models, the lowest abundance occurred in 2020, which is the final year of the current assessment.

Neither of those models incorporated abundance information from an index. The DB-SRA model produced a declining trend in abundance similar to the Stock Synthesis model, and would also have an opposite trend in abundance compared to that implied in the MRIP CPUE index. One of the primary differences between DB-SRA and the Stock Synthesis models, compared to the JABBA-Select, was the inclusion of that MRIP CPUE index.

When trying to include the MRIP CPUE in the Simple Stock Synthesis model, the fit to the MRIP index was poor, and there were opposing trends in abundance implied by the depletion assumed, compared to the MRIP CPUE index. For the JABBA model, the JABBA-Select model links age structure dynamics with per recruit models, and a Pella-Tomlinson surplus production model parameters. It uses the MRIP CPUE removal data, life history characteristics and selectivity information as inputs. It incorporates uncertainty through prior distributions on influential stock parameters, such as a stock recruitment relationship, steepness, and natural mortality. Then the JABBA model does not require the assumption

that the model time series starts when the stock is unexploited.

We did not make an assumption about depletion at or near the end of the time series, but rather makes that assumption about depletion at the start of the time series, which in this case was 1982, with the use of the prior distribution. The MRIP CPUE index generally increased during that ’82 to 2020 timeframe, which implies a black drum abundance increase during this time.

But also, during this time period there was an increase in removals. Given these inputs in the structure of the JABBA model, the abundance estimates for this model generally increased over time, so that abundance in 2020 is not the lowest, but was actually one of the highest of the estimates during the ’82 to 2020 timeframe.

As part of our modeling decisions, the TC felt that the MRIP CPUE did generally track population abundances, and was the only index thought to really track closely the entire coastwide stock, and had a nondecreasing trend, similar to all the fishery independent indices. Therefore, the SAS had no reason not to exclude the MRIP CPUE index in this assessment, especially as inclusion of the index or of the abundance indices was one of the improvements suggested by the reviewers during the previous benchmark assessment.

The JABBA model differentiated between exploitable biomass and spawning biomass, which are different for black drum, due to life history and exploitation patterns, and accounted for this difference when estimating annual production as the ratio of these two biomasses as they change. It required one less assumption about biomass depletion than the DB-SRA and Simple Stock Synthesis, did not require the use of early uncertain catch data, and accounted for changes to fishery selectivity through time, and resultant impacts to productivity.

This is a procedure for linking the age structure dynamics with a per recruit models for the Pella-Tomlinson surplus production model parameters, essentially drawing those iterations of natural mortality and steepness from the prior distributions, and it solves for MSY and MSY parameters using per recruit models calculating an additional spawning stock biomass, by setting that F equal to 0 in the per recruit models, and then uses these parameters to derive multivariant priors of surplus production parameters, the HMSY and M, then fits that surplus production model to the MRIP CPUE and removals.

The reference points that are generated are MSY generated reference points. Basically, spawning biomass and exploitation, as well as MSY. And model results. Spawning biomass, which is the top figure, was estimated to increase throughout the time series, though there were wide credible intervals indicating high uncertainty in the absolute biomass estimates.

Relative biomass was estimated with more certainty. The exploitation rate, the lower left, generally follows the removal time series with higher exploitation estimated during the mid-1980s, and since 2000, credible intervals of relative exploitation are also quite wide here. Most of the intervals through the time series indicate exploitation less than HMSY. But there are some low probability years of exploitation, where it could have exceeded HMSY during those high exploitation years. The base model is interpreting the increasing trend in both MRIP CPUE and the fishery removals, as indications that the stock was lightly exploited in earlier years, which allowed for surplus biomass to recruit to less vulnerable spawning stock, and build up over time.

Some positive anomalies in the biomass during the late 2000s and early 2010s were likely due to some strong year classes that were not fully exploited at the threshold level, and appeared to have offset the increased removals and a more drastic increase in exploitation, to allow for the trend to continue increasing, although that was a reduced rate. It starts to flatten out from the increased exploitation since about 2000.

There were 9 sensitivity runs that were made using low natural mortality, high steepness in the likelihood estimates, high and low, changes in MRIP selectivity, increasing the selectivity for the South

Atlantic adults, as well as shifting the descending selectivity slightly to the right by about 100 millimeters. Then in the Mid-Atlantic early selectivity also shifting to the right. The uniform depletion priors were tested in a range from 0 to 1, and then the MRIP catchability coefficient change that occurred in 2016. These models change slightly, and the top is the original and then the base is the final one.

But there were some noticeable results. There was tighter distribution of estimates in the updated analysis, and all alternative configurations now estimate the exploitation time series remain below 1. The two configurations with the greatest relative exploitation in the updated analysis were the lower mortality rate, and then the change in the MRIP catchability coefficient.

Uniform depletion changed so much, because the model indicates a less depleted stock than in the original analysis, and therefore lower removals relative to the stock biomass and lower exploitation. The retrospective analysis was conducted with a five-year peel from the assessment terminal year.

Mohn's rho values were calculated according to the methodology of Hurtado-Ferro. The estimates of the Mohn's values range from negative 0.02 for relative biomass estimates to 0.74 for relative exploitation estimates, as the years were peeled from the timeseries. Magnitude of the Mohn's rho values indicate no significant retrospective bias according to the rule of thumb, proposed by Hurtado-Ferro, for long-lived species, which range from -0.15 to 0.2.

In conclusion, the JABBA model had shown a higher exploitation rate since 2000, increasing biomass followed by a stabilizing trend towards the end of the time series, high uncertainty in the absolute estimates, but much lower uncertainty in the relative estimates, with the majority of credible intervals concentrated in the final stock status region.

Okay, for stock status, the results indicated greater certainty that the stock has not been depleted to an overfished status in the terminal year of the assessment, while there is less certainty about the exploitation status. The overfishing definition with spawning biomass in the terminal year, the ratio of spawning biomass in the terminal year to the spawning biomass in MSY has to be less than 1. The model estimated that at 2.99, so the stock is not overfished. Then the overfishing definition, the exploitation and the ratio of the exploitation rate the final year to exploitation rate for MSY greater than 1, with the calculated median being 0.28, so the stock is not experiencing overfishing.

All of the 95 percent credible interval is above the overfished threshold, while exploitation shows some low probability of exceeding the threshold within the 95 percent credible interval. However, this low risk of overfishing, according to the credible intervals, extends back from much of the last 20 years of the time series.

We would like to be clear that the MSY point estimates are not being recommended for catch targets, due to the uncertainty in the absolute quantities. There were some additional considerations, on the first, the empirical indicators did show increased fishery removals in the last 20 years and less frequent large recruitment events, particularly in the Mid-Atlantic in the last 10.

There were no clear indications of a declining trend in recruitment or exploitable abundance from abundance indicators, with the exception of the Georgia trammel index. There is a declining trend in the final two years of the recreational discard time series that may be reflective of abundance, in addition to other factors.

There is some indication of the northern range expansion as was shown in the New Jersey Trawl Survey. But overall, the stock indicators did not appear negative at this time. However, they should be monitored closely for any sign of change. The one-way trip increasing trend in both removals and the MRIP CPUE, the assessment time period may indicate the stock either had been lightly exploited in the 1980s, which allowed for the recent increase in exploitation and the predicted high biomass, or was overfished and rebuilding throughout the assessment time series.

However, it is possible that the recruitment overfishing is occurring or could begin to occur prior to detection with the currently available data, due to sub-adult black drum accounting for the majority of the removals and the lack of an index that solely tracks mature biomass. The overfished scenario is contrary to the TCs expert opinion that the stock was not overfished at the beginning of the time period, and there were minimal regulation changes that were aimed specifically at black drum in the 1980s to induce rebuilding.

Then with over 30 cohorts contributing to spawning stock biomass, recruitment overfishing may not be evident within the current data streams for an extended number of years, leading to an overfished state being reached prior to removals and the MRIP CPUE index indicating a sustained downward trend.

The TC concurs with the model-derived stock status, but acknowledges the lack of contrast in both the removals and the MRIP CPUE, coupled with the model uncertainty. This will require close monitoring of stock indicators and a more conservative approach to managing the fishery. With that, we'll finish up with some research recommendations, I have one more slide. Just to start off, one thing, we actually had three items from the previous assessment that had been accomplished since the last one that we wanted to point out, the collection of genetic material to obtain information on movement and population structure. This study was actually published right towards the tail end of when we were finishing up the previous assessment. Attain better estimates of harvest from black drum recreational fishery, particularly in states with really short seasons. The MRIP changes that are discussed in the assessment showed some of this, though the exception remains, like the nighttime fishery in sampling identified as a moderate research recommendation.

I'm only actually talking about the high priority ones here, there were additional research recommendations in the document. Then, collection of information on the magnitude and sizes of commercial discards, attaining better estimates of bycatch of black drum in our fisheries. The ongoing observer program now provides monitoring of the primary suspected commercial black drum discard fishery, and recent estimates have been relatively small, in comparison to the total fishery removals, but this source of catch should be continued to be monitored into the future for assessment purposes. For the research recommendations as I said, I'm going to pretty much just list the high priority ones. The first one was to evaluate use of MRIP site-use weighting factors to improve CPUE estimates.

Utilization of the Skate and Itarget models with their current data inputs should be evaluated as annual indicators, to show current relationships between the stocks and stock removals, which is Itarget, and the ongoing trend of relative F, which is the Skate model. A process should be developed for appropriately combining the MRIP supplemental recreational sampling program data, characterizing the size and/or age structure of the recreational harvest.

The process needs to consider spatial information, as there are likely spatial effects within the state supplemental sampling program, such as the VMRC Freezer Fish Program, which occurs primarily in Eastern Shore. Continue all current fishery independent surveys recommended as stock indicators for black drum, and continue to collect biological samples of black drum in these surveys.

Develop a fishery independent adult survey to target black drum, particularly for collecting age samples in states where the maximum size regulations preclude collection of those older fish. Conduct high reward tagging program or programs to obtain return rate estimates. Continue and expand current tagging programs to obtain additional mortality, catch and release mortality, and growth information and movement at size at age data.

Increase biological sampling in the commercial fisheries, particularly gillnet fishery in Virginia, to better characterize size and age composition of the commercial landings, and increased biological sampling in the recreational fisheries, particularly harvest in the Mid-Atlantic region, and releases coastwide that are characterized in the sizes and age

composition of that recreational catch. With that I am finished my portion, and I will hand it off to Marcel, and then we will have questions afterwards.

PRESENTATION OF PEER REVIEW PANEL REPORT

DR. MARCEL REICHERT: Thank you, Chris, and I would like to thank the Board for the opportunity to present the Black Drum Stock Assessment Review today. Chris provided an excellent overview of the assessment, and the Review Workshop was conducted in January. The Review Panel focused on all aspects of the assessment, including the data and the model's uncertainty, and the resulting stock status. In my presentation I will highlight the Review Panel's conclusions and recommendations, and I will primarily focus on our main discussion points.

I would like to mention that further details can be found in our Review Report. But before I delve into the technical details, I should mention that the Review Panel consists of Ms. Maia Sosa Kapur, Dr. Gary Nelson, and myself. We brought to the table a combination of expertise that included black drum ecology, population dynamics, fisheries data, and various other aspects of stock assessment modeling.

Ms. Kapur and I were present at the Review Workshop, and I would like to specially acknowledge Maia for her contributions, in particular her detailed expertise on the JABBA-Select model was invaluable during the review. Unfortunately, Dr. Nelson was unable to attend the Workshop, but he provided detailed assessment feedback, and made significant contributions to the Review Report.

I also would like to extend a special thanks to the assessment team and the Commission staff. Their Review Panel much appreciated the extremely collegial atmosphere during the entire review process, as well as the timeliness in accommodating additional analyses and information. I also want to especially thank Jeff Kipp, who was responsible for a significant part of the assessment modeling, including our requests for additional sensitivities and model runs during the Review Workshop.

In terms of our overall findings, the Review Panel commended the Assessment Team for the detailed documentation of the assessment, exploitation, exploration and analysis of the data, and investigating the potential models. In the end, the Review Panel agreed with the assessment team that the JABBA-Select model was the most appropriate model, given the available data.

As Chris mentioned, so no spoiler alert, then it's good to present some good news. The good news is that the assessment indicated that the black drum stock was not overfished and overfishing was not occurring in 2020, the terminal year of the assessment. We felt that the Assessment Team did a great job exploring and describing the potential data sources, including characterizing the complex harvest picture, and also the available index data.

The Review Panel concluded that in general, the use and analysis of the data was appropriate. However, it is worth mentioning that black drum is still considered a relatively data poor species. In terms of our specific data highlights that were important for our review, as Chris indicated, the harvest is largely from bycatch, and mostly recreational, concentrated off the South Atlantic Coast, while the commercial harvest is dominated by landings in Virginia, North Carolina and Florida.

There is very little information on discards available, including discard mortality. What was available was used appropriately in the modeling efforts. Black drum life history aspects were also very well documented, and the Review Panel noted that relatively little age information was available, but that progress was definitely made since the last assessment. We also considered the assumption of a closed stock structure reasonable. But also noted that the possible recruitment from other areas, such as the Gulf of Mexico, may occur, and possibly contribute to uncertainty in the assessment. The Assessment Team's exploration of the available indices, including those based on various state surveys, was well done, but we know the lack of a coastwide or regionwide fishery independent index.

As mentioned by Chris, the JABBA-Select model heavily relied on the MRIP data that provided the only coastwide fishery dependent index used in the model. The Review Panel also discussed that the Georgia trammel net index, the only young of the year index available in the South Atlantic area, conflicted with trends from the other indices, as Chris just mentioned.

This may be because the population in Georgia is following different patterns, but we also discussed that a change in the survey design, which was a 50 percent reduction in net length, may have affected this index. A gear comparison study by the Georgia DNR, using speckled trout, showed no difference in catchability between the different net lengths.

However, we noted that black drum behavior is likely different. We did recommend investigating a possible change in the black drum catchability in the survey, as it may, at least partially, explain the apparent conflict between the Georgia Trammel Net Index and other indices.

In evaluating data to monitor the black drum stock and fishery, the indices are important data sources. The Review Panel recommended monitoring trends in existing surveys for potential changes in the black drum population, especially in areas where the majority of the harvest occurs. Trends in harvest are also valuable in monitoring the stock, especially in the recreational sector, and in that respect MRIP data are important. Also, because MRIP was a critical data source in the JABBA-Select model.

When and where available, length and age information can be a good data source to monitor potential changes in population structure, including identifying strong or weak year classes, and the overall pressure on the black drum population as a whole.

Our third TOR was to evaluate the methods and models used to estimate population parameters and reference points. As you may expect, we spent considerable time discussing this TOR. The Review Panel felt that the Assessment Team explored the various models very well, and as Chris gave you a good overview of the considered models, I will therefore concentrate on the model that was eventually used in the assessment.

Given the available data, we agreed with the Assessment Team to accept the JABBA-Select model as most appropriate for use in stock status determination, but also for management. In part, because the JABBA model provided the superior presentation of the overall uncertainty. We extensively discussed data inputs, parameter choices, priors and other model specifics.

We ended up focusing on three key considerations. One was the specification of the fishery fleets, the second one was the estimation of growth curve, and the third one was the treatment of error in the MRIP CPUE index. I would like to emphasize that the Review Panel did not feel that any of these issues were alarming enough to require a change in the base model, with the exception of one. It was related to the fleet specification. We had much discussion on the use of the specified fleets, including their use as proxies for geographic areas. This so-called area as fleet approach was not specifically mentioned in the assessment report.

The Assessment Team specified that the partitioning into South Atlantic and Mid-Atlantic fleets, and the use of the inverse in the maturity curve as the descending link of the selectivity curve for the South Atlantic, was chosen to mimic the hypothesis that fish might emigrate from the South Atlantic upon maturity.

However, as a result, the fleet selectivity is actually a combination of gear selectivity and species availability. These two are notoriously difficult to separate. The Review Panel also felt that the original assessment report had a fairly sparse description of how the selectivity curve was chosen. We were not entirely confident with some of the “eyeball approaches.”

The specified curves appear to be either disregarding the catch of small fish, as in the case of the Mid-Atlantic fleet, or overestimate the availability of larger fish, such as in the South Atlantic fleet. The

Review Panel recommends a more rigorous approach for the next assessment. This is particularly important, because dome-shaped selectivity can introduce a considerable bias, if selectivity is actually different in shape.

In the original base model, as Chris mentioned, the Mid-Atlantic fleet was split into an early and a late component, corresponding to seasonal trends in availability. The Review Panel felt that this overcomplicated and potentially biased the model, as catches are modeled in a yearly time step. We felt that it was no good reason to account for seasonal dynamics in availability.

A sensitivity run showing that collapsing the Mid-Atlantic fleets into a single fleet, with a logistic selectivity curve, only slightly changed the reference points. This is likely because the Mid-Atlantic fleet accounts for a small part of the total annual harvest. The Review Panel and the Assessment Team agreed to incorporate a single Mid-Atlantic fleet into a new base model.

This resulted in a more parsimonious model, and is more in keeping with the model structure of a single year time step, with no seasonal dynamics. We also had extensive conversations about the growth functions, which were fit by sex to data from the entire region, but with outliers removed.

The removal of outliers before growth parameter estimation might mask differences across the region, and may also underestimate the overall uncertainty of fish growth in a population. Obtaining accurate estimates of the uncertainty in the growth parameters, when they were refitted to the individual length at age data that was done during the review, were unsuccessful.

Based on a visual inspection of the data, the Review Panel believes that in a future assessment sexual dimorphic growth should be further investigated. It's plausible there is not a strong sexual dimorphism in length at age for black drum, supporting the use of a singular growth curve for the entire stock. In addition, there is likely more variability in the length at age than is currently represented in the base model and its related sensitivity runs. The Review Panel recommends exploring growth parameters estimation to individual length at age, observations by sex, without the removal of outliers, and without the averaging steps. Now regardless of the outcome, we recommend to determine whether and how the growth model uncertainty can be incorporated into the assessment. Again, that is for the next assessment.

The impact of these issues on the reference points could not be evaluated within the scope of this review. As I mentioned just now, that it is important to address this in the next assessment. In particular, because the growth parameterization explicitly informs the conversion of length at age to weight, and therefore, to the exploitable fish biomass.

As an example, this figure from the Stock Assessment Report Appendix shows the length at age data for the Mid-Atlantic Region, with the red circles identifying the removed outliers. It also demonstrates the considerable variability in the length at age data. The later, by the way, is not unique to black drum. Many other species also exhibit a considerable level of variability in the length at age, and thus in the growth parameters or in the overall growth of the species.

The third critical discussion point was related to the observation uncertainty in the MRIP CPUE index, here shown in the graph on the lower part of the slide. The MRIP index was the only index used in the JABBA-Select model, and we discussed at length how the error in this index was handled.

Our Review Report provides further details, but the Review Panel concluded that the methods used in the assessment to specify an input standard error for the MRIP CPUE may have inflated error in the index. We felt that perhaps alternative methods could have resulted in an improved fit to the index, and better-informed process error estimates.

We recommend that alternative methods to specify the error inputs for the index should be explored in the next assessment. The Assessment Team explored the impact of various parameters on the model behavior, and the so-called alternative states

of nature very well, in a chosen suite of sensitivity runs, and Chris just went through the sensitivity runs.

After some discussion, and based on the conversations mentioned in my previous slides, we requested three additional runs. One was to enter the Mid-Atlantic early and late fleets as a single fleet. The second one was a run with no additive standard error in MRIP CPUE index, and the third one was one with a logistic selectivity for the South Atlantic fleets.

As I mentioned earlier, we much appreciated the responsiveness of the Assessment Team to these requests. The overall conclusion was that the result of the sensitivity runs generally did not significantly change the quality of the status of the stock. In addition, and again as Chris mentioned, the retrospective analysis did not show a significant pattern that raised concerns with the Review Panel.

As you know, in the end we recommend that the base model that combines the Mid-Atlantic early and late fleets. I will note that this model run and the related uncertainty analysis was completed after the Review Workshop. Upon completion, the Review Panel conducted the desk review, and we have no additional comments or concerns. The Review Panel concluded that the Assessment Team thoroughly explored uncertainty through sensitivity runs, Bayesian statistics and other diagnostics, and had provided critical information of the influence of parameter choice on model behavior and stock status. We were satisfied with the extent of the uncertainty characterization approaches, but I refer to my earlier slides in the report for specifics affecting the uncertainty in this assessment.

In terms of overall uncertainty, we felt that the specification of the shape and the parameterization of the selectivities is likely a chief component of the model uncertainty. The Review Panel concluded that given the available data the JABBA-Select model provides the best, most robust estimate for relative stock biomass and fishing mortality estimates, and is appropriate for use in management.

In terms of continuity, the JABBA-Select model also generally agreed with the qualitative stock status results from the updated depletion-based stock reduction analysis, or DB-SRA used in the previous assessment. In our evaluation of the reference points as stock status determination, we concluded that the estimation methods were appropriate, given the data and the recommended model.

The updated base run indicated that black drum population is not overfished in the terminal year, and is not undergoing overfishing. The analysis indicated that the assessment is robust for overfishing status and robust, but with a higher uncertainty, for exploitation status. As a reminder, the figure on the lower right-hand side shows the face plot from the assessment report, indicating in the red circle the 2020 stock status, in the green not overfished and not overfishing box.

The accompanying uncertainty is indicated in the whitish and gray areas. The Review Panel concluded that the assessment results are appropriate for use in management, that uncertainties described in the assessment and review reports should be taken into account, in terms of management risk.

The Review Panel largely agreed with the Assessment Team's research recommendations, and we added three. One was investigating the reduction in large recruitment events, as it may affect the stock's resilience to harvest and other impacts that may affect the stock-recruitment relationship.

More region-specific reproductive information will also improve future stock assessments, including fecundity estimates and possible age-varying spawning frequency and batch fecundity, and a variability in the length of the spawning season. The third one is an investigation into possible change in catchability in the Georgia trammel net survey that I mentioned earlier, as this is the base for the only available young of the year index in the South Atlantic.

Furthermore, we emphasize the increase in biological sampling, especially acquiring more age samples. In spite of the progress made since the last assessment, the age information is still relatively sparse. Biological sampling can also aid in gathering

reproductive information that I mentioned earlier. We realize that setting up a new comprehensive regionwide fishery independent survey for the black drum is likely cost prohibitive. But perhaps making slight adjustments to its existing surveys can improve useful data collection for black drum. As very little discard information was available, improving coastwide discard data, including biological data and discard mortality, will definitely benefit future assessments, especially the data for recreational fishery will be very valuable.

I would like to note that many of these research recommendations are not unique to black drum. For instance, fishery independent information is missing for many species, and discard data is lacking for numerous other fisheries also.

As far as the next assessment is concerned, based on the stock status, the uncertainty in the assessment and the life history aspects of black drum, such as the relatively high maximum age of 67 years, we recommended conducting the next assessment in about five years. But we also recommend monitoring the stock using the indicators that I mentioned before. If the monitoring information warrants, adjustments could be made to the stock assessment schedule. In closing, the Review Panel concluded that the black drum off southeastern U.S. remains relatively data poor.

