Atlantic States Marine Fisheries Commission

Winter Flounder Management Board

January 31, 2023
1:45 – 3:15 p.m.
Hybrid Meeting

Draft Agenda

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

1.	Welcome/Call to Order *(B. Hyatt*)	1:45 p.m.
2.	Board Consent • Approval of Agenda • Approval of Proceedings from February 2021	1:45 p.m.
3.	Public Comment	1:50 p.m.
4.	Review 2022 Management Track Assessments for Gulf of Maine and Southern New England/Mid-Atlantic Stocks of Winter Flounder (*P. Nitschke/T. Wood*)	2:00 p.m.
5.	Set 2024-2025 Specifications (*T. Bauer*) **Final Action** • Review Technical Committee Recommendations *(R. Balouskus)* • Review Advisory Panel Report *(B. Brown)*	2:30 p.m.
6.	Consider Fishery Management Plan Review and State Compliance for the 2021 Fishing Year (*T. Bauer*) **Action**	3:00 p.m.
7.	Review and Populate Advisory Panel Membership (*T. Berger*) **Action**	3:10 p.m.
8.	Other Business/Adjourn	3:15 p.m.

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

MEETING OVERVIEW

Winter Flounder Management Board
Tuesday January 31, 2023
1:45 – 3:15 p.m.
Hybrid Meeting

Chair: William Hyatt (CT)	Technical Committee Chair: Rich Balouskus (RI)	LEC Representative: Keith Williams
Vice Chair: Vacant	Advisory Panel Chair: Bud Brown	Previous Board Meeting: February 2, 2021
Voting Members: ME, NH, MA, RI, CT, NY, NJ, NMFS, USFWS (9 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from February 2021

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

4. Review 2022 Management Track Assessments for Gulf of Maine Winter Flounder and Southern New England/Mid-Atlantic Winter Flounder (2:00 – 2:30 p.m.)

- The Gulf of Maine and Southern New England/Mid-Atlantic Winter Flounder Management Track Assessments were completed and peer-reviewed in Fall 2022 (**Briefing Materials**).
- The Gulf of Maine winter flounder stock biomass status remains unknown and overfishing is not occurring. The Southern New England/Mid-Atlantic winter flounder stock is now no longer considered overfished and overfishing is not occurring.

Presentations

- 2022 Management Track Assessment for Gulf of Maine winter flounder by P. Nitschke
- 2022 Management Track Assessment for Southern New England/Mid-Atlantic winter flounder by T. Wood

5. Set 2024-2025 Specifications (2:30 – 3:00 p.m.) Final Action

- In February 2021, the Winter Flounder Management Board set status quo specifications for state waters for the 2021-2023 fishing years.
- In December 2022, the New England Fishery Management Council (NEFMC) took final action on FY 2023-2025 specifications in Framework 65, which included the Gulf of Maine (GOM) and Southern New England/Mid-Atlantic (SNE/MA) winter flounder

stocks.

- The Technical Committee (TC) met on January 11th to review the GOM and SNE/MA stock assessments, recent fishery performance, and federal specifications approved by the NEFMC. After reviewing these items, the TC recommended no changes to the state water specifications for the 2024-2025 fishing years **(Supplemental Materials).**
- The Advisory Panel met on January 12th to discuss current management issues and provide input on state water specifications for the 2024-2025 fishing years **(Briefing Materials).**

Presentations

- Overview of NEFMC 2023-2025 Specifications and Current State Waters Management Measures by T. Bauer
- Technical Committee Summary by R. Balouskus
- Advisory Panel Summary by B. Brown

Board Actions for Consideration

- Consider GOM and SNE/MA winter flounder specifications for the 2024-2025 fishing year

6. Consider Fishery Management Plan Review and State Compliance for the 2021 Fishing Year (3:00 – 3:10 p.m.) Action

- Winter flounder state compliance reports are due on December 1.
- The Winter Flounder Plan Review Team (PRT) has reviewed state reports and compiled the annual FMP Review. New Jersey has requested continued *de minimis* status **(Supplemental Materials)**.

Presentations

- 2021 FMP Review for Winter Flounder by T. Bauer

Board Actions for Consideration

- Consider approval of the 2021 FMP Review, state compliance reports, and New Jersey's *de minimis* request for winter flounder

7. Review and Populate Advisory Panel Membership (3:10 – 3:15 p.m.) Action

- Massachusetts has submitted a nomination to the Winter Flounder Advisory Panel: Allan Butler, recreational fisherman **(Briefing Materials)**.

Presentations

- Nomination by T. Berger

Board Actions for Consideration

- Consider approval of Advisory Panel nomination for Allan Butler

8. Other Business/Adjourn

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

WINTER FLOUNDER MANAGEMENT BOARD

Webinar
February 2, 2021

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

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ATTENDANCE

Board Members

Megan Ware, ME, proxy for P. Keliher (AA)
Sen. David Miramant, ME (LA)
Cheri Patterson, NH (AA)
Ritchie White, NH (GA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)
Dan McKiernan, MA (AA)
Raymond Kane, MA (GA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)
Conor McManus, RI, proxy for J. McNamee (AA)
David Borden, RI (GA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)
Matt Gates, CT, proxy for J. Davis (AA)
Willian Hyatt, CT (GA)
Jim Gilmore, NY (AA)
John McMurray, NY, proxy for Sen. Kaminsky (LA)
Joe Cimino, NJ (AA)
Tom Fote, NJ (GA)
Adam Nowalsky, NJ, proxy for Asm. Houghtaling (LA)
Mike Millard, USFWS
Allison Murphy, NMFS

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

Ex-Officio Members

Paul Nitschke, Technical Committee Chair
Kurt Blanchard, Law Enforcement Representative

Staff

Robert Beal
Toni Kerns
Kristen Anstead
Maya Drzewicki
Emilie Franke
Chris Jacobs
Jeff Kipp
Dustin Colson Leaning
Savannah Lewis
Sarah Murray
Joe Myers
Kirby Rootes-Murdy
Caitlin Starks
Deke Tompkins
Geoff White

Guests

Karen Abrams, NOAA
Max Appelman, NOAA
Pat Augustine, Coram, NY
Richard Balouskus, RI DEM
Vincent Balzano, ME
Chris Batsavage, VMRC
Peter Benoit, Ofc. of Sen. King
Alan Bianchi, NC DENR
Jason Boucher, DE DFW
Delayne Brown, NH F&G
Jeff Brust, NJ DEP
Joe Cavaluzzi
Matt Cieri, ME DMR
Allison Colden, CBF
Heather Corbett, NJ DFW
Jamie Cournane, NEFMC
Jessica Daher, NJ DEP
Justin Davis, CT (AA)
John DePersenaire, RFA
Russell Dize, MD (GA)
Chris Dollar, CBF
Bill Dunn
Julie Evans
Cynthia Ferrio, NOAA
James Fletcher
Alexa Galvan, VMRC
Pat Geer, VMRC
Shaun Gehan, Gehan Law
Bill Gorham, NC
Melanie Griffin, MA DMF

Guests (continued)

Alex Hansell, MA DMF
Helen Takade-Heumacher, FL FWS
Carol Hoffman, NYS DEC
Asm. Eric Houghtaling, NJ (LA)
Rachel Howland, NC DENR
Jeff Kaelin, Lund's Fisheries
Rob LaFrance, Quinnipiac Univ
Wilson Laney
Mike Luisi, MD DNR
Chip Lynch, NOAA
Pam Lyons, Wild Oceans
Shanna Madsen, VMRC
John Maniscalco, NYS DEC
Chris McDonough, SC DNR
Nichola Meserve, MA DMF
Roy Miller, DE (GA)
Pat Moran, MA Environ. Police
Brandon Muffley, MAFMC
Brian Neilan, NJ DEP
Josh Newhard, FL FWS
Gerry O'Neill, Cape Seafoods
Derek Orner, NOAA
Craig Pugh, Leipsic, DE
Kathleen Reardon, ME DMR
CJ Schlick, NC DENR
Eric Schneider, RI DEM
Tara Scott, NOAA
McLean Seward, NC DENR
David Sikorski, CCA MD
Melissa Smith, ME DMR
Somers Smott, VMRD
George Stamboulis, NY IT
Mark Taylor
Chris Uraneck, ME DMR
Beth Versak, MD DNR
Holly White, NC DENR
Chris Wright, NOAA
Sarah York, NOAA
Phil Zalesak, MD
Erik Zlokovitz, MD DNR
Rene Zobel, NH F&G

The Winter Flounder Management Board of the Atlantic States Marine Fisheries Commission convened via webinar; Tuesday, February 2, 2021, and was called to order at 1:30 p.m. by Chair David V. Borden.

CALL TO ORDER

CHAIR DAVID V. BORDEN: Good afternoon, this is the Winter Flounder Management Board meeting. My name is David Borden; I'm the Governor's Appointee from the state of Rhode Island. We have a relatively short agenda, most of which relates to reports, and the main purpose of this meeting is to set specifications for 2021.

I'll just run through the items on the agenda. Under other business, I only have one item. Toni has asked for like one minute to update us on an issue, and when we get to that subject, I'll ask whether or not anyone else wants to add anything to the agenda.

APPROVAL OF AGENDA

CHAIR BORDEN: In terms of the agenda, any additions or deletions to the agenda, other than what I said? There are no hands up that I can see, Toni.

MS. TONI KERNS: I don't see any hands either, David.

CHAIR BORDEN: Okay, so any objections to approving the agenda? I have no hands up, the agenda stands approved as is.

APPROVAL OF PROCEEDINGS

CHAIR BORDEN: Approval of the proceedings is the next item of business. The proceedings of October 20th, any objections to approving the proceedings? If you object, please raise your hand. I see no hands up, the proceedings stand approved by consent.

PUBLIC COMMENT

CHAIR BORDEN: Public comments. We normally take public comments on issues that are not on the agenda, so are there any members of the public that wish to comment on a winter flounder issue that is not on the agenda? For this, Toni, I think I'm going to ask you, do you have any hands up?

MS. KERNS: No hands, David.

CHAIR BORDEN: Okay, so although we don't have any public comments at this time, I may take public comments later on, depending upon the circumstance.

CONSIDER SPECIFICATIONS FOR THE 2021 FISHING YEAR

CHAIR BORDEN: When we get to the substance of the meeting, we've got two items. One is a Technical Committee report, and the other is an Advisory Panel report. Dustin, would you like to provide both reports? I think you can do both at the same time, and then we'll take questions on both of them.

MR. DUSTIN COLSON LEANING: Yes, thank you, Mr. Chair, I'll just transition over to my screen now. All right, thank you. As the Chair alluded to, we have a pretty straightforward agenda today. We'll be covering winter flounder specifications for the 2021 to 2023 fishing years. I'll start with an outline here. Just going over a background first. I'll cover the status of the winter flounder Gulf of Maine and southern New England, Mid-Atlantic stock, followed by commercial and recreational fishery trends. Then I'll cover the New England Fishery Management Council winter flounder specifications for the fishing years 2021 through 2023.

Then, I'll go over the Addendum III specifications process. This will be followed by the Technical Committee report and recommendations, and then I'll wrap up with the Advisory Panel report, before we have the Board action, which is to consider setting specifications for the fishing years 2021

through 2023 for winter flounder, Gulf of Maine and southern New England/Mid-Atlantic stock.

The 2020 management track stock assessment determined that the Gulf of Maine winter flounder stock biomass, status is unknown, and overfishing is not occurring. For the 2019 biomass for fish over 30 centimeters, that is the exploitable threshold, according to the minimum size. This was estimated to be 2,862 metric tons, and the fishing mortality rate was estimated to be 0.052, which is well below the fishing mortality threshold of 0.23.

Side notes here, the Gulf of Maine stock is not in a rebuilding plan, since it was never declared overfished. Here we have a quick snapshot view of the surveys, which informs the stock assessment, a lot of noise here, a little volatility over the years. But for the most part we can see an average kind of flat line trend over time.

Hence, a very different picture when you look at total catch from both the commercial and recreational fisheries. As you can see, total catch has declined in the eighties, and precipitously in the nineties, and has remained quite low since. We've got commercial landings here in purple, and recreational landings here in green, all of which are at timeseries lows in recent years.

Despite the decline in commercial and recreational landings, the indices of abundance have remained somewhat flatlined. The general lack of response in survey indices, and lack of changes in age and size structure are the primary sources of concern, with catches remaining far below the overfishing level.

Now moving on to the southern New England and Mid-Atlantic stock. The spawning stock biomass in 2019 was estimated to be 3,959 metric tons, which is 32 percent of the biomass target, and 64 percent of the biomass threshold for an overfished stock. Both SSB or spawning stock biomass and fishing mortality are at timeseries lows.

As a reminder, this stock is in a rebuilding plan with a target date of 2023, and a projection using assumed catch in 2020 and fishing mortality of zero through 2023, indicated that there was about a 5 percent chance of rebuilding SSB to the target by 2023. Overall, the outlook is not looking very good for this stock.

Here we have recreational landings for the southern New England stock. As you can see here on the graph, we have the old MRIP landings in red and the blue designates the new MRIP landings. There was a scale up here, it was a pretty consistent scale up across the timeseries, but due to the scale of the graph, it's kind of hard to tease that out in the most recent years, where you've just got timeseries lows of recreational catch. Then we also have the commercial landings displayed here on this graph. We see a big decline in the eighties, followed by a little bit of an increase in the nineties, but then another precipitous decline from 2000 all the way until present day.

At the stock assessment peer review, Tony Wood, the assessment scientist, his sensitivity analysis using an environmentally driven model, was discussed. The inclusion of estuary water temperature into the model had little impact on the estimates of SSB but did help to explain the declines in recruitment values in recent years.

I mention this because it was in response to the Bell et al. paper, although it wasn't included in the official stock assessment. It was approved for management. It was ran as a sensitivity analysis, just to show that these things are being explored, and that it may help explain recruitment, but may not really contribute to any differences in estimated levels of spawning stock biomass.

Now moving into the specifications portion of this presentation. After these two stock assessments were accepted for management use, the Council met in December to set specifications for federal waters. This table displays the total ACL and state subcomponents for each of the stocks.

A state subcomponent is comprised of both recreational and commercial catch, and the commercial portion of the state subcomponent is caught by vessels that do not hold federal northeast multispecies permits. The recreational portion is based off of the MRIP estimates of recreational catch.

The subcomponent is an estimation of what the state fisheries will harvest each year. It is important to note that it is not an allocation, and there are also no accountability measures associated with a state water subcomponent, meaning that there is no pound for pound payback if the state waters subcomponent is exceeded.

