



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201

703.842.0740 • www.asmfc.org

Joe Cimino (NJ), Chair

Dan McKiernan (MA), Vice-Chair


Robert E. Beal, Executive Director

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

MEMORANDUM

January 10, 2024

TO: Commissioners; Proxies; American Eel Management Board; American Lobster Management Board; Atlantic Striped Bass Management Board; Coastal Pelagics Management Board; Executive Committee; ISFMP Policy Board; Shad and River Herring Management Board; Spiny Dogfish Management Board

FROM: Robert E. Beal 
Executive Director

RE: ASMFC Winter Meeting: January 23-25, 2024 (TA 24-017)

The Atlantic States Marine Fisheries Commission's Winter Meeting will be January 23-25, 2024 at **The Westin Crystal City**. This will be a hybrid meeting (both in-person and remote) to allow for participation by Commissioners and interested stakeholders. The room block is now closed; if you need assistance reserving a room, please contact Lisa Carty at lcarty@asmfc.org. The final agenda and meeting materials for the Winter Meeting are now available at <https://www.asmfc.org/home/2024-winter-meeting>.

Webinar Information

Meeting proceedings will be broadcast daily via webinar beginning Tuesday, January 23rd at 12:30 PM and continuing daily until the conclusion of the meeting (expected to be 11 AM) on Thursday, January 25th. To register for the webinar, please go to: <https://attendee.gotowebinar.com/register/8556735274724277084> (Webinar ID 795-025-635).

If you are joining the webinar but will not be using voice over internet protocol (VoIP) via your computer, you can also call in at 631.992.3221, access code 426-309-773. A PIN will be provided to you after joining the webinar; see webinar instructions for details on how to receive the PIN.

For those who will not be joining the webinar but would like to listen to the audio portion only, press the # key when asked for a PIN.

Meeting Process

Board chairs will ask both in-person and virtual board members if they wish to speak. In-person members can simply raise their hands at the meeting without logging on to the webinar, while virtual members will raise their hands on the webinar. The chair will work with staff to compile the list of speakers, balancing the flow of questions/comments between in-person and virtual attendees. The same process will be used for public comment. Depending upon the number of commenters, the board chair

will decide how to allocate the available time on the agenda (typically 10 minutes) to the number of people who want to speak.

Each day, the webinar will begin 15 minutes prior to the start of the first meeting so that people can troubleshoot any connectivity or audio issues they may encounter. If you are having issues with the webinar (connecting to or audio-related), please contact Chris Jacobs at 703.842.0790.

We look forward to seeing you at the Winter Meeting. If the staff or I can provide any further assistance to you, please call us at 703.842.0740.



Atlantic States Marine Fisheries Commission

Winter Meeting

January 23-25, 2024

The Westin Crystal City

Arlington, Virginia

Public Comment Guidelines

To provide a fair opportunity for public input, the ISFMP Policy Board has approved the following guidelines for use at management board meetings:

For issues that are not on the agenda, management boards will continue to provide opportunity to the public to bring matters of concern to the board's attention at the start of each board meeting. Board chairs will ask members of the public to raise their hands to let the chair know they would like to speak. Depending upon the number of commenters, the board chair will decide how to allocate the available time on the agenda (typically 10 minutes) to the number of people who want to speak.

For topics that are on the agenda, but have not gone out for public comment, board chairs will provide limited opportunity for comment, taking into account the time allotted on the agenda for the topic. Chairs will have flexibility in deciding how to allocate comment opportunities; this could include hearing one comment in favor and one in opposition until the chair is satisfied further comment will not provide additional insight to the board.

For agenda action items that have already gone out for public comment, it is the Policy Board's intent to end the occasional practice of allowing extensive and lengthy public comments. Currently, board chairs have the discretion to decide what public comment to allow in these circumstances.

In addition, the following timeline has been established for the **submission of written comment for issues for which the Commission has NOT established a specific public comment period** (i.e., in response to proposed management action).

1. Comments received three weeks prior to the start of a meeting week (January 2) will be included in the briefing materials.
2. Comments received by 5 PM on Tuesday, January 16 will be included in supplemental materials.
3. Comments received by 10 AM on Friday, January 19 will be distributed electronically to Commissioners/Board members prior to the meeting.

The submitted comments must clearly indicate the commenter's expectation from the ASMFC staff regarding distribution. As with other public comment, it will be accepted via mail and email.

Final Agenda

The agenda is subject to change. The agenda reflects the current estimate of time required for scheduled Board meetings. The Commission may adjust this agenda in accordance with the actual duration of Board meetings. Interested parties should anticipate Boards starting earlier or later than indicated herein.

Tuesday, January 23

12:30 – 2:30 p.m.

American Lobster Management Board

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Virginia

Other Members: NMFS

Chair: McNamee

Other Participants: Pugh, Truesdale, Beal, Delayne

Staff: Starks

1. Welcome/Call to Order (*J. McNamee*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from October 2023
3. Public Comment
4. American Lobster Technical Committee Report (*T. Pugh*)
 - Information on Lobster Resource and Fishery Near the Northern Edge of Georges Bank
5. Jonah Crab Technical Committee Report (*C. Truesdale*)
 - Jonah Crab Stock Indicators
 - Discuss Future Management Tools
6. Consider Pursuing a Management Strategy Evaluation for American Lobster (*J. McNamee*) **Possible Action**
7. Discuss Inconsistencies in Federal and Commission Rules for Lobster Conservation Management Areas 2 and 3 (*C. Starks, A. Murphy*)
8. Progress Update on State Implementation of Addendum XXIX on Federal Vessel Trackers (*J. McNamee*)
9. Progress Update on American Lobster Benchmark Stock Assessment (*J. Kipp*)
10. Review and Populate Jonah Crab Advisory Panel Membership (*T. Berger*) **Action**
11. Other Business/Adjourn

2:45 – 3:45 p.m.

Spiny Dogfish Management Board

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina

Other Members: NMFS

Chair: Geer

Other Participants: Baker, Newlin, Didden

Staff: Boyle

1. Welcome/Call to Order (*P. Geer*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from October 2023

3. Public Comment
4. Review 2023 Management Track Assessment (*J. Didden*)
5. Set Specifications for Up to the Next Three Fishing Years **Final Action**
 - Review Monitoring Committee and Mid-Atlantic Fishery Management Council Recommendations for 2024-2026 Fishing Years (*J. Didden*)
6. Elect Vice-Chair **Action**
7. Other Business/Adjourn

4 – 5:30 p.m.

American Eel Management Board

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Other Members: DC, NMFS, PRFC, USFWS

Chair: Kuhn

Other Participants: Carty, Beal

Staff: Starks

1. Welcome/Call to Order (*K. Kuhn*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from October 2023
3. Public Comment
4. Consider Approval of Draft Addendum VI on Maine’s Glass Eel Quota for Public Comment (*C. Starks*) **Action**
5. Consider Approval of Draft Addendum VII on Yellow Eel Coastwide Cap for Public Comment (*C. Starks*) **Action**
6. Consider Approval of Fishery Management Plan Review and State Compliance Reports for the 2022 Fishing Year (*C. Starks*) **Action**
7. Review and Populate Advisory Panel Membership (*T. Berger*) **Action**
8. Other Business/Adjourn

Wednesday, January 24

8 – 10 a.m.

Executive Committee

Breakfast will be available at 7:30 a.m.

(A portion of this meeting may be closed for Committee members and Commissioners only)

Members: Abbott, Burgess, Cimino, Clark, Davis, Dyer, Fegley, Gary, Geer, Keliher, Kuhn, McKiernan, McNamee, Miller, Patterson, Rawls, Woodward

Chair: Cimino

Staff: Leach

1. Welcome/Introductions (*J. Cimino*)
2. Committee Consent
 - Approval of Agenda
 - Approval of Meeting Summary from October 2023
3. Public Comment
4. Legislative Update (*A. Law*)

5. Tasking for the Committee on Economics and Social Sciences (*J. Patel*)
6. Commission Officer Election Procedures (*R. Beal*)
7. Review 2024-2028 Strategic Plan (*R. Beal*)
8. Discuss Future Meeting Week Format; In-Person vs. Virtual (*R. Beal*)
9. Other Business/Adjourn

10:15 – 11:45 a.m.

Coastal Pelagics Management Board

Member States: Rhode Island, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Other Members: NMFS, PRFC, SAFMC

Chair: Woodward

Other Participants: Giuliano, Pearce

Staff: Franke, Tuohy

1. Welcome/Call to Order (*S. Woodward*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from October 2023
3. Public Comment
4. Consider Approval of Terms of Reference for the SouthEast Data, Assessment and Review of Atlantic Migratory Group (AMG) Cobia Stock Assessment (*C. Tuohy & A. Giuliano*) **Action**
5. Update from Cobia Plan Development Team on Recreational Reallocation Addendum Scoping (*C. Tuohy*)
6. Consider Approval of Spanish Mackerel Fishery Management Plan Review and State Compliance Reports for the 2022 Fishing Year (*E. Franke*) **Action**
7. Update from the South Atlantic Fishery Management Council on Mackerel Port Meetings and Coastal Migratory Pelagics Framework Amendment 13 (*J. Carmichael*)
8. Elect Vice-Chair **Action**
9. Other Business/Adjourn

11:45 a.m. – 12:45 p.m.

Lunch Provided for Commissioners & Proxies

12:45 – 1:30 p.m.

Shad and River Herring Management Board

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Other Members: DC, NMFS, PRFC, USFWS

Chair: Fegley

Other Participants: Eakin, Sabo

Staff: Boyle

1. Welcome/Call to Order (*L. Fegley*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from October 2023
3. Public Comment

4. Consider Update to New Hampshire River Herring Sustainable Fishery Management Plan and Proposal to Reopen Fishery (*W. Eakin*) **Final Action**
5. Progress Update on the 2024 River Herring Benchmark Stock Assessment (*K. Drew*)
6. Other Business/Adjourn

1:45 – 4:45 p.m.

Atlantic Striped Bass Management Board

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina

Other Members: DC, NMFS, PRFC, USFWS

Chair: Ware

Other Participants: Lengyel Costa, Mercer

Staff: Franke

1. Welcome/Call to Order (*M. Ware*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from October 2023
3. Public Comment
4. Consider Draft Addendum II for Final Approval **Final Action**
 - Review Options and Public Comment Summary (*E. Franke*)
 - Advisory Panel Report (*E. Franke*)
 - Law Enforcement Committee Report (*J. Mercer*)
 - Consider Final Approval of Addendum II
5. New Jersey Alternative Management Proposal **Final Action**
 - Review of New Jersey Proposal (*J. Cimino*)
 - Plan Review Team Report (*E. Franke*)
 - Consider Approval of New Jersey’s Conservation Equivalency Proposal
6. Review and Populate Advisory Panel Membership (*T. Berger*) **Action**
7. Other Business/Adjourn

Thursday, January 25

8:30 – 10:30 a.m.

Interstate Fisheries Management Program Policy Board

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Other Members: DC, NMFS, PRFC, USFWS

Other Participants: D. Blacklock

Chair: Cimino

Staff: Kerns

1. Welcome/Call to Order (*J. Cimino*)
2. Board Consent (*J. Cimino*)
 - Approval of Agenda
 - Approval of Proceedings from October 2023

3. Public Comment
4. Executive Committee Report (*J. Cimino*) **Action**
5. Review and Discuss 2023 Commissioner Survey Results (*A. Law*)
6. Consider Jurisdiction Requests for Species Declared Interest **Final Action**
7. Discuss Aquaculture in the Exclusive Economic Zone (*D. Blacklock*)
8. Review NOAA Fisheries White Paper for an Industry-Based Survey
9. Update on Ongoing Stock Assessments **Action**
10. Review Noncompliance Findings, If Necessary **Action**
11. Other Business/Adjourn

10:30 – 11 a.m.

Commission Business Session

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida

Chair: Cimino

Staff: Beal

1. Welcome/Call to Order (*J. Cimino*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from October 2023
3. Public Comment
4. Consider Approval of Revision to 2024 Action Plan (*T. Kerns*)
 - Addition to Goal 1 to Develop an Action with the Mid-Atlantic Fishery Management Council for Summer Flounder Commercial Measures
5. Review and Consider Approval of 2024-2028 Strategic Plan **Final Action**
6. Review Noncompliance Findings, If Necessary **Final Action**
7. Other Business/Adjourn

Atlantic States Marine Fisheries Commission

American Lobster Management Board

January 23, 2024

12:30 – 2:30 p.m.

Hybrid Meeting

Draft Agenda

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

1. Welcome/Call to Order (*J. McNamee*) 12:30 p.m.
2. Board Consent 12:30 p.m.
 - Approval of Agenda
 - Approval of Proceedings from October 2023
3. Public Comment 12:35 p.m.
4. American Lobster Technical Committee Report (*T. Pugh*) 12:45 p.m.
 - Information on Lobster Resource and Fishery Near the Northern Edge of Georges Bank
5. Jonah Crab Technical Committee Report (*C. Truesdale*) 1:00 p.m.
 - Jonah Crab Stock Indicators
 - Discuss Future Management Tools
6. Consider Pursuing a Management Strategy Evaluation for American Lobster (*J. McNamee*) **Possible Action** 1:25 p.m.
7. Discuss Inconsistencies in Federal and Commission Rules for Lobster Conservation Management Areas 2 and 3 (*C. Starks, A. Murphy*) 1:45 p.m.
8. Progress Update on State Implementation of Addendum XXIX on Federal Vessel Trackers (*J. McNamee*) 2:10 p.m.
9. Progress Update on American Lobster Benchmark Stock Assessment (*J. Kipp*) 2:20 p.m.
10. Review and Populate Jonah Crab Advisory Panel Membership (*T. Berger*) **Action** 2:25 p.m.
11. Other Business/Adjourn 2:30 p.m.

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

MEETING OVERVIEW

American Lobster Management Board

January 23, 2024

12:30 – 2:30 p.m.

Hybrid Meeting

Chair: Dr. Jason McNamee (RI) Assumed Chairmanship: 02/22	Technical Committee Chair: Tracy Pugh (MA)	Law Enforcement Committee Representative: Rob Beal (ME)
Vice Chair: Pat Keliher (ME)	Lobster Advisory Panel Chair: Grant Moore (MA) Jonah Crab Advisory Panel Chair: Sonny Gwin	Previous Board Meeting: October 16, 2023
Voting Members: ME, NH, MA, RI, CT, NY, NJ, DE, MD, VA, NMFS, NEFMC (12 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from October 2023

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

4. American Lobster Technical Committee Report (12:45-1:00 p.m.)

Background

- In October the Board tasked the lobster Technical Committee (TC) with compiling information on the lobster resource and fishery in and around the Northern Edge of Georges Bank in relation to a potential action at the New England Fishery Management Council (NEFMC) considering scallop fishery access on the Northern Edge.
- The TC developed a report responding to the Board Task (**Supplemental Materials**).

Presentations

- TC Report on Lobster Resource and Fishery around the Northern Edge by T. Pugh

5. Jonah Crab Technical Committee Report (1:00-1:25 p.m.)

Background

- The 2023 Jonah Crab Benchmark Stock Assessment indicated that the Jonah crab stock has not been depleted to historical lows. However, the Peer Review noted substantial uncertainty about stock status, and recommended monitoring the stock closely.
- In October the Board tasked the Jonah Crab TC with making recommendations regarding stock indicators and potential future management measures. The TC developed a report responding to the Board task (**Briefing Materials**).
- The TC also requested feedback from the Jonah Crab AP on potential market and economic factors driving trends in the fishery. The AP met on December 14, 2023 to review the benchmark stock assessment for Jonah crab and provide input to the TC (**Briefing Materials**).

Presentations

- Jonah Crab TC Report by C. Truesdale

6. Consider Pursuing a Management Strategy Evaluation for American Lobster (1:25-1:45 p.m.) Possible Action

Background

- In May 2021 the Board reviewed TC recommendations on a Management Strategy Evaluation (MSE) for the lobster fishery. The TC recommended the Board pursue a two-phase MSE focused on the GOM/GBK stock, with the goal of providing short-term management guidance at the stock-wide scale while concurrently building the framework to expand the MSE to provide long-term, spatially-explicit management advice. As next steps, the TC recommended a formal process to develop management goals and objectives for the future of the lobster fishery, and forming a steering committee for additional scoping and work plan development (**Briefing Materials**).
- The Board expressed interest in pursuing an MSE but postponed any action on development of an MSE in order to prioritize work on Draft Addendum XXVII. This issue was last discussed by the Board in August 2021.

Presentations

- Overview of Management Strategy Evaluation by J. McNamee

Board Actions for Consideration at the Meeting

- Consider initiating an MSE for American Lobster

7. Discuss Inconsistencies in Federal and Commission Rules for Lobster Conservation Management Areas 2 and 3 (1:45-2:10 p.m.)

Background

- NOAA fisheries has published an [interim rule](#) that responds to the Commission's 2013 recommendations to NOAA to adopt the measures in Addenda XXI and XXII in federal waters. The Addenda aimed to scale the capacity of the Southern New England (SNE) fishery to the diminished size of the SNE resource. However, over a decade has passed since the date when the Commission intended for these federal measures to be implemented.

- Due to the delay between the Commission’s adoption of the Addenda and federal implementation, there have been significant changes in the fishery. Also, some aspects of the federal rulemaking differ from the measures included in Addenda XXI and XXII.

Presentations

- Overview of Federal and Commission Rules for LCMAs 2 and 3 by C. Starks and A. Murphy

8. Progress Update on State Implementation of Addendum XXIX on Federal Vessel Trackers (2:10-2:20 p.m.)

Background

- Addendum XXIX was approved in 2022 and established electronic tracking requirements for federally-permitted vessels in the American lobster and Jonah crab fisheries.
- The Addendum is effective as of December 15, 2023, though there have been some delays in state regulations.

9. Progress Update on American Lobster Benchmark Stock Assessment (2:20-2:25 p.m.)

Background

- A benchmark stock assessment for American Lobster is scheduled for completion in 2025.

Presentations

- Progress on American Lobster Benchmark Stock Assessment by J. Kipp

10. Review and Populate Jonah Crab Advisory Panel Membership (2:25-2:30 p.m.) Action

Background

- Denny Colbert, a commercial offshore tarp fisherman from Massachusetts, has been nominated to serve on the Advisory Panel (**Briefing Materials**).

Board Actions for Consideration at the Meeting

- Approve Advisory Panel nomination

11. Other Business/ Adjourn

American Lobster and Jonah Crab TC Task List

Activity level: High

Committee Overlap Score: Medium

Committee Task List

Lobster TC

- August 1, 2024: Annual Compliance Reports Due
- Fall 2024: Annual data update of lobster abundance indices
- Spring-Summer 2024: Development of lobster stock assessment

Jonah Crab TC

- August 1, 2024: Annual Compliance Reports Due
- Fall 2024: Annual data update of Jonah crab abundance indices

TC Members

American Lobster: Kathleen Reardon (ME), Joshua Carloni (NH), Jeff Kipp (ASMFC), Catherine Fede (NY), Conor McManus (RI), Chad Power (NJ), Tracy Pugh (MA, Chair), Burton Shank (NOAA), Craig Weedon (MD), Somers Smott (VA), Renee St. Amand (CT)

Jonah Crab: Corinne Truesdale (RI, Chair), Derek Perry (MA), Joshua Carloni (NH), Chad Power (NJ), Jeff Kipp (ASMFC), Conor McManus (RI), Allison Murphy (NOAA), Kathleen Reardon (ME), Chris Scott (NY), Burton Shank (NOAA), Somers Smott (VA), Craig Weedon (MD)

Lobster Stock Assessment Subcommittee (SAS) Members

Jonah Crab: Tracy Pugh (MA, TC Chair), Conor McManus (RI), Joshua Carloni (NH), Kathleen Reardon (ME), Burton Shank (NOAA), Jeff Kipp (ASMFC)

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
AMERICAN LOBSTER MANAGEMENT BOARD**

**Beaufort Hotel
Beaufort, North Carolina
Hybrid Meeting**

October 16, 2023

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

TABLE OF CONTENTS

Call to Order1

Approval of Agenda1

Approval of Proceedings1

Public Comment1

Consider 2023 Jonah Crab Benchmark Stock Assessment and Peer Review Report2

 Presentation of Stock Assessment Report.....2

 Presentation of Peer Review Panel Report.....7

 Consider Acceptance of Benchmark Stock Assessment and Peer Review Report for Management Use14

 Consider Management Response16

Consider Annual Data Update of American Lobster Indices17

Update on Addendum XXVII Trigger Index.....19

Consider Terms of Reference and Timeline for the American Lobster Benchmark Stock Assessment26

Other Business.....28

 Consider Potential Action by NEFMC regarding Scallop Fishery Access on Northern Edge of Georges Bank.....28

 Consider NOAA Interim Final Rule in Relation to Lobster Board actions in Addenda XXI, XXII, and XXVI.....29

Adjournment31

INDEX OF MOTIONS

1. **Approval of agenda** by consent (Page 1).
2. **Approval of Proceedings of May 1, 2023** by consent (Page 1).
3. **Move to accept the Jonah Crab Benchmark Stock Assessment and Peer Review Report for management use** (Page 15). Motion by Mr. Dan McKiernan; second by Mr. Steve Train. Motion passes (11 in favor) (Page 16).
4. **Motion to task the Technical Committee to recommend possible management measures or other options to correct what appear to be deficiencies in the stock.** (Page 16). Motion by Mr. Steve Train; second by Mr. Doug Grout. Motion passes by unanimous consent (Page 17).
5. **Motion to amend the approval of Addendum XXVII to change the implementation date. The implementation date for all management measures shall be January 1, 2025, including those measures triggered under Section 3.2. Year 2 and year 3 measures would be implemented by January 1 of the following calendar years for which they are required** (Page 20). Motion by Mr. Pat Keliher; second by Mr. David Borden. Motion passes (Roll Call: In Favor – NH, ME, MD, DE, VA, NJ, NY, CT, MA, RI; Opposed – NOAA; Abstentions – None; Null – None) (Page 26).
6. **Move to modify terms of reference 4 to identify, describe, and, if possible, quantify the effect of environmental/climatic drivers on stock abundance considering annual to decadal scales** (Page 28). Motion by Mr. Pat Keliher; second by Mr. Doug Grout. Motion approved by unanimous consent (Page 28).
7. **Move to task the Lobster Technical Committee (TC) to compile information on the lobster resource and fishery in and around the Northern Edge on Georges Bank. This is in relation to a potential action at the New England Fishery Management Council (NEFMC) which is considering scallop fishery access on the Northern Edge. A starting place for this tasking could be reviewing information that the Lobster TC compiled when ASMFC commented on the NEFMC’s Omnibus Habitat Amendment 2. Areas of interest include:**
 - **Information on the presence and abundance of lobsters, including ovigerous lobsters, in and around the Northern Edge by month/season**
 - **Lobster fishery effort in and around the Northern Edge by month/season**
 - **Potential impacts of mobile gear on the lobster population in the area**
 - **Information on the habitat type and depth preference of lobsters which could inform our understanding of lobsters on the northern edge if there are limitations in the data**
 - **Whether current reporting by Area 3 vessels is representative, or an underestimate, of lobster effort in the Northern Edge area and how future requirements (i.e., federal eVTR requirement, vessel tracking) will impact the data available**(Page 29). Motion by Mr. Pat Keliher; second by Mr. Doug Grout. Motion passes by unanimous consent (Page 30).
8. **Move to adjourn** by consent (Page 31).

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

ATTENDANCE

Board Members

Pat Keliher, ME (AA)	William Hyatt, CT (GA)
Stephen Train, ME (GA)	Craig Miner, CT, proxy for Rep. Gresko (LA)
Rep. Allison Hepler, ME (LA)	Marty Gary, NY (AA)
Renee Zobel, NH, proxy for C. Patterson (AA)	Emerson Hasbrouck, NY (GA)
Doug Grout, NH (GA)	Joe Cimino, NJ (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Jeff Kaelin, NJ (GA)
Dan McKiernan, MA (AA)	Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)
Raymond Kane, MA (GA)	John Clark, DE (AA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	Roy Miller, DE (GA)
Jason McNamee, RI (AA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
David Borden, RI (GA)	Mike Luisi, MD, proxy for L. Fegley (AA, Acting)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Shanna Madsen, VA, proxy for J. Green (AA)
Colleen Bouffard, CT, proxy for J. Davis (AA)	Allison Murphy, NOAA

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

Ex-Officio Members

Kathleen Reardon, Technical Committee Chair	Richard Wong, Stock Assessment Peer Review Chair
Derek Perry, Technical Committee Chair	Rob Beal, Law Enforcement Committee Rep.

Staff

Bob Beal	Tracy Bauer	James Boyle
Toni Kerns	Emilie Franke	Mike Rinaldi
Tina Berger	Caitlin Starks	Jeff Kipp
Madeline Musante	Chelsea Tuohy	Katie Drew

Guests

Max Appelman, NOAA	Heather Corbett, NJ DEP	Deirdre Gilbert, ME DMR
Mike Armstrong, MA DMF	Jamie Cournane, NEFMC	Heather Glon, ME DMR
Pat Augustine	Jennifer Couture, NEFMC	Jennifer Goebel, NOAA
Michelle Bachman, NEFMC	Caitlin Craig, NYSDEC	Joe Gresko, CT (LA)
Alan Bianchi, NC DMF	Scott Curatolo-Wagemann,	Olin Hartkopf
Alex Boeri, MA DMF	Cornell Cooperative Extension of	Heidi Henninger, NOAA
Colleen Bouffard, CT DEEP	Suffolk County	Jesse Hornstein, NYS DEC
Michael Brown, ME DMR	Dustin Delano, NEFSA	Jon Hurdle, NJ Spotlight
Jeffrey Brust, NJ DEP	Bill DeSteph, Senate of VA	Denise Kaminski, NYS DEC
Allen Burgenson, Lonza	Wes Eakin, NYS DEC	Gregg Kenney, NYS DEC
Joshua Carloni, NH FGD	Julie Evans	Blaik Keppler, SC DNR
Beth Casoni, MA Lobstermen's Assn.	Paula Farnell, NC DMF	Jennifer Lander, NYS DEC
Haley Clinton	F Joel Fodrie, Institute of Marine Sciences (UNC-CH)	Loren Lustig, PA (GA)
Dennis Colbert	Christine Ford, NOAA	Chip Lynch, NOAA
		John Maniscalco, NYS DEC

These minutes are draft and subject to approval by the American Lobster Management Board.

The Board will review the minutes during its next meeting.

Guests (continued)

Kim McKown	Justin Pellegrino, NYS DEC	Kevin Sullivan, NH FGD
Conor McManus, RI DEM	Jonathon Peros, NEFMC	Rachel Sysak, NYS DEC
Meredith Mendelson, ME DMR	Michael Pierdinock	Mike Tambone
Guest (continued)	Will Poston	Laura Tomlinson, MA DMF
Nichola Meserve, MA DMF	Tracy Pugh, MA DMF	Corinne Truesdale, RI DEM
Steve Meyers	Paul Rago	Andrew Valmassoi, NC DMF
Lorraine Morris, ME DMR	Marianne Randall, NOAA	Beth Versak, MD DNR
Brandon Muffley, MAFMC	Kathleen Reardon, ME DMR	Jesica Waller, ME DMR
Thomas Newman	Story Reed, MA DMF	Megan Ware, ME DMR
Jeff Nichols, ME DMR	Tajrian Sarwar, NYS DEC	Craig Weedon, MD DNR
Rebecca Nuzzi, Maine	Christopher Scott, NYS DEC	Ritchie White
Lobstermen's Assn.	Burton Shank, NOAA	Shelby White, NC DDMF
Conor O'Donnell, NH FGD	Jared Silva, MA DMF	Kelly Whitmore, MA DMF
George O'Donnell, MD DNR	Jennifer Slovinski, Gugifilm Wako	Erin Wilkinson, ME DMR
Virginia Olsen, District 4 IAMAW	Chemicals	Chris Wright, NOAA
Scott Olszewski, RI DEM	Melissa Smith, MA DMR	Daniel Zapf, NC DEQ
Cheri Patterson, NH (AA)	Somers Smott, VMRC	Erik Zlokovitz, MD DNR
Sarah Peake, MA (LA)	Renee St. Amand, CT DEEP	

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

The American Lobster Management Board of the Atlantic States Marine Fisheries Commission convened in the Rachel Carson Ballroom via hybrid meeting, in-person and webinar; Monday, October 16, 2023, and was called to order at 9:35 a.m. by Chair Jason McNamee.

CALL TO ORDER

CHAIR JASON McNAMEE: All right, it's 9:35. We're going to call the American Lobster Management Board meeting to order. Welcome everyone, we are here for the American Lobster Management Board, have a number of things to get through. We got an extra ten minutes, so hoping to end up on time.

APPROVAL OF AGENDA

CHAIR McNAMEE: Let's start off with Approval of the Agenda. Are there any modifications to the agenda? Pat.

MR. PATRICK C. KELIHER: Under Other Business, I would like to bring up an issue with the Northern Edge that the New England Council is dealing with.

CHAIR McNAMEE: Very good, thanks, Pat. We will add that under Other Business. Any other edits, modifications, David.

MR. DAVID V. BORDEN: Not an edit on the agenda, Mr. Chairman. Are you ready for a comment on that? Under Other Business, I would like to have a brief discussion on the NOAA Proposed Rule.

CHAIR McNAMEE: Great, thanks, David, we will add that under Other Business as well. Okay, so we've had two modifications, two additions to Other Business. Anything else from any other board members on the agenda?

MS. TONI KERNS: Jason, Alli Murphy had her hand up, wanting to ask for something under Other Business.

CHAIR McNAMEE: Go ahead, Caitlin.

MS. CAITLIN STARKS: Toni, we don't see her hand up, but I see Alli, you are unmuted now. Okay.

MS. ALLISON MURPHY: Mr. Borden beat me to the punch. Wanted to quickly discuss the Interim Final Rule that we published.

CHAIR McNAMEE: Alli, we were having, at least I was having a really hard time hearing you, could you try that again?

MS. MURPHY: Mr. Borden beat me to the punch. My intention was just to quickly mention the Interim Final Rule that NOAA Fisheries published a few weeks ago.

CHAIR McNAMEE: Excellent, thanks, Alli. We've got that under Other Business, and I'll make sure that we come to you for comment as well there, thank you. Okay, one more time around, is everybody okay? Anything else for the agenda? Not seeing anything; no other hands online. Are there any objections to approving the agenda as modified?

Please, raise your hand if you have an objection. Okay, seeing none; we will consider the agenda, with its modifications approved by consent. Good.

APPROVAL OF PROCEEDINGS

CHAIR McNAMEE: Next up is the approval of the proceedings from our May meeting. Any edits, additions, deletions to those proceedings? Not seeing any hands around the table, any hands online? Okay, no hands online, so try this again.

Are there any objections to approving the May, 2023 proceedings of the American Lobster Board as submitted? Please, raise your hand if you have an objection. Not seeing any in the room, any online? Okay, no hands online, we will consider those proceedings approved. Thanks everybody.

PUBLIC COMMENT

CHAIR McNAMEE: Next up on the agenda is some time to take some Public Comment.

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

This would be public comment for things not being covered on today's agenda. I'll look around the room here. Please, raise your hand if there is anybody in the room that would like to make public comment. Okay, not seeing anybody in the room with a hand raised, anybody online? Okay, no hands online either, so that is the Public Comment portion.

We will keep trucking along here.

CONSIDER 2023 JONAH CRAB BENCHMARK STOCK ASSESSMENT AND PEER REVIEW REPORT

CHAIR McNAMEE: Next up is Consideration of the 2023 Jonah Crab Benchmark Stock Assessment, and the Peer Review Report. We're going to start off with a couple of informational presentations, and to kick us off here is Josh Carloni from New Hampshire, so Josh, whenever you are ready, please feel free to take it away.

PRESENTATION OF STOCK ASSESSMENT REPORT

MR. JOSH CARLONI: I'm just going to get started here. Just wanted to acknowledge everybody that has been working on this assessment. What seems like over the last five years, but I think more realistically, in earnest it's been probably three years. The Technical Committee has provided all the data that we've needed.

They've been great, and the Stock Assessment Subcommittee has been working very hard at this. It's the first time this species has been assessed, so it's been a lot of work. We tried to leave no stone left unturned, and I think we did a really good job with the data we had in hand. I would like to give a shout out to Jeff Kipp, who did a ton of work on this, and deserves some acknowledgement for sure. He is here as well, to answer any questions as we move forward.

The outline for today's presentation is just going to go over the stock structure that we came up with, get into a bit of the fisheries characterization, some of the available data sources we looked at, and finally stock status. For

stock structure, we looked at a number of different aspects. We looked at biological aspects, which was kind of the size at maturity, which increased from inshore to offshore at the similar latitude, and then the L50 also increased from south to north as you moved from south to north. We also looked at Mass DMF did a large-scale tagging study, and there is no real broadscale movement associated with these guys, a couple outlier large movements, but generally they did not move very much, unlike lobster, where you'll see some pretty large movements throughout the range.

That was not the case, at least with this passive type that use a T-bar tag study. The other thing we looked at was management considerations. This fishery is tightly coupled to American lobster, as everybody knows. Making these splits along these lobster management areas seemed to make a lot of sense, the best we could do with that, to keep them tied together, as it's largely a bycatch fishery within the Gulf of Maine.

As you move to Southern New England, I'll talk about this more as we move forward, there is a targeted fishery. That kind of brings us to the fisheries characterization. I spoke about that just briefly already, that it's a bycatch fishery in the Gulf of Maine, and then I'll point your eye to Stat Area 525, 526 and 537. That is where there is a directed fishery in southern New England, and I'll get into that a bit in the next slide a bit more.

Data availability, basically the finest resolution we had was by stat area, so that is what we used for this assessment. Most things were done by stat area, and that is where some of these splits are. You see this split between offshore Gulf of Maine and offshore Southern New England is along those stat areas.

Fisheries characterization, this becomes a bit difficult, because first I'll draw your eye to this plot on the right. This is 2018, and what it's showing is the percentage of landings from each stat area. You'll notice that some of those stat areas are

grayed out, and that is because they are confidential.

But kind of the take home message here is, in the Gulf of Maine if you looked at those stat areas in the Gulf of Maine from Maine down through northern Massachusetts, it's characterized by a low percentage of the total makeup of the coastwide landings, as it's a bycatch fishery. With a bycatch fishery there is a high number of participants in this area, but low catch per trip.

That is kind of how that is characterized. But it's worth pointing out that with that you have a high number of participants, so if anything changes with the abundance of lobster, and they start to target Jonah crabs more, there is the potential for quite a bit of growth. If you look down to the stat areas that I spoke about before in southern New England, 525, 526, 537.

In this case in 2018, about 70 percent of the coastwide landings are concentrated in just those three stat areas. In some years that is as high as 83 percent. This is where there is a targeted fishery. This is where a lot of discussion was based throughout this assessment, so that is just kind of setting the stage there.

With the last point here is just that with a bycatch fishery, and even a targeted fishery, there is some confounding factors when you're looking at landings, because the abundance of lobster is going to drive that. If you have high catch rates of lobster, they are less apt to take Jonah crabs, as well as market. If there is a high price for Jonah crabs, they may be more apt to, and if there is just generally a market, they may be more apt to land them as well. That made our job a bit more difficult as well. The available data sources were fisheries dependent data and fisheries independent data.

What we looked at for fisheries dependent data were landings, participation, so that is number of trips and permits. I'm not going to present that today, but it is within the report, catch rates and size structure. These are the landings, and we only

went back to 2010, because that was when Massachusetts had available data, and they were a pretty integral part of some of these landings.

This is back to 2010, you can see in the upper panel it's inshore Gulf of Maine to offshore Gulf of Maine in the top. Then inshore Southern New England to offshore Southern New England. A couple things to point out here. Again, those top panels, this is largely a bycatch fishery here. You can see the trends for yourself.

But there are a lot of market driven reasons likely for some of these fluctuations. Then in inshore southern New England, you see that kind of oscillating trend, and it has gone up a touch in the end, but a lot of our discussion was focused around this offshore southern New England area. As you can see, the lobster population declined in this area, and then they started targeting Jonah crabs. You can see that increase in landings.

Notice the magnitude too on the Y axis is quite larger here. But offshore southern New England it stays high through about 2019, and then if you looked at '20 and '21 in this case, you see a pretty dramatic decrease in that time period. There will be more on that in a little bit. We also looked at catch rates.

We looked at the CFRF, that's Commercial Fisheries Research Foundation, they are harvesters volunteering to put ventless traps on some of the trawls that they're fishing commercially. What you're looking at in that top panel is the offshore in yellow, and it shows kind of a similar trend to those landings, with that decline '20.

We don't have '21 in this case, but you see that decline in those later years, kind of in agreement with what we see with the landings there as well. Then the DRM is a modeled CPUE that is trying to get at kind of teasing apart the difference between targeted trips and nontargeted trips, and standardizing that catch per unit effort over time.

The top panel is the offshore Southern New England, and you see that kind of is pretty stable, a

These minutes are draft and subject to approval by the American Lobster Management Board.

The Board will review the minutes during its next meeting.

little bit of decline in the end, and the inshore Southern New England included a general decline throughout. The reference fleet is not pictured here. That was a group of Area 3 Gulf of Maine, we looked at catch per trap haul over time, and compared that to some of our fishery's independent surveys, and found at least some agreement there.

That was another thing that is not shown here due to confidentiality, but that we did look at. The size structure, we looked at size structure from biosampling data from the states and organizations that you see above. The data were pretty limited, but we were able to do it by state area, and we looked at the mean size of males over time, to look for any indication of exploitation, as well as we looked at the mean size of the 5 percent largest males to again, look for any signs of exploitation. With this the size structure was generally stable over time. We kind of were a little, it was a bit of a head scratcher whether this was a reliable way to measure exploitation, and it may be due to our short time series here.

It's something we're going to continue to monitor, but this size structure was stable over time. It's worth noting that Canada did an assessment, and they had a pretty stable size structure over time, even as they were seeing declines in abundance, so that is worth noting, and the peer review report will have more on that.

The fisheries independent, we looked at the Settlement Survey, which was created for lobster young of the year, but we also have tracked crab abundance over time, and then the trawl survey with recruit abundance, exploitable abundance, and spawning abundance. This is the Settlement Survey, and this is all crabs less than 13 millimeters carapace width.

This is for the inshore Gulf of Maine. This was the only reliable area where we had these data for. But you can see these trends over time are generally low in the 2000s, increased in the 2010s, and then you're seeing a bit of a decline generally

with most of these in the most recent years. This is the recruit abundance indices, so this is males in 90 to 119, and these will molt into legal size with their following molt.

We'll see when we look at the indicators some of these trends in a bit more detail, but a couple things I'll point out here. The top two panels, we did look at this on a coastwide basis, and also a Gulf of Maine level basis, as well as by each stock. Ultimately, we decided to move forward by stocks and not the Gulf of Maine or coastwide.

That was because the coastwide index was driven largely by the Gulf of Maine Index, whereas landings come largely from Southern New England, so it created a bit of a mismatch there. I wanted to point that out. You can see some of these trends for yourself. Another thing I think worth pointing out, what you can see to some degree here is that in the Gulf of Maine, our trawl surveys showed some correlation seasonally.

The spring and fall generally were showing some similar trends over time, which gave us a certain level of confidence. If those were largely out of whack, it would kind of decrease that confidence. But I think that's worth noting, and then coming to the bottom panel here, that is the inshore Southern New England.

You can see that those catch rates there, bottom left, are quite sporadic. The inshore Southern New England is defined by low catch rates, low encounter rates, high CV. We did not recommend moving forward with this as an indicator, and you can see there, there are some wild swings where there is 0 catch or close to 0, and then a high catch and it goes back down.

Then in offshore Southern New England bottom right, we'll see these trends in more detail. But we didn't see that spring and fall correlation in the trawl survey indices in that region. That is worth noting. This is exploitable abundance; I'm not going to go into the level of details I just did. We'll see some of these trends later on. But this is males 120 plus. This is spawning abundance, so

These minutes are draft and subject to approval by the American Lobster Management Board.

The Board will review the minutes during its next meeting.

this is females over 80 millimeters, which is inclusive of the maturity estimates for all the regions. Again, this is coastwide in the first two panels, and then you can see that it's inshore Gulf of Maine and offshore Gulf of Maine, and moving to Southern New England after that. Stock status, the methods we looked at were an index-based method.

Jeff did a lot of work with this. Ultimately, we decided that this was not appropriate for the data we had. There is a defined relationship between catch and abundance, which is an essential element when using this type of method. We opted for a rather simple stock indicators, which I'll explain.

The stock indicators, the abundance indicators, were young of the year settlement that we ended up using, recruit abundance, exploitable abundance, spawning abundance, and you can see the sizes associated with those. You'll see it's grayed out there. Fisheries performance indicators, we did use those, they are in the report. They are available. I am not reporting on those today.

Then the way that we looked at these were, we took the time series, calculated the 75th percentile of the time series and the 25th percentile of the time series, and we compared the terminal indicator to those percentiles. The terminal indicator was the average of 2019 through 2021. That will be shown here as we move forward.

Again, this is just a recap of what we're looking at. The inshore Gulf of Maine, the terminal indicators, you can see the red dot is the terminal indicator, and the 25th percentile, I know it's hard to see, but is a solid line, and the dotted line is the 75th percentile. For the inshore Gulf of Maine, they were all neutral, in the neutral range, which would be between the 25th and 75th, except for Maine 512, which was in the positive.

Again, you do see some declines over time, but this is an average of three years, and that is where they are landing at this time. This is the inshore

Gulf of Maine recruit abundance, and at the top is the Mass spring and fall, the Maine/New Hampshire spring and fall, and then the Science Center spring and fall.

You'll notice, and this comes into play in a minute, that the Maine/New Hampshire started in 2000, 2001, so it's a shorter time series. It kind of begins during these pulses of abundance that you may have noticed, and that we've kind of pointed out in this report. The trawl surveys seem to kind of track these pulses of abundance.

Not so great at kind of interannual variability, but kind of a coarse tracking of an abundance signal, which they seem to be picking up on these pulses over time. This is neutral for Mass, both spring and fall. It's negative for Maine/New Hampshire, both spring and fall, and positive for the trawl survey, the Science Center.

For the Maine/New Hampshire, I just pointed this out, but this being in the negative is likely due to this shorter time series. There is no context of the historical values, which is pulling the 25th percentile up. That's just at least worth noting. This is inshore Gulf of Maine exploitable abundance, and this is positive for a spring Mass, neutral for fall Mass, negative for Maine/New Hampshire, again same shorter time series there, and positive for the Science Center. You can see the trends are trending downward in recent years for Maine/New Hampshire, also for the Mass, not so much for the Science Center. This is spawning abundance, and this is positive for spring Mass, neutral for fall Mass, negative for spring Maine/New Hampshire, positive for fall Maine/New Hampshire, and positive for the Science Center, both seasons.

This is the offshore Gulf of Maine spring and fall, and this is neutral for both. You can see kind of that peak abundance in the mid-2010s in the spring comes down quite a bit, still in the neutral zone, and the same is showing for the fall, a fairly similar trend. This is offshore Gulf of Maine, exploitable abundance, and this is positive for both.

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

Again, you do see those declines, the abundance levels went up pretty substantially, and it looks like around 2015 and has been declining. But both still are in the positive values. This is spawning abundance, and this is neutral in the spring, positive in the fall. You can see kind of a similar dynamic there.

This brings us to the offshore Southern New England. Again, where a bulk of the coastwide landings are coming from. You can see from the spring and fall, these kind of are showing, there is no correlation between spring and fall, as I mentioned. Right now, the spring is in the neutral zone, and the fall is in the positive zone.

You can see the spring is kind of generally showing a downward decline since the 2000s, whereas the fall is showing more of a positive trend since that time period. There is a lot of variability here. One of the issues with these trawl surveys, there are low catch rates. We don't fully understand the catchability associated with them, but it's kind of the best we have.

This is offshore Southern New England exploitable abundance, and you can see that this is neutral in the spring, positive in the fall, kind of a similar picture to what I just showed. You do see that in the fall that most recent year has shown quite a bit of decline. That is something that you do see earlier in the time series with these rather large swings.

Spawning abundance, these are both neutral. You see the trends there. Stock status, this was, as you can see from those trawl surveys, they are defined by generally low catch rates, a lot of variability. Again, we felt like they were picking up on these pulses of abundance in kind of this coarse level of an abundance signal over time.

Certainly not perfect, and a lot we still do not understand about them, catchability in different substrates, how temperature affects their movement, and how susceptible they may be to these gears at different seasons. There is still a lot

of questions. That first bullet there is kind of the statement we made, is that abundance conditions have not declined to historical lows for inshore Gulf of Maine, offshore Gulf of Maine, or offshore Southern New England.

The conditions are unknown for inshore Southern New England. As far as settlement goes, settlement condition is neutral, and do not indicate recruitment to Gulf of Maine will decline to historical lows in the near future. Again, that is based upon that terminal indicator, and some of the high values received around that time period. We do acknowledge that there are declines in the Settlement Survey in recent years, and certainly something to keep an eye on. Settlement conditions are unknown for southern New England. We'll get into this a little bit, but that is one of the big mysteries with southern New England, we are unsure of where recruitment is coming from for this stock. But inshore southern New England they do a Settlement Survey, just as we do in the Gulf of Maine, but they get very few to 0 Jonah crab, so it's likely happening in deeper water, but we're unclear of where that is.

Then the last bullet, there is insufficient information to make statements about exploitation. Landings have declined, which is a concerning trend in offshore Southern New England stock, but we also realize with a bycatch fishery and with this fishery, that there are a lot of confounding factors that go into, such as markets, while crabs, or folks are seeking out Jonah crabs is typically lower on the desirability standard for that.

There are lots of different factors that are going into this, but we acknowledge that landings are declining, the CFRF ventless trap is declining, and the peer review, which Rich will get into, picked up on this and really did a good job, and asked us for some additional analyses. Rich will talk about that, but they were really good, you know kind of bringing some of this into focus. I think I'm going to wait on this, Caitlin. I don't know if we jump right into that or we go to Rich's.

These minutes are draft and subject to approval by the American Lobster Management Board.

The Board will review the minutes during its next meeting.

MS. STARKS: You can go through them, and then we can just discuss them again afterwards, or we can go right.

MR. CARLONI: Okay, so we had a lot of research recommendations that came out of this assessment. I don't know the number, but we're not going to bore you with all 45 of them, or whatever it was. But we were able to kind of pick our top ones, and some of the ones that we think could help us to better assess this stock right now.

You know there are so many unknowns that it makes it very difficult to say a whole lot, other than kind of monitor these trends, monitor landings. The first one is to collect growth data, particularly for adult crabs in offshore southern New England stock. We do have some growth data that Corinne Truesdale from Rhode Island has collected, also in New Hampshire, and myself and some colleagues have collected some here. But one of the big issues is that when you get to legal size there is very little molt information.

We didn't get any to molt in the legal-size range, and I know Corinne had some luck, but still not once you get into that larger size range. We don't know the growth increment, or the time period between the frequency of how often they molt, which is a big unknown and would really help us to better be able to assess this stock, growth is very important. Conduct video surveys for a snapshot of total stock size, and improved understanding of catchability.

Again, I mentioned some of that, the issues with catchability in different substrates temperatures, how that relates to what is actually going on, on the bottom. The third one, research spatio-temporal settlement dynamics and recruitment source for offshore southern New England. I think I mentioned that as well, where a bulk of these landings are coming up from, up to 83 percent in some years. We have really no idea where recruitment for those individuals or that portion of the stock is coming from, so that is a big unknown. Then what environmental drivers, ecosystem drivers are kind of driving the recruitment process.

Then lastly, determine how to interpret fisheries dependent data, considering drivers of these data streams, and that gets back to some of these confounding factors we talked about better understanding, how these maybe catch rates work over time, and what factors are really driving this market value, things of that nature to better understand these landings. That's all I have.

CHAIR McNAMEE: Awesome, great job getting a lot of information. It's always easier when you have like a single model that you can report out on. A little more challenging when you have to cover a bunch of things. We are going to hold questions for now and go right into the peer review. I hear that as well; I'm just going to power through it.

We're going to go right to Rich's presentation, they are very closely related, so please hold your questions for now, and we'll circle back, hopefully Josh will hang out with us for a little while, and we'll come back to all of your questions for both Rich and Josh. Rich, whenever you're ready.

PRESENTATION OF PEER REVIEW PANEL REPORT

MR. RICH WONG: Good morning, and a pleasure to meet you. The Review Workshop was conducted in late August, and we focused on all aspects of the assessment, including data methods and overall judgment of the assessment and quality for management use. The Review Panel consisted of Dr. Paul Rago, former Chief of the Population Dynamics Branch of the Northeast Fisheries Science Center. Dr. Chris Siddon, shellfish biometrician from Alaska Fish and Game, and myself, Rich Wong, another biometrician from Delaware Division of Fish and Wildlife.