Given the available data, the JABBA-Select was the most appropriate model in the assessment, but we requested the new base run with a combined Mid-Atlantic fleet. The assessment indicated that black drum, as I mentioned before, is not overfished and overfishing is not occurring in 2020, and this stock status determination is generally robust and appropriate for management.

Given the stock status, the model uncertainty, harvest trends, available abundant indices, and the nature of the fishery, the Review Panel feels that recent harvest levels are likely sustainable. However, harvest, abundance trends, and recruitment should be monitored for indications of disconcerting changes in the population. Finally, we recommend a new stock assessment in five years. With that, I thank you, and I will be happy to answer any questions you may have.

CHAIR BATSAVAGE: Thank you, Chris and Marcel for the assessment report and peer review report, very thorough information. Again, as I mentioned earlier, a lot of great work was put into the assessment. With that I'll look for questions from the Board on either the assessment or peer review report.

MS. KERNS: We have Shanna Madsen.

CHAIR BATSAVAGE: Go ahead, Shanna.

MS. SHANNA MADSEN: Thank you both for incredibly thorough reports. I really enjoyed listening to them. You guys really covered a lot of bases here. Hopefully, my questions aren't repetitive to some of the things that you already covered. One of the things that you noted pretty strongly in the Review Panel report is that the shape and parameterization of the selectivities could be kind of leaning towards a chief component of some of the uncertainty in the models.

I was just curious to hear a little bit more. I know Chris, you went over some of the different sensitivity runs that you guys ran for the Review Panel, in addition to some of the things that they asked extra. I was just sort of curious as to how many of those sensitivity runs had to do with those selectivity patterns, and then additionally, am I correct in saying that even though you ran through a bunch of different sensitivity runs, all of those sensitivity runs still aligned with the exact same stock status that the base run came up with as well.

MR. McDONOUGH: I'll start. Yes, the various runs didn't really change the result vey significantly. That really didn't, even when we changed the selectivity, it didn't change it that much. Then Jeff, I don't know, do you want to add anything specific on the changes that were made for those, for the retrospective?

MR. JEFF J. KIPP: If I could just note, I don't recall off the top of my head. I think there were maybe four or five of our original sensitivity runs or configurations that were identified on sort of the major

uncertainties of selectivity in the assessment, and we put those towards the peer review. Then the peer review had further concerns.

They requested, I think three additional sensitivities, focused on selectivity and selectivity parameterization. Those were added during the Peer Review Workshop, and ultimately, though that the results of those sensitivities were fairly insensitive to some of those assumptions about selectivity.

DR. REICHERT: Yes, and to add to that, they showed some differences, but the qualitative stock assessment results did not change. I think where the most bang for the buck probably comes in the overall uncertainty. If you lower the overall uncertainty, that obviously provides a better model for management.

CHAIR BATSAVAGE: Any other questions?

MS. KERNS: Jeff Brust.

CHAIR BATSAVAGE: Go ahead, Jeff.

MR. JEFF BRUST: Thank you, Chris and Marcel, for your updates, very helpful summaries of the reports. I have a question that I think you touched on during your presentations, but I'm hoping you can sum it all up and tie it up with a bow for me. We have information that shows that harvest was increasing over time, and at the same time the biomass was increasing as well.

As they are increasing in concert, harvest rates were relatively flat. Could you explain what is going on that with harvest rates staying the same, how were we getting an increase in biomass, to the point that biomass is almost three times the BMSY?

DR. REICHERT: Yes, there may be processes in the population that they don't respond to harvest directly. The traditional idea is if you harvest you lower the biomass. If the productivity in the population is high enough, there may be potentially disconnect between harvest and the population biomass.

It's particular in species that grow fast, have a long lifespan. There are opportunities for the population to respond to harvest, and actually increase in biomass. Not respond to harvest but increase biomass, because there may be somewhat of a disconnect, especially if the harvest is relatively light. In addition, I would say that most patterns in the stock assessment were relatively level. There hasn't been a lot of contrast in, for instance, the indices or some of the other indicators. I'm not sure if, Jeff, do you have further comments to that?

MR. KIPP: I would just add that the nature of exploitation would believe that there is some reduced vulnerability on adults, and since there are so many age classes that contribute to that adult component of the population, there are some processes to think that you know if there is particularly lower exploitation on those first couple of year classes, that they can recruit to this spawning stock biomass, and that that could build up over time.

Things like some larger year classes at times, similarly exploited to low levels, since they do exit that more vulnerable component of the population early on in their life stage, that some of that biomass can recruit to that less vulnerable adult SSB, and build up over time, even with higher harvest on the subadults.

MR. McDONOUGH: I actually had one more thing on that. Typically, when you do get big year classes, they do not track well beyond a couple years, in terms of seeing them in the age distribution. That age distribution stays pretty consistent over time, has remained pretty consistent over time. Those really big year classes, and they definitely occur, will fade out after a couple of years. That is likely making an impact as well from the increasing biomass, but none of the surveys catch it.

DR. REICHERT: That reminds me, if I may. That was one of the reasons the Review Panel felt that looking into the lack of those larger recruitment pulses that were seen in the earlier timeseries we are not seeing in recent years. It may be important to take a look at that and why that may happen.

CHAIR BATSAVAGE: Jeff, do you have a follow up, or did that answer your question?

MR. BRUST: No that was a very good answer, thank you very much.

CHAIR BATSAVAGE: Any other questions?

MS. KERNS: I don't see any hand online or in the room. I'm sorry, Roy Miller has a question.

CHAIR BATSAVAGE: Okay, great, Roy, go ahead.

MR. ROY W. MILLER: Just curious as to whether exploitation of the larger individuals in this population is suppressed by abundance of parasitic worms in the flesh. Is that a factor that was considered at all, even though it is well known among recreational anglers, and in fact a lot of large drum are turned loose as a result, rather than being fully exploited.

MR. McDONOUGH: Thanks for that question, Roy. Actually, that was something we had discussed in actually the previous assessment, as well as this one. But that was mostly a qualitative, those qualitative data. The areas, I know the South Atlantic it is very strong, you know the feeling that the parasitization in those larger fish is pretty common. But as I recall, and I can't remember, I think it was off, it may have been Delaware. But there were some fisheries where the black drum, the larger adults were actually utilized for eating, they just wouldn't use certain parts of the fish. But that was something that we definitely discussed, but there is really no really good information that we can incorporate in the assessment, unless Jeff has anything to add.

CHAIR BATSAVAGE: Great, any further questions from folks in the room? I don't see any online. Erika, go ahead.

MS. ERIKA BURGESS: Chris, I read the Stock Assessment Report, and I just want to confirm my understanding of it. The Florida fishery independent monitoring indices were rejected for use because of the inability for the power to detect changes in abundance. Is that correct?

MR. McDONOUGH: That is correct.

CHAIR BATSAVAGE: Any further questions from Board members? I had one, I'll jump in, if there is someone else in the queue, because I can't see them. It was suggested that a benchmark assessment be done in five years, for various reasons. Is that contingent on collecting more age information to do an age-based model next time around, or would a benchmark assessment be considered anyways, just to look at potentially other models that could be used, instead of the JABBA-Select model?

DR. REICHERT: I think that irrespective of the increase in age information, I think if there is more age information available, it shows that the model may change. If sufficient ag information is available, perhaps the statistical catch at age model or similar models can be considered. But in terms of the Review Panel, we did not discuss the five-year being contingent on the availability of additional data, it's more the issues that we identified in our report that were used in our five-year recommendation. I hope that answered your question.

CHAIR BATSAVAGE: Yes, it did, thanks. I don't think the Board needs to consider ways to increase age samples today, but maybe just something for all of us to think about. Whether that is done through the black drum FMP or just through individual state efforts, just to try to get as much information as possible for future assessments, especially things like age data that do show up on the research recommendations. Anyways, thanks for that. Just one final check on any questions. Yes, go ahead.

MR. McDONOUGH: I would point out that the previous assessment, the timeframe between it was closer to what, about six or seven years, primarily because when we evaluated close to five. The stock indicators were still looking pretty good, and then COVID happened and everything got thrown in the fan.

That five-year recommendation, that is kind of our standard, but it's not tied to it. If there are indicators that the stock is still doing okay, and there are reasons, and other things are more important in the

queue for assessments, you know they could potentially be put off. But it's certainly something that has got to warrant closer looks, at least at the five-year mark.

CHAIR BATSAVAGE: Thanks for that additional information on the assessment schedule and how that works. Yes, just final check on any questions from the Board on either the assessment or the peer review report.

MS. MADSEN: One more question, Shanna.

CHAIR BATSAVAGE: Go ahead, Shanna.

MS. MADSEN: I don't know if this is the appropriate time or not, but if we have questions about the indicators, should we hold those until after a motion is made?

CHAIR BATSAVAGE: We can go ahead and address that now. I'll look to Tracey, if she thinks it might be better to address that later.

MS. TRACEY BAUER: I think you are within the realm of the stock assessment, it's fair game now.

CHAIR BATSAVAGE: Go ahead, Shanna.

MS. MADSEN: My questions were, so there is quite a number of indicators laid out for us. Is the intent of the indicators to continue, like Chris was sort of saying we'll continue to look at the indicators and determine whether or not we need a benchmark sooner rather than later, or maybe we can save it for later if everything is still looking good on the indicators.

Then secondarily to that, when it said like yearly, we were going to look at those indicators, is that a heavy lift for the TC or the SAS to deal with, and do you intend on kind of reporting out to the Board yearly on that, or is it just you'll report out to the Board if things aren't looking so great, and we kind of need to know?

MR. McDONOUGH: I think if I remember correctly, our discussions about that were that we could potentially look at that yearly, because black drum, coming from the previous assessment, really didn't have an annual, I mean we did the Plan Review and the compliance reports and stuff like that, but there was no year-to-year indicator or stock status indicator, like we have for things like croaker and spot with traffic light and some other things.

It was thought that some of these models like the Itarget and the Skate models could be something that potentially we reviewed annually. They are all indices that are included in most of the reports every year. However, it was my understanding that you know once we basically got through the assessment.

The next step for the TC would be to act, and Jeff, correct me and Tracey, correct me if I'm wrong. But was then we would go back and look at, okay, how would we use these specific indicators, and whether or not, you know maybe yearly. Could be every other year. But that is something that I think we actually, that would be the next step, we need further development.

MR. KIPP: I would just add to that that yes, when we discussed timeframe, we discussed and recommended annually reviewing these indicators. They were developed as simple empirical time series, so something relatively straightforward to put together on an annual basis, to keep closer tabs on this stock, because of some of the data limitations that we run into, and some of the uncertainties of the assessment.

The idea would be to review those annually. The question we had not resolved yet as a Technical Committee, was how would those be responded to by the Management Board, and so ultimately suggested a formal review of those, and keeping tabs on those as to whether it may suggest an expedited stock assessment.

But things like using them like spot and croaker, and any type of like management framework, that that would be something that would be pushed off from this discussion, if that was something that was desired on the board by the Management Board.

CHAIR BATSAVAGE: Okay, any other questions on the assessment report or the stock indicators?

MS. BAUER: We have one hand from Lynn.

CHAIR BATSAVAGE: Yes, go ahead, Lynn.

MS. LYNN FEGLEY: Just to close the loop on that, and make sure that the Board is clear. It was my thought with an indicator that those would be something that would be reviewed annually, and that they would be used to determine whether we needed to go, as Shanna was saying, to a new stock assessment, they are not to be used for management response. I just guess it would be to be clear amongst the Board that that is the guidance for you. If that is true, make sure that that is on the record, annual review, not management response.

MR. McDONOUGH: Yes, that was essentially the intention.

CHAIR BATSAVAGE: Yes, thanks for that clarification. That is definitely an important one for all of us to understand at this point. Tracey, just checking again for any other questions from Board members.

MS. BAUER: No more questions at this time.

CONSIDER ACCEPTANCE OF BENCHMARK STOCK ASSESSMENT AND PEER REVIEW REPORT FOR MANAGEMENT USE

CHAIR BATSAVAGE: If there are no other questions, then I think we are at a point, I'll be looking for a motion to consider the acceptance of the benchmark stock assessment and peer review report for management use. Now Tracey, if there is a motion already ready for that we can just see who would want to make that motion.

MS. BAUER: Yes, it's on the board.

CHAIR BATSAVAGE: I'll just rely on you Tracey to see who wants to make the motion and to second it, since I can't see the folks in the room.
MS. BAUER: Motion made by John Clark, second by Lynn.

CHAIR BATSAVAGE: Okay great, so move to accept the 2023 Black Drum Stock Assessment and Peer Review Report for management use. Motion by John Clark, second by Lynn Fegley. Any discussion on the motion?

MS. KERNS: No hands.

CHAIR BATSAVAGE: I guess before I ask if there are any objection, Tracey, I guess, are we going to need to do a separate motion to consider adopting the stock indicators, or could we just fold that into this motion? What would be the best way to do that?

MS. BAUER: Right now, it's a separate motion.

CHAIR BATSAVAGE: Yes, let's keep it simple. We can just dispense with this, and I guess we still need to take action on the stock indicators, right, or not?

MS. BAUER: Yes.

CHAIR BATSAVAGE: If there is no discussion on this motion by the Board, I will just look to see if there are any objections to accepting the stock assessment and peer review report for management use.

MS. BAUER: There are no hands.

CONSIDER ADOPTING ANNUAL INDICATORS

CHAIR BATSAVAGE: All right, great, so now we will look for a motion to consider adopting the stock indicators that are recommended from the stock assessment. If there is a motion available, we'll get that up on the screen before looking for people to make the motion and second it.

MS. BAUER: Jeff Brust.

CHAIR BATSAVAGE: Motion by Jeff Brust, seconded by.

MS. KERNS: Chris, we need to have Jeff read it.

CHAIR BATSAVAGE: Yes, Jeff, if you could that would be great, thanks.

MR. BRUST: Sure, move to have the TC annually present the indicators as described in the Black Drum 2023 Stock Assessment and Peer Review Report.

MS. KERNS: Shanna Madsen.

CHAIR BATSAVAGE: Second by Shanna, great. Any discussion on the motion?

MS. KERNS: Erika.

MS. BURGESS: Is there an interest among the Board to modify this motion to clarify that the indicators, to be very clear that the indicators would be to inform whether a stock assessment is necessary and not management action?

MS. KERNS: It's up to the Board.

MS. BURGESS: I'm looking around to the Board. I see heads nodding. Okay, so process question. Motion to amend: move to have the TC annually present the indicators as, okay, so at the end of the sentence, to inform the need for a new stock assessment, benchmark stock assessment.

CHAIR BATSAVAGE: The motion to amend was made by Erika and read into the record. Do we have a second?

MS. KERNS: Mel Bell.

CHAIR BATSAVAGE: Seconded by Mel, any discussion on the motion to amend?

MS. KERNS: Lynn Fegley.

CHAIR BATSAVAGE: Go ahead, Lynn.

MS. FEGLEY: Yes, I sort of blurted out benchmark, and I want to make sure that was the intent of what we were being told, that it would be a benchmark and not an update, if the indicators.

MS. KERNS: If you say benchmark then it has to be a benchmark, but if you just say stock assessment it could be a benchmark or an update.

MS. FEGLEY: Yes, process question. I think that is probably incorrect, it should just say stock assessment.

MS. KERNS: We'll go to the maker and the seconder.

MS. BURGESS: Well, technically it doesn't belong to the motion maker or the seconder anymore.

MS. KERNS: In interest of time, we will allow it at this moment.

CHAIR BATSAVAGE: Thanks for that.

MS. BURGESS: Can you please remove benchmark.

MS. KERNS: Erika, will you reread your motion please?

MS. BURGESS: Motion to amend by adding "to inform the need for a new stock assessment."

CHAIR BATSAVAGE: Mel, I guess you're okay with that friendly amendment to the amendment?

MR. MEL BELL: Yes.

CHAIR BATSAVAGE: Any further discussion on the motion to amend?

MS. BAUER: No hands.

CHAIR BATSAVAGE: Okay, are there any objections to the motion to amend?

MS. BAUER: No hands.

CHAIR BATSAVAGE: I guess then now that will be added to the other motion, and become the main motion. I don't have the one go quite right. I guess we need to add that.

MS. KERNS: Just give us one second.

CHAIR BATSAVAGE: Sure, okay. I'll just go ahead and read it into the record. What we have upon the screen is the way we almost want it. **Move to have the TC annually present the indicators, as described**

in the black drum 2023 Stock Assessment and Peer Review Report to inform the need for a new stock assessment. That is property of the Board. **Is there any further discussion, actually in the interest of time, is there any objections to the motion?**

MS. BAUER: No hands.

CHAIR BATSAVAGE: Okay, the motion passes by unanimous consent. Thanks, I appreciate everyone working on this, and again my thanks again to the TC and the Stock Assessment Subcommittee, as well as the Peer Review Panel for all the work they've done on getting us to this point on having an approved benchmark stock assessment for black drum, so that is good news.

CONSIDER NOT CONDUCTING 2023 ATLANTIC CROAKER AND SPOT TRAFFIC LIGHT ANALYSES

CHAIR BATSAVAGE: Next item on the agenda is to consider not conducting the 2023 spot and Atlantic croaker Traffic Light Analyses. I'll turn to Tracey for more information on that for that for the Board. Tracey, whenever you're ready.

MS. BAUER: I'll be making this quick, it can just be a verbal update. A little background on this similar to what you heard for Atlantic menhaden. Due to a packed stock assessment schedule for the next couple of years, several proposals were put forward by science staff to reduce workload and TC staff activities, one of which was skipping the 2023 traffic light analysis for spot and Atlantic croaker.

That usually occurs in July/August to focus on the benchmark assessments for both the species that are ongoing right now. This will give staff, the TC and the SAS more time to focus on that assessment for those two species, and in addition it's still uncertain if the calibrated ChesMMAP data will be available this year. If it is available, it won't be available until late summer, early fall potentially, and without the ChesMMAP data the TLAs will not be very informative, similar to what we were looking at last year. The Assessment Science Committee looked at this, and they have no objection to not completing the spot and croaker TLA this year. As a reminder, the management measures that were put into place in 2021 for spot and croaker, from when the TLAs were tripped in 2020, were both due to be reevaluated this year for both species, and if the Board is in consensus with going this route, the TLAs will not be conducted this year, and the spot and croaker management measures will remain status quo, until TLAs can be reevaluated in 2024 with a benchmark assessment. I can hand this back over to Chris for any discussion on this item.

CHAIR BATSAVAGE: Any questions or concerns from the Board on this plan for not conducting the traffic light analyses for spot and croaker this year?

MS. BAUER: No hands raised.

CHAIR BATSAVAGE: Okay, great, with that then I guess there are no objections to moving forward with not conducting these and allowing the TC and other folks working on spot and croaker more time to work on the upcoming benchmark stock assessments. We can just wait until 2024 and really just be waiting for the stock assessment for both of these species.

OTHER BUSINESS

CHAIR BATSAVAGE: If there is nothing else on this item then we can just do a quick check to see if there is any other business that needs to come before the Sciaenids Board before we adjourn.

MS. BAUER: No hands in the room.

ADJOURNMENT

CHAIR BATSAVAGE: All right, great, so thanks everyone for sticking around a little later this evening than we originally planned, but I'm glad we were able to accomplish the work that we did this evening, so I will look for a motion to adjourn.

MS. BAUER: Motion by Mel Bell.

CHAIR BATSAVAGE: Do we have a second?

MS. BAUER: Second by Spud.

CHAIR BATSAVAGE: By Spud, great, thanks, we are adjourned. Thanks everyone.

(Whereupon the meeting adjourned at 6:20 p.m. on Monday, May 1, 2023)

Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
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MEMORANDUM

TO: Sciaenids Management Board

FROM: Black Drum Technical Committee

DATE: October 2, 2023

SUBJECT: 2023 Black Drum Data Update

Background

The 2023 Black Drum Benchmark Stock Assessment determined the Atlantic coast stock was not overfished nor experiencing overfishing in the terminal year of the assessment (2020). However, the assessment acknowledged lack of contrast in black drum data sets coupled with high uncertainty in model-based estimates**.** To this end, the Black Drum Technical Committee (TC) recommended close monitoring of empirical stock indicators annually between stock assessments to identify any concerning trends in a timely manner. The next black drum stock assessment is tentatively scheduled for 2027. Should any concerning trends occur, the TC may recommend an expedited assessment.

Indicators developed during the stock assessment include abundance (young-of-year, age 0-1, subadult, and exploitable abundance), range expansion, recreational live releases and harvest, and commercial landings. Additional details on these indicators are available in Section 6 of the 2023 stock assessment report. At the conclusion of the assessment, indicators overall did not appear negative. The following provides updated indicator time series with two additional years of data through 2022.

Results

Overall, indicators show mixed signs of stability and declines since the assessment.

- Mid-Atlantic abundance indicators (all YOY) have varied around their time series means during the two update years (Figure 1).
- South Atlantic abundance indicators were mixed with declines measured by the SC Trammel survey (ages 0-1) and GA Trammel survey (YOY), while varying around the time series mean for the NC Gillnet survey (subadult, Figure 2).
- The MRIP CPUE (exploitable abundance indicator) declined below the time series mean for both update years (Figure 3).
- The range expansion indicator was not available for 2021 and declined below the time series mean in 2022 (Figure 4).
- Recreational live release indicators varied around the time series mean in the Mid-Atlantic and were both above the time series mean in South Atlantic during the update

years (Figure 5). Live releases in the South Atlantic have continued to follow a declining trend in 2021 and 2022 that was observed at the end of the stock assessment time series.

- Recreational harvest has varied with both update years below the time series mean in the Mid-Atlantic and both update years above the time series mean in the South Atlantic (Figure 6).
- Commercial landings have shown a similar pattern to the recreational harvest with both update years below the time series mean in the Mid-Atlantic and both update years above the time series mean in the South Atlantic (Figure 7).

Recommendations

The Black Drum TC met on September 26, 2023 to discuss the data update to the indicators and make a recommendation to the Sciaenids Management Board for their October 2023 meeting. In their discussion, the Black Drum TC noted that, despite some observed declines in a few of the indicators, in each case the two additional years of data were still within the historical range of that indicator. In addition, the TC did not believe two additional years of data are enough to determine any definitive trend in the black drum stock. As a result, they do not believe there is cause for concern at this time. **The TC recommended no change to the current black drum stock assessment schedule, but did note it will be important to continue to monitor the indicators.**

The TC discussed potential reasons behind some of the declines observed in the indicators. The declines observed in the recreational live releases in the South Atlantic could potentially be attributed to declines in directed effort. It was also noted there may be less market demand for black drum now compared to 10 to 15 years ago in some areas of the Mid-Atlantic, such as Maryland and Delaware, which may account for the decline in commercial harvest observed in this region. Additionally, fewer fishermen may be harvesting black drum because they are no longer participating in other fisheries, such as striped bass, where black drum is a bycatch species.

The Black Drum TC also highlighted the continued need for a black drum fishery independent index for adults, which none of the existing fishery independent surveys currently target. Current indicators are highly sensitive to year class strength, which is variable for black drum, creating challenges for assessing trends of overall stock abundance. As noted in the research recommendations of the 2023 Black Drum Stock Assessment report, an adult fishery independent survey for black drum would likely consist of a purse seine or long-line gears with bait and sampling areas appropriate to target black drum.