Looking at this table, you can see that 2021 to 2023 Gulf of Maine state subcomponent was revised upward from the 2020 value, to reflect the recent fishery trends, using 2017 through 2019 average catch. The reverse happened for the southern New England/Mid-Atlantic stock, which was revised downward to reflect the reduction of catch in recent years.

As a reminder, Addendum III was approved in 2013, and this revised the specification process, so that the recreational and commercial fishery measures may be set for up to three years, to better align with the federal water's specifications process. Previously, measures were changed through addendums, and the majority of the measures that are currently in place were set through Addendum II.

The commercial measures that are subject to change are trip limits, trigger trip limits, size limits, season, and area closures. The recreational measures subject to change are size limits, bag limits and season. The commercial management measures presented here have not changed since 2014. I can come back to this slide later during the discussion, if needed. Here we have listed the current recreational winter flounder regulations by state. You'll note here that the federal waters measures are open all year, with no creel limit and a uniform size limit of 12 inches. This particular discrepancy between state and federal waters measures I'll get back to later.

TECHNICAL COMMITTEE REPORT

MR. COLSON LEANING: The Technical Committee met on January 6, to review recent fishery trends, stock status information, and the Council specifications to help review state waters measures.

The TC recommended no changes to the recreational or commercial measures, and there were several reasons for why they supported this recommendation. First, the Council's groundfish Plan Development Team or PDT adjusted the state subcomponent to reflect recent trends in catch. The 2017 through 2019 average catch was used as a proxy for catch in 2021.

But this assumed constant measures within state waters. Changing the measures would make this analysis invalid, and in effect invalidate the states subcomponent catch value. Second, the TC recalled their 2018 analysis, which indicated that the majority of southern New England and Mid-Atlantic commercial fishermen are not landing their trip limits, which means that the trip limit is successful in its design of solely accounting for bycatch.

Since winter flounder aren't being targeted in the southern New England/Mid-Atlantic stock, a greater reduction in the trip limit could lead to more regulatory discards, without much of an effect on fishing mortality. Lastly, the TC has heard anecdotal reports that anglers are rarely catching their bag limit, so adjustments to the recreational measures may not prove fruitful either.

The TC also discussed the mismatch between the state measures and the lack of a bag limit in season in federal waters, but reasoned that any angler fishing in the EEZ would need to abide by the regulations of the state waters they travel back through to, to get back to shore. TC was also concerned about the low likelihood of the stock rebuilding to the target biomass.

In addition, it is more concerning that fishing mortalities have not appeared to be the main cause, and they supported that more analysis is needed to better understand how environmental indicators play a role in winter flounder recruitment. This will likely need to be taken up in a more substantive way through the next research track stock assessment.

ADVISORY PANEL REPORT

MR. COLSON LEANING: The Advisory Panel also met. That was on January 14 via webinar. They discussed specifications, current fishery management issues, and provided research recommendations. Of note here that attendance was limited. We had one participant from the commercial industry, and two who are recreational fishermen, and also come from a very environmentally focused perspective.

The Advisory Panel members were all concerned about the status of the stock in southern New England/Mid-Atlantic, but there was some disagreement on what was the greatest cause for concern. One member noted that environmental stressors have been an issue, such as hypoxia, pollution, habitat destruction, as well as rising sea temperatures.

Another did think that sea temperature is an issue, but not to the extent in which it is being brought as the primary cause for low abundance. He however, thought that fishing mortality was the biggest issue, and should be addressed immediately. However, all three were in agreement that natural mortality through predation appears to be a big problem. The AP also commented on the fact that there are many places in the Gulf of Maine where winter flounder were once abundant, but are no longer encountered.

Due to these concerns, two Advisory Panel members supported a recreational fishing moratorium, until both stocks show increases in abundance. The third AP member in attendance, coming from the commercial industry perspective, thought that the potential cost of reduced access and regulatory discards, outweighed the potential benefits of a moratorium, and so did not support this recommendation, and felt he could not really weigh in on it, considering that he is more of a commercial representative.

Those original two AP members also thought that the inshore commercial fishery should close during the spawning season, from December to April, to protect the spawning stocks. The AP also had a number of research recommendations. They went from increasing understanding of the internal stock substructure, there have been some tagging studies that they referenced and talked about, but they encourage more research in this area, to kind of understand the interesting dynamics there.

One idea was to have sonic tag tracking studies, to improve the life history information of winter flounder. Another idea in that lane was looking at genetic testing to analyze natal homing. It was also the recommendation to conduct studies of eggs, larvae, and young of year, to test for abnormalities contributing to natural mortality.

One AP member was also interested in looking at the effects of nearshore pollution on winter flounder. Lastly here, just wrapping up. The AP also had a request specific to the Board to review panel membership, and appoint representatives. They recognize that this is an issue more broadly, not just with winter flounder. But there has been decreased participation in the Advisory Panel process.

They thought with the greater focus on younger membership, they might be able to ensure sustained stakeholder participation in the management process. With that I'll ask if there are any questions, and then as a reminder today, we are considering setting specifications for the 2021 through 2023 fishing years.

The Board has the ability to set specifications for only one year, if they prefer that approach. However, Addendum III did provide the ability to set specifications for three years, to align with the

Council specification setting process. With that I'll take any questions.

CHAIR BORDEN: Questions for Dustin, let's have the order of taking questions on the Technical Committee first. Any questions? I see no hands up, Toni, have you got any hands?

MS. KERNS: Yes, we have Conor McManus.

CHAIR BORDEN: Conor.

MR. CONOR McMANUS: Dustin, from the TC's notes, was it apparent whether there were suggestions for further research or work to address needs for upcoming stock assessments, to help better inform ABCs or OFLs, or was there more of a focus on trying to address some research or science within state waters that might lend themselves to better spatial management, or trying to address some of the questions during those early life stages? Just trying to get a sense from a management board perspective, where we should be trying to think about focusing our efforts.

CHAIR BORDEN: Dustin.

MS. KERNS: Dustin, if you're talking, we can't hear you.

MR. COLSON LEANING: Man, I hate when I do that. Thank you for letting me know, so I don't go on for a minute by myself. No, thank you for the question. It was tough, because the conversation at the Technical Committee level was sparked by the discussion of Tony Wood's sensitivity analysis.

Some on the TC acknowledged that it seems that some within the Board, or people who are interested in winter flounder management, are trying to grapple with the understanding of what does it mean if catch is declining precipitously over time, and you're not seeing a rebound in the population or recruitment. Most often with a rebuilding plan, the tried-and-true way to solve things is to reduce fishing mortality. In the absence of that being an effective tool, what can be done?

They were saying primarily we should get a better understanding of what may be causing this decline. Through the type of analyses that Tony Wood conducted and were referenced in the Bell et al. paper, but there were some problems there, because the timeline on which these might be revolved is kind of up in the air. I think at this point there hasn't been an official date set for the next research track stock assessment.

I think the date 2026 was tossed around. But up until now, the NRCC has established a process where substantial revisions to a stock assessment model needs a research track stock assessment, so that is why these types of analyses and this type of work haven't been conducted through the management stock assessment process. I may have kind of answered your question. You can maybe try reiterating again if I've missed some of your key points there.

CHAIR BORDEN: Conor, a follow up?

MR. McMANUS: No, thanks for that, Dustin. I was just thinking in the larger context, particularly in the discussions we had for lobster this morning, trying to find not just any tools to improve the stock, but the ones that are actually to be effective. Just trying to think about what properties for us to hone in on moving forward in the future.

What might these bottlenecks be, considering both the TC's and the AP's hypotheses for things for us to look at, and how we would try to address those? I think it's interesting in the context of temperature, and how that is, I think an improvement to the assessment model, once it passes if we can get it into a research track. But it's interesting in that it doesn't really change our understanding of SSB perhaps, so it might be helpful for a projection. But it leads to the question of what should we do moving forward. I guess I would just try to think from the Board perspective, and all of us, about what types of things we would want to consider, continue to look for guidance from the TC on how

we should prioritize examining the different processes that may be controlling southern New England and Mid-Atlantic winter flounder.

CHAIR BORDEN: Thanks, Conor, Tom Fote you're next.

MR. THOMAS P. FOTE: Yes, I was wondering if you have a projection of how the Gulf and Georges Bank winter flounder stocks are doing, because I know some of the guys that take trips. As a matter of fact, I did two years ago make the cruise, you know 35, 40 miles offshore to go for black sea bass.

We rounded up a winter flounder that was about 3 pounds, which is never what we see inshore, and never what we see in the bays and estuaries. We figured they were Georges Bank stock. What information can you give me on that? If we went and got basically recorded it when we came in, it would have been recorded as a New Jersey stock, but they were really, I think Georges Bank stock.

CHAIR BORDEN: Dustin, do you want to follow up on that, or someone else?

MR. COLSON LEANING: Yes, I'll give it a shot. I'm relatively new to winter flounder, so the majority of my experience and my learning process has been centered on these two stocks. Offhand, I can't give you the scientific stock assessment perspective. I can maybe pull that out later in the discussion. But I do know that during the Advisory Panel meeting, the commercial fishery representative was saying that they have been encountering some really sizeable, some really large winter flounder.

It seems from his perspective that there is a healthy offshore stock, and so that is in huge contrast to some of the winter flounder that are encountered inshore. He also noticed that discrepancy, and that kind of tied into the whole conversation about complex stock substructures, and how in some areas they may be completely gone, but in other areas they may still be doing quite well.

CHAIR BORDEN: Any other questions on either one of these reports? I have no hands up. Anyone? Toni, have you got? Jim Fletcher.

MR. JAMES FLETCHER: Since Tom is there, would you ask do the Jamaica Bay effect of the estrogen or warmer climate, and is it possible that one of those slides you showed had small fish in it? Has any consideration been done to enhancing the stock through producing mainly female fish? Thank you.

CHAIR BORDEN: Dustin.

MR. COLSON LEANING: Mr. Chair, I'm not sure if that was directed to me. I'm not sure if I'm able to answer that.

MR. FOTE: Dave, could I follow up on what Fletcher was asking? This is Tom Fote.

CHAIR BORDEN: Certainly.

MR. FOTE: Yes, what he is talking about is Dr. McElroy's study that was done in Jamaica Bay, which showed that there were only females in most of it. I mean there were like 15 to 1, 16 to 1, 14 to 1, and I think it was 13 to 1, in a survey she had done over a period of time, looking at winter flounder in Jamaica Bay.

As some of you know, I grew up fishing Jamaica Bay, and that has huge sewer outflows right into Jamaica Bay, and matter of fact, if you ever go out in the Bell Park, when you pass Starlight City, that is still the landfill seeping into Jamaica Bay from when we basically put in many years ago. There is a high concentration of anything disruptive in Jamaica Bay.

It looks like it is affecting the sex of winter flounder inside the bays and estuaries. It is one of, also the fact that New Jersey was the last one to see a collapse in the winter flounder stock, even though it was due to warm water. We should have seen the first collapse. But we have no bays or estuaries that we directly dumped sewage in, so we just pump it

directly into the ocean. The winter flounder were left alone when they were in the bays and estuaries. That is just a hypothesis, but Dr. McElroy, she's a friend of Emerson, he could probably answer more to that.

CHAIR BORDEN: Thanks, Tom, anyone else for a question for Dustin? I don't have any hands up. **If not, we're going to move on. I asked the staff to develop a draft motion. If they could put that up on the board, please. All right, you can see the motion that the staff recommends. Would someone like to make that as a motion?** If so, raise your hand. I've got Conor McManus, and then I have Dennis Abbott as a second. Any discussion on the motion?

MR. McMANUS: I guess I would just say well I do support this motion. I would just urge us to continue to think about, similar to other stocks in other circumstances, what we want this fishery to look like, and try and think through about what the goals are for us in southern New England, particularly in southern New England for winter flounder.

CHAIR BORDEN: Thanks, Conor, Dennis, would you like to comment on the motion?

MR. DENNIS ABBOTT: No, I don't think there is anything to comment on.

CHAIR BORDEN: Anyone else? I have no hands up. Let me ask, are there any objections to approving this motion by consensus? If so, raise your hand. There are no hands up, so the motion stands approved by consensus.

OTHER BUSINESS

CHAIR BORDEN: Next item on the agenda is Other Business. Toni, do you want to report on a follow up item?

MS. KERNS: I apologize, I'm having some work so I can have some heat added to my house, since I have none right now, and there might be some loud construction noises. A couple of commissioners have raised some concerns with staff, and we started to touch on some of these concerns, either through the TC report, or issues that folks have brought up. Conor, you raised some of them, in terms of trying to figure out what is the science that we need to understand, in order to start seeing rebuilding for this, in particular southern New England/Mid-Atlantic stock, and even some questions with the Gulf of Maine stock for winter flounder. The stock assessment showed that you wouldn't be able to rebuild the stock by 2023, and that is the end date for the rebuilding program.

We do not manage this stock alone; we partner with the New England Fishery Management Council on this stock. Federal regulations are set through the Council. The Commission just sets regulations in state waters, as we've done today, and there have been some questions raised about the discrepancy between trip limits in federal waters, versus state waters.

I think that there may need to be some additional discussion with the New England Fishery Management Council, that we have done some through the NRCC about how to move forward with management in this stock. What happens when we don't rebuild in 2023, questions such as that. You know there are some questions that we would want to bring forward to the Science Center.

Tony Wood did this paper that was not a part of the official peer review for the assessment, if I'm understanding correctly. We would need some more science, which we thought was going to be included in this last assessment, but then it turned out it wasn't. I think we just need to find a path forward for trying to rebuild this stock, or having an understanding of what is possible.

Maybe it isn't rebuilding this stock, but what does happen? I think we will bring forward these questions, and raise these issues with the NRCC, to try to work together as both NOAA Fisheries, the Science Center and New England Fishery Management Council, to find a path forward.

ADJOURNMENT

CHAIR BORDEN: Any questions for Toni? I see no hands up. Any other business to come before the Board? There are no hands up, so the meeting stands adjourned by consensus.

(Whereupon the meeting convened at 2:00 p.m. on Tuesday, February 2, 2021)

Introduction

This document summarizes the 2022 Stock Assessment Updates for the Gulf of Maine (GOM) and Southern New England/Mid-Atlantic (SNE/MA) winter flounder stocks. Both assessments revise the 2011 Benchmark Stock Assessments that were peer-reviewed by an independent panel of scientific experts at the 52nd Northeast Regional Stock Assessment Workshop/Stock Assessment Review Committee (SAW/SARC 52) meeting. These assessments reflect the latest and best information available on the status of the two winter flounder stocks for use in fisheries management.