These panel members have extensive experience with stock assessments, most importantly, they have personal expertise in data poor methods, trawl and trap surveys, invertebrate stock assessments and crab population dynamics and ecology. As outlined in the Commission's framework, the panel has no affiliation with the Jonah crab assessment or management.

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

As such, we were tasked with obtaining an unbiased judgment of the quality and appropriateness of the assessment for use in management, and to provide recommendation for research and improvements to the assessment. Overall, the stock assessment was well done. This was a data limited assessment, and as such it had associated challenges.

These challenges made ascertaining stock status extremely difficult. Despite this uncertainty, there was some clear declining signals evident in the fishery. Given this uncertainty and recent concerning signals, the panel felt that it was essential for the Commission to closely monitor stock indicators on an annual basis for the next few years, to better understand the nature of these recent declines, rather than waiting for the next assessment cycle.

In reviewing this assessment, a pretty compelling story emerged for the panel. We see a fishery that has grown tremendously in a relatively short period of time. Landings rose 30-fold in the span of about two decades. The fishery is based on a fairly long-lived crab, which is a common bycatch species in an immense lobster fishery.

This crab has become so valuable, it supports a substantial fishery in its own right, peaking at nearly 20-million-dollars in ex-vessel value. However, we see steeply declining landings occurring over the past four years of this assessment. In fact, landings have declined 51 percent in the main producer region, the offshore southern New England, over this period. We are now at a pivotal part of the story. Where does the story go from here? What lies ahead? Are we at the beginning of a bust phase in a classic boom and bust arc, or is this decline caused by factors unrelated to stock decline?

What makes the story particularly worrisome, is that we've seen an almost identical set up in the early stages of the collapse of the Canada Jonah crab fishery in the early 2000s. In the first four years of this crash, landings have fallen 59 percent.

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

By year 7, landings had declined 97 percent, and the stock no longer supported a fishery.

In retrospect, Canada DFO concluded that Jonah crab biomass was severely depleted, despite relatively low fishing pressure, and on a male-only fishery. To evaluate the appropriateness of this assessment, the panel was tasked to formally address nine terms of reference. The following slides will state each term of reference, and summarize the panel's main conclusions.

Term of Reference 1, evaluate the thoroughness of data collection in the presentation and treatment of fishery dependent and fishery independent data in the assessment. The data collection in the assessment was comprehensive and thorough, and the SAS did an exemplary job of justifying whether they included or removed data sources.

Data source variances and caveats were clearly presented. The panel agreed with the SAS's decision to summarize and report data for four distinct regions, given different fishery dynamics and potentially different stock dynamics between these regions. Throughout the review workshop, there was considerable discussion on how effective trawl surveys are for capturing stock signals for Jonah crab.

As an illustration, one out of every five annual index values was a 0. This indicates very low catchability success in these trawl surveys. For the future and the success of any future assessment, will depend on identifying and developing a synoptic index of abundance. TOR 2, evaluate empirical indicators of stock abundance, stock characteristics, and fishery characteristics for their appropriateness to monitor the stock between assessments.

The SAS presented a large number of stock indicators that Josh went over earlier. It consisted of 53 fishery independent surveys and 4 fishery dependent indices. Its fishery independent indicators in bulk, did show positive long-term trends across time series of greater than 40 years.

Here is a stoplight diagram, courtesy of Dr. Rago, showing all 53 fishery independent indicators.

As you can see, really want to just focus on the green, the colors of the values, the green being positive. As you can see, most of the positive values in green are seen in the later years of the time series. However, the panel also recommends to interpret these indicators over a more recent timeframe. This is because of a potential regime shift at the beginning and around 2010.

Pictured here the young of the year indices, and we see much higher recruitment and higher stock productivity, beginning in 2010. To better evaluate current stock status, it might be more appropriate to view the indicator as relative to 2010 to current. As you can see here, there are very few green lights in the past couple years of the assessment. We have somewhat conflicting long term versus short term signals from fisheries independent indicators. However, the indicators that were most worrisome were fishery dependent. The most conspicuous is the 51 percent decline in landings in the OSNE over the past four years.

But the more concerning indicator is the decline in fishery dependent CPUE in Rhode Island. That is the top panel. The bottom panel shows this preliminary analysis of fishery catch per unit effort, based on directed Jonah crab trips only. When we prepared this presentation, we revisited the fishery independent indices, but this time it's focusing especially on the last three to four years. We did see sharp declines in recent years in almost all of the fishery independent indicators in the most recent years of the surveys.

These are the young of the year indices. This is inshore Gulf of Maine recruit indices. Here are the inshore Gulf of Maine exploitable crab indices, the inshore Gulf of Maine spawner indices, the offshore Gulf of Maine recruit indices, offshore Gulf of Maine exploitable crab indices, offshore Gulf of Maine spawner indices, offshore southern New England recruit indices, offshore southern

New England exploitable crab indices, and the offshore southern New England spawner indices.

The panel does want to be careful, to not overstate these very recent fishery independent declines. However, the consistency in these declines in the most recent years was notable, and is a source of anxiety. Given the steep drop in landings and declining fishery dependent CPUE, and the very recent drop in the fishery independent indices, again, the panel recommends to continue monitoring indicators on an annual basis.

TOR 3, evaluate the methods and models used to estimate population parameters by less reference points. Data limitations precluded any methods to estimate population parameters by population size and fishing mortality rates. Other methods were employed, these include trend analyses, correlation analyses, construction of traditional and model generated abundance indices as indicators, and using reference-based quantile thresholds to evaluate these indicators and indexed based methods.

The SAS did a good job of stating any assumptions and caveats contained in these methods. TOR 4, evaluate the diagnostic analysis reform. This is a rather generic term of reference that is usually intended to explore the stability in models that are used to estimate population size and fishing mortality rates.

In this assessment, a large array of correlations was conducted, which could be considered diagnostic analyses. These correlations were used to investigate the cohesion in indices across life stages and regions. Another diagnostic analysis was the exploration of potential climate impacts and survey catchability.

Overall, diagnostic analyses were appropriate, and the SAS was transparent in decisions methods, and was critical and objective in evaluating their analytical results. TOR 5, evaluate the methods used to characterize uncertainty in estimated parameters. Again, this is a term of reference that

These minutes are draft and subject to approval by the American Lobster Management Board.

The Board will review the minutes during its next meeting.

is more applicable to assessments that estimate biomass and fishing mortality rates, Fmsy or quotas. But in this assessment, uncertainty was quantified when appropriate, and otherwise was stated, and acknowledged by the SAS in the report. TOR 6, recommend best estimates of stock biomass abundance and exploitation. Although the SAS was unable to generate estimates of abundance and exploitation, the panel did provide guidance towards future modeling efforts.

Obviously, a high priority is to develop and identify a synoptic index of abundance. With a synoptic index, catch survey analysis, depletion models or surplus production models will be logical models to pursue. More complex models, length-based models are possible, but require more substantial length sampling, and growth information.

If ageing is possible this would be a complete game changer, and would open up tremendous assessment possibilities. TOR 7, evaluate reference points and stock status determination. The panel considers stock status to be highly uncertain, owing largely to the fact that population estimates and biological reference points were not available.

The SAS did present other status determining criteria that we discussed earlier, that Josh discussed in his previous presentation. In general, these criteria portrayed positive long-term trends, plus more recent signals. Other favorable factors do exist. One, it is unlikely that recruitment overfishing or overfishing on juveniles is occurring, since the minimum size limit appears to be adequately specified.

The fishery also appears to select crabs larger than this minimum size limit. Female harvest is minimal in this fishery. This provides a significant moat around the potential depletion of female spawning biomass. Again, long term trends in fishery independent indices are positive. The concerns are sharply dropping landings, declining fishery dependent CPUE, and some very recent drops in fishery independent indices.

These somewhat conflicting signals in the fishery independent indices are not necessarily surprising for Jonah crab. In the Canada Jonah crab stock collapse, fishery independent trawl surveys were not very effective at detecting the decline in stock. However, the declining fishery dependent catch per unit effort was observable, preceding and during stock crash, as you can see in the top figure.

Again, you see the Rhode Island fishery dependent CPUE on the bottom figure. TOR 8, review and prioritize research recommendations. These were discussed at the review workshop, and the panel supports the SAS's prioritized research recommendations. In addition, the panel put forward these specific recommendations.

One, to continue to develop and refine fishery dependent indicators, including an examination of the Massachusetts directed fishery CPUE, and formally incorporate, if possible, local knowledge when interpreting this fishery dependent data. Two, to continue and possibly expand the CFRF ventless trap research.

Three, investigate surveys with higher catchabilities, such as the defunct winter bottom trawl survey, as potential directed Jonah crab surveys. Four, increase monitoring of female metrics, such as operational sex ratios in surveys and sea sampling, spawning potential ratios, and potential sperm limitation. TOR 9, recommend timing of the next stock assessment. It was difficult to recommend a precise timing for the next assessment. However, what is clear is that the Commission should not wait until the next assessment cycle to monitor indicators.

It is imperative to understand the nature of these recent declines. That being said, five, possibly ten years are probably needed to attempt population modeling. The panel recommends convening in five years, to summarize ongoing work and progress towards the next assessment. Furthermore, the panel felt that implementing a decision process might be helpful in identifying and preventing potential collapse of the stock.

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

To conclude, the Jonah crab stock is highly uncertain because of data limitations that prevent traditional population estimates, as well, it is also uncertain due to the concerning recent fishery signals. Annual monitoring is critical in the near term to determine where the Jonah crab story is heading.

In light of these conclusions, the panel felt it was important to one, identify and prioritize candidate indicators, to conduct a formal annual review of these indicators, and to develop a methodology for making decisions in response to indicator pattern. Lastly, the panel would like to thank the SAS, the Stock Assessment Team and the Commission staff for highly productive and collegial workshop, and for the timeliness in the reports and additional requests for analyses.

CHAIR McNAMEE: Great, thanks so much, Rich. Okay, excellent reports from the stock assessment team and the peer review team. Why don't we clear up any questions that folks might have for Josh or Rich. Anyone with questions, please raise your hand. I saw Bill Hyatt first, so go ahead, Bill.

MR. WILLIAM HYATT: Yes, just a quick question regarding the collapse of the Canadian fishery. Is there any evidence that since that collapse there has been any kind of recovery in those geographical areas involved?

MR. WONG: That's a good question. To my knowledge, the fishery has never recovered from that collapse that had occurred. But the assessment was conducted, I think it was in 2009, more than 10 years ago, the Canadian assessment. That is a recommendation that we gave to the Stock Assessment team is to do a post mortem investigation into that, a deeper post mortem investigation into that Canadian stock collapse.

MR. HYATT: There is no post collapse monitoring taking place at all?

MR. WONG: Not to my knowledge, I haven't seen anything published about that.

CHAIR McNAMEE: Good, Bill, next up I have Mike Luisi. Go ahead, Mike.

MR. MICHAEL LUISI: I'm not sure who this question is for, but maybe somebody can help me out. I certainly appreciate the presentation, and it is concerning to see declines that we're looking at. I just wonder, as far as prosecuting the fishery, I know that we had discussions in the past about whole body versus claws, and things like that. Is there any information about the distribution of the catch, whether it's whole body, the whole crab harvest versus the claw harvest? You know the idea behind the claw harvest is that the crab will actually survive. I know the fishermen in the south, many of them just use the claws. But if there is any additional information about whole body harvest, I would be curious to see what that looks like.

MR CARLONI: I can take a stab at that to start, and if anyone wants to jump in, they can. The last estimate, I think that we saw is less than 1 percent is just claw harvest. There are states that do not allow it at this time. Myself and some others actually did some research on mortality rates associated with declawing Jonah crabs, and it was as high as 70 percent when removing by hand both claws. That information is in the assessment. I don't know if that answers your question or not.
MR. LUISI: Yes, it helped, thank you.

CHAIR McNAMEE: Next up I have Doug Grout. Go ahead, Doug.

MR. DOUGLAS E. GROUT: My question is, I noticed in some of the different areas the degree of the decline was different. Clearly to me, it showed that in the offshore southern New England it seemed like that's where it was the most dramatic declines that are occurring. My question is, is the best available science right now that this is a single stock of Jonah crab?

CHAIR McNAMEE: That might be one for Joshua or Jeff. Josh, do you want to jump in on that one?

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

MR. CARLONI: Yes, so I guess are you saying is it one coastwide stock, Doug? Is that where your question is leading?

MR. GROUT: Yes, Josh.

MR. CARLONI: Yes, so the information that we had, we did split it into these four different stocks. Some of it, of course, was based on management, and it was tied tightly to the lobster fishery. But some of it was on biological data, where we're seeing differences in size at maturity, as well as a lack of movement of these crabs, large-scale movement.

There is obviously still a lot to learn with larval dispersal. We don't fully understand that yet. But as currently constituted it is four stocks, and this southern New England area is its own stock, as we assessed it in this assessment. Of course, there is still a lot to learn, but that is how it is now.

MR. WONG: I'll just add to that. In the report there is a comparison of indices from the Science Center's Trawl Survey in adjacent stat areas that are in that offshore southern New England and Gulf of Maine stocks, and the trends are pretty different in those two areas, so it does seem that there are also some differences in trends in abundance going on between those areas.

CHAIR McNAMEE: Good, thanks, good info. Next up I have Steve Train.

MR. STEPHEN TRAIN: I'm not sure who might be able to answer this. You know when we took this species on, I wonder if we may have actually created a derby for a while, and these fishermen aren't the same as we used to be. Somebody starts talking about limiting something, we go as hard as we can to make sure we don't get something else taken away from us. If that happened, we would land a lot more of anything for a while, then they would be bound to see a decline.

I wonder if the effort on this could have been taken into account, because of when we started

managing it and there was a worry. I know we're dropping below pre-management levels, but even that I think could be taken into account. There were some things in this that didn't look as bad as others. There is a lot of neutral there. I wonder how much of that could be attributed to management more than what the traditional fishery and the stock would look like.

CHAIR McNAMEE: Good question, Steve. Maybe Josh, take a crack at that one. I think you guys talked a lot about these external factors, so maybe you have a comment on that.

MR. CARLONI: I'm not sure I fully understood his exact question, but I think one way that I look at it is, when we're just talking about southern New England, which is where I think the concern seems to be generally right now, due to the high exploitation rate there. When we're talking about that southern New England stock, the reason that started to be fished so heavily was due to the decline in the lobster fishery in southern New England.

As their lobster fishery declined, they started to target these Jonah crabs in these specific areas, and that's when the landings just skyrocketed, and stayed high for a period of time. Only in the last two or three years, looking at the landings, has it been declining quite a bit. That does also coincide with a higher price per pound, which adds to some of that concern level, as to why those landings are declining.

But at least in southern New England, I think it's highly tied to what is going on with the lobster population there, and that I guess would be the concern in the Gulf of Maine, with a high number of participants. You know we're seeing some declines in the lobster population in the Gulf of Maine, but compared to historic values, at a very high level.

You know that would be the concern if the lobster population continues to decline, are these guys going to shift to Jonah crabs, and then you have a pretty high exploitation rate, and you could

These minutes are draft and subject to approval by the American Lobster Management Board.

The Board will review the minutes during its next meeting.

deplete the resource fairly quickly, at least according to what we saw in Canada.

CHAIR McNAMEE: Thanks, Josh, follow up, Steve?

MR. TRAIN: I think you got the concept of what I was saying, but I'm wondering if this peak effort, of course may have caught a larger crab for a while, as more people went and went harder. But has this effort peak dropped off, so that maybe if you take into account that that peak in effort for a while may be leveling off, that the stock may level off on its own.

I mean essentially this is a male-only fishery. There are females, but the size alone has made this almost a male only fishery. How we put more broodstock on bottom is beyond me, and that is one of our general tools. I'm not saying I don't want to manage something, but I'm wondering if this might level off on its own.

CHAIR McNAMEE: Thanks, Steve, appreciate that. Roy, you are up next.

MR. ROY W. MILLER: I was wondering from either Joshua or Rich, if the troubling recent declines in fishery dependent and fishery independent indices, we're admitting that those are troubling. Are they responsible for what we're seeing, or is exploitation responsible for what we're seeing, or is it a climate change affect? I'm just curious which of those two might be more important, or is it too difficult to say?

CHAIR McNAMEE: Actually, I think that one was directed to Rich, if you want to take a crack at it, but I think we could lateral that one as well over to Josh or Jeff.

MR. WONG: Roy, you are correct, it is very difficult to answer that question. You know the conclusion was that almost everything was uncertain. The stock status was uncertain for the stock, and that is because we know so little about its biology, its life history and the appropriate years as indicators. I guess I would probably pass this off to Josh.

CHAIR McNAMEE: Yes, either Josh or Jeff, feel free to chime in.

MR. JEFF J. KIPP: Hey, Josh, I was just going to offer a comment. You might have to add to it. But one of the things that we saw, particularly in the Gulf of Maine indicators, was that there appeared to be this boom-and-bust type population dynamic going on, and we saw an increase in abundance in the early 2000s across trawl surveys.

It was very clearly picked up in the indicators that we had, and that was at a time when there was really no Jonah crab fishery, even in southern New England. That pulse went away within a couple of years. We saw that again in the mid-2000s, but it was considerably larger. There was a significant increase in abundance. We saw it across trawl surveys, and that's what we're seeing in the most recent years of this assessment is the decline from that all-time high.

It seems like there is another boom in abundance, and we don't know the drivers behind that, what is causing these boom-and-bust type dynamics. But that was one of the things that we grappled with in this assessment, that we did see across indicators, that we don't know what the declines are in those boom periods.

CHAIR McNAMEE: Anything to add, Josh?

MR. CARLONI: No, I think that covers it pretty well. There is just a lot of uncertainty still, and it's hard to answer questions sometimes, when we just simply don't know.

CHAIR McNAMEE: Great, thank you, is there any follow up, Roy?

MR. MILLER: Well, the reason I posed the question is, I'm just wondering if we need to take action to avoid the collapse that happened in Canada, happening in offshore southern New England stocks. Do we need to do anything, or is it out of our control, basically?

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

CHAIR McNAMEE: Thanks, Roy, that was an excellent segue for transitioning on the agenda here, so thank you for that. Not seeing any more hands around the table, not seeing any online either. Certainly, if folks have additional questions, we can address those.

CONSIDER ACCEPTANCE OF BENCHMARK STOCK ASSESSMENT AND PEER REVIEW REPORT FOR MANAGEMENT USE

CHAIR McNAMEE: But let's move forward. We have a couple of options for how we can proceed today per what Roy was just wondering.

Maybe at the highest level, just sort of let folks know what I was thinking, kind of looking at the agenda. We could do nothing, that is always an option. We could potentially approve the assessment for management use, and then develop some tasking for the Technical Committee to look at some things that you're interested in, that will help you to kind of understand a little better, whether we should take action. That is kind of like the middle road, and then we also could approve the assessment for management use, and if somebody is ready to go, wants to offer something, you know you could do that as well. I have a favorite amongst those three, but I'll let you all discuss, so that is kind of how I see the conversation going here. I'm going to start off with Dan McKiernan. Go ahead, Dan.

MR. DANIEL MCKIERNAN: Is it possible to accept the assessment and stop short of new management, but actually put more efforts into monitoring?

CHAIR McNAMEE: Sorry, Dan, just to make sure I'm clear. You would recommend, you would approve the assessment and then you would make some research recommendations. Is that your idea?

MR. MCKIERNAN: Yes, thank you, something in that realm. I'm thinking of raise this particular species up, in terms of priority species for future research and for attention, in terms of funding

priorities, because it seems like even if it's just at a minimum, making sure that the states continue to do what we've been doing to maintain that.

We already know that we've got some challenges with trawl surveys, for example. If we need to continue to study the fishery dependent data, make sure that states are providing that data and those analyses. I'm wondering if we can stop short of management, but ramp up the monitoring attention.

CHAIR McNAMEE: Okay, got you, absolutely that's an option. The first part is straightforward. The second part, the way I'm kind of interpreting, one way we could approach that is we could ask the Technical Committee to kind of look at the research recommendations, and offer which subset of them we think they would, or which ones they would recommend that would meet the goal that you just offered, of raising this species up. The subset that would give us the most information to kind of begin more robust monitoring of this stock. That could absolutely be a way to go. We'll take a few more comments here. Dave Borden.

MR. BORDEN: To me that sounds like a logical way to move forward, but I guess my suggestion on part of this, I'm a little uncomfortable with is the marketing aspect of it. I realize that is not an issue that we traditionally get involved in. But right now, the average fisherman could literally catch tens of thousands of pounds of Jonah crabs, but there is no market for them right now.

You can't sell the product. I would be comfortable approving the assessment for management, or just approving the assessment, and asking for technical advice on some of the elements you outlined. But I think one of those should be to try to get some more information on why the market is in the condition that it's in, because that may lead us to very different management conclusions than we would ordinarily take otherwise.

CHAIR McNAMEE: Really good point, David, I think that is aligned with what Steve Train was offering

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

earlier as well. Okay, let me just check around the table. Doug Grout, go ahead.

MR. GROUT: Yes, I liked Dan's suggestion, but I have concerns that if we ask the TC, and they give us suggestions about things we could do to improve the monitoring here. That is going to take a while to develop, and if we continue to see these declines, it's not going to be as valuable two years from now as it will be five, ten years from now.

I personally like the suggestion of the peer review panel that we increase the frequency of the updates on what we have right now. Now whether it is annual or every two years, it depends on what our capacity of our stock assessment committee is, with all the other things that they are involved in.

But I certainly would support Dan's suggestion for one or two things that can improve things for the long term, but I think right now we're at a point where we need to keep a close track of the stocks with the data that we have at hand. If you would like a motion on that sometime, I would be glad to put it forward, if you give me a minute.

CHAIR McNAMEE: Just to offer a thought. Excellent comments, and I wonder again, to sort of understand the optimal frequency of how often we should be looking, and what of the things we already have we should be looking at could be a task to the Technical Committee as well, just to get a little advice back on that. I'll just offer that thought, so you can think on that a little bit. Dan McKiernan, go ahead.

MR. MCKIERNAN: I would be happy to make a **motion to accept the peer review and the stock assessment for management use**, if that would move the discussion forward.

CHAIR McNAMEE: Yes, thanks for that. We've got a motion on the table, is there a second? I see everybody in Maine and New Hampshire wants to second, so I'll go with Steve Train, I saw his hand first. Motion from Dan McKiernan, seconded by

Steve Train. It looks like that is making its way up there, great.

The motion is made by Dan, anything further you want to say about that? Okay, you're good. Anything, Steve, from you on the motion? Okay, any other discussion folks want to have before we take action on this motion? Any hands online? Okay, I'm going to give folks maybe one minute to chat, because of the hybrid, so if you need to connect with anyone online, to make sure things are okay. Let's do one-minute caucus, and then we'll call the question. Does anybody need more time? You can raise your hand if you do.

Not seeing any hands, no hands online. We have a motion before us to accept the Jonah crab benchmark stock assessment and peer review report for management use. Motion made by Dan McKiernan, seconded by Steve Train. Let's go ahead and call the question on that. **All those in favor of the motion, please raise your hand, including folks online with a virtual hand. Okay, so that was 10 in favor, all those opposed to the motion. It looks like 0.**

MS. KERNS: Mr. Chair, you have a hand up from NOAA Fisheries, Alli Murphy, and I don't know if that's opposed or if she's trying to do something else. She's put it down.

MS. MURPHY: Mr. Chair, I meant to vote yes.

MS. STARKS: It was hard to hear you, but I think you said you meant to vote yes.

MS. MURPHY: Correct.

MS. STARKS: Thank you.

CHAIR McNAMEE: Sorry, so we missed a hand online. There are **11 yesses, there were 0 noes, any abstentions? Oh, that is everybody, so no abstentions, no null votes. Great, so the motion passes.** Thanks for that, Dan. We got that part settled.

CONSIDER MANAGEMENT RESPONSE

CHAIR McNAMEE: Now we can get into some of the other comments that were made about potential tasking to the Technical Committee, or otherwise. I see a hand from Steve Train first, go ahead, Steve.

MR. TRAIN: Just trying to move this along. I would like to make a **motion to task the Technical Committee with the possible management options to correct what appear to be deficiencies in the health of the stock**, whether they be seasonal closures, increased vent size or other options.

CHAIR McNAMEE: We'll just get that up on the board, hang on a second. We're just pausing to get the motion up on the board. Okay, how does that look, Steve?

MR. TRAIN: Oh, that's fine, I don't need examples, I just gave them when I was giving the motion.

CHAIR McNAMEE: Okay, so looking for a second to the motion. Doug Grout seconds the motion. Discussion on the motion. I think this is starting to create the tasking list for the Technical Committee here. Steve, I'll hand it over to you first, if you want to offer anything.

MS. TRAIN: I spoke earlier to it, I'm not sure what more we can do. But I'm not a technical expert, and I'm hoping that there might be some advice on how we might be able to correct this. If we're already leaving the females on bottom, maybe they need more males down there, I don't know. But it seems like that is the tool that we go to on most things, and we're there already. Hopefully they've got some advice for us.

CHAIR McKIERNAN: Doug, anything to add? Nothing from Doug. David.

MR. BORDEN: I'm fine with the motion, but I kind of view this as a two-step process, and the first step being that some of the technical folks would at least talk to the processing industry, and try to

figure out the dynamic of what's going on, in terms of the market implications. Then bring that back, hopefully by our winter meeting.

Then we could decide whether or not we wanted them to target specific management action. If it's all right with Steve, it would be kind of a two-step process. I just don't want to waste a lot of technical time on this, if it's not going to be placed in the right arena.

CHAIR McNAMEE: I saw Dan McKiernan's hand.

MR. McKIERNAN: I have a question for the motion maker. It says deficiencies in the stock. Was it meant to be deficiencies in the stock assessment?

MR. TRAIN: Actually no, I think most stock assessments might have flaws, but I think as a whole they are accurate or close to accurate, and this one says that the stock may have issues.

CHAIR McNAMEE: Just to offer an interpretation, and Steve, you can absolutely correct me if I'm off. But the stock deficiencies I think he was talking about are the declines that we're seeing in some areas. Okay, Roy.

MR. MILLER: I was wondering if I might tack on to David Borden's suggestion. While the Technical Committee considers the task before us there in Steve's motion, if they could also examine if the market is potentially very important, in terms of effort, then they need to let us know whether effort, in fact directed effort, has declined or is it staying fairly constant? I would add effort to that examination as well.

CHAIR McNAMEE: I'm going to try and round, okay, I'm going to see if I can try something first. I think we've gotten some good feedback on the motion. The motion is pretty broad, but what I'm hoping is we can kind of keep this, rather than getting into a series of amendments, and just define that, you know the tail end of the motion; what folks are interested in seeing are some economic indicators that we can sort of pull into the analysis. We heard things about market, Roy

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

offered changes in effort, what might be driving that. We have this kind of broad motion of tasking to the Technical Committee.

We've had some discussion that I think defines that a little bit more for them. If it's okay with the Board, I'm hoping we can kind of stick with that as we task the Technical Committee, they will have a little more detailed information from the discussion. Is everybody okay? How about the ASMFC folks. Am I okay with the logistics?

MS. STARKS: **Yes, I think as long as we're clear on the record what the Board is looking for from the Technical Committee, we don't need to add everything into a motion. We just want to make sure on our end we are going to be having the Technical Committee look into market factors that could be affecting this, recommending any monitoring improvements, and looking into effort in the fishery, as well as other factors.**

CHAIR McNAMEE: That sounds right to me, anyone want to add anything in addition to what Caitlin just summarized? Doug.

MR. GROUT: Maybe you indicated this, but just to get a feel for how frequently we could have that update, is it two years or one year? It would be great if it would be annual, but I'm not sure they could do it.

CHAIR McNAMEE: That's awesome, Doug, so yes, that is an important one. Getting some feedback from the Technical Committee on the frequency of the informational updates that we get, is also an important one to get feedback on. Okay, does anybody need time? Can you raise your hand if you need time to caucus with folks who are online? I'm not seeing any hands around the table. We have a motion before us that has been seconded. Are there any objections to the motion? Please, raise your hand if you object to the motion. Dan, go ahead.

MR. McKIERNAN: A question just came up in our delegation. When would we get a report back from the TC?

MS. STARKS: I believe we can have a report back by the winter meeting with recommendations.

MR. McKIERNAN: Next meeting in January?

MS. STARKS: Jeff, does that sound all right to you? Yes.

CHAIR McNAMEE: Try again. That wasn't an objection, just to be clear. **Any objections to the motion, please, raise your hand. Looking around the table, no hands, looking online, no hands. The motion passes by consent.** Great, thanks everybody, good discussion.

CONSIDER ANNUAL DATA UPDATE OF AMERICAN LOBSTER INDICES

CHAIR McNAMEE: Let's move on to our next agenda item, this is Consideration of the Annual Data Update of American Lobster Indices. Kathleen, I believe is online. If you're ready, Kathleen, we've got your presentation up, so please take it away whenever you're ready.

MS. KATHLEEN REARDON: Coming out of the 2020 American lobster stock assessment, it was recommended to provide data updates to the Board between assessments to allow for evaluation of potential changing trends in stock abundance. The objective of this process is to present information that could support additional research or consideration of changes to management between assessments.

The datasets that I will present, are those that may indicate the exploitable lobster stock abundance conditions in the future. Those datasets are the trawl survey indicators, including recruit abundance and survey encounter rates, ventless trap survey, sex-specific indices by statistical area, and young of year settlement indicators.

The updated data since the assessment include 2019, 2020, 2021, and 2022. This is the third update provided to the Board since the 2020

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

assessment. To show relative status, we use a baseline from the assessment time series to understand potential changes in condition. For each assessment time series, below the 25th percentile is considered negative conditions.

Between the 25th and 75th is considered neutral, and above 75th percentile is a positive condition. The terminal indicator status for each index is a five-year mean. To determine the status, we compare that five-year terminal indicator status or mean, from the assessment including 2014 to 2018, to the most recent and updated five-year status mean of years, 2018 to 2022.

We do have some notes to consider. COVID 19 had impacts on trawl survey sampling efforts in 2020, and will continue to impact our updated five-year mean in this period of 2018 to 2022. Any data or past errors that lead to changes from previously documented values, are described in your meeting material memo appendix.

The figures shown on the slides only display the annual values as a time series, but the memo in your meeting materials includes tables with the assessment and updated five-year mean value. The red dots and lines in all of the figures represent the updated data since the last assessment, or the black dots and bold lines are the data time series considered in the assessment, and data determining the 25th and 75th percentiles.

The solid line is the 25th, below which is negative, and the dotted gray line is the 75th, above which is positive. Between the horizontal lines represents neutral conditions. We will start with the Gulf of Maine young-of-year indices. All updated five-year means were neutral, which is an improvement from the assessment, because both southwest areas were negative during the assessment.

When looking at individual years, the 2022 young of year indices increased from '21 in all areas except 514 in the bottom figure, and all 2022 values were in neutral status except 511 at the

top. The Gulf of Maine trawl survey recruit indices, the indicators were showing signs of decline since the assessment.

The Maine/New Hampshire fall trawl survey updated five-year mean, changed from positive in the assessment to neutral in the update, while the others remained positive since the assessment. Looking at individual years, the 2022 values for three of the four inshore indicators were neutral. The offshore indicators from the Science Center trawl survey remained positive. It is important to note that five of the six indicators were not available in the 2020 year, due to COVID sampling restrictions.

For encounter rates in the Gulf of Maine, the rates remain high, but are showing deteriorating conditions since the assessment. All four of the inshore indicators were neutral, whereas only one was neutral in the assessment, showing relative declines in index condition. The updated five-year mean for the two offshore indicators remained positive. Again, five of six indicators did not collect data in 2020.

For the Gulf of Maine ventless trap survey indicators, the surveys have shown decline since the stock assessment. For the updated means, six of eight updated means were neutral, and two were negative, compared to four positive and four neutral, and no negative means during the assessment. The 2022 values for both sectors in 512 and 514 were among the lowest observed in the time series. Switching to Georges Bank recruit abundance from the Science Center Trawl Survey, conditions exhibited a slight improvement since the stock assessment, where one mean moved from neutral to positive, and the other remained neutral.

Both the 2022 annual values were both positive, and relatively high. These indicators tend to be noisier than some of the other abundance indicators, with high interannual variability and lack of discernable trends. No indicators were available for Georges Bank in 2020. For encounter rate in Georges Bank since the assessment, both

These minutes are draft and subject to approval by the American Lobster Management Board.

The Board will review the minutes during its next meeting.

means were positive and similar to the assessment.

Moving to southern New England. The updated five-year means for young of year were all negative, while only two of three were negative in the assessment. There has been only one nonnegative annual indicator observed since the assessment, and no young of year have been observed in Massachusetts for the past eight years.

For recruit abundance from trawl surveys in southern New England, conditions have declined since the assessment, with all updated five-year means negative. In the assessment, three of the eight indicators were neutral. All annual values for 2022 were negative, and marks the first year that values have been negative across all the true indicators for southern New England. Six of the eight indicators were unavailable in 2020.

Southern New England encounter rates, the conditions have deteriorated since the assessment, with all updated means and negative condition, with two changing from neutral to negative since the assessment. All encounter rate indicators were negative in 2022 for the second year.

For southern New England ventless trap survey, there has also been a relative decline. In the assessment all four indicators were neutral, while the update shows that two have changed to negative and two remain neutral. All 2022 values were negative, the second year where the annual values have been negative, across all ventless indicators.

It is important to note that ventless traps have only taken place in southern New England during depleted stock conditions, coinciding with an adverse environmental regime, so interannual variability can be misleading without the context of a longer time series encompassing varying stock conditions. In summary, the Gulf of Maine

indicators show declines from the time series highs observed in the assessment.

Georges Bank shows slight improvement, while southern New England shows continued unfavorable conditions, with further signs of decline.

UPDATE ON ADDENDUM XXVII TRIGGER INDEX

MS. REARDON: At the May 2023 meeting, the Board voted to approve Addendum XXVII, so we have added the calculated trigger index to the data update memo and presentation.

Just as a reminder, the trigger index is based on three recruit abundance indices, including the Maine/New Hampshire and Massachusetts trawl surveys, fall and spring, and the model based ventless trap survey index. Only the size range of 71 to 80 millimeters are considered as part of these three recruit indices. The addendum determined a 35 percent trigger, defined by the decline in the combined recruit indices from the reference period of 2016 to 2018. The assessment found the trend from the indices correlates with overall abundance.

The annual index is calculated as a three-year rolling average. One year cannot trigger action. This is the trigger index calculated through 2022, and the combined index is in the yellow square. The combined index showed a 39.1 percent decline from the reference period, and has crossed the trigger. I will now hand it off to Caitlin, to address the management implement.

MS. STARKS: Just as a reminder, Addendum XXVII established that the management measures triggered under Section 3.2 would be implemented by June 1st of the calendar year following meeting the trigger. This means in Year 1, which would be 2024, the LCMA1 minimum gauge size would increase to 3 and 5/16 of an inch for 84 millimeters.

In Year 3, which would be 2026, the LCMA1 minimum gauge would increase again to 3 and 3/8

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

of an inch, and in Year 4, the LCMA escape vent size would change to 2 by 5 and 3/4 inches rectangular, or 2 and 5/8 circular. Then finally, in Year 5, 2028, the LCMA3 and Outer Cape Cod maximum gauge size would decrease to 6 and 1/2 inches. Kathleen and I can both take questions.

CHAIR McNAMEE: Thank you very much, Kathleen, nice job getting through the data update and thanks for helping out there at the end, Caitlin, with the management response to the trigger. We have a set of data in front of us, and I'll just open it up here to the Board for discussion, sorry, questions to start.

Any questions for Kathleen or Caitlin? No hands around the table, any hands online? No hands online. Okay, we have a set of information, this is a possible action item, so I'll look around the table, and I think I see someone already with their hand up, so Pat, go ahead.

MR. KELIHER: I don't think when we were sitting here in May that we expected to be hitting the trigger as quickly as we did. Certainly, the presentation from our TC Chair shows some troubling trends. If you all recall, at the May meeting there was also a lot of discussion as it pertains to Canada and the differing gauge sizes between the U.S. and Canada, and how problematic that could be. The Board did, with the approval of the Policy Board, develop a committee to work with Canada, try to address some of those issues.

We have in good faith, had two meetings. We've got another one coming up. We've got a Town Hall meeting with industry in Canada scheduled in January. What I'm worried about is the fact that we could have some really negative trade connotation associated with our early action, and I would like to, with the approval of the Chair, put a motion on the board to kick this conversation off, and if I get a second, I'll be happy to give some rationale.

CHAIR McNAMEE: Yes, let's get that motion up, so that we have something to focus the discussion.

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

While they are sort of consulting, let me check one more time, just to make sure there aren't any questions around the table. Okay, not seeing any hands. Looks like we might be ready to go here, Pat, so whenever you're ready, please go ahead.

MR. KELIHER: This has gone through several iterations, so hopefully staff has the correct one. **A motion to amend the approval of Addendum XXVII to change the implementation date. The implementation date for all management measures shall be January 1, 2025, including those measures triggered under Section 3.2. Year 2 and Year 3 measures would be implemented by January 1 of the following calendar years for which they are required.**

CHAIR McNAMEE: Thanks, it looked like we had an older version that flashed up on the screen, so hang on a second.

MR. KELIHER: I would just say, Mr. Chairman, and I appreciate the time that many Board members have given me over the past week, to try to perfect this. I just want to make sure that it's clear for the record. I was the original maker of the motion that developed that started this whole process to be proactive instead of reactive, and I don't like the idea of these delays with the trends that we have in place. But I do think it is critical that we do have time to play out the issues that we have started with Canada, to try to solve some of these problems.

CHAIR McNAMEE: It looks like we've got the right version up on the board. We've got a motion up on the board, is there a second? Seconded by David Borden. Pat, I'll turn it back to you for anything further you want to say on the motion.

MR. KELIHER: Yes, the U.S./Canadian issue is certainly the one driver here. I've already spoken to that. There is the ongoing issue we do have in our Board packet to the supplemental material, the issue of whether gauges can be put together or constructed in time for the potential June 1 trigger. You know David Borden and I have talked about that. There are probably some other ways

around that particular issue, but it's still one of those things that needs to be addressed.

Maine has a very unique problem, as it pertains to differing size gauges with Canada, which is the gray zone issue. Certainly, it's not the problem of everybody around the table here, but it is a serious issue when boats fishing right beside each other from two different countries, one is having to throw that back, and the other is retaining that product. Having some additional time to see if that could be worked on as well would be beneficial.

CHAIR McNAMEE: David, do you wish to speak to the motion as well?

MR. BORDEN: I basically agree with the points that Pat has made. I seconded this, because I think it's a good compromise, in terms of the timing. I've always been a little uncomfortable with a rule change for a fishery that affects 5,000 license holders. If you do it in June, or July, in other words, the time period will link up better with kind of a down period.

My only reservation about this is I'm still a little bit concerned about the aspect of state regulations and how they will follow. I would like to have some discussion of that. We could include that in this discussion, or we can do it separately, whatever your preference is. But my point is very simple, that I think that the states should start their regulatory process now, as soon as possible, and I would particularly emphasize that I think the federal government needs to start its regulatory process soon, given the fact that at this meeting we're going to be discussing federal compliance with regulations that were approved ten years ago.

NOAA needs to step up to the plate and start their own regulations, and have this be seamless, so that when the gauge changes take place, all of the areas have their regulations in place. I think that is critical for our enforcement agencies collectively.

CHAIR McNAMEE: Yes, it's a really good point, kind of keeping with the philosophy of Addendum XXVII, being proactive, and to have folks' kind of thinking out ahead of the regulatory processes, so you're not kind of stuck at the last minute. Please, folks, feel free to comment on that as you're going around the table as well. Other discussion? Dennis Abbott, go ahead.

MR. DENNIS ABBOTT: Could we ask Pat to elaborate a little further on the issues with Canada, beyond the gray zone, the economic issues that we're dealing with and whatever might be informative to the Board.

CHAIR McNAMEE: Yes, please feel free, Pat.

MR. KELIHER: Thanks for that question, Dennis. The Subcommittee has had two meetings, the first one was kind of a more informal meet and greet, to understand, also understand the management processes from each country. The second one was to understand both the science and the assessment work that is ongoing between the two. It was very interesting conversation, where Kathleen Reardon presented for the U.S., talked about high level from our assessment in that things looked good from an assessment standpoint, but we're seeing some troubling trends. Canada's presentation was strictly their assessment, and painted a very rosy picture.

But it wasn't until they looked at our very proactive approach to management that it felt like there was some really positive comments around, okay, we are starting, probably not positive from their standpoint, but seeing some negative trends in Canada as well. The market implications are such that when you have that small product that is potentially going to come back into the U.S. to fill that chick market, that live chick market.

That can be very problematic when you're selling, you know, everybody is seeing the twin lobster special, you know when it's two chicks, and we're not going to be able to sell into that market. I heard loud and clear from the industry, in fact we heard loud and clear from the industry in our own

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

public hearing process from the Commission that industry was very concerned about this from a market standpoint.

You have both that market component from a harvester perspective, and then on the dealer/processor side, there is a lot of concern being expressed to me from the processors about not being able to bring that product in. Now, the document does give some flexibility to each state to allow that to happen. But I think what we would run into probably state by state is quite a conflict between harvesters and the processors. I think trying to rectify that with a consistent gauge would help alleviate any of that consternation between the two user groups.

CHAIR McNAMEE: Okay, Dennis, good? Because of the nature of the motion here, I'm going to look to Bob Beal to kind of clarify what exactly needs to take place here. Go ahead, Bob.

EXECUTIVE DIRECTOR ROBERT E. BEAL: Yes, this is a little bit outside the normal Robert's Rules of Order. It falls under the special provision that the Commission has developed for amending or rescinding a previous final action. This motion will require a two-thirds vote of all the members of the Board.

Usually, you can't go back and sort of just vote to change a final action that has already been approved, but the Commission has set up a special rule where that is allowed. This falls under that and it's in the rules and regulations. The only unique thing here is it's a two-thirds vote, and if this is approved, or any other similar motion, it will, in effect, modify the Amendment XXVII document. It's actually changing the approval of that Addendum. Happy to answer questions on that.

CHAIR McNAMEE: Any questions for Bob? Go ahead, Dan.

MR. MCKIERNAN: Yes, thanks, Bob, for that explanation. You said in effect it changes the final rule. Would it in fact change the printed

document on the web? Like would it be an amended Addendum XXVII, so in historical record we would know going forward this change was made? Has it captured that?

EXECUTIVE DIRECTOR BEAL: Yes, we would update the actual Addendum on the website, with a notation of, you know to capture the changes and the actions the Board took.

CHAIR McNAMEE: Dennis.

MR. ABBOTT: For Bob clarification, I think we've been through this before. It's two-thirds vote of those present and those who abstain, are they counted as part of the two-thirds? I remember that with the Service voting and not voting.

CHAIR McNAMEE: Go ahead, Bob.

EXECUTIVE DIRECTOR BEAL: It's two-thirds majority of all the members of the Board. However, if the federal agency were to abstain, that abstention doesn't count against it, and the math changes a little bit. This Board has a total of, I think 12 votes, and depending on what happens with the federal service it may be 11 or 12 votes.

Eleven, okay, great. The New England Fishery Management Council technically has a vote on this Board for Jonah crab issues, but this is not a Jonah crab issue, so there are 11 votes. If the National Marine Fisheries Service were to abstain, sort of the denominator of our math would be 10. It's a little confusing.

CHAIR McNAMEE: That's how we like it here in the fisheries world. Okay, thanks for all that. Really good discussion on the logistical elements of this, important to know. Yes, Ray Kane, go ahead.

MR. RAYMOND W. KANE: I support this motion to amend, but I would like to go back to the Director of Maine, I support this motion, Pat. Can you give us a percentage on certainty dealing with Canada? In January '25 at that winter meeting, we're not coming back and saying well, we didn't strike a

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

deal with Canada yet. I think I'm asking for a time-certain date.

MR. KELIHER: Thanks for that, Ray. My seatmate was going to flip a coin. I mean that's the certainty we have, right? I mean we don't know how we're going to end up in these conversations. But I can tell you clearly on the record, it is not my intent to come back to this Board and ask for further delay. I think we have to, in good faith, negotiate with Canada to see if there is any room for change, and if there is not then we have to figure it out on our own, on how we're going to implement the gauge change. Sustainability needs to rule the day.

CHAIR McNAMEE: Thanks for that, thanks, Ray. Mike Luisi.

MR. LUISI: Just for the record I wanted to say that the state of Maryland will support the motion delaying the implementation until January, 2025. I understand why that could be necessary, and don't see very many concerns with that. What I'm mostly concerned with, and I don't know if anyone else caught it, but there was a y'all that came out of Pat Keliher during that motion. That was the most concerning thing I've heard all day, and we're in the midst of watching stocks fall apart in our hands. I just wanted to point that out.

MR. KELIHER: I'm going to fully admit, and Jeff Kaelin and the Chairman and Steve Train witnessed me eating grits this morning, and that's the only thing I can contribute it to.

MR. LUISI: They're not going to let you back in when you drive north.

CHAIR McNAMEE: David, go ahead.

MR. BORDEN: A quick point. On this issue of dealing with Canada. If we pass this motion, it becomes much more of a certainty that we're going to take action on a specific date, and if the states start their regulatory process, that will be backed up by that. Then when we get into the next discussion with Canada, we're going to be saying, it's definitely taking place and this is the

date, and the committee that Pat chairs will be in a much stronger position to get into resolving that issue.

CHAIR McNAMEE: I've got Alli Murphy online, go ahead, Alli.

MS. MURPHY: I just wanted to let the Board know that I don't support this motion. Looking back at the meeting notes from the May Board meeting, when Addendum XXVII was approved, Regional Administrator Pentony urged the Board to be as aggressive and proactive as possible in setting these resiliency measures. Those were difficult decisions, but I think it's important that they be adhered to, especially as it is going to be several years before we see any results from any action that is taken. Again, I would urge the Board not to change course from what was originally approved in the Addendum, and I'll be voting no on this motion.

CHAIR McNAMEE: Dan McKiernan.

MR. McKIERNAN: To follow David Borden's point about timing. If we can get a lot of these rules implemented soon, then the gauge manufacturers will know it's time to produce the gauges. I think the manufacturers are nervous about producing a bunch of gauges that if this Board were to change courses again or delay again, they would be left holding with a lot of inventory that they can't sell. I do have a question on the Year 2 and 3 measures. I don't know if this is the type, or I'm trying to remember what was supposed to happen in Year 2 and 3.

But weren't there also some measures going forward in Years 4 and 5 maybe? I wonder if it's clear that all future measures would be kicking in on January 1st, and this would include the maximum gauges that are supposed to come down. I'm not sure that Year and 2, and I just noticed this. I'm not sure that we've got that nailed down. I'm totally supportive of the January 1st start, I just want to make sure this motion isn't confounded in some way.

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

CHAIR McNAMEE: It is a good question, Dan. Caitlin, go ahead.

MS. STARKS: I think as long as it's clear on the record I can work with it, but if you would like to modify your own motion. If you were going to do that, I would just add that all additional measures would be implemented by January 1st of the following calendar years for which they are required.

MS. KERNS: Caitlin, I took this directly from the implementation of Addendum XXVII, so implementation of Addendum XXVII does not indicate anything beyond Year 3, if that is helpful at all. But this is a direct quote from XXVII.

MS. STARKS: Yes, understood. I think the Addendum states that measures would occur a certain number of years after other measures, so it doesn't actually say the year for each one.

CHAIR McNAMEE: Go ahead, Pat.

MR. KELIHER: We look at this stuff and it becomes too clear to us as we're looking at it. But I mean the intent is to stay on the exact same schedule, only we're moving it out starting January 1, and then the schedule would continue from there for Year 2 and 3, and then I think Doug made the motion that was finally on the vent change, pushing it out a year, which I believe was Year 4. Everything would remain the same, and think we bluntly, clearly state that on the record.

CHAIR McNAMEE: David.

MR. BORDEN: Quick point, Mr. Chairman, if you wanted to consider a five-minute break, I'm sure the staff could amend that schedule and put it up on the board. That way it would be totally clear to everybody.

CHAIR McNAMEE: Okay, good suggestion, David. I think we will take maybe two minutes, two or three minutes here. What we're going to do is we're going to put up a table that clearly identifies the timeline here, so everyone can look at it, agree

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

to it, and then we can move forward from there, so three-minute break and then I'll call you back to order.