Lastly, the Black Drum TC discussed, hypothetically, what trends in the indicators the TC believes would be of concern and likely cause the TC to recommend changes to the black drum stock assessment schedule. The TC would be concerned if young-of-year or sub-adult fishery independent index values were repeatedly lower than what's previously been observed for that index, over a longer period of time, such as four or five years. The Black Drum TC can refer back to this discussion in future years when discussing the annual update to the indicators.

Figures

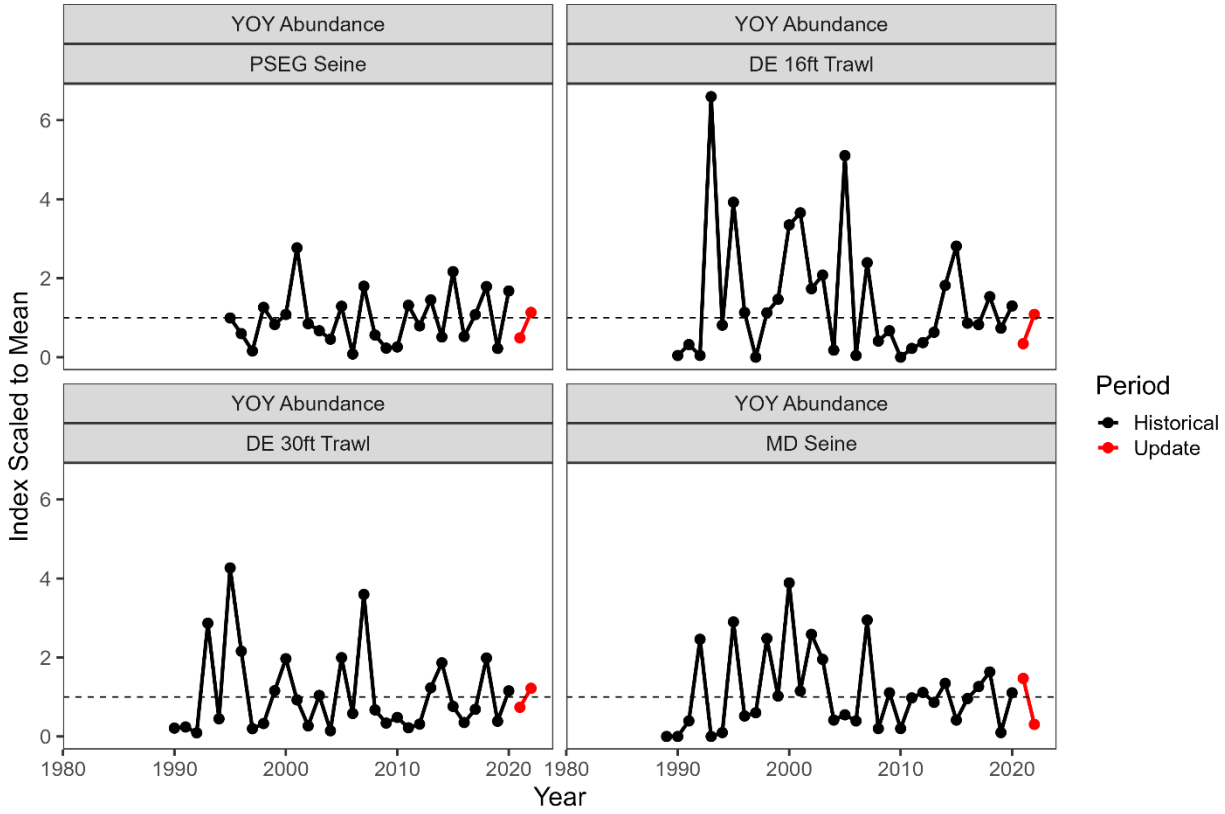


Figure 1. Mid-Atlantic abundance indicators. The dashed line is the time series mean.

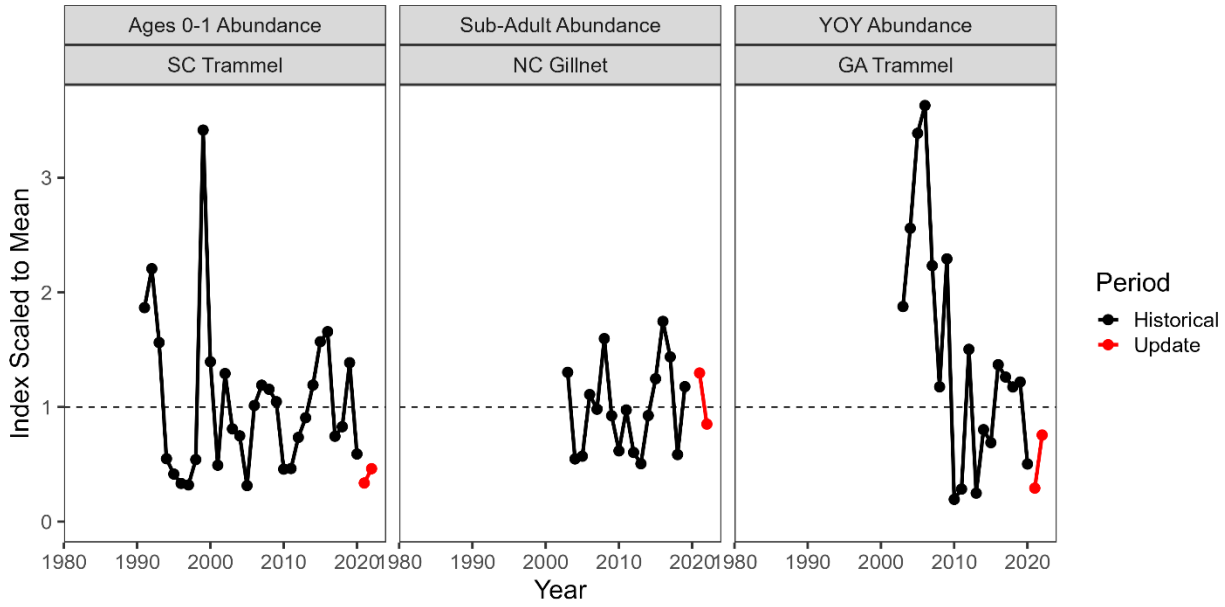


Figure 2. South Atlantic abundance indicators. The dashed line is the time series mean.

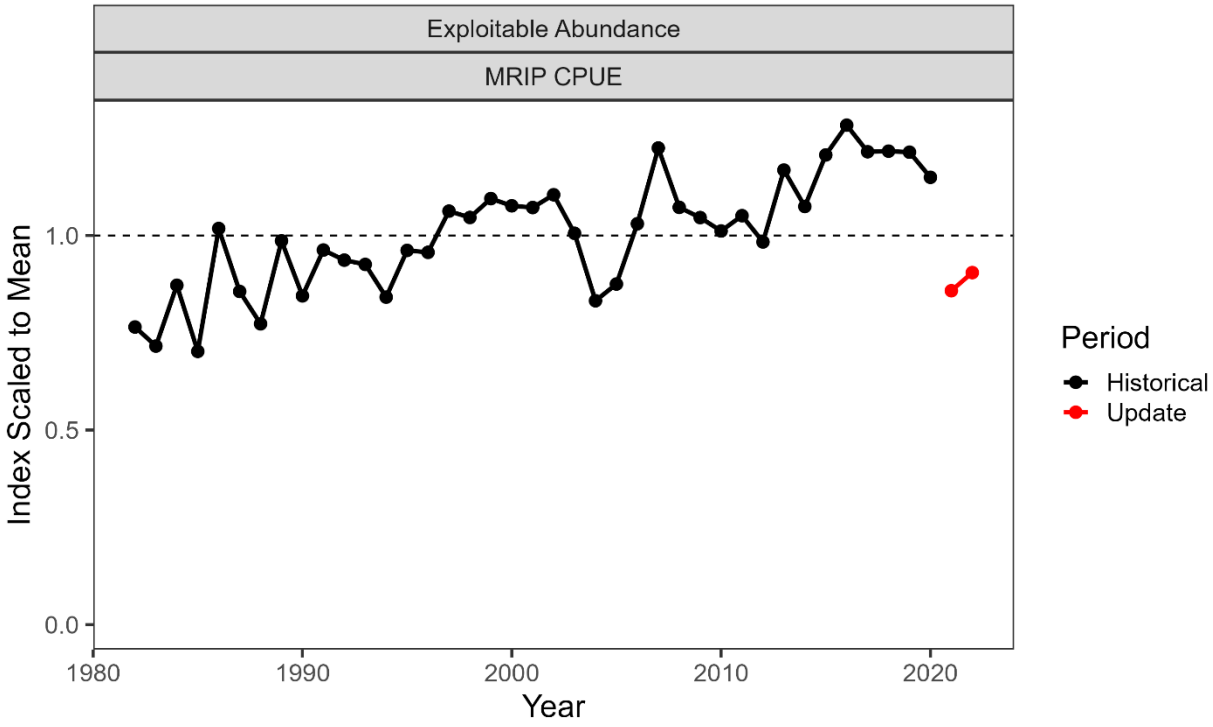


Figure 3. Coastwide abundance indicator. The dashed line is the time series mean.

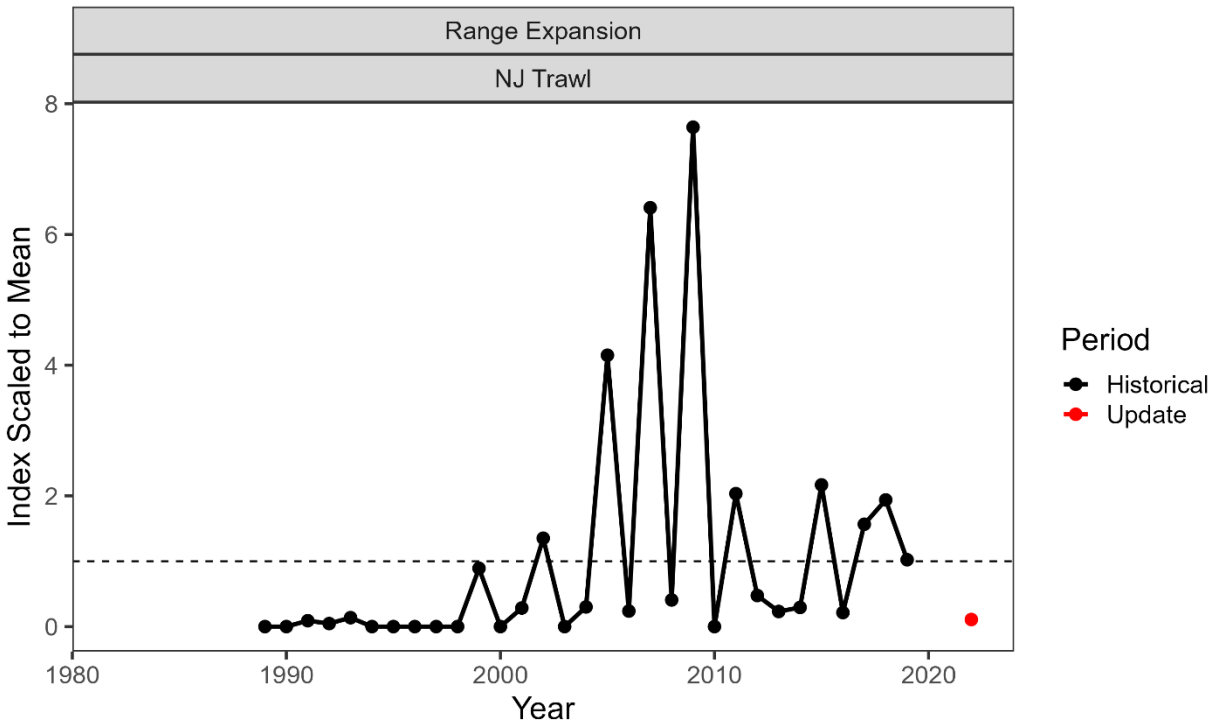


Figure 4. Range expansion indicator. The dashed line is the time series mean.

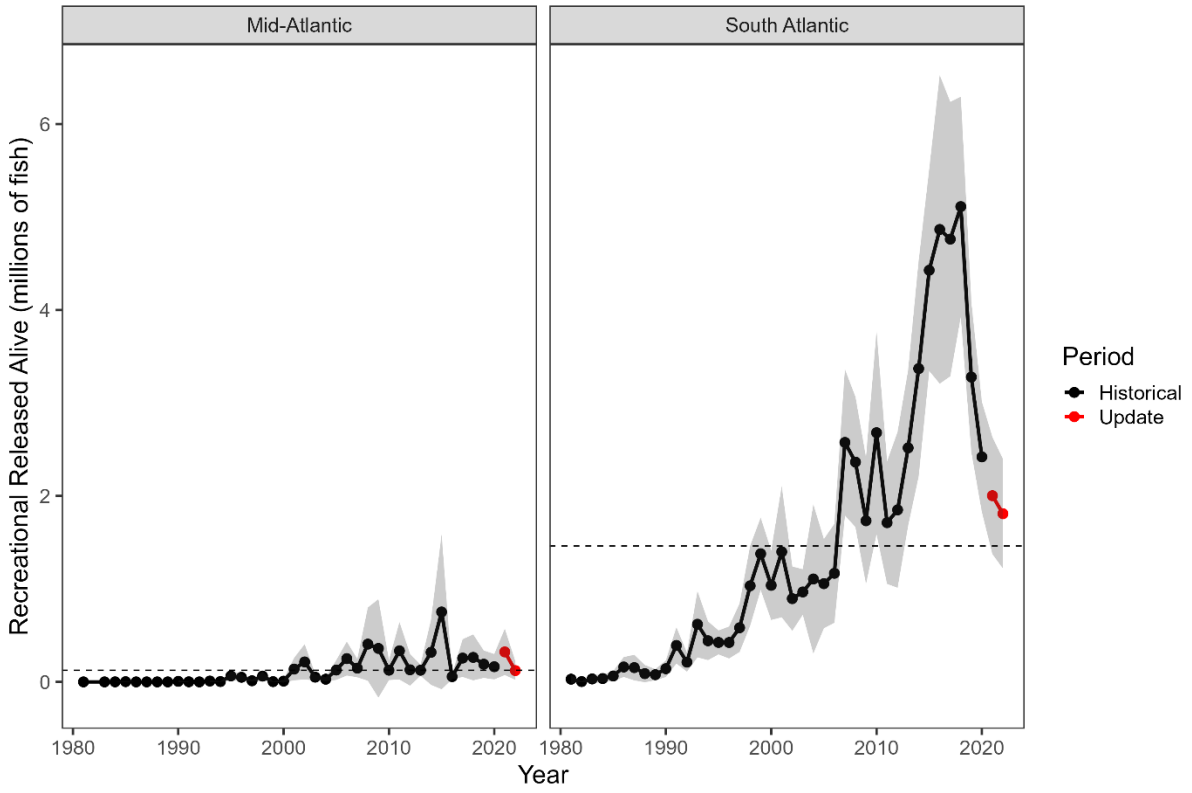


Figure 5. Recreational live release indicators. The dashed line is the time series mean.

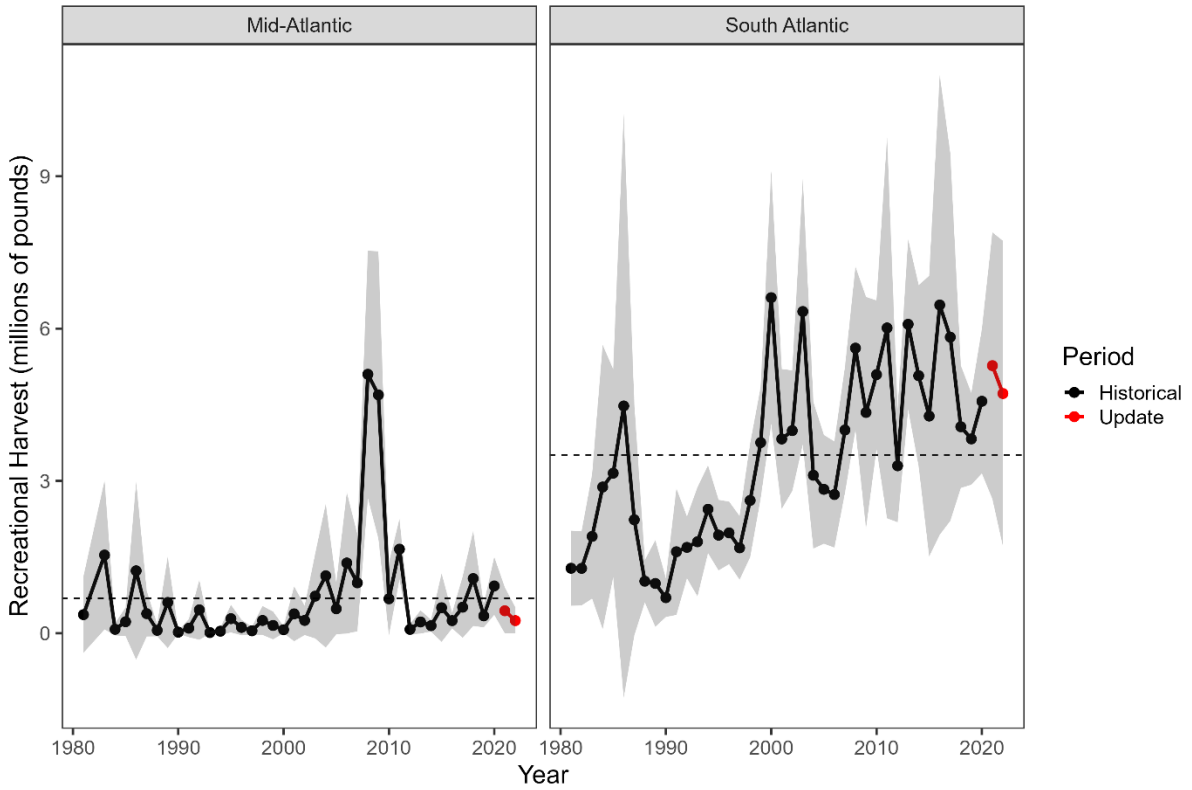


Figure 6. Recreational harvest indicators. The dashed line is the time series mean.

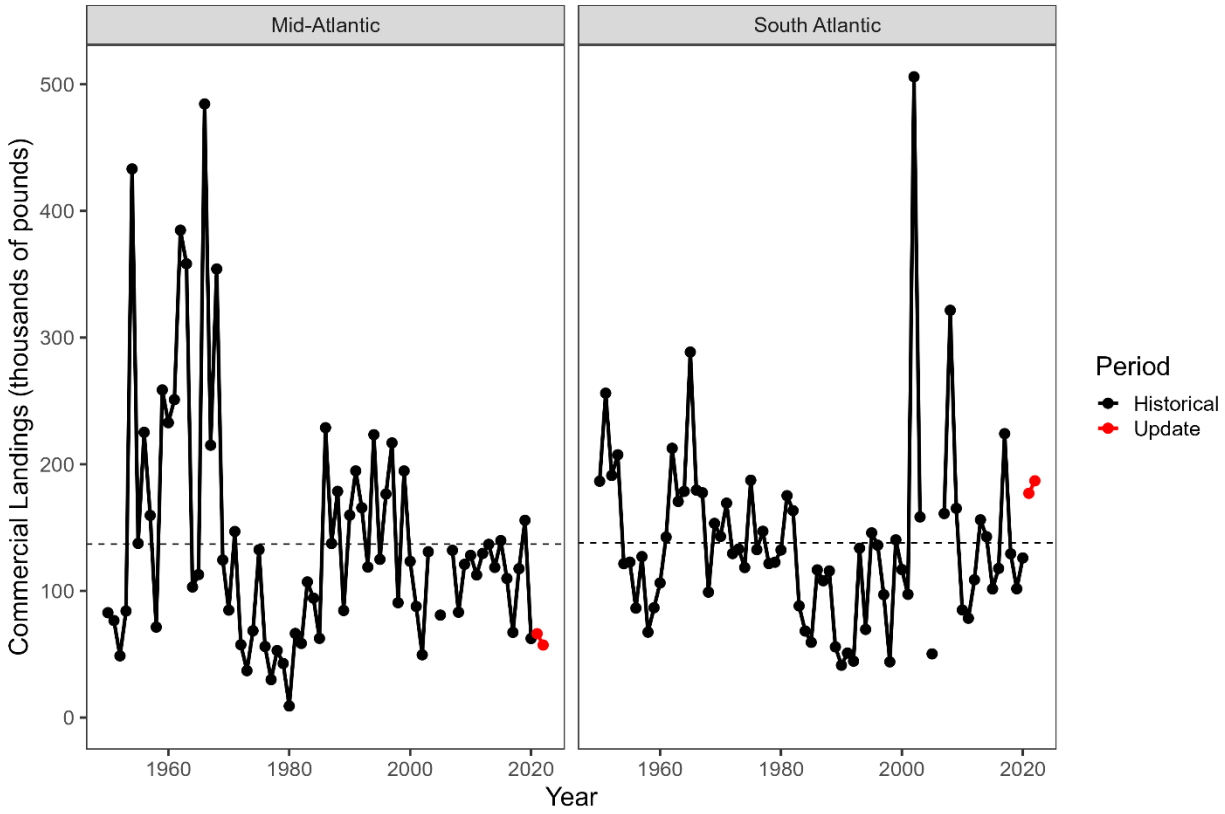


Figure 7. Commercial landings indicators. The dashed line is the time series mean.

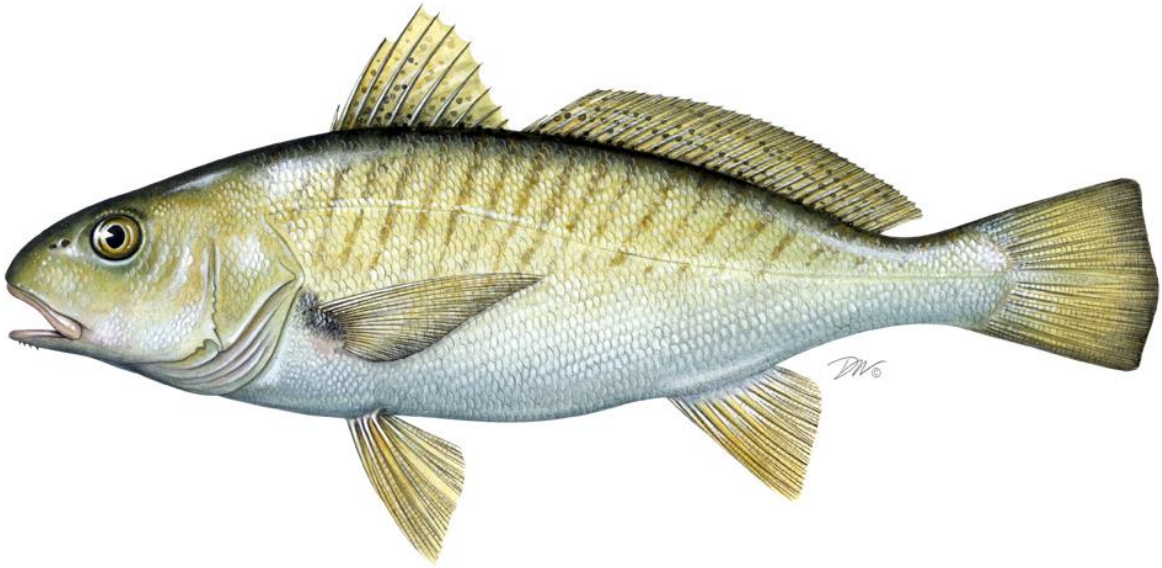
DRAFT FOR BOARD REVIEW

ATLANTIC STATES MARINE FISHERIES COMMISSION

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR ATLANTIC CROAKER
(Micropogonias undulatus)

2022 FISHING YEAR



Prepared by the Plan Review Team
Drafted August 2023

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

DRAFT FOR BOARD REVIEW

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DRAFT FOR BOARD REVIEW

I. Status of the Fishery Management Plan

Date of FMP Approval:	Original FMP – October 1987
Amendments:	Amendment 1 – November 2005 (implemented January 2006) Addendum I – March 2011 Addendum II – August 2014 Addendum III – February 2020
Management Areas:	The Atlantic coast distribution of the resource from New Jersey through Florida
Active Boards/Committees:	South Atlantic State/Federal Fisheries Management Board; Atlantic Croaker Technical Committee, Stock Assessment Subcommittee, and Plan Review Team; South Atlantic Species Advisory Panel

The Fishery Management Plan (FMP) for Atlantic Croaker was adopted in 1987 and included the states from Maryland through Florida (ASMFC 1987). In 2004, the South Atlantic State/Federal Fisheries Management Board (Board) found the recommendations in the FMP to be vague, and recommended that an amendment be prepared to define management measures necessary to achieve the goals of the FMP. The Interstate Fisheries Management Program Policy Board also adopted the finding that the original FMP did not contain any management measures that states were required to implement.