Management Overview

Winter flounder (*Pseudopleuronectes americanus*) is an estuarine flatfish found in almost all shoal water habitats along the northwest Atlantic coast. The geographic distribution ranges from nearshore habitats to offshore fishing banks along the New England and Mid-Atlantic coast of North America.

Winter flounder are jointly managed by the Atlantic States Marine Fisheries Commission (ASMFC) and the New England Fishery Management Council (NEFMC) under complementary fishery management plans. This is due to their presence in, and migration between, state waters (0-3 miles) and federal waters (3-200 miles). The Commission sets regulations for state waters in accordance with Amendment 1 to the Winter Flounder Fishery Management Plan. NEFMC sets regulations for federal waters in accordance with the Northeast Multispecies Fishery Management Plan. The management unit for the GOM stock includes waters north of Cape Cod to the US-Canada border. By comparison, the SNE/MA stock area spans the waters south of Cape Cod to the Delaware-Maryland border.

In February 2021, the Winter Flounder Management Board approved status quo specifications (commercial trip limits, minimum size limits, seasons, area closures, and recreational bag limits) in state waters for the 2021-2023 fishing years. These same measures have been in place since 2014. Federal management focuses on the commercial fishery because the bulk of harvest in federal waters is attributed to commercial vessels. The federal commercial fishery is managed through an annual catch limit to prevent overfishing.

Life History

Winter flounder make annual spawning migrations into nearshore waters primarily during the winter. Adults migrate in two phases. An autumn estuarine migration occurs prior to spawning. In the late spring/early summer after spawning, they travel to either deeper, cooler portions of estuaries or to offshore areas. This pattern of seasonal distribution may change in colder waters at the northern extent of their range. Under these differing temperature conditions, winter flounder make a reverse migration to shallow waters in the summer and deeper waters in the winter. The annual spawning period varies geographically. Although spawning periods overlap considerably, peak spawning times are earlier in southern locations.

During spawning, females release eggs whose adhesive properties facilitate retention within spawning grounds. Many factors influence larval and juvenile growth and survival, including

temperature, salinity, dissolved oxygen, and food availability. Nursery habitat for winter flounder larvae and juveniles is typically saltwater coves, coastal salt ponds, estuaries, and protected embayments; although larvae and juveniles have also been found in open ocean areas such as Georges Bank and Nantucket shoals. Larvae are predominantly found in the upper reaches of estuaries in early spring, moving into the lower estuary later in the season. Five to six weeks after they hatch, larvae settle to the bottom to begin their transformation into juveniles. After several weeks of adapting to living on the bottom, juveniles' left eye migrates to the right side of their body and their metamorphosis is complete.

What Data Were Used?

The GOM and SNE/MA stock assessments used fishery-dependent and -independent data collected through state, federal, and academic research programs. Fishery-dependent data are collected from fish caught by either the commercial or recreational fisheries. Whereas fishery-independent data are collected from fish caught through biological surveys that are operated independently from commercial and recreational fisheries. The SNE/MA assessment included final data through 2021, and the GOM assessment included final data through spring 2022.

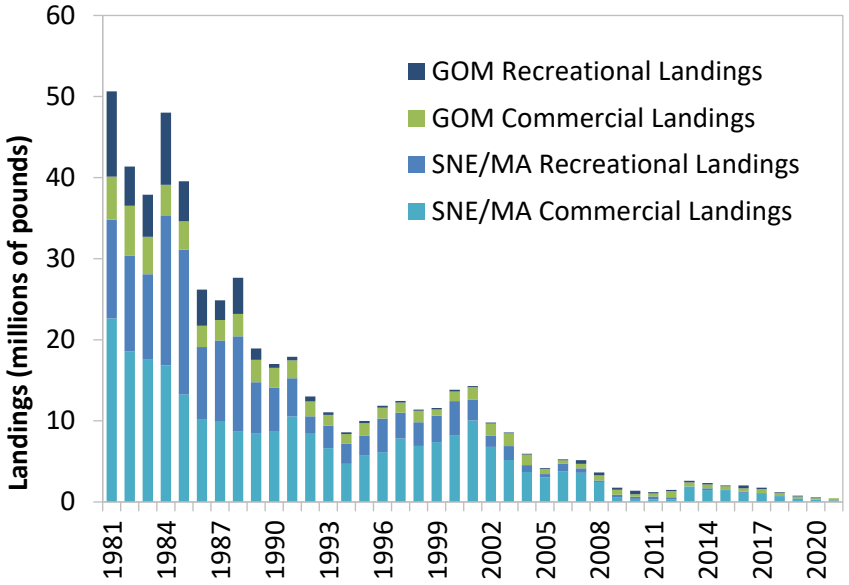
Commercial and Recreational Data

GULF OF MAINE

The stock assessment used commercial and recreational fishery landings and discards data. A discard mortality rate of 15% was assumed for recreational discards and 50% for commercial discards. Discards were estimated for the large mesh trawl (1982-2021), gillnet (1982-2021), and northern shrimp fishery (1982-2021).

Figure 1. Winter Flounder Commercial & Recreational Landings by Stock Unit

Source: Northeast Fisheries Science Center, 2022



Throughout the management area, states conduct strict commercial quota monitoring through various state and federal dealer and harvester reporting systems. Data from those sources is compiled into annual landings by state biologists.

The commercial fishery has experienced sharp declines in landings since the industry's heyday in the 1980s (Figure 1). Commercial landings peaked in 1982 at just over six million pounds and then declined steadily to approximately 770,000 pounds in 1999. Commercial landings have been below one million pounds since 2005, and were approximately 260,145 pounds in 2021.

Recreational catch, effort, and fish length frequency data were obtained from the Marine Recreational Information Program (MRIP) for 1982-2021. Starting in 2018, MRIP estimates of recreational effort and catch were improved through a transition from a phone-based survey to a mail-based survey to estimate fishing effort. Catch estimates prior to 2018 were subsequently calibrated to the new estimation methodology based on the improved mail-based survey.

Recreational landings represented a significant portion of total harvest on the GOM stock during the 1980s, ranging between 2.5 and 10.5 million pounds (Figure 1). Recreational landings dropped below 440,000 pounds in 1992 and continued to drop to their present low of approximately 94,799 pounds in 2021. This significant reduction in landings is largely attributable to low availability and/or low effort.

SOUTHERN NEW ENGLAND/MID-ATLANTIC

Similar to the GOM update, the SNE/MA update also relied on commercial and recreational fishery landings and discards data. A discard mortality rate of 15% was assumed for recreational discards and a discard mortality rate of 50% was assumed for the commercial discards.

Commercial landings from the SNE/MA stock have declined significantly from the record high of 22.6 million pounds in 1981 (Figure 1). Commercial landings averaged 14.8 million pounds in the 1980s, 7.3 million pounds in the 1990s, and 4.7 million pounds in the 2000s. In response to the poor condition of the stock, a moratorium in the SNE/MA fishery was implemented in federal waters between May 2009 and April 2013. Concurrently, a 50-pound commercial bycatch limit was implemented in state waters and still remains in place today. SNE/MA commercial landings only averaged 902,576 pounds in the past 10 years (2012-2021), with a time series low of approximately 192,322 pounds landed in 2021.

The recreational sector has also experienced significant declines over time due to decreases in abundance. Landings were around 12 million pounds in the early 1980s, increased to 18.5 million pounds in 1984, and then precipitously declined to between 2 and4.5 million pounds from 1992 to 2001 (Figure 1). Landings continued to decline over the next two decades, from a high of 1.4 million pounds in 2002 to a low of 1,080 pounds in 2019. In 2021, recreational landings were estimated at 11,222 pounds.

Fishery-Independent Surveys

GULF OF MAINE

The GOM stock assessment used research survey indices of abundance to estimate area-swept estimates of 30+ cm biomass based on the Northeast Fisheries Science Center (NEFSC) Bigelow Survey, the Massachusetts Division of Marine Fisheries Trawl Survey, and the Maine/New Hampshire Inshore Trawl Survey. The area-swept method uses mean catch (either in weight or in numbers) per unit of effort or per unit of area as an index of the stock abundance. This index is converted into an absolute measure of biomass. All three of the surveys are conducted annually in the spring and fall.

SOUTHERN NEW ENGLAND/MID-ATLANTIC

The SNE/MA stock assessment used several fishery-independent indices of abundance with associated age compositions from the NEFSC Winter, Spring, and Fall Surveys; the Northeast Area Monitoring and Assessment Program Spring Survey; the Massachusetts Spring Trawl Survey; the Rhode Island Spring Trawl Survey; the University of Rhode Island Graduate School of Oceanography Fish Trawl Survey; the Connecticut Long Island Sound Spring Trawl Survey; and the New Jersey Ocean and River Spring Survey. The model also used recruitment indices (age-0; young-of-the-year or YOY) from surveys conducted by the Massachusetts Department of Marine Fisheries and the Connecticut Department of Energy and Environmental Protection.

How Were the Data Analyzed?

Gulf of Maine – Area-Swept Assessment

GOM winter flounder assessment models developed during the 2011 assessment were determined to be too unreliable for stock status determination. The population models had difficulty with the conflicting data trends within the assessment, specifically, the large decrease in the catch over the time series with very little change in the indices or age structure in both the catch and surveys. Instead, an area-swept approach was utilized to produce an estimate of biomass. However, the area-swept method is unable to determine if the stock is overfished.

SNE/MA – Age-Structured Model, ASAP

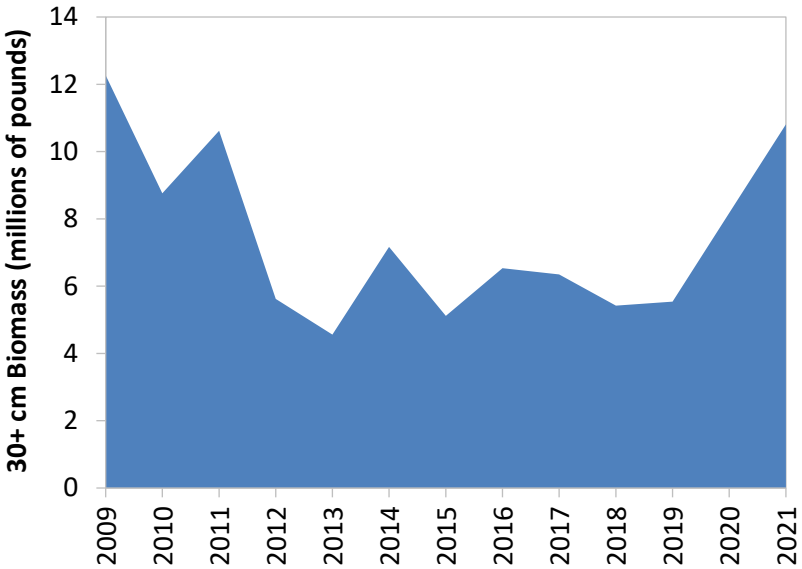
The Age-Structured Assessment Program (ASAP) model is the accepted model for the SNE/MA winter flounder stock assessment. The ASAP model uses commercial and recreational fishery landings and discards-at-age, as well as indices of abundance, to estimate annual stock size and fishing mortality rates. Indices of abundance indicate relative changes in abundance over time, while catch data provide information on the magnitude of abundance and the proportion of abundance removed by fishing. Age composition data link the information provided by indices of abundance and catch to specific year classes. Stock abundance is tracked by the model as new year classes recruit to the stock and then decline over time due to mortality (both natural and fishing).

What is the Status of the Stock?

Gulf of Maine

As described previously, the GOM stock was assessed using an area-swept model which does not provide spawning stock biomass reference points. As such, it is unknown if the stock is overfished. However, the assessment is able to provide an estimate of biomass for fish 30 cm and larger for 2009-2021 (Figure 2). The 2021 30+ cm exploitation rate was estimated to be 14% of the overfishing exploitation threshold proxy, indicating the stock is not experiencing overfishing.

Figure 2. Gulf of Maine Winter Flounder 30+ cm Biomass
Source: Northeast Fisheries Science Center Fall Survey, 2022



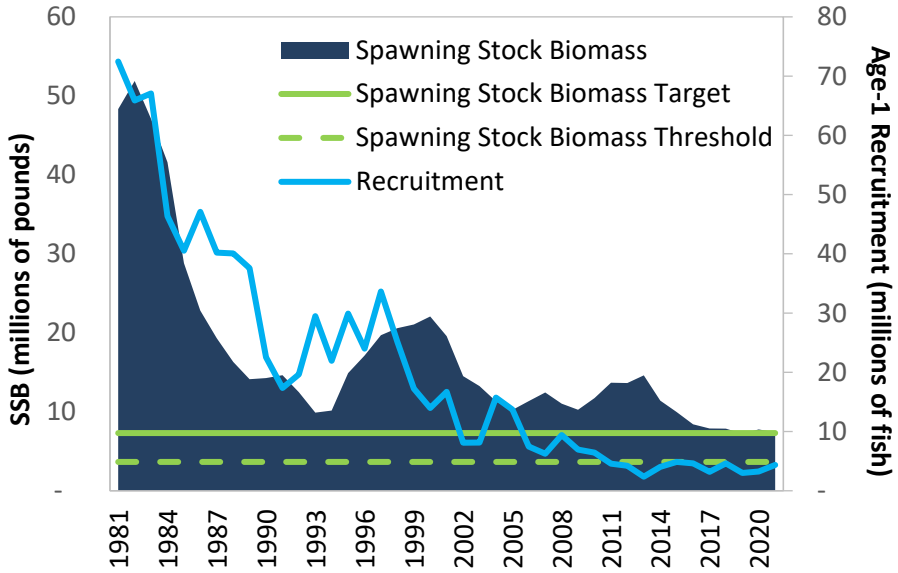
The GOM winter flounder stock has relatively flat survey indices with little change in the composition of age classes over time. This phenomenon is concerning considering the declining level of annual landings in the GOM. Overall, these indices of abundance have not demonstrated any positive response to the large declines in commercial and recreational removals since the 1980s. However, there were increases in the fall 2021 and spring 2021 and 2022 area-swept biomass estimates, which, if they continue, could be the beginning of a response to continued low fishing effort. It should be noted, however, that no survey data is available for 2020 due to the COVID pandemic, which is a source of uncertainty in this area-swept assessment that relies on survey data.