(Whereupon a recess was taken.)

CHAIR McNAMEE: Let's have everybody come back to the table. We are back. What we have going on here is, we have the original motion made by, I don't have a very loud voice, so I'm not going to try and talk over people. That was my stern finger wagging. What we have is the original motion made by Pat Keliher.

Then we inserted below the motion an updated table that identifies all of the exact dates, when all of these measures would become implemented. Hopefully that clarifies the intent for everybody, this is how it will be documented. I'm getting a thumbs up from Pat with that, and David, are you also okay with the way we have this laid out? Okay, any further discussion needed on the motion? Steve, go ahead.

MR. TRAIN: I figured if I'm the only one in the room that is actually directly impacted by these actions, I should say something. I support them. I didn't want to delay it, but if we don't get it right it could be even worse, so if we need to delay six months to make sure we get this right the first time, great.

CHAIR McNAMEE: Thank you, Steve, appreciate that. Not seeing any hands around the table, before I call the question, there is a hand in the back that I missed, and thank you to Marty for flagging that for me. We're going to have some public comment. There is a public microphone up here to my left, your right, please come on up, state your name and make your comment. Thanks, sorry I missed your hand before.

MR. DUSTIN DELANO: I appreciate the time to speak. My name is Dustin Delano, from the New England Fishermen's Stewardship Association. NEFSA supports Commissioner Keliher's motion. We take Addendum XXVII extremely seriously, and as a lobster fisherman myself, I'm proud to be a

part of one of the most sustainable fisheries in the world.

While we prefer a one-year postponement, seven months would certainly be better than the alternative. Just to reiterate a couple of things. You know back in May, no one expected that this trigger would be met this year in just a few months. You know a couple other things with the datasets that we're using, as Kathleen Reardon stated, the 2020 data is missing quite a bit of information from the surveys from that year.

I think it's real important for us to also realize how much of a contributing factor climate change has been with our fishery. As someone who has fished for over 20 years, and most of my fishery was in federal waters. We have seen a huge increase in small lobsters off there. A lot of us don't even come inshore anymore, and haven't for many years. When you're fishing and hauling a trawl out of 70, 80 pounds of water, and you're catching lobsters that are two inches long, and Jonah crab the size of your thumbnail, there is definitely something going on in that deeper water. Aside from my comments, I really have advocated and tried to encourage for increased surveys and science in that deeper water, because there are definitely some big changes happening offshore. You know just again to reiterate. We've heard the same concerns about the ability to get gauges in time, in a timely manner for the June 1st implementation in 2024, so the seven-month delay would be extremely beneficial for that.

I think it's important for us to remember as well that a 35 percent decline, if I read the graphics correctly, would still keep us above the 2000 to 2010 survey numbers. When I look at it, I of course had trouble for a long time at using 2016 to 2018 as sort of the reference period, because that is sort of at the ceiling, and so I just think that these measures are certainly proactive rather than reactive, which is a very new technique for our fisheries.

I also just want to add to the Canadian inequity issue as well, being a Maine fisherman. While I

don't fish the gray zone, I know many guys who do. It would be incredibly difficult to be trying to conserve a resource and throw back lobsters that would just be caught up by other boats that you're fishing around. As a harvester, when I look at this gauge increase, I see that the harvesters are going to take the brunt of the impact.

But what I could see as a positive thing would have been possibly an increase in demand for our product, where there would be less surprise on a market. But with the inequity, with the Canadians having dealers just go by us and bring that same product across the border into the markets, would take away the one advantage that we would possibly have. I would just appreciate it if you guys would consider this motion, and I definitely learned one thing this morning that I won't be eating grits this week, because I'm not changing my New England vocabulary.

CHAIR McNAMEE: Thank you very much, really appreciate those comments. We have one other public comment that we're going to take from someone online, Virginia Olsen, please feel free to unmute your microphone when you're able, and make your comment, and hope you will be as succinct as our last speaker.

MS. VIRGINIA OLSEN: Thank you. I wholeheartedly agree with Dustin, and appreciate Commissioner Keliher's comments as well that it's a good motion. We were hoping for at least a full year to be able to delay this before we start. I know I'll just in closing highlight some of the things that our membership saw, and that is the same, the inequities be addressed on conservation measures between Maine and Canada before instituting a gauge change.

A new rule for no importing products that are not harvestable in Maine waters, and the federal rules must be adjusted for current and future gauge measures to be implemented federally, so we have consistency there. We also had two members suggest that two ventless traps go to every license holder, and those traps be hauled

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

twice a week during their season, and everything recorded out of those traps.

It would be nice to have some of that information implemented before we have to go to our gauge change. That is why our membership voted, and asked for a two-year delay. But anything would be better than June, so we really appreciate that you're looking at an extended timeline. That's it, thank you.

CHAIR McNAMEE: Thank you, Virginia, appreciate your comments. Okay, so back to the Board here. We are now officially three minutes over time, so I think we need to get to business here. Does anybody need time to caucus? There has been a fair amount of time to chat as we were getting organized here.

Not seeing any hands around the table, so I'm going to go ahead and call the question on this motion. Please keep in mind what Bob mentioned earlier about the logistics. Okay, and Caitlin is going to call out the states as we go along here, so **all those in favor of the motion, please raise your hand.**

MS. STARKS: Keep them high, please. New Hampshire, Maine, Maryland, Delaware, Virginia, New Jersey, New York, Connecticut, Massachusetts, Rhode Island.

CHAIR McNAMEE: All those opposed, raise your virtual hand, or anyone at the table also raise your hand.

MS. STARKS: I don't see any hands up for opposition.

MS. KERNS: You have NOAA Fisheries.

CHAIR McNAMEE: Thank you, Alli. That's everybody, right. Okay, so no abstentions, no null votes. By my math we have 10 in favor, 1 opposed, and I think we've met our threshold, so the motion passes. Thanks everybody. All right, so we're over time, so Jeff and I consulted, and

we're both going to go super-fast on our agenda items here, and I bet Caitlin will too. Go ahead.

MS. STARKS: We can take up the FMP reviews by e-mail vote.

CHAIR McNAMEE: Caitlin is going to be faster than both Jeff and I with that.

CONSIDER TERMS OF REFERENCE AND TIMELINE FOR THE AMERICAN LOBSTER BENCHMARK STOCK ASSESSMENT

CHAIR McNAMEE: With that, Jeff, next up is the Terms of Reference and the timeline for the Lobster Benchmark Stock Assessment. Go ahead whenever you're ready.

MR. KIPP: A memo was provided in meeting materials with three components to consider for this agenda item. The first component is the terms of reference for the assessment, these are terms of reference to be addressed by the TC and SAS during the stock assessment, which I'll present here in a slightly abbreviated format.

The second component is the terms of reference for the peer review, these are TORs to be addressed by the peer review that reviews the stock assessment, upon completion by the TC and SAS. These are essentially the same as the assessment TORs, but directing the review panel to evaluate the TC and SAS's fulfillment of the stock assessment TOR.

I won't go into detail on those. The final component is the timeline of the assessment, and I'll present this with select milestones following the assessment TORs. The objective of this agenda item is to consider the TORs and timeline for approval, so the Committee can begin to work on these TORs. Jumping into the TORs. TOR 1 is to estimate catch and catch at length from all appropriate fishery dependent data sources, including commercial and potential discard data. TOR 2 is to present the abundance data being considered and/or used in the assessment.

TOR 3 is to evaluate new information on the life history, such as growth rates, size at maturation, natural mortality rates and migrations. We do have a sub-TOR here to consider any new information on growth, for potential to update the growth transition matrices, using the assessment model.

TOR 4 is to identify, describe, and if possible, quantify environmental climatic drivers. TOR 5 is to use length-based models to estimate population parameters for each stock unit, and analyze model performance. Sub bullet here of interest is to conduct projections assuming uncertainty in current and future conditions for all stocks, and compare projections retrospectively with model estimates.

TOR 6 is to update simple empirical indicator-based trend analyses of abundance, exploitation, fishery performance, and environmental stress for stock or sub stock areas. Modify or develop new indicators if warranted. TOR 7 is to evaluate the current regime-based exploitation and abundance reference points, recommend modifications to these reference points if necessary.

TOR 8 is to characterize uncertainty of model estimates, reference points and stock status. TOR 9 is to perform retrospective analyses, assess the magnitude and direction of retrospective patterns detected, and discuss implications of any observed retrospective patterns for uncertainty in population parameters and reference points.

TOR 10 is to report stock status as related to overfishing and depleted reference points, include simple description of the historical and current condition of the stock in layman's terms. TOR 11 is to address and incorporate to the extent possible, recommendations from the 2020 benchmark peer review.

TOR 12 is to develop detailed short- and long-term prioritized lists of recommendations for future research, data collection, and assessment methodology. Highlight improvements to be made by next benchmark review. TOR 13 is to

recommend timing of the next benchmark assessment and intermediate updates, if necessary, relative to the biology and current management of the species.

Those are our assessment TORs, so now jumping into the proposed assessment timeline. This slide shows the major milestones coming up with assessment. We have a data deadline for early 2024, we will then meet as a Technical Committee and Stock Assessment Subcommittee at a data workshop in February of 2024.

We have two assessment workshops scheduled, one in June of 2024, and one in October of 2024, to develop models and finalize those models, stock status reference points for the assessment. We'll finalize the assessment report from the SAS in January of 2025, and then have that assessment reviewed by the Technical Committee in February of 2025. We'll have our Peer Review Workshop in May of 2025, and then we'll present the assessment and review reports to the Lobster Management Board in August, 2025. Just a note here, the Stock Assessment Subcommittee was approved by this Board in July via e-mail. I did just want to note that we have the same Stock Assessment Subcommittee as our last assessment in 2020. We did lose one member, however, Kim McKown from New York DEC retired.

She was also our SAS Chair. I would just note that if anyone knows of additional folks out there that would be interested in collaborating on the assessment and supporting it in any way, we would have open ears to that. With that I will conclude my presentation, and take any questions on the TORs.

CHAIR McNAMEE: Excellent, thank you, Jeff, and thanks for spinning through that so rapidly. Questions, or you can offer anything on the terms of reference or the timeline. Pat Keliher.

MR. KELIHER: I don't want to stand in the way of you all's lunch here. TOR 4, could you put that back up, Jeff? I do have a motion to change it, but I don't know if it can simply be done with an

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

agreement, if everybody is there. This TOR 4 deals with, you know the climactic side of the issues with the assessment, and we did look at temperature issues the last time around. We had a lot of conversations with staff at DMR, and one of the thoughts was to include environmental and climactic drivers on stock abundance, considering annual to decadal scales. I've got a motion to recognize that.

CHAIR McNAMEE: Yes, let's get right to that, Pat. There will be a motion, go ahead.

MR. KELIHER: Yes, **to identify, describe, and if possible, quantify the effect of environmental and climactic drivers on stock abundance considering annual to decadal scales.**

CHAIR McNAMEE: Okay, so there is a **motion on the board** from Pat Keliher, to **modify Term of Reference 4**, as presented up here or on the webinar or up on the screens here. Is there a second to that motion? Doug Grout seconds the motion. It's got a motion, it's been seconded, anything else, Pat that you want to add to the discussion here?

MR. KELIHER: Just obviously we've heard it, and we heard it from even Dustin Delano, and the fishermen are starting to recognize that climate change is becoming a driver. I think we need to maybe put a little bit more emphasis within the terms of reference.

CHAIR McNAMEE: Thanks, Pat, Doug, anything to add? Nothing from Doug. Any other discussion on the motion? This is a modification to one of the terms of reference. Seeing no hands around the table, any online? No hands online. We've got a motion, it's been seconded. **Are there any objections to the motion that is on the board? Please, raise your hand if so. No hands in the room, no hands online, so the motion passes by consent.** Thanks for that, Pat.

Any other modifications, comments on the terms of reference? Looking around the room, not seeing any. Now actually looking in the back of

the room, not seeing any back there either. Any online? Okay, good, so with that, Jeff, I think you have your modifications to the terms of reference, and there were no comments on the timeline. Great, the next agenda item here was something I was going to give a quick presentation on, Management Strategy Evaluation. We are going to punt that to January, so I'm going to skip that agenda item. Caitlin already offered that she is going to handle the FMP reviews, I think you said online by e-mail. We all skip over that agenda item as well.

OTHER BUSINESS

CHAIR McNAMEE: Which brings us to our Other Business. Pat, I will start with the item that you offered, so go ahead, Pat.

MR. KELIHER: Just to help expedite, I do have a motion, maybe if we could put that up on the board, and then I can speak to that.

CHAIR McNAMEE: I love it. Let's get that up on the board.

CONSIDER POTENTIAL ACTION BY NEW ENGLAND FISHERY MANAGEMENT COUNCIL REGARDING SCALLOP FISHERY ACCESS ON NORTHERN EDGE OF GEORGES BANK

MR. KELIHER: Just so everybody is aware, the New England Council has begun efforts to reopen the Northern Edge to the scallop fishery.

I know this is a Pierce-esque type motion, but I'll read it into the record, and if I get a second, I'll dig into the rationale.

Move to task the Lobster Technical Committee (TC) to compile information on the lobster resources and fishery in and around the Northern Edge of Georges Bank. This is in relation to a potential action at the New England Fishery Management Council (NEMC) which is considering scallop fishery access on the Northern Edge. A starting place for this tasking could be reviewing information that the Lobster

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

TC compiled when ASMFC commented on the NEFMC’s Omnibus Habitat Amendment 2. Areas of interest include:

- **Information on the presence and abundance of lobsters, including ovigerous lobsters, in and around the Northern Edge by month/season**
- **Lobster fishery effort in and around the Northern Edge by month/season**
- **Potential impacts of mobile gear on the lobster population in this area.**
- **Information on the habitat type and depth preference of lobsters which could inform our understanding of lobsters on the Northern Edge if there are limitations in the data.**
- **Whether current reporting by Area 3 vessels is representative, or an underestimate, of lobster effort in the Northern Edge area and how future requirements (i.e., federal eVTR requirements or vessel tracking) will impact the data availability.**

CHAIR McNAMEE: We have a motion by Pat Keliher. Is there a second to that motion? Doug Grout seconds the motion, thanks, Doug. Pat, anything to add?

MR. KELIHER: I mean a lot of the rationale is really built into the motion, but I would say that the fact that this has been an area that has been closed for a long time to scallop fishing, it’s a very rich lobstering grounds. We’re certainly going to see a lot of gear conflict there, when 200 plus boats become actively engaged in looking for scallops in the area. I think we need to have a closer look at this, and we need to start with the TC.

CHAIR McNAMEE: Doug, anything to add? Nothing from Doug. David Borden, go ahead.

MR. BORDEN: I’m glad Pat raised this; I appreciate that. I think the motion does a good job with describing what the technical people need to look at. I just remind everybody that we went through this about seven or eight years ago, as you’ll recall,

and the Commission basically took a position at my urging, to oppose it. There are times in this fishery where 80 percent of the lobsters are ovigerous females. The damage rate at certain times a year for dredges is up to 60 percent. It’s a real concern, given the fact that we just finished the section talking about the indices of abundance in lobster going down. We have to be really careful on this one.

CHAIR McNAMEE: Dan McKiernan, go ahead.

MR. McKIERNAN: I have good news. Because Massachusetts raced out and required trackers as of May 1, we might have most of a year worth of data that we could share for the Massachusetts-based Area 3 fleet.

CHAIR McNAMEE: Great, thank you for that, Dan. Okay, any further discussion around the table? Any hands online? No hands online, so I’m going to go ahead and call the question here. We’ve got a motion that’s been seconded, are there **any objections to the motion tasking the TC? Please, raise your hand if you object. Are you objecting, Ray? Okay, no objections, no hands around the table, no hands online, so the motion passes by consent.** Thanks, Pat.

We had a second Other Business item, and so, David, I will turn it over to you, and Alli, I’ll be sure to come to you as well.

CONSIDER NOAA INTERIM FINAL RULE IN RELATION TO LOBSTER BOARD ACTIONS IN ADDENDA XXI, XXII, AND XXVI

MR. BORDEN: I will try and make this brief, Mr. Chairman. We had this issue of a proposed rule that NOAA sent out, and we commented on it and asked for additional time, and I very much appreciate the fact that NOAA accommodated us, and send my thanks. I’m sure the Commission thanks. There are three components to the rule.

You’ve got mandatory reporting. I think everyone is in concurrence that that should go into effect immediately. Then on the Area 2 and the Area 3

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

portions of it, I've talked to Pat and Dan McKiernan, in particular, and you, Mr. Chairman, and your staff. I think there is a need for us to kind of follow the protocol that we have established in previous discussions on this.

These recommendations were formalized by the industry for both Area 2 and Area 3, by the respective LCMTs, and that was ten years ago, over ten years ago. I think there is a responsibility on our part to take the proposed rule in conjunction with the NOAA staff, back to the LCMTs, and ask them to review it and formulate comments.

Then I think the appropriate action then, that could take place over the next month or two, and then we could put it on the agenda and formalize a recommendation for NOAA. The main reason I'm saying that is the situation, and I'll give you just a short example. The situation is so dramatically changed from when the regulation was originally put in place when we, we meaning the Commission, adopted the Addendum. There was one entity that owned six boats.

Now we're in a situation where basically, 70 percent of the fishing effort in Area 3 is owned by five companies, so it's completely changed. It's a reverse. Part of the objective of us doing what we did was to kind of slow down the consolidation. But it took place anyways. Then there are other reasons, I think, if we hold an industry discussion issue, like the Area 2 indices that we just reviewed, are falling like a stone. I think we may get very different recommendations out of the industry, if we hold discussions in them.

Dan, at least, has volunteered to work with Rhode Island, and any other states, to put together a virtual LCMT meeting, I think, and then bring recommendations back. I would hope that would be the course of action we would follow, and if we need to, we could send a letter to NOAA, basically summarizing that from the staff, staff to staff letter, saying this is the way we intend to handle them. That's my recommendation.

CHAIR McNAMEE: Alli, I'll offer you some space to make a comment or two, if you would like.

MS. MURPHY: Yes, thank you, Mr. Chair. David talked a little bit about this, but I just wanted to summarize for the Board what was in our Interim Final Rule. Three things that complemented Lobster Board actions in Addenda XXI, XXII, and XXVI. First is mandatory electronic harvester reporting, using the federal electronic vessel trip report.

That would be implemented on April 1st, 2024. For Area 2, we're implementing an ownership cap that would restrict most entities to 800 traps, but allow those who are over as of May 1st, 2023, to keep those traps but not purchase additional traps. Then for Area 3, we're implementing maximum trap cap reductions over three years and associated ownership caps that will reduce over three years.

Again, an entity that exceeded those limits as of May 1, 2022, could keep their current trap allocation. Based on the comments that we received, including from the Commission, we're accepting some additional comments on that. I would be happy to discuss the rule in additional detail at an upcoming meeting, and I'm happy to work with the states, if they are going to host LCMT meetings, to provide additional information.

CHAIR McNAMEE: Great, thanks, Alli. I'm just going to consult here for a second, to see what we need to do to implement this, so hang on one second. Okay, so we don't need a motion, but what can happen is the states can convene the LCMTs on their own, they don't need guidance from the Board or the Commission to do that.

If you are able to successfully convene those LCMT meetings, you can report back and then we'll add it to a future agenda. I think we can move forward with what you suggested, David, and if we're successful in that, we can meet back here with the Commission at a future meeting. All right, any discussion on that? Anyone want to add anything to that discussion?

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

Not seeing any hands, so I'm just going to keep rolling forward.

ADJOURNMENT

CHAIR McNAMEE: That brings us to the end of our agenda, so I'm just kind of looking around the

table to see if anybody is looking antsy to offer anything else, they are not. I will entertain a motion to adjourn. Moved by Pat Keliher, seconded by everyone. Any objection to the motion? Seeing none; we are adjourned, thanks everybody.

(Whereupon the meeting adjourned at 12:01 p.m. on October 16, 2023)



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • www.asafc.org

MEMORANDUM

TO: American Lobster Management Board
FROM: Jonah Crab Technical Committee
DATE: January 8, 2024
SUBJECT: Response to Board Task Following 2023 Stock Assessment

The 2023 Jonah Crab Benchmark Stock Assessment determined that the abundance of three of four Jonah crab stocks (Offshore Southern New England or OSNE, Inshore Gulf of Maine or IGOM, and Offshore Gulf of Maine or OGOM) has not been depleted to historical lows observed in the 1980s and 1990s. Data were insufficient to make determinations about abundance for the Inshore Southern New England stock (ISNE) or fishing mortality rates for any of the four stocks. The Peer Review of the assessment noted substantial uncertainty about stock status and expressed concern due to similarities between some trends in data for the US stocks and a Canadian stock assessed in the late 2000s that appeared sensitive to fishing pressure and experienced a rapid decline in abundance.

Following review and acceptance of the assessment in October 2023, the American Lobster Management Board tasked the Jonah Crab Technical Committee (TC) to “recommend possible management measures or other options to correct what appear to be deficiencies in the stock”. The Board requested several components of information including (1) current information on management and stock conditions for the Canadian Jonah crab stock to better understand this stock’s response following its apparent decline, (2) recommendations on additional indicators from existing data to monitor the stocks, (3) recommendations on the appropriate frequency of indicator updates following the assessment, (4) recommendations on management measures that could be used for a potential management response, and (5) recommendations to improve monitoring in the short term.

The TC met on November 16, 2023 and January 2, 2024 to gather and review information requested and make recommendations in response to the Board task. Additionally, the TC requested input on several questions from the Jonah Crab Advisory Panel (AP) during its December 14, 2023 meeting to review the stock assessment. Input from the AP was provided in a memo and was considered in the TC’s recommendations.

Canadian Stock Post-Mortem Analysis

The Peer Review Report for the assessment highlighted similarities between the period just prior to the apparent decline of the Canadian Jonah crab stock in the 2000s and the current US Jonah crab population. To provide more context on the Canadian stock and fishery before and after its decline, information was gathered on management through time and the structure of the fishery. The Canadian stock has not been assessed or formally monitored since the 2009 stock assessment that found a decline in abundance, so the recovery status is unknown.

At the time of the 2009 stock assessment, there was a sole license holder in the Jonah crab fishery, Clearwater Seafoods, which operated several boats. The fishery has largely been inactive for Jonah crab since 2009, with landings reported only in 2013 and 2016. The stock has historically been managed with

M24-05

a 130mm minimum carapace width, a prohibition on female harvest, and a catch limit (Table 1). The only management measures to change through time have been decreasing catch limits, once following the stock assessment in 2010 and again in 2017. The decrease in 2017 was a precautionary measure due to the fishery expressing interest again in retention of Jonah crab and the conclusion from the stock assessment that the resource appeared very sensitive to fishing pressure.

Table 1. Management measures for the Canadian Lobster Fishing Area (LFA) 41 Jonah crab stock.

Year	Prohibition of Females?	Min. Carapace Width	Season	Catch Limit
1995-2005	Yes	130 mm	October 16 - October 15	720 t
2006-2009	Yes	130 mm	January 1 - December 31	720 t
2010-2016	Yes	130 mm	January 1 - December 31	540 t
2017-2023	Yes	130 mm	January 1 - December 31	270 t

Additional Indicators

The TC considered potential new indicators to include with those selected during the stock assessment to update on a periodic basis. Additional indicators considered included fishery-dependent CPUE from Rhode Island, fishery-dependent effort from Massachusetts, sex ratios from fishery-dependent biosampling and fishery-independent trawl surveys, price per pound data for landings of Jonah crab and other crustacean species, and mean size from fishery-dependent biosampling.

Fishery-Dependent Effort Indicators

Following a preliminary analysis of fishery-dependent RI CPUE data during the stock assessment peer review workshop, the TC considered this dataset as a potential indicator. These data were calculated as Jonah crab landings per trip from a select fleet of “high liners” that have consistently targeted Jonah crab through time. In addition to these data, the TC also considered the number of trips landing Jonah crab in Massachusetts. These data were provided as an alternative to the CPUE data calculated from RI because the MA data do not include number of days fished for most years and vessel participation has been more inconsistent, complicating selection of a “high liner” fleet. Both data sets are for the OSNE stock and include the states that account for the majority of landings from this stock and coastwide.

The RI CPUE declined markedly in 2021 and remained at this lower level in the updated data since the assessment (2022; Figure 1). The MA effort data showed similar declines for these years as well as 2020 (Figure 2). The cause of these declines is not known. Given data limitations for Jonah crab, the TC believes reviewing these data on a regular basis would be useful for identifying changes in the fishery that may indicate concern. Considered along with the AP input from its December 14, 2023 meeting, the TC also believes market factors are impacting these fishery-dependent indicators, adding uncertainty to using these indicators for inference on stock status.

The TC recommends these datasets be added as indicators to be updated alongside those selected during the assessment, but stresses these indicators should not be viewed in a vacuum without important context from market indicators such as price per pound (see below).

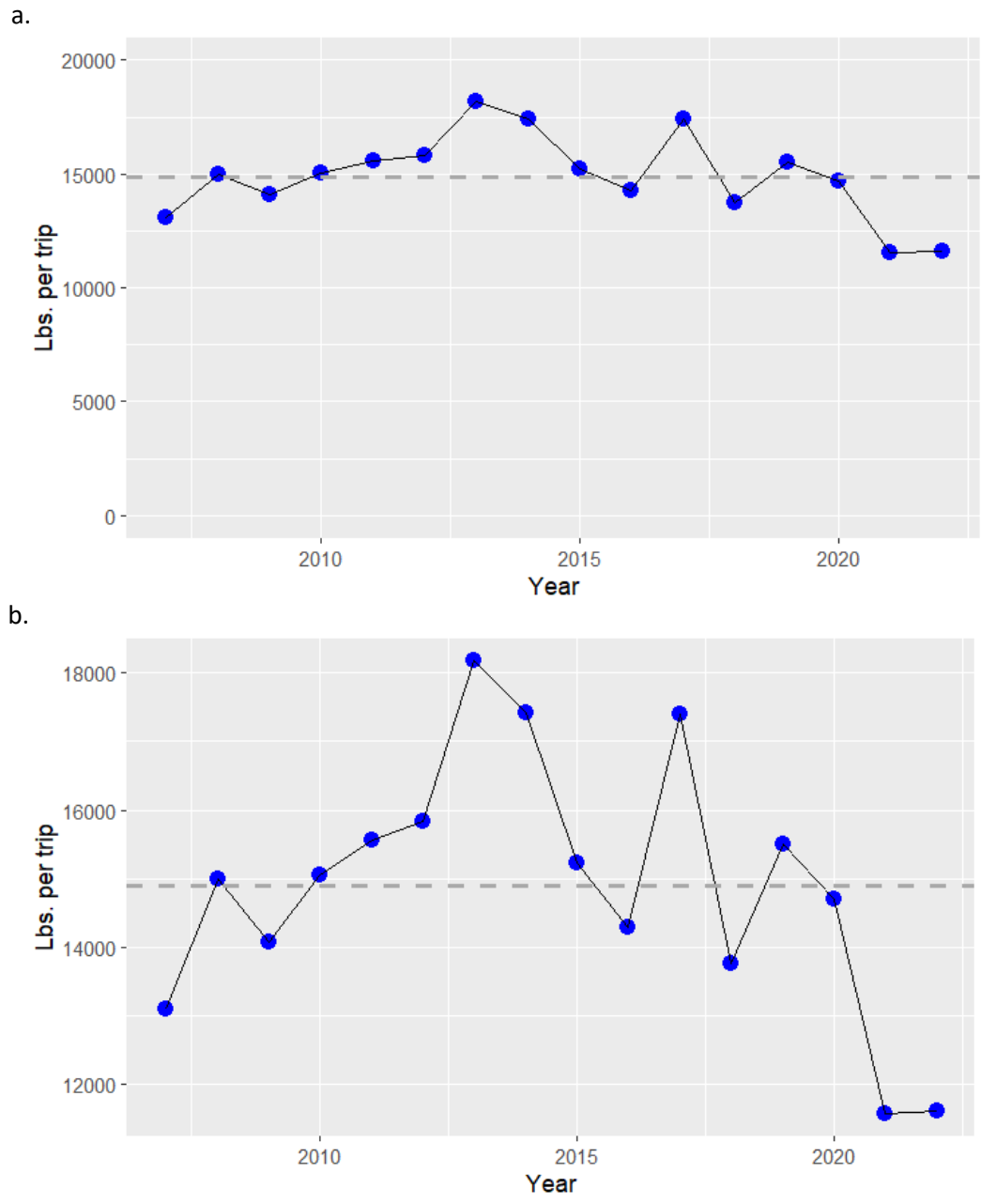


Figure 1. Rhode Island commercial Jonah crab CPUE of a "high liner" fleet targeting Jonah Crab with the y-axis extended to zero to show scale (a.) and zoomed in to the observed range to show contrast (b.).

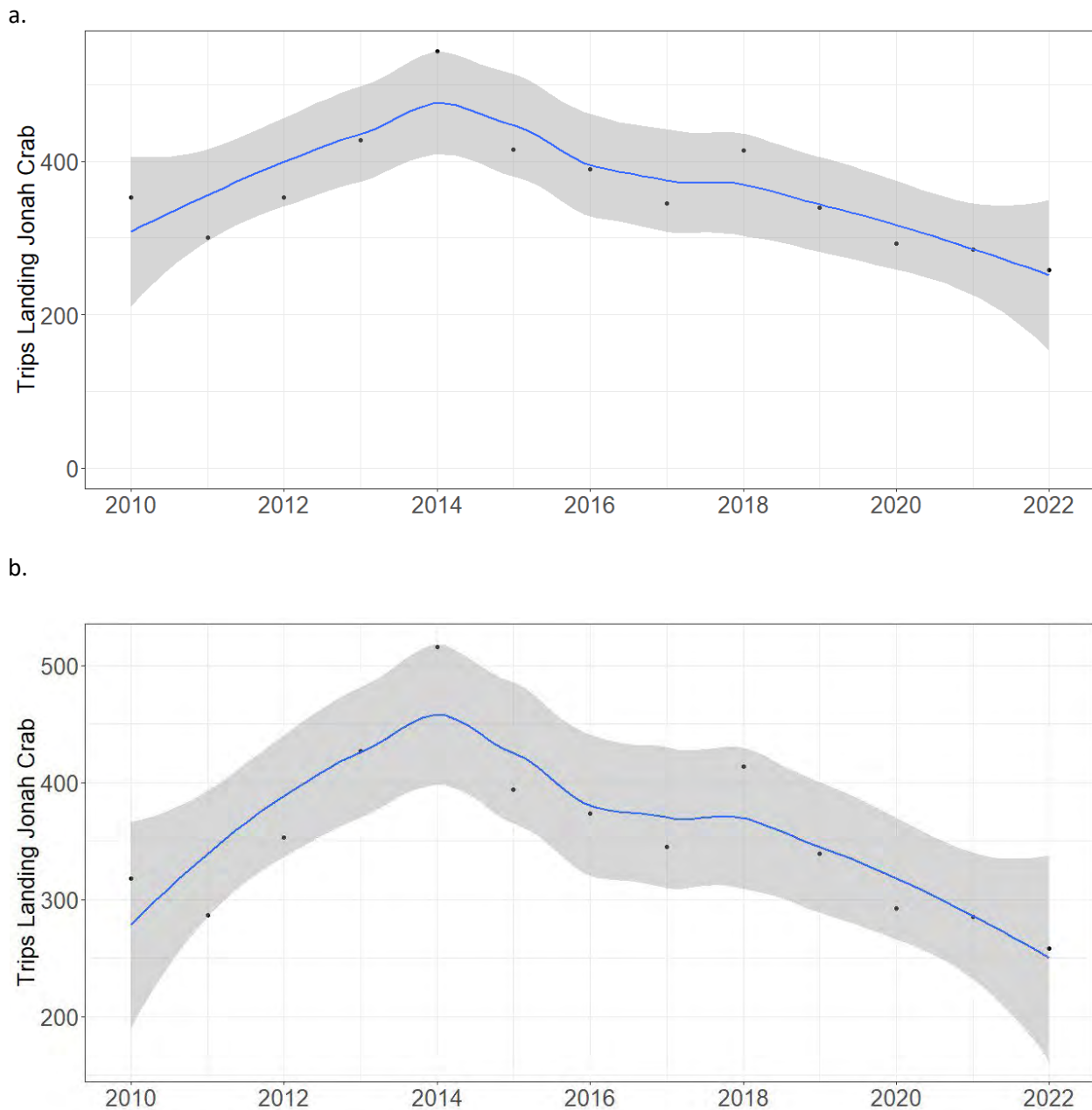


Figure 2. Number of trips landing Jonah crab in Massachusetts from statistical area 526 and the LMA3 portion of statistical area 537 with the y-axis extended to zero to show scale (a.) and zoomed in to the observed range to show contrast (b.). Data source: state and federal trip reports.

Sex Ratios

Sex ratio data developed during the assessment do not show consistent trending through time (Figure 3 and Figure 4). The fall NEFSC trawl survey sex ratios for the stock considered the most exploited stock (OSNE) show increasing proportions of males through time, which is not an intuitive signal for a fishery executed almost exclusively on males. **The TC does not believe sex ratios are informative indicators at this time and does not recommend they be used for indicator updates.**

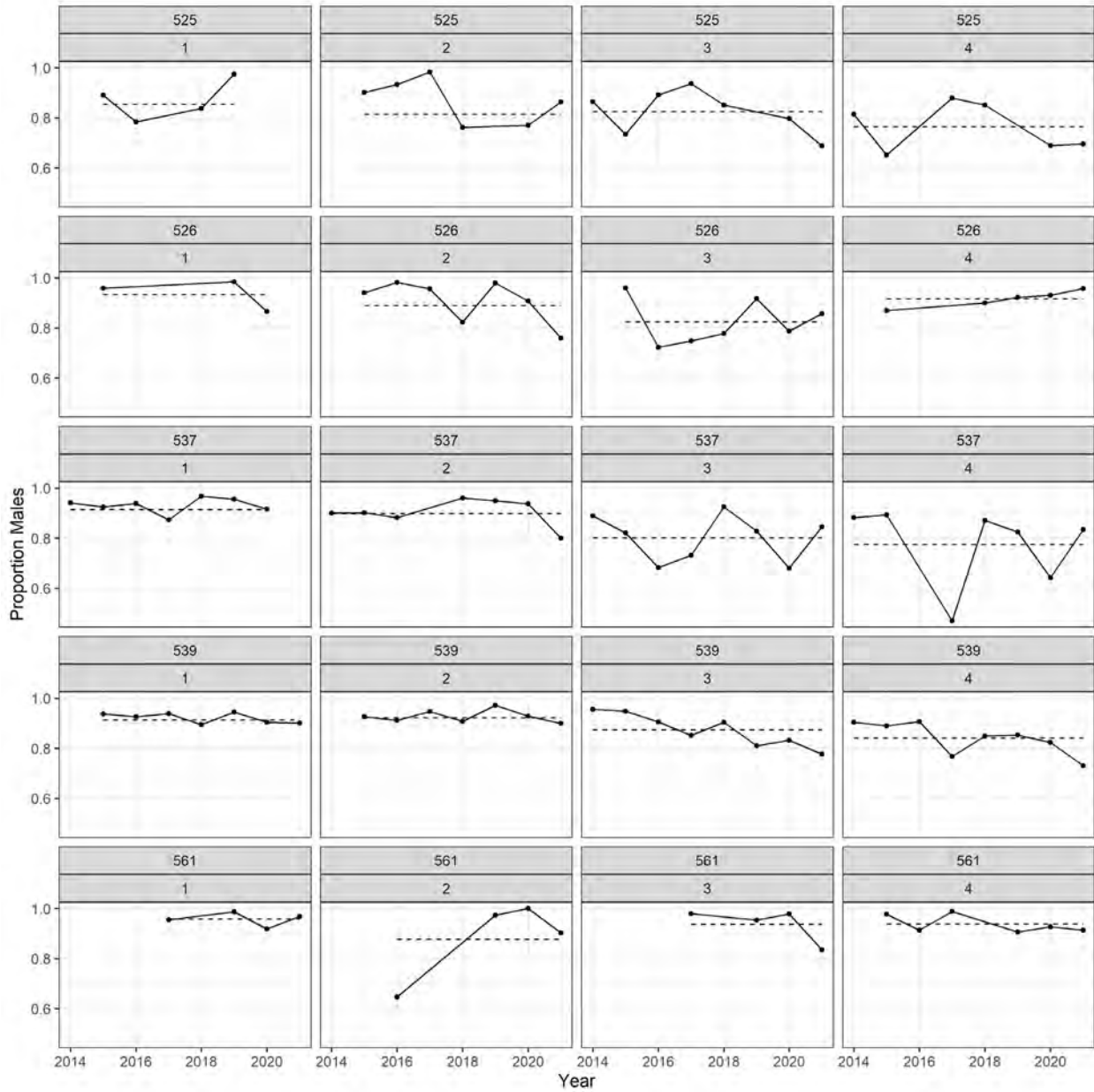


Figure 3. Proportion males from fishery-dependent sea sampling data in select, well-sampled statistical areas. Statistical areas 525 and 526 are part of the Offshore Southern New England stock, statistical area 539 is part of the Inshore Southern New England stock, and statistical area 561 is part of the Offshore Gulf of Maine stock. Statistical area 537 overlaps the Offshore and Inshore Southern New England stocks.

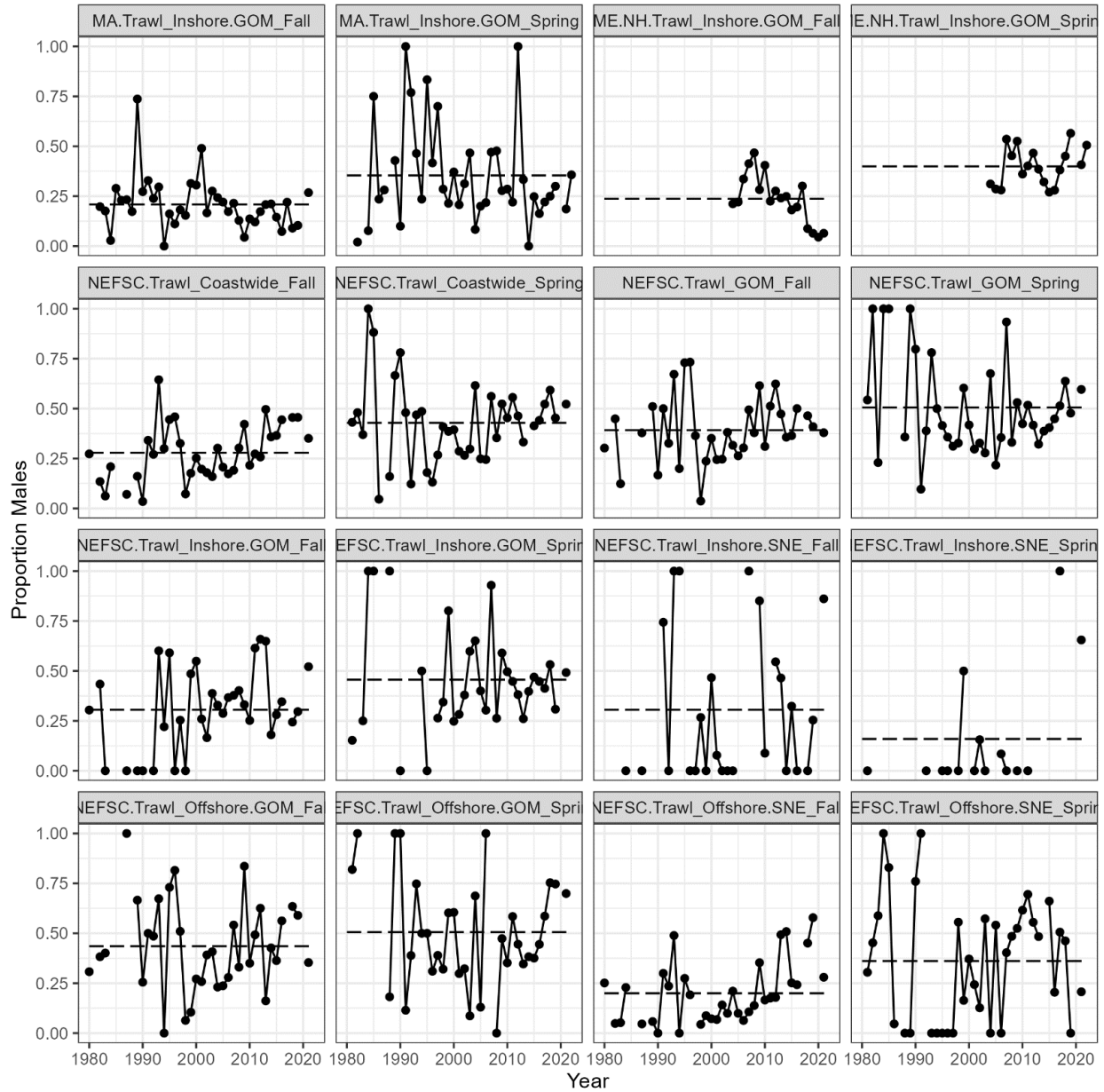


Figure 4. Proportion males from fishery-independent trawl surveys.

Price Per Pound

Price per pound data for landings of Jonah crab and American lobster were reviewed as potential indicators of market influence on Jonah crab fishery-dependent indicators. Jonah crab price steadily increased since 2010 to a high in 2022, but decreased in 2023 (Table 2). American lobster price also steadily increased (Table 3), but peaked a year earlier in 2021 which was the year when fishery-dependent Jonah crab CPUE and effort data showed marked decreases. American lobster price decreased in 2022, but remained relatively high in some states. These prices could be causing target shifting that would result in decreased Jonah crab CPUE. The TC believes these price data provide important context for changes in fishery-dependent indicators because of their direct link to each other in the mixed crustacean fisheries harvesting Jonah crab. The TC also reviewed price data for US Dungeness crabs and Canadian snow crabs as these species are considered competitors in the crab

market that would impact Jonah crab demand. However, the TC notes more work is necessary to understand the relationship among these crab species in the market before inferring impacts to Jonah crab fishery-dependent indicators from these data.

The TC recommends updating price per pound data for both Jonah crab and American lobster to be considered along with fishery-dependent effort indicators during indicator updates.

Table 2. Jonah crab landed price per pound by state and regional means. Confidential data is marked with an asterisk. Data for 2023 is preliminary and marked with a caret (^). Data source: NMFS commercial fisheries statistics web page ([https://www.fisheries.noaa.gov/foss/f?p=215:200:::~:Y=14,P=215,F=200:::~:Y=14,P=215,F=200:::](https://www.fisheries.noaa.gov/foss/f?p=215:200:::)) for 2010-2022, SAFIS dealer reports for 2023.

Year	ME	NH	MA	RI	Mean	MA/RI Mean
2010	\$0.34	*	\$0.56	\$0.52	\$0.47	\$0.54
2011	\$0.35	*	\$0.68	\$0.57	\$0.53	\$0.62
2012	\$0.39	*	\$0.74	\$0.68	\$0.60	\$0.71
2013	\$0.49	\$0.69	\$0.90	\$0.72	\$0.70	\$0.81
2014	\$0.30	\$0.71	\$0.78	\$0.75	\$0.64	\$0.76
2015	\$0.51	*	\$0.76	\$0.69	\$0.65	\$0.72
2016	\$0.51	\$0.70	\$0.77	\$0.77	\$0.69	\$0.77
2017	\$0.54	\$0.72	\$0.98	\$0.96	\$0.80	\$0.97
2018	\$0.59	\$0.66	\$0.94	\$0.92	\$0.78	\$0.93
2019	\$0.55	\$0.60	\$0.84	\$0.80	\$0.70	\$0.82
2020	\$0.54	\$0.63	\$0.82	\$0.83	\$0.71	\$0.82
2021	\$0.77	\$0.76	\$1.20	\$1.20	\$0.98	\$1.20
2022	\$0.97	\$1.32	\$1.81	\$1.86	\$1.49	\$1.83
2023^		\$0.95	\$1.28	\$1.23	\$1.15	\$1.26

Table 3. Lobster landed price per pound by state and regional means. Data for 2023 is preliminary and marked with a caret (^). Data source: NMFS commercial fisheries statistics web page ([https://www.fisheries.noaa.gov/foss/f?p=215:200:::~:Y=14,P=215,F=200:::~:Y=14,P=215,F=200:::](https://www.fisheries.noaa.gov/foss/f?p=215:200:::)) for 2010-2022, SAFIS dealer reports for 2023.

Year	ME	NH	MA	RI	ME-RI Mean	MA-RI Mean
2010	\$3.31	\$4.07	\$3.94	\$4.24	\$3.89	\$4.09
2011	\$3.19	\$4.17	\$3.99	\$4.64	\$4.00	\$4.31
2012	\$2.69	\$4.06	\$3.68	\$4.48	\$3.73	\$4.08
2013	\$2.90	\$4.35	\$3.87	\$4.51	\$3.91	\$4.19
2014	\$3.70	\$4.74	\$4.46	\$4.85	\$4.44	\$4.66
2015	\$4.10	\$5.20	\$4.76	\$5.34	\$4.85	\$5.05
2016	\$4.08	\$5.25	\$4.63	\$5.26	\$4.81	\$4.95
2017	\$3.92	\$5.73	\$4.92	\$5.42	\$5.00	\$5.17
2018	\$4.06	\$5.75	\$5.02	\$5.75	\$5.14	\$5.38
2019	\$4.82	\$5.91	\$5.61	\$6.15	\$5.62	\$5.88
2020	\$4.21	\$5.30	\$4.98	\$5.62	\$5.03	\$5.30
2021	\$6.71	\$7.74	\$7.46	\$7.92	\$7.46	\$7.69

2022	\$3.97	\$6.19	\$5.61	\$6.89	\$5.67	\$6.25
2023^			\$6.22			

Additional Length-Based Indicators

The TC considered several length-based indicators during the assessment, but ultimately recommended against using these indicators for inference on stock status due to lack of signal in the data available for US Jonah crab as well as data for the Canadian Jonah crab stock assessed in 2009. Here, the mean size of the 5% smallest crabs retained for harvest in port sampling was considered as an additional length-based indicator that would signal changes in harvester selectivity due to market preference. **However, the data remain too sparse to identify trends over time and the TC does not recommend using these data sets as indicators during indicator updates.**

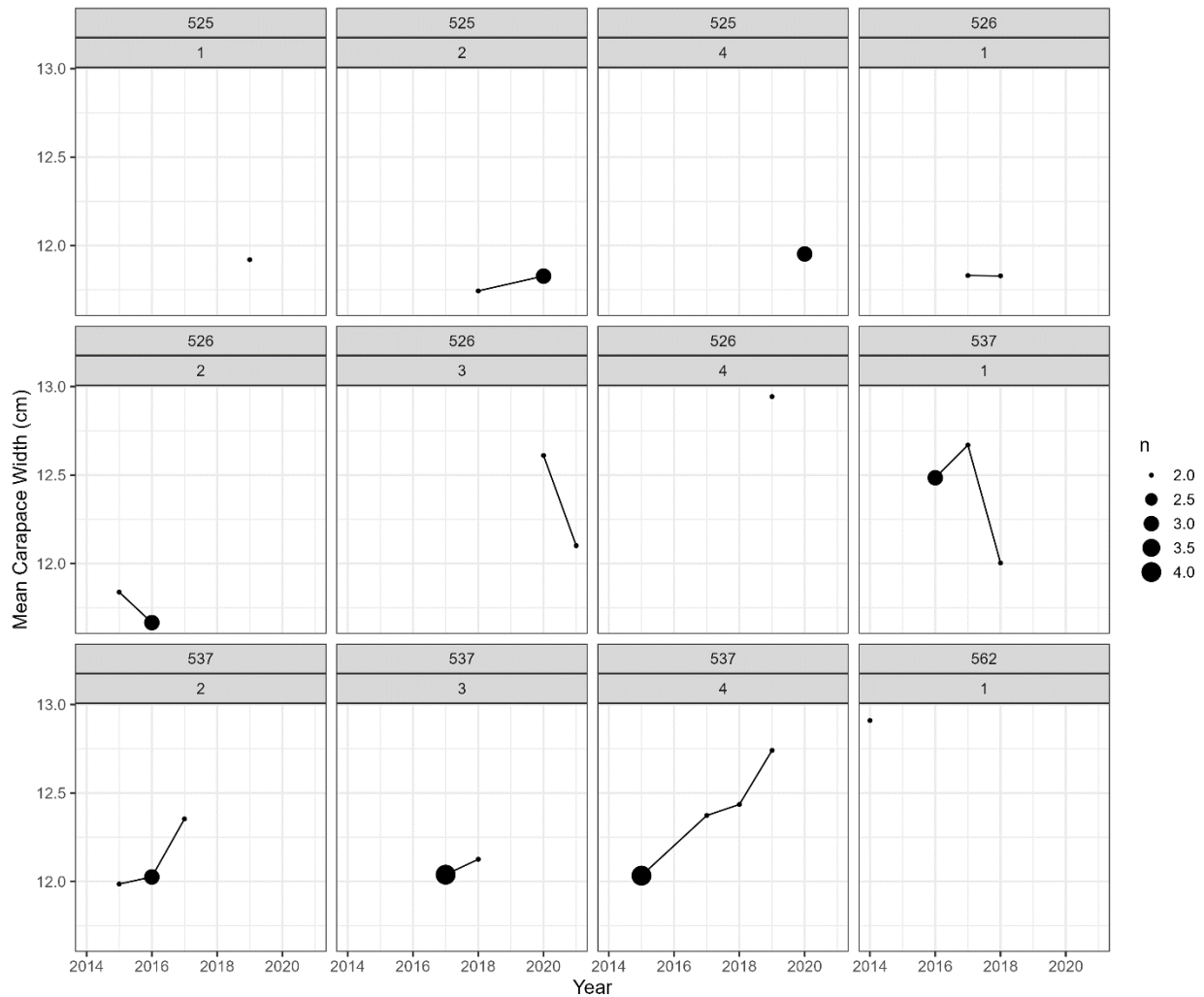


Figure 5. Mean carapace width of the smallest 5% male Jonah crabs sampled during port sampling in select, most frequently sampled Offshore Southern New England statistical areas.