In 2002, the Board directed the Atlantic Croaker Technical Committee (TC) to conduct the first coastwide stock assessment of the species to prepare for developing an amendment. The Atlantic Croaker Stock Assessment Subcommittee developed a stock assessment in 2003, which was approved by a Southeast Data Assessment Review (SEDAR) panel for use in management in June 2004 (ASMFC 2005a). The Board quickly initiated development of an amendment and, in November 2005, approved Amendment 1 to the Atlantic Croaker FMP (ASMFC 2005b). The amendment was fully implemented by January 1, 2006.

The goal of Amendment 1 was to utilize interstate management to perpetuate the self-sustainable Atlantic croaker resource throughout its range and generate the greatest economic and social benefits from its commercial and recreational harvest and utilization over time. Amendment 1 contains four objectives:

1) Manage the fishing mortality rate for Atlantic croaker to provide adequate spawning potential to sustain long-term abundance of the Atlantic croaker population.
2) Manage the Atlantic croaker stock to maintain the spawning stock biomass above the target biomass levels and restrict fishing mortality to rates below the threshold.
3) Develop a management program for restoring and maintaining essential Atlantic croaker habitat.

4) Develop research priorities that will further refine the Atlantic croaker management program to maximize the biological, social, and economic benefits derived from the Atlantic croaker population.

Amendment 1 expanded the management area to include the states from New Jersey through Florida. Consistent with the stock assessment completed in 2004, the amendment defined two Atlantic coast management regions: the south-Atlantic region, from Florida through South Carolina; and the mid-Atlantic region, from North Carolina through New Jersey.

Amendment 1 established biological reference points (BRPs) to define an overfished and overfishing stock status for the mid-Atlantic region only. Reliable stock estimates and BRPs for the South Atlantic region could not be developed during the 2004 stock assessment due to a lack of data. The BRPs were based on maximum sustainable yield (MSY), and included threshold and target levels of fishing mortality (F) and spawning stock biomass (SSB): F threshold = F_{MSY} (estimated to be 0.39); F target = 0.75 X F_{MSY} (estimated to be 0.29); SSB threshold = 0.7 X SSB_{MSY} (estimated to be 44.65 million pounds); and SSB target = SSB_{MSY} (estimated to be 63.78 million pounds). An SSB estimate below the SSB threshold resulted is an overfished status determination, and an F estimate above the F threshold resulted is an overfishing status determination. The Amendment established that the Board would take action, including a stock rebuilding schedule if necessary, should the BRPs indicate the stock is overfished or overfishing is occurring.

Amendment 1 did not require any specific measures restricting recreational or commercial harvest of Atlantic croaker. States that already had more conservative measures were encouraged to maintain those regulations (Table 1). The Board was able to revise Amendment 1 through adaptive management, including any regulatory and/or monitoring requirements in subsequent addenda, along with procedures for implementing alternative management programs via conservation equivalency.

The Board initiated Addendum I to Amendment I at its August 2010 meeting, following the updated stock assessment, in order to address the proposed reference points and management unit. The stock assessment evaluated the stock as a coastwide unit, rather than the two management units established within Amendment I. In approving Addendum I, the Board endorsed consolidating the stock into one management unit, as proposed by the stock assessment. In addition, Addendum I established a procedure, similar to other species, by which the Board may approve peer-reviewed BRPs without a full administrative process, such as an amendment or addendum.

In August 2014, the Board approved Addendum II to the Atlantic Croaker FMP. The Addendum established the Traffic Light Approach (TLA) as the new precautionary management framework to evaluate fishery trends and develop management actions. The TLA was originally developed as a management tool for data poor fisheries. The name comes from assigning a color (red, yellow, or green) to categorize relative levels of population indicators. When a population characteristic improves, the proportion of green in the given year increases. Harvest and abundance thresholds of 30% and 60% were established in Addendum II, representing

moderate and significant concern for the fishery. If thresholds for both population characteristics achieve or exceed a threshold for a three year period, then management action is enacted.

The TLA framework replaces the management triggers stipulated in Addendum I, which dictated that action should be taken if recreational and commercial landings dropped below 70% of the previous two-year average. Those triggers were limited in their ability to illustrate long-term declines or increases in stock abundance. In contrast, the TLA approach is capable of better illustrating trends in the fishery through changes in the proportion of green, yellow, and red coloring. A 2018 TC report recommended several updates to the current TLA approach (ASMFC 2018). The Board initiated an Addendum III to incorporate these updates.

In February 2020 the Board approved Addendum III to Amendment 1 of the Atlantic Croaker FMP. This addendum adjusted the TLA to incorporate additional fishery-independent indices, age information, use of regional characteristics, and changes to the management triggering mechanisms. Management triggers and responses include bag limits for the recreational fishery and percentage harvest reductions from a 10-year average for the commercial fishery. The response will be defined by which percent threshold (30% or 60%) that was exceeded in any of the 3 out of 4 terminal years.

Addendum III did not add or change any management measures or requirements, unless management-triggering mechanisms are tripped. The only pre-existing requirement is for states to submit an annual compliance report by July 1st of each year that contains commercial and recreational landings as well as results from any monitoring programs that intercept Atlantic croaker.

II. Status of the Stock

The most recent stock assessment, conducted in 2017, was not recommended for management use upon peer review. Therefore, current stock status is unknown. The Peer Review Panel did not indicate problems in the Atlantic croaker fishery that would require immediate management action but did recommend continued evaluation of the fishery using the annual TLA.

The conclusions of the 2010 stock assessment (ASMFC 2010), which is the most recent assessment that was recommended by peer review for management use, were that Atlantic croaker was not experiencing overfishing and biomass had increased and fishing mortality decreased since the late 1980s. The 2010 assessment was unable to confidently determine stock status, particularly with regards to biomass, due to an inability to adequately estimate removals from discards of the South Atlantic shrimp trawl fishery. Improvements on estimation of these discards were made in the 2017 assessment, allowing the potential for shrimp trawl discards to be included as supplemental information with the annual TLA. Annual monitoring of shrimp trawl fishery discards is important because these discards represent a considerable proportion of Atlantic croaker removals, ranging from 7% to 78% annually during 1988-2008, according to the 2010 assessment (ASMFC 2010).

One of the primary reasons that the 2017 stock assessment did not pass peer review was due to conflicting signals in harvest and abundance metrics. Theoretically, increases in adult abundance should result in more fish available to be caught by the fishery; thus, fishing would be more efficient (greater catch per unit effort) and harvest would increase in a pattern similar to adult abundance. However, several recent abundance indices have shown increases while harvest has declined to some of the lowest levels on record. One factor thought to contribute to overestimates of adult abundance is an increase in the number of juveniles misclassified as adults in surveys that historically have typically caught adults.

In response, the Atlantic Croaker TC recommended several changes to the annual TLA through Addendum III. The addendum added indices from the Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP) and the South Carolina Department of Natural Resources (SCDNR) Trammel Net Survey into the adult composite characteristic index. In addition, all surveys used revised adult abundance indices and now have an established reference period of 2002-2012. Regional metrics were also used to characterize the fisheries north and south of the Virginia-North Carolina state line. The ChesMMAP and the Northeast Fisheries Science Center (NEFSC) surveys will be used to characterize abundance north of the state line, and SCDNR Trammel Net and Southeast Area Monitoring and Assessment Program (SEAMAP) surveys will be used to characterize abundance south of the state line.

III. Status of the Fishery

Total Atlantic croaker harvest (recreational and commercial) from New Jersey through the east coast of Florida in 2022 is estimated at 2.8 million pounds (Tables 2 and 3, Figure 1). This represents an 8% decrease in total harvest from 2021 (3.0 million pounds). The commercial and recreational fisheries harvested 25% and 75% of the 2022 total, respectively, which was similar to 2020 and 2021 when the recreational fishery also harvested a majority (84% and 68%, respectively) of the total Atlantic croaker harvest. This represents a large shift from the previous 10-year average spilt of recreational and commercial harvest, of 52% and 48%, respectively, from 2010 to 2019.

Atlantic coast commercial landings of Atlantic croaker exhibit a cyclical pattern, with low harvests in the 1960s to early 1970s and the 1980s to early 1990s, and high harvests in the mid-to-late 1970s and the mid-1990s to early 2000s (Figure 1). Commercial landings increased from a low of 3.7 million pounds in 1991 to 28.6 million pounds in 2001; however, landings have had a declining trend since then, from 47 million pounds in 2003 to 684,464 pounds in 2022, the lowest of the time series (1950-2022). Within the management unit, the majority of 2022 commercial landings came from North Carolina (52%), Virginia (28%), and Florida (17%).

From 1981-2022, recreational landings of Atlantic croaker from New Jersey through Florida have varied by count between 5.1 million fish in 2022 and 36.2 million fish in 1986 and by weight between 1.8 million pounds in 2019 and 18.9 million pounds in 2003 (Tables 4 and 5, Figure 2). Landings generally increased from 1990 until 2003, after which they showed a declining trend through 2022. The 2022 landings are estimated at 5.1 million fish and 2.1

million pounds, similar to 2021's landings of 5.2 million fish and 2.0 million pounds. Virginia was responsible for 38% of the 2022 recreational landings, in numbers of fish, followed by North Carolina (21%) and Florida (18%).

The number of recreational releases generally increased over the time series until 2013 when releases steadily declined until reaching a low of 18.1 million fish released in 2018 (Table 5 and Figure 2). From 2018 through 2022, releases have overall been increasing again. In 2022, anglers released 30.5 million fish, an increase from the 27.4 million fish released in 2021. Anglers also released a greater percentage of the total recreational catch in 2022, compared to 2021. An estimated 85.5% of the total recreational croaker catch was released in 2022, the highest percentage on record for a second year in a row, compared to 84% in 2021 (Figure 2). The percentage of released recreational catch has shown an increasing trend from the 1990s through 2022.

IV. Status of Assessment Advice

A statistical catch-at-age (SCA) model was used in the 2010 Atlantic croaker stock assessment (ASMFC 2010). This model combines catch-at-age data from the commercial and recreational fisheries with information from fishery-independent surveys and biological information such as growth rates and natural mortality rates to estimate the size of each age class and the exploitation rate of the population. The assessment was peer reviewed by a panel of experts in conjunction with the Southeast Data, Assessment, and Review (SEDAR) process.

The benchmark stock assessment conducted in 2017 was not recommended for management use due to uncertainty in biomass estimates resulting from conflicting signals among abundance indices and catch time series as well as sensitivity of model results to assumptions and model inputs. Specifically, model-estimated values of stock size, fishing mortality, and biological reference points are too uncertain for use; however, the trends in model-estimated parameters and ratio-based fishing F reference points are considered reliable. Currently, a Traffic Light Approach (TLA) is used to monitor the stock and make management decisions in lieu of an approved stock assessment. The TLAs can be found here. A benchmark stock assessment for Atlantic croaker is currently underway and is scheduled to be complete Fall 2024.

V. Status of Research and Monitoring

There are no research or monitoring programs required of the states except for the submission of an annual compliance report. New Jersey, Delaware, Maryland, Potomac River Fisheries Commission (PRFC), Virginia, North Carolina, South Carolina, and Georgia conduct fishery-dependent (other than catch and effort data) monitoring programs. All states and jurisdictions conduct fishery-independent monitoring programs along the Atlantic coast from New Jersey to Florida.

The NEFSC performs a randomly stratified groundfish survey from Cape Hatteras, North Carolina to Maine. Atlantic croaker are one of the main species caught throughout much of the

survey area and, since the surveys started in 1972, it provides a long term data set. Since 1994, there has been an increase in annual catch variability. The NEFSC survey was not carried out in 2020 due to the COVID-19 pandemic, but was active again in 2021.

VI. Status of Management Measures and Issues

Fishery Management Plan

Amendment 1 was fully implemented by January 1, 2006, and provided the management plan for the 2009 fishing year. There are no interstate regulatory requirements for Atlantic croaker. Should regulatory requirements be implemented in the future, all state programs must include law enforcement capabilities adequate for successfully implementing the regulations. Addendum I to Amendment 1 was initiated in August 2010 and approved in March 2011, in order to 1) revise the biological reference points to be ratio-based, and 2) remove the distinction of two regions within the management unit, based on the results of the 2010 stock assessment. Addendum II was approved August 2014 and established the TLA management framework for Atlantic croaker in order to better illustrate long-term trends in the fishery. Addendum III was approved February 2020 and adjusted management though the TLA by incorporating additional fishery-independent indices, age information, use of regional characteristics, and changes to the management-triggering mechanisms.

Traffic Light Approach

The Traffic Light Analysis was not conducted in 2023 so the TC could focus on working on the 2024 benchmark stock assessment. A summary of last year's TLA can be found in last year's FMP Review here, or in the report here.

De Minimis Requests

States are permitted to request *de minimis* status if, for the preceding three years for which data are available, their average commercial landings or recreational landings (by weight) constitute less than 1% of the coastwide commercial or recreational landings for the same three-year period. A state may qualify for *de minimis* in either its recreational or commercial sector, or both, but will only qualify for exemptions in the sector(s) that it qualifies for as *de minimis*. Amendment 1 does not include any compliance requirements other than annual state reporting, which is still required of *de minimis* states. Addendum III, depending on the level of management action triggered, has exemptions for *de minimis* states when measures are triggered at the 30% level (see above for the TLA description). If the TLA triggers at the 60% level, then all states, including *de minimis*, must implement management measures.

In the annual compliance reports, the following states requested *de minimis* status: New Jersey (commercial and recreational fisheries), Delaware (recreational and commercial fisheries), South Carolina (commercial fishery), and Georgia (commercial fishery). The commercial and recreational *de minimis* criteria for 2022 are based on 1% of the average coastwide 2020-2022 landings in each fishery. New Jersey, Delaware, South Carolina, and Georgia commercial fisheries all qualify for *de minimis* status, but landings are confidential. New Jersey and

Delaware recreational fisheries both qualify for *de minimis* status, as the 3-year average of recreational landings for both states constitute less than 1% of the coastwide recreational landings.

Changes to State Regulations

In 2020, the TLA triggered management measures at the 30% level, or moderate concern. Non *de minimis* states were required to implement management measures that instituted a 50 fish recreational bag limit and reduce the commercial harvest by 1% of the average state commercial harvest from the previous 10 years. If the state had more restrictive measures in place, they did not need to make any changes. All proposed management changes were reviewed by the Technical Committee and approved by the Board. Below is a list of states that who implemented measures in 2021:

- Virginia: 50 fish bag limit, charter allowance, and commercial fishery season closure from January 1 to January 15. Approved on March 23, 2021.
- North Carolina: 50 fish bag limit and a commercial fishery season closure from December 16 to December 31. Proclamation authority published on April 15, 2021.
- Florida: 50 fish bag limit and a commercial vessel limit of 1,200 pounds in state waters. Rule published December 1, 2021.

The Potomac River Fisheries Commission implemented a season closure for the Atlantic croaker commercial fishery from September 30 to December 31. It was approved on December 2, 2021.

Atlantic Croaker Habitat

In 2017, the ASMFC Habitat Committee released *Atlantic Sciaenid Habitats: A Review of Utilization, Threats, and Recommendations for Conservation, Management, and Research*, which outlines the habitat needs of Atlantic croaker at different life stages (egg, larval, juvenile, adult). This report also highlights threats and uncertainties facing these ecological areas and identifies Habitat Areas of Particular Concern. It can be found online at: http://www.asmfc.org/files/Habitat/HMS14_AtlanticSciaenidHabitats_Winter2017.pdf.

Bycatch Reduction

Atlantic croaker are subject to both direct and indirect fishing mortality. Historically, Atlantic croaker ranked as one of the most abundant bycatch species of the South Atlantic shrimp trawl fishery, resulting in the original FMP's recommendation that bycatch reduction devices (BRDs) be developed and required in the shrimp trawl fishery. Since then, the states of North Carolina through Florida have all enacted requirements for the use of BRDs in shrimp trawl nets in state waters, reducing croaker bycatch from this fishery (ASMFC 2010). However, bycatch and discard monitoring from the shrimp trawl fishery have historically been inadequate, resulting in a major source of uncertainty for assessing this stock, as well as other important Mid- and South Atlantic species. Most of the discarded croaker are age-0 and thus likely have not yet reached maturity (ASMFC 2010). The North Carolina Division of Marine Fisheries conducted a two-year study, published in 2015, to collect bycatch data from state shrimp trawlers. It found that Atlantic croaker represent between 34-49% of the total observed finfish bycatch by weight in estuarine waters and between 20-42% in ocean waters. The at-net mortality for Atlantic

croaker was found to be 23% (Brown 2015). These data will be valuable for incorporating estimates of removals in future stock assessments.

Developed during the 2017 benchmark assessment, discard estimates of Atlantic croaker in the South Atlantic Shrimp Trawl Fishery are informed by catch rates observed during the SEAMAP survey and South Atlantic Shrimp Trawl Fishery Observer Program, and total effort of the South Atlantic Shrimp Trawl Fishery. Increases in discards could be an indicator of higher abundance of juveniles in the region, an increase in effort by the fishery, or a combination of both. Discard estimates of Atlantic croaker in the South Atlantic Shrimp Trawl Fishery were not calculated in 2023, so the TC could focus on working on the 2024 benchmark stock assessment. A summary of last year's analysis can be found in the FMP Review for fishing year 2021. For additional information on the South Atlantic Shrimp Trawl Fishery discard estimation, see Appendix 1 of the 2020 TLA Update Report.

Atlantic croaker are also discarded from other commercial fishing gears, primarily due to market pressures and few restrictions on croaker harvest at the state level. The National Oceanic and Atmospheric Administration (NOAA) Fisheries Pelagic Observer Program provides data to estimate these discards for use in assessments; however, the time series is limited and only discards from gill nets and otter trawls could be estimated for the 2010 assessment based on the available data. Since 1988, estimated discards have fluctuated between 94 and 15,176 mt without trend, averaging 2,503 mt (ASMFC 2010).

Atlantic croaker are also a major component of the scrap/bait fishery. Landings from this fishery are not reported at the species level, except in North Carolina, which has a continuous program in place to sample these landings and enable estimation of croaker scrap landings for use in the stock assessment. As part of the 2010 stock assessment, North Carolina estimated the scrap/bait landings, which have declined in recent years, from a high of 1,569 mt in 1989 to a low of 84 mt in 2008, primarily due to restrictions placed on fisheries producing the highest scrap/bait landings (ASMFC 2010). Regulations instituted by North Carolina include a ban on flynet fishing south of Cape Hatteras, incidental finfish limits for shrimp and crab trawls in inside waters, minimum mesh size restrictions in trawls, and culling panels in long haul seines.

South Carolina began a state monitoring program to account for bait landings in 2015. The state initiated a bait harvester trip ticket program for all commercial bait harvesters licensed in South Carolina. The impetus for this program is to track bait usage of small sciaenid species (croaker, spot, and whiting) as well as other important bait species.

Several states have implemented other commercial gear requirements that further reduce bycatch and bycatch mortality, while others continue to encourage the use of the BRD devices. NOAA Fisheries published a final rule with an effective date of April 1, 2021 requiring all skimmer trawls greater than 40 feet in length to use TEDs. For all other vessels, the net must be emptied of catch on the deck within a specified time (84 FR 70048). Continuing to reduce the quantity of sub-adult croaker harvested should increase spawning stock biomass and yield per recruit.

Atlantic croaker are also subject to recreational discarding. The percentage of Atlantic croaker released alive by recreational anglers has generally increased over time. Discard mortality was estimated to be 10% for the 2010 stock assessment (ASMFC 2010). The use of circle hooks and appropriate handling techniques can help reduce mortality of released fish.

VII. Implementation of FMP Compliance Requirements for 2022

The PRT found no inconsistences among states with regard to the requirements of Amendment 1 and Addendum III.

VIII. Recommendations

Management and Regulatory Recommendations

- Consider approval of the *de minimis* requests from New Jersey, Delaware, South Carolina, and Georgia for their commercial fisheries.
- Consider approval of the *de minimis* requests from New Jersey and Delaware for their recreational fisheries.
- Research into the impacts of climate change on the range of the species.
- Research into Atlantic croaker juvenile discard mortality for recreational and commercial fisheries by each gear type in regions where removals are highest.

Research and Monitoring Recommendations

Additional research and monitoring recommendations can be found in the 2016 Atlantic Croaker Stock Assessment Peer Review Report here under Term of Reference 8.

IX. References

Atlantic States Marine Fisheries Commission (ASMFC). 1987. Fishery Management Plan for Atlantic Croaker. Washington (DC): ASMFC. Fishery Management Report No. 10. 90 p.

ASMFC. 2005a. Atlantic Croaker Stock Assessment & Peer Review Reports. Washington (DC): ASMFC. 370 p.

ASMFC. 2005b. Amendment 1 to the Interstate Fishery Management Plan for Atlantic Croaker. Washington (DC): ASMFC. Fishery Management Report No. 44. 92 p.

ASMFC. 2010. Atlantic Croaker 2010 Benchmark Stock Assessment. Washington (DC): ASMFC. 366 p.

ASMFC. 2018. Memorandum 18-8: Recommended Updates to the Annual Traffic Light Analyses for Atlantic Croaker and Spot.

Brown, K. 2015. Characterization of the commercial shrimp otter trawl fishery in the estuarine and ocean (0-3 miles) waters of North Carolina. Morehead City (NC): NCDEQ, Division of Marine Fisheries. Abstract.