Southern New England/Mid-Atlantic

The 2022 assessment indicates the SNE/MA stock of winter flounder is not overfished and not experiencing overfishing relative to the updated biological reference points defined in the assessment. This is a change in stock status compared to previous assessments is due to a change in the years of recruitment estimates used

to estimate biological reference points. Instead of drawing upon the entire time series of recruitment estimates, the projections now only use recruitment estimates from the past 20 years (2002-2021). The winter flounder stock is most likely not capable of achieving the high levels of recruitment prior to 2000; therefore, using a truncated recruitment time series of only the past 20 years better reflects the current state of the stock.

Figure 3. Winter Flounder Southern New England/Mid-Atlantic Spawning Stock Biomass (SSB)
Source: Northeast Fisheries Science Center, 2022



SSB in 2021 is estimated at 7.4 million pounds, slightly above the SSB target of 7.3 million pounds (Figure 3). Total fishing mortality is estimated at 0.061, which is 23% of the overfishing threshold of 0.265 (Figure 4). Natural mortality, defined as the removal of fish from the stock due to causes not associated with fishing, is a source of uncertainty in the stock assessment. Natural mortality may be contributing to declining abundance.

Despite a change in stock status, the perception of the stock has not changed; trends in survey indices and model estimates all continue to indicate the stock is in poor condition.

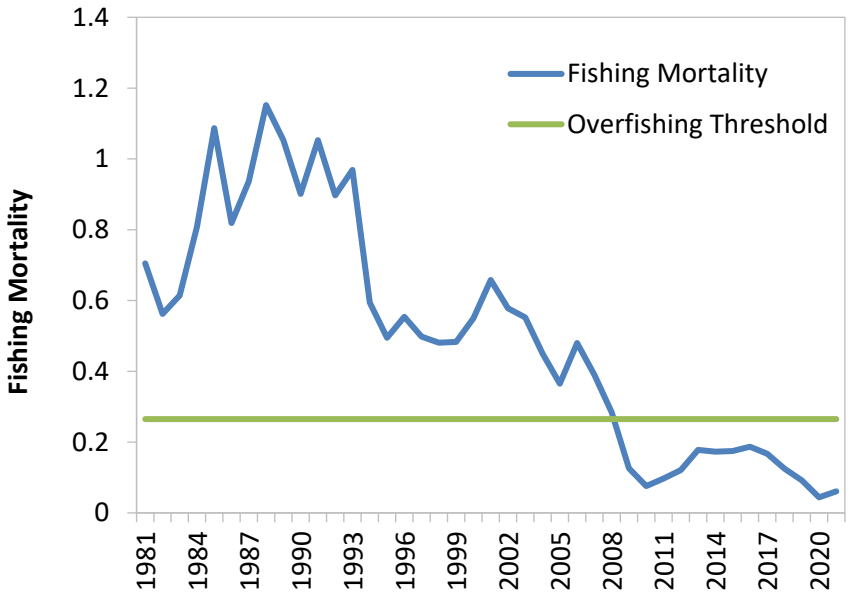
Recruitment

GULF OF MAINE

Estimates of recruitment are not possible under the area-swept assessment method.

SOUTHERN NEW ENGLAND/MID-ATLANTIC

Figure 4. Southern New England/Mid-Atlantic Fishing Mortality
Source: Northeast Fisheries Science Center, 2022



Recruitment, or the number of age-1 fish, for the SNE/MA stock has decreased significantly since peaking in 1981 at around 160 million. Since 1981 recruitment decreased precipitously to a low of 49 million in 1991. Recruitment had a small resurgence in the 1990s, reaching a peak in 1997 at 75 million fish before dropping to around 10 million recruits per year in 2011. Recruitment in 2021 was estimated at 4.4 million fish, a time series low (Figure 3). Preliminary analysis has revealed that winter estuarine water temperature influences recruitment. This may indicate that warming winter

temperatures are related to a reduction in the number of age-0 and age-1 fish. However, the exact environmental drivers of this declining trend in recruitment have not been definitively identified yet.

Biological Reference Points

GULF OF MAINE

The area-swept assessment does not produce biomass-based biological reference points.

SOUTHERN NEW ENGLAND/MID-ATLANTIC

The reference points used for management include a fishing mortality threshold of 0.265, SSB target of 7.31 million pounds, and SSB threshold of 3.65 million pounds. The SSB reference points are much lower than the previous assessment, due to limiting the recruitment estimates used in the projections to the past 20 years.

Data and Research Priorities

Gulf of Maine

The stock assessment indicated several areas for improvement. The area-swept assessment could be improved with additional studies on state survey gear efficiency. The current assessment averaged the full time series of catchability estimates, but the area-swept assessment model may more precisely estimate winter flounder biomass within the GOM if year-specific catchability estimates are applied instead. Statistical approaches that overcome the imbalance between night and day tows in a stratum could also be investigated. The assessment also identified the need for more studies quantifying winter flounder abundance and distribution among habitat types, and especially within estuarine environments.

Southern New England/Mid-Atlantic

The SNE/MA winter flounder assessment could be improved with additional studies on maximum age and maturity, particularly with regard to latitudinal patterns. The localized structure or genetics of the stock should be examined. The migration and movement rates of SNE/MA winter flounder need to be updated and investigated, especially as there has been advances in tagging technology and study design since the previous studies were conducted. Environmental influences on recruitment, mortality, and/or survey catchability should be incorporated when evaluating the stock using state-space models. All three winter flounder stocks (SNE/MA, GOM, and Georges Bank) should be assessed at the same time. Alternative model structures that may be robust to patterns of biases evident in age composition fits in commercial catch data and survey time series should be evaluated.

Next Steps

The Winter Flounder Management Board will meet at the Commission's Winter Meeting to set specifications for 2024-2025. The next management track assessment is scheduled for 2024, which will be used to set 2025-2027 specifications.

Glossary

Age structure: the separation of a fish population into distinct age groups

Age-Structured Assessment Program (ASAP): an age-structured stock assessment model that works forward in time to estimate population size and fishing mortality in each year

Area-swept method or approach: The mean catch (either in weight or in numbers) per unit of effort or per unit of area is an index of the stock abundance. This index is converted into an absolute measure of biomass.

Benthic: at or near the bottom of a body of water including the lowest level of water and bottom substrate

Demersal eggs: negatively or neutrally buoyant eggs

Fishing mortality rate: the instantaneous rate at which fish are killed by fishing

Recruitment: a measure of the weight or number of fish that enter a defined portion of the stock, such as the spawning stock or fishable stock. For this stock assessment, recruitment refers to the number of age-1 fish entering the population

Spawning stock biomass (SSB): the total weight of the mature females within a stock of fish; frequently used instead of total biomass as a better measure of the ability of a stock to replenish itself

Young-of the-year (YOY): an individual fish in its first year of life; for most species, YOY are juveniles, age-0 fish

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NEFSC. 2020. Southern New England Mid-Atlantic Winter Flounder 2020 Assessment Update Report, Northeast Fisheries Science Center, Woods Hole, Massachusetts.

draft working paper for peer review only

Gulf of Maine winter flounder

2022 Management Track Assessment Report

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Northeast Fisheries Science Center
Woods Hole, Massachusetts

Compiled September 2022

This assessment of the Gulf of Maine winter flounder (Pseudopleuronectes americanus) stock is a management track assessment of the existing 2020 area-swept management track assessment (NEFSC 2022). Based on the previous assessment the biomass status is unknown but overfishing was not occurring. This assessment updates commercial and recreational fishery catch data, research survey indices of abundance, and the area-swept estimates of 30+ cm biomass based on the fall NEFSC, MDMF, and MENH surveys.

State of Stock: Based on this updated assessment, the Gulf of Maine winter flounder (*Pseudopleuronectes americanus*) stock biomass status is unknown and overfishing is not occurring (Figures 1-2). Retrospective adjustments were not made to the model results. Biomass (30+ cm mt) in 2021 was estimated to be 5,093 mt (Figure 1). The 2021 30+ cm exploitation rate was estimated to be 0.033 which is 14% of the overfishing exploitation threshold proxy (E_{MSY} *proxy* = 0.23; Figure 2).

Table 1: Catch and status table for Gulf of Maine winter flounder. All weights are in (mt) and E_{Full} is the exploitation rate on 30+ cm fish. Biomass is estimated from survey area-swept for non-overlaping strata from three different fall surveys (MENH, MDMF, NEFSC) using an updated q estimate of 0.81 based on the wing spread from the sweep study (Miller et al., 2020).

	2016	2017	2018	2019	2020	2021
			Data			
Recreational discards	11	5	2	2	1	1
Recreational landings	41	161	80	42	51	43
Commercial discards	3	3	3	4	2	6
Commercial landings	185	210	158	102	81	118
Catch for Assessment	240	378	243	150	134	168
			Model Results			
30+ cm Biomass	3,037	3,039	2,610	2,620	NA	5,093
E_{Full}	0.079	0.124	0.093	0.057		0.033

Table 2: Comparison of reference points estimated in an earlier assessment and from the current assessment update. An $E_{40\%}$ exploitation rate proxy was used for the overfishing threshold and was based on a length based yield per recruit model from the 2011 SARC 52 benchmark assessment.

	2020	2022
E_{MSY} *proxy*	0.23	0.23
B_{MSY}	Unknown	Unknown
MSY (mt)	Unknown	Unknown
Overfishing	No	No
Overfished	Unknown	Unknown

Projections: Projections are not possible with area-swept based assessments. Catch advice was based on 75% of $E_{40\%}$(75% E_{MSY} *proxy*) using the terminal year fall area-swept estimate assuming q=0.81 on the wing spread which was updated using the average efficiency from 2009-2021 from the sweep experiment (Miller et al., 2020). Updated 2021 fall 30+ cm area-swept biomass (5,093 mt) implies an OFL of 1,171 mt based on the E_{MSY} *proxy* and a catch of 879 mt for 75% of the E_{MSY} *proxy*. Catch advice (OFLs and ABCs) from the 2020 managment track assessment was based on the average of the last two years of the fall surveys to make better use of the available new information and to help stabilize the catch advice. Alternatively, since the 2020 surveys are not available due to covid, using the average of updated 2021 and 2022 spring and 2021 fall 30+ cm area-swept biomass (4,660 mt) implies an OFL of 1,072 mt based on the E_{MSY} *proxy* and a catch of 804 mt for 75% of the E_{MSY} *proxy*.

Special Comments:

- What are the most important sources of uncertainty in this stock assessment? Explain, and describe qualitatively how they affect the assessment results (such as estimates of biomass, F, recruitment, and population projections).

  The largest source of uncertainty with the direct estimates of stock biomass from survey area-swept estimates originates from the survey gear catchability (q). Biomass and exploitation rate estimates are sensitive to the survey q assumption. However this 2022 update does incorporate the use of a re-estimated q through an average estimate of efficiency from 2009-2021 fall and 2009-2022 spring (q=0.81 fall and q=0.70 spring) from the sweep study for the NEFSC survey. This updated q assumption (0.81) results in a lower estimate of 30+ biomass (5,093 mt) relative to the 2020 estimate q=0.71 assumption (5,783 mt) from the updated fall surveys. Another major source of uncertainty with this method is that biomass based reference points cannot be determined and overfished status is unknown.

- Does this assessment model have a retrospective pattern? If so, is the pattern minor, or major? (A major retrospective pattern occurs when the adjusted SSB or F_{Full} lies outside of the approximate joint confidence region for SSB and F_{Full}

  The model used to determine status of this stock does not allow estimation of a retrospective pattern. An analytical stock assessment model does not exist for Gulf of Maine winter flounder. An analytical model was no longer used for stock status determination at SARC 52 (2011) due to concerns with a strong retrospective pattern. Models have difficulty with the apparent lack of a relationship between a large decrease in the catch with little change in the indices and age and/or size structure over time.

- Based on this stock assessment, are population projections well determined or uncertain? If this stock is in a rebuilding plan, how do the projections compare to the rebuilding schedule?

  Population projections for Gulf of Maine winter flounder do not exist for area-swept assessments and stock biomass status is unknown. This stock was never declared as overfished. Catch advice from area-swept estimates tend to vary with interannual variability in the surveys. Consideration was given to using multiple surveys (fall 2021 and spring 2021-2022) to stabilze the biomass estimates and catch advice since 2020 surveys are not available due to covid.

- Describe any changes that were made to the current stock assessment, beyond incorporating additional years of data and the effect these changes had on the assessment and stock status.

  The assumption on q changed from 0.71 to 0.81 for the fall and from 0.62 to 0.70 for the spring using information from the updated average qs from the NEFSC survey (Miller et al., 2020) and incorporation of new survey data were made to this Gulf of Maine winter flounder management track assessment. The 2020 and 2021 commercial catch estimates are based on CAMS in this assessment. However, changes in total removals will not directly affect the estimated biomass or catch advice and total removals still remain far below the overfishing definition. In addition there were some minor changes to the survey indices due to tow based area-swept adjustments.

- If the stock status has changed a lot since the previous assessment, explain why this occurred.

  The overfishing status of Gulf of Maine winter flounder has not changed.

- Provide qualitative statements describing the condition of the stock that relate to stock status.

  The Gulf of Maine winter flounder has relatively flat survey indices with little change in the size structure over time. There have been large declines in the commercial and recreational removals since the 1980s. This large decline over the time series does not appear to have resulted in a response in the stock's size structure within the catch and surveys nor has it resulted in a change in the survey indices of abundance. However, there have been increases in the fall 2021 and the spring 2021 and 2022 area swept biomass estimates. If increasing biomass trends continue then perhaps this is the beginning of a response to time series lows in exploitation rates.

- Indicate what data or studies are currently lacking and which would be needed most to improve this stock assessment in the future.

  Direct area-swept assessments could be improved with additional studies on state survey gear efficiency. Quantifying the degree of herding between the doors and escapement under the footrope and/or above the

headrope for state surveys is needed to improve the area-swept biomass estimates. Studies quantifying winter flounder abundance and distribution among habitat types and within estuaries could improve the biomass estimate.

- Are there other important issues?

  The general lack of a response in survey indices and age/size structure are the primary sources of concern with catches remaining far below the overfishing level. Recent increases in the biomass could perhaps be the being of a response to removals being at record lows over the last three years (2019-2021). If recent increases in biomass is a response to the low catches then continuation of keeping catchs near recent levels should result in further increases in biomass.