Frequency of Indicator Updates

The TC recommends updating indicator time series for the OSNE stock on an annual basis. This stock supports the primary targeted Jonah crab fishery that accounts for the majority of annual coastwide

landings. Data from trawl surveys are processed intermittently, so trawl survey-based indicators selected during the stock assessment will most likely be available every other year for updates. Indicators for the three remaining stocks (ISNE, IGOM, and OGOM) that generally support bycatch fisheries with relatively low annual landings should be updated every five years unless monitoring data indicate development of a more targeted fishery in these stocks. The TC recommends providing data updates during the Commission's Annual Meeting to allow for data from the previous calendar year to be finalized. The TC also recommends involving the AP in all update processes to provide important feedback on market drivers that can be challenging to interpret from existing datasets. The AP should have representation from dealers that can describe what is driving the current prices and demand of Jonah crab including market interactions with competing crustacean species.

Potential Management Measures

The TC considered several potential management measures including seasonal closures, effort controls (i.e., trap limits), circular vent size changes, and minimum legal-size changes. The TC believes identifying a cause of population decline is necessary to determine which of these measures would be most effective. Given the current management measures in place, the two most likely causes of a decline would be sperm limitations due to overfishing of male crabs or increased mortality due to environmental conditions. However, data were insufficient to determine cause of abundance changes in the benchmark stock assessment. Data are also insufficient to quantify benefits to the stock from these management measures if they are implemented.

If the population is determined to be declining due to overfishing of male crabs, the TC recommends seasonal closures or effort controls. These measures would reduce male mortality allowing for increased reproductive capacity. Seasonal closures should focus on the time between molting and mating. Spatially-limited data indicate peak molting in June in Rhode Island Sound and mating through late fall in Cape Cod Bay, MA occurring from mid-October through mid-November. Sampling does not cover December through April and mating activity remains unknown during this timeframe and in other areas. This period between molting and observed mating does not align with the peak of the fishery (winter), so these measures may need to be coupled with other effort controls such as trap limits depending on the level of decline.

If the population is determined to be declining due to environmental changes, the TC recommends increasing minimum legal size and circular vent sizes to protect more females from processing-induced stress and mortality. Increased female abundance would provide the best buffer against adverse environmental conditions in the case that these adverse conditions yield to more favorable conditions. An anticipated challenge with circular vent size changes is impacts to lobster catch as well as crabs in mixed target fisheries.

The Peer Review Panel was particularly concerned about a decline in CPUE data from a preliminary analysis of RI data conducted during the peer review workshop, and that it may foreshadow declines similar to those observed in the 2009 Canadian Jonah crab stock assessment. With current data limitations and the lack of biological reference points the need for management action cannot be based solely on biological condition of the stocks (i.e., biological reference points). However, the TC does not believe management action is necessary at this time. Recent declines in US market demand have decreased Jonah crab fishing effort. The MA-RI mean annual price per pound declined by 31% from 2022 to 2023 (Table 2), based on preliminary 2023 data. As a result, harvesters have indicated they are conducting fewer trips targeting Jonah crab in 2023 and dealers are accepting catch from fewer vessels. One dealer reportedly had to dump thousands of pounds of Jonah crab in a New Bedford landfill due to a lack of market. A sudden shift in market conditions is said to be related to an increase in the availability of Canadian snow crab and the Monterey Bay Aquarium Seafood Watch Program "red-

listing” Jonah crab and rock crab (*Cancer irroratus*) in September of 2022. The red-listing has apparently caused some major retailers to stop purchasing Jonah crab. The Seafood Watch Program pointed to “the risk posed by these fisheries to North Atlantic right whale and the ineffectiveness of management measures to mitigate risk” as justification for red-listing.

Monitoring Recommendations

At the request of the Peer Review Panel during the stock assessment, the TC compiled a refined list of the five highest recommendations to improve the body of information for a future assessment. Below are those recommendations and the TC believes these should remain the focus for improvements to monitoring Jonah crab.

- Inter-molt duration of adult crabs is currently unknown and growth increment data for mature crabs is limited. There are no growth data from OSNE where the bulk of the fishery occurs and differences in growth between regions are unknown. These data need to be collected.
- Video surveys should be conducted on existing survey platforms for snapshot estimates of total stock size (i.e., swept-area biomass) that could be used to gain a better understanding on exploitation levels. These data would also be useful for validating trends from existing gears (i.e., trawls) and understanding potential catchability effects, such as temperature.
- Research should be conducted to provide a more comprehensive understanding of recruitment dynamics, including tracking of spatio-temporal settlement dynamics and the source of recruitment to OSNE, to inform development of Jonah crab settlement surveys.
- Little is known about ecosystem/environmental drivers of Jonah crab population dynamics. Studies should be done to identify and understand these drivers, particularly of recruitment.
- Determine how to interpret fisheries-dependent data considering interactions between fishery response to abundance, economic drivers, and lobster fishery dynamics.



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmfc.org

MEMORANDUM

TO: Jonah Crab Technical Committee; American Lobster Management Board

FROM: Jonah Crab Advisory Panel

DATE: December 28, 2023

SUBJECT: Jonah Crab Advisory Panel Report

The Jonah Crab Advisory Panel (AP) met on Thursday, December 14 to review the recently completed benchmark stock assessment for Jonah crab, and provide input on possible market and economic indicators for the fishery.

AP Attendance: Sonny Gwin, Denny Colbert, Jon Williams, Brian Thibeault
Staff: Caitlin Starks, Jeff Kipp, Corinne Truesdale (RI DEM)

Staff presented a summary of the stock assessment and peer review reports. Additionally, the AP discussed market and economic factors that affect the fishery. This was in response to a request from the Technical Committee (TC). After accepting the benchmark assessment for management use, the Board tasked the TC with recommending possible management measures or other options to correct what appear to be deficiencies in the stock. To gather more information to help address this task, the TC requested input from the AP on market and economic factors that could help explain recent trends in catch and landings.

The AP provided some thoughts on why Jonah crab landings have been trending down in recent years, despite high market prices. Jon commented that before the decline, there was a fleet of vessels off Southern New England (SNE) landing huge amounts of Jonah crabs, but those boats now only target lobster. Denny commented that you can still catch the same poundage per pot and easily fill your boat, but the prices have gotten so high that the Jonah crab are not selling. Adding to the difficulty selling Jonah crab, they commented that the price of Canadian snow crab has gone down and taken over more of the market. Jon added that when prices are high, fishermen can catch less and make the same amount of money, so they may reduce their landings. He also stated that the prices are not solely driven by market demand, but also the processors. There has been a price war between processors, in which processors have had to raise the price they will pay for Jonah crab to keep the boats that are selling to them. The AP members indicated that all of these factors have created a perfect storm where despite the fishing being great, they are not able to sell the crab. Additionally, some processors have placed catch limits on the boats that sell to them because they can't sell large quantities, and this is also keeping landings lower. There are also fewer processors in New England now than in the 2010s.

The AP members also indicated that catch-per-unit-effort (CPUE) can be driven by a combination of market factors including price and the availability of other crab species and lobster. They emphasized that the market is controlling everything in the fishery. They think the decline in landings is not indicative of a stock collapse, but rather just due to the Jonah crab market being shut down, primarily because of the Canadian snow crab market. Brian added that because they are focusing on catching larger, higher quality crabs that can be sold in the live market by modifying their traps, the decreased CPUE that has been observed is really because of intentional selectivity by the harvesters. It was also mentioned that it can be difficult to interpret the CPUE data from trip reports, because on multi-day trips some boats will focus on Jonah crab for specific days, and lobster for other days; on these trips the target species can change from day to day.

Another topic raised by the AP was the impact of acoustic surveys for wind development on Jonah crab. Two AP members observed a correlation between the decline in landings and the acoustic surveys for wind development. They said the surveys did not impact their access to bottom, but sometimes they were asked to move gear or not haul it to avoid interactions. During the time of the surveys, they said they observed that previously productive areas were not as productive. They suspect that the Jonah crabs were digging into the mud and not moving. Brian said in the inshore SNE area where some of the initial acoustic pounding was occurring, before the surveys he could catch fifteen pounds per trap, and then when the acoustic boats came in for the initial pass through, the crabs disappeared. He said he could hardly catch any crabs when the survey boats were there, but about an hour or two after they left, the catch per trap increased again. Additionally, the crabs caught after the surveys had mud stuck under their claw pocket, suggesting they had hunkered down in the mud. The AP agreed that this should be studied further to understand the impact of the acoustic surveys and wind farms on the crab behavior and catchability.

Commenting on the information provided in the assessment about the Canadian Jonah crab fishery collapse, two AP members mentioned that the fishery in Canada is strong right now, and they are selling Jonah crab for 40 cents a pound. In particular the fishery is concentrated just north of the Maine border in areas 34 and 35.



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmf.org

MEMORANDUM

TO: American Lobster Management Board
FROM: American Lobster Technical Committee
DATE: April 16, 2021
SUBJECT: Lobster Management Strategy Evaluation Options

The Atlantic States Marine Fisheries Commission's Lobster Technical Committee (TC) was tasked by the American Lobster Management Board (Board) at the Commission's 2021 Winter Meeting to develop a set of prioritized options, timelines, and draft budgets to assist the Board in considering if management strategy evaluation (MSE) could be of use for management of the lobster fisheries. The TC met via webinar two times following the Winter Meeting to develop and prioritize these options. Options are outlined at the end of the memorandum, and include anticipated personnel needs, major budget line items, and timelines with milestones that would incur a substantial cost. However, the TC indicated that due to the highly interdisciplinary nature of MSE, additional perspectives are needed to provide a comprehensive work plan. Therefore, the TC has provided some recommendations for next steps for MSE development in addition to a recommended option to pursue. In addition to the line item cost estimates for each option, it is important to keep in mind that these costs do not include time and, consequently, indirect costs of several participants' time being allocated to participating in the MSE process (e.g., TC members); workloads would have to be prioritized and modified to accommodate the MSE workload. Competing workloads include the next lobster stock assessment (tentatively scheduled for 2025) and a potential Jonah crab stock assessment (tentatively scheduled for 2023), at a minimum. The details of the options provided at the end of the memorandum are considered preliminary and may change dependent on management goals and objectives (e.g., need to include anthropologists to address human dimensions objectives).

TC Recommendations on MSE Focus

The TC recommends the option for a two-phase MSE of the Gulf of Maine/Georges Bank (GOM/GBK) stock. The first phase of this option would provide an intermediate MSE at a coarser spatial resolution (i.e., stock level) that can be used to support a management framework in a relatively short timeframe, while also allowing time to build knowledge and tools to develop a subsequent, spatially-explicit MSE in phase two. This phased approach provides short term management guidance, while concurrently building the framework to expand to a spatially explicit approach in phase two. The extended timeframe may also allow several large-scale changes on the horizon for the lobster fishery to develop that could impact the lobster fishery and management goals, and thus better guide the cost and focus of incorporating spatial considerations explicitly into the MSE.

The TC believes MSE has potential for supporting a management framework for the Southern New England (SNE) stock, but believes a SNE-focused MSE is a lower priority option for several reasons. First, the scale of the fisheries in terms of fleet size and landings make the GOM/GBK stock a higher priority. Second, MSEs are generally focused on proactive management strategies for the future of the fishery, such as strategies intended to promote stock resilience, as opposed to reactive management strategies responding to stock conditions estimated in past stock assessments; the TC believes this further skews cost-benefit considerations of MSE in favor of the GOM/GBK stock. Third, the TC anticipates unique

M21-51

challenges that would require more complex tools to provide a successful SNE MSE. These challenges include the dominant mixed-crustacean nature of the fishery, and the degree and rate at which the lobster population and fishery have changed in response to climate change. These factors require modeling aspects of both Jonah crab and lobster population dynamics and distributions, as well as spatial dynamics of the fishery in any MSE option. There is also a high likelihood for an MSE to require customized model development and data collection by stock (e.g., socio-economic indicators), making MSE focused on one stock at a time most feasible.

TC Recommendations on Next Steps

The TC recommends two next steps for development of an MSE. First, a formal process is recommended to develop management goals and objectives for the future of the lobster fisheries. A good example is the process used by the Ecosystems Management Objectives Workshop conducted by the Commission to guide development of ecological reference points for Atlantic menhaden. Objectives developed from such a process would be used to further develop an MSE work plan for lobster. The second recommendation is to form a steering committee for additional scoping and development of a comprehensive work plan with a detailed timeline, including: outreach components that are not anticipated to incur a substantial cost but are imperative to the success of an MSE (e.g., outreach at regularly scheduled industry association meetings), identification of funding sources for the MSE costs, and identification of personnel. Representation recommended for the steering committee includes Board members, TC members, Commission staff, members of the Commission's Committee on Economics and Social Sciences, industry stakeholders (preferably those with past experience in MSE), and members of the Commission's Assessment and Science Committee or Management and Science Committee with past experience in MSE. To be effective, the number of people in the steering committee should be limited to approximately a dozen members.

The TC discussed two ongoing developments that will potentially streamline the development of a formal MSE approximately a year from now. First, University of Maine researchers have submitted a proposal to the current round of the Sea Grant's American Lobster Research Program funding; while funding is uncertain, the project is to evaluate population dynamics simulations that will incorporate environmental effects into the biological modeling framework likely to be used in a lobster MSE. Second, work towards the conceptualization of an economics model and economic data gathering is being funded by NOAA Fisheries; this will support development of an economic model within the MSE modeling framework. These developments support the TC recommendation for the formation of a steering committee, with a start date for the MSE to be determined pending the results of the steering committee's findings.

GOM/GBK MSE Option (high priority)

Phase One - Stockwide GOM/GBK MSE

Purpose: Evaluate performance of management strategies at the stock level for the GOM/GBK stock in response to changes in recruitment with biological, fishery, and other socio-economic performance metrics.

Timeline: Three years. One modeler workshop in the first year and one modeler and one stakeholder workshop in years two and three.

Personnel and responsibilities:

- ASMFC Lobster TC – Stakeholder recruitment and engagement, data gathering, guidance on technical aspects of the MSE, report writing, and training for using the MSE tools in future updates

- ASMFC Staff – Project management, data gathering, workshop coordination, and report writing/publishing
- ASMFC Lobster Board Members – Define management goals and provide guidance on the direction of the MSE based on established goals, participate in stakeholder input gathering (webinars and workshops)
- Stakeholders – Identify desired objectives and outcomes of an MSE and provide guidance on the direction of the MSE, participate in stakeholder input gathering (surveys, webinars, and workshops)
- Biological modeler – Couple existing assessment model and operating model in a closed-loop model (six months to program, six months to modify based on workshop feedback and to provide training to TC members)
- Economics modeler – Develop an economics model guided by NOAA Fisheries’ economic model conceptualization and data gathering work and couple with the assessment model and operating model in a closed-loop model.
- Professional facilitator - Facilitate stakeholder webinars and workshops, assist with stakeholder input survey development and analysis

Costs:

- Facilitator - \$25,000
- Travel - \$37,500 for two in-person stakeholder workshops (30 people), \$22,500 for three in-person modeler workshops (12 people)
- Biological model development - \$85,000 (one year postdoc with ASMFC indirect cost cap)
- Economic model development - \$115,000 (one year full time or two six month full time contractors)
- Total - \$285,000

Phase Two - Spatially-Explicit GOM/GBK MSE

Purpose: Evaluate performance of spatially-directed management strategies for the GOM/GBK stock triggered by external forces (e.g., whale interactions, wind farm development and operation, climate change).

Costs: Estimates to be developed during phase one.

Spatially-Explicit SNE MSE Option (low priority)

Purpose: Evaluate performance of spatially-directed management strategies for the SNE stock in response to changes in recruitment and diversification of the fishery (targeting lobster and Jonah crab) with biological, fishery, and other socio-economic performance metrics.

Timeline: Five years. One modeler workshop in years one through five. One stakeholder workshop in years two, four, and five.

Personnel and responsibilities:

- ASMFC Lobster TC – Stakeholder recruitment and engagement, data gathering, guidance on technical aspects of the MSE, report writing, and training for using the MSE tools in future updates

- ASMFC Staff – Project management, data gathering, workshop coordination, and report writing/publishing
- ASMFC Lobster Board Members – Define management goals and provide guidance on the direction of the MSE based on those pre-defined goals, participate in stakeholder input gathering (webinars and workshops)
- Stakeholders – Identify desired objectives and outcomes of an MSE and provide guidance on the direction of the MSE, participate in stakeholder input gathering (surveys, webinars, and workshops)
- Biological modeler – Conceptualize modeling of the spatial dynamics necessary to address stakeholder objectives by integrating lobster population distribution models along with Jonah crab population distribution and the resulting fleet dynamics. Identify biological and fleet spatial dynamics and resolution of each that can and cannot be modeled with available data to guide configuration of operating and assessment model. Couple assessment model and operating model in a closed-loop model (eighteen months to program, eighteen months to modify based on workshop feedback and provide training to TC members).
- Economics modeler – Conceptualize modeling of the economic processes driven by lobster landings, and interactions between lobster and Jonah crab effort and landings. Identify processes that can and cannot be modeled with available data to guide configuration of model. Couple economics model with the assessment model and operating model in a closed-loop model.
- Professional facilitator – Facilitate stakeholder webinars and workshops, assist with stakeholder input survey development and analysis
- ***Potentially others dependent on management and stakeholder objectives (e.g., reduce whale interactions would require a whale biologist and protected resource personnel)***

Costs:

- Facilitator - \$42,000
- Travel - \$56,250 for three in-person stakeholder workshops (30 people), \$46,875 for five in-person modeler workshops (15 people)
- Spatially-explicit closed-loop model development: \$255,000 (three year postdoc with ASMFC indirect cost cap)
- Economic model development: \$345,000 (three year full time or two one and half year full time contractors)
- Total - \$745,125 (minimum with potential for additional costs dependent on stakeholder objectives)



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • www.asmfc.org

MEMORANDUM

December 5, 2023

To: American Lobster Management Board
From: Tina Berger, Director of Communications
RE: Advisory Panel Nomination

Please find attached a new nomination to the Jonah Crab Advisory Panel – Denny Colbert, a commercial offshore trap fisherman from Massachusetts. He replaces Marc Polumbo who is no longer active in the fishery. 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: Caitlin Starks

M23-106

JONAH CRAB ADVISORY PANEL

Bolded names await approval by the American Eel Management Board
Bolded and italicized name denotes Advisory Panel Chair

January 9, 2024

Maine ***Vacancy***

Earl Gwin (comm lobster trap/LCMA 5)
10448 Azalea Road
Berlin, MD 21811
Phone: 401.251.3709
jeanenegwin@verizon.net
Appt Confirmed 11/2/15

New Hampshire

Todd Richard Ellis (manager for offshore
lobster/crab boats)
4 Laurel Lane
Somersworth, NH 03878
Phone: 603.396.0993
tellis@littlebaylobster.com
Appt Confirmed 5/4/15

Massachusetts

Denny Colbert (comm traps/offshore)

32 Landfall Lane

Manomet, MA 02345

Phone: 781.831.4005

DennyColbert11@gmail.com

Captain Jan Horecky (comm traps/offshore SNE)
29 France Street
Middleboro, MA 02346
Phone: 774.766.8466
jhorecky@verizon.net
Appt. Confirmed 5/4/15; 8/18

Rhode Island

Jon Williams (comm trap/offshore)

132 Herman Melville Blvd.

New Bedford, MA

Phone: 508.951.4788

jwilliams@atlanticredcrab.com

Appt. Confirmed 2/2/21

Brian Thibeault (comm trap/inshore SNE)

40 lakeside Drive

Charleston, RI 02813

Phone: 401.932.8250

Kwe5tbos90@yahoo.com

Appt Confirmed 5/4/15

New York

Vacancy

Maryland



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: Denny Colbert

Address: (Box 1049) 32 LAMPFORD LANE

City, State, Zip: MANIMET, MA 02345

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

Phone (day): (781) 831-4005

Phone (evening): _____

FAX: _____

Email: DENNY COLBERT11@GMAIL.COM

FOR ALL NOMINEES:

1. Please list, in order of preference, the Advisory Panel for which you are nominating the above person.

1. Jonah Crab
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 ✓

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

yes no

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

NOLA _____
MLA _____
EBBCFA _____

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

LOB _____
(NOB) _____
SCALLOPS _____

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

LOB _____
(NOB) _____
SCALLOPS / (GROUND FISH) _____

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? 40 years

2. Is the nominee employed only in commercial fishing? yes _____ no X

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

4. What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)? 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/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 RECREATIONAL FISHERMEN:

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

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

If "yes," please explain.

FOR SEAFOOD PROCESSORS & DEALERS:

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

40 years

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

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

RESTAURANT

3. How many years has the nominee lived in the home port community? 40 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? 40 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.

Nominee Signature: 

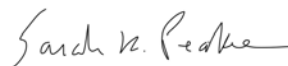
Date: 12/1/23

Name: DENNIS CULBERT
(please print)

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



State Director



State Legislator



Governor's Appointee

Atlantic States Marine Fisheries Commission

Spiny Dogfish Management Board

January 23, 2024

2:45 – 3:45 p.m.

Hybrid Meeting

Draft Agenda

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

- | | |
|--|-----------|
| 1. Welcome/Call to Order (<i>P. Geer</i>) | 2:45 p.m. |
| 2. Board Consent | 2:45 p.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from October 2023 | |
| 3. Public Comment | 2:50 p.m. |
| 4. Review 2023 Management Track Assessment (<i>J. Didden</i>) | 3:00 p.m. |
| 5. Set Specifications for Up to the Next Three Fishing Years Final Action | 3:15 p.m. |
| • Review Monitoring Committee and Mid-Atlantic Fishery Management Council Recommendations for the 2024-2026 Fishing Years (<i>J. Didden</i>) | |
| 6. Elect Vice-Chair Action | 3:40 p.m. |
| 7. Other Business/Adjourn | 3:45 p.m. |

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

MEETING OVERVIEW

January 23, 2024

2:45 – 3:45 p.m.

Hybrid Meeting

Chair: Pat Geer (VA) Assumed Chairmanship: 1/24	Technical Committee Chair: Scott Newlin (DE)	Law Enforcement Committee Representative: Chris Baker (MA)
Vice-Chair: Vacant	Advisory Panel Chair: Vacant	Previous Board Meeting: October 18, 2023
Voting Members: ME, NH, MA, RI, CT, NY, NJ, DE, MD, VA, NC, NMFS (12 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from October 18, 2023

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

4. Review 2023 Management Track Assessment (3:00-3:15 p.m.)

Background

- The management track assessment is an update of the 2022 research track assessment, which had a terminal year of 2019. This assessment uses 2022 as the terminal year, extends the initial year to 1924 from 1989, and updated the stock projections through 2026. Based on the results, the stock is not overfished and overfishing is not occurring (**Briefing Materials**).

Presentations

- Review 2023 Management Track Assessment by J. Didden

5. Set Specifications for Up to the Next Three Fishing Years (3:15-3:40 p.m.) Final Action

Background

- In December 2023, based on the advice of the Mid-Atlantic Council’s Science and Statistical Committee, Advisory Panel, and Spiny Dogfish Committee, the Council voted to recommend a commercial quota of 10.7 million pounds for 2024, 11.0 million pounds

in 2025, and 11.2 million pounds in 2026. The 2024 quota is an 11% decrease from 2023
(Briefing Materials).

- The New England Fishery Management Council will also make quota recommendations in January 2024.

Presentations

- Review Monitoring Committee and Mid-Atlantic Fishery Management Council Recommendations for the 2024-2026 Fishing Years by J. Didden

Board Actions for Consideration

- Set specifications for the 2024-2025 fishing year

6. Elect Vice-Chair

7. Other Business/Adjourn

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
SPINY DOGFISH MANAGEMENT BOARD**

**Beaufort Hotel
Beaufort, North Carolina
Hybrid Meeting**

October 18, 2023

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

TABLE OF CONTENTS

Call to Order, Chair Nichola Meserve1

Approval of Agenda1

Approval of Proceedings from August 3, 2023.....1

Public Comment1

Review Atlantic Sturgeon Fishery Management Action Team/Plan Development Team Alternatives1

Approval of Fishery Management Plan Review and State Compliance for the 2022-2023 Fishing Year5

Adjournment6

INDEX OF MOTIONS

1. **Approval of agenda** by consent (Page 1).
2. **Approval of Proceedings of August 3, 2023** by consent (Page 1).
3. **Move to approve the Fishery Management Plan Review, state compliance reports, and *de minimis* requests for DE and NY for the 2022-2023 fishing year** (Page 6). Motion by Raymond Kane; second by John Clark. Motion approved by unanimous consent (Page 6).
4. **Move to adjourn** by consent (Page 6).

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

ATTENDANCE

Board Members

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

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

Ex-Officio Members

Staff

Bob Beal	Tracy Bauer	Emilie Franke
Toni Kerns	James Boyle	Katie Drew
Tina Berger	Caitlin Starks	Jainita Patel
Madeline Musante	Chelsea Tuohy	Kristen Anstead

Guests

Max Appelman, NOAA	Will DiMento	Chip Lynch, NOAA
Mike Armstrong, MA DMF	Julie Evans	John Maniscalco, NYS DEC
Richard Balouskus, RI DEM	Catherine Fede	Daniel McKiernan, MA (AA)
William Barnhill, NMFS	Cynthia Ferrio, NOAA	Steve Meyers
Jessica Best, NYS DEC	Christine Ford, NOAA	Steve Minkkinen, US FWS
Alan Bianchi, NC DMF	Robin Frede, NEFMC	Patrick Moran, MA
Jason Boucher, NOAA	Beth Govoni, NC DMF	Environmental Police
Jeffrey Brust, NJ DEP	Joe Gresko, CT (LA)	Robert Moss, Commercial
Michael Celestino, NJ DEP	Joseph Grist, VMRC	Striped Bass Assn.
Joseph Cimino, NJ (AA)	Jay Hermsen, NOAA	Brandon Muffley, MAFMC
Karson Cisneros, MAFMC	Amanda Higgs, NYS DEC	Allison Murphy, NOAA
Heather Corbett, NJ DEP	William Hoffman, MA DMF	Thomas Newman
Jennifer Couture, NEFMC	Pierre Juillard	Conor ODonnell, NH FGD
Caitlin Craig, NYS DEC	Ellen Keane, NOAA	Danielle Palmer, NOAA
Scott Curatolo-Wagemann,	Pat Keliher, MA DMF	Robert Pellegrino, Plum Island
Cornell Cooperative Extension of	Thomas Kosinski, Sandy Hook	Surfcasters
Suffolk County	Outfitters	Michael Pierdinock
Jason Didden, MAFMC	Brooke Lowman, VMRC	Janice Plante, NEFMC

These minutes are draft and subject to approval by the Spiny Dogfish Management Board.

The Board will review the minutes during its next meeting.

Guests (continued)

Will Poston
Jill Ramsey, VMRC
Kathy Rawls, NC (AA)
Mike Ruccio, NOAA
Christopher Scott, NYS DEC
Somers Smott, VMRC

Mark Taylor
Taylor Vavra, Stripers Forever
Craig Weedon, MD DNR
Peter Whelan
John Whiteside
Alvin Williams

Brandon Wingate, Salt Tale
Charters
Chris Wright, NOAA
Phil Zalesak
Renee Zobel, NH FG

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

The Spiny Dogfish Management Board of the Atlantic States Marine Fisheries Commission convened in the Rachel Carson Ballroom via hybrid meeting, in-person and webinar; Wednesday, October 18, 2023, and was called to order at 1:20 p.m. by Chair Nichola Meserve.

CALL TO ORDER

CHAIR NICHOLA MESERVE: We'll call the Spiny Dogfish Board meeting to order. Apologies to those online that we ran a little late at lunch, but we have some vitamin D coursing through our bodies now, and ready to get back and do business.

APPROVAL OF AGENDA

CHAIR MESERVE: Looking at our agenda, I think we'll be able to make up the time, perhaps not as quick as Erika Burgess got through the Coastal Sharks meeting yesterday, but we'll do our best to not delay Striped Bass. Looking at the agenda, is there any opposition to approving the agenda as is? Seeing none; we'll consider the agenda approved, and move on.

APPROVAL OF PROCEEDINGS

CHAIR MESERVE: Proceedings from our last meeting in August of 2023. Are there any clarifications, edits, corrections to those proceedings? Seeing none; we will consider them approved by consent.

PUBLIC COMMENT

CHAIR MESERVE: We're going to move on to Item 3, Public Comment. This is an opportunity for members of the public to comment on items that are not on the agenda. I don't see any hands in the audience, anything online, James? None online.

**REVIEW ATLANTIC STURGEON FISHERY
MANAGEMENT ACTION TEAM/PLAN
DEVELOPMENT TEAM ALTERNATIVES**

CHAIR MESERVE: We can move on to Item 4, which is to Review the Atlantic Sturgeon Fishery

Management Action Team/Plan Development Team Alternatives.

We have Karson Cisneros from the Mid-Atlantic Council here to give us a presentation. The Commission is closely tracking this joint Council action, as there is an expectation that the Dogfish Board will be taking some complementary action, once that action gets a little bit further along. Without further ado, I'll go to Karson for her presentation.

MS. KARSON CISNEROS: Thank you, Madam Chair, hopefully everyone can hear me okay. I'll just give another minute to see if the slides pop up. But as noted, I'm going to give an overview of the Mid-Atlantic Council and New England Council's joint framework action to reduce sturgeon bycatch in the dogfish and monkfish fisheries. I'll basically be giving you all an update of the progress that has been made thus far.

There hasn't been any final action or anything. In terms of background on why this action was initiated. In 2021 there was a biological opinion issued by NOAA Fisheries as required by the Endangered Species Act, and this addressed several different FMPs. But one of the outcomes from that biological opinion, or BiOp was that Atlantic sturgeon bycatch must be reduced in several large mesh gillnet fisheries by 2024. To address the BiOp, NMFS formed the Atlantic Sturgeon Bycatch Working Group, and that group produced an action plan that recommended the Council process should be used to meet the needed reductions. Dogfish and monkfish were both identified as high contributors to the sturgeon bycatch, and they are both jointly managed by the New England and Mid-Atlantic Councils.

Then some of the potential measures to reduce sturgeon bycatch, that were recommended within that action plan were modifications to gear. Low profile gillnets have been tested in the monkfish fishery in New Jersey, and have been shown to reduce sturgeon bycatch. Then reductions in soak time, as well as focused time area measures, including closures in hotspot bycatch areas.

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

In response to this action plan conclusion, the councils each initiated a joint framework action earlier this year. In June, the councils did find out that the incidental take statement or ITS, was exceeded in gillnet fisheries, so there was an overage of sturgeon bycatch, and a new biological opinion has been reinitiated just last month.

This is kind of an evolving situation, but the previous 2021 BiOp is still active, and requires that bycatch reduction by 2024. But because of the timing, the new BiOp will likely use the current framework action as a baseline, instead of the current status quo condition. Currently, staff are working with GARFO through the FMAT/PDT that will sponsor this action, in order to share data and make sure that these processes are informing each other, and we're addressing the issue as needed.

This is just a quick overview of where the hotspot areas are for Atlantic sturgeon bycatch in gillnet fisheries. These were identified in the Action Plan and are based on observer data. The map on the left shows the Gulf of Maine and Southern New England, and then on the right the map shows New Jersey down through Virginia and Northern North Carolina.

The more pink and red area have the densest sturgeon and gillnet interaction. As you can see, there are some interactions in the Gulf of Maine and Southern New England, but the highest density hot spots are really off of New Jersey and the DelMarVa Peninsula on the right. In general, there are seasonable trends within these hotspots where there is a peak in interactions in the spring, closer inshore, and then a peak in the winter a little bit further offshore.

I mentioned the FMAT/PDT earlier. I just wanted to introduce the group a little bit. This is kind of the merging of the New England process of PDTs and the Mid-Atlantic process of Fishery Management Action Teams. On this team we have monkfish and dogfish and

sturgeon expertise. We have representation from GARFO, including people from Sustainable Fisheries, Protected Resources, and NEPA.

Then we have Science Center expertise with the Observer Data, and sturgeon population dynamics, and then we have ASMFC staff, James Boyle represented on the team as well. This is the action timeline, and today's meeting is highlighted in green. At this point there have been several meetings, and these have been to really develop the early development of the range of alternatives. The FMAT and PDT formed and met in April, and then in May the dogfish and monkfish AP's and Committees met. Then in June the Councils met. During that first set of meetings, there were preliminary alternatives developed, and then the Councils decided in June that the Committee needed to meet again, to further refine the range of alternatives with more input from enforcement. Because of this, in September the FMAT and PDT and Committee met again to narrow the range of alternatives and refine them, and to keep with the action timeline and have a reasonable range of alternatives.

The New England Council approved the range of alternatives at their late September meeting, and then the Mid-Atlantic Council approved that same range at their meeting in early October, so just two weeks ago. Then since then staff and the FMAT/PDT are starting to analyze those alternatives and impacts, and starting development of that final framework document.

In late winter, so now we're on the other side of the green highlighted line of today's meeting. In late winter, likely February, there will be another set Advisory Panel for dogfish and monkfish, and Committee meetings to review the analysis and recommend those preferred alternatives. Then final action is scheduled for April of next year for both councils.

The requirement was to reduce sturgeon bycatch by 2024, so we anticipate rulemaking late in the year and implementation. Now we'll get into some of the types of measures that were developed for the

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

action. These were developed by the FMAT and PDT or by the Dogfish and Monkfish Committees.

The first one is gillnet soak time limits, and these would be in place within the hotspot areas during specific times of the year, where interactions are occurring. Different soak time options were considered, including no overnight soaks and maximums of 24-, 48- and 72-hour soak time. There were all these iterations that were originally considered, but there were concerns with soak times of 24 hours or greater, because those restrictions may not necessarily reduce the overall nets in the water, as the fishermen hauls back their net and then immediately resets it.

It was discussed that the action requires that sturgeon bycatch overall needs to be reduced, so not just bycatch mortality, because the shorter soak times can reduce bycatch mortality. Then in addition to that concern, the 24-hour soak times or greater did raise a lot of concern from enforcement representatives.

Ultimately, the only soak time restriction option that was kept in this action was no overnight soaks, since that would reduce nets in the water, and was deemed more enforceable. Preferably with a discrete ending time, instead of something like sunset, so a discrete ending time of 8:00 p.m. was proposed, and daytime hours can vary seasonally.

This was only kept in the dogfish range of alternatives, because the monkfish fishery requires multi-day soaks in order to operate. Then these soak times, daytime-only soak times were discussed in general, as more feasible in the New Jersey hot spot area, whereas in the southern Mid-Atlantic areas, fishermen have said that they need to keep the nets in overnight, so they may need to consider other measures.

Another option for reducing sturgeon bycatch in hotspot areas is the use of low-profile gillnet gear, which was described in the Action Plan.

This would also be for specific times of year, when bycatch was high, and then those hot spot areas. This option has only really been researched in the Monkfish Fishery and in the New Jersey Region, where it has been shown to reduce sturgeon bycatch, while still maintaining monkfish catch. This type of net hasn't been tested for spiny dogfish or monkfish in the New England areas. Because of this, this is only included as an option for monkfish.

Lastly, small time-area closures are another option included in the range of alternatives to reduce bycatch, and these are included for both dogfish and monkfish. There were three different methods considered to capture those hotspot areas. These methods include drawing small polygons around the bycatch hotspots, using parallel lines to shore.

Another approach was using 10-minute squares to cover a hotspot area, and then a third approach was including the entire statistical area that contains the hotspot. There were pros and cons to each approach, but ultimately, the first option using parallel lines to draw the areas had the most flexibility, and was deemed more enforceable than the 10-minute square approach, which could create an area of more than four sides.

Then using entire statistical areas would include a large amount of area that was not considered a hotspot area, so that was considered too much of a burden on the fisheries, potentially without reducing more sturgeon bycatch. I won't go through all of these one by one, but this slide shows the final range of monkfish alternatives that were approved by both councils.

These alternatives include a low-profile net requirement or closures in the New Jersey hotspot area, and a closure option in the southern New England hotspot area. Then the southern New England closure has options in May and June, while the New Jersey timing of restriction or closure is December and May.

This is the range of dogfish alternatives that were approved by both councils. The types of restriction for dogfish are either no overnight soak or a time

These minutes are draft and subject to approval by the Spiny Dogfish Management Board.

The Board will review the minutes during its next meeting.

area closure. There are options for these restrictions to be applied to hotspot areas in New Jersey, as well as hotspots off the coast of Delaware, Maryland and Virginia, and the timing of closures or restrictions for New Jersey is November, December and/or April.

For the southern Mid-Atlantic, the timing options are December, January and/or March. Some other considerations that have come up throughout the development of this action, are kind of listed on this slide. The Committee discussed the potential requirement of VMS in these fisheries, in order to increase enforceability of the different options, and potentially for some benefits of refining the hotspot areas in the future, or collecting further data.

Enforcement representatives did clarify that they would still be able to enforce the alternatives that were included in the final range, without a VMS requirement. The Councils ultimately felt it would be too large of a burden to the fisheries, so they didn't include a VMS requirement within the range of alternatives for either fishery.

Another consideration is that the sturgeon bycatch data needs to be updated for the hotspot analysis. Once that is done, hotspot area boundaries can be drawn more firmly. We're also planning to provide a state versus federal waters breakdown of the bycatch for these fisheries, because that has been requested by the Councils. Lastly, both Councils recommended future research on the use of data loggers as a tool to enforce gillnet soak time, and as well as the exploration of low-profile gillnet gear in the spiny dogfish fishery, and other regions beyond New Jersey for monkfish.

Further work in these areas can help enable the Councils to have more management tools in the future, if more sturgeon bycatch needs to be mitigated. Lastly, these are the next steps that I already touched on during the timeline slide.

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

The Council staff, New England and Mid-Atlantic Council staff are both working with the FMAT and PDT to analyze the data and alternatives, and develop the framework document.

We have just gotten started on that. Around February, the dogfish and monkfish AP's will meet, followed by the joint Dogfish and Monkfish Committee, in order to recommend those preferred alternatives to the Council. Then both Councils will take final action at their April meeting. That is all I have.

CHAIR MESERVE: Great, thank you, Karson for that overview, a lot of great information there for the Board. Are there any questions for Karson on her presentation? I think you covered it excellently, Karson, there are no questions right now from the Board. I think the one thing that James and I wanted to discuss with the Board though is next steps for us on the matter. There is a question, David Borden.

MR. DAVID V. BORDEN: Question, Nichola. Could we go back to, I think it's Slide 3, where you put up the number of interactions. Yes, that. I'm a little bit concerned about the ITS being based on 2011 and 2015 observer data. Just for everyone's edification, I have nothing to do with the gillnet fishery. But I have listened to a lot of monk/skate discussions on this issue.

It is quite apparent that the gillnet fishery over the past ten years is totally contracting, in terms of the amount of gear that is used, number of gillnets out, where they're set, and so forth. If you use a time period going back to 2011 to '15, I'm afraid it may bias the results. I think it would be better to try to integrate some of the more recent effort data and fishery location information in the future.

CHAIR MESERVE: Karson, do you have any response to that about the years being incorporated in the new biological opinion?

MS. CISNEROS: Yes, I'm not sure of the exact years that the new BiOp that was just reinitiated will use, but for our action we will use through 2022, so all of

the bycatch and the sturgeon interaction of recent years will be used to draw the sort of boundaries and look at the trends. The ITS, the Incidental Take Statement that was developed, is kind of a limit that shouldn't be exceeded. That was derived from 2011 to 2015.

Then a look at recent years, so 2015 to 2021, is where there was quite a bit of an increase in sturgeon takes in the gillnet fishery in recent years. That is kind of what has triggered this new biological opinion, and definitely it kind of further emphasized the need for action. I hope that helps.

CHAIR MESERVE: Thank you, Karson. Any other questions, now that you've had a moment to let it marinate? Okay, seeing none; as I was saying, James and I wanted to bring up the potential for the Board's next action. It seems it's early at this point. There is a lot more detail that is going to be developed for the options in the range of alternatives.

We think that we'll be looking at the February of May meeting would be the time that the Board has some more information, and may start to think about initiating some type of complementary action for in-state waters for dogfish. As Karson said, we may have some more specific information about the bycatch proportion between state and federal waters to inform what this Board wants to do. That concludes this topic, and we can move on to the FMP review and State Compliance reports. We'll turn to James for that.

**APPROVAL OF FISHERY MANAGEMENT PLAN
REVIEW AND STATE COMPLIANCE FOR THE
2022-2023 FISHING YEAR**

MR. JAMES BOYLE IV: I'm going to jump right in. I think I can go over this pretty quickly, so we can stay relatively on schedule. Good afternoon, everyone. I'll just jump right in. Here is just a very quick overview of the presentation. I'll start with a reminder of the

status of the stock, which is still based on the 2018 stock assessment update.

Then I'll discuss the fishery in 2022-2023, and wrap up with the State Compliance, de minimis requests and PRT recommendations. The latest stock status information for management use still comes from the 2018 stock assessment update. Female spawning stock biomass is estimated to be 106,753 metric tons in 2018, which was above the threshold of 79,644 metric tons.

In 2017, fishing mortality on exploitable females was estimated to be 0.202, and has remained below the threshold level of 0.244 since 2005. A management track assessment was recently peer reviewed, and will be reviewed by the Mid-Atlantic Council's Science and Statistical Committee on October 30, and is scheduled to be presented to the Mid-Atlantic and New England Councils in December and January respectively.

In terms of the commercial quota and landings, the fishing year ran from May 1, 2022 to April 30, 2023. The quota was 29.56 million pounds and the trip limit was 7,500 pounds for the northern region states and commercial landings in total were approximately 12.6 million pounds, which is about a 28 percent increase from fishing year 2021 and 2022.

Recreational harvest was approximately 211,608 pounds in the fishing year 2022, which is about a 41 percent decrease in the previous fishing year. The dead discards were estimated to be about 2.5 million pounds, which is an 8 percent increase from 2021-2022 fishing season. All regions and state harvested within their quota, and all states implemented regulations consistent with the requirements of the FMP.

Under the spiny dogfish FMP, a state may be granted de minimis status upon request if landings are less than 1 percent of the coastwide landings. Both New York and Delaware requested and qualified for de minimis status. There are just a few PRT recommendations and comments. First thing, Connecticut did not meet the compliance report

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

deadline. Additionally, while every state satisfied the weekly reporting requirements through either SAFIS or NOAA Fisheries, a couple of states still did not provide the reporting regulations that show the requirement, and the PRT requests those going forward just for clarity. New York noted in their report that their finning regulations only apply to coastal sharks, but they are working to amend those to include spiny dogfish going forward.

Furthermore, the PRT maintained the note that the FMP gives a fairly broad definition of biomedical supplies for exempted fishing permits, and the states are reporting harvest under a variety of research and education purposes. While the reported harvest under these permits is well below the 1,000 fish limit, the PRT may require Board input on what type of harvest can count towards its limit in the future, should any state start to be near that 1,000 fish limit.

Finally, the PRT continues to recommend the Board consider the purpose of the current de minimis provision, given that all states must satisfy the only monitoring requirement, which is to report annual landings, regardless of de minimis status. With that, the Board action to consider today is the approval of the FMP Review and State Compliance Reports for the 2022-2023 fishing year, as well as the de minimis requests from New York and Delaware. With that I'm happy to take any questions.

CHAIR MESERVE: Are there any questions from the Board about the FMP Review? Seeing none; is there anyone that would like to make a motion? Ray Kane. Could you read it into the record please, Ray?

MR. RAYMOND W. KANE: Yes, **move to approve the Fishery Management Plan Review, State Compliance reports and De Minimis requests for Delaware and New York for the 2022-2023 fishing year.**

CHAIR MESERVE: Motion by Ray Kane, is there a second? John Clark, thank you. **Is there any opposition to the motion? Seeing none; we'll consider that approved.**

ADJOURNMENT

CHAIR MESERVE: Is there any further business to come before the Board today? Seeing none; I will consider us adjourned, and I'll look to Toni for any announcement about the next Board meeting.

(Whereupon the meeting adjourned at 1:45 p.m. on October 18, 2023)

2023 September Management Track Peer Review Panel Report

Adrian Jordaan (Chair)¹, Thomas Miller², and Yong Chen³

¹University of Massachusetts Amherst, ²University of Maryland Center for Environmental Science, ³Stony Brook University

Executive Summary

Seven stock assessments were reviewed by the September 2023 Management Track peer review panel. Four of these were Level 2s Expedited Review: northern and southern red hake (*Urophycis chuss*), Atlantic mackerel (*Scomber scombrus*), and northern windowpane flounder (*Scophthalmus aquosus*), and three of these were Level 3 Enhanced Reviews: Acadian redfish (*Sebastes fasciatus*), skate complex, and spiny dogfish (*Squalus acanthias*). Levels of review were as recommended by the Assessment Oversight Panel (Appendix A).

The Peer Review Panel (Panel) for the September 2023 Management Track Assessments met via webinar on September 18-20, 2023. The Panel was to determine whether the completed management track assessment was technically sufficient to (a) evaluate stock status, (b) provide scientific advice and (c) successfully address the assessment Terms of Reference (Appendix B). Table 1 presents a list of the stocks, name of the lead analyst/presenters, and conclusions about stock status.

Attendance at the meeting is provided in Appendix C with the Agenda shown in Appendix D.

We thank Russ Brown (Population Dynamics Branch Chief) and Michele Traver (Assessment Process Lead) for their support during the meeting and to the staff of the Population Dynamics Branch at NEFSC for the open and collaborative spirit with which they engaged the Panel.

Our thanks also extend to the rapporteurs for taking extensive notes during the meeting and to staff of the Mid-Atlantic and New England Fishery Management Councils. Last, we thank the analysts for their diligent and highly professional work in completing their assessments.

The Panel has suggestions for improvements that could be made for review of Management Track assessments:

1. The Panel suggests continued development of supplemental information, including age/length-frequency plots and comparisons between discards estimates broken down by gear and year, as these were important to interpretation of trends. The Panel recognizes that different analysts construct different assessment models, but there could be some future effort of identifying the best data visualizations for the similar data types.