X. Figures

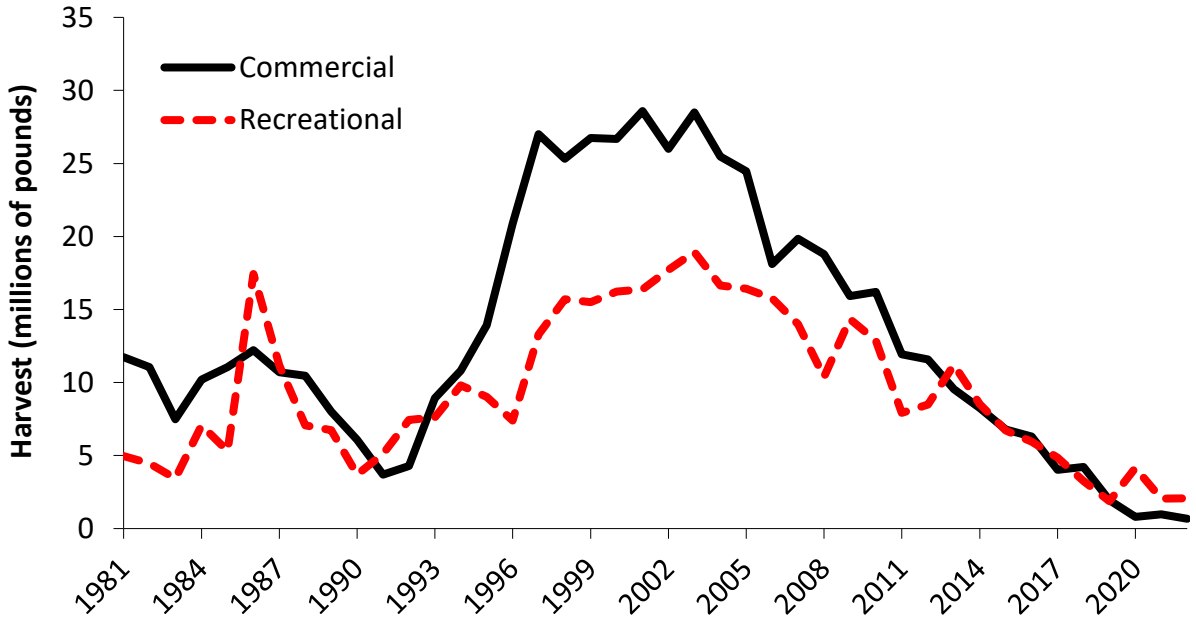


Figure 1. Atlantic croaker commercial and recreational landings (millions of pounds) from 1981-2022. (See Tables 2 and 3 for source information. Commercial landings estimates for 2022 is preliminary. Reliable recreational landings estimates are not available prior to 1981. Recreational landings estimates are based on the mail-based Fishing Effort Survey.)

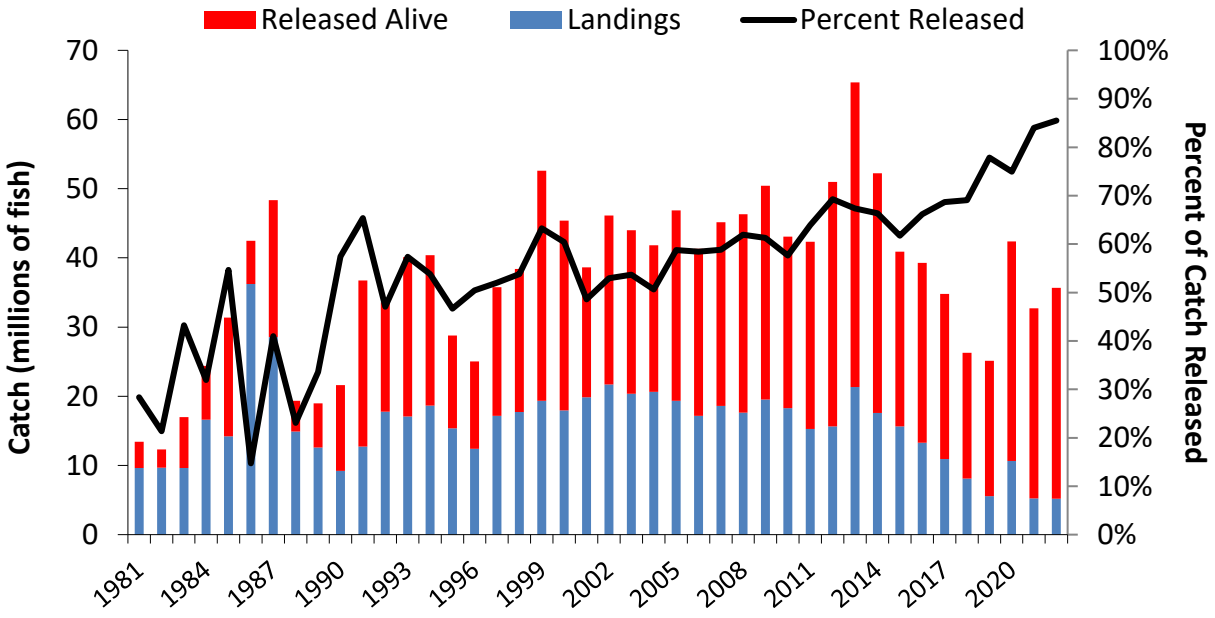


Figure 2. Recreational catch (landings and alive releases, in millions of fish) and the percent of catch that is released, 1981-2022, based on the mail-based Fishing Effort Survey calibration. (See Tables 4 and 5 for values and source information.)

XI.
Tables

Table 1. Summary of state regulations for Atlantic croaker in 2022.

State	Recreational	Commercial
NJ	None	Otter/beam trawl mesh restriction for directed croaker harvest (>100 lbs in possession)
DE	8" minimum; recreational gill nets (up to 200 ft.) with license	8" minimum
MD	9" min, 25 fish/day, charter boat logbooks	9" minimum; open 3/16 to 12/31
PRFC	9” min, 25 fish/day	Open 1/1 to 9/30 (effective 1/1/22) Pound net season: 2/15 to 12/15
VA	50 fish/day, with additional charter live bait allowance (effective 3/23/21)	Open 1/15 to 12/31 (effective 3/23/21)
NC	50 fish/day (effective 4/15/21), recreational use of commercial gears with license and gear restrictions	Open 1/1 to 12/15 (effective 4/15/21)
SC	Mandatory for-hire logbooks, small Sciaenidae species aggregate bag limit of 50 fish/day	None
GA	25 fish/day	25 fish/day limit except for trawlers harvesting shrimp for human consumption (no limit)
FL	50 fish/day (effective 12/1/21)	1,200 commercial vessel limit (effective 12/1/21)

* A commercial fishing license is required to sell croaker in all states with fisheries. For all states, general gear restrictions affect commercial croaker harvest.

Table 2. Commercial harvest (pounds) of Atlantic croaker by state, 2013-2022.
(Estimates for 2022 are preliminary. Sources: 2023 state compliance reports for 2022 fishing year and for years prior to 2022, personal communication with ACCSP, except PRFC [compliance reports only].) Note that Georgia does not have a commercial fishery for Atlantic croaker.

Year	NJ	DE	MD	PRFC	VA	NC	SC	GA	FL	Total
2013	C	C	820,777	130,285	6,237,602	1,927,938	C		76,463	9,538,901
2014	265,166	C	443,661	177,777	4,697,381	2,629,908	C		45,587	C
2015	C	C	294,038	118,996	4,426,957	1,819,007	C		39,096	6,784,146
2016	C	C	101,949	168,889	3,825,737	2,092,287	C		57,538	6,302,799
2017	C	C	42,958	114,319	2,822,005	1,008,015	C		43,033	4,032,993
2018	C	C	44,306	16,561	2,450,984	1,643,646	C		54,409	4,210,715
2019	C	463	2,865	C	595,434	1,278,340	C		68,179	1,945,723
2020	C	C	1,857	601	147,026	570,453	C		84,906	806,781
2021	C	C	4,584	11,430	287,898	540,622	C		124,642	972,121
2022	C	773	3,944	C	193,161	357,312	C		117,958	684,464

C: Confidential data

Table 3. Recreational harvest (pounds) of Atlantic croaker by state, 2013-2022. (Sources: 2023 state compliance reports for 2022 fishing year and for years prior to 2022, personal communication with MRIP)

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2013	1,637,516	253,447	1,581,384	6,442,166	453,881	84,248	89,781	642,887	11,200,818
2014	750,580	427,615	1,265,217	4,354,046	758,751	104,434	138,423	712,090	8,511,554
2015	263,749	189,320	871,596	3,514,410	557,735	181,909	248,431	881,185	6,708,335
2016	7,133	10,959	407,010	2,998,022	443,728	81,896	116,313	1,893,203	5,958,264
2017	0	26,441	238,659	3,383,057	237,160	310,621	100,565	555,389	4,851,892
2018	34,125	5,859	191,854	2,245,518	164,644	81,251	83,258	445,663	3,252,172
2019	973	23,973	38,895	995,491	224,337	133,227	97,791	358,941	1,873,628
2020	16,358	21,870	91,047	2,410,612	223,685	230,205	77,876	1,072,714	4,144,367
2021	7,079	35,746	69,744	823,319	376,121	173,526	95,031	461,048	2,041,614
2022	33,048	22,483	21,043	554,254	481,721	240,275	152,231	577,555	2,082,610

Table 4. Recreational harvest (numbers) of Atlantic croaker by state, 2013-2022. (Sources: 2023 state compliance reports for 2022 fishing year and for years prior to 2022, personal communication with MRIP)

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2013	2,707,410	530,236	2,308,987	12,517,286	1,300,804	336,140	264,984	1,332,465	21,328,324
2014	852,733	806,256	2,197,125	9,533,829	1,935,961	600,482	289,781	1,359,207	17,576,096
2015	339,021	334,676	1,738,576	8,024,381	1,437,019	555,263	790,014	2,429,723	15,648,673
2016	8,236	24,546	659,318	7,276,719	1,109,570	268,470	402,254	3,553,777	13,302,890
2017	0	65,606	423,790	7,644,516	666,930	765,227	371,301	969,146	10,906,516
2018	104,321	12,370	305,469	5,472,329	472,917	335,833	241,382	1,176,999	8,121,620
2019	3,031	53,048	69,771	3,055,510	651,268	593,475	332,073	801,751	5,559,927
2020	58,097	54,193	244,788	6,529,494	673,377	827,904	232,535	2,010,168	10,630,556
2021	22,722	71,237	174,056	1,862,543	1,066,533	707,924	371,257	952,581	5,228,853
2022	91,584	64,397	55,408	1,969,042	1,110,382	545,062	394,967	942,037	5,172,879

Table 5. Recreational releases (number) of Atlantic croaker by state, 2013-2022. (Sources: 2023 state compliance reports for 2022 fishing year and for years prior to 2022, personal communication with MRIP)

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2013	2,980,744	1,811,661	7,557,223	18,480,099	6,729,556	3,754,143	1,361,943	1,265,571	44,025,744
2014	703,031	1,396,970	2,806,693	10,314,405	10,347,332	4,742,718	2,057,898	2,265,961	34,635,008
2015	240,840	309,389	1,236,293	6,815,343	9,632,560	3,236,774	1,320,939	2,451,253	25,243,391
2016	139,085	390,655	726,662	6,993,470	7,254,382	5,233,835	1,178,630	4,073,001	25,989,720
2017	152,540	230,455	2,829,255	8,464,305	4,631,445	4,755,853	1,059,539	1,770,846	23,894,238
2018	144,637	85,424	203,081	5,359,179	4,311,368	5,568,892	1,403,560	1,072,381	18,148,522
2019	33,333	101,523	1,243,785	6,642,685	3,634,211	3,768,288	1,893,287	2,259,705	19,576,817
2020	147,494	286,780	2,870,268	6,223,025	5,560,605	12,921,019	1,696,852	2,057,158	31,763,201
2021	116,606	353,743	1,909,466	4,306,221	9,539,047	8,207,074	1,687,801	1,363,075	27,483,033
2022	74,058	467,349	1,537,746	7,193,201	7,914,042	8,359,506	2,056,650	2,901,874	30,504,426

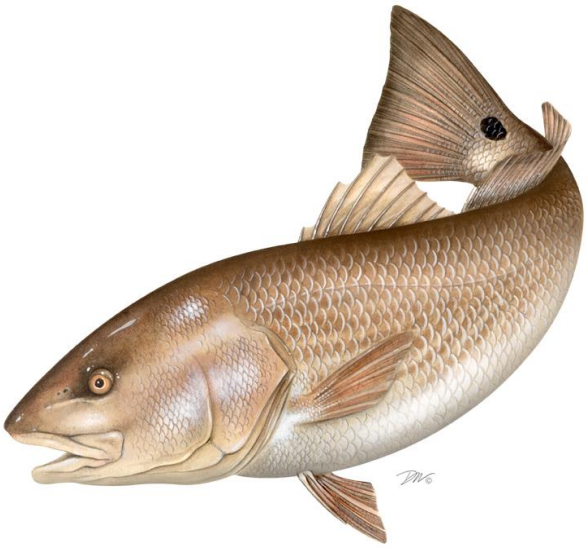
ATLANTIC STATES MARINE FISHERIES COMMISSION

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR

RED DRUM
(*Sciaenops ocellatus*)

2022 FISHING YEAR



Prepared by the Plan Review Team
Drafted September 2023

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

Table of Contents

DRAFT FOR BOARD REVIEW

I. Status of the Fishery Management Plan

Date of FMP Approval:	Original FMP – October 1984
Amendments & Addenda:	Amendment 1 – October 1991 Amendment 2 – June 2002 Addendum 1 – August 2013
Management Areas:	The Atlantic coast distribution of the resource from New Jersey through Florida Northern: New Jersey through North Carolina Southern: South Carolina through the east coast of Florida
Active Boards/Committees:	Sciaenids Management Board, Red Drum Technical Committee, Stock Assessment Subcommittee, Plan Development Team, Plan Review Team, South Atlantic Species Advisory Panel

The Atlantic States Marine Fisheries Commission (ASMFC) adopted an Interstate Fishery Management Plan (FMP) for Red Drum in 1984. The original management unit included the states from Maryland to Florida. In 1988, the Interstate Fisheries Management Program (ISFMP) Policy Board requested all Atlantic coastal states from Maine to Florida implement the plan's recommended management regulations to prevent development of northern markets for southern fish. The states of New Jersey through Florida are now required to follow the FMP, while Maine through New York (including Pennsylvania) are encouraged to implement consistent provisions to protect the red drum spawning stock.

In 1990, the South Atlantic Fishery Management Council (Council) adopted an FMP for red drum that defined overfishing and optimum yield (OY) consistent with the Magnuson Fishery Conservation and Management Act of 1976. Adoption of this plan prohibited the harvest of red drum in the exclusive economic zone (EEZ), a moratorium that remains in effect today. Recognizing all harvest would take place in state waters, the Council FMP recommended states implement measures necessary to achieve the target level of at least 30% escapement.

Consequently, ASMFC initiated Amendment 1 in 1991, which included the goal to attain optimum yield from the fishery over time. Optimum yield was defined as the amount of harvest that could be taken while maintaining the level of spawning stock biomass per recruit (SSBR) at or above 30% of the level which would result if fishing mortality was zero. However, a lack of information on adult stock status resulted in the use of a 30% escapement rate of sub-adult red drum to the off-shore adult spawning stock.

Substantial reductions in fishing mortality were necessary to achieve the escapement rate; however, the lack of data on the status of adult red drum along the Atlantic coast led to the adoption of a phase-in approach with a 10% SSBR goal. In 1991, states implemented or maintained harvest controls necessary to attain the goal.

As hoped, these management measures led to increased escapement rates of juvenile red drum. Escapement estimates for the northern region of New Jersey through North Carolina

(18%) and the southern region of South Carolina through Florida (17%) were estimated to be above the 10% phase-in goal, yet still below the ultimate goal of 30% (Vaughan and Carmichael 2000). North Carolina, South Carolina, and Georgia implemented substantive changes to their regulations from 1998-2001 that further restricted harvest.

The Council adopted new definitions of OY and overfishing for red drum in 1998. Optimum yield was redefined as the harvest associated with a 40% static spawning potential ratio (sSPR), overfishing as an sSPR less than 30%, and an overfishing threshold as 10% sSPR. In 1999, the Council recommended management authority for red drum be transferred to the states through the Commission's Interstate Fishery Management Program (ISFMP) process. This was recommended, in part, due to the inability to accurately determine an overfished status, and therefore stock rebuilding targets and schedules, as required under the revised Sustainable Fisheries Act of 1996. The transfer necessitated the development of an amendment to the interstate FMP in order to include the provisions of the Atlantic Coastal Fisheries Cooperative Management Act.

ASFMC adopted Amendment 2 to the Red Drum FMP in June 2002 (ASMFC 2002), which serves as the current management plan. The goal of Amendment 2 is to achieve and maintain the OY for the Atlantic coast red drum fishery as the amount of harvest that can be taken by U.S. fishermen while maintaining the sSPR at or above 40%. There are four plan objectives:

- Achieve and maintain an escapement rate sufficient to prevent recruitment failure and achieve an sSPR at or above 40%.
- Provide a flexible management system to address incompatibility and inconsistency among state and federal regulations which minimizes regulatory delay while retaining substantial ASMFC, Council, and public input into management decisions; and which can adapt to changes in resource abundance, new scientific information, and changes in fishing patterns among user groups or by area.
- Promote cooperative collection of biological, economic, and sociological data required to effectively monitor and assess the status of the red drum resource and evaluate management efforts.
- Restore the age and size structure of the Atlantic coast red drum population.

The management area extends from New Jersey through the east coast of Florida, and is separated into a northern and southern region at the North Carolina/South Carolina border. The sSPR of 40% is considered a target; an sSPR below 30% (threshold level) results in an overfishing determination for red drum. Amendment 2 required all states within the management unit to implement appropriate recreational bag and size limit combinations needed to attain the target sSPR, and to maintain current, or implement more restrictive, commercial fishery regulations. All states were in compliance by January 1, 2003. See Table 1 for state commercial and recreational regulations in 2022.

Following the approval of Amendment 2 in 2002, the process to transfer management authority to ASMFC began, including an Environmental Assessment and public comment period. The final

rule became effective November 5, 2008. It repeals the federal Atlantic Coast Red Drum Fishery Management Plan and transfers management authority of Atlantic red drum in the exclusive economic zone from the South Atlantic Fishery Management Council to the Atlantic States Marine Fisheries Commission.

The Board approved Addendum I to Amendment 2 in August 2013. The Addendum revised the habitat section of Amendment 2 to include current information on red drum spawning habitat and life-stages (egg, larval, juvenile, sub-adult, and adult). It also identified and described the distribution of key habitats and habitats of concern.

II. Status of the Stocks

The 2017 Red Drum Stock Assessment and Peer Review Report indicated overfishing was not occurring for either the northern or southern stock of red drum (ASMFC 2017). The assessment was unable to determine an overfished/not overfished status because population abundance could not be reliably estimated due to limited data for the older fish (ages 4+). A simulation assessment was recently completed, providing a roadmap for future red drum stock assessments through the ASMFC process, with a planned benchmark assessment to follow; all work will be completed by the end of 2024. Results of the 2017 assessment for both the Northern Region and Southern Region are given below.

Northern Region (NJ-NC)

Recruitment (age 1 abundance) has varied annually with a large peak occurring in 2012 (Figure 1). The trend in the three-year average sSPR indicates low sSPR early in the time series with increases during 1991 – 1997 and fluctuations thereafter (Figure 2). The average sSPR has been above the overfishing threshold ($F_{30\%}$) since 1994, and at or above the target ($F_{40\%}$) since 1996, except during one year (2002). Fishing pressure and mortality appear to be stabilized near the target fishing mortality. The average sSPR is also likely above the target benchmark.

Southern Region (SC-FL)

Recruitment (age 1 abundance) has fluctuated without apparent trend since 1991 (Figure 1). A high level of uncertainty exists around the three-year average sSPR estimates for the southern region. While the 3-year average sSPR estimate in 2013 was above both the target ($F_{40\%}$) and the overfishing threshold ($F_{30\%}$), indicating that overfishing is not occurring, the high level of uncertainty around this estimate indicates this conclusion should be considered with extreme caution (Figure 2).

NOTE: In 2018, the Marine Recreational Information Program (MRIP) transitioned from estimating effort using the Coastal Household Telephone Survey (CHTS) to the mail-based Fishing Effort Survey (FES). The 2017 stock assessment used CHTS data to estimate recreational harvest. However, as red drum is not managed by a quota and to accommodate the transition, recreational harvest estimates based on the FES data or calibration are shown in this report. Due to differing estimation methodologies, these harvest data should not be compared to reference points from the 2017 stock assessment.

III. Status of the Fishery

Red drum landings from New Jersey through the east coast of Florida in 2022 are estimated at 5.8 million pounds (Tables 3 and 4; Figure 3). In 2022, 56% of the total landings came from the southern region where the fishery is exclusively recreational, and 44% from the northern region, similar to 2020 and 2021 when approximately 55% of the total landings came from the southern region and approximately 45% from the northern region (Figure 4). This shift is a significant change from the historic regional landings split (1981-2019), which averaged 76% from the southern region and 24% from the northern region.

Northern Region (NJ-NC)
Red drum landings in the northern region totaled 2.6 million pounds in 2022, a decrease of approximately 9% from the previous year (Tables 3 and 4). There was a decline in both commercial and recreational landings. Commercial landings totaled 192,496 pounds or 7% of the combined commercial and recreational harvest in the northern region, with 91% of commercial landings coming from North Carolina (Figure 5). This is a 12% decrease in commercial landings from 2021. In North Carolina, a daily commercial trip limit and an annual cap of 250,000 pounds with payback of any overage constrained the commercial harvest. Unique to this state, the red drum fishing year extends from September 1 to August 31. In 2008, the Board approved use of this fishing year to monitor the cap. During the 2021/2022 fishing year, North Carolina landed 216,528 pounds of the 250,000-pound annual landings cap.

Recreational landings in the northern region in 2022 were estimated to be 2.4 million pounds, a slight decrease from the previous year's estimates of recreational harvest at 2.6 million pounds (Table 4). North Carolina is estimated to have 1.6 million pounds of recreational landings, followed by Virginia with 0.8 million pounds. Virginia red drum recreational landings decreased by 14% from the previous year. The number of fish harvested in the recreational fishery was 500,242 fish, a decline of 13% from 2021 (Table 5). The number of fish released in the northern region, 2.9 million fish, declined by 23% from 2021, at 3.8 million fish (Figure 6). It is estimated that 8% of released fish die as a result of being caught, resulting in an estimated 236,128 dead discarded fish in 2022 (Table 6). Recreational removals from the fishery are thus estimated to be 736,370 fish in 2022 (Figure 6 and 7).

Southern Region (SC-FL)
The southern region had no commercial landings; Florida commercial harvest has been prohibited since January 1988. South Carolina and Georgia designated red drum as a gamefish, banning commercial harvest and sale since 1987 and 2013, respectively.