References:

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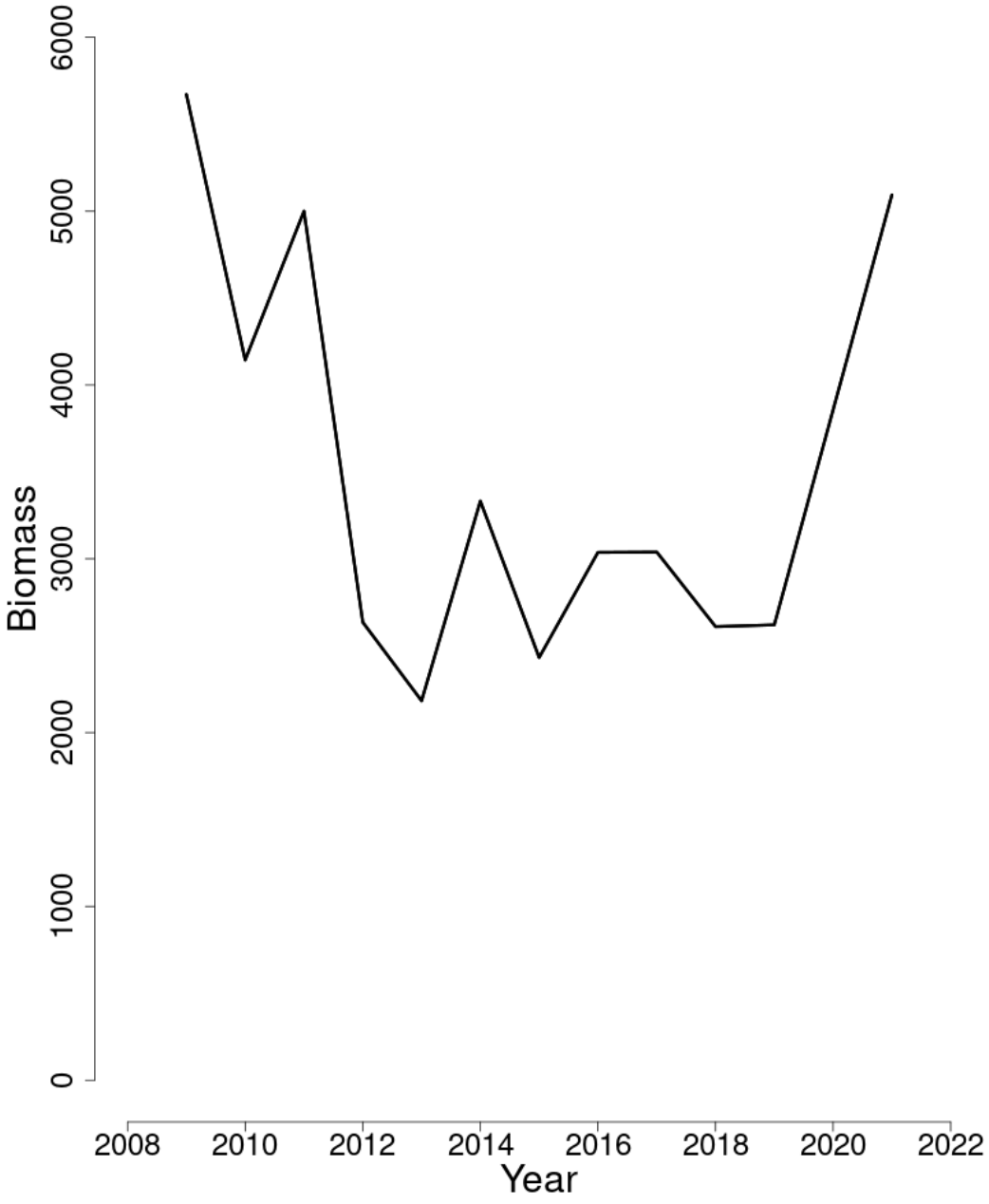

Figure 1: Trends in 30+ cm area-swept biomass of Gulf of Maine winter flounder between 2009 and 2021 from the current assessment based on the fall (MENH, MDMF, NEFSC) surveys.

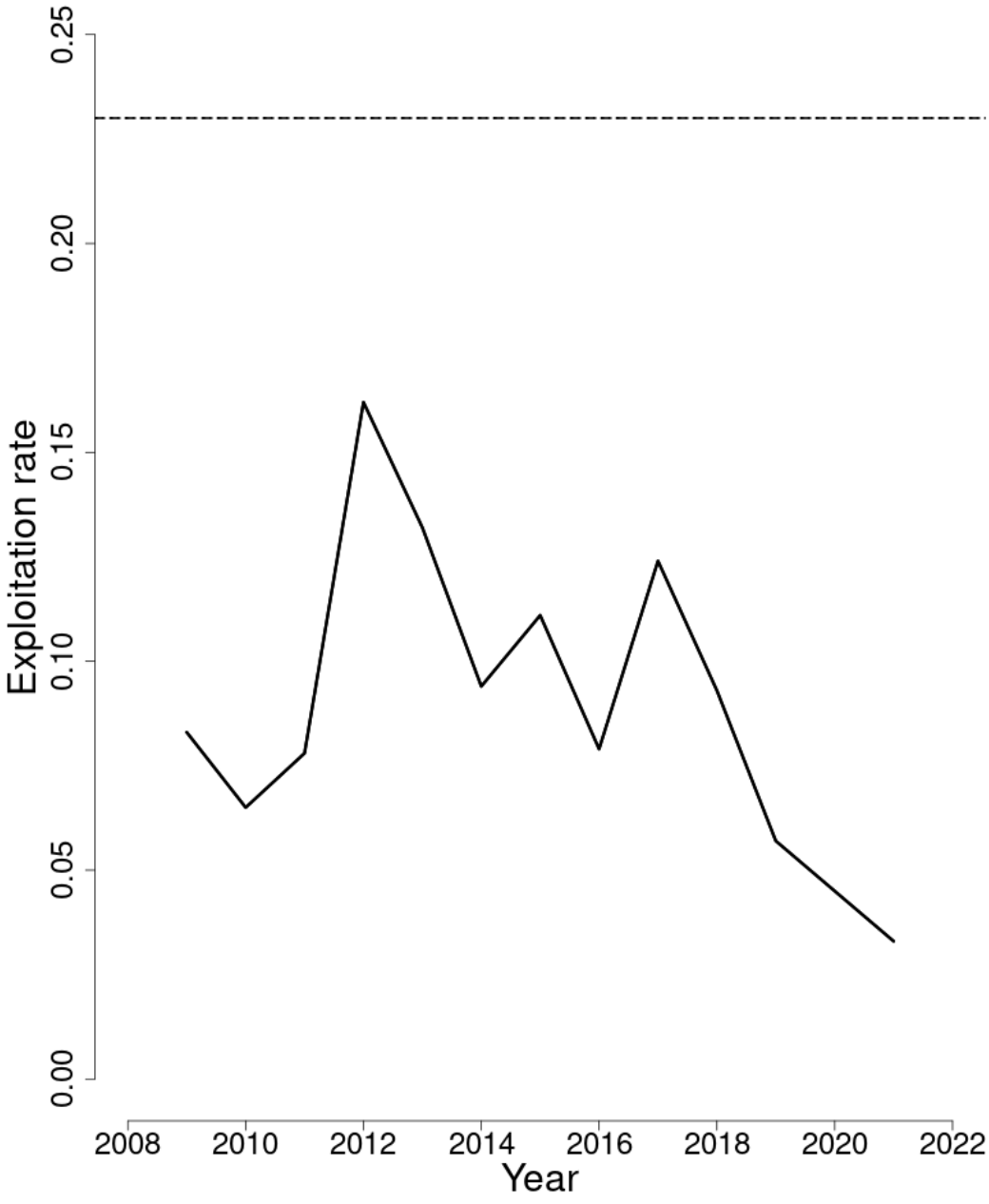

Figure 2: Trends in the exploitation rates (E_{Full}) of Gulf of Maine winter flounder between 2009 and 2021 from the current assessment based on the fall (MENH, MDMF, NEFSC) surveys and the corresponding $F_{Threshold}$ (E_{MSY} *proxy*=0.23; horizontal dashed line).

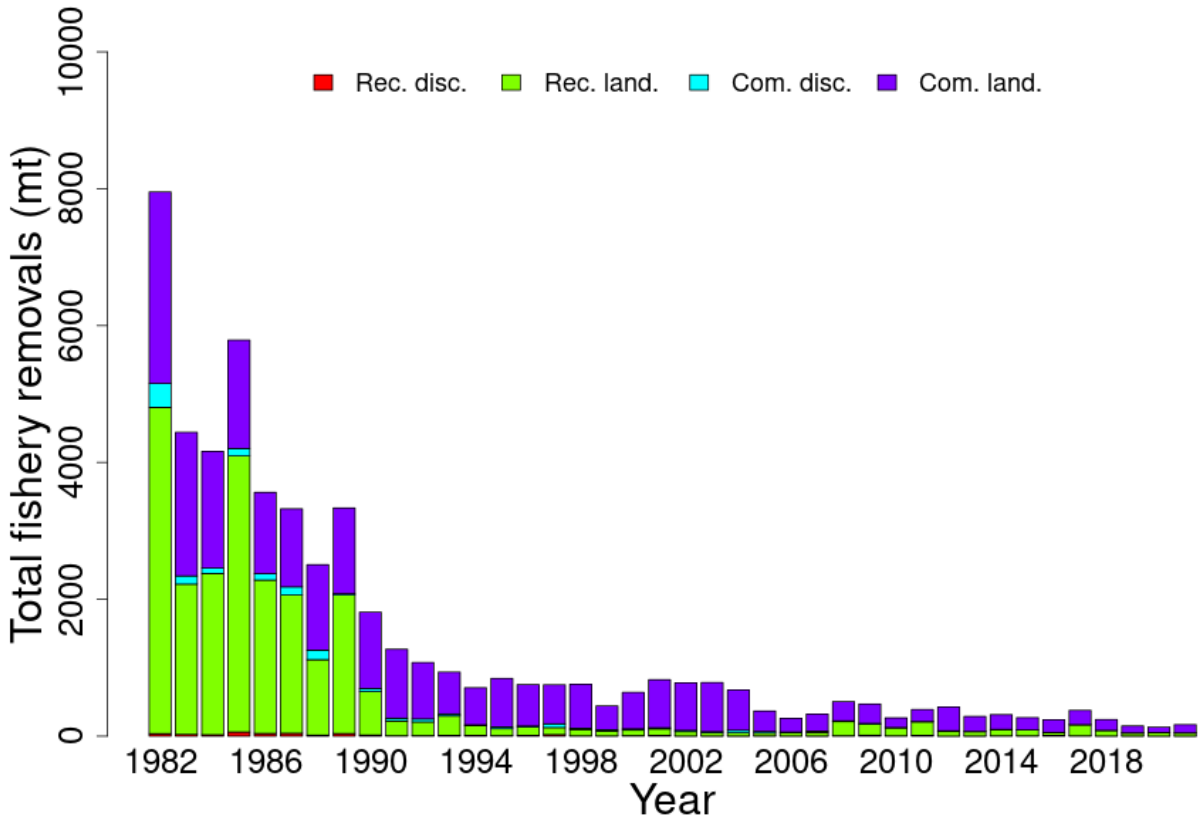

Figure 3: Total catch of Gulf of Maine winter flounder between 2009 and 2021 by fleet (commercial and recreational) and disposition (landings and discards). A 15% mortality rate is assumed on recreational discards and a 50% mortality rate on commercial discards.

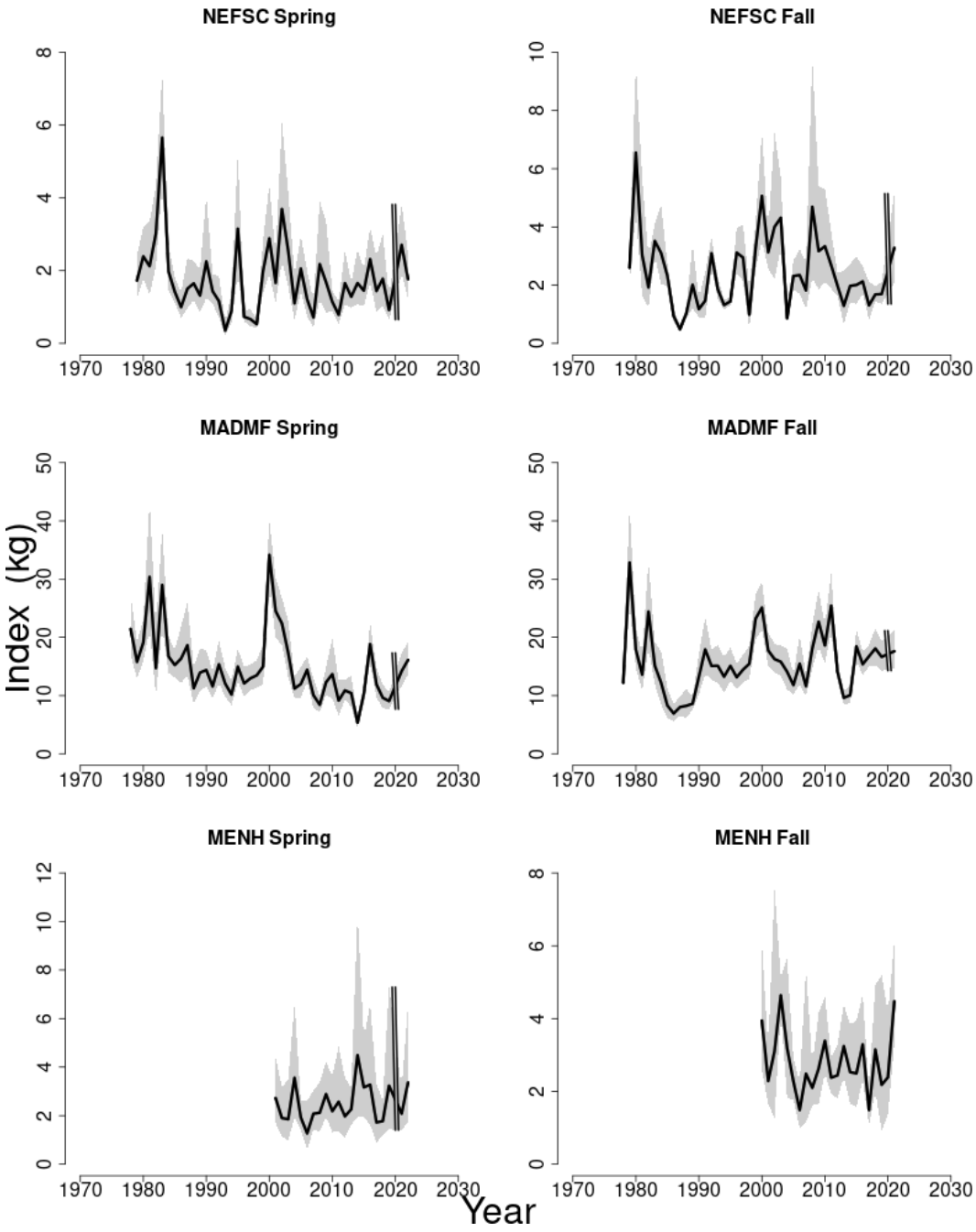

Figure 4: Indices of biomass for the Gulf of Maine winter flounder between 1978 and 2022 for the Northeast Fisheries Science Center (NEFSC), Massachusetts Division of Marine Fisheries (MDMF), and the Maine New Hampshire (MENH) spring and fall bottom trawl (strata 1-3) surveys. NEFSC indices are calculated with gear and vessel conversion factors where appropriate. The approximate 90% lognormal confidence intervals are shown.