The Panel also has several crosscutting recommendations with respect to the individual stock assessments:

1. Projections and ABC setting, and best practices around developing them remain a challenge. For example, the time-series of recruitment used to generate OFL projections. The time series used, or inclusion of autocorrection, in generation of recruitment could be considered during projections,. In other stocks, periods of exploitation rates where populations were viewed as stable were used to develop the ABC. The choice of time series length and what is deemed stable are ad hoc procedures, and this area would benefit from a Research Track effort to determine best practices that could guide PDT development of projections and advice setting during SSC deliberations, and lead to more consistency and transparency in the approach.
2. When empirical approaches are used in the assessment, there needs to be a standard set of procedures for setting ABCs. We saw four methods of setting ABCs in this process, based on SSC deliberations and from an FMP. The Panel recommends exploring 75 and 25 percentiles of historical biomass time series as an empirical target and limit reference points, respectively for the red hake stocks, although in the past a target exploitation rate of 1.5% was used. For the skate complex, the SSB_{msy} proxy is considered the 75th percentile of the survey, the ABC calculation uses the Median C/B by species*most recent 3-year moving average of the survey, and the MSY calculation is the Median C/B by species*B_{msy} proxy. The development of BRPs, ABCs and projections in non-analytical assessments remains an important area of focus in Research Track Assessments or its own RT assessment with crosscutting recommendation #1 above.
3. Two stocks reviewed are in rebuilding plans but the analytical assessment failed in previous peer review and thus there is no way to understand if the stock is rebuilt, or if the reference points are current, given the potential productivity changes due to climate change and/or other factors. This is a consistent issue and needs to be addressed. Essentially, these are an extension of the short term projections into long term projections and how to know where the population is without a biomass and fishing mortality estimate.
4. Incomplete individual age matrices in Acadian redbfish assessment, from catch and the spring survey, needs continued effort. Aging was an issue in multiple stocks, and samples that are on hand or future collection would aid in the assessment process.
5. The Catch Accounting and Monitoring System (CAMS) was implemented to provide a single source of commercial fishery data for quota monitoring and stock assessment. Stock assessment updates continue to check CAMS estimates against current or historical estimates of discards and harvest, where available to ensure that the differences remain negligible. In the assessment of northern red hake, the inclusion of lobster observer data based on 18 trips in 2021 and 22 samples (and CVs of 0.54 -0.80) contributed to elevated total removals. Because red hake catch is low, no impact occurred in the assessment, but details of discard estimates are important to include and flagging lower confidence values.
6. Figures for exploitation rates should be more explicit, for example if it is fully selected fishing mortality, then this should be the y-axis label.

Table 1. Stocks reviewed at September 2023 Management Track Assessment Peer Review.

Stock	Lead Analyst/Presenter	Peer Review Panel conclusion on Stock Status
Expedited Review		
Red hake (north)	Toni Chute	<p>Stock’s overfished status and overfishing status are both unknown.</p> <p>Biomass indices are high and the exploitation rate remains at low levels.</p>
Red hake (south)	Toni Chute	<p>Stock’s overfished status and overfishing status are both unknown.</p> <p>Biomass indices are low and the exploitation rate remains at low levels.</p>
Windowpane flounder (north)	Toni Chute	<p>Stock’s overfished status and overfishing status are both unknown.</p> <p>Biomass indices are at time-series lows and the exploitation rate remains at low levels. This is a discard fishery.</p>
Atlantic mackerel	Kiersten Curti	<p>Stock is Overfished and overfishing is not occurring.</p> <p>The stock is near time-series lows but closure of directed Canadian fishery and lower US catch resulted in not overfishing in the last year of the assessment.</p>
Enhanced Review		
Acadian redfish	Brian Linton	<p>The stock is not overfished and overfishing is not occurring.</p> <p>The stock is not being fully utilized and it appears unlikely that full utilization will occur unless market conditions change.</p>
Skate complex	Kathy Sosebee	<p>Stock’s overfished status and overfishing status are both NA.</p> <p>BRP’s are defined in past development of the Skate FMP, and these support an</p>

Stock	Lead Analyst/Presenter	Peer Review Panel conclusion on Stock Status
		overfished status for Thorny Skate and recent overfishing in Little and Winter Skate.
Spiny dogfish	Dvora Hart	<p>The stock is not overfished and overfishing is not occurring.</p> <p>Exploitation rates are relatively high and at the FMSY Proxy, thus it appears likely that catch will achieve ABCs.</p>

Expedited Reviews

Red Hake

Red hake (*Urophycis chuss*) is a gadid species with relatively small maximum age and size (8 years, ~45cm). Red hake is managed as two separate stocks. The northern stock encompasses the Gulf of Maine and the northern flank of Georges Bank. The southern stock, also termed SNEMA, encompasses coastal waters of southern New England and the Mid-Atlantic and the eastern and southern flanks of Georges Bank. Data on both red hake stocks from 1981-2022 were evaluated. Catches of hake in both stock areas declined sharply between 1981-2000 and have since remained low. The northern hake stock abundance index was increasing late in the time series and the southern declining.

In 2020, an expert working group released a report on the structure of red hake in the northeast Atlantic (NEFSC. 2020). This report documented the assessment history of this stock. Evidence from distributional patterns, vital rates, otolith microchemistry and physical oceanographic factors was examined. The report concluded that the information available is “insufficient to reject the null hypothesis of two stocks.” This finding was based on “clear evidence” of phenotypic stocks with clear trends in abundance. The report acknowledged the potential for exchange, particularly during early life stages, but the report concluded that evidence for exchange “did not provide a sufficient basis to reject the null hypothesis of two stocks.”

The Panel does not wish to re-explore the question of whether or not there is sufficient evidence to support any specific stock structure. The Panel raises the issue of stock structure to identify an important source of uncertainty in the inferences drawn regarding stock status of both the putative northern and southern stocks, and as a necessary question towards understanding differing responses of the stocks to historical exploitation rates. If there are indeed two separate stocks, are there any exchanges between the two stocks, or are they isolated as is assumed in the current approach? Are there characteristic patterns, frequencies and magnitudes of exchanges between stocks that affect management? Are both putative stocks resilient, or does one serve more often as a source population subsidizing the other? Alternatively, if red hake lack the putative stock structure and are rather a single, well-mixed population, what is the importance of latitudinal differences in vital rates and the disparate spatial distributions documented? Would the stock structure be considered differently if the null hypothesis was a single population? The Panel recommended strongly continued research to resolve questions of stock structure in this species.

The two stocks of red hake also demonstrate a pattern in population trends that are consistent with climate change, with the southern stock declining and the northern stock increasing.

Northern Red Hake Stock

Previous assessments have applied an index method (AIM) to northern red hake as a part of the Research Track Assessment (RTA, NEFSC 2020). This was not successful, leading the peer review panel for the RTA to conclude that fishing was likely not the driver for changes in

abundance of northern red hake. Consequently, the 2020 Management Track Assessment (MTA, NEFSC 2022) brought forward an empirical approach based on estimating total swept-area biomass with model-based net efficiencies. This method does not produce reference points and accordingly the 2020 MTA did not determine stock status. The same method was used for the 2023 MTA and consequently stock status remains unknown. Indices developed from NEFSC Bottom Trawl Surveys (BTS) indicate that biomass is high, and relative exploitation rate is low.

The Panel concluded that the Term of Reference related to catch was broadly met. However, the Panel notes that discard estimates in 2021 and 2022 were approximately 4 times higher than estimates for earlier in the time series. This large increase stems from incidental catch of red hake in lobster pots in the Gulf of Maine based on federal observer coverage. These observations are based on a limited number of trips and more work is required to determine how representative they may be of the wider lobster fishery in the Gulf of Maine. If these discard estimates are supported by a broader examination of bycatch in the lobster fishery, discard mortality on northern red hake in the lobster fishery could have important implications for past catches, and our understanding of the pattern of exploitation of red hake. The Peer Review Panel (Panel) recommended efforts to more fully evaluate the discard estimates from the lobster fishery throughout the catch time series.

The Panel suggested considering using historical biomass and relative exploitation rates time series as potential reference points to gauge the stock status in relation to historical levels. For example, 75 and 25 percentiles of historical biomass time series can be considered as an empirical target and limit reference points, respectively. The development of BRPs, ABCs and projections in non-analytical assessments remains an important area of focus in research track assessments. Specific to northern red hake, relative exploitation rates are low and biomass is near time series highs. The stock ranges between 205-849 MT in total catch.

Nothing reviewed would cause the Panel to suggest a change to what the SSC decided during past setting of catch specifications, however, there is also not much support for the somewhat arbitrary use of the period of stable catches with a 1.5% exploitation rate. The Panel felt there were a number of times that catch could be viewed as stable, including the whole time series. Thus, the Panel suggests further thinking around what exploitation rate is appropriate for this stock, and considering constant catch levels since catch is low and biomass trends appear unrelated to fisheries removals.

Research suggestions

Analyze ME Department of Marine Resources (DMR) lobster sea sampling data which include groundfish bycatch to estimate potential red hake discards in the coastal GOM lobster fishery. Better understand potential discards and the mortality rates.

Identify possible drivers that led to reduced sizes at age over time as population growth. Potential drivers include density-dependent factors (e.g., changes in size/age at maturity) and environmental drivers (e.g., climate induced changes). Discussions of the differing responses of the stocks to historical exploitation rates should be useful, particularly if such discussions lead to more refined analyses of underlying causes.

A genetic study would help with understanding stock structure since there was little support in otolith microchemical studies thus far.

The sharp drop in the number of the larger (older) individuals is consistent throughout all the length frequency figures. Red hake are not a particularly large fish and this could reflect the slowing of growth as fish age and length frequency bins. Behavioral or size-dependent distributions, however, could introduce some bias. A starting point might be a comparison of size composition changes over depth and in discards.

Panel conclusions

The Panel concluded that the 2023 assessment update for northern red hake fulfilled the recommendations of the AOP, and is the Best Scientific Information Available. The Panel believes the Terms of Reference for the stock's assessment were broadly met. Catch was estimated from all sources including landings and discards. An abundance index was generated, broken down to strata and length frequencies provided. Annual fishing mortality, recruitment and stock biomass were not possible to estimate as a result of the assessment method for the time series. The same model was used as the last assessment. No BRP's are defined, nor any stock status provided. Temporal trends in length frequencies and a back up i-smooth option provided. No short-term stock projections were appropriate, although some different time series periods with different mean exploitation rates were provided and applied to the 3-year moving average swept-area biomass estimate of 221,920 mt. No more than 2% of the stock has been removed annually since the 1980s and it will be difficult to justify an appropriate time period for the exploitation rate. Most previous comments in past peer reviews or SSC concerns from the most recent assessment will require a research track assessment to explore another framework, likely once improved estimates of M , selectivity, and recruitment, and an expanded time series become available.

Southern Red Hake Stock

Previous assessments have applied an index method (AIM) to southern red hake as a part of the Research Track Assessment (RTA, NEFSC 2020). This was not successful, leading the peer review panel for the RTA to conclude that fishing was likely not the driver for changes in abundance of southern red hake. Consequently, the 2020 Management Track Assessment (MTA, NEFSC 2022) brought forward an empirical approach based on estimating total swept-area biomass with model-based net efficiencies. This method does not produce reference points and accordingly the 2020 MTA did not determine stock status. The same method was used for the 2023 MTA and consequently stock status remains unknown. Indices developed from NEFSC Bottom Trawl Surveys (BTS) indicate that biomass is low, and relative exploitation rate is low.

The Panel discussed the small footprint of the red hake southern stock relative to the survey area, as viewed in the distributional maps. This stock is not experiencing overexploitation but is still declining, leading to concerns about the interpretation of the survey index. Data to inform stock structure remains uncertain. The biggest case for separation is the division is historical growth and different index trends. But whether these data can support the division of fish caught on

Georges Bank into allocations to two stock areas remains unclear. The Panel still views the stock structure as a potential source of uncertainty.

The Panel concluded that the Term of Reference related to catch was met. Catch is low and biomass trends appear unrelated to fisheries removals.

The Panel concluded that the Term of Reference related to abundance indices and life history was met. The index is statistically sound, but missing stations and in particular spring survey issues could have impact on estimates and map of center of gravity.

The Panel questioned the feasibility in evaluating a rebuilding plan with a rebuilding F and rebuilding biomass without management reference points. The Panel suggested considering using historical biomass and relative exploitation rates time series as interim reference points to gauge the stock status in relation to historical levels. For example, 75 and 25 percentiles of historical biomass time series can be considered as an empirical target and limit reference points, respectively.

The Panel suggested an investigation of the causes that resulted in a southern stock declining and northern stock increasing. Climate change may be one of the causes that need to be evaluated. but the mechanism could be the result of either differential production and survivorship or from migrations.

Research suggestions

Many of the same research recommendations were reiterated from the northern stock. Comparisons between northern and southern stocks and look for inconsistencies between biomass trends and survey indices, recruitment? Timing of the survey in the south could greatly impact the index due to the phenology of fish migrations.

Panel conclusions

The Panel concluded that the 2023 assessment update for southern red hake fulfilled the recommendations of the AOP, and is the Best Scientific Information Available. The Panel believes the Terms of Reference for the stock's assessment were broadly met. Catch was estimated from all sources including landings and discards. An abundance index was generated, broken down to strata and length frequencies provided. Annual fishing mortality, recruitment and stock biomass were not possible to estimate as a result of the assessment method for the time series. The same model was used as the last assessment. No BRP's are defined, nor any stock status provided. Temporal trends in length frequencies and a back up i -smooth option provided. No short-term stock projections were appropriate, although some different time series periods with different mean exploitation rates were provided and applied to the 3-year moving average swept-area biomass estimate of 53,968 mt. Exploitation rates appear low and it will be difficult to justify an appropriate time period for the exploitation rate. Most previous comments in past peer reviews or SSC concerns from the most recent assessment will require a research track assessment to explore another framework, likely once improved estimates of M , selectivity, and recruitment, and an expanded time series become available.

Atlantic mackerel

Atlantic mackerel (*Scomber scombrus*) is a broadly distributed pelagic fish species. Atlantic mackerel school and grow to a maximum of around 40 cm. Atlantic mackerel is considered a unit stock, with two spawning contingents, a southern contingent spawns in April and May in U.S. waters and a northern contingent spawns in June and July in the Gulf of St. Lawrence. The Canadian directed fishery was closed in 2022 in response to lowest estimated spawning stock biomass on record, and US removals were also low. The result is that the past year had low fishing mortality.

The mackerel assessment was originally a level 1 for direct delivery to the SSC. Changes in the assessment, driven by the addition of 2022 data (i.e. new data during a fishery closure, not changes to the assessment model parameterization), resulted in the updated model suggesting a change in status, which resulted in an upgrade to a level 2 assessment for this Management Track peer review. The primary assessment model for the Atlantic mackerel stock is ASAP. The model uses a constant M of 0.2 and one fishing fleet with a flat topped selectivity (1 at age 6 y). A range-wide egg survey that combines a targeted effort by Canada and the ECOMON survey in the United States provides an important index of SSB. In the assessment, the SSB index is complemented by data from the spring bottom trawl survey (ages 3+, dome-shaped selectivity) for each of the Albatross years (1974-2008) and Bigelow years (2009+). Long-term projections for BRPs are based on empirical CDF derived using recruitment estimated from 1975 onward. In the last assessment, the F_{MSY} proxy ($F_{40\%}$) was 0.22, and thus the stock was overfished (24% MSY proxy) and overfishing was occurring (208% of F_{MSY} proxy). The stock is in a rebuilding plan with $F_{Rebuild}$ 0.12, using a two stanza recruitment to limit highest recruitment to larger stock sizes.

The Atlantic mackerel stock is overfished and overfishing is not occurring with a small but not insignificant retrospective pattern. The not overfishing status is the first such designation for this species in almost 20 years. There is age truncation in the population. Recruitment patterns suggest recruitment overall is low and there has been a greater relative recent contribution of the southern contingent to egg production (and presumably recruitment)..

The Panel was concerned how the fit to the abundance index shows systemic positive and negative patterns over time and the potential this is an indication of process errors that is not fully captured in the current stock assessment model. The Panel encourages the continued development of a state-space model such as the WHAM model to attempt to better deal with changing ecosystems.

The Panel recognizes the importance of the Canadian egg surveys and the US ECOMON survey to develop the egg production SSB index. This could be improved on the US side by additional

sampling during the mackerel peak spawning, earlier than when the current ECOMON survey is conducted. Efforts are currently underway to collect spawning mackerel from the southern contingent to provide updated fecundity estimates. These could improve the assessment in the future.

This stock utilized an SSB-based recruitment time-series in short-term projections in which low SSBs (less than 1/2 reference pt) produced a truncated time series where large past recruitments are not possible until SSB > 1/2 reference point, at which point the full time series is used. The Panel appreciated the thought that went into this as it represents a method of recognizing both the recent productivity that is more likely and the possibility of large recruitment possible at larger SSB values. However, a feeling that projections were optimistic remains, Past projections have similarly been shown to be optimistic. Another key uncertainty is the Canadian closure of the fishery and the likelihood it will remain in effect over the intervening time until another assessment and SSC deliberation occur.

Research suggestions

The Panel encourages the continued development of a state-space model such as the WHAM model to attempt to better deal with changing ecosystems. In addition, continued attention to the recruitment time-series and attempting to limit the optimistic projections either using shorter time series, or autocorrelation, to maintain lower recruitment. Part of the higher projections could be explained by higher R/SSB values in the last few years.

There is evidence of size-varying M. The Panel suggested that this be evaluated in future stock assessment.

The Panel thought efforts to develop a predation pressure index may be useful for this and other stocks, however the changing demographics and areas of spawning/young of year habitat may influence which predators contribute most to predation pressure.

Better delineation of the stock structure (using genetics) is needed.

Panel conclusions

The Panel concluded that the 2023 assessment update for Atlantic mackerel fulfilled the recommendations of the AOP, is technically sufficient to evaluate stock status and provide scientific advice and meets the Terms of Reference for the stock's assessment. Catch was estimated from all sources including landings and discards. An abundance index was generated, and an ASAP model used including bridge runs to last assessment that used the same modeling framework. Annual fishing mortality, recruitment and stock biomass were estimated, as well as BRP's. The stock is overfished but overfishing is not occurring and there is a minor retrospective pattern that did not justify any rho-adjustment. Short-term stock projections were appropriate, and since the stock is in a rebuilding plan used the $F_{Rebuild}$ ($F=0.11$), recommending 6864, 8571,

and 9830 mt in 2024, 2025 and 2026, respectively. There is a consistent pattern of optimistic projections, and longer term projections reflect this, suggesting that catches could double by 2029. Exploitation rates remain variable and the spawning stock biomass near the all time low. It appears likely that catch will be close to the ABC. A better understanding of how abundance indices are tracking the population (Tor 6) and estimation of a stock-recruit relationship remain as carry over recommendations.

Northern windowpane

Windowpane flounder are a small flatfish species that does not grow larger than 40cm in length, with most achieving 35cm length. Historically maximum age was up to 12 years old, although maximum age is now closer to 8-9 yr. Males are often the largest and oldest in the population. Catches were much higher prior to 1994, but fell precipitously and since the year 2000 the stock is primarily a discard fishery.

The stock was last assessed in 2020 using data through 2019. The application of the AIM model was discontinued in the 2019 assessment update because the fit was poor, although the AIM model continues to be used for the southern windowpane stock. Consequently, the 2020 Management Track Assessment (MTA, NEFSC 2022) was brought forward as an empirical approach based on estimating total swept-area biomass with model-based net efficiencies. This method does not produce reference points and accordingly the 2020 MTA did not determine stock status. The same method was used for the 2023 MTA and consequently stock status remains unknown. Indices developed from NEFSC Bottom Trawl Surveys (BTS) indicate that biomass is low and currently the abundance index is at a record low for the time series, and the relative exploitation rate is low.

The Panel was concerned about the potential for unaccounted mortality in discards. The stock has continued to decline while under low fishing pressure, in contrast to the southern stock that has stabilized, thus it is likely that there is unaccounted mortality or an unknown population process. We are not seeing recruitment materialize into the population.

This stock suffers from not having an analytical model that allows for estimating reference points to determine stock status. This is one of a number of current stocks that are in rebuilding plans but where the analytical assessments have not passed peer-review. For these stocks it is not clear if (1) the BRPs and rebuilding targets from past analytical assessment should be maintained, (2) the relevance of any such past values given the inability to understand present status, and (3) how to approach rebuilding without current status in setting current ABCs.

Research suggestions

There appears to be some unaccounted mortality, likely in discards, that possibly explains for the dichotomy between the low relative exploitation rate and lack of response by the stock.

Additional research on windowpane discards, likely in the scallop dredge fishery or recreational catches, are warranted. This research could include better accounting of current bycatch and development of fishery practices that limit discards.

Mentioned above in the cross cutting themes, there needs to be some broader work, perhaps its own RT assessment, on the time-periods used for determining exploitation rates that had a stable population.. This stock and the two hake stocks all had similar issues.

Panel conclusions

The Panel concluded that the 2023 assessment update for northern windowpane fulfilled the recommendations of the AOP, and is the Best Scientific Information Available. The Panel believes the Terms of Reference for the stock's assessment were broadly met. Catch was estimated from all sources including landings and discards. An abundance index was generated using the fall survey due to limited catches in the spring, broken down to strata and with annual length frequencies provided. Annual fishing mortality, recruitment and stock biomass were not possible to estimate as a result of the assessment method for the time series. The same model was used as the last assessment. No BRP's are defined, nor any stock status provided. A back up i-smooth option provided. No short-term stock projections were appropriate, although some different time series periods with different mean exploitation rates were provided and applied to the 3-year moving average swept-area biomass estimate of 7094 mt. Exploitation rates appear low and it has been difficult to justify an appropriate time period for the exploitation rate in past SSC deliberations. The stock is in a rebuilding plan and biomass is decreasing even though catches have been low. The lead analyst suggested basing catch advice on the exploitation rates from recent years for that reason as they most likely reflect the current condition of the stock. The Panel concurs that this is likely the best approach, although 3 time series (2010-2022, 2009-2022 and 1995-2001) all produced exploitation rates between 1.759 and 1.948% leading to a catch between 125 and 138 mt. Most previous comments in past peer reviews or SSC concerns focussed on the time period used and the associated exploitation rate.

Enhanced Reviews

Acadian Redfish

Acadian redfish (*Sebastes fasciatus*) is a species with a long life history that makes them more susceptible to overfishing and slower to recover. The species is a live bearer which complicates our understanding of stock and recruitment relationships. A fishery occurs in deeper water in the center of the Gulf of Maine. Catch remains low with 2023 at 1,813 mt.

Management advice for redfish is based on an 2008 GARM III ASAP model, updated in 2020, and again in this assessment. Mohn's Rho adjusted 2022 F and SSB were within 90% CIs of unadjusted values from the 2023 Base model, and thus no Rho adjustment was applied.

The model estimated Biological Reference Points for Acadian redfish with the Fmsy proxy of 0.037 and SSBMSY 184,322 mt, both values slightly lower than the past assessment. These

values were used in projections, thus for the 2024-2026 Forecast used the FMSY proxy of F50% (0.037). Recruitments drawn from empirical CDF (1969-2020) for projections. Current catch for 2023 is significantly below the FMSY proxy at 0.006, and thus it seems unlikely that catch in the projection time period will exceed the BRP.

The Panel discussed the impact of the lack of age data and performance of the models in relation to the age residuals, noting that during big changes in biomass the model has a hard time estimating values. Comments regarding the appearance of older fish during the recent increase in biomass, and the very unlikely scenario that biomass changes are biologically realistic (e.g. mass die-off of deep water fish), leads to the conclusion that biomass changes more likely result from a population process such as migration (Frisk et al. 2010) than from population dynamic responses. Canadian data are missing in general for the stock, and should be evaluated in future assessments both for potential catch, and for trends in surveys that might support movement among stocks.

Lack of age data in many years is a major source of uncertainty in the assessment. Samples for ageing have been collected for the entire period but many have not been processed. Additional commercial age data for 1986–2016 and for years post 2017 would be likely to decrease uncertainty in the next assessment. Discard estimation is available for Acadian redfish, but age composition is not available and not reflected in the fishery age composition data, which may influence the estimation of selectivity. However, because the amount of discard is relatively small, such impacts are not expected to be large.

Many groundfish stocks in the Northeast US have experienced reduced productivity. This species demonstrates an opposite pattern with an increase in predicted recruitment at the end of the time series. It is unknown if the increasing trends will be sustainable into the future and and/or if this resulted from possible overestimation in the assessment.

Research suggestions

The Panel suggested that temporal variability in weight at age be evaluated.

SSB and recruitment were estimated in the assessment. The Panel suggested exploring possible stock-recruit relationships internal or external to the stock assessment model, but also to consider the way recruitment was modeled with a linear ramp from 0.1 in 1964 to 0.8 in 1969, and then a linear ramp from 0.8 in 2017 to 0.52 in 2019. It is unclear how these CVs play out in the model results and how they would be adapted in more work on the S-R relationship.

The Panel recommended that a genetic study and/or tagging study be conducted to investigate transboundary stock movements, but initial explorations could look for signals in age frequencies or Canadian Survey data.

Given the large change in the ecosystem, the Panel suggested considering moving to WHAM or a state-space model which can accommodate large process errors occurring in the ecosystem and the Panel suggested that static M and age at maturity assumptions in the current stock assessment be evaluated.

Panel conclusions

The Panel concluded that the 2023 assessment update for Acadian redbfish fulfilled the recommendations of the AOP, is technically sufficient to evaluate stock status and provide scientific advice and meets the Terms of Reference for the stock's assessment. Catch was estimated from all sources including landings and discards. Abundance indices were generated, and an ASAP model used including bridge runs to last assessment that used the same modeling framework. Annual fishing mortality, recruitment and stock biomass were estimated, as well as BRP's. The stock is not overfished and overfishing is not occurring. Short-term stock projections were appropriate, recommending 11,041, 10,900, and 10,998 mt in 2024, 2025 and 2026, respectively. Exploitation rates appear low and it appears likely that catch will not achieve the projected catch. Most previous comments in past peer reviews or SSC concerns from the most recent assessment focus on aging and the need for more age data. Additional age data was included in this assessment, and there will be more aging of missing years in the future. A better understanding of how abundance indices are tracking the population (Tor 6) and estimation of a stock-recruit relationship remain as carry over recommendations.

Skate complex

The skate complex was last assessed in the 2008 Data Poor Workshop. This represents the first time the Skate complex has been through a management track assessment process. Seven species of skates form the skate complex: Winter Skate (*Leucoraja ocellata*), Barndoor Skate (*Dipturus laevis*), Thorny Skate (*Amblyraja radiata*), Smooth Skate (*Malacoraja senta*), Little Skate (*Leucoraja erinacea*), Clearnose Skate (*Raja eglanteria*) and Rosette Skate (*Leucoraja garmani*). Winter skate, barndoor skate and thorny skate are all considered large skates over 100 cm in size at maturity, while little skate, clearnose skate, smooth skate, and rosette skate all are under 100cm at maturity. All skate species are found offshore, while winter, thorny, smooth, clearnose and little skates can also be caught inshore. The distributions of the skates are slightly different among species with clearnose and rosette skates confined mainly to the mid-Atlantic.

The assessment used an index-based approach and all the skate species are considered data poor, with the fishing mortality RPs based on the average CV of the survey. The Bmsy proxy is the 75th percentile of the survey through 2022 for 6 species, but is set at the 1963-1966 average biomass for barndoor skate. The ABC calculation uses the Median C/B by species multiplied by the most recent 3-year moving average of the survey, and the MSY calculation is the Median C/B by species multiplied by the Bmsy proxy. The spring survey is used for little skate and the fall survey

Due to challenges of skate identification over time in catches particularly as when skates were pooled as mixed skates, and due to the lack of price difference among the species there is no incentive to collect species-level landings data. Landings were generally not reported by species, with over 99% of the landings reported as "unclassified skates" until the FMP was implemented

in September of 2003. Identification in the observer program has been historically inaccurate but is improving over time. Therefore, a method was developed to assign both landings and discards to species. For landings, the length frequencies from all species were assigned to bait or wing based on a 60 cm split (≤ 60 = bait and ≥ 61 cm = wing). These lengths were used to derive total length frequencies by half year and area (GOM, GB, SNE, and Mid-Atlantic). For discards, the same procedure was applied by gear, half year and area. The proportions at length from the surveys were applied to these length frequencies to derive species composition in number and weight. These calculations were conducted for 1994-2022, the time period when length frequencies were routinely collected by the observer program. An adjustment was made for the possession prohibitions for barndoor skate, thorny skate and smooth skate starting in 2004 and then allowing for barndoor landings starting in 2018. To get the species composition prior to 1994, the biomass by species was applied to the landings and discards by area and half year. This may overestimate landings of smaller species in the wing fishery and smaller species discarded in the longline and gill net fisheries. A January 14th, 2008 Memo to the SSC details the process, summarized here (See Appendix E).

CAMS shows a similar pattern in discards to the past Stock Eff method but deviates by as much as 10% in the same year. For the stock status in the last few years, two-year averages were used since the 2020 spring and fall surveys did not occur. This was 2021-2022 for all species. Since the 2023 spring survey was not considered to be representative for any species, this will be an issue for the next update.

The Panel was concerned over the level of uncertainty in this assessment. There was a sequence of decisions that were necessary to allocate total catch and discards to the species owing to the past mis-identification of species, the use of two mixed skate categories, and the way landings data are collected. These decisions, while acknowledged as needed to produce the assessment and completed by an expert on this stock, likely add compounding errors to the assessment that are not fully captured in the indices CIs. Simulations on key decisions would help to uncover any biases or areas where uncertainties are important. Potential concerns could be improvements in ID of species over time that allocate them to species differently,

The Panel also was concerned about the overfishing definitions used for the stocks, and spent time looking at reference materials to understand the underlying scientific basis (see Appendix E). The use of a strict overfishing definition with the high uncertainty in catch and discards could lead to issues in SSC deliberations and make the setting of specifications challenging.

Overfishing reference points make a strong assumption that these species are controlled by fishing. Looking at survey mean weight per tow there is clear evidence that fishing is not the only driver, could be climate, or geographic shifts, etc. The biomass trends and projections (with potential ABCs) for the skate will remain detached from the stock status of each species.

The Panel also thought that looking at a correlation matrix of all the species indices would help define potential commonalities in response. These analyses should include Canadian data.

There were few estimates of discard mortality available, and those that were suggested that discard mortality is lower than the default 0.5 rate. However, there is also reason to believe that the rates could be quite a lot higher in certain fisheries. Another place where a simulation could be informative to potential biases in the results, particularly for Thorny skate which are a discard only fishery.

Research suggestions

Species ID remains an issue with this stock complex. Determining the best strategy to provide a quick and accurate ID of the species is still needed, and may require an update to the dichotomous key used in Bigelow and Schroeder.

Maturity and age data would help with understanding the SSB and prevalence of age 1 fish, respectively. There are substantial vertebrae available for aging and this data would be useful for future assessments.

Moving to either a stock synthesis or length-based model that provides status information, if even for only little and winter skates, as they are the dominant catch, would improve the assessment and should be considered in future efforts. Length-based models for little skate have been developed previously.

Simulation of the assumptions for splitting stocks and the 0.5 discard mortality rate to see impact on results, and to identify deficiencies and help the SSC better understand the uncertainty and potential biases.

Size morphs in thorny skate should be ID'ed, if important for management (different life histories assumed), using clasper/cloaca measurements at size

Potential interactions with offshore wind infrastructure, particularly as it relates to the behavioral and distributional responses of skates to EMF radiation associated with electricity conduction, should be evaluated.

Panel conclusions

The Panel concluded that the 2023 assessment for the skate complex fulfilled the recommendations of the AOP, and is the Best Scientific Information Available. The Panel believes the Terms of Reference for the stock's assessment were broadly met. Catch was estimated from all sources including landings and discards. An abundance index was generated, broken down to strata and length frequencies provided. Annual fishing mortality, recruitment and stock biomass were not possible to estimate as a result of the assessment method for the time series. The same model was used as the last assessment. BRP's are defined in past development

of the Skate FMP, and these support the low stock status for thorny skate and recent overfishing in little and winter skate. The official overfishing and overfished status for the complex is NA. ABC options were provided based on C/B using commercial and commercial and recreational landings from over 1981-2022 and a shorter time series (1994-2022) and these seem appropriate for SSC deliberations. Another modeling framework could improve this assessment, but age and growth studies are needed.

Spiny dogfish

Atlantic spiny dogfish (*Squalus acanthias*) is a relatively small shark species with sexual dimorphism in growth and size at maturity. Males grow up to 3.3 feet in length and reach sexual maturity at age 6 yr, whereas females grow up to 4 feet and reach sexual maturity at 12 yr. Spiny dogfish reproduce in winter in offshore waters and females birth live offspring. Females produce between two and 12 pups per spawning season that require 18 to 24 months of gestation. The slow life histories demonstrated by spiny dogfish suggests that there are significant lags before recruitment enters the fishery and, combined with broad movements demonstrated in past research (Sulikowski et al. 2010) and high inter-annual variability in the exploitation rate, suggest significant uncertainty about the stock dynamics.

Atlantic spiny dogfish stock assessment presented is an update to the research track assessment completed in 2022, which used 2019 as the terminal year. This assessment added commercial and recreational catch data, survey indices of abundance, and assessment models through 2022, as well as initializing the model starting in 1924 instead of 1989, in order to satisfy the need of the SS3 model to start at an equilibrium point.

The Panel was concerned about the potential decline in size-at-maturity and overall lengths of females affecting offspring fitness. It is unknown whether the smaller size would impact a maternal effect (i.e., quality of offspring declines with spawners' size). While recruitment survival is implicitly estimated by the model and would not be affected by a possible declining pups' survival rates, the estimation of the F 60% SPR may be implicitly affected. More studies may be needed to evaluate the impacts of possible declining size-at-maturity.

Discards, once again, form one of the biggest sources of uncertainty, particularly when extrapolating discards pre-1989, and the 1990s with low trip coverages. The assumptions are more uncertain as we go back in time. A sensitivity was performed assuming discards were 100% higher in the past, which was considered extreme. This led to a higher biomass estimate as we essentially assumed more catch in the past and a greater potential stock productivity. This led to a large concern in using data back to 1924. It is understood that SS3 tends to perform better with an equilibrium population assumption at the beginning of the time series, although the shorter time-series performed very similarly. Using data back to 1924 is considered a better option than starting in 1989, if concerns about an equilibrium starting point are the focus. However, the reverse is true if concerns about discards and accurate catch histories are greater. While the Panel found the similar estimates regardless of data series reassuring, there was an unease

about using the longer data series given the high levels of uncertainty in catch prior to the 1980s.

There are a large number of zero-size bins in the two tails of size composition data, which may greatly increase the weights of size composition data in model fitting. The Panel suggested that a dynamic binning approach be explored to reduce the weighting of zero-size-bin data in modeling.

The choice of likelihood weighting factor, lambda, affects the status determination. Even with increased lambda, the fit to the spring survey was not that great, and this is worrisome to the Panel. Because the decline in spawning output was reasonably captured, the model is capturing some real trends in spawning output. Further, there was good support for the lambda= 6 model in the fit, but also in the treatment of the Albatross and Bigelow time series. However, even the proposed model suggests overfishing has been occurring for all years except 2022. Thus, the Panel has some concerns this stock will re-enter an overfishing point soon. Still, the survey index fit, and catchability estimates agreeing with the empirical estimate suggest the correct lambda was used.

Research suggestions

We encourage more thought about non-equilibrium starting points in the SS3 modeling framework.

Aging is again a major source of uncertainty, in particular because it is likely growth has changed over the past decades.

Panel conclusions

The Panel concluded that the 2023 assessment update for spiny dogfish fulfilled the recommendations of the AOP, is technically sufficient to evaluate stock status and provide scientific advice and meets the Terms of Reference for the stock's assessment. Catch was estimated from all sources including landings and discards. An abundance index was generated, and an SS3 model used including bridge runs to last assessment that used the same modeling framework. Annual fishing mortality, recruitment and stock biomass were estimated, as well as BRP's. The stock is not overfished and overfishing is not occurring. Short-term stock projections were appropriate, recommending 7818, 7956, and 8085 mt in 2024, 2025 and 2026, respectively. Exploitation rates are relatively high ($F=0.025$, at the F_{MSY} Proxy) and it appears likely that catch will achieve the projected values. Most previous comments in past peer reviews or SSC concerns from the most recent assessment focus on aging and the need for more age data.

References

Frisk, MG, Martell, S.D, Miller, TJ and Sosebee, K, 2010. Exploring the population dynamics of winter skate (*Leucoraja ocellata*) in the Georges Bank region using a statistical catch-at-age model incorporating length, migration, and recruitment process errors. Canadian Journal of Fisheries and Aquatic Sciences, 67(5), pp.774-792.

[NEFSC] Northeast Fisheries Science Center. 2020. Final report of red hake stock structure working group. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 20-07; 185 p.
Available from:
<https://www.fisheries.noaa.gov/new-england-mid-atlantic/northeastcenter-reference-document-series>

[NEFSC] Northeast Fisheries Science Center. 2022. Fall Management Track Assessments 2020. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 22-08; 168 p.

Sulikowski, JA, Galuardi B, Bublely W, Furey NB, Driggers WB III, Ingram GW Jr and Tsang PCW, 2010. Use of satellite tags to reveal the movements of spiny dogfish *Squalus acanthias* in the western North Atlantic Ocean. *Marine Ecology Progress Series* 418:249-254.

Appendix A. Summary of Assessment Oversight Panel Meetings for September 2023 Management Track Stock Assessments

The NRCC Assessment Oversight Panel (AOP) met to review the operational stock assessment plans for the skate complex, northern and southern red hake, Acadian redfish, northern and southern windowpane flounder, and northern and southern silver hake/offshore hake stocks on May 22, 2023. Three assessments were recommended for Level 1 Reviews (Direct Delivery) and these assessments will undergo an internal review before being delivered to the appropriate management body. The assessments for stocks/species recommended for Level 2 and 3 peer reviews will be reviewed during a meeting September 18-22, 2023.

The AOP consisted of:

Chris Legault, Ph.D. (AOP Chair), Northeast Fisheries Science Center, Woods Hole, Massachusetts.

Gary Nelson, Ph.D., representing the Atlantic States Marine Fisheries Commission, Massachusetts Division of Marine Fisheries.

Lisa Kerr, Ph.D., Chair of the NEFMC Scientific and Statistical Committee, Gulf of Maine Research Institute.

Paul Rago, Ph.D., Chair of the MAFMC Scientific and Statistical Committee, NOAA Fisheries (retired).

Meeting Details:

These meetings were guided by the NRCC-approved stock assessment guidance documents. Three background documents were provided to the Panel: (1) an updated prospectus for each stock; (2) an overview summary of all the salient data and model information for each stock; and (3) the NRCC Guidance memo on the Operational Assessments. Prior to the meeting, each assessment lead prepared a proposal for their Management Track Assessment. The proposal reflected the research track or most recent assessment results, the peer review panel Summary Report results and any initial investigations conducted for the management track assessment.

At the meeting, each assessment lead gave a presentation on the data to be used, model specifications (if applicable), evaluation of model performance, the process for updating the Biological Reference Points, the basis for catch projections, and an alternate assessment approach if their analytical assessment was rejected by the peer review panel.

Major Recommendations for Review of Individual Stocks:

In general, the AOP approved the plans presented, but recommended several points of emphasis to the recommended review levels as summarized below. AOP guidelines can be found in the [stock assessment process document](#).

Stock	Assessment Lead	Review Level	Rationale and Comments
Skate Complex	Kathy Sosebee	Level 3	Rationale: First time through MT process, species identification issues, add recreational catch, new methods for catch by species, examine new surveys, consider new reference point for thorny skate
Red Hake (North and South)	Toni Chute	Level 2 (both stocks)	Rationale: Fishing does not appear to be driving trends in the population recently, missing 2020 surveys, CAMS catch, swept area biomass survey values same as 2020, stocks trending in different directions, MRIP data has high PSEs
Acadian Redfish	Brian Linton	Level 3	Rationale: Evaluate splitting the Albatross-Bigelow survey time series, reweighting model components, CAMS catch, tow-specific swept-area survey values, aging backlog, explore fishery selectivity changes if enough age data, examine possible change in growth over time
Windowpane Flounder (North and South)	Toni Chute	Level 2 (North) Level 1 (South) - provisional on status change	Rationale: Explore dk ratios over time, CAMS catch, possible incidental mortality in scallop dredge fishery, northern stock in a rebuilding plan, important bycatch in scallop fishery, consider using chainsweep experiment results for southern stock, explore scenarios for deciding years of exploitation rate for northern stock
Silver/Offshore	Jason	Level 1 (both	Rationale: CAMS catch not different,

Stock	Assessment Lead	Review Level	Rationale and Comments
Hake (North and South)	Boucher	stocks)	not overfished not overfishing for both, 2020 surveys as missing, consider time period for reference points (not obvious how to do this), stock ID question would require a research track

Individual Stock Discussion Summaries:

Skate Complex (AOP Lead: Lisa Kerr)

Recommendation: Level 3 (Enhanced Review)

The skate complex is currently assessed using an empirical approach that relies on the NEFSC survey time series. The F_{MSY} proxy is defined as the average CV of the survey and the B_{MSY} proxy is defined as the 75th percentile of the time series for all species but barndoor skate. The barndoor skate B_{MSY} proxy is based on the average of the autumn survey biomass indices from a short period of time (1963-1966). The terminal year F is estimated as the percent change in the three-year moving average of the survey time series. The stocks are declared to be overfished when the three-year moving average of the NMFS trawl survey index (mean weight per tow) is less than one half of the 75th percentile of mean weight per tow of the reference survey series for that species ($B_{threshold}$). Overfishing status is determined if the three-year moving average of the survey biomass index for a skate species declines by more than a critical percentage from the previous year's moving average, then fishing mortality is assumed to be greater than F_{MSY} and overfishing is assumed to be occurring for that skate species.

The level of review suggested for the 2023 skate complex management track assessment was Level 3 and the work plan included several proposed updates and changes to the assessment. All fishery and survey data will be updated through 2022. The analyst will explore adding an additional data source (i.e., recreational data) to the catch time series. In the past, recreational data has been used in catch accounting but not in assessment and is estimated to comprise up to 5% of total catch. Work will be conducted to evaluate the methods for attributing commercial fishery landings and recreational catch of skates by species. Skates are difficult to identify by species, and use of dealer and observer data to characterize the catch by species has been hampered by known data errors. The analyst will explore opportunities to improve the utility of the dealer and observer data streams for allocation to species. For skates that have been managed with a possession prohibition, the analyst will examine the use of fishery compliance assumptions to reduce the landings attributed to these skates and increase landings attributed to other species. The analyst plans to explore the utility of other surveys to inform the skate complex assessment. This will include exploration of the fall NEFSC bottom trawl survey as an additional index for little skate and spring survey for others, MA-DMF spring and fall surveys as additional indices for winter, little, thorny and barndoor skates, the ASMFC shrimp survey as an additional index for thorny and smooth skate, and the NEFSC bottom longline survey as an index for thorny and barndoor skates. The analyst plans to examine the potential difference between landings and discards produced through AA tables and CAMS methods.

The NEFSC bottom trawl surveys were not completed in 2020 due to the pandemic. The analyst will explore whether to treat missing 2020 survey data as missing or to impute a value for 2020. The analyst also noted that they will explore the utility of 2020 survey data from the southern region, which did get some coverage before the survey stopped. The analyst will calculate the ABC based on decisions made on survey time series and approach to dealing with missing 2020 data. The backup assessment for the skate complex is LOESS smoothing of both NEFSC surveys indices to infer future catch change (Ismooth).

This management track assessment will involve substantial changes, including the potential addition of new survey indices. **The AOP agreed with the analyst's suggestion of a Level 3 – Enhanced Review for this stock.**

**Red Hake - North and South (AOP Lead: Paul Rago)
Recommendation: Level 2 (Expedited Review)**

Northern and Southern Red Hake stocks were last updated using an empirical approach in a Level 3 Management Track Assessment (September 2020). Prior to this update, the stocks were evaluated using the AIM approach which relates a measure of population growth rate to the exploitation rate of the stock. The AIM model is rejected when the expected linear relationship is statistically insignificant. Low rates of exploitation and/or imprecise survey estimates can lead to this outcome. In 2020, rejection of AIM led to an alternative model in which actual biomass and exploitation are approximated using experimentally derived estimates of gear efficiency.

Both assessments are based on the same empirical approach wherein annual exploitation is computed as the ratio of total catch divided by an improved estimate of total stock biomass. Total stock biomass is based on the minimum swept-area estimate of biomass from the fall bottom trawl survey in year t and the spring bottom trawl survey in year $t+1$. The average biomass is improved by dividing it by an estimate of catchability experimentally derived from a comparison of standard research fishing gear with a chain sweep (Miller et al. 2020). The true biomass of the population is expected to be higher because the capture efficiency of the chain-sweep trawl is less than one.

The revised empirical model does not provide biological reference points but does rely on an external decision about the relevant period during which the stock appears to have responded to management measures followed by a period of stability. For Northern Red Hake the period of stability was defined as 1981-1994; for Southern Red Hake, the comparable period was 2001-2019. The mean exploitation rate during these intervals is multiplied by the most recent three-year average of biomass to estimate overfishing limits (or ABCs?). The previous AOP report in 2020 noted that the selection of the exploitation period is “not trivial” and “that there was no clear recommendation from the [RTA] reviewers as to the preferred model, but the approach being used seems to follow the advice of the reviewers by and large.”

Estimated exploitation rates were low in both stocks (<1% North, <3% South) in 2019. Despite low catches and low exploitation rates on both stocks since about 2004, the Northern stock has increased markedly in both the spring and fall surveys. In contrast, the Southern red hake stock has remained at relatively low levels. Causes for the lack of response in the Southern stock are

unknown. Climatic effects may be occurring but there is limited evidence of migration or changes in geographic centers of gravity. Moreover, coherence between spring and fall abundance indices remains high in both areas.

Comparisons of landings and discard data under the new CAMS approach with previous estimates using the AA method are ongoing. In view of the low overall rates of exploitation, the transition to CAMS is unlikely to have a major impact on exploitation estimates. A potentially greater effect is the inclusion of recreational catch data from MRIP. These estimates are highly imprecise at the annual level. Decomposition of these data into finer stock areas will increase their uncertainty.

The AOP's recommendation of a Level 2 Management Track Assessment in September 2023 is based on the potential cumulative effect of several ostensibly minor factors. The AOP expressed concerns about treatment of missing survey data in both spring and fall of 2020. Methods that have been used to impute biomass for missing data for other stocks will need to be applied and evaluated for both red hake stocks. The offset of average survey estimates across calendar years and the overall coherence of spring and fall survey data for both stocks should reduce the effects of missing data in 2020. The use of CAMS estimates for commercial catch and MRIP for recreational catch is expected to have a minor impact. Discussions of the differing responses of the stocks to historical exploitation rates should be useful, particularly if such discussions lead to more refined analyses of underlying causes.

Acadian Redfish (AOP Lead: Gary Nelson)
Recommendation: Level 3 (Enhanced Review)

The current assessment methodology for the Acadian Redfish stock is a statistical catch-at-age model (ASAP) in which estimates of recruitment, fishing mortality and abundance are made by using commercial landings (plus discards), NEFSC spring and survey indices, and age information. The current configuration uses an M of 0.05, assumes one fishery fleet, and uses a single fishery selectivity block. The stock was last assessed in 2020 and the status stock determination, after retrospective adjustment of the terminal F and spawning stock biomass, was that overfishing was not occurring and the stock was not overfished.

The proposed plan for the 2023 management track assessment is to update several sources of information. All NEFSC survey indices will be updated and changed to the new tow-specific swept-area measures (the 2020 index will be treated as missing). US commercial landings and discards for 2020-2022 will be updated by using the CAMS approach. Little impact is expected on the landings, but there will be some impact on the discards estimates. Age data will be updated to include current and historical, previously unavailable data. In addition, two primary changes to the current model structure will be made; these include splitting the Albatross-Bigelow spring and fall surveys and readjustment of fishery and survey weights. If deemed necessary, the terminal F and spawning stock biomass will be adjusted for retrospective bias. New reference points will be calculated and projections for 2024-2026 will be made using the same approaches developed in the 2020 assessment. The lead analyst will also explore possible changes in fishery selectivity and growth over time.

Due to the potential for significant impact of the proposed changes on the assessment results, the lead analyst recommended a Level 3 Management Track Assessment; the AOP unanimously concurred.

**Windowpane Flounder - Northern (AOP Lead: Lisa Kerr)
Recommendation: Level 2 (Expedited Review)**

Northern windowpane flounder was last assessed during the September 2020 management track assessment. At that time, the AIM model was rejected for use due to the lack of significance in the relationship between population response and fishing mortality. Northern windowpane is currently assessed using an empirical approach that uses catch/swept area biomass (expanded from fall NEFSC survey) to estimate annual exploitation rate. There were no reference points derived from the estimates of relative exploitation rate. For catch advice setting, several scenarios were considered where the mean relative exploitation rate during a period could be applied to the current biomass estimate for a catch recommendation. It was decided to apply the mean exploitation rate during the period of 2010-2019, the time period when the “no possession” rule was in place, to the final biomass estimate to derive catch. Northern windowpane stock status is overfished as determined by NMFS and the overfishing status is unknown. The back-up assessment plan for this stock is LOESS smoothing of survey index time series to determine slope of trend and adjust catch accordingly (Ismooth).