Recreational landings in the southern region in 2022 were estimated to be 3.3 million pounds, similar to the 2021 estimate of 3.4 million pounds (Table 4). Florida is estimated to have 1.6 million pounds of recreational landings, followed by Georgia with 1.1 million pounds, and South Carolina with 0.6 million pounds. Recreational landings declined in Florida by 35% and increased in Georgia by 113% and South Carolina by 32%. The number of fish harvested in the recreational fishery was 1.23 million fish, which was a slight increase from recreational harvest

in 2021 (1.18 million fish; Table 4). The number of fish released in the southern region was 7.3 million fish, which was a slight decrease from 2021 when 7.4 million fish were released (Figure 6). It is estimated that 8% of released fish die as a result of being caught, resulting in an estimated 583,432 dead discarded fish in 2022 (Table 6). Recreational removals from the fishery are thus estimated to be 1.8 million fish in 2022 (Figure 6 & 7).

IV. Status of Assessment Advice

Current stock status information comes from the 2017 stock assessment (ASMFC 2017) completed by the ASMFC Red Drum Stock Assessment Subcommittee (SAS) and Technical Committee (TC), peer reviewed by an independent panel of experts through ASMFC's desk review process, and approved by the South Atlantic State-Federal Fisheries Management Board for use in management decisions. The approved base model from this assessment is a statistical catch-at-age model. Previous interstate management decisions were based on the last coastwide assessment, SEDAR 18 (SAFMC 2009), and prior to 2009, decisions were based on regional assessments conducted by Vaughan and Helser (1990), Vaughan (1992, 1993, 1996), and Vaughan and Carmichael (2000) that reflected the current stock structure, two stocks divided at the North Carolina-South Carolina border. Several states have also conducted state-specific assessments (e.g., Murphy and Munyandorero 2009; Takade and Paramore 2007 [update of Vaughan and Carmichael 2000]).

In 2017, a state-specific stock assessment was completed by South Carolina, which indicated the South Carolina population of red drum was experiencing overfishing (Murphy 2017). This assessment result prompted new state management regulations, which went into effect on July 1, 2018 (Table 1).

In 2020, Florida completed a stock assessment for red drum in Florida state waters, and found the Atlantic Coast red drum stock was not overfished and overfishing was not occurring (Addis 2020). The northeast region (Flagler through Nassau counties) exceeded the Commission's target escapement rate of 40%. The formally defined southeast region (Miami-Dade-Volusia counties) exceeded the escapement rate in the terminal year (2019), but does not meet the current escapement rate target. Overall, the state of Florida has an escapement rate higher than the Commission's goal of 40%.

At the Winter meeting of ASMFC in 2019, the Board reviewed a proposal from the SAS that recommended a population simulation model be developed to simulate the full red drum population. The simulated population would be used to test a variety of assessment modeling techniques to determine which model would be the most applicable for the next benchmark stock assessment. Due to the work and modeling expertise needed for the simulation assessment, the benchmark assessment was postponed until 2024. The Red Drum Simulation Assessment and Peer Review Report was accepted by the Board at their May 2022 meeting. The Peer Review Panel recommended the Stock Synthesis model should be used to assess the northern (from New Jersey – North Carolina) and southern (from South Carolina – Florida) red drum stocks, while the statistical catch-at-age model should not be used. The Panel also recommended using a traffic light approach to monitor changes in landings and stock

abundance in between assessments. A new benchmark assessment for red drum is currently in progress and is scheduled to be complete in Fall 2024.

V. Status of Research and Monitoring

No monitoring or research programs are annually required of the states except for the submission of a compliance report. Fishery-dependent (other than catch and effort data) monitoring programs are conducted from Maryland to Florida, with biological and sportfish carcass recovery programs collecting age, length, and sex data. Virginia, North Carolina, and South Carolina also conduct sportfish tagging programs. Fishery-independent monitoring programs that directly target or may encounter red drum are conducted in New Jersey, Delaware, North Carolina, South Carolina, Georgia, and Florida. Data collected includes CPUE, biological data, YOY indices, and mark-recapture data. See Table 2 for details on the fishery independent indices and ongoing surveys.

VI. Status of Management Measures and Issues

Fishery Management Plan

Amendment 2 was fully implemented by January 1, 2003, providing the management requirements for 2022. Requirements include: recreational regulations designed to achieve at least 40% sSPR, a maximum size limit of 27 inches or less, and current or more stringent commercial regulations. States are also required to have in place law enforcement capabilities adequate to successfully implement their red drum regulations. In August 2013, the Board approved Addendum I to Amendment 2 of the Red Drum FMP. The Addendum revises the habitat section of Amendment 2 to include the most current information on red drum spawning habitat for each life stage (egg, larval, juvenile, sub-adult, and adult). It also identifies the distribution of key habitats and habitats of concern, including potential threats and bottlenecks.

Changes to State Regulations

In 2022, Florida adopted a more holistic approach to red drum management, to better capture regional differences in ecological and human factors and improve angler satisfaction. Each year, the FWC will evaluate the red drum stock in each region using set metrics, and results will be summarized in annual reviews. Regulations may be changed based on the results of these reviews. Based on the results of the 2022 review of red drum management metrics and subsequent stakeholder feedback, the Florida Fish and Wildlife Conservation Commission approved the following regulation changes for red drum in state waters, which went into effect on September 1, 2022[1]:

- Northeast Region – Reduced the daily bag limit to 1 fish per person per day and reduced the vessel limit to 4 fish.
- Indian River Lagoon Region – Catch-and-release only until metrics improve.
- Southeast Region – Maintained a daily bag limit of 1 fish per person per day and reduced the vessel limit to 2 fish.

[1] Regulation changes are only provided for Florida regions on the Atlantic Coast in this document. For a complete list of red drum regulation changes implemented on September 1, 2022 in Florida state waters and a map of the regions, please refer to: https://myfwc.com/fishing/saltwater/recreational/red-drum/.

De Minimis Requests

New Jersey and Delaware requested *de minimis* status through the annual reporting process. While Amendment 2 does not include a specific method to determine whether a state qualifies for *de minimis*, the PRT chose to evaluate an individual state's contribution to the fishery by comparing the two-year average of total landings of the state to that of the management unit. New Jersey and Delaware each harvested zero percent of the two-year average of total landings. *De minimis* status does not exempt either state from any requirement; it may exempt them from future management measures implemented through addenda to Amendment 2, as determined by the Board.

VII. Implementation of FMP Compliance Requirements for 2022

The PRT found no inconsistences between state compliance reports and the requirements of Amendment 2.

VIII. Recommendations of the Plan Review Team

Management and Regulatory Recommendations

Consider approval of the *de minimis* requests by New Jersey and Delaware.

Research Recommendations

Additional research recommendations can be found in the most recent stock assessment found here and the 2022 Simulation Assessment and peer review report here. The PRT had the additional research recommendations:

- Implement surveys (e.g., logbooks, electronic methods, etc.) to determine the length composition (and age data, if possible) of recreational discards (B2) of red drum. This information has been highlighted as the single largest data gap in previous assessments.

- Continue sampling of adult red drum surveys to determine abundance, size, age, sex composition, and maturity of the adults. Additionally, investigate the possibility of senescence in female red drum. Investigate how targeting of adult red drum spawning and post-spawning aggregations via catch-and-release hook-and-line fisheries by anglers is affecting the reproductive potential of the stock due to both direct lethal and sub-lethal effects.

- Assess the effects of environmental factors and habitat loss on stock density/year class strength. Determine whether natural environmental perturbations and habitat loss affect recruitment and modify relationships with spawning stock size.

- Support and conduct applied research to evaluate the social and economic value of this important, primarily recreational fishery. Accomplishing this includes continued support of the Marine Recreational Fishing Expenditures Survey that is conducted every three to five years by NOAA Fisheries as well as conducting applied research on projecting social and/or economic estimated impacts associated with this fishery.

IX. References

Addis, D. 2020. The 2020 stock assessment of Red Drum, *Sciaenops ocellatus*, in Florida. Florida Fish and Wildlife Conservation Commission Fish and Wildlife Research Institute In-House Report IHR2020-002: 129 p.

Atlantic States Marine Fisheries Commission (ASMFC). 2002. Amendment 2 to the Interstate Fishery Management Plan for Red Drum. ASMFC, Washington, DC, Fishery Management Report No. 38, 141 p.

ASMFC. 2017. Red Drum Stock Assessment and Peer Review Report. Atlantic States Marine Fisheries Commission, Stock Assessment Report, 126 p.

ASMFC. 2022. Red Drum Simulation Assessment and Peer Review Report. Atlantic States Marine Fisheries Commission, Stock Assessment Report, 567 p.

Murphy, MD. 2017. An assessment of red drum in South Carolina, 1982-2016. South Carolina Department of Natural Resources Marine Resources Research Institute, In House Report 2017, 46 p.

Murphy, MD and J. Munyandorero. 2009. An assessment of the status of red drum in Florida through 2007. Florida Fish and Wildlife Commission Fish and Wildlife Research Institute, St. Petersburg, In-House Report 2008-008, 106 p.

South Atlantic Fishery Management Council (SAFMC). 2009. Southeast Data, Assessment and Review 18, Stock Assessment Report, Atlantic Red Drum. North Charleston, SC. 544 p.

Takade, H and L Paramore. 2007. Stock Status of the Northern Red Drum Stock. North Carolina Division of Marine Fisheries. In-House Report, 60 p.

Vaughan, DS. 1992. Status of the red drum stock of the Atlantic coast: Stock assessment report for 1991. NOAA Tech. Mem. NMFS-SEFC-297. 58 p.

Vaughan, DS. 1993. Status of the red drum stock of the Atlantic coast: Stock assessment report for 1992. NOAA Tech. Mem. NMFS-SEFC-313. 60 p.

Vaughan, DS. 1996. Status of the red drum stock of the Atlantic coast: Stock assessment report for 1995. NOAA Tech. Mem. NMFS-SEFC-380. 50 p.

Vaughan, DS and JT Carmichael. 2000. Assessment of Atlantic red drum for 1999: northern and southern regions. NOAA Tech. Mem. NMFS-SEFSC-447, 54 p. + app. U.S. DOC, NOAA, Center for Coastal Fisheries and Habitat Research, Beaufort, NC.

Vaughan, DS and JT Carmichael. 2001. Bag and size limit analyses for red drum in northern and southern regions of the U.S. South Atlantic. NOAA Tech. Mem. NMFS-SEFSC-454, 37 p. U.S. DOC, NOAA, Center for Coastal Fisheries and Habitat Research, Beaufort, NC.

Vaughan, DS and TE Helser. 1990. Status of the red drum stock of the Atlantic coast: Stock assessment report for 1989. NOAA Tech. Mem. NMFS-SEFC-263. 117 p.

X. Figures

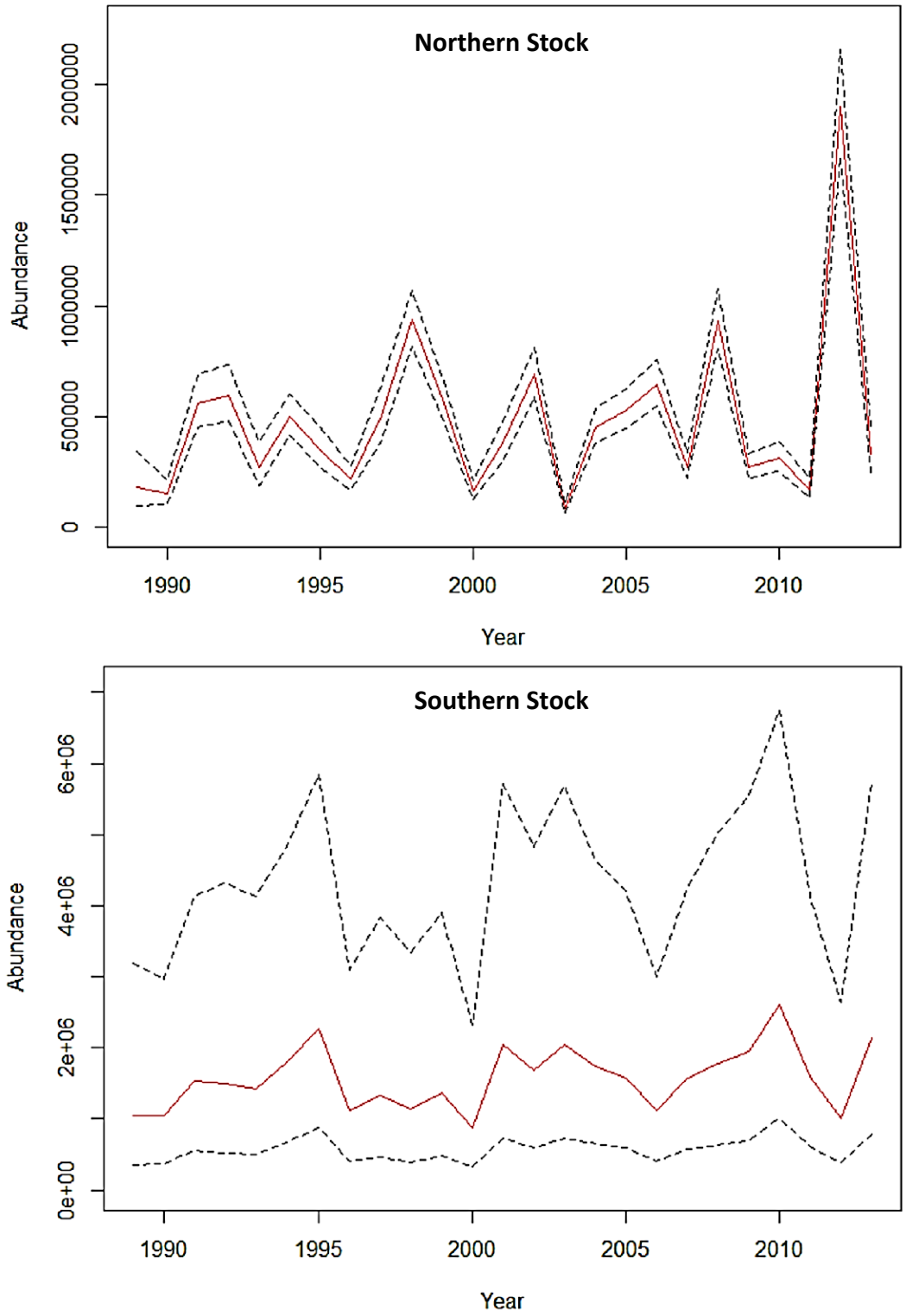


Figure 1. Predicted recruitment (age-1 abundance, red lines) with 95% confidence intervals (dashed black lines) for the northern (top) and southern (bottom) regions (Source: ASMFC 2017).

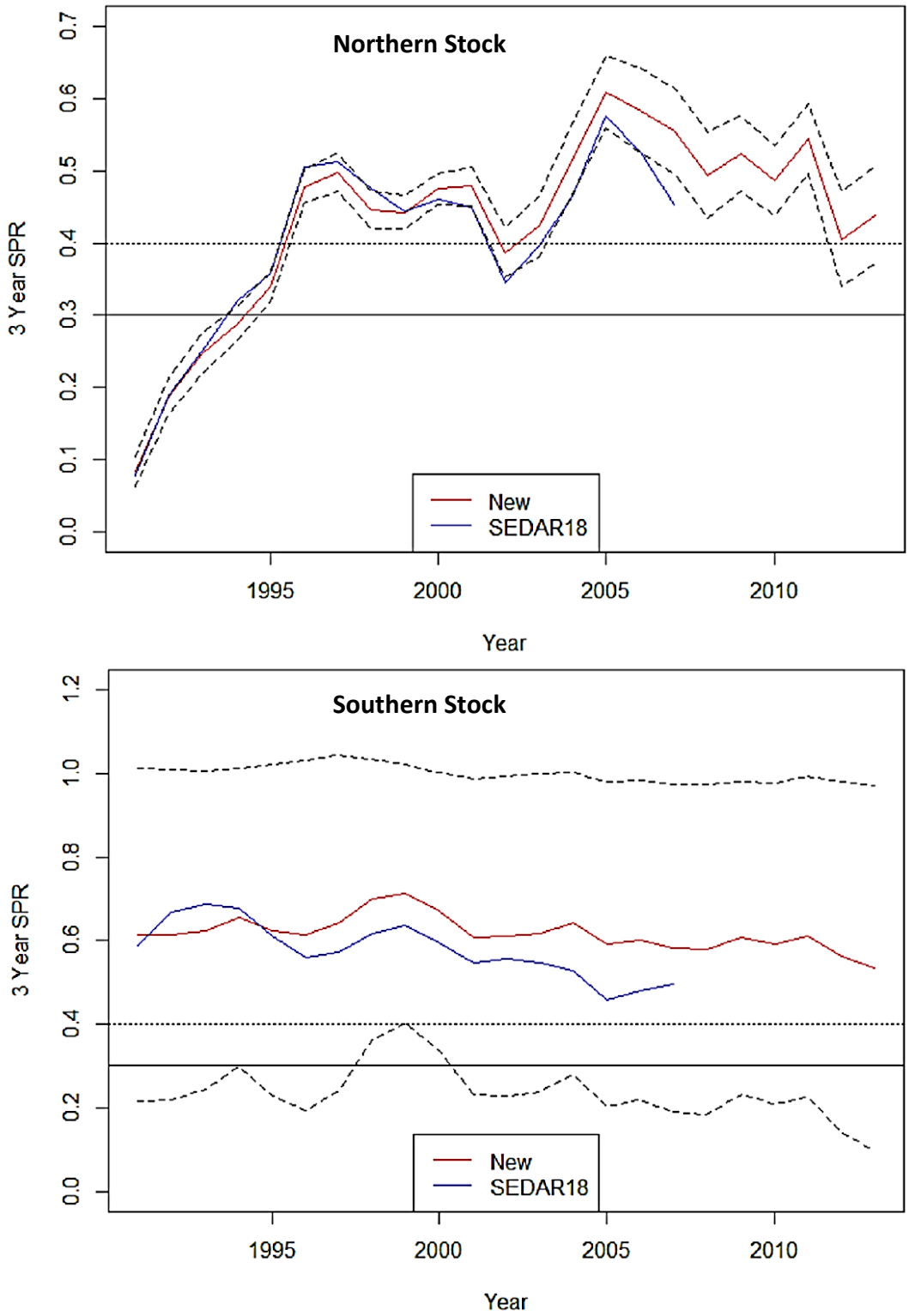


Figure 2. Three-year average sSPR (red lines) for the northern (top) and southern (bottom) stocks with 95% confidence intervals (dashed black lines). Point estimates from the previous benchmark assessment (SEDAR18) are included for comparison. The target sSPR (dotted black line) is 40% and the threshold sSPR (solid black line) is 30% (Source: ASMFC 2017)**.**

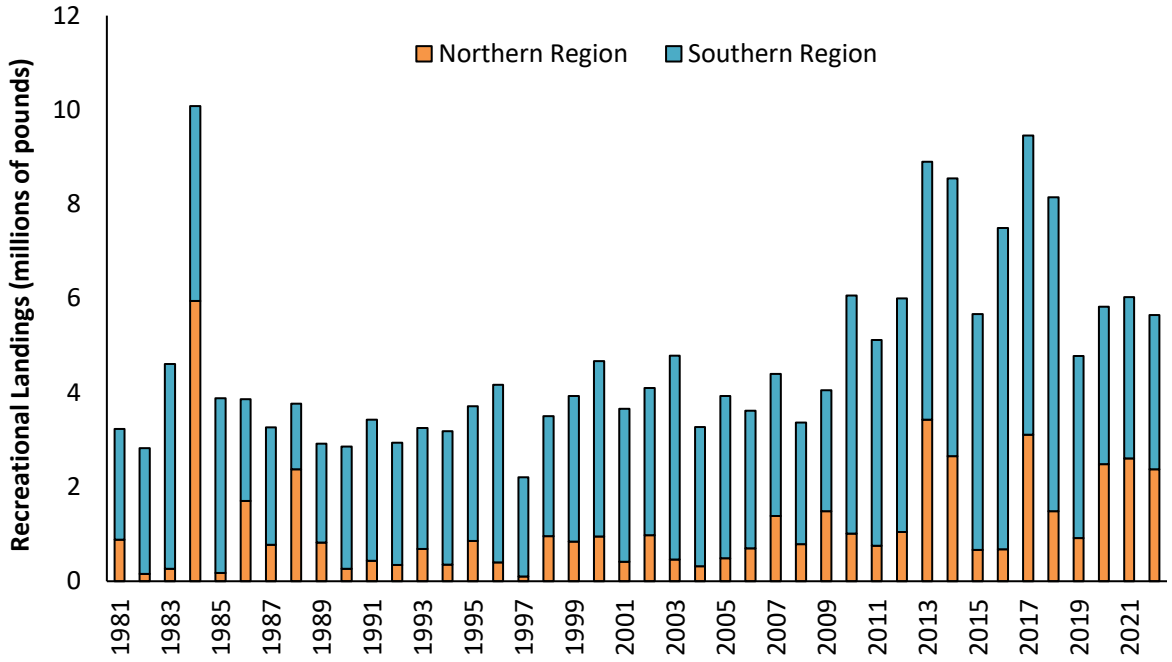


Figure 3. Recreational landings of red drum by region (1981-2022). See Table 4 for values and data sources.

*Recreational weight data for NC-FL in 1988 is unavailable. Recreational harvests in pounds were estimated for these states in this year by multiplying each state's 1988 harvest in numbers of fish by its time series average weight.

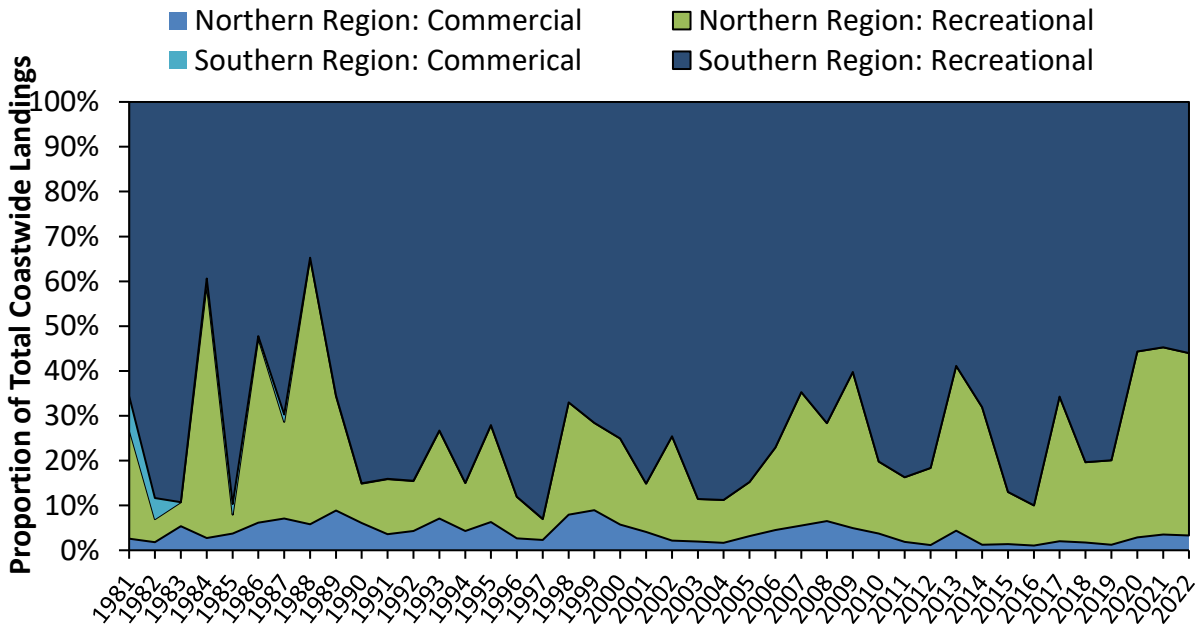


Figure 4. Proportion of regional, sector-specific landings to total coastwide landings (pounds) from 1981-2022. See Tables 3 and 4 for data sources.