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Southern New England Mid-Atlantic winter flounder

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Woods Hole, Massachusetts

Compiled June 2022

This assessment of the Southern New England Mid-Atlantic winter flounder (Pseudopleuronectes americanus) stock is an operational assessment of the existing benchmark assessment (NEFSC 2011), and follows operational updates in 2015, 2017, and 2020. In each assessment since the benchmark the stock was overfished, but overfishing was not occurring (NEFSC 2015, 2017, 2022). The current assessment updates commercial fishery catch data, recreational fishery catch data (using new MRIP calibrated data), research survey indices of abundance, and the analytical ASAP assessment models and reference points through 2021. Additionally, stock projections have been updated through 2025.

State of Stock: Based on this updated assessment, the Southern New England Mid-Atlantic winter flounder (*Pseudopleuronectes americanus*) stock is not overfished and overfishing is not occurring (Figures 1-2). Retrospective adjustments were not made to the model results. Spawning stock biomass (SSB) in 2021 was estimated to be 3,353.2 (mt) which is 101% of the biomass target (3,314 mt), and 202% of the biomass threshold for an overfished stock ($SSB_{Threshold}$ = 1657 (mt); Figure 1). The 2021 fully selected fishing mortality was estimated to be 0.061 which is 23% of the overfishing threshold (F_{MSY} = 0.265; Figure 2).

Table 1: Catch and status table for Southern New England Mid-Atlantic winter flounder. All weights are in (mt), recruitment is in (000s), and F_{Full} is the fishing mortality on fully selected ages (ages 4 and 5). Model results are from the current updated ASAP assessment.

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
					Data					
Recreational discards	11	8	4	13	3	2	4	2	3	1
Recreational landings	126	15	99	39	61	10	10	0	9	5
Commercial discards	482	206	64	82	125	101	108	127	47	122
Commercial landings	132	857	659	654	519	515	337	212	120	87
Catch for Assessment	750	1,085	826	787	708	629	460	342	180	216
					Model Results					
Spawning Stock Biomass	6,186.4	6,631.6	5,173.6	4,528.1	3,819.4	3,573.6	3,569.7	3,271.2	3,522.3	3,353.2
F_{Full}	0.121	0.178	0.173	0.175	0.187	0.167	0.125	0.092	0.044	0.061
Recruits	4,226.8	2,379.5	4,032.7	4,861.5	4,641	3,186.6	4,622.6	3,001.3	3,263.7	4,364.5

Table 2: Comparison of reference points estimated in the 2020 operational assessment and from the current assessment update. F40% was used as a proxy for F_{MSY} and an SSB_{MSY} proxy was calculated from a long-term stochastic projection drawing from the last 20 years of empirical recruitment. Recruitment estimates are median values of the time-series. 90% CI are shown in parentheses.

	2020	2022
F_{MSY} *proxy*	0.284	0.265
SSB_{MSY} (mt)	12,322	3,314 (2,432 - 4,687)
MSY (mt)	3,906	1,025 (755 - 1,441)
Median recruits (000s)	16,649	15,742
Overfishing	No	No
Overfished	Yes	No

Projections: Short term projections of biomass were derived by sampling from a cumulative distribution function of the last 20 years of recruitment estimates. The annual fishery selectivity, maturity ogive, and mean weights at age used in the projection are the most recent 5 year averages; The model exhibited a minor retrospective pattern in F and SSB so retrospective adjustments were not applied in the projections.

Table 3: Short term projections of total fishery catch and spawning stock biomass for Southern New England Mid-Atlantic winter flounder based on a harvest scenario of fishing at F_{MSY} *proxy* between 2023 and 2025. Catch in 2022 was assumed to be 441 (mt), which is the 2022 ACL for the stock. 90% CI are shown next to SSB estimates.

Year	Catch (mt)	SSB (mt)	F_{Full}
2022	441	3,472 (2,859 - 4,222)	0.114

Year	Catch (mt)	SSB (mt)	F_{Full}
2023	1,142	3,447 (2,845 - 4,156)	0.265
2024	1,276	3,894 (3,367 - 4,491)	0.265
2025	1,256	4,186 (3,666 - 5,011)	0.265

Special Comments:

- What are the most important sources of uncertainty in this stock assessment? Explain, and describe qualitatively how they affect the assessment results (such as estimates of biomass, F, recruitment, and population projections).

  A source of uncertainty is the estimate of natural mortality based on longevity, which is not well studied in Southern New England Mid-Atlantic winter flounder, and assumed constant over time. Natural mortality affects the scale of the biomass and fishing mortality estimates. Natural mortality was adjusted upwards from 0.2 to 0.3 during the last benchmark assessment (2011), assuming a max age of 16. However, there is still uncertainty in the true max age of the population and the resulting natural mortality estimate.

  Other sources of uncertainty include the length distribution of the recreational discards. The recreational discards are a small component of the total catch, but the assessment suffers from very little length information used to characterize the recreational discards (1 to 2 lengths in recent years). For this assessment a compiled discard length distribution over all years was used to characterize the recreational discards. In addtion, the poor sampling of recreational fishery information could be an issue for this assessment moving forward.

  The population projections are sensitive to the recruitment model chosen, as well as the temporal period selected from which recruitment estimates are drawn. In addition, recruitment and natural mortality are likely both dependant on environmental conditions, which can not be explored within the framework of ASAP

- Does this assessment model have a retrospective pattern? If so, is the pattern minor, or major? (A major retrospective pattern occurs when the adjusted SSB or F_{Full} lies outside of the approximate joint confidence region for SSB and F_{Full}

  The retrospective patterns for both Ffull and SSB are minor and a retrospective adjustment in 2021 was not required.

- Based on this stock assessment, are population projections well determined or uncertain? If this stock is in a rebuilding plan, how do the projections compare to the rebuilding schedule?

  Population projections for Southern New England Mid-Atlantic winter flounder are reasonably well determined. However, the results are sensitive to both the recruitment model and the time-period of recruitment used. In addition, while the retrospective pattern is considered minor (within the 90% CI of both F and SSB), the rho adjusted terminal value of F and SSB are close to falling outside of the confidence bounds, which would indicate a major retrospective pattern. This would lead to retrospective adjustments being needed for the projections.

  The stock is in a rebuilding plan with a rebuild date of 2023. The projections for this assessment update used a truncated stanza for recruitment, incorporating values from 2002-2021 (last 20 years). Previous assessments have used the entire time-series of recruitment, with historical recruitments that are well beyond

the current productivity of the stock. The truncated recruitment stanza led to a much reduced biomass target and as a result the overfished status of the stock has changed. The current status is that the stock is not overfished, overfishing is not occurring, and the stock has rebuilt by the 2023 deadline.

- Describe any changes that were made to the current stock assessment, beyond incorporating additional years of data and the effect these changes had on the assessment and stock status.

  There has been a change in the commercial data processing for the NEFSC over the past few years. The NEFSC has switched to the Catch Accounting and Monitoring System (CAMS) from the AA table procedure. CAMS estimates of landings were available for 2020 and 2021. CAMS will be used going forward for commercial catch information and historical catch from 1981-2019 will remain based upon the AA table estimates.

  A minor change was made to the assessment model data for this update. The NEFSC fall survey index was previously input as an age 2-7+ index. This input format was carried over from when the model was a VPA. The index was un-bumped to an age 1-7+ index, which did not have any noticeable impacts on model performance or estimates.

  There was a change to the stanza of recruitment that is used in the projections for this update (which led to the level 3 review requirement). This new recruitment stanza uses the last 20 years of estimates (2002-2021) for both short term projections, and to estimate the biomass target (SSBMSY) from a long term (100yr) projection. Previous assessments have used the entire time-series of recruitment (1981-present). Many of the historical recruitment estimates are overly optimistic, if not impossible, for the current stock size and productivity to achieve. Very early recruitment estimates are 20 times the levels seen in recent years. At the 2020 management track review the main recommendation from the review panel was:

  The Peer Review Panel notes, as had been done in previous reviews, that recruitment had been de- clining throughout the period and was currently very low. As for several other stocks under the purview of the NEFSC it would be helpful to evaluate if the previously observed high recruitment are possible; i.e., is it simply a matter of building back SSB and recruits will follow, or are there other factors at play. If the productivity of the resource(s) has decreased, it would be helpful to adjust reference points accordingly. This would be unlikely to change fisheries yield much but would be more realistic in terms of setting expectations.

  Extensive work has been carried out to evaluate the effects of climate change on recruitment for southern New England winter flounder. Two assessment models that include environmental covariates have been developed: an environmental ASAP model (Bell et al 2018) and the transition of this environmental model into the state space Woods Hole Assessment Model (WHAM). In order to move to one of these alternative models for management, SNEMA winter flounder would have to go through a research track assessment. To help bridge the gap from now until the next research track (2026) more realistic reference points were estimated in this assesment. The environmental index (time-series of mean winter estuary temperatures) applied in the alternative assessment models was used as support in this assessment for choosing a more representative time period of recruitment for the projections.

- If the stock status has changed a lot since the previous assessment, explain why this occurred.

  The stock status of Southern New England Mid-Atlantic winter flounder has changed since the previous operational updates and from the status determined at the last benchmark assessment in 2011. The overfished status of the stock has changed to not overfished, and the stock is now considered rebuilt by the 2023 deadline. The reason for this change in status determination is directly due to changing the recruitment stanza going into the projections. Previous assessments used the full time-series of recruitment, however, for this assessment a more recent range of recruitment (the last 20 years) was chosen. This truncated recruitment stanza eliminates the highest estimates of historical recruitment and greatly reduces the median recruitment used by the projections. The lower median recruitment estimates in the long term BRP projection results in a much lower SSB value for the SSBMSY reference point. While the stock status has changed, the perception of the stock has not, and recent model estimates and fishery independent survey indices all reveal a poor stock condition for southern New England winter flounder.

- Provide qualitative statements describing the condition of the stock that relate to stock status.

  The Southern New England Mid-Atlantic winter flounder stock shows an overall declining trend in SSB over the time series, with the current estimate (3,353 MT) at the second lowest in the time series. Estimates of fishing mortality have been declining since 2015 and the current value (0.061) is also the second lowest of the time-series. Recruitment has reamined low and steady over the past decade with a current value of 4.4 million fish, which is above the 10 year average of 3.9 million fish

- Indicate what data or studies are currently lacking and which would be needed most to improve this stock assessment in the future.

  The Southern New England Mid-Atlantic winter flounder assessment could be improved with additional studies on maximum age, as well as improved recreational discard length information. In addition, further investigation into the localized struture/genetics of the stock is warranted. Finally, a future shift to WHAM (during the next research track assessment) will provide the ability to model envirionmental factors that may influence recruitment and mortality, and help develop more informed population projections.

- Are there other important issues?
  None.

References:

Bell, R.J., A.D. Wood, J. Hare, D. Richardson, J. Manderson, and T. Miller.Rebuilding in the face of climate change. CJFAS 75(9) https://doi.org/10.1139/cjfas-2017-0085

Northeast Fisheries Science Center. 2011. 52^{nd} Northeast Regional Stock Assessment Workshop (52^{nd} SAW) Assessment Report. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 11-17; 962 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026.

Northeast Fisheries Science Center. 2015. Operational Assessment of 20 Northeast Groundfish Stocks, Updated through 2014. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 15-24; 251 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026.

Northeast Fisheries Science Center. 2017. Operational Assessment of 19 Northeast Groundfish Stocks, Updated through 2016. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 17-17; 264 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026.

Northeast Fisheries Science Center. 2022. Fall Management Track Assessments 2020US Dept Commer, Northeast Fish Sci Cent Ref Doc. 22-08; 168 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026.