The analyst suggested a Level 1 review for this stock for the 2023 management track assessment. The analyst proposed to use the same swept-area biomass method with updated Bigelow net efficiency conversion factors for northern windowpane, survey indices, catch and discards through 2022. While there are no proposed changes to the model, two data streams (i.e., NEFSC Trawl Survey and the discarded catch) have changes in how they are calculated, and Covid-19 disruptions resulted in missing surveys and reduced observer and port sampling of catch data in 2020. The NEFSC has adopted swept area biomass calculations of indices and the impact of the adjustment to the NEFSC trawl survey data was reported to be minimal for northern windowpane. Discards from 2019-2022 will be estimated using the CAMS method and the difference between AA tables and CAMs estimates should be examined for this stock (i.e., 2019 comparison between AA and CAMs method). The analyst proposed to impute a value for the 2020 missing trawl survey using a mean of 2019 and 2021 survey indices will be used to replace the missing 2020 survey value.

The AOP suggested that a Level 2 review be conducted for this stock. A Level 2 is required when: 1) evaluating effects of delayed seasonal surveys or missing strata on fishery independent measures of abundance if significant analysis is required to characterize the effects, and 2) recalibrated catch estimates (e.g., CAMs). Furthermore, the AOP suggested additional analyses be pursued in this management track assessment. The analyst was asked to evaluate any potential sources of incidental mortality or additional removals from the population that could be characterized to improve the assessment (e.g., overages in limits in scallop fishery). Furthermore, the analyst was asked to examine whether there are any trends in catch rates as estimated in the D/K indices over time that may provide additional information on the trend in relative abundance for this stock. The analyst was also asked to look at a recent publication on survey efficiency to evaluate whether this information should be used to adjust survey-based biomass estimates for this stock (Miller et al. 2023). Finally, any further insight from the analyst on the appropriate

time period to use in deriving mean exploration rate as an Fmsy proxy or comment on the prior time series used would be helpful in catch advice setting.

This stock is of particular concern as northern windowpane is overfished and in a rebuilding plan. Although northern windowpane is a no possession species, it is caught as bycatch in the groundfish and scallop fisheries and accountability measures are in place. It was noted that there have been overages in catch in the scallop fishery in recent years and accountability measures for scallop fishery triggered the past two years.

Windowpane Flounder - Southern (AOP Lead: Lisa Kerr)
Recommendation: Level 1 (Direct Delivery)

Southern windowpane was last assessed in the September 2020 management track using AIM (An Index Model). Southern windowpane is not overfished and overfishing is not occurring. Reference points (Fmsy, Bmsy proxies) are estimated for this stock but short-term projections are not conducted.

The 2023 management track assessment for this stock will run the AIM model, adding fall bottom trawl survey indices, landings and discard estimates from 2020-2022. Similar to other assessments, this assessment will need to deal with missing 2020 survey data. The analyst proposed using the mean of the 2019 and 2021 fall bottom trawl survey indices as a replacement for the 2020 value. The discards from 2019 to 2022 will be estimated using the CAMS method. The analyst should confirm that there are minimal differences between AA tables and CAMS methods of estimation. The alternative assessment plan is an empirical approach where relative exploitation rates for the time series are calculated using catch/swept-area biomass. In this case, an Fmsy proxy can be derived using the mean of the same series of years as the AIM model uses, or any other time series. Alternatively, LOESS smoothing of survey index time series to determine slope of trend and adjust catch accordingly (Ismooth) could be used.

The analyst suggested a Level 1 review for this stock for the 2023 management track assessment. There are no changes proposed to the assessment methods. The management track will focus on updating the assessment model with three years of new data. **The AOP agreed with the Level 1 review for this stock but noted that the level of review should be upgraded if any unexpected issues arise or there is a change in stock status.**

Silver Hake - North (AOP Lead: Gary Nelson)
Recommendation: Level 1 (Direct Delivery)

The current assessment methodology for the Northern Silver Hake stock is an empirical approach in which annual exploitation rates are developed from a 3-year moving-average of the NEFSC autumn survey index and catch. Reference points, overfishing and biomass thresholds, are available and are based on a reviewed approach from the 2010 benchmark assessment. The assessment was last updated in 2020. The 2020 stock status determination was that the Northern stock was not overfished and overfishing was not occurring.

The proposed plan for the 2023 management track assessment is to update US commercial landings and discards through 2022 using the CAMS approach instead of AA methodology; little

impact is expected with the switch to the CAMS approach. In addition, the NEFSC autumn trawl survey indices will be updated through 2022. The 2020 fall survey was not conducted due to COVID restrictions; therefore, the 2020 survey index value will be treated as missing and only a two-year moving average will be used to calculate relative exploitation rates where applicable. All biological reference points will remain the same. Projections will not be performed due to the limitations of the empirical approach.

The AOP concurred unanimously with the lead assessment scientist's determination that the update plan reflects a Level 1 Management Track Assessment. However, the AOP members did express concern that the reference points may be outdated and should be re-examined in the future.

Silver Hake/Offshore Hake - South (AOP Lead: Gary Nelson)
Recommendation: Level 1 (Direct Delivery)

The current assessment methodology for the Southern Silver Hake stock is an empirical approach in which annual exploitation rates are developed from a 3-year moving-average of the NEFSC autumn survey index and catch. Reference points, overfishing and biomass thresholds, are available and are based on a reviewed approach from the 2010 benchmark assessment. The assessment was last updated in 2020. The 2020 stock status determination was that the southern stock was not overfished and overfishing was not occurring.

The proposed plan for the 2023 management track assessment is to update US commercial landings and discards through 2022 using the CAMS approach instead of AA methodology; little impact is expected with the switch to the CAMS approach. The NEFSC autumn trawl survey indices will be updated through 2022 as well. The 2020 fall survey was not conducted due to COVID restrictions; therefore, the 2020 survey index value will be treated as missing and only a two-year moving average will be used to calculate relative exploitation rates where applicable. Because commercial landings of Silver Hake are mixed with landings of Offshore Hake, species composition data from the updated surveys will be used to partition landings into species contributions. All biological reference points will remain the same. Projections will not be performed due to the limitations of the empirical approach.

The AOP concurred unanimously with the lead assessment scientist's determination that the update plan reflects a Level 1 Management Track Assessment. However, as with the Northern Silver Hake stock, the AOP members did express concern that the reference points may be outdated and should be re-examined in the future.

AOP Meeting Conclusions:

The AOP met on May 22, 2023 to review the stock assessment plans for 8 stocks scheduled for the September 2023 Management Track cycle. The panel concluded that a Level 1 review (Direct Delivery) was warranted for northern and southern silver hake and southern windowpane flounder; Level 2 reviews (Expedited Review) for northern and southern red hake and northern windowpane flounder; and Level 3 review (Enhanced Review) for the skate complex and Acadian redfish. The Level 2 and 3 reviews will occur during the September 2023 Management Track Peer Review scheduled for September 18-22, 2023. Spiny dogfish will be reviewed at this

meeting, based on the recommendation from the NRCC. Changes in the required review level would be triggered by a Northeast Fisheries Science Center request to increase the review level for a given stock. The AOP could concur to increase the review level via email or request to reconvene the AOP panel to have further discussions with the stock assessment lead. In the case of southern windowpane flounder, if there is a status change, the AOP agreed to raise the review level to Level 2 (Expedited Review) via correspondence. Any need to reconvene the panel would be a publicly announced meeting and any subsequent changes to the review level would be publicized to assessment partners and stakeholders.

Appendix 1. Assessment Oversight Panel Meeting participants (names only, no call-in numbers).

Chris Legault, AOP Chair (NEFSC)
Paul Rago, AOP (MAFMC)
Gary Nelson, AOP (ASMFC)
Lisa Kerr, AOP (NEFMC)
Michele Traver - NEFSC

Alex Dunn - NEFSC
Alex Hansell - NEFSC
Andrew Applegate - NEFMC Staff
Andrew Jones - NEFSC
Angela Forristall - NEFMC Staff
Ben Levy - NEFSC
Brian Linton - NEFSC
Charles Adams - NEFSC
Connor Buckley - NEFMC Staff
Dave McCarron - NEMFC Staff
Emily Bodell - NEFMC Staff
Jacqueline O'Dell - Northeast Fisheries Coalition
Jamie Cournane - NEFMC Staff
Jason Boucher - NEFSC
Jon Deroba - NEFSC
Julie Nieland - NEFSC
Kathy Sosebee - NEFSC
Kelly Whitmore - MA DMF
Kristan Blackhart - NEFSC
Leona Burgess - NEFSC
Libby Etrie - NEFMC Member
Mark Alexander - NEFMC Member
Melanie Griffin - MA DMF
Paul Nitschke - NEFSC
Rachel Feeney - NEFMC Staff
Robin Frede - NEFMC Staff
Sefatia Romeo Theken - Deputy Commissioner for MA Fisheries and Game
Scott Olszewski - NEFMC Member
Shannah Jaburek - GARFO
Susan Wigley - NEFSC
Tim Miller - NEFSC
Toni Chute - NEFSC
Tony Wood - NEFSC

Key:

ASMFC - Atlantic States Marine Fisheries Council
GARFO - Greater Atlantic Regional Fisheries Office

MADMF - Massachusetts Division of Marine Fisheries
MAFMC - Mid-Atlantic Fisheries Management Council
NEFMC - New England Fisheries Management Council
NEFSC - Northeast Fisheries Science Center

Appendix B. Management Track Stock Assessment Terms of Reference

1. Estimate catch from all sources including landings and discards.
2. Evaluate indices used in the assessment (e.g., indices of relative or absolute abundance, recruitment, state surveys, age-length data, etc.).
3. Estimate annual fishing mortality, recruitment and stock biomass (both total and spawning stock) as possible (depending on the assessment method) for the time series using the approved assessment method and estimate their uncertainty. Include retrospective analyses if possible (both historical and within-model) to allow a comparison with previous assessment results and projections, and to examine model fit.
 - a. Include bridge runs to sequentially document each change from the previously accepted model to the updated model proposed for this peer review.
 - b. Prepare a backup assessment approach that would serve as an alternative for providing scientific advice to management if the analytical assessment were to not pass review
4. Re-estimate or update the BRP's as defined by the management track level and recommend stock status. Also, provide qualitative descriptions of stock status based on simple indicators/metrics (e.g., age- and size-structure, temporal trends in population size or recruitment indices, etc.).
5. Conduct short-term stock projections when appropriate.
6. Respond to any review panel comments or SSC concerns from the most recent prior research or management track assessment.

* Major changes from the previous stock assessment require pre-approval by the Assessment Oversight Panel.

Appendix C. September 2023 Management Track Peer Review meeting attendees.

GARFO - Greater Atlantic Regional Fisheries Office
MA DMF - Massachusetts Division of Marine Fisheries
MAFMC - Mid-Atlantic Fisheries Management Council
NEFMC - New England Fisheries Management Council
NEFSC - Northeast Fisheries Science Center
NC DMF - North Carolina Division of Marine Fisheries
RI DEM - Rhode Island Department of Environmental Management
SMASST - University of Massachusetts School of Marine Science and Technology
UMASS - University of Massachusetts

Adrian Jordaan - Chair
Yong Chen - Panel
Tom Miller - Panel

Russ Brown - NEFSC
Michele Traver - NEFSC

Alan Bianchi - North Carolina DMF
Alex Dunn - NEFSC
Alex Hansell - NEFSC
Amanda Hart - NEFSC
Andrew Minkiewicz - Kelley Drye & Warren LLP
Andy Applegate - NEFMC Staff
Andy Jones - NEFSC
Angela Forristall - NEFMC Staff
Brian Linton - NEFSC
Cami McCandless - NEFSC
Cate O'Keefe - NEFMC Executive Director
Charles Adams - NEFSC
Charles Perretti - NEFSC
Chris Legault - NEFSC
Connor Buckley - NEFMC Staff
Conor Mcmanus - RI DEM
Cynthia Ferrio - GARFO
Dave McElroy - NEFSC
David McCarron - NEFMC Staff
Dvora Hart - NEFSC

Emily Bodell - NEFMC Staff
Greg Ardini - NEFSC
Greg DiDomenico - Lund's Fisheries
Jacqueline O'Dell - Northeast Seafood Coalition
James Fletcher - United Commercial Fishermen's Association/industry
Jason Boucher - NEFSC
Jason Didden - MAFMC
Jeff Kaelin - Lund's Fisheries
Jeff Kneebone - MA DMF
Jessica Blaylock - NEFSC
John Whiteside - Whiteside Law
Jon Deroba - NEFSC
Jui-Han Chang - NEFSC
Julie Nieland - NEFSC
Kathy Sosebee - NEFSC
Kelly Whitmore - MA DMF
Kiersten Curti - NEFSC
Larry Alade - NEFSC
Libby Etrie - NEFMC member
Lindsey Nelson - NEFSC
Liz Sullivan - GARFO
Louis Forristall - GARFO
Mark Grant - GARFO
Mark Alexander - NEFMC member
Mark Terceiro - NEFSC
Melanie Griffin - MA DMF
Michelle Passerotti - NEFSC
Nichola Meserve - MA DMF
Paul Nitschke - NEFSC
Rachel Feeney - NEFMC Staff
Robin Frede - NEFMC Staff
Scott Olszewski - RI DEM
Sefatia Romeo Theken - Deputy Commissioner for MA Fisheries and Game
Steve Cadrin - SMAST
Susan Wigley - NEFSC
Tara Trinko Lake - NEFSC
Tobey Curtis - NOAA Office of Sustainable Fisheries
Toni Chute - NEFSC

Appendix D. Realized Agenda for September 2023 Management Track peer review.

**September Management Track Peer Review Meeting
September 18-20, 2023**

Google Meet joining info: <https://meet.google.com/qza-zvku-oig>

Or dial: (US) +1 252-987-4102 PIN: 732 891 507#

AGENDA (v. 9/15/2023)

**All times are approximate, and may be changed at the discretion of the Peer Review Panel chair. The meeting is open to the public; however, during the Report Writing sessions we ask that the public refrain from engaging in discussion with the Peer Review Panel.*

Monday, September 18, 2023

<u>Time</u>	<u>Subject</u>	<u>Presenter</u>
9:00 a.m. - 9:15 a.m.	Welcome/Logistics/Conduct of Meeting	Michele Traver, Russ Brown, Adrian Jordaan, Chair
9:15 a.m. - 10:15 a.m.	Red Hake (North and South) Discussion/Questions	Toni Chute Panel
10:15 a.m. - 10:30 a.m.	Break	
10:30 a.m. - 11:30 a.m.	Red Hake (North and South) cont. Discussion/Questions	Toni Chute Panel
11:30 a.m. - 11:45 a.m.	Morning Wrap Up Summary/Discussion	Panel
11:45 a.m. - 12:00 p.m.	Public Comment	Public
12:00 p.m. - 1:00 p.m.	Lunch	
1:00 p.m. - 2:00 p.m.	Acadian Redfish Discussion/Questions	Brian Linton Panel
2:00 p.m. - 3:00 p.m.	Break	
3:00 p.m. - 4:30 p.m.	Acadian Redfish cont. Discussion/Questions	Brian Linton Panel
4:30 p.m. - 4:45 p.m.	Afternoon Wrap Up Summary/Discussion	Panel

<u>Time</u>	<u>Subject</u>	<u>Presenter</u>
4:45 p.m. - 5:00 p.m.	Public Comment	Public
5:00 p.m.	Adjourn	

Tuesday, September 19, 2023

<u>Time</u>	<u>Subject</u>	<u>Presenter</u>
9:00 a.m. - 9:05 a.m.	Welcome/Logistics	Michele Traver Adrian Jordaan, Chair
9:05 a.m. - 10:30 a.m.	Skate Complex Discussion/Questions	Kathy Sosebee Panel
10:30 a.m. - 10:45 a.m.	Break	
10:45 a.m. - 12:00 p.m.	Skate Complex cont. Discussion/Questions	Kathy Sosebee Panel
12:00 p.m. - 12:15 p.m.	Morning Wrap Up Summary/Discussion	Panel
12:15 p.m. - 12:30 p.m.	Public Comment	Public
12:30 p.m. - 1:30 p.m.	Lunch	
1:30 p.m. - 3:30 p.m.	Atlantic Mackerel Discussion/Questions	Kiersten Curti Panel
3:30 p.m. - 3:45 p.m.	Break	
3:45 p.m. - 5:00 p.m.	Northern Windowpane Flounder Discussion/Questions	Toni Chute Panel
5:00 p.m. - 5:15 p.m.	Afternoon Wrap Up Summary/Discussion	Panel
5:15 p.m. - 5:30 p.m.	Public Comment	Public
5:30 p.m.	Adjourn	

Wednesday, September 20, 2023

<u>Time</u>	<u>Subject</u>	<u>Presenter</u>
9:00 a.m. - 9:05 a.m.	Welcome/Logistics	Michele Traver

<u>Time</u>	<u>Subject</u>	<u>Presenter</u>
		Adrian Jordaan, Chair
9:05 a.m. - 12:00 p.m.	Spiny Dogfish Discussion/Questions	Dvora Hart Panel
12:00 p.m. - 12:15 p.m.	Morning Wrap Up Summary/Discussion	Panel
12:15 p.m. - 12:30 p.m.	Public Comment	Public
12:30 p.m. - 1:30 p.m.	Lunch	
1:30 p.m. - 4:30 p.m.	Report Writing	Panel
4:30 p.m.	Adjourn	

Appendix E. 2008 SSC Memo.

draft working paper for peer review only



Atlantic Spiny Dogfish

2023 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 09-05-2023

This assessment of the Atlantic Spiny Dogfish (*Squalus acanthias*) stock is an update of the research track assessment completed in 2022, which used 2019 as the terminal year. This assessment updates commercial and recreational fishery catch data, research survey indices of abundance, and the analytical assessment models through 2022. Additionally, the initial year for this assessment is 1924 compared to 1989 for the research track assessment, and stock projections have been updated through 2026

State of Stock: Based on this updated assessment, the Atlantic Spiny Dogfish (*Squalus acanthias*) stock is not overfished and overfishing is not occurring (Figures 1-2). Retrospective adjustments were not made to the model results. Spawning Output in 2022 was estimated to be 190.8 (million pups) which is 101% of its target (SSB_{MSY} proxy = 188; Figure 1). The 2022 fully selected fishing mortality was estimated to be 0.02 which is 81% of the overfishing threshold proxy (F_{MSY} proxy = 0.0246; Figure 2).

Table 1: Catch and status table for Atlantic Spiny Dogfish. All weights are in (mt) recruitment is in (million pups) and F_{Full} is the fishing mortality on fully selected ages. Model results are from the current SS3 model with lambda=6.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	<i>Data</i>									
Commercial landings	7,373	10,734	8,687	12,158	8,789	6,923	7,947	8,828	4,780	4,969
Recreational landings	219	120	67	205	141	51	56	101	215	19
Commercial discards	10,226	10,368	6,803	7,078	6,609	5,402	6,964	7,422	5,955	3,884
Recreational discards	5,685	13,327	2,698	4,277	2,032	2,038	3,798	1,815	3,524	1,965
Catch for Assessment	13,222	18,242	12,350	16,289	12,403	9,854	12,059	12,683	8,490	7,122
	<i>Model Results</i>									
Spawning Output	311.4	283.3	253.8	233.5	212.6	200	193.6	188.9	186.6	190.8
F_{Full}	0.03	0.046	0.033	0.044	0.038	0.031	0.042	0.042	0.027	0.02
Recruits	81.8	230.7	70.4	99.5	104.1	78.3	193.5	189.3	186.6	136.2

Table 2: Comparison of reference points estimated in the research track assessment and from the current assessment update. A 60% SPR proxy was used for the overfishing threshold.

	2019	2023
F_{MSY} proxy	0.025	0.025
SSB_{MSY} (million pups)	371	188 (148- 227)
MSY (mt)	N/C	7134 (5631 - 8636)
Recruits (million pups)	N/C	109.9
<i>Overfishing</i>	Yes	No
<i>Overfished</i>	No	No

Projections: Short term projections of biomass were obtained using the SS3 forecast module.

Table 3: Short term projections of total fishery catch and spawning output for Atlantic Spiny Dogfish based on a harvest scenario of fishing at F_{MSY} proxy between 2024 and 2026. The catch in 2023, 7,751 (mt) is the 2023 ACL/ACT

Year	Catch (mt)	SSB (million pups)	F_{Full}
2023	7751	196.9 (167.6 - 226.3)	0.025
2024	7818	202.8 (171.9 - 233.7)	0.025
2025	7956	208.3 (177 - 239.6)	0.025
2026	8085	212.5 (180.9 - 244)	0.025

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 lack of age and growth data induces considerable uncertainty, particularly when there is evidence that the growth parameters have changed over time. Spiny dogfish discards are uncertain, and are highly uncertain for the period before observer data was available as well as during the first years with observer data due to low sample sizes. Additionally, there is uncertainty in the assumed discard mortality rates. Results also depend on the value of weighting of the survey index (lambda), which also causes substantial uncertainty.

- 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}).

This assessment had only a minor retrospective pattern. No retrospective adjustment of spawning output or fishing mortality in 2022 was 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 Atlantic Spiny Dogfish, are reasonably well determined particularly because of the longevity and slow growth of this stock. This stock is not in a rebuilding plan.

- 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 data weighting for the survey index was increased to lambda = 6. This both induced a better fit to the survey data and also allowed the model to match the Albatross/Bigelow calibration at large sizes.

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

The overfishing status of Atlantic Spiny Dogfish changed because of reduced catches in 2022 compared to the previous terminal year of 2019. This caused F to be below the overfishing threshold in 2022. Overfishing was occurring in 2019 in both the previous and current models.

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

Female Atlantic Spiny Dogfish have a truncated size structure, with large females being a much smaller percentage of the population than was observed historically. Although overfishing was not occurring in 2022, it was occurring during every year from 2012-2021. Because the ACL/ACT for 2023 was above the SS3 estimated OFL for that year, and projected discards are likely underestimated, it is probable that overfishing is occurring in 2023 as well.

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

The Atlantic Spiny Dogfish assessment could be improved with age and growth data, as well as more studies regarding discard mortality.

- Are there other important issues?

References:

Chang, J-H., Sosebee, K., Hart, D.R. 2023. Stock Synthesis For Atlantic Spiny Dogfish. Appendix to this report.

Spiny Dogfish Research Track Working Group. Research Track Assessment of Northwest Atlantic Spiny Dogfish. NEFSC Center Reference Document, in press.

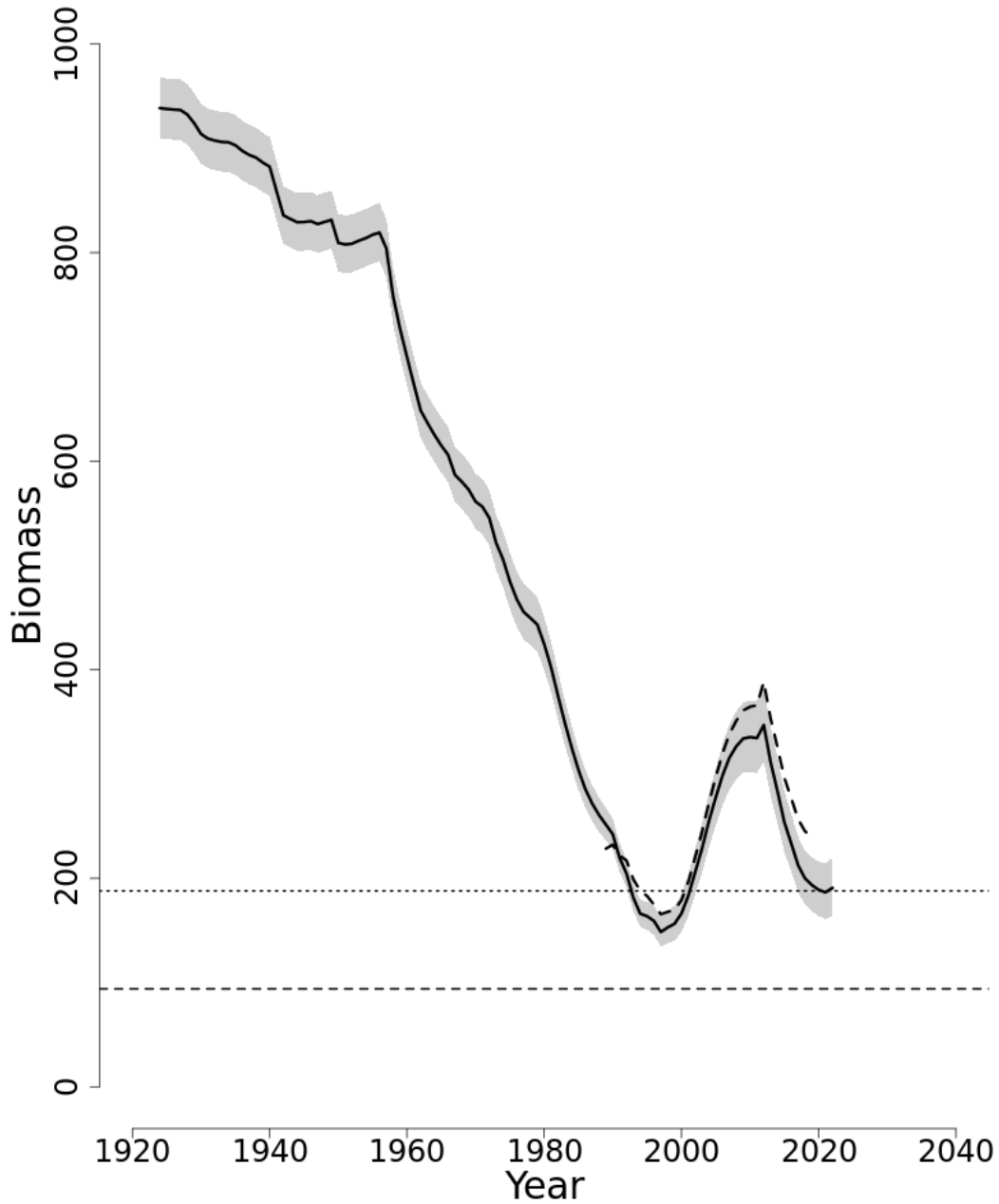


Figure 1: Trends in spawning output of Atlantic Spiny Dogfish between 1924 and 2022 from the current (solid line) and previous (dashed line) assessment and the corresponding $SSB_{Threshold}$ ($\frac{1}{2} SSB_{MSY}$ proxy; horizontal dashed line) as well as SSB_{Target} (SSB_{MSY} proxy; horizontal dotted line) based on the 2023 assessment. The approximate 95% gamma confidence intervals are shown.

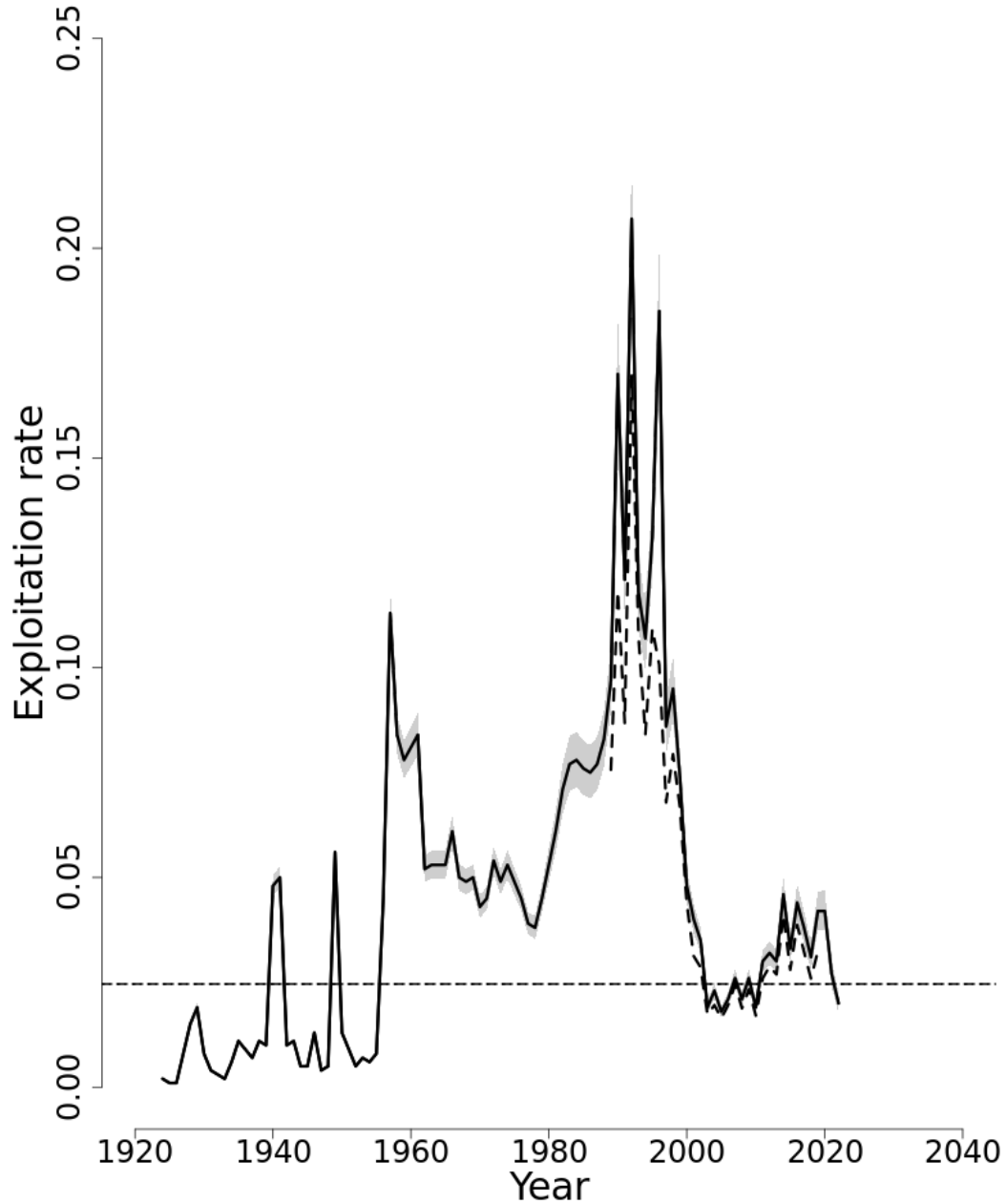


Figure 2: Trends in the fully selected fishing mortality (F_{Full}) of Atlantic Spiny Dogfish between 1924 and 2022 from the current (solid line) and previous (dashed line) assessment and the corresponding $F_{Threshold}$ (F_{MSY} proxy=0.0246; horizontal dashed line). based on the 2023 assessment. The approximate 95% gamma confidence intervals are shown.

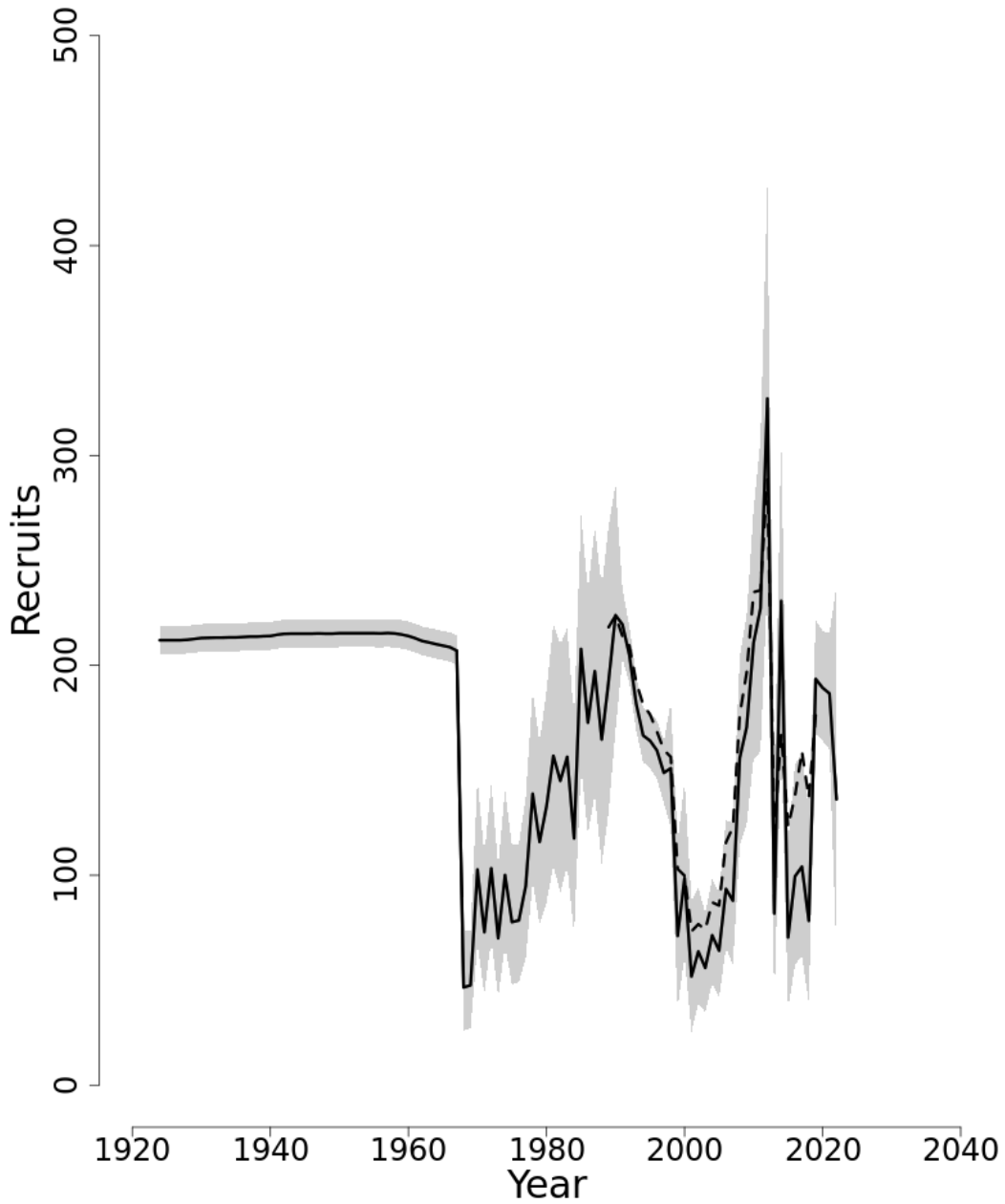


Figure 3: Trends in Recruits (million pups) of Atlantic Spiny Dogfish between 1924 and 2022 from the current (solid line) and previous (dashed line) assessment. The approximate 95% gamma confidence intervals are shown.

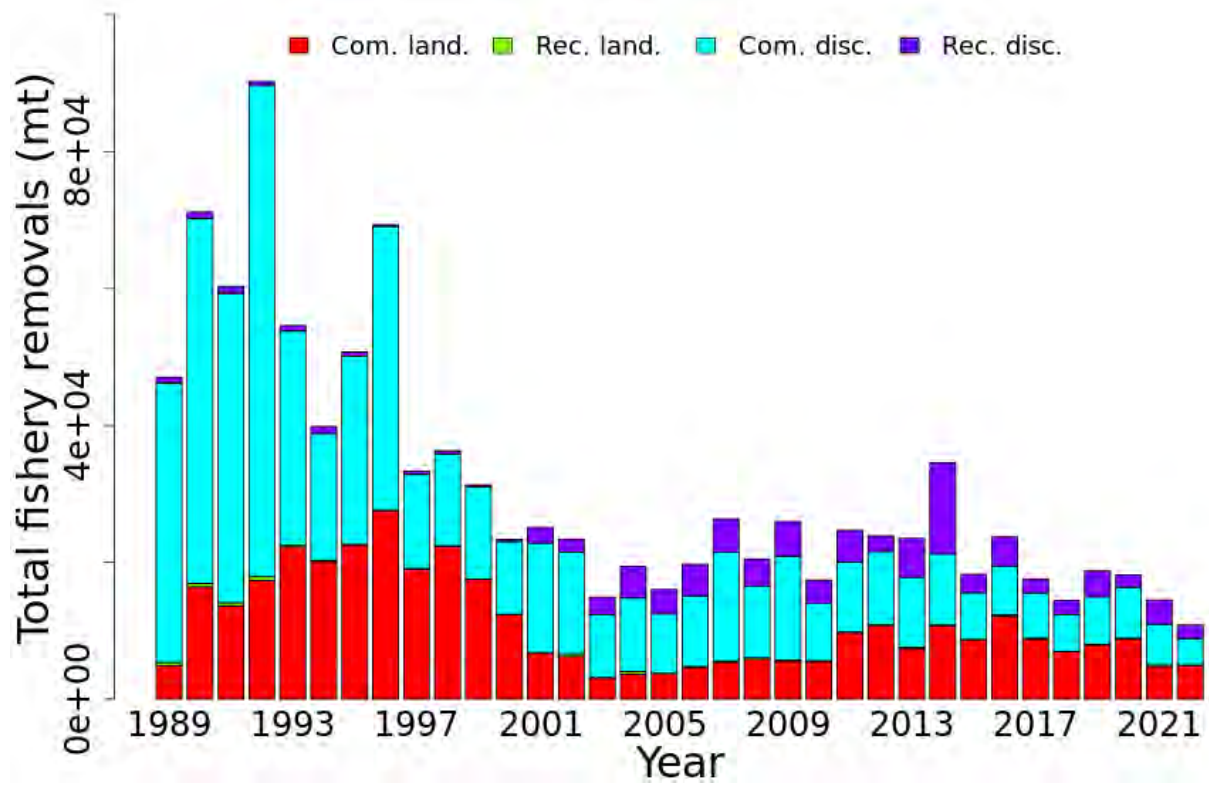


Figure 4: Total catch of Atlantic Spiny Dogfish between 1989 and 2022 by fleet (commercial, recreational, or Canadian) and disposition (landings and discards).

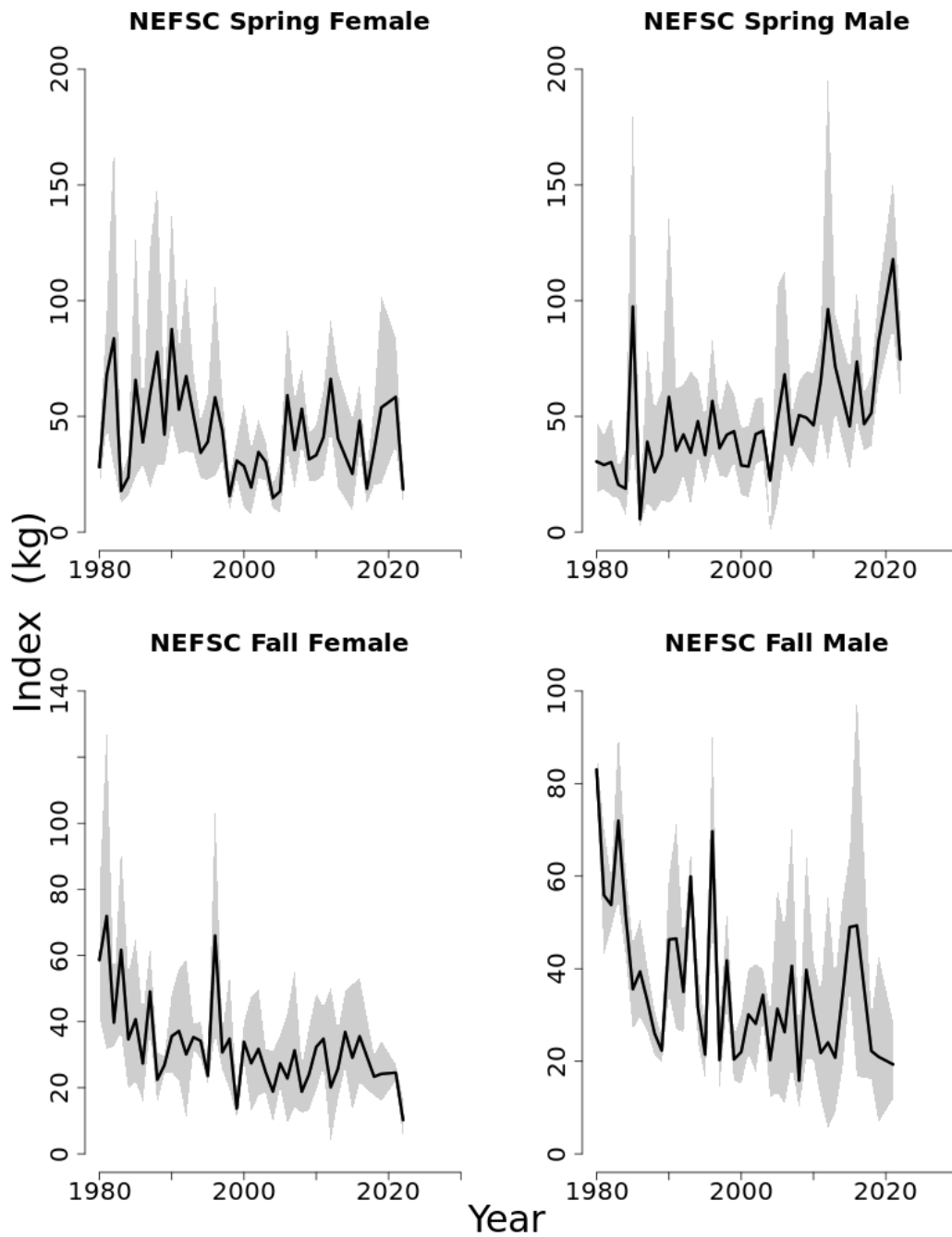


Figure 5: Indices of biomass for the Atlantic Spiny Dogfish between 1980 and 2022 for the Northeast Fisheries Science Center (NEFSC) spring and fall bottom trawl surveys; Females on the left, males on the right. The approximate 95% gamma confidence intervals are shown.

Stock Synthesis For Atlantic Spiny Dogfish

Jui-Han Chang^{*1}, Katherine A. Sosebee¹, and Deborah R. Hart¹

¹Northeast Fisheries Science Center, NMFS/NOAA
^{*}jui-han.chang@noaa.gov

September 2, 2023

Contents

1	Introduction	2
2	Model Configuration	2
2.1	Model Starting/Ending Year	2
2.2	Catch and Survey Data	2
2.3	Time Blocks for Biology, Survey, and Fishery	3
2.4	Prior for Selectivity Parameters	3
2.5	Likelihood Weights for Survey Indices	4
2.6	Spawner-Recruitment Relationship Parameters	4
3	Model Results	4
3.1	Convergence	4
3.2	Overall Goodness of Fit	4
3.3	Growth	5
3.4	Abundance Index	5
3.5	Selectivity	5
3.6	Length Composition	5
3.7	Recruitment	5
3.8	Total Biomass, Spawning Output, and Fishing Mortality	6
4	Sensitivity Analysis	6
4.1	1989-2022 Research Track Model	6
4.2	Fishery Block	6
4.3	Likelihood Weights	6
5	Retrospective Analysis	7
6	References	7

1 Introduction

A sex-specific stock assessment model was constructed and implemented in Stock Synthesis version 3.30.21 (SS3; Methot and Wetzel 2013) for the 2023 Atlantic spiny dogfish management track assessment. This is an update of the SS3 model used during the 2022 spiny dogfish research track that is documented in NEFSC (2022). Updates on model configurations for this assessment are listed and discussed below:

- Model starting/ending year,
- Catch and survey data,
- Time blocks for biology, survey, and fishery
- Priors for selectivity parameters
- Likelihood weights for survey indices, and
- Spawner-recruitment relationship parameters.

2 Model Configuration

2.1 Model Starting/Ending Year

For the 2022 research track assessment, the SS3 model runs started in 1989, the first year quantitative discards information was available from the observer data. For this assessment, the model runs started in 1924, assuming the population was unfished before 1924. Despite the uncertainties in earlier years' catch, starting the model around the onset of the fishery is a more realistic model configuration than starting the model in 1989 with the assumption that the catch level was maintained at an initial equilibrium catch annually for 100+ years (R. Methot, NOAA Fisheries, personal communication). The terminal year for the SS3 runs is 2022 for the 2023 management track assessment. An SS3 run starting from 1989 using the 2022 research track assessment model was conducted in the sensitivity analysis.

2.2 Catch and Survey Data

Commercial catch time series data by gear were obtained from two sources: the research document from Fowler and Campana (2015) for landings from 1924 to 1961 (which was in turn based on Jensen et al. 1961) and discards from 1924 to 1988, and the Northeast Fisheries Science Center (NEFSC) database for later years. Sex-specific length composition data for catch by gear were obtained from the NEFSC database, and are available for landings from 1982 to 2022 and discards from 1989 to 2022. Like the 2022 research track assessment, the commercial data by gear were aggregated into five modeling fleets (two landings fleets and three discard fleets; Table 1 and Figures 1-2).

NEFSC spring bottom trawl survey data were used as the abundance index for the SS3 modeling. The survey index and sex-specific length composition data used in the 2022

research track assessment (offshore strata: 1-30, 34, 36-40, 61-76; inshore strata: 2, 5, 8, 11, 14, 17, 20, 23, 26, 29, 32, 35, 38, 41, 44-46, 56, 59-61, 64-66) were extended to 1982-2022 (besides 2014 and 2020 when data was not available). Following the research track assessment, survey selectivity time blocks were implemented to estimate different selectivities for the two different research vessels conducting the survey: RV *Albatross IV* (1982-2008) and FRV *Henry B. Bigelow* (2009-2022).

Additional NEFSC spring bottom trawl survey data from 1968 to 1981, which only covered the offshore strata (1-30, 34, 36-40, 61-76), were included in this assessment. The offshore strata surveyed in 1968-1981 is around half of the area size of the inshore+offshore strata surveyed in 1982-2022. The additional survey data were separated into two time series and modeled as different “fleets” in SS3 based on changes in the survey gear: Yankee 36 trawl net was used in 1968-1972, and Yankee 41 trawl net was used in 1973-1981 (Table 1). Sex-specific length composition data were available for all years except for 1973-1979, where only the unsexed data were available.

2.3 Time Blocks for Biology, Survey, and Fishery

Consistent with the 2022 research track assessment, survey time blocks (mentioned above), as well as biology time blocks, were used for this assessment. The time series was split into two biology time blocks with different growth, fecundity, and maturity for the years prior to 2012, and for 2012 and afterward.

New time blocks of selectivity for the landings fleets were introduced for this assessment. The 2022 research track assessment model showed some systematic poor fit to the landings’ length composition data for large females in 1989-1993 (NEFSC 2022). Preliminary model runs for this assessment showed that the systematic poor fit persisted and extended to 1982 due to the sharp drop in proportions of large females for the landings fleets during the 1990s (Figure 3). Similar but less clear reductions were also observed for large males (Figure 4). Therefore, a time block of 1994-2022 (referred to as fishery block) on the peak value selectivity parameter (first size at maximum selectivity) for both sexes was implemented for this assessment to account for the shift in the length compositions for the two landings fleets. A sensitivity run was conducted to examine the fishery block assumption.

2.4 Prior for Selectivity Parameters

For this assessment, instead of non-informative priors, double normal selectivity parameters for all fleets utilize a diffuse symmetric beta prior (standard deviation = 0.05, scaled between parameter bounds) to impose a larger penalty near the parameter bounds. The diffuse symmetric beta prior provided only weak information about the parameters and helped the correlated selectivity parameters to avoid crashing into the bounds (Methot et al. 2021).

2.5 Likelihood Weights for Survey Indices

Preliminary model runs showed that the survey indices were not fitting well, similar to the 2022 research track model results. In order to fit the survey indices better, different likelihood weights (λ) for the three survey indices were explored during this assessment. Increasing λ changed the scale of the population and the female sex ratio of the estimated population by changing the survey catchability q and apical survey selectivity for females relative to males. $\lambda = 6$ was selected for this assessment so that the apical survey selectivity for females for the *Albatross* period is the same as the *Bigelow* period. This is a reasonable assumption, considering the substantial calibration data between these two vessels, and that the survey domain of the two periods is similar. The comparisons of model results with different λ for the survey indices are in the sensitivity analysis section.

2.6 Spawner-Recruitment Relationship Parameters

The survivorship spawner-recruitment (SR) parameters were updated based on a profile analysis and fixed at $Z_{frac} = 0.8$, $\beta = 1$, and $\sigma_R = 0.6$ (standard deviation of log recruitment deviations) for the final model for this assessment. Figure 5 compared the SR relationships from this assessment to that of the 2022 research track assessment.

3 Model Results

3.1 Convergence

The base case model converged (gradient 9.7×10^{-5}), and the Hessian matrix was positive definite. All parameters were estimated within their bounds, correlations between parameters were low (< 0.95), and all parameters were informative (correlation > 0.01).

