

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 9:45 a.m.
 - Approval of Agenda
 - Approval of Proceedings from July and August 2023
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 11:20 a.m.
 - Assessment Science Committee **Action** (*J. Patel*)
 - Law Enforcement Committee (*K. Blanchard*)
 - Atlantic Coastal Fish Habitat Partnership (*S. Kaalstad*)
 - Habitat Committee **Final Action** (*S. Kaalstad*)
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 <ul style="list-style-type: none">• The Executive Committee will meet on October 18, 2023
Presentations <ul style="list-style-type: none">• S. Woodward will provide an update of the Executive Committee’s work
Board action for consideration at this meeting <ul style="list-style-type: none">• none

5. Review and Consider Changes to Conservation Equivalency: Policy and Technical Guidance Document (10:05-11:00 a.m.) Final Action
Background <ul style="list-style-type: none">• The Executive Committee (EC) tasked the Management and Science Committee (MSC) to review the <i>Conservation Equivalency: Policy and Technical Guidance Document</i>. 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**

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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INDEX OF MOTIONS

1. **Approval of agenda** by Consent (Page 1).

2. **Main Motion**

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 (Page 17). Motion by Emerson Hasbrouck; second by Jason McNamee. Motion substituted.

Motion to Substitute

Move 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” (Page 20). Motion by Dan McKiernan; second by John Clark. Motion passes (Roll call: In Favor – CT, SC, DE, GA, NH, MA, PA, MD, NJ, FL, ME; Opposed – VA, RI, NY, NC, PRFC; Abstentions – NOAA; Null – None) (Page 21).

Motion as Substituted

Motion 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 (Page 21). Motion passes (Roll call: In Favor – CT, SC, DE, VA, GA, NH, MA, PA, MD, NJ, PRFC, FL, ME; Opposed – RI, NY, NC; Abstentions – NOAA; Null – None) (Page 21).

3. **Move to adjourn** by Consent (Page 23).

ATTENDANCE

Board Members

Pat Keliher, ME (AA)	Kris Kuhn, PA, proxy for T. Schaeffer (AA)
Cheri Patterson, NH (AA)	John Clark, DE (AA)
Dennis Abbott, NH proxy for Sen. Watters (LA)	Lynn Fegley, MD (AA, Acting)
Dan McKiernan, MA (AA)	Pat Geer, VA, proxy for Jamie Green (AA)
Raymond Kane, MA (GA)	Chris Batsavage, NC, proxy for K. Rawls (AA)
Jason McNamee, RI (AA)	Mel Bell, SC (AA)
Justin Davis, CT (AA)	Doug Haymans, GA (AA)
Bill Hyatt, CT (GA)	Spud Woodward, GA (GA)
Jim Gilmore, NY, proxy for B. Seggos (AA)	Erika Burgess, FL, proxy for J. McCawley (AA)
Emerson Hasbrouck, NY (GA)	Marty Gary, PRFC
Joe Cimino, NJ (AA)	Mike Ruccio, NOAA
Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)	Chris Wright, NOAA

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

Staff

Robert Beal	Madeline Musante	Geoff White
Toni Kerns	Patrick Campfield	Julie DeFilippi Simpson
Tina Berger	Tracey Bauer	

Guests

Megan Ware, ME DMR	Ryan Silva, NOAA	Maureen Davidson, NYS DEC
Renee Zobel, NH F&G	Scott Travers, Rhode Island	Michelle Duval, MAFMC
Nichola Meserve, MA DMF	Saltwater Anglers Association	Robert Gill
Max Appelman, NOAA	Jesse Hornstein, NYS DEC	Tara McClintock, Cornell
Pat Augustine, Coram, NY	Todd Smith, NOAA	S Meyer
Jeff Kaelin, Lund's Fisheries	Scott Curatolo-Wagemann,	Brandon Muffley, MAFMC
Mike Celestino, NJ DEP	Cornell	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.

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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

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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

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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 managers 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

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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.

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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

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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 or 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.

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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

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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 Cornell 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.

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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

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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-

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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

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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,

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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.

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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.

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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

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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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INDEX OF MOTIONS

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2. **Approval of Proceedings of May 3, 2023 Meeting** by Consent (Page 1).
3. **Main Motion**
Move to approve Option 4 board discretion for allowing Conservation Equivalency (Page 17). Motion by John Clark; second by Erika Burgess. Motion postponed until next meeting of the ISFMP Policy Board (Page 21).

Motion to Substitute
Motion to substitute to adopt Option 1 with an allowance for 2/3 majority to override (Page 17). Motion by Motion by Dan McKiernan; second by Cheri Patterson.