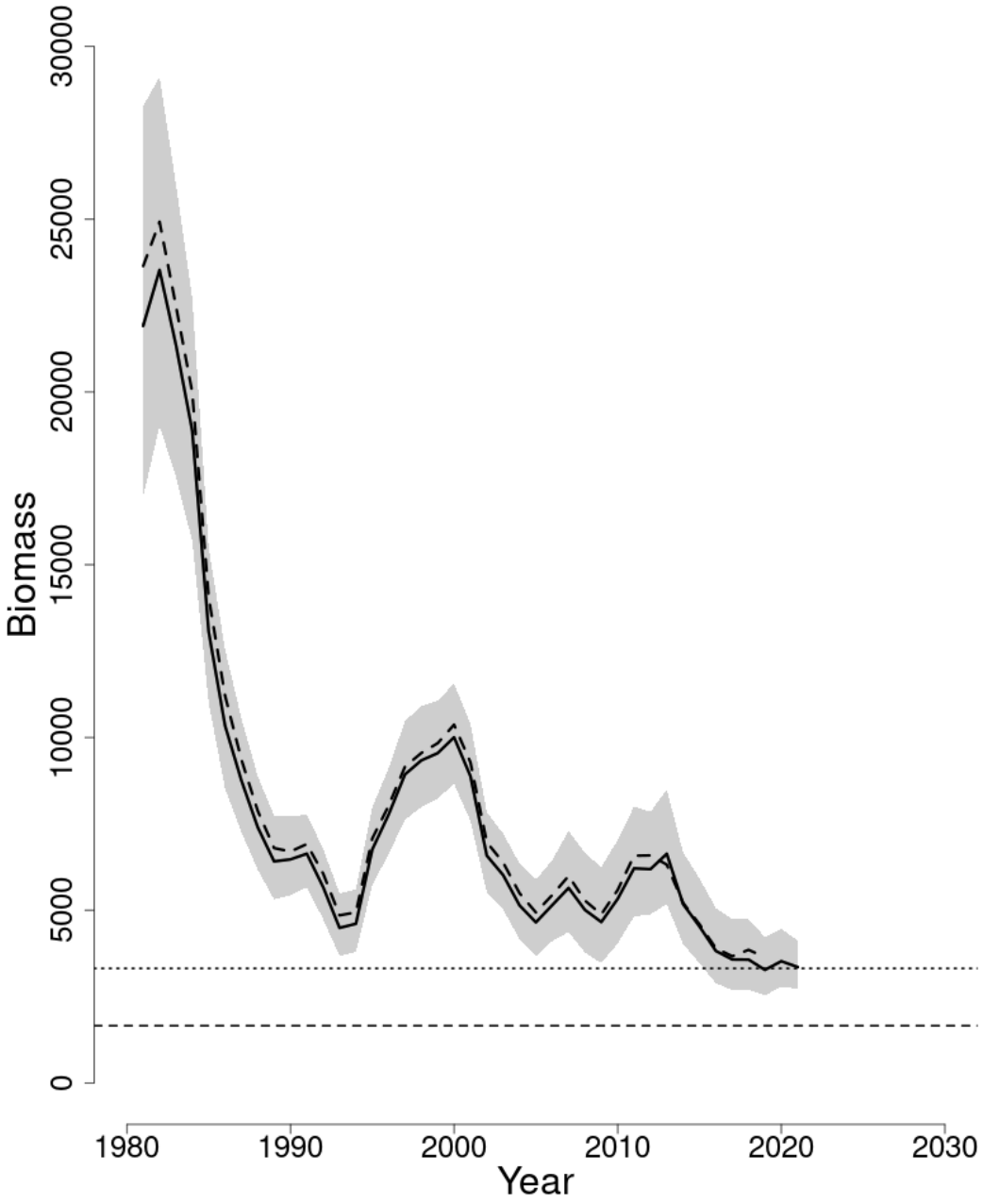

Figure 1: Trends in spawning stock biomass of Southern New England Mid-Atlantic winter flounder between 1981 and 2021 from the current (solid line) and previous (dashed line) assessment and the corresponding $SSB_{Threshold}$ ($\frac{1}{2}$ SSB_{MSY} *proxy*; horizontal dashed line) as well as SSB_{Target} (SSB_{MSY} *proxy*; horizontal dotted line) based on the 2022 assessment. The approximate 90% lognormal confidence intervals are shown.

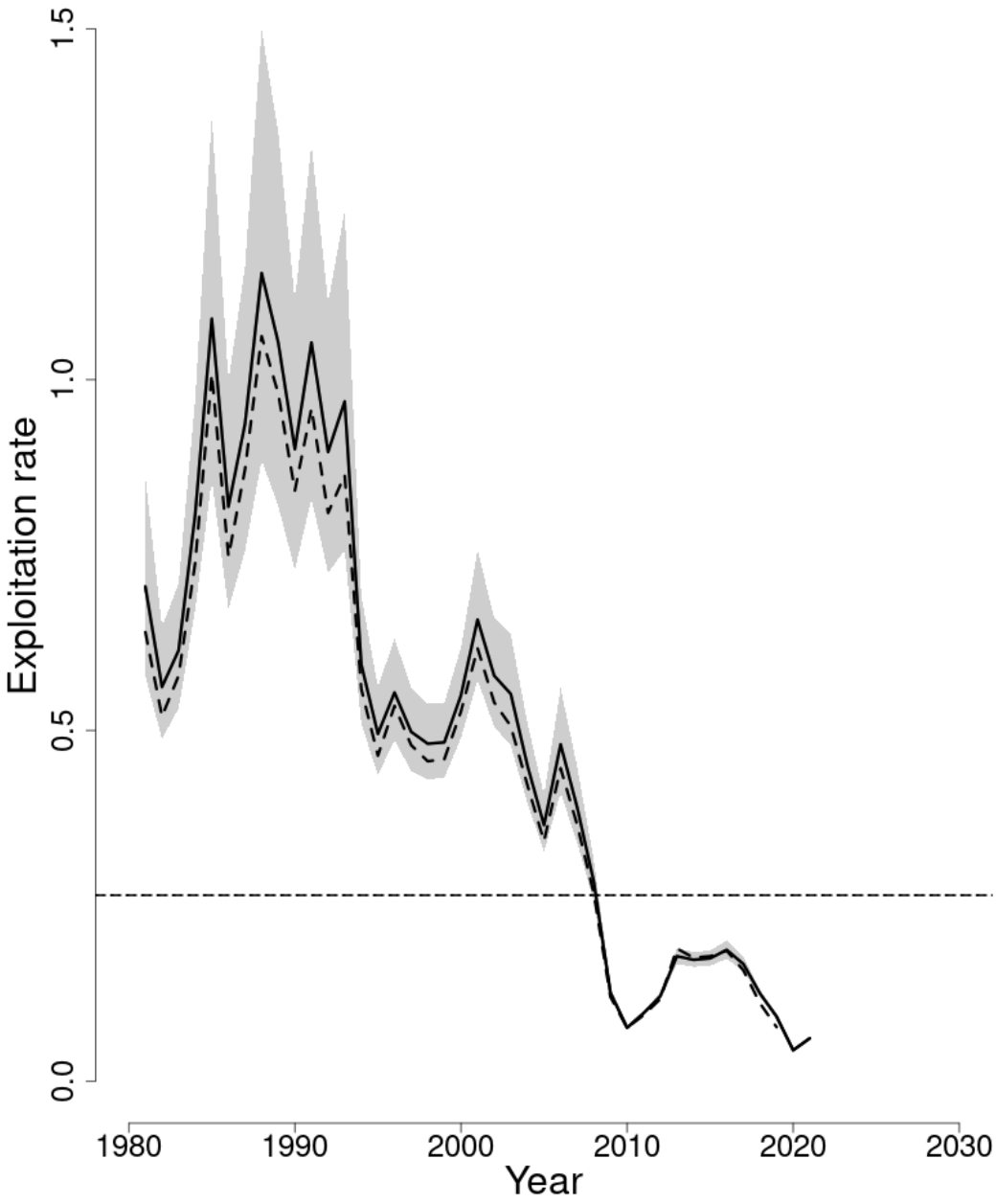

Figure 2: Trends in the fully selected fishing mortality (F_{Full}) of Southern New England Mid-Atlantic winter flounder between 1981 and 2021 from the current (solid line) and previous (dashed line) assessment and the corresponding $F_{Threshold}$ (F_{MSY}=0.265; horizontal dashed line) based on the 2022 assessment. The approximate 90% lognormal confidence intervals are shown.

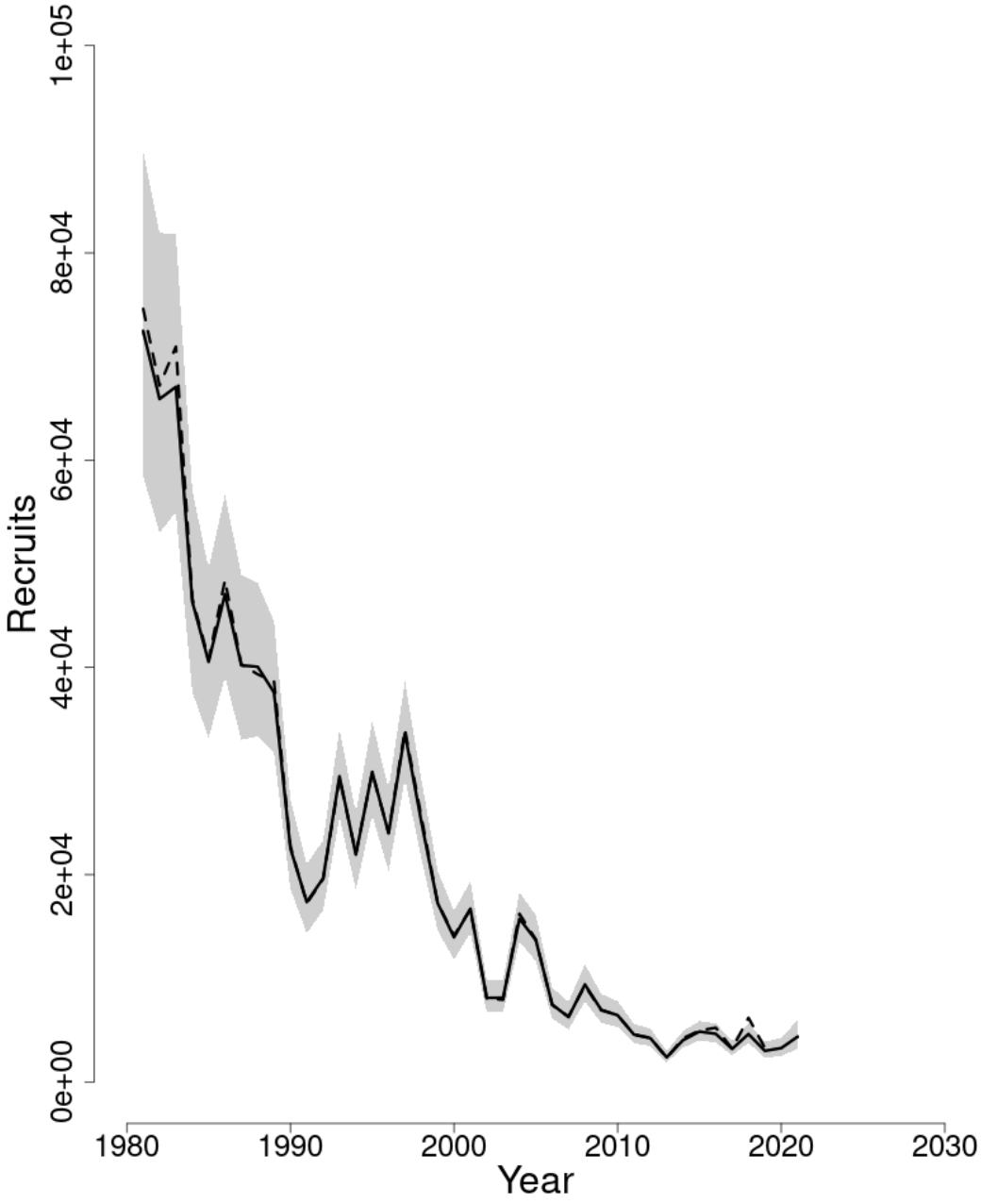

Figure 3: Trends in Recruits (000s) of Southern New England Mid-Atlantic winter flounder between 1981 and 2021 from the current (solid line) and previous (dashed line) assessment. The approximate 90% lognormal confidence intervals are shown.

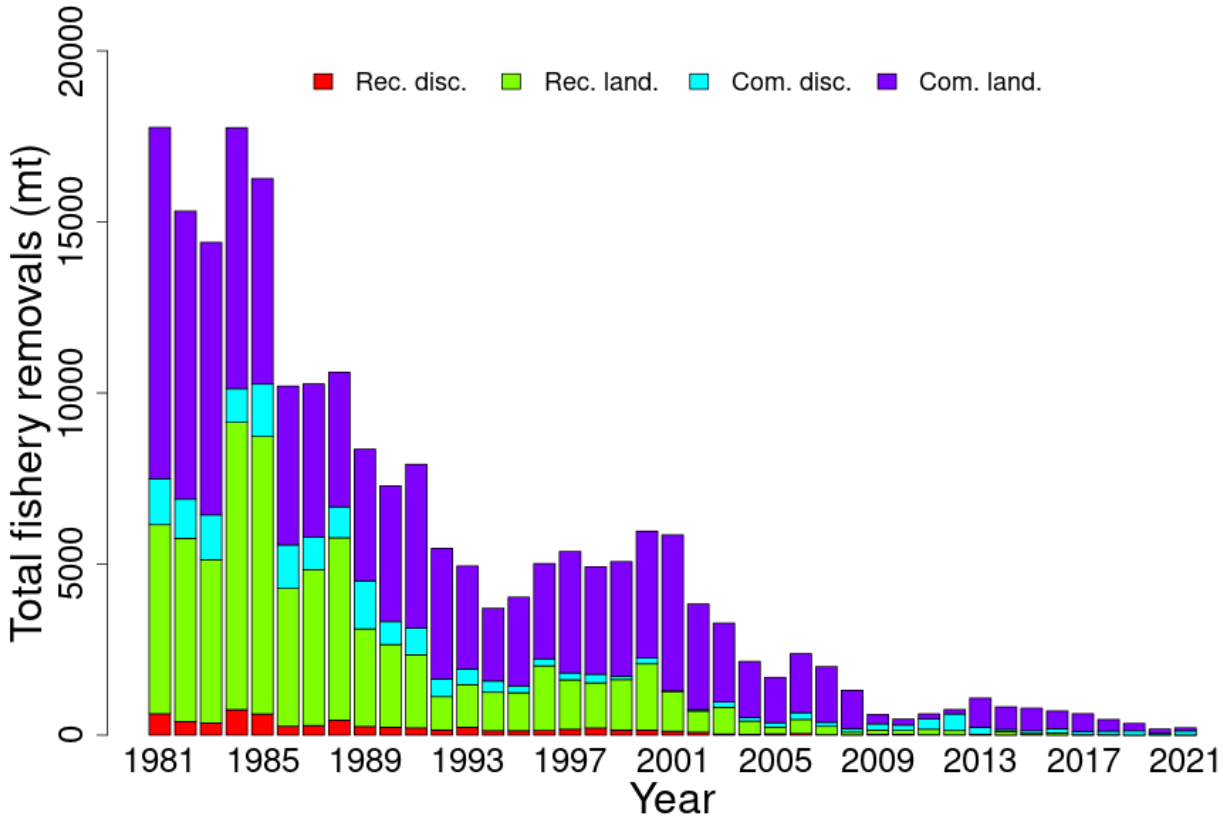

Figure 4: Total catch of Southern New England Mid-Atlantic winter flounder between 1981 and 2021 by fleet (commercial, recreational) and disposition (landings and discards).