3.2 Overall Goodness of Fit

The overall model fit to the abundance index and length composition data was evaluated using joint-index residual plots from the fit to the index data and the mean length of the length composition data (Carvalho et al. 2021). The residual plot for the three NEFSC spring bottom trawl survey indices showed a mild positive residual pattern around the end of the time series, with RMSE = 39.4% (Figure 6). The residual plot for the mean length of length composition data showed a good fit with RMSE = 8.7%. The loess-smoother of this plot showed a negative residual pattern in the early time series but no apparent residual pattern for recent years (Figure 7). The above analyses indicates a reasonably good overall fit to the data.

3.3 Growth

The time-varying growth curve by sex are shown in Figure 8. The estimated L_∞ for the biology block 2012-2022 were 88.52 cm for females and 79.74 cm for males. These estimates are similar to the 2022 research track assessment (female: 89.24 cm; male: 79.14 cm) and smaller than the estimates from Nammack et al. (1985; female: 100.5 cm; male: 82.49 cm). The reduction is more significant for females than males, likely reflecting the decrease of large females and males in both catch and survey data after 1995 (Figures 3 and 4).

3.4 Abundance Index

The observed and model-predicted NEFSC spring bottom trawl abundance indices are shown in Figure 9. The estimated survey catchabilities (q) were 0.17, 0.47, and 0.87 for fleets 6 (1968-1972), 7 (1973-1981), and 8 (1982-2022), respectively.

3.5 Selectivity

The estimated selectivities by sex and fleet are shown in Figure 10. The estimated selectivities were asymptotic (logistic) for all landings fleets and NEFSC spring bottom trawl survey fleets (fleets 1, 2, 6-8) and dome-shaped for all discard fleets (3-5). The estimated apical male selectivity was smaller than females for landings and discard fleets (1-5), which is reasonable for a female-targeted fishery. The estimated apical male selectivity was smaller than females for the two offshore surveys but similar to females for the inshore+offshore survey.

Time-varying selectivities showed a reduced peak value selectivity parameter for females and males for the two landings fleets in 1994-2022 (Figures 11 and 12). The peak value was reduced by 12.5 cm for fleet 1 and 9.9 cm for fleet 2 for both sexes. NEFSC spring bottom trawl survey showed increased selectivities for the median-size females and males during the *Bigelow* period (2009-2022; Figure 13).

3.6 Length Composition

The observed and model-predicted length compositions aggregated across time by fleet and sex are shown in Figure 14. The fits to the aggregated length compositions appear to be reasonably accurate. The observed and model-predicted annual length composition data and the residuals from the fits by fleet and sex are in Figures 15-30. Fits to the annual length composition were poor for the median size males for fleet 8 (Figure 30).

3.7 Recruitment

The fixed survivorship SR relationship, along with the estimated age-0 recruitment from both the SR relationship and recruitment deviations, are shown in Figure 31. The estimated age-0 recruitment has decreased slightly since 2019 (Table 2 and Figure 32).

3.8 Total Biomass, Spawning Output, and Fishing Mortality

The estimated time series of spawning output, fishing mortality, and sex-specific total biomass are provided in Table 2 and Figures 33 and 34. The estimated total biomass indicated significant changes in the population structure: the female-dominated population shifted to male domination around the 1980s (Figure 33). Females' weights at age are greater and have longer lifespans than males (Nammack et al. 1985); therefore, the estimated biomasses were higher than males early in the time series. This changed in the 1980s due to increasing fishing pressure on larger females (Figure 3). The estimated spawning output, i.e., the number of pups the mature females produced, had been dropping since 2012 but leveled off in the most recent years (Figure 34). The terminal spawning output is 190,771 (1,000s). The estimated fishing mortality decreased slightly since 2020. The terminal fishing mortality is 0.02.

4 Sensitivity Analysis

4.1 1989-2022 Research Track Model

Sensitivity runs were conducted to compare different model configurations:

- 2023 management track model (1924-2022),
- 2022 research track model (1989-2019), and
- 2022 research track model (1989-2022).

The estimated spawning output and fishing mortality from the 2022 research track model (1989-2019) are the highest and lowest, respectively, among the three models tested (Figures 35 and 36). However, the estimated spawning output, fishing mortality, and recruitment from the 2022 research track model with additional three years of data (1989-2022) and from the 2023 management track model (1924-2022) are very similar (1924-2022; Figures 35-37).

4.2 Fishery Block

A sensitivity run was conducted without the fishery block assumption. The fishery block assumption has minor influence on the estimated spawner output, fishing mortality, and recruitment (Figures 38-40) but improved the fits to the length compositions for large females and males in years prior to 1994 for the two landings fleets (Figures 41 and 42).

4.3 Likelihood Weights

Ten SS3 runs with λ increased from 1 to 10 for all three surveys were conducted, and the results were compared. Fits to the survey indices improved slightly with increasing *lambda*

(Figure 43). The improvement is mainly contributed by reducing survey catchability q and changes in female apical selectivity for the NEFSC spring bottom trawl survey (fleet 8). The survey q was reduced from 0.97 at $\lambda = 1$ to 0.84 at $\lambda = 10$. As a result, the estimated total population and recruitment increased with increasing λ (Figures 44 and 45).

A female apical selectivity smaller than 1 means fewer females were caught than males, and vice versa for the female apical selectivity larger than 1. The female apical selectivity was reduced from 1.1 to 0.91 for the *Albatross* period and increased from 0.82 to 0.99 for the *Bigelow* period with increasing λ . The influences of the female apical selectivity for the *Bigelow* period on the population estimates were more significant because the *Bigelow* survey caught more males than females for all years (Figure 46). The increases in apical female selectivity indicated that more females should be in the population than what was observed in the survey. As a result, the model increased the female sex ratio and estimated more females in the population with increasing λ (Figure 47).

The combination of increasing total population, recruitment, and female sex ratio results in an increase in spawning output and a decrease in fishing mortality with increasing λ (Figures 48 and 49). The final model was chosen so that the female apical selectivity from the *Albatross* and *Bigelow* period are the same.

5 Retrospective Analysis

A 7-year peel retrospective analysis was conducted for the base case model. The results indicated that the model has a minor retrospective pattern with Mohn's $\rho = -0.09$ for the spawning output and 0.06 for the fully recruited fishing mortality (Figures 50-51).

6 References

Carvalho F, Winker H, Courtney D, Kapur M, Kell L, Cardinale M, Schirripa M, Kitakado T, Yemane D, Piner KR, Maunder MN. 2021. A cookbook for using model diagnostics in integrated stock assessments. *Fisheries Research*, 240, p.105959

Fowler GM, Campana SE. 2015. Framework assessment and 2013 update using a stage-based population model for spiny dogfish (*Squalus acanthias*) in the Northwest Atlantic. DFO Canadian Science Advisory Secretariat Research Document 2015/065. v + 134 p.

Jensen, AC, Edwards RL, Matthiessen GC. 1961. The spiny dogfish - a review. U.S. National Marine Fisheries Service, Northeast Fisheries Science Center Reference document, 61-07, 42 p.

Methot RD, Wetzel CR, Taylor IG, Doering KJ. 2021. Stock synthesis user manual: version 3.30.18

Nammack MF, Musick JA, Colvocoresses JA. 1985. Life history of spiny dogfish off the Northeastern United States. Transactions of the American Fisheries Society, 114(3): 367-376

NEFSC [Northeast Fisheries Science Center]. 2022. Research track assessment of Northwest Atlantic spiny dogfish. US Dep. Commer., Northeast Fisheries Science Center Reference Document, in press

Table 1: Summary of Atlantic spiny dogfish data by gear and fleet used in SS3.

Type	Gear	Fleet	Label in SS3
Landings	Sink Gill Net + Others Recreational	1	Landings_SGN_Rec_Others
Landings	Longline Otter Trawl + Foreign Fleet	2	Landings_LL_OT_Foreign
Discard	Sink Gill Net Scallop Dredge	3	Discard_SGN_SD
Discard	Longline Large Mesh Otter Trawl Recreational	4	Discard_LMOT_LL_Rec
Discard	Small Mesh Otter Trawl	5	Discard_SMOT
Survey	NEFSC Spring Bottom Trawl Offshore Yankee 36 1968-1972	6	NEFSC_Spring_BTS_OFFSHORE_Y36
Survey	NEFSC Spring Bottom Trawl Offshore Yankee 41 1973-1981	7	NEFSC_Spring_BTS_OFFSHORE_Y41
Survey	NEFSC Spring Bottom Trawl Inshore+Offshore 1982-2022	8	NEFSC_Spring_BTS

Table 2: Summary of total biomass by sex, spawning output (1,000s), recruitment (1,000s, age-0) and fishing mortality (age-12+) by year estimated by SS3 for Atlantic spiny dogfish.

Year	Total Biomass (mt)		Spawning Output (1,000s)	Recruitment (1,000s)	F (age-12+)
	Female	Male			
1924	954497	718806	938549	211968	0.002
1925	953700	718429	937653	212007	0.001
1926	953202	718201	937050	212033	0.001
1927	952993	718117	936746	212046	0.008
1928	949227	716333	932441	212227	0.015
1929	941993	712922	924049	212567	0.019
1930	933378	708901	913746	212962	0.008
1931	930383	707639	909335	213122	0.004
1932	929636	707487	907355	213193	0.003
1933	929509	707650	906120	213237	0.002
1934	930012	708123	905687	213252	0.006
1935	928258	707497	902876	213349	0.011
1936	924278	705808	897597	213527	0.009
1937	921605	704771	893672	213654	0.007
1938	920154	704354	891071	213736	0.011
1939	916719	702975	886310	213881	0.010
1940	914004	701961	882309	213999	0.048
1941	893839	692417	858968	214597	0.050
1942	874495	683291	835712	215037	0.010
1943	873812	683477	832299	215088	0.011
1944	873079	683625	829054	215133	0.005
1945	875345	685248	829349	215129	0.005
1946	877641	686858	830088	215119	0.013
1947	876373	686700	827309	215156	0.004
1948	879377	688649	829392	215128	0.005
1949	881905	690322	831330	215102	0.056
1950	862225	680963	809296	215335	0.013
1951	862154	681401	807821	215345	0.009
1952	863836	682676	808464	215340	0.005
1953	867336	684813	811394	215319	0.007
1954	870027	686523	813818	215299	0.006
1955	873172	688380	817054	215270	0.008
1956	875117	689620	819247	215249	0.045
1957	860907	682821	803969	215367	0.113
1958	818991	662027	757841	215241	0.084
1959	792753	649005	726825	214714	0.078
1960	771379	638417	700114	213950	0.081
1961	750976	628227	673959	212903	0.084
1962	731536	618413	648588	211589	0.052
1963	724885	615370	636610	210860	0.053
1964	718473	612516	625317	210107	0.053
1965	712448	609819	615016	209364	0.053
1966	707080	607371	606055	208671	0.061
1967	694497	604780	586765	207033	0.050
1968	685363	597572	580230	46614	0.049
1969	671974	586702	572700	47586	0.050
1970	654261	574439	561184	102661	0.043
1971	637942	559865	556305	72874	0.045
1972	616318	544475	545625	103335	0.054

Table 2: Continued.

Year	Total Biomass (mt)		Spawning Output (1,000s)	Recruitment (1,000s)	F (age-12+)
	Female	Male			
1973	583243	526877	521606	70014	0.049
1974	555238	509561	505930	100067	0.053
1975	522196	491259	484676	77715	0.049
1976	492086	473374	467611	78480	0.045
1977	466848	456265	455502	95015	0.039
1978	450117	441439	449478	138822	0.038
1979	437414	427072	443337	115873	0.045
1980	421395	414020	424748	132674	0.053
1981	407357	403103	402390	156920	0.061
1982	393064	394131	375491	145041	0.071
1983	381246	386259	349529	156367	0.077
1984	370941	378948	325501	117599	0.078
1985	365724	376141	303883	207773	0.076
1986	363641	375701	285493	172721	0.075
1987	365937	378077	271585	197177	0.077
1988	369535	381442	260582	164695	0.083
1989	374321	386505	251357	192450	0.097
1990	379180	393204	242328	223895	0.170
1991	372443	396547	219501	219511	0.121
1992	372006	404902	204436	204941	0.207
1993	360719	406672	181174	181659	0.118
1994	360177	415370	166107	166553	0.107
1995	364698	424688	163647	164083	0.131
1996	364350	431171	159114	159534	0.185
1997	354361	432972	148489	148789	0.086
1998	359672	439668	152866	150998	0.095
1999	358817	441577	156384	71060	0.074
2000	360517	442048	166173	98717	0.048
2001	363844	440117	183162	51845	0.040
2002	367828	435251	205654	63718	0.035
2003	368969	427999	228646	55935	0.019
2004	371831	420462	254648	71430	0.023
2005	371048	410777	277530	64146	0.018
2006	370265	401706	298808	93513	0.021
2007	366970	392134	315694	87945	0.026
2008	363098	384728	326579	155856	0.021
2009	361663	380745	334000	170601	0.026
2010	362053	379913	335360	210794	0.019
2011	367783	383971	334501	227210	0.030
2012	373941	393985	346988	327060	0.032
2013	358249	394338	311424	81819	0.030
2014	352166	399982	283295	230720	0.046
2015	340144	400850	253788	70414	0.033
2016	334098	402504	233505	99451	0.044
2017	325375	402434	212552	104129	0.038
2018	319616	400441	200023	78325	0.031
2019	319409	401465	193576	193546	0.042
2020	318821	402620	188899	189253	0.042
2021	318802	404738	186614	186614	0.027
2022	321401	406767	190771	136158	0.020

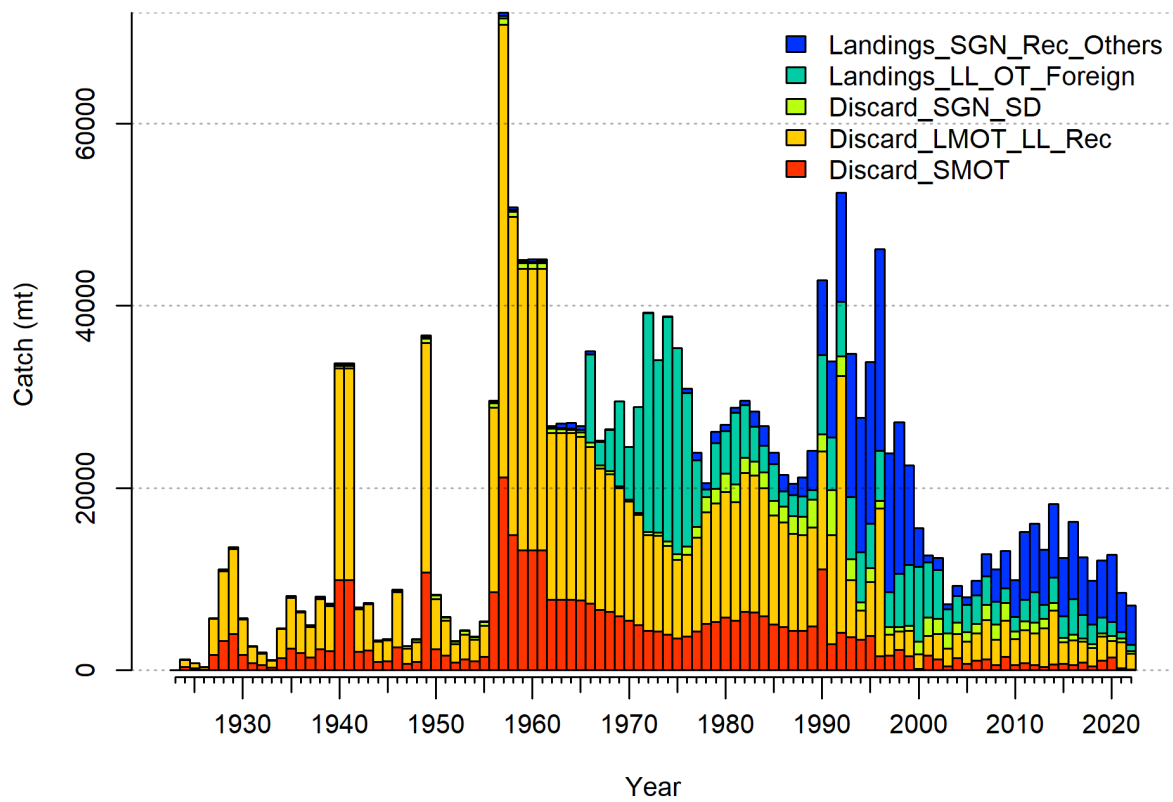


Figure 1: Time series of Atlantic spiny dogfish catch (landings plus dead discards) by fleet.

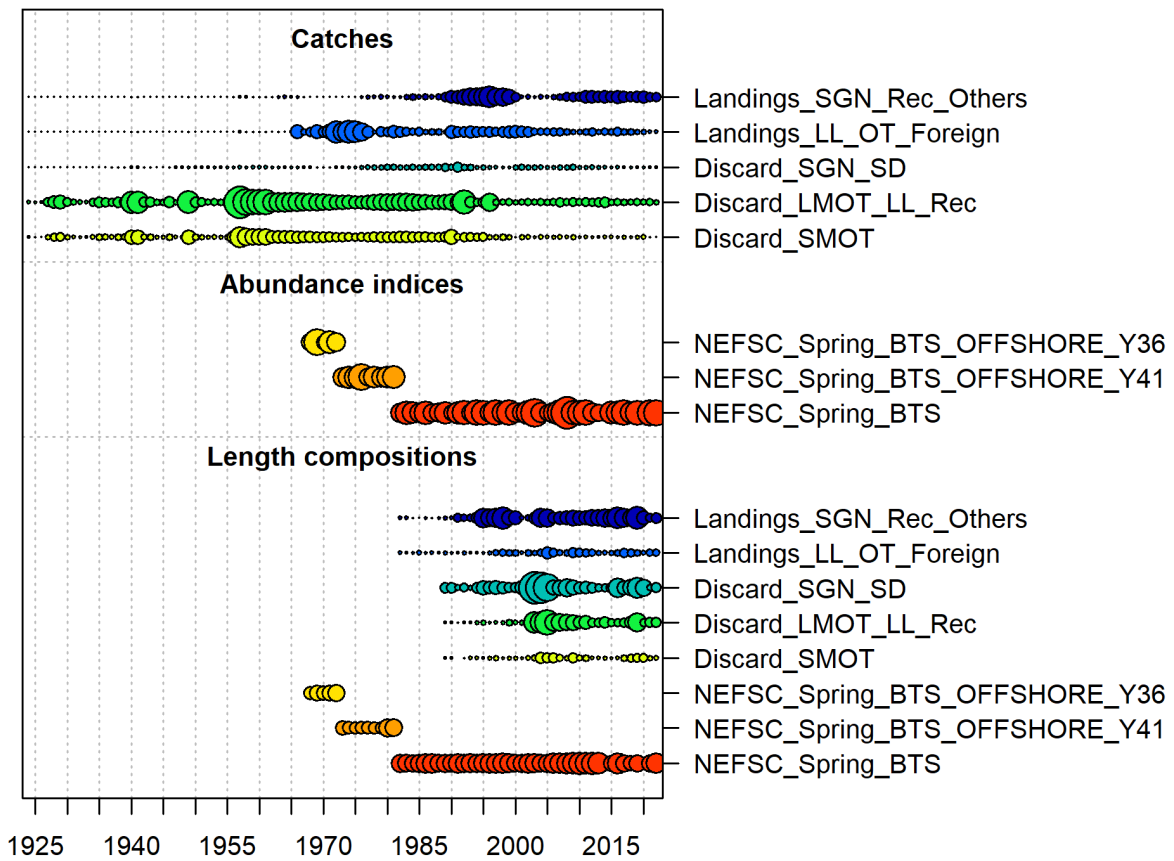


Figure 2: Catch and survey data by year for each fleet used in SS3. Circle area is relative within a data type. Circles are proportional to total catch for catches, to precision for indices, and to total sample size for length compositions. Note that since the circles are scaled relative to the maximum within each type, the scaling within separate plots should not be compared.

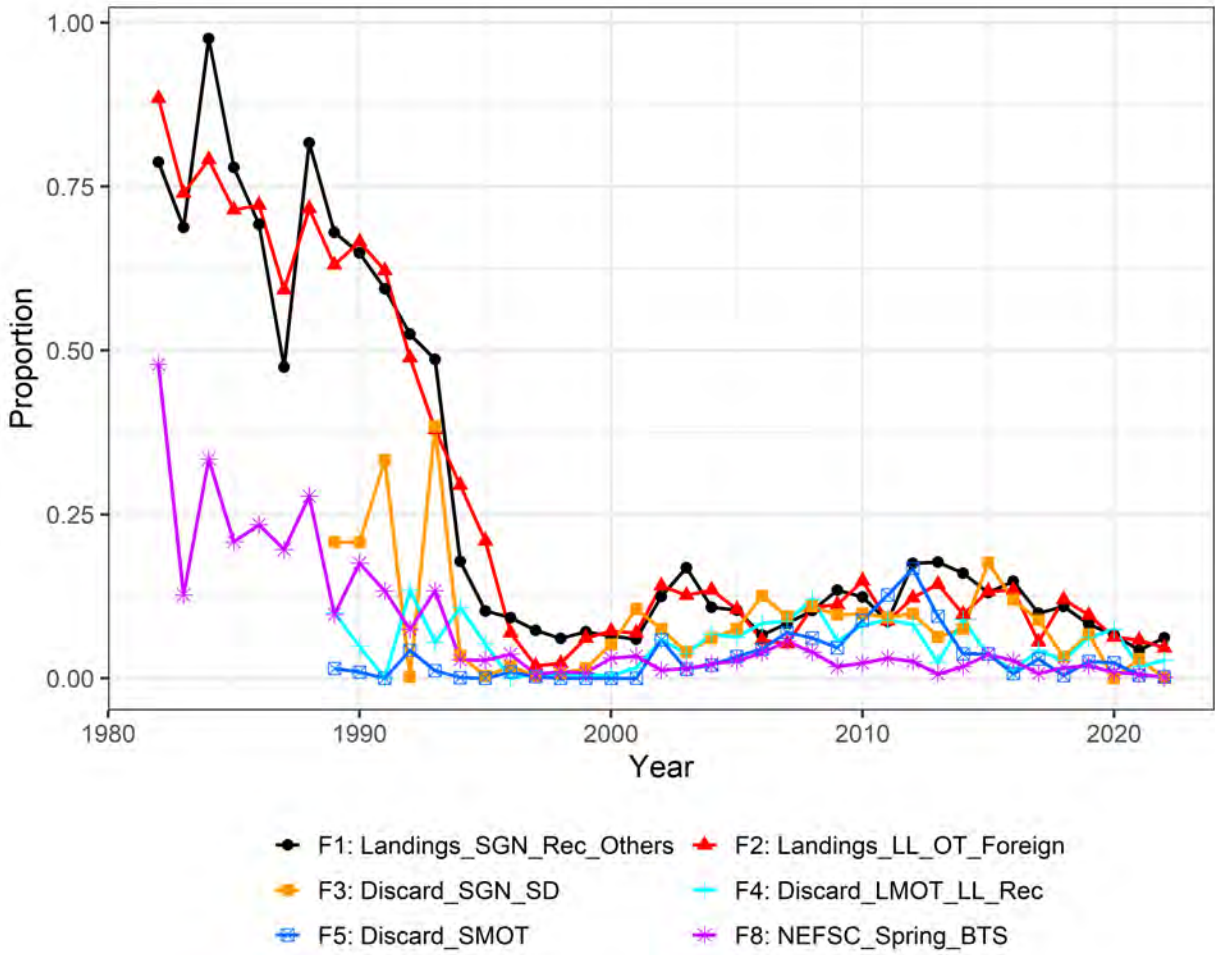


Figure 3: Proportions of 90+ cm females by fleet from 1982 to 2022.

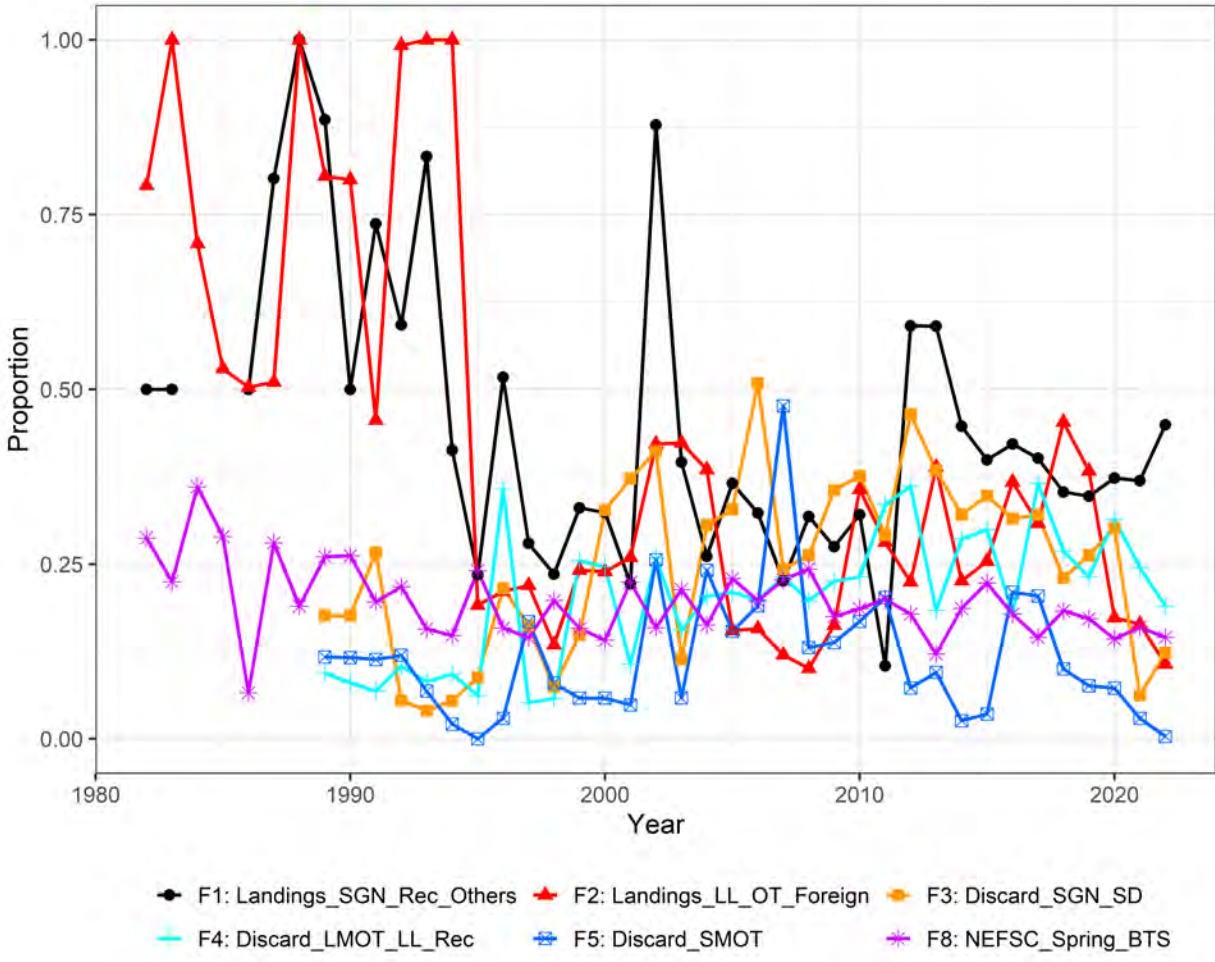


Figure 4: Proportions of 75+ cm males by fleet from 1982 to 2022.

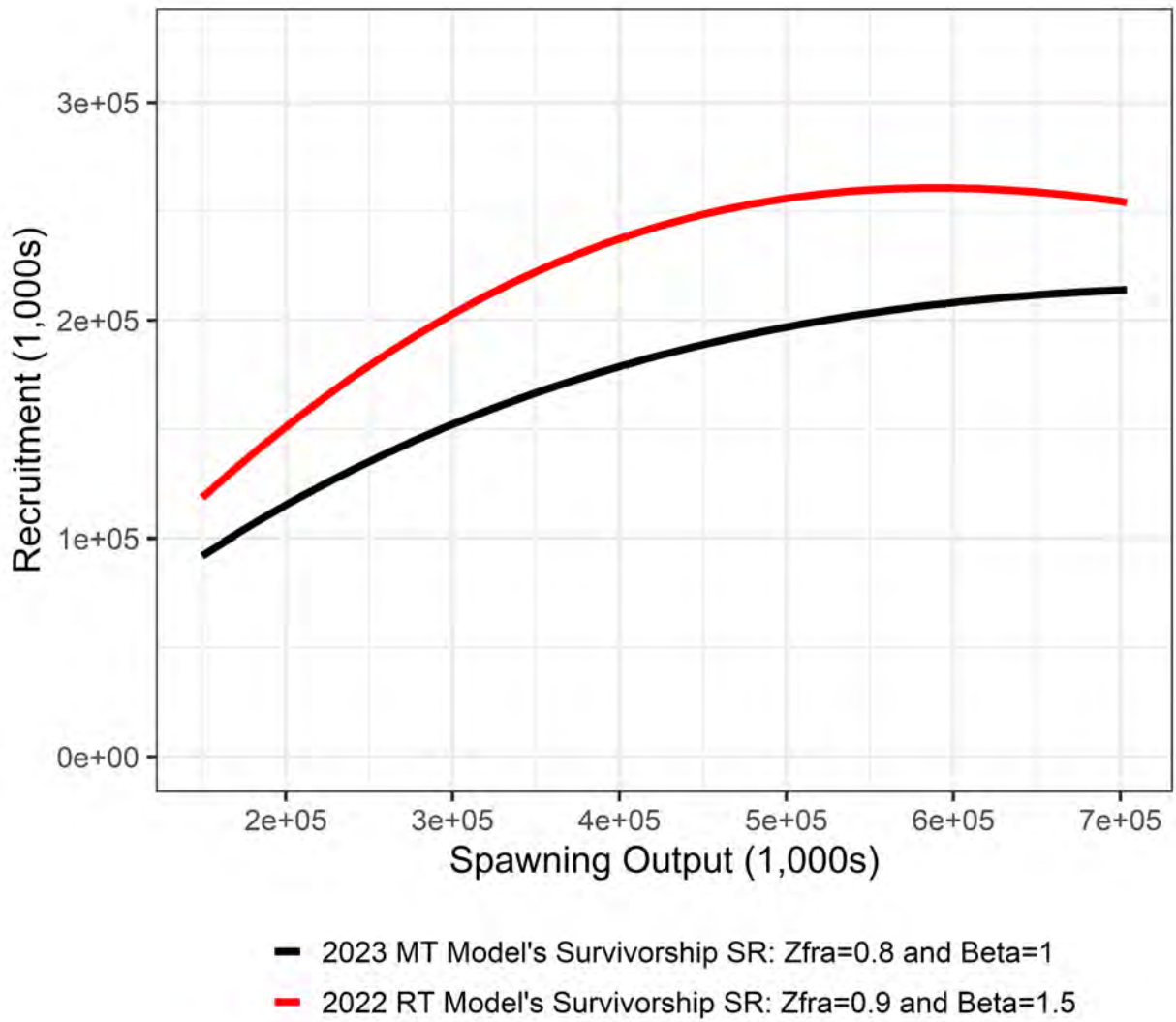


Figure 5: Comparison of survivorship spawner-recruitment relationships assumed in the 2022 research track and 2023 management track assessment model.

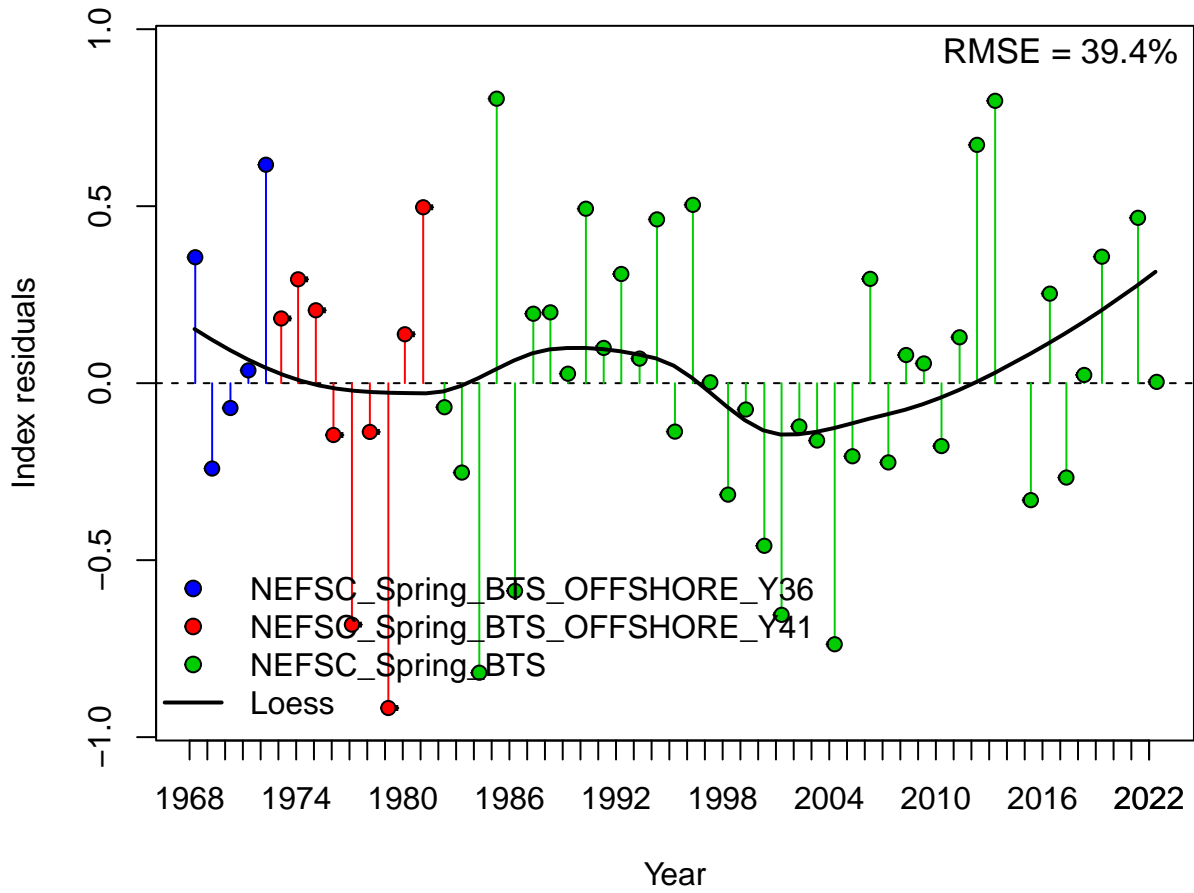


Figure 6: Joint residual plot from fit to annual survey index data.

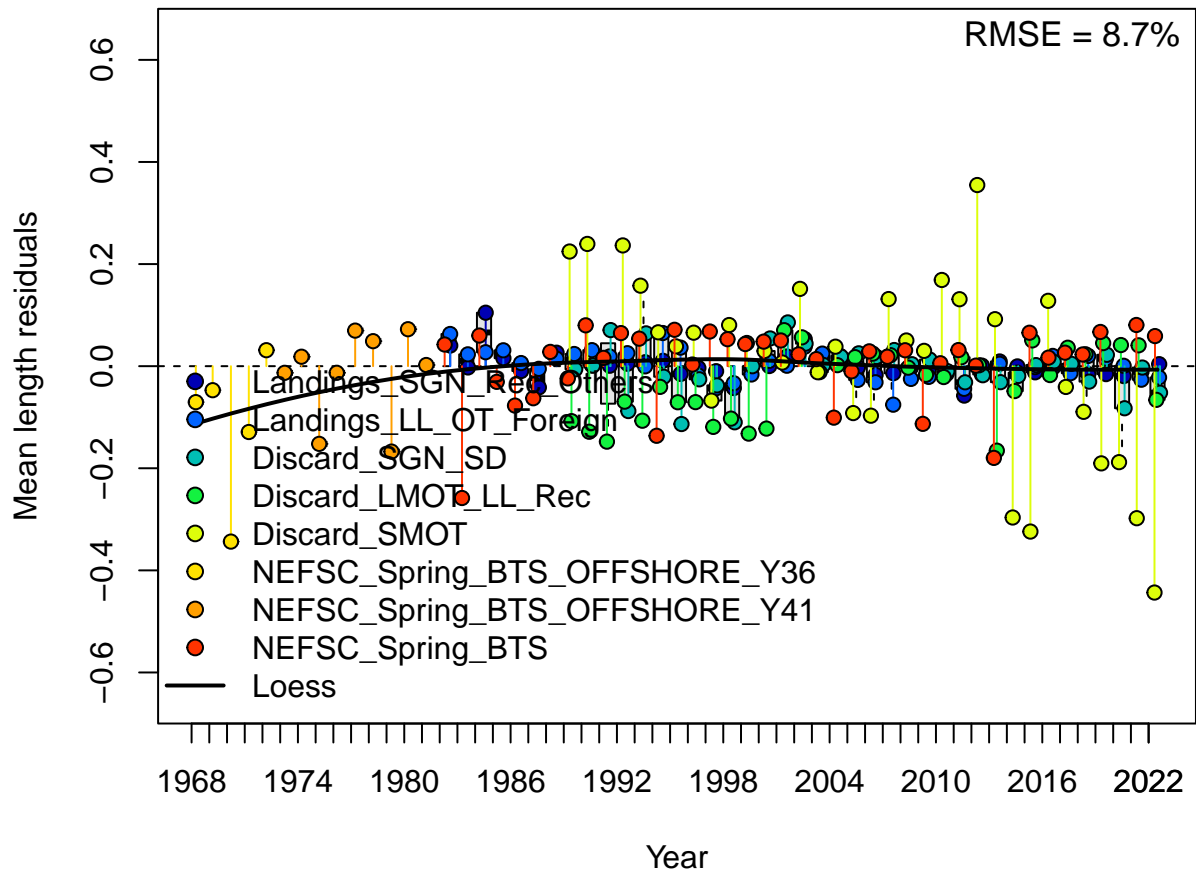


Figure 7: Joint residual plot from fit to annual mean length from length composition data.

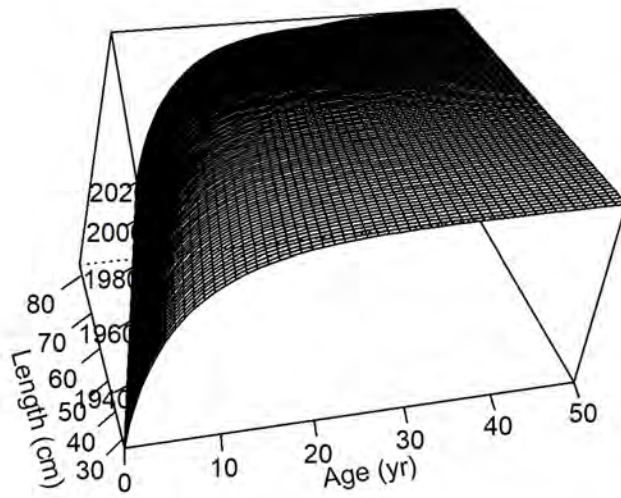
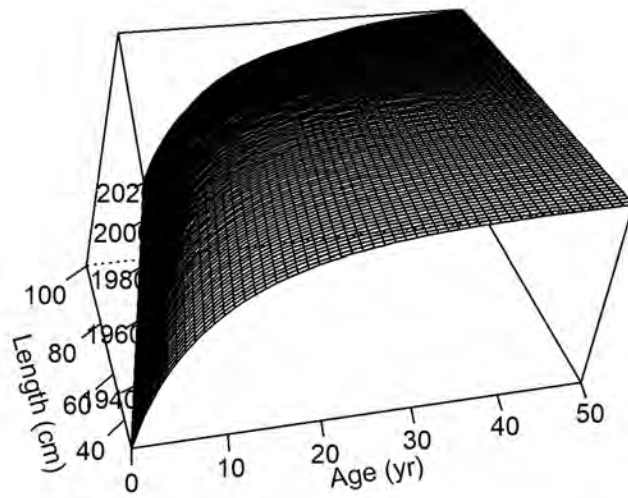


Figure 8: Surface plot of time-varying growth for females (top) and males (bottom) from 1924 to 2022.

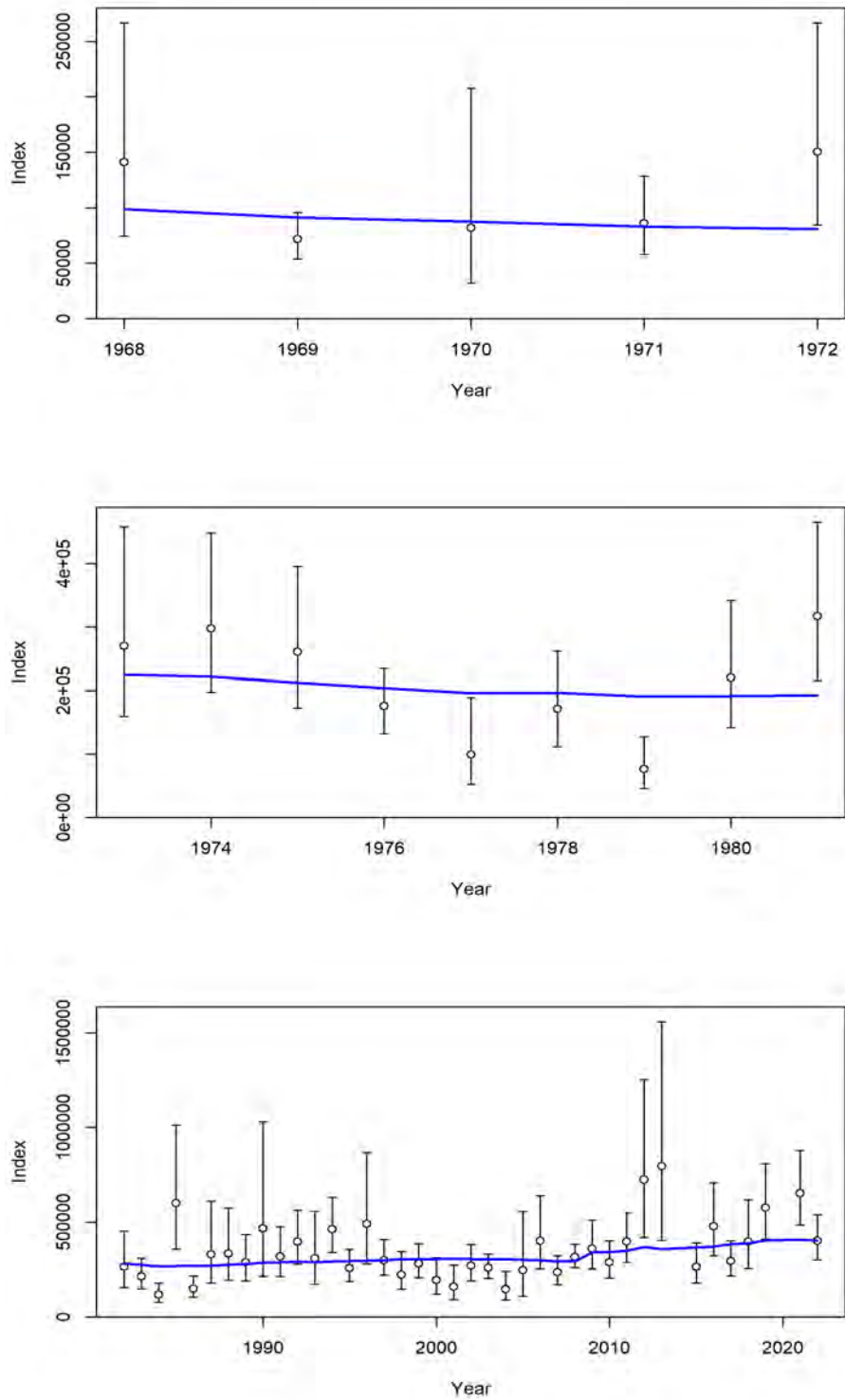


Figure 9: Observed and model-predicted abundance index (1,000s) for the NEFSC spring bottom trawl surveys. Lines indicate 95% uncertainty interval around index values based on the model assumption of lognormal error.

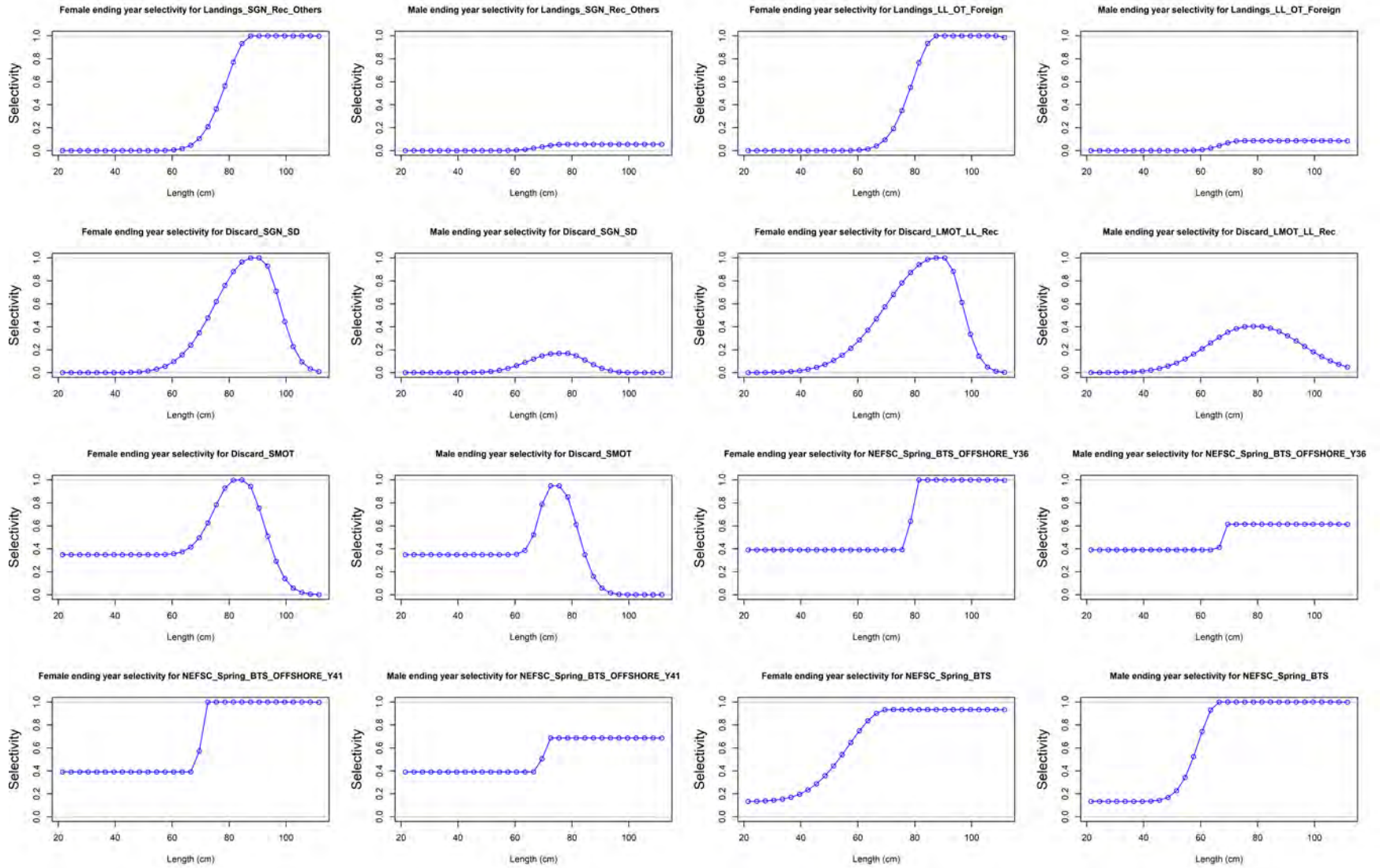


Figure 10: Estimated ending year selectivity for females and males for all fleets.