Motion to Postpone
Move to postpone decision on Conservation Equivalency until the next meeting of the Policy Board (Page 20). Motion by Lynn Fegley; second by Marty Gary. Motion passes with one null vote (Page 21).
4. **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** (Page 27). Motion by Dan McKiernan; second by Mel Bell. Motion carries with one abstention (Page 27).
5. **Move to adjourn** by Consent (Page 28).

ATTENDANCE

Board Members

Pat Keliher, ME (AA)	Lynn Fegley, MD (AA, Acting)
Allison Hepler, ME (LA)	David Sikorski, MD, proxy for Del. Stein (LA)
Cheri Patterson, NH (AA)	Russell Dize, MA (GA)
Dennis Abbott, NH proxy for Sen. Watters (LA)	Pat Geer, VA, proxy for J. Green (AA)
Doug Grout, NH (GA)	Shanna Madsen VA, proxy for M. Mason (LA)
Dan McKiernan, MA (AA)	Bryan Plumlee, VA (GA)
Eric Reid, RI, proxy for Sen. Sosnowski (RI)	Ben Dyar, VA, proxy for Sen. Cromer (LA)
Robert LaFrance, CT, proxy for B. Hyatt (GA)	Kathy Rawls, NC (AA)
John Maniscalco, NY, proxy for B. Seggos (AA)	Mel Bell, SC (AA)
Emerson Hasbrouck, NY (GA)	Doug Haymans, GA (AA)
Joe Cimino, NJ (AA)	Spud Woodward, GA (GA)
Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)	Erika Burgess, FL, proxy for J. McCawley (AA)
Jeff Kaelin, NJ (GA)	Gary Jennings, FL (GA)
Kris Kuhn, PA, proxy for T. Schaeffer (AA)	Marty Gary, PRFC
Loren Lustig, PA (GA)	Mike Ruccio, NOAA
John Clark, DE (AA)	Chris Wright, NOAA
Roy Miller, DE (GA)	

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

Staff

Robert Beal	Tracey Bauer	James Boyle
Toni Kerns	Alexander Law	Caitlin Starks
Tina Berger	Chris Jacobs	Chelsea Tuohy
Madeline Musante	Trevor Scheffel	Kurt Blanchard
Lindsey Aubart	Katie Drew	

Guests

Michael Academia, CCB	Bill Dunn	Tom Lilly
Max Appleman, NOAA	Cynthia Ferrio, NOAA	Michael Luisi, MD DNR
Mike Armstrong, MA DMF	James Fletcher, United National	Chip Lynch, NOAA
Robert Atwood, NH F&G	Fisherman's Association	Nichola Meserve, MA DMF
Pat Augustine	Jared Flowers, GA DNR	Chris McDonough, SC DNR
Chris Batsavage, NC DEQ	Thomas Fote, Jersey Coast Anglers	Joshua McGilly, VMRC
Carolyn Belcher, GA DNR	Association	Kevin McMenamin, Annapolis Anglers
Alan Bianchi, NC DMF	Tony Friedrich, ASGA	Club
Jeff Brust, NJ DEP	Alexa Galvan, VMRC	Steve Meyers
Nicole Caudell, MD DNR	Angela Giuliano, MD DNR	Brandon Muffley, AFMC
Mike Celestino, NJ DEP	Hannah Hart, MAFMC	Allison Murphy, NOAA
Peter Clarke, NJ DEP	Jay Hermsen, NOAA	Thomas Newman
Haley Clinton, NC DEQ	Jesse Hornstein, NYS DEC	Nicole Pitts, NOAA
Kiley Dancy, MAFMC	Yan Jiao, Virginia Tech	Will Poston, ASGA
Jamie Darrow, NJ DEP	Emily Keiley, NOAA	Jill Ramsey, VMRC
Donald Dicostanzo	Blaik Keppler, SC DNR	Kirby Rootes-Murdy, USGS

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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 her 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.

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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 ZALESK: 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

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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 meeting 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.

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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 accidentally. 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.

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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 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,

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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.

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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.

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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.

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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 by 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.

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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

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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

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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

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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.

CHAIR 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

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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

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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.

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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

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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, ACFHP 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

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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

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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.

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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**

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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 be 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 equivalency¹ 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 lieu 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 chosen 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		<i>*Update</i>
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 include 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 habitat¹. 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.*

¹Federal 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 (Migliarese 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.
- Migliarese, 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 FHOs 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 FHOCS 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 FHOCS 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 FHOCS 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 FHOCS 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 FHOCS 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/km², 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 FHO 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* Mitchell, 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/m2-3gvyk-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* Mitchell, 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. Environmental 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., Boshers, 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 FHOCS 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.