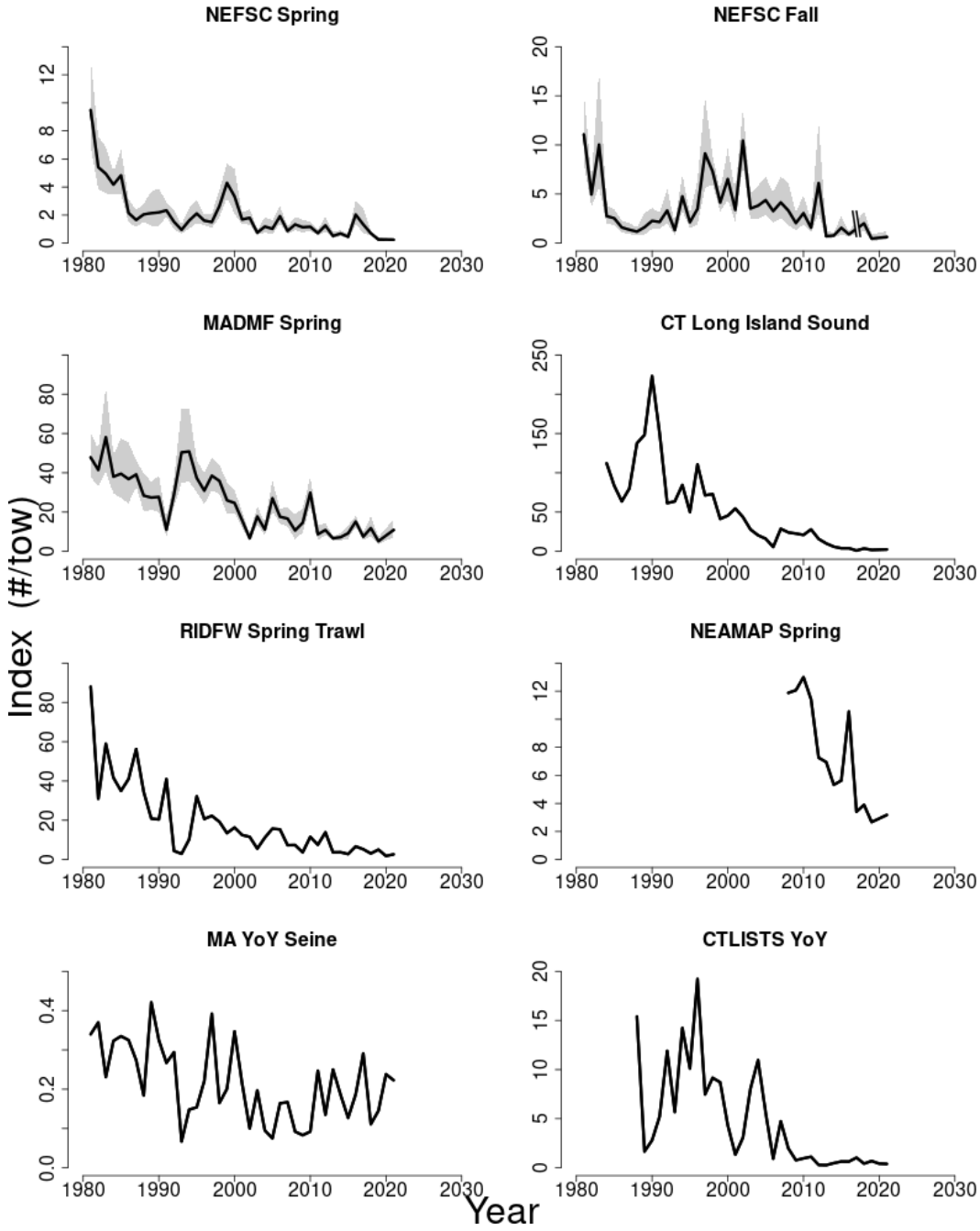

Figure 5: Indices of biomass for the Southern New England Mid-Atlantic winter flounder between 1981 and 2021 for the Northeast Fisheries Science Center (NEFSC) spring and fall bottom trawl surveys, the MADMF spring survey, the CT LISTS survey, the RIDFW Spring Trawl survey, the NJ Ocean Trawl survey, and two YoY surveys from MADMF and CT LISTS. Where available, the approximate 90% lognormal confidence intervals are shown. Slashes through the solid line indicate a hole in the survey time series.

Atlantic States Marine Fisheries Commission

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Winter Flounder Advisory Panel
Call Summary

Webinar
January 12, 2023

Advisory Panel Members in Attendance: Bud Brown (Chair, ME), David Goethel (NH), Charles Witek (NY), Allen Butler (MA)

ASMFC Staff: Tracey Bauer

Others in Attendance: Jared Lamy, Tony Wood, Paul Nunnenkamp, Tara Dolan, Paul Nitschke, Kurt Blanchard, Jay Hermsen

The Winter Flounder Advisory Panel (AP) met via conference call to review the Gulf of Maine (GOM) and Southern New England/Mid-Atlantic (SNE/MA) stock assessments, provide recommendations for 2024-2025 specifications for state waters, and to comment on any other current fishery management issues of concern to them.

General Comments
General concern was expressed by the AP about the low abundance in both the Gulf of Maine and Southern New England/Mid-Atlantic areas. One AP member was also concerned that the current low rates of reproduction cannot overcome the higher rate of natural mortality.

Specifications Recommendations
One advisor recommended a moratorium for the SNE/MA winter flounder stock, as he thought there was little interest by recreational fishermen in this area for a fishery, and an open season in the GOM because he believed more people actively participate in that fishery. Another advisor cautioned that, given the state of the stock, they prefer to convert those discards to landings. This advisor recommended to continue to have a small recreational creel limit and a small commercial trip limit, as they would rather see some landings than dead discards. This advisor also supported allowing some landings because this will ensure scientific data are still be able to be collected on the catch, and that a complete moratorium would mean no data would be able to be collected. A third advisor initially recommended no allowable catch in both SNE/MA and GOM regions, but later agreed with this second advisor that some landings should be allowed to minimize dead discards.

An advisor commented that the Winter Flounder Management Board should not have expanded the winter flounder fishing season in the SNE/MA region in 2014, and that it should instead be limited again.

Two AP members expressed support for all states to adopt a commercial and recreational spawning season closure to allow winter flounder the chance to spawn with no fishing pressure, and recommended that the Board strive for consistency in spawning closure seasons between states. An AP member noted that currently, there is disparity between states with spawning closures in both the

commercial and recreational fisheries; some states do not have closures at all, and for those that do, the timing of the spawning closure can differ between states.

Research Recommendations

The advisory panel also provided comments on research recommendations for consideration at the next research track stock assessment. Two advisors expressed their concern that the current stock boundaries do not reflect what may actually be many more distinct, smaller stocks that we should be managing by; they believed more research into winter flounder genetics was crucial to understanding this issue. An AP member expressed his frustration that the stock assessments do not include many years of high catch and abundance of winter flounder because the start years currently used are at the latest in the 1980's; however, it was explained that the data for these earlier periods, especially for the recreational fishery, are sparse or does not exist.

One advisor expressed concern that discards from observer data are being misrecorded and recommended that discards and discard mortality in state waters should to be investigated further. Winter flounder discards in state waters are currently calculated from only federal observer data and so these data are more uncertain than the federal discard numbers. This advisor recommended that states should not rely on the federal observer program to calculate these discards, but instead should invest in their own systems to calculate discards and discard mortality.

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MEMORANDUM

January 9, 2023

To: **Winter Flounder Management Board**

From: **Tina Berger, Director of Communications**

RE: **Advisory Panel Nomination**

Please find attached a new nomination to the Winter Flounder Advisory Panel – Allan Butler, a recreational angler from Massachusetts. Please review this nomination for action at the next Board meeting.

If you have any questions, please feel free to contact me at (703) 842-0749 or tberger@asmfc.org.

Enc.

cc: Tracey Bauer

M23-002

Winter Flounder Advisory Panel

1/18/2023

Maine
Chair - Harold Brown (rec) (4/96)
Eco Analysis Inc.
P.O. Box 224
Bath, ME 04530
Phone: 207.837.2442
raptor@gwi.net
Appt. Confirmed 4/24/95
Appt. Reconfirmed 3/11/03
Appt Reconfirmed 3/07
Participation: Active

Gary Libby
PO BOX 91
Port Clyde ME 04855-0091
Phone: 207.542.9557
portclydecowboy@gmail.com
Appt. Confirmed 5/09
Participation: Inactive; Last meeting attended was in 2012

New Hampshire
David Goethel (comm.)
23 Ridgeview Terrace
Hampton, NH 03842
Phone: 603.926.2165
Email: egoethel@comcast.net
Appt. Confirmed 10/27/14
Participation: Active; attended last meeting in 2023

1 Vacancy – recreational

Massachusetts
Allan Butler (rec)
1899 Main Street
Athol, MA 01331
Phone: 508.382.2274
Stripernut1@gmail.com

Vacancy – commercial

Rhode Island
2 Vacancies – commercial and recreational

Connecticut
Vacancy - commercial

Art DeFrancisco (rec)
89 Avon Street
Stratford, CT 06615-6703
Phone: 203.922. 650.1745
Email: adefra3228@yahoo.com
Appt. Confirmed 6/9/03
Appt Reconfirmed 6/07
Reconfirmed 3/2014
Participation: Inactive; attended last meeting in 2014

New York
Charles Witek (rec)
1075 Tooker Avenue
West Babylon, NY 11704
Phone (office): 212.412.6707
Phone (home): 631.587.2211
charleswitek@gmail.com
Appt. Confirmed 8/5/98
Appt. Reconfirmed 5/30/03
Appt. Reconfirmed 5/07
Participation: Active; attended last meeting in 2023

Ken Mades (comm)
14 Carter Road
Hampton Bays, NY 11946
Phone: 516.728.4792
Appt. Confirmed 10/17/94
Appt. Reconfirmed 5/30/03
Appt. Reconfirmed 5/07
Participation: Inactive; Never attended a meeting since appt in 1994

New Jersey
James R. Lovgren (comm)
17 Laurelhurst Drive
Brick, NJ 08724
Phone: 732.899.1872
Jlovgren3@gmail.com
Appt. Confirmed 4/24/95
Appt. Reconfirmed 6/9/03
Appt Reconfirmed 6/07
Participation: Inactive; Never attended a meeting since appt in 1995

Thomas Siciliano (rec)
6 Nautic Way
Little Egg Harbor Township, NJ 08087-1688
Phone (day): 732.267.6451
Phone (eve): 609.296.3774
Email: TomS6363@comcast.net
Appt Confirmed 5/4/09
Appt Reconfirmed 3/2014
Participation: Inactive; Never attended a meeting since appt in 2009

Delaware
Vacancy - recreational

ATLANTIC STATES MARINE FISHERIES COMMISSION

Advisory Panel Nomination Form

This form is designed to help nominate Advisors to the Commission's Species Advisory Panels. The information on the returned form will be provided to the Commission's relevant species management board or section. Please answer the questions in the categories (All Nominees, Commercial Fisherman, Charter/Headboat Captain, Recreational Fisherman, Dealer/Processor, or Other Interested Parties) that pertain to the nominee's experience. If the nominee fits into more than one category, answer the questions for all categories that fit the situation. **Also, please fill in the sections which pertain to All Nominees (pages 1 and 2). In addition, nominee signatures are required to verify the provided information (page 4), and Commissioner signatures are requested to verify Commissioner consensus (page 4). Please print and use a black pen.**

Form submitted by: Daniel McKiernan State: MA
(your name)

Name of Nominee: Allan Butler

Address: 1899 Main St

City, State, Zip: Athol, MA 01331

Please provide the appropriate numbers where the nominee can be reached:

Phone (day): 508-382-2274 Phone (evening): 978-780-4015

FAX: _____ Email: stripernut1@gmail.com

FOR ALL NOMINEES:

1. Please list, in order of preference, the Advisory Panel for which you are nominating the above person.
   1. Winter Flounder
   2. _____
   3. _____
   4. _____

2. Has the nominee been found in violation of criminal or civil federal fishery law or regulation or convicted of any felony or crime over the last three years?

   yes_____ no X

3. Is the nominee a member of any fishermen's organizations or clubs?

yes _____ no X_____

If "yes," please list them below by name.

_____ _____

_____ _____

_____ _____

4. What kinds (species) of fish and/or shellfish has the nominee fished for during the past year?

Winter Founder _____ Black Fish _____

Summer Flounder _____ Haddock _____

Striped Bass _____ _____

5. What kinds (species) of fish and/or shellfish has the nominee fished for in the past?

_____ _____

_____ _____

_____ _____

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? _____ years

2. Is the nominee employed only in commercial fishing? yes_____ no_____

3. What is the predominant gear type used by the nominee?_____

4. What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)?_____

FOR CHARTER/HEADBOAT CAPTAINS:

1. How long has the nominee been employed in the charter/headboat business? _____ years

2. Is the nominee employed only in the charter/headboat industry? yes _____ no_____

   If "no," please list other type(s)of business(es) and/occupation(s):_____

   _____

3. How many years has the nominee lived in the home port community? _____ years

   If less than five years, please indicate the nominee's previous home port community.

   _____

FOR RECREATIONAL FISHERMEN:

1. How long has the nominee engaged in recreational fishing? 56 years

2. Is the nominee working, or has the nominee ever worked in any area related to the fishing industry? yes X no _____

   If "yes," please explain.

Fishing Guide (30 years), Fresh and Salt, Outdoor Writer (at one time had a column in On The Water),

Mated on a headboat, I run tours on mini Buses for anglers, I load Waypoints (for mostly haddock now)

into anglers chartplotters, but mostly I am hired to do instuction on a anglers boat.

FOR SEAFOOD PROCESSORS & DEALERS:

1. How long has the nominee been employed in the business of seafood processing/dealing? _____years

2. Is the nominee employed only in the business of seafood processing/dealing?

   yes _____ no _____ If "no," please list other type(s) of business(es) and/or occupation(s):

   _____

   _____

   _____

3. How many years has the nominee lived in the home port community? _____ years

If less than five years, please indicate the nominee's previous home port community.

_____

FOR OTHER INTERESTED PARTIES:

1. How long has the nominee been interested in fishing and/or fisheries management? _____ years

2. Is the nominee employed in the fishing business or the field of fisheries management?
yes _____ no _____

If "no," please list other type(s) of business(es) and/or occupation(s):

_____

_____

_____

FOR ALL NOMINEES:

In the space provided below, please provide the Commission with any additional information which you feel would assist us in making choosing new Advisors. You may use as many pages as needed.

I am interested in nomination to the Advisory Panel because I feel my background could be a real asset. I have been a fishing guide and outdoor writer for over 3 decades and have fished the coast much longer. I had a column in On The Water for many years and have worked in the industry for companies as diverse as Orvis and New England Marine Industries, giving me a much broader point of view than many. I have been active in public speaking on fishing-related subjects (before covid) and do my best to stay up to date in the industry.

Nominee Signature: Allan Butler Jr Date: 7.4.2022

Name: Allan Butler, Jr.
(please print)

COMMISSIONERS SIGN-OFF (not required for non-traditional stakeholders)

Daniel J McKiernan
State Director

Sarah M. Peake
State Legislator

Raymond McKay
Governor's Appointee