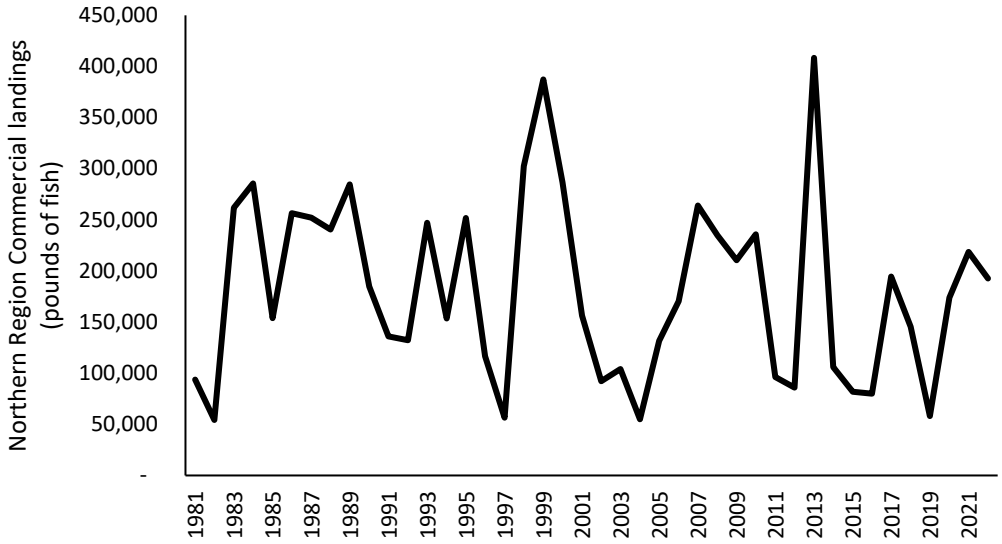


Figure 5. Commercial landings of red drum from the Northern Region (1981-2022). See Table 3 for values and data sources.

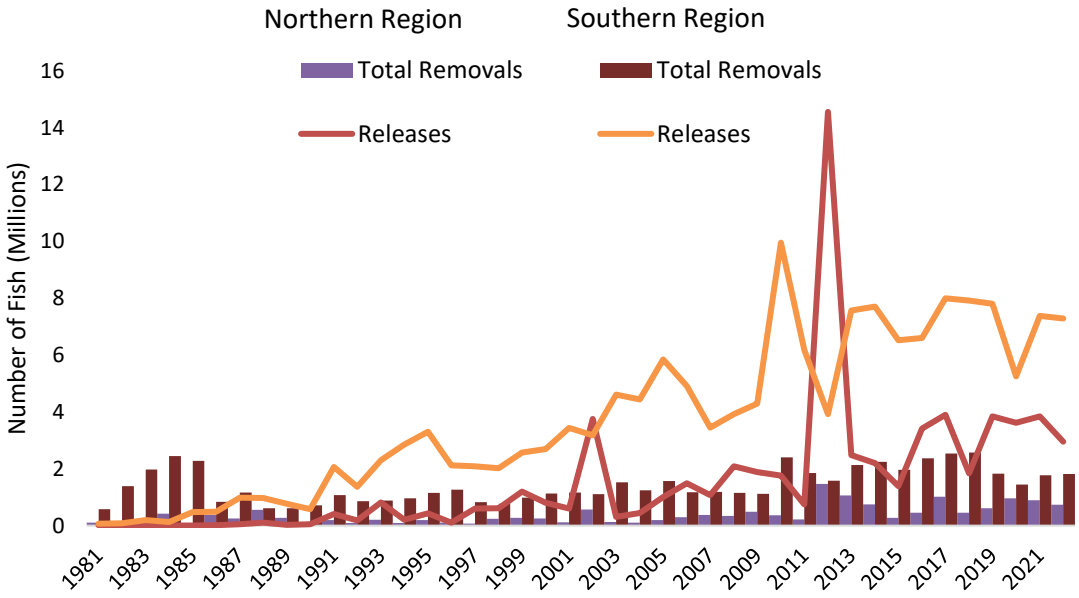


Figure 6. Total recreational removals (numbers) compared to recreational releases of red drum (numbers) for 1981-2022. See Tables 5 and 6 for values and data sources.

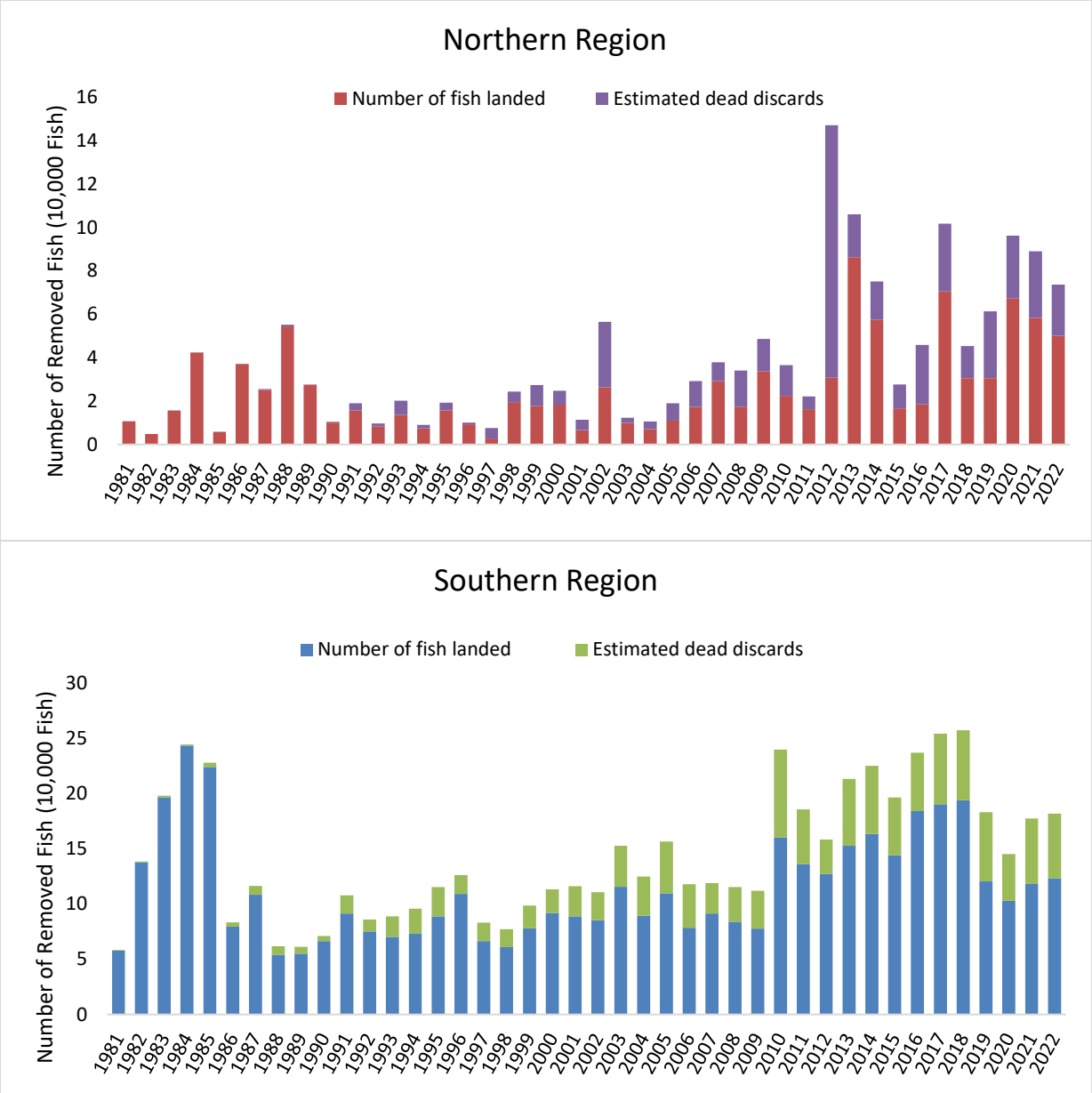


Figure 7. Recreational removals (landings and dead discards) of red drum (numbers) by region from 1981-2022. Dead discards are estimated by applying an 8% discard mortality rate to alive releases. See Tables 5 & 6 for values and data sources.

XI. Tables

Table 1. Red drum regulations for 2022. The states of New Jersey through Florida are required to meet the requirements in the FMP; states north of New Jersey are encouraged to follow the regulations. All size limits are total length.

State	Recreational	Commercial
NJ	18" - 27", 1 fish	18" - 27", 1 fish
DE	20" - 27", 5 fish	20" - 27", 5 fish
MD	18" - 27", 1 fish	18" - 25", 5 fish
PRFC	18" - 25", 5 fish	18" - 25", 5 fish
VA	18" - 26", 3 fish	18" - 25", 5 fish
NC	18" - 27", 1 fish	18" - 27"; 250,000 lbs harvest cap with overage payback (150,000 lbs Sept 1- April 30; 100,000 lbs May 1-Aug 31); harvest of red drum allowed with 7 fish daily trip limit; daily landed catch of flounder, bluefish, black drum or striped mullet must exceed daily catch of drum; small mesh (<5" stretched mesh) gill nets attendance requirement May 1 - November 30. Fishing year: September 1 – August 31.
SC	15" - 23", 2 fish per person per day bag limit and 6 fish per boat per day boat limit	Gamefish Only
GA	14" - 23", 5 fish	Gamefish Only
FL	18" - 27"; Northeast Region – 1 fish per person per day, 4 fish vessel limit; Indian River Lagoon Region – 0 fish per person per day, 0 vessel limit; Southeast Region – 1 fish per person per day, 2 fish vessel limit (effective September 1, 2022).	Sale of native fish prohibited

Table 2. Overview of each state's fishery independent surveys.

State	Fishery Independent Monitoring Details
New Jersey	Five annual nearshore trawl surveys conducted since 1988, in January/February, April, June, August, and October. Length and weight data, and catch per unit effort (CPUE) in number of fish per tow and biomass per tow recorded for all species.
Delaware	30-ft bottom trawl survey and 16-ft bottom trawl survey. Neither survey has ever captured red drum.
North Carolina	Seine survey since 1991 produces age-0 abundance index. Gill net survey in Pamlico Sound since 2001 characterizes size and age distribution, produces abundance index, improves bycatch estimates, and studies habitat usage. Longline survey since 2007 produces adult index of abundance and tags fish.
South Carolina	Estuarine trammel net survey for subadults. Electrofishing survey in low salinity estuarine areas for juveniles/subadults. Inshore and coastal bottom longline survey for biological data and adult abundance index. Genetic sub-sampling and tagging conducted during these three surveys.
Georgia	Estuarine trammel net survey for subadult biological data and abundance index. Estuarine gill net survey for young-of-year (YOY) biological data and abundance index. Bottom longline survey for adult biological data and abundance index.
Florida	Seine surveys characterizing young-of-year (YOY) (<40 mm standard length) and sub-adult (>299 mm) abundance along the northeast (NE) and southeast (SE) Florida coasts.

Table 3. Commercial landings (pounds) of red drum by state, 2013-2022. (Source: personal communication with ACCSP, for years prior to 2022 and state compliance reports for 2022, except as noted below.) Note that SC, GA, and FL do not have commercial red drum fisheries, and years with incidental landings are included in the total.

Year	NJ to PRFC	VA	NC	Total
2013	3,176	30,137	371,949	405,262
2014	353	14,733	90,647	105,732
2015	421	814	80,282	81,516
2016	197	1,898	77,833	79,927
2017	644	6,971	186,411	194,032
2018	C	885	144,464	145,501
2019	32	1,650	56,393	58,107
2020	104	7,989	165,670	173,867
2021	217	19,584	200,825	220,843
2022	57	17,411	175,029	192,554

*C indicates confidential landings, and totals have been rounded to protect confidentiality.

Table 4. Recreational landings (pounds) of red drum by state, 2013-2022. (Source: personal communication with MRIP for data prior to 2022; state compliance reports for 2022)

Year	NJ	DE	MD	VA	NC	Northern Region Total
2013		13,536	12,086	1,185,572	2,214,045	3,425,239
2014				979,388	1,674,595	2,653,983
2015				98,329	567,730	666,059
2016				45,451	633,496	678,947
2017			6,782	1,628,692	1,475,852	3,111,326
2018				31,566	1,452,358	1,483,924
2019	4,107		2,113	470,940	436,219	913,379
2020		1,544	115,181	610,001	1,758,789	2,485,515
2021			5,441	1,123,953	1,479,550	2,608,944
2022				762,729	1,615,108	2,377,837

Year		SC	GA	FL	Southern Region Total
2013		682,544	452,283	4,341,545	5,476,372
2014		921,971	387,367	4,582,561	5,891,899
2015		656,747	394,787	3,949,000	5,000,534
2016		536,550	586,235	5,694,370	6,817,155
2017		1,048,249	826,857	4,470,905	6,346,011
2018		643,213	1,186,306	4,829,344	6,658,863
2019		862,124	630,294	2,372,773	3,865,191
2020		671,004	535,674	2,135,395	3,342,073
2021		441,191	506,962	2,473,995	3,422,148
2022		584,289	1,081,410	1,605,556	3,271,255

Table 5. Recreational landings (numbers) of red drum by state, 2013-2022. (Source: personal communication with MRIP for data prior to 2022; state compliance reports for 2022)

Year	NJ	DE	MD	VA	NC	Northern Total
2013		3,734	4,766	333,590	520,758	862,848
2014				251,501	324,303	575,804
2015				22,102	143,876	165,978
2016				15,866	169,195	185,061
2017			4,943	347,145	353,716	705,804
2018				6,334	299,577	305,911
2019	1,331		1,258	205,824	97,186	305,599
2020		493	44,975	214,069	413,419	672,956
2021			1,415	256,281	325,662	583,358
2022				163,962	336,280	500,242

Year		SC	GA	FL	Southern Total
2013		282,688	236,760	1,007,729	1,527,177
2014		393,424	212,193	1,027,980	1,633,597
2015		258,493	201,049	981,685	1,441,227
2016		241,224	289,928	1,309,505	1,840,657
2017		455,887	467,522	978,520	1,901,929
2018		262,725	606,836	1,069,604	1,939,165
2019		333,315	271,970	599,348	1,204,633
2020		239,874	230,026	560,382	1,030,282
2021		210,454	261,488	710,091	1,182,033
2022		219,659	607,512	406,391	1,233,562

Table 6. Recreational alive releases (numbers) of red drum by state, 2013-2022. (Source: personal communication with MRIP for data prior to 2022; state compliance reports for 2022)

Year	NJ	DE	MD	VA	NC	Northern Region Total	Northern Region Dead Discards
2013		1,325	7,125	576,743	1,892,171	2,477,364	198,189
2014		264	659	1,108,646	1,086,967	2,196,536	175,723
2015			1,456	78,590	1,308,072	1,388,118	111,049
2016		2,598	47,908	164,575	3,203,452	3,418,533	273,483
2017			14,148	1,722,618	2,165,656	3,902,422	312,194
2018	4,715		21,384	85,338	1,729,260	1,840,697	147,256
2019		474	5,740	865,957	2,976,601	3,848,772	307,902
2020			217,710	716,277	2,686,150	3,620,137	289,611
2021		1,147	22,218	1,272,609	2,545,371	3,841,345	307,308
2022		2,116	18,010	770,731	2,160,742	2,951,599	236,128

Year		SC	GA	FL	Southern Region Total	Southern Region Dead Discards
2013		1,864,510	504,759	5,196,513	7,565,782	605,263
2014		1,874,809	750,619	5,074,602	7,700,030	616,002
2015		1,432,754	961,277	4,132,461	6,526,492	522,119
2016		1,266,931	601,153	4,734,303	6,602,387	528,191
2017		2,094,199	1,176,524	4,727,411	7,998,134	639,851
2018		1,493,803	1,045,570	5,375,011	7,914,384	633,151
2019		2,911,653	1,206,707	3,688,884	7,807,244	624,580
2020		1,705,054	393,368	3,154,500	5,252,922	420,234
2021		1,894,088	794,030	4,689,059	7,377,177	590,174
2022		1,289,714	1,814,251	4,188,940	7,292,905	583,432

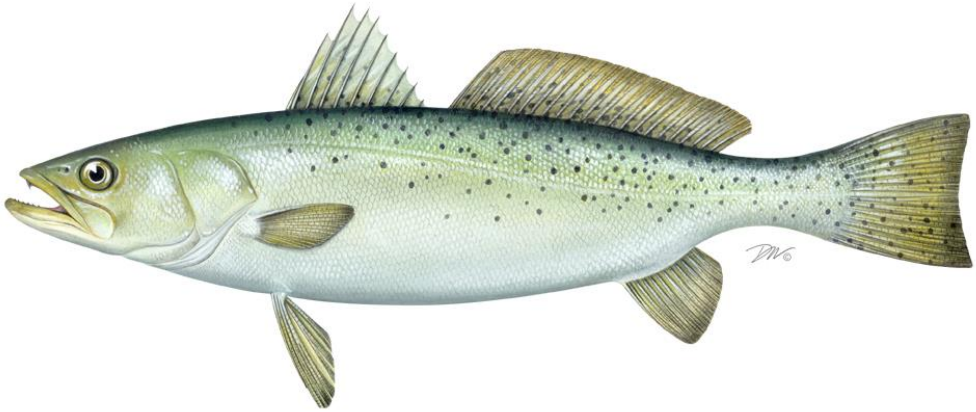
ATLANTIC STATES MARINE FISHERIES COMMISSION

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR

SPOTTED SEATROUT
(Cynoscion nebulosus)

2022 FISHING YEAR



Prepared by the Plan Review Team
Drafted October 2023

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

DRAFT FOR BOARD REVIEW

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DRAFT FOR BOARD REVIEW

I. Status of the Fishery Management Plan

Date of FMP Approval:	Original FMP – October 1984
Amendments:	Amendment 1 – November 1991 Omnibus Amendment to Spanish Mackerel, Spot, and Spotted Seatrout -- August 2011
Management Area:	The Atlantic coast distribution of the resource from Maryland through the east coast of Florida
Active Boards/Committees:	Sciaenids Management Board; Spotted Seatrout Plan Review Team; South Atlantic Species Advisory Panel

The Atlantic States Marine Fisheries Commission (ASMFC) adopted the Fishery Management Plan (FMP) for spotted seatrout in 1984. The ISFMP Policy Board approved Amendment 1 to the FMP in November 1991. In August 2011, the South Atlantic State/Federal Management Board approved the Omnibus Amendment to the Spanish Mackerel, Spot, and Spotted Seatrout FMPs, bringing the Spotted Seatrout FMP under the authority of the Atlantic Coastal Fisheries Cooperative Management Act (Act, 1993) and the ASMFC Interstate Fishery Management Plan Charter (1995). The management unit is comprised of the states of Maryland through Florida.

The goal of the management plan is "to perpetuate the spotted seatrout resource in fishable abundance throughout its range and generate the greatest possible economic and social benefits from its harvest and utilization over time." Plan objectives include:

1. Attain optimum yield over time.
2. Maintain a spawning potential ratio of at least 20% to minimize the possibility of recruitment failure.
3. Promote conservation of the stocks to reduce inter-annual variation in availability and to increase yield per recruit.
4. Promote collection of economic, social, and biological data required to effectively monitor and assess management efforts relative to the overall goal.
5. Promote research that improves understanding of the biology and fisheries of spotted seatrout.
6. Promote harmonious use of the resource among various components of the fishery through coordination of management efforts among the various political entities having jurisdiction over the spotted seatrout resource.
7. Promote determination and adoption of standards of environmental quality and provide habitat protection necessary for the maximum natural protection of spotted seatrout.

The Omnibus Amendment added the following objectives to support compliance under the Act:

1. Manage the spotted seatrout fishery by restricting catch to mature individuals.
2. Manage the spotted seatrout stock to maintain sufficiently high spawning stock biomass.
3. Develop research priorities that will further refine the spotted seatrout management program to maximize the biological, social, and economic benefits derived from the population.

Management measures include a minimum size limit of 12 inches in total length (TL), with comparable mesh size regulations in directed fisheries, and data collection for stock assessments and monitoring of the fishery. All states with a declared interest in spotted seatrout (NJ-FL) have implemented, at a minimum, the recommended minimum size limit. In addition, each state has either initiated spotted seatrout data collection programs or modified other programs to collect improved catch and effort data. Table 1 provides the states' recreational and commercial regulations for spotted seatrout in 2022.

II. Status of the Stock

A coastwide stock assessment of spotted seatrout has not been conducted, given the largely non-migratory nature of the species and the lack of data on migration where it does occur. Instead, state-specific age-structured analyses of local stocks have been performed by several states. These stock assessments provide estimates of static spawning potential ratio (SPR), a measure of the effect of fishing pressure on the relative spawning power of the female stock. The FMP recommends a goal of 20% SPR. South Carolina and Georgia have adopted this goal while North Carolina and Florida have established a 30% and 35% SPR goal, respectively.

A benchmark stock assessment for spotted seatrout in North Carolina and Virginia waters was completed and approved to use for management in late 2022 (https://www.deq.nc.gov/marine-fisheries/fisheries-management/spotted-seatrout/2022-spotted-seatrout-stock-assessment/open; NCDMF 2022). The assessment indicated the spotted seatrout stock in North Carolina and Virginia waters was not overfished with spawning stock biomass (SSB) above $SSB_{35\%}$, but overfishing was occurring. A review of the North Carolina FMP is currently underway. Amendment 1 to the North Carolina Spotted Seatrout FMP will focus on management to end overfishing and ensure sustainable harvest.

The South Carolina Department of Natural Resources packaged several state-specific assessments into a report in 2001, though these were not peer reviewed. The initial assessment covering 1986-1992 indicated female SPR was just above the 20% goal in the terminal year (Zhao and Wenner 2001), leading to a minimum size limit increase and a creel limit reduction. A more recent assessment was conducted for the period 1981-2004 (de Silva, Draft 2005). Two modeling approaches were used, and both models indicated the current SSB is below the requirement to maintain 20% SPR.

Florida completed a new statewide assessment in 2018, which in 2019 was updated with data through 2017 (https://myfwc.com/media/26731/seatrout-assessment-summary-2019.pdf;

Addis et al. 2018; Muller and Addis 2019). They assessed the status of spotted seatrout populations among management regions in Florida waters using an integrated statistical catch-at-age model, Stock Synthesis, as the primary modeling platform. Spotted seatrout population dynamics were described for the period 1950-2017 utilizing available information on catch, effort, relative abundance, and size/age composition. For the Northeast (Nassau through Flagler counties) and Southeast (Volusia through Miami-Dade counties) management regions along Florida's Atlantic coast, the regional base SS model estimates of current transitional spawning potential ratios ($tSPR_{Current}$, geometric mean for 2015-2017) are 31% in the northeast, and 34% in the southeast region. The $tSPR_{Current}$ values for the two Atlantic coast regions were found to be below the Commission's 35% $tSPR_{Current}$ management target. These assessment results led to changes in spotted seatrout regulations in Florida, including decreasing bag limits and modifying the slot size limit (Table 1). Work on a new benchmark stock assessment is underway in Florida, and is scheduled to be completed in Fall 2024.

III. Status of the Fishery

Spotted seatrout are typically caught both commercially and recreationally from Delaware through the east coast of Florida. In South Carolina, spotted seatrout are declared a gamefish and can only be taken by recreational means. Landings from states north of Delaware are minimal and/or inconsistent from year to year. In 2022, landings ranged as far north as Connecticut. State catch estimates in this section include those in the management area only (NJ-FL), but coastwide totals include the entire Atlantic coast. Total recreational landings have surpassed total commercial landings every year since recreational landings were first recorded in 1981 (Figure 1). Spotted seatrout, particularly those found from Virginia through South Carolina, are susceptible to cold stuns that result in sporadic, high winter mortality, which can lead to sudden declines in harvest. The last cold stun occurred in 2018, prompting in-season changes to management in affected states.

Commercial Fishery

Commercial harvest statistics were obtained from the Atlantic Coastal Cooperative Statistics Program (ACCSP) for years prior to 2022 and from state compliance reports for 2022. Atlantic coast commercial landings (1950-2022) range from 157,000 pounds in 2011 to 2.3 million pounds in 1952 (Figure 1). Historically, commercial landings primarily came from Virginia, North Carolina, and Florida, with Maryland, South Carolina, Georgia, and occasional landings Delaware and north accounting for a small portion. From 1950 to 1976, annual commercial landings averaged 1.3 million pounds, followed by a decline due to increased regulations and possible declines in abundance. Significant changes to regulations include the 1987 designation of spotted seatrout as a gamefish in South Carolina, and the 1995 prohibition on the use of entangling nets in Florida's coastal waters. From 2013 to 2022, commercial landings averaged approximately 448,481 pounds. In 2022, commercial landings totaled 681,598 pounds, a 11% decrease from 2021 (Table 2). North Carolina, Virginia, and Florida accounted for 88%, 10%, and 1% of the total commercial landings, respectively.

Recreational Fishery

Recreational harvest statistics were obtained from the Marine Recreational Information Program (MRIP) for years prior to 2022 and from state compliance reports for 2022. Over the last 41 years, recreational catch of spotted seatrout (kept and released) has shown an upward trend, increasing from 4.3 million fish in 1981 to 31.2 million fish in 2018 and has remained high. In 2022, recreational catch totaled 25.9 million fish, a 17% increase from 2021 (Figure 2). Recreational harvest has remained stable throughout the time series with an average of 4.0 million fish over the last five years. Recreational harvest in 2022 was 6.5 million pounds or 3.8 million fish (Tables 3 and 4), with North Carolina (52%), Georgia (25%), and Florida (9%) responsible for the largest shares in numbers of fish. Due in part to recreational size and creel limits and closed seasons, as well as the encouragement of catch and release practices, the percentage of caught fish being released has increased throughout the time series, with the 10-year average (2013-2022) at 82%. The percent of fish released in 2022 (83%) was approximately equal to the percent of fish released in 2021 (83%; Figure 2, Table 5). The number of fish released has averaged 18.9 million fish in the last 10 years (2013-2022). In 2022, 22.1 million fish were released, which is the third highest number released in the time series, and the highest since 2018. Rod and reel is the primary recreational gear, but some spotted seatrout are taken by recreational nets and gigging where these methods are permitted. Most recreational fishing is conducted from private boats and the majority of the catch is taken from nearshore waters.

IV. Status of Assessment Advice

A coastwide stock assessment of spotted seatrout has not been conducted and the Plan Review Team (PRT) does not recommend that one be completed due to the life history of the fish and the availability of data. Several states have performed age-structured analyses on local stocks, and recent assessments provide divergent trends on the status of the species. The 2005 stock assessment in South Carolina indicated an increasing population trend but a status level that is still below target spawning stock biomass levels (de Silva 2005).

The 2022 North Carolina and Virginia stock assessment indicated overfishing was occurring but that the stock was not overfished (NCDMF 2022). The stock assessment model was a novel, size structured model with winter and non-winter seasonal time-steps. Additionally, the model allowed winter natural mortality (M) to vary year to year in order to capture the signature of increased winter M from cold stuns and predicted high or rising M in most years with documented cold stuns.

In the 2019 Florida stock assessment update, the regional base SS model estimated current transitional spawning potential ratios of 31% in the Northeast management region, and 34% in the Southeast management region on Florida's Atlantic coast. The transitional spawning potential ratio for the spotted seatrout stock in northeast Florida was below the Commission's 35% $tSPR_{Current}$ management target and in southeast Florida, it was just below or at the management target (Muller and Addis 2019).

The PRT supports the continuation of state-specific assessments, yet recognizes the difficulty most states face to attain sufficient data of assessment quality and personnel who can perform the necessary modeling exercises. The lack of biological and fisheries data for effective assessment and management of the resource was recognized in the 1984 FMP and continues to be a hindrance. Some states are increasing their collection of biological and fisheries data, which will provide insight on stock status over time.

V. Status of Research and Monitoring

In addition to commercial and recreational fishery-dependent data collected and/or compiled through the NMFS Fisheries Statistics Division, some states have implemented fishery-independent or additional fishery-dependent monitoring programs. States currently conducting fishery dependent sampling include Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, and Florida. Delaware, Maryland, North Carolina, South Carolina, Georgia, and Florida currently conduct fishery independent surveys for spotted seatrout or run surveys encountering spotted seatrout. Virginia, North Carolina, and South Carolina conduct aging, and in 2022 the NCDMF aging lab aged a total of 815 spotted seatrout by otoliths with a maximum age of 6 and a modal age of 2. In 2022, Virginia aged 283 spotted seatrout, with a modal age of 1.

VI. Status of Management Measures and Issues

De Minimis Requests

A state qualifies for *de minimis* status if its previous three-year average combined commercial and recreational catch is less than 1% of the previous three-year average coastwide combined commercial and recreational catch. Those states that qualify for *de minimis* are not required to implement any monitoring requirements, as none are included in the plan.

The states of Delaware and New Jersey request continuation of *de minimis* status, and the PRT notes they meet the requirements of *de minimis*.

VII. Implementation of FMP Compliance Requirements for 2022

The PRT found no inconsistences in relation to the FMP compliance requirements among state compliance reports.

VIII. Recommendations of Plan Review Team

<u>Management and Regulatory Recommendations</u>

- Consider approval of *de minimis* requests by New Jersey and Delaware.

<u>Prioritized Research Recommendations</u>

- The PRT recommends focusing on addressing important missing components to improve state specific stock assessments. Specific focal areas include the development or improvement of state specific abundance indices, particularly for juvenile abundance

indices, research into fecundity and recruitment relationships, and additional research into B2 releases due to a rise in popularity of the catch and release fishery.

- Consider trigger factors to allow for a swift management response to environmental events that have been shown to heavily impact spotted seatrout. An example is a temperature trigger in North Carolina to protect spotted seatrout that have had long-term exposure to cold temperatures. Additional research into links between spotted seatrout population dynamics and life history variability in response to environmental factors such as land use patterns, climate change, etc.

IX. References

De Silva JA. 2005. Draft. Stock assessment of spotted seatrout, *Cynoscion nebulosus*, in South Carolina with recommendations on the management of the recreational fishery. South Carolina Department of Natural Resources, Marine Research Institute, Charleston (SC).

Florida Fish and Wildlife Conservation Commission's Fish and Wildlife Research Institute. 2013. Species Profile: Spotted Seatrout. In: R.H. McMichael, editor. Fisheries-independent monitoring program, 2012 annual data summary report, St. Petersburg (FL).

Addis D, Mahmoudi B, O'Hop J, Muller R. 2018. The 2016 stock assessment of Spotted Seatrout, *Cynoscion nebulosus*, in Florida. Florida Fish and Wildlife Conservation Commission's Fish and Wildlife Research Institute, St. Petersburg, (FL).

Jensen CC. 2009. Stock status of spotted seatrout, *Cynoscion nebulosus*, in North Carolina, 1991-2008. Morehead City (NC): North Carolina Division of Marine Fisheries. 89 p.

Moravec F, de Buron I, Roumillat WA. 2006. Two new species of Philometra (Nematoda: Philometridae) parasitic in the perciform fish *Cynoscion nebulosus* (Sciaenidae) in the estuaries of South Carolina, USA. Folia Parasitologica, 53: 63-70

Muller, R, and Addis D. 2019. An update assessment of the status of spotted seatrout in Florida waters through 2017. Florida Fish and Wildlife Conservation Commission's Fish and Wildlife Research Institute, St. Petersburg, (FL).

Murphy MD, Chagaris D, Addis D. 2011. An assessment of the status of spotted seatrout in Florida waters through 2009. Florida Fish and Wildlife Conservation Commission Fish and Wildlife Research Institute. In-House Report 2011-002, St. Petersburg (FL).

North Carolina Division of Marine Fisheries. 2014. Stock assessment of spotted seatrout, *Cynoscion nebulosus*, in Virginia and North Carolina waters. North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries, Morehead City (NC).

North Carolina Division of Marine Fisheries. 2022. Stock Assessment of Spotted Seatrout, *Cynoscion nebulosus*, in Virginia and North Carolina waters, 1991–2019. North Carolina

Division of Marine Fisheries, NCDMF SAP-SAR-2022-02, Morehead City, North Carolina. 137

Roumillat WA, Brouwer MC. 2004. Reproductive dynamics of female spotted seatrout (*Cynoscion nebulosus*) in South Carolina. Fisheries Bulletin, 102: 473-487

Zhao B, Burns B. 2001. Stock assessment of the spotted seatrout, *Cynoscion nebulosus*, on the North Carolina coast, 1981-1997. In: South Carolina Department of Natural Resources. Cooperative Research on the Biology and Assessment of Nearshore and Estuarine Fishes along the Southeast Coast of the U.S: Part III. Spotted Seatrout, *Cynoscion nebulosus*. Charleston (SC): SC DNR. Final Report, Grant NA77FF0550.

Zhao B, Wenner C. 2001. Stock assessment of the spotted seatrout, *Cynoscion nebulosus*, on the South Carolina coast, 1986-1992. In: South Carolina Department of Natural Resources. Cooperative Research on the Biology and Assessment of Nearshore and Estuarine Fishes along the Southeast Coast of the U.S: Part III. Spotted Seatrout, *Cynoscion nebulosus*. Charleston (SC): SC DNR. Final Report, Grant NA77FF0550.

Zhao B, Wenner C, Nicholson N. 2001. Stock assessment of the spotted seatrout, *Cynoscion nebulosus*, on the Georgia Coast, 1986-1995. In: South Carolina Department of Natural Resources. Cooperative Research on the Biology and Assessment of Nearshore and Estuarine Fishes along the Southeast Coast of the U.S: Part III. Spotted Seatrout, *Cynoscion nebulosus*. Charleston (SC): SC DNR. Final Report, Grant NA77FF0550.

X. Figures

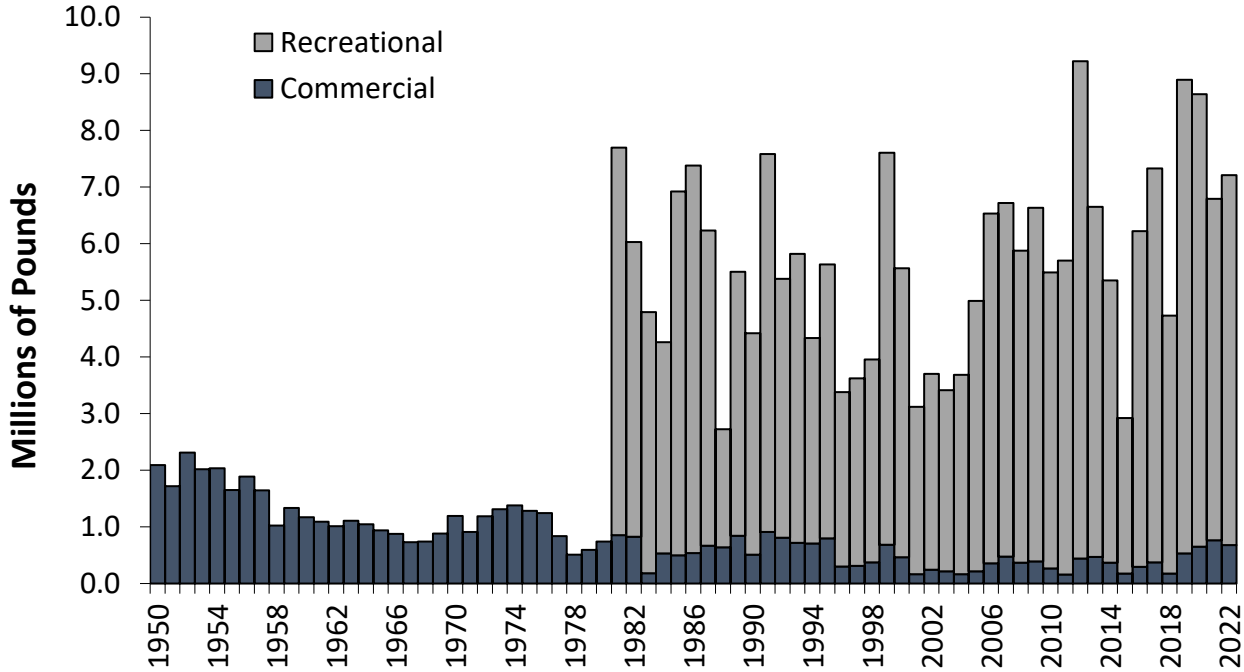

Figure 1. Coastwide commercial landings (1950-2022) and recreational landings (1981-2022), in pounds (See Tables 2 and 4 for values and sources). Recreational data not available prior to 1981.

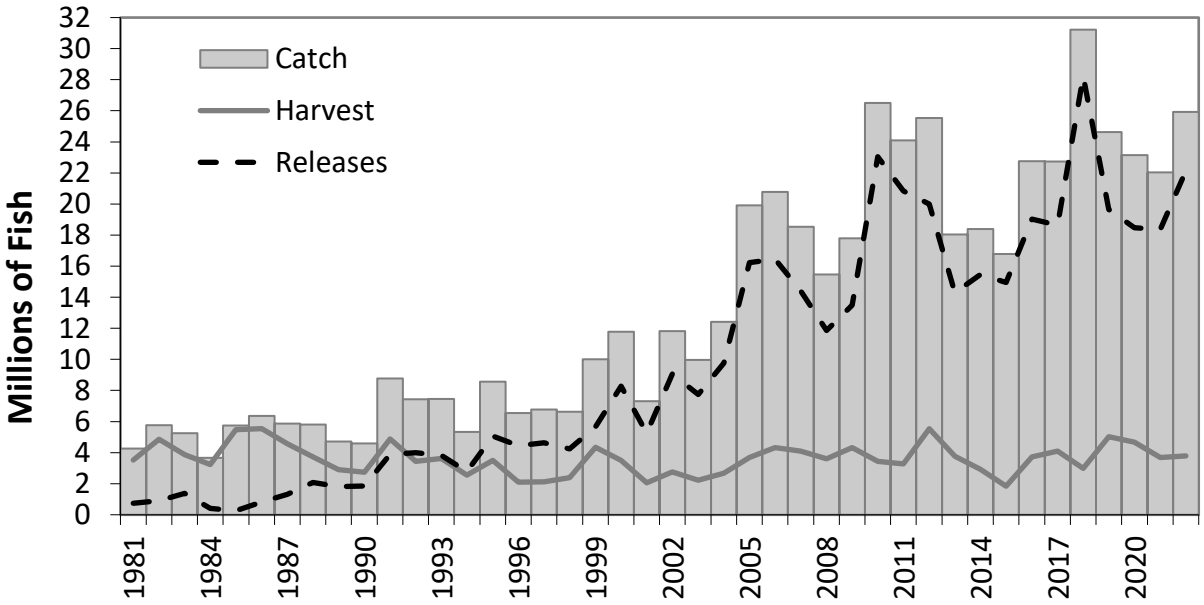

Figure 2. Coastwide recreational catch, harvest, and releases (numbers), 1981-2022 (See Tables 3 and 5 for values and sources).

XI. Tables

Table 1. Summary of state regulations for spotted seatrout in 2022.

State	Recreational	Commercial
New Jersey	13” TL; 1 fish	13” TL; 100 lbs/vessel/day during open seasons 100 lbs bycatch allowance during closed season if equal lbs of other species are also harvested. Gill net: 3.25 in minimum mesh size; closed season from 5/21-9/2 and 10/20-10/26. Otter trawl: 3.75 in minimum diamond stretched mesh size or 3.375 in stretched square mesh; closed season 8/1 to 10/12 Pound net: closed season 6/7 to 6/30 Hook and line: must follow recreational bag and size limit
Delaware	12" TL	12" TL
Maryland	14" TL; 4 fish	14" TL. 150 lbs limit per day or trip (whichever is longer). Trawl and gill net mesh size restrictions.
PRFC	14" TL; 10 fish	14" TL
Virginia	14-24" TL; 1 fish >24” allowed; 5 fish	14" TL; pound nets/seines allowed 5% by weight less than 14". Hook & line fishermen must follow rec limits. Quota: 51,104 lbs (Sept-Aug). After it’s been announced the quota has been reached, then daily incidental catch of 50 lbs/licensee aboard the vessel, not to exceed 100 lbs per vessel
North Carolina	14" TL; 4 fish	14" TL; 75 fish limit. Unlawful to possess or sell Friday 12:00am-Sunday 12:00am.
South Carolina	14" TL; 10 fish. Gig March-Nov.	Gamefish status since 1987; native caught fish may not be sold.
Georgia	14" TL; 15 fish	14" TL; 15 fish. BRD requirement for trawl; gear mesh regulations.
Florida	15-19" TL slot; 1 fish >19" allowed per vessel, or per person if fishing on land; 0 captain and crew bag limit on for-hire trip; hook & line/cast net only. Western Panhandle: 3 fish, closed February; Big Bend: 5 fish; South: 3 fish; Central East: 2 fish, closed Nov -Dec; Northeast: 5 fish	Hook & line/cast net only; 15-24" TL; Season varies by region; 50 fish per person per day or 100 fish vessel limit with two or more licensed fishermen on board South, Big Bend, and Western Panhandle: Open June 1 - October 31. Central East: Open May 1 - September 30. Northeast: Open June 1 - November 30.

Note: A commercial fishing license is required to possess spotted seatrout for sale in all states with a fishery.

Table 2. Commercial landings (pounds) of spotted seatrout by state, 2013-2022 (Source: ACCSP for years prior to 2022 and State Compliance Reports for 2022). Totals are for the coastwide fishery and may extend beyond the management unit. "C" represents confidential data.

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2013			C	42,086	367,610	C	C	58,288	471,243
2014			C	90,051	242,245	C	C	37,710	370,110
2015			C	7,888	128,752	C	C	39,226	175,931
2016			C	18,483	254,590	C	C	23,105	296,419
2017			C	55,219	299,910	C	C	16,194	371,590
2018			C	17,526	128,980	C	C	22,105	173,651
2019			C	100,763	378,491	C	C	16,700	531,010
2020		C	C	67,794	568,764	C	C	12,591	650,034
2021			C	51,594	694,784	C	C	12,352	762,443
2022	C		72	68,479	603,155	C	C	5,696	681,598

Table 3. Recreational harvest (A + B1; numbers of fish) of spotted seatrout using the FES effort calibration, by state, 2013-2022 (Source: MRIP). Totals are for the coastwide fishery and may extend beyond the management unit.

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2013		5,436		153,706	1,107,957	440,751	937,046	1,122,151	3,767,047
2014		3,514	21,560	84,537	725,086	260,321	724,411	1,111,177	2,930,606
2015		39	11,619	23,062	249,260	311,106	740,932	504,137	1,840,155
2016	547	12	10,092	163,529	978,624	311,168	1,290,220	962,946	3,717,042
2017			24,255	172,288	1,217,834	647,679	1,060,493	977,797	4,100,346
2018		344		189,537	449,473	175,191	1,096,602	929,155	2,993,485
2019		4,644	36,314	596,428	1,937,250	813,548	1,008,284	620,337	5,016,805
2020		774	11,951	591,624	2,053,354	511,261	830,771	678,934	4,678,669
2021			17,664	399,529	1,223,508	483,046	935,052	621,389	3,680,188
2022			8,739	248,150	1,963,400	281,274	952,260	337,142	3,790,965

Table 4. Recreational harvest (A + B1; pounds of fish) of spotted seatrout using the FES effort calibration, by state, 2013-2022 (Source: MRIP). Totals are for the coastwide fishery and may extend beyond the management unit.

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2013		8,866		379,399	1,881,881	717,402	1,125,802	2,075,929	6,180,413
2014		6,295	46,870	166,182	1,451,592	382,155	825,903	2,111,818	4,984,520
2015		10	23,546	48,477	430,579	462,498	794,861	984,940	2,744,901
2016	451	8	20,024	341,977	1,724,492	475,749	1,740,513	1,625,597	5,928,352
2017			48,624	342,463	2,157,198	992,938	1,403,646	2,011,777	6,956,646
2018		248		226,786	658,555	414,442	1,556,782	1,701,275	4,557,840
2019		10,878	61,935	1,256,916	3,334,163	1,238,834	1,440,368	1,033,847	8,366,063
2020		790	28,170	1,375,062	3,632,315	713,197	1,196,591	1,045,536	7,990,871
2021			40,801	815,724	2,241,421	696,038	1,277,168	956,682	6,027,834
2022			12,902	549,095	3,756,040	423,318	1,268,493	519,335	6,529,183

Table 5. Recreational releases (number of fish) of spotted seatrout using the FES effort calibration, by state, 2013-2022 (Source: MRIP). Totals are for the coastwide fishery and may extend beyond the management unit.

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2013		8,039	22,780	738,474	4,278,671	2,190,796	1,320,699	5,722,715	14,282,174
2014		2,926	74,250	1,059,287	3,949,284	1,407,310	1,687,540	7,279,660	15,460,257
2015		604	242,150	834,028	4,824,088	1,147,982	1,763,638	6,131,007	14,943,497
2016	15,423	15,066	133,223	3,708,969	6,475,193	1,791,072	2,113,253	4,783,644	19,035,843
2017	0	71	107,611	3,154,997	5,147,567	1,949,554	2,436,867	5,845,559	18,641,985
2018	418		54,795	4,455,420	15,245,249	1,062,769	2,022,125	5,306,034	28,230,566
2019	2,262	5,905	334,805	2,865,887	7,161,183	2,476,659	2,673,432	4,098,551	19,643,063
2020		9,027	237,023	2,830,854	6,155,571	1,301,634	2,632,036	5,306,269	18,471,640
2021			84,300	3,035,971	6,284,614	1,467,051	3,022,516	4,467,598	18,362,050
2022			97,241	2,291,186	10,860,575	1,189,063	2,039,833	5,667,898	22,145,796