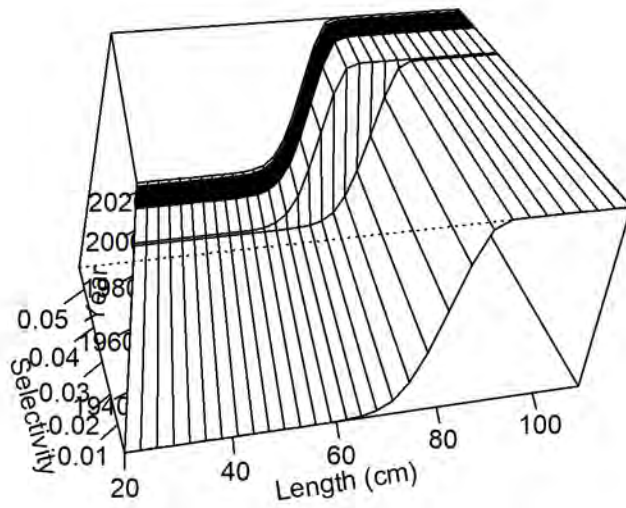
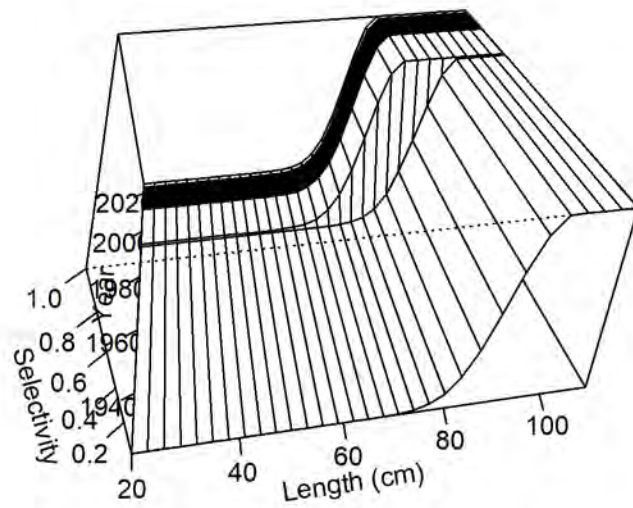


Figure 11: Surface plot of time-varying selectivity for females (top) and males (bottom) from 1982 to 2022 for fleet 1: Landings_SGN_Rec_Others.

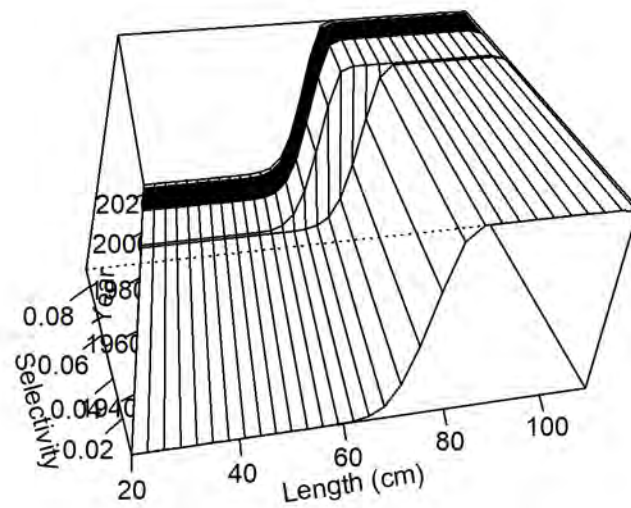
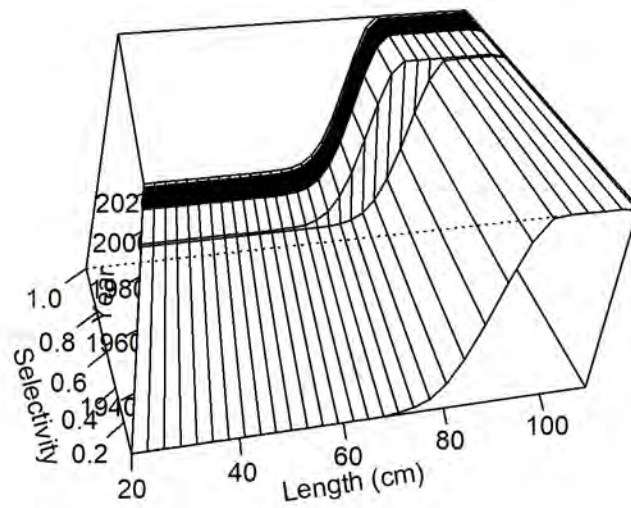


Figure 12: Surface plot of time-varying selectivity for females (top) and males (bottom) from 1982 to 2022 for fleet 2: Landings.LL.OT.Foreign.

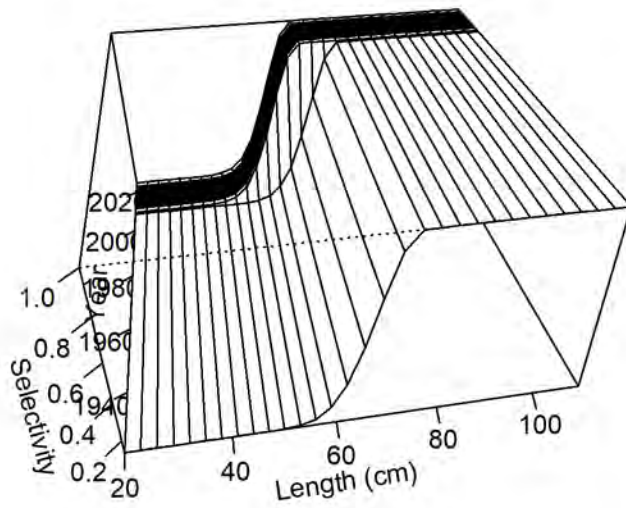
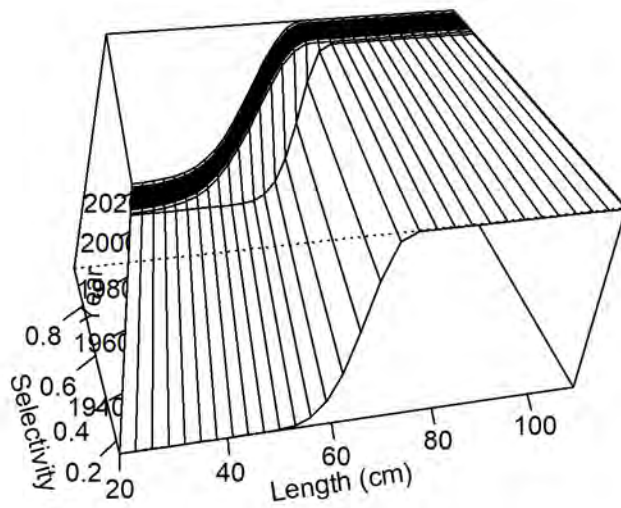


Figure 13: Surface plot of time-varying selectivity for females (top) and males (bottom) from 1982 to 2022 for fleet 8: NEFSC_Spring_BTS.

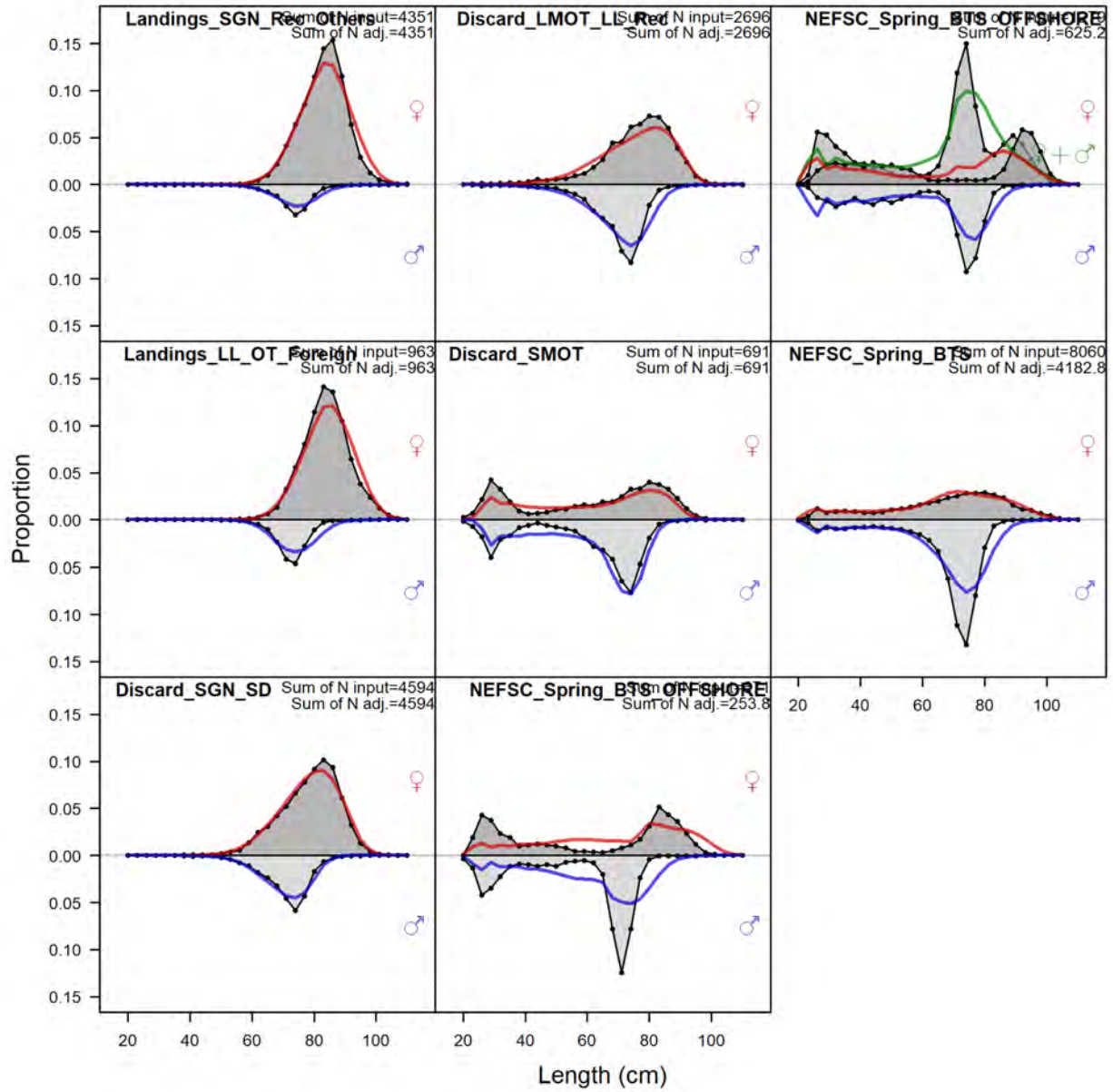


Figure 14: Observed (shaded) and model-predicted (line) length compositions, aggregated across time by fleet and sex.

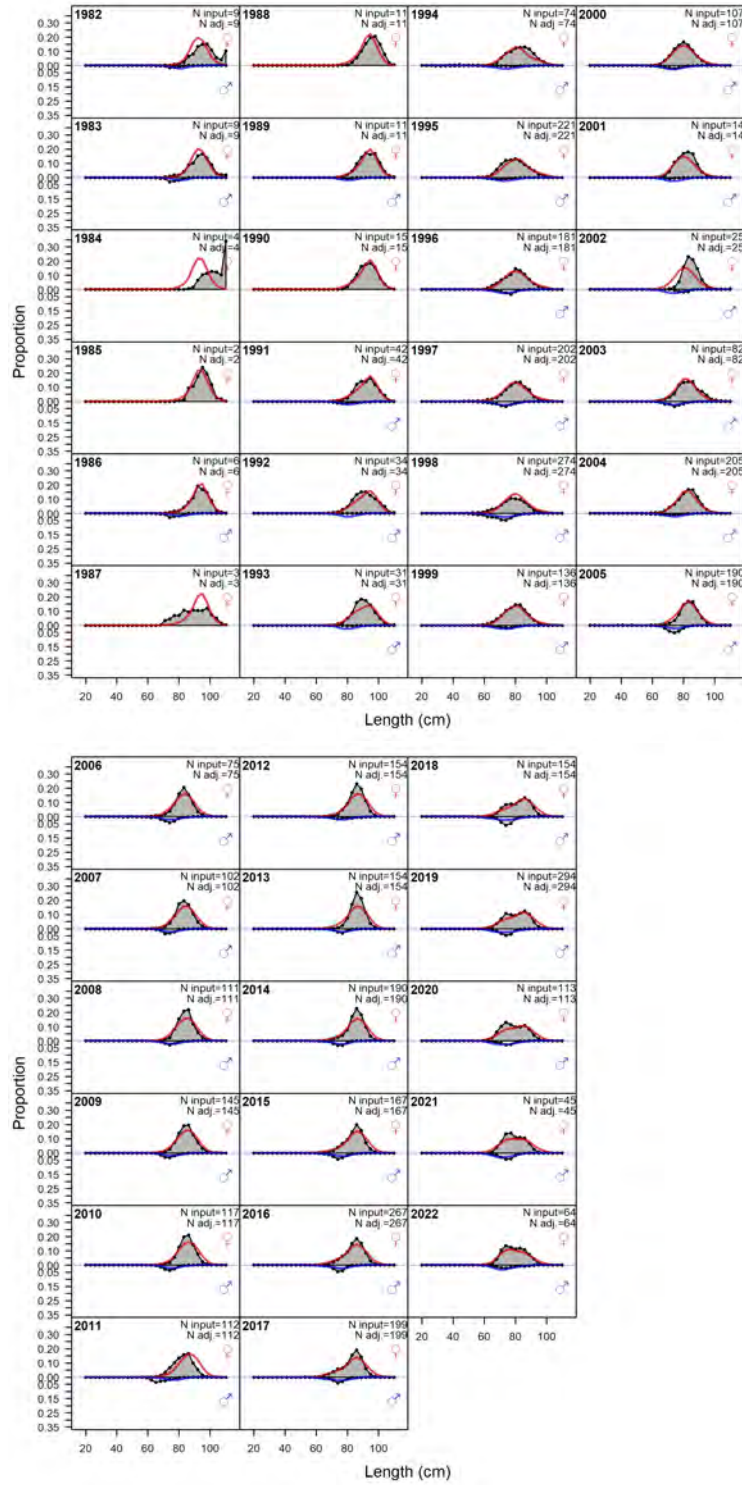


Figure 15: Fit to length compositions by year and sex for fleet 1: Landings_SGN_Rec_Others.

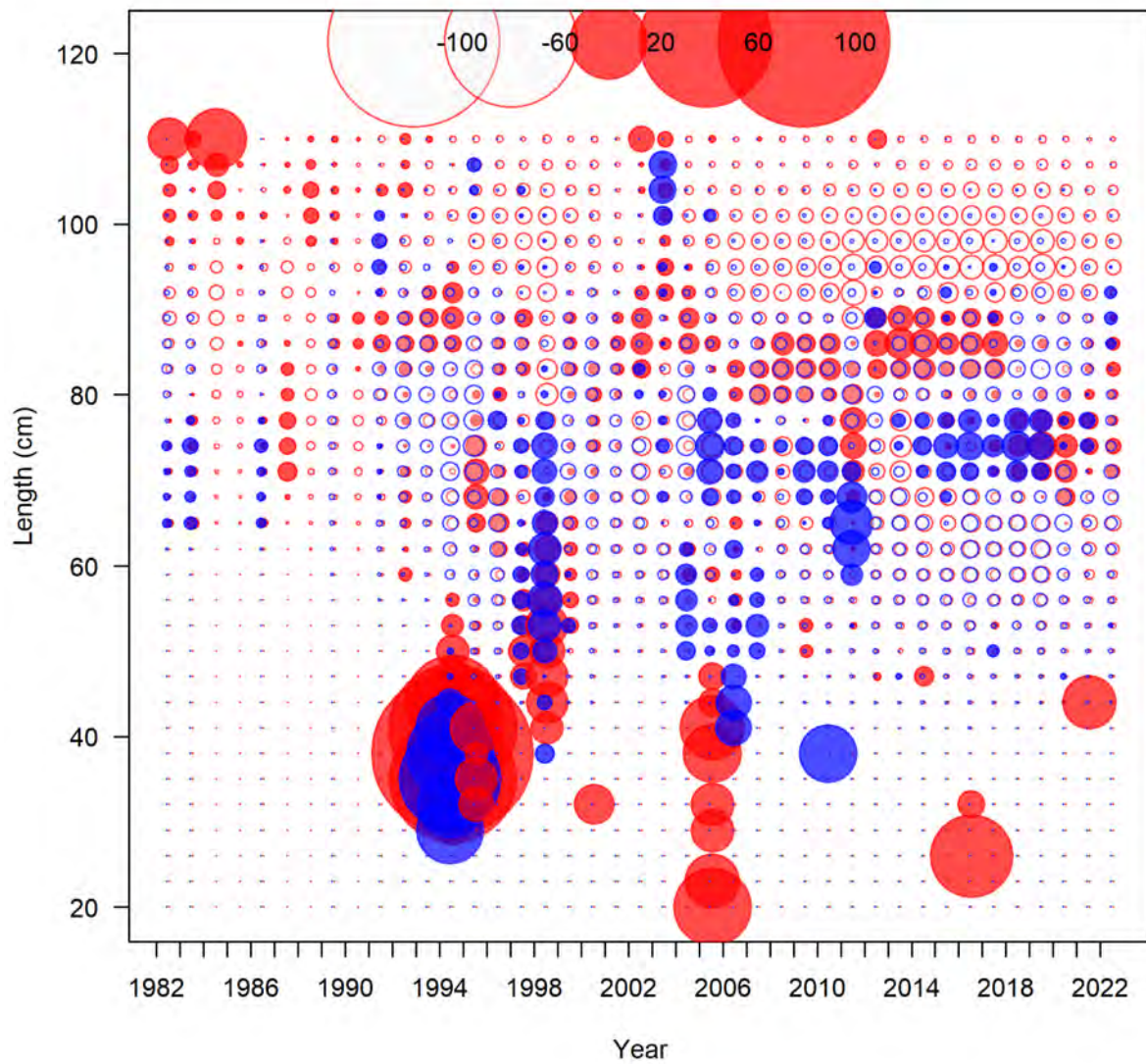


Figure 16: Pearson residuals for the fit to length compositions by year and sex for fleet 1: Landings_SGN_Rec_Others. Closed bubbles are positive residuals (observed > expected) and open bubbles are negative residuals (observed < expected).

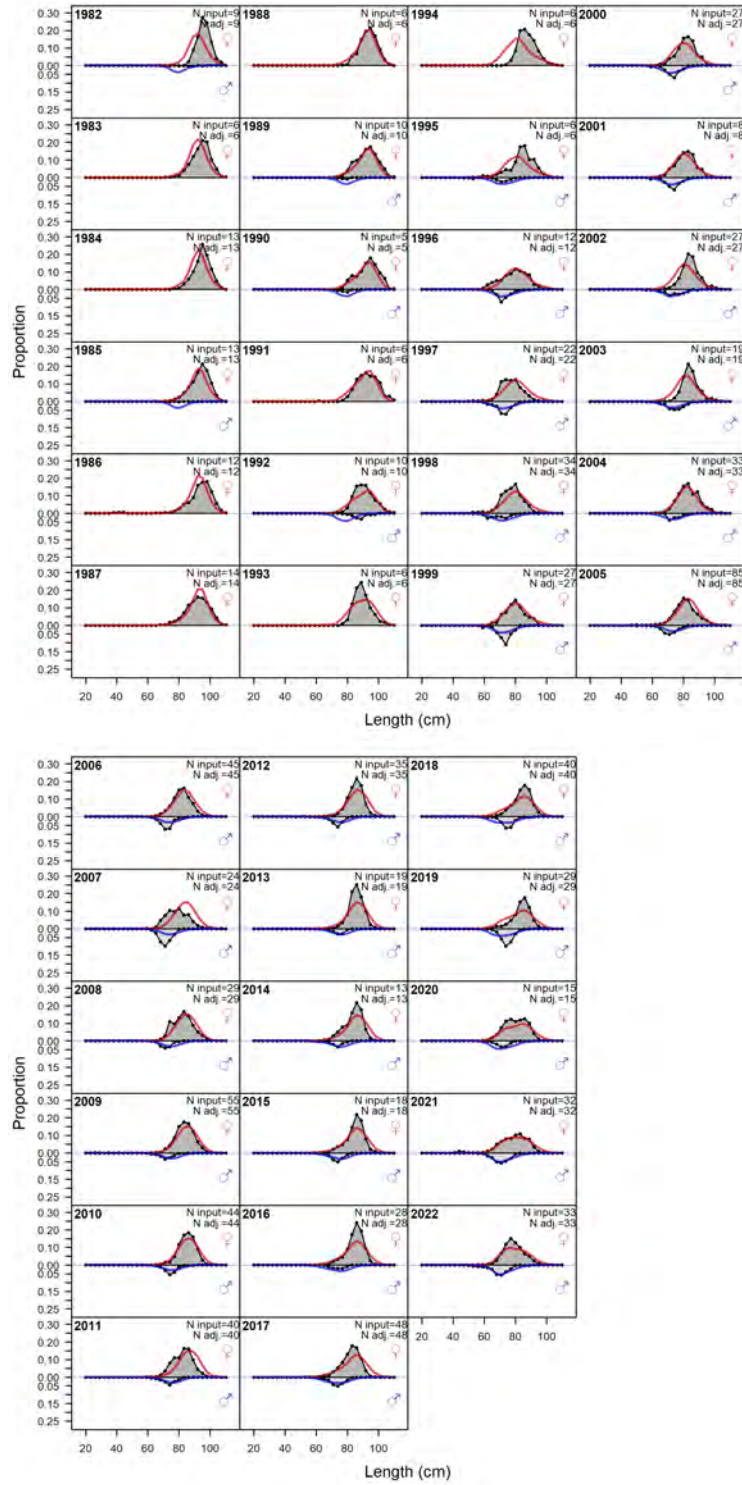


Figure 17: Fit to length compositions by year and sex for fleet 2: Landings_LL_OT_Foreign.

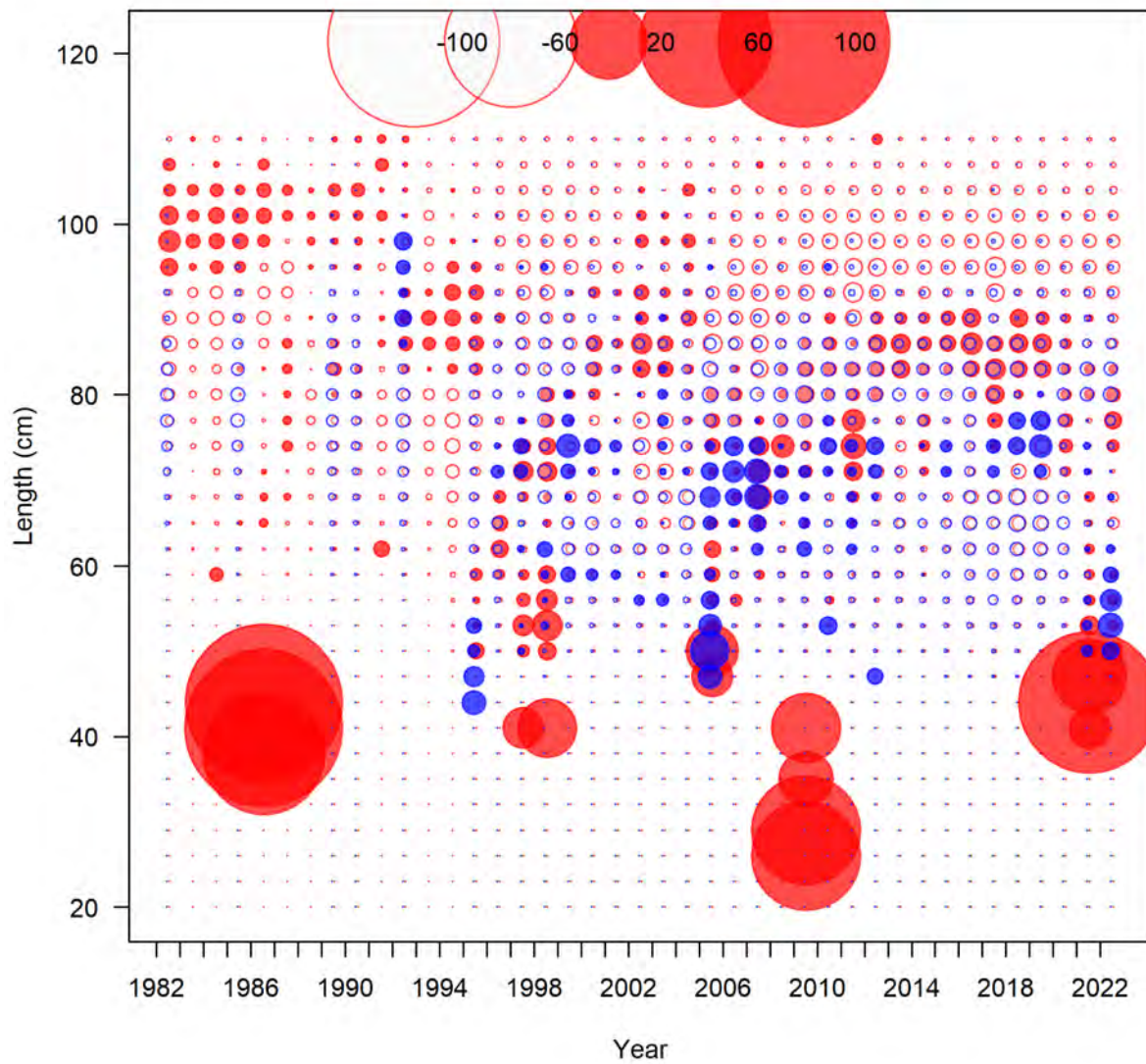


Figure 18: Pearson residuals for the fit to length compositions by year and sex for fleet 2: Landings_LL_OT_Foreign. Closed bubbles are positive residuals (observed > expected) and open bubbles are negative residuals (observed < expected).

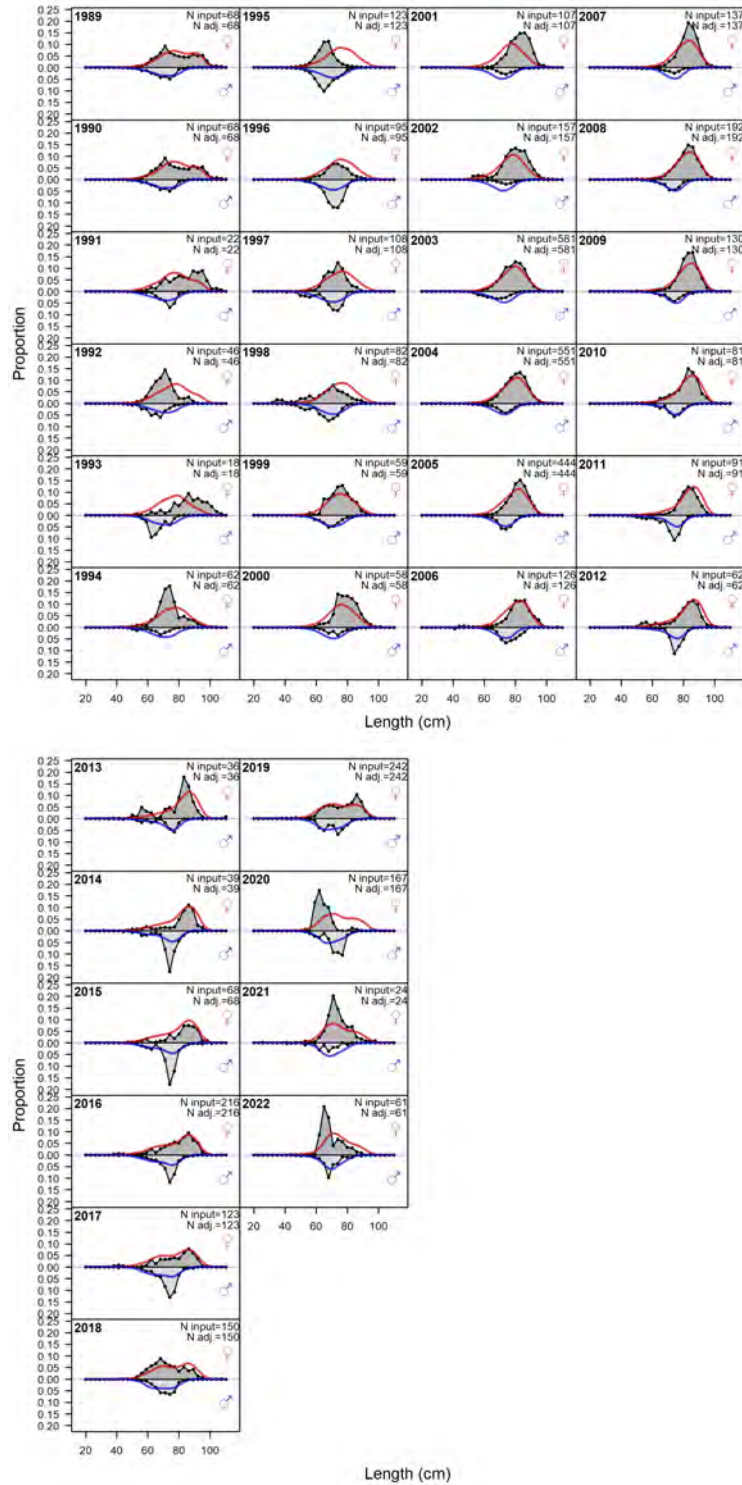


Figure 19: Fit to length compositions by year and sex for fleet 3: Discard_SGN_SD.

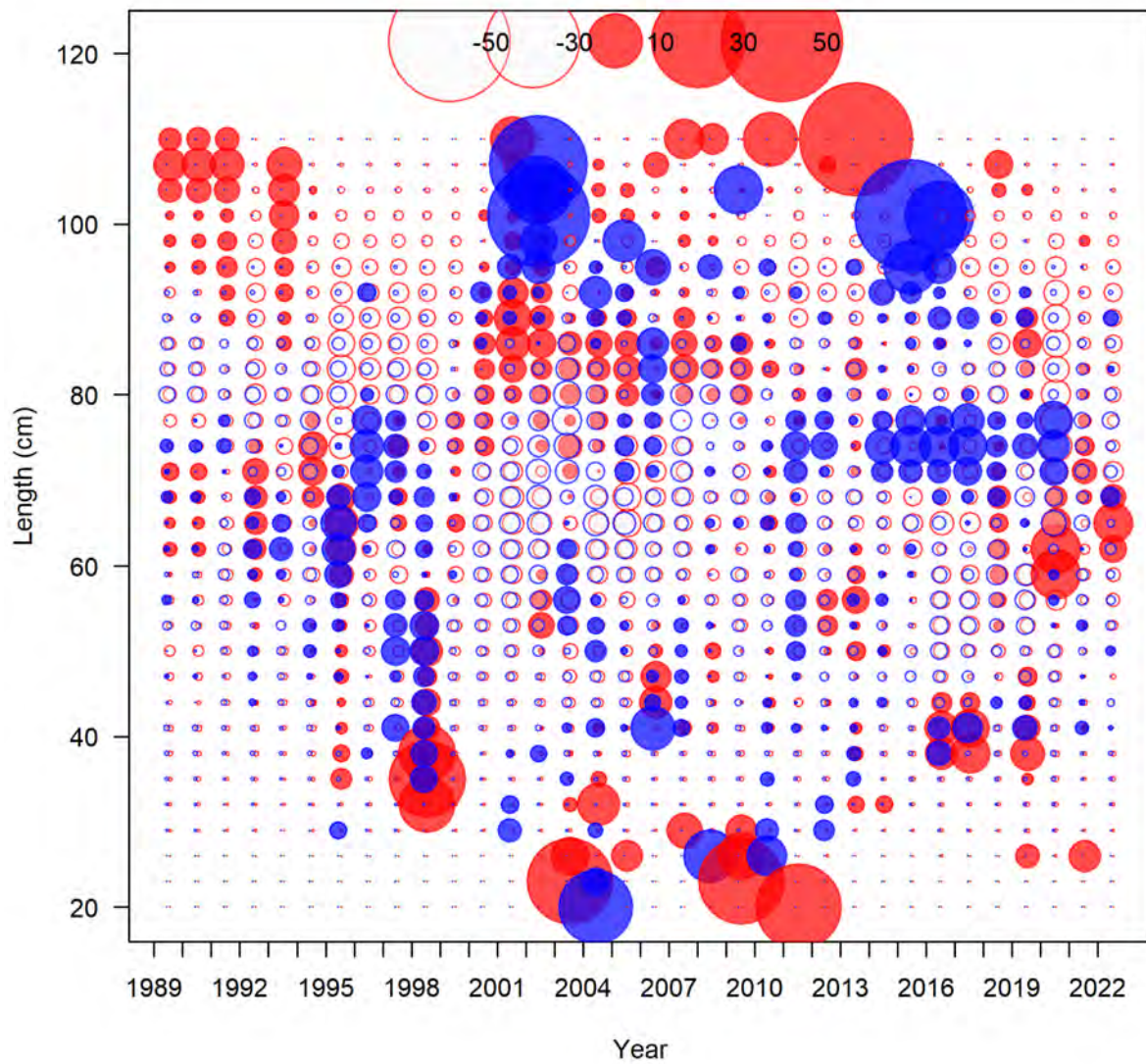


Figure 20: Pearson residuals for the fit to length compositions by year and sex for fleet 3: Discard_SGN_SD. Closed bubbles are positive residuals (observed > expected) and open bubbles are negative residuals (observed < expected).

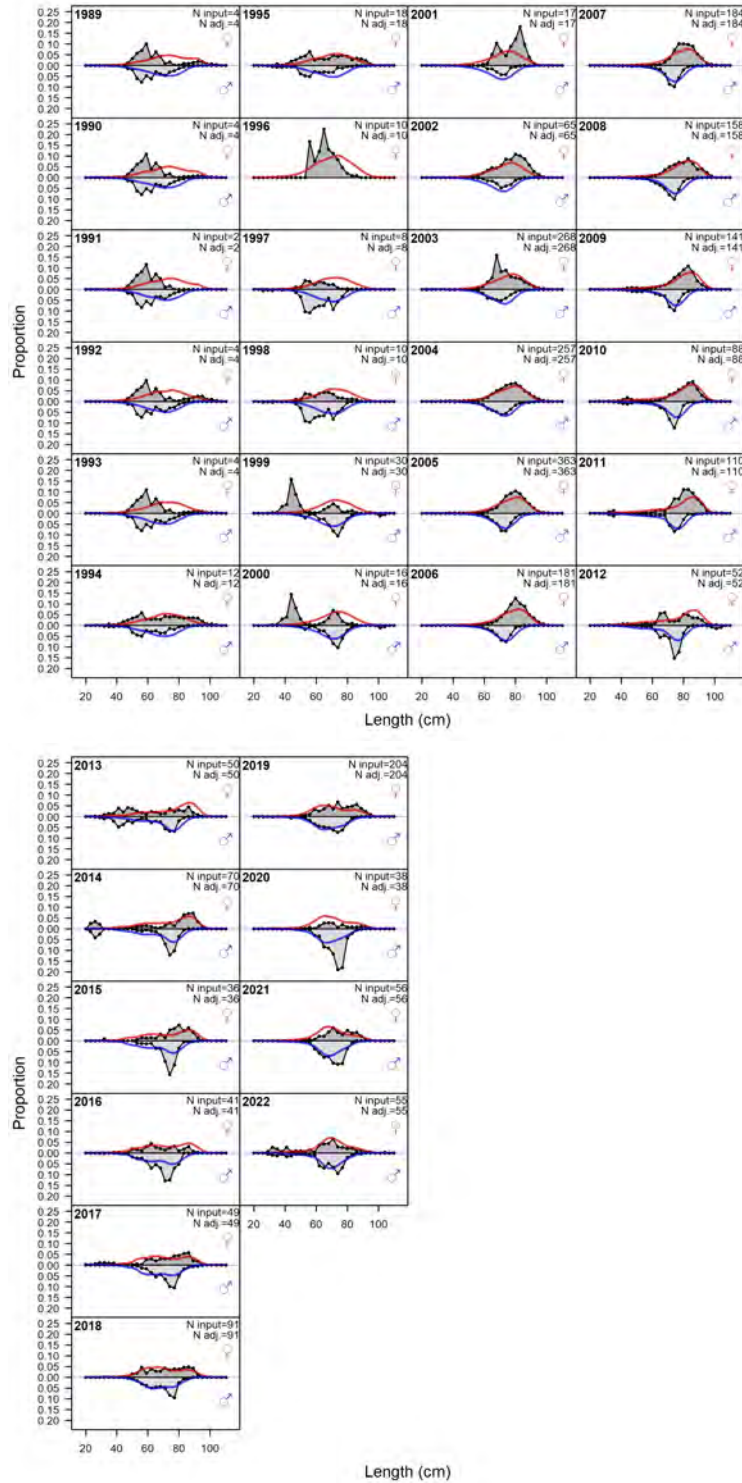


Figure 21: Fit to length compositions by year and sex for fleet 4: Discard_LMOT_LL_Rec.

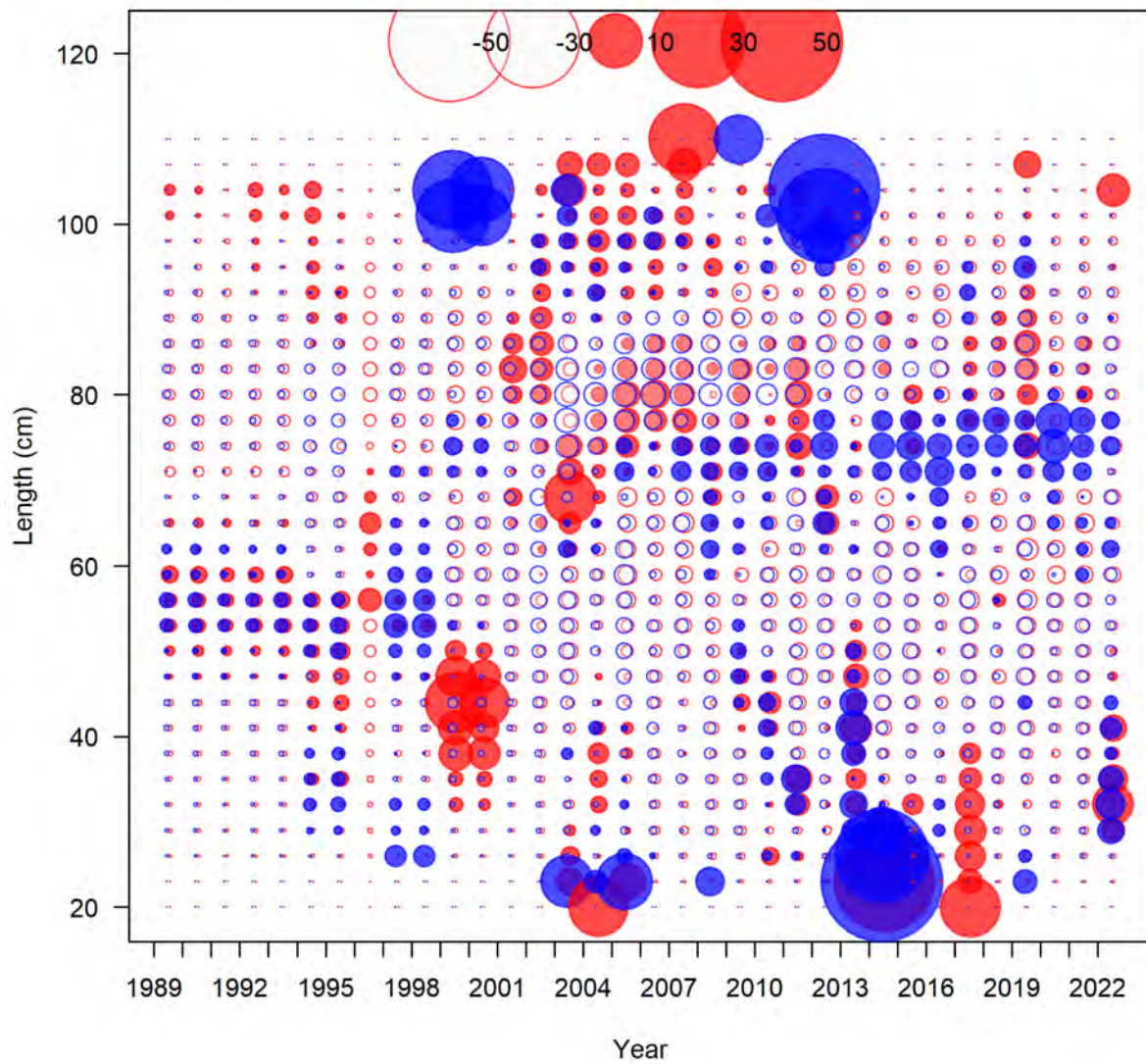


Figure 22: Pearson residuals for the fit to length compositions by year and sex for fleet 4: Discard_LMOT_LL_Rec. Closed bubbles are positive residuals (observed > expected) and open bubbles are negative residuals (observed < expected).

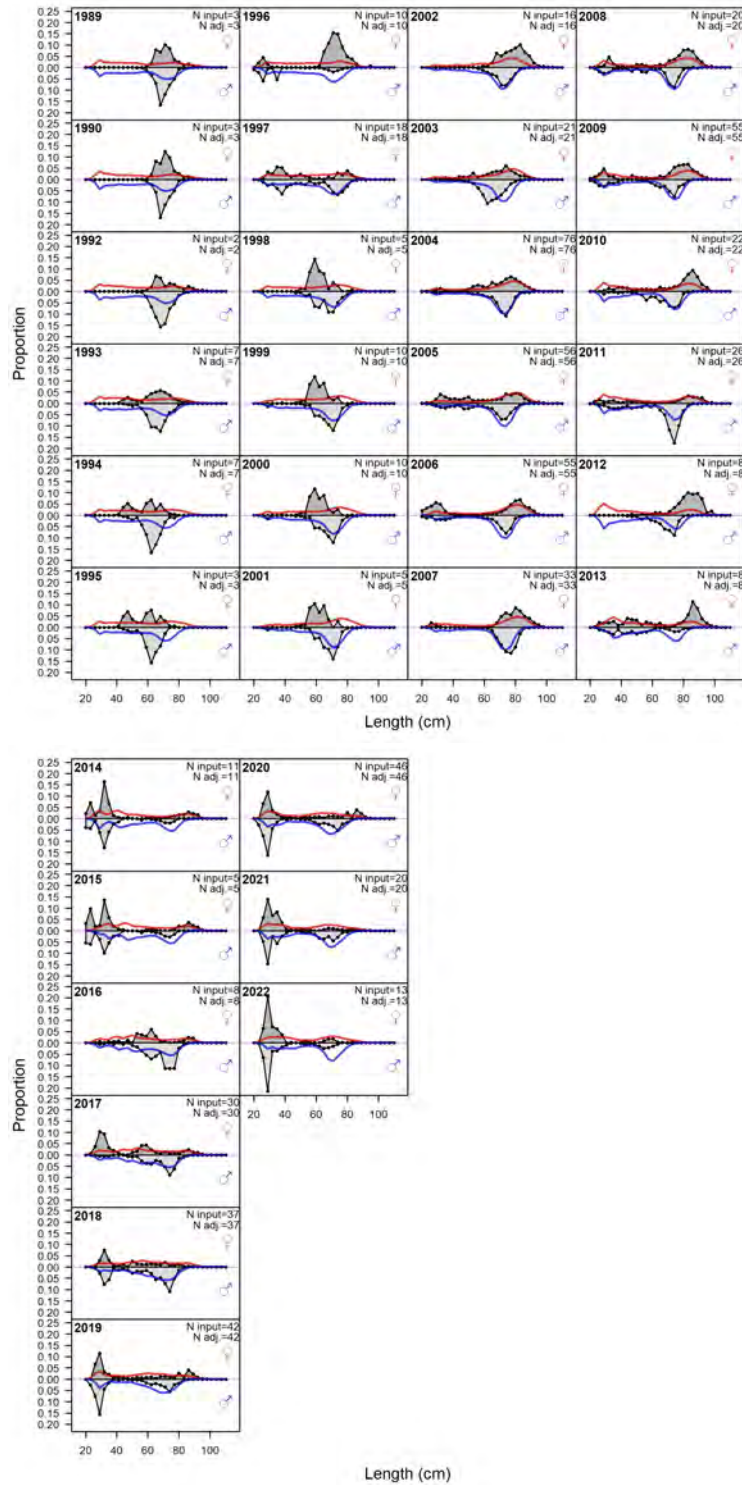


Figure 23: Fit to length compositions by year and sex for fleet 5: Discard.SMOT.

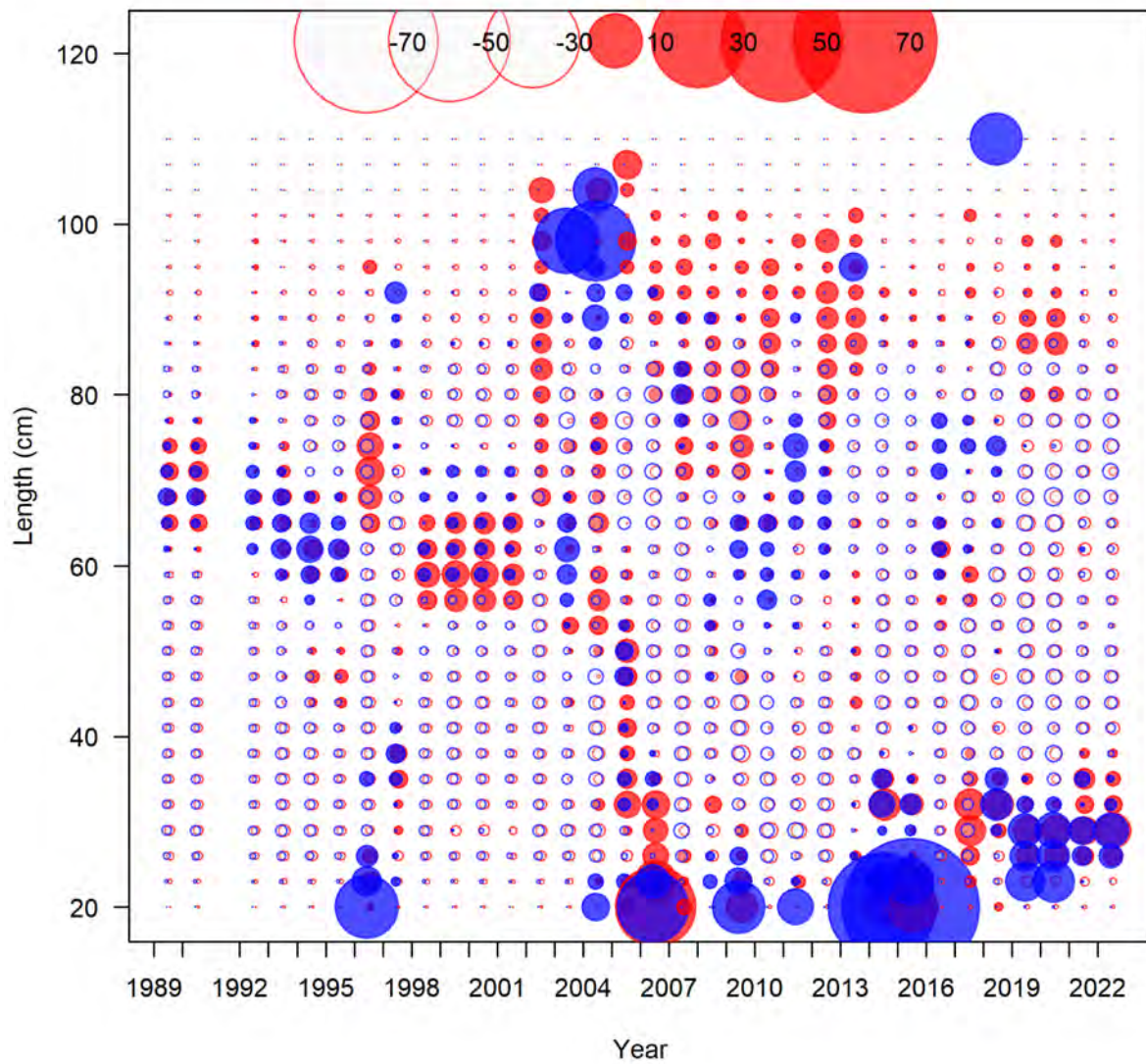


Figure 24: Pearson residuals for the fit to length compositions by year and sex for fleet 5: Discard_SMOT. Closed bubbles are positive residuals (observed > expected) and open bubbles are negative residuals (observed < expected).

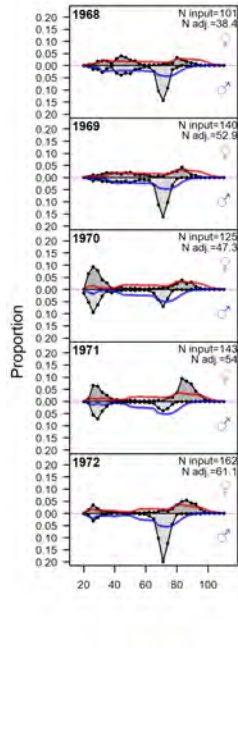


Figure 25: Fit to length compositions by year and sex for fleet 6: NEFSC_Spring_BTS_OFFSHORE_Y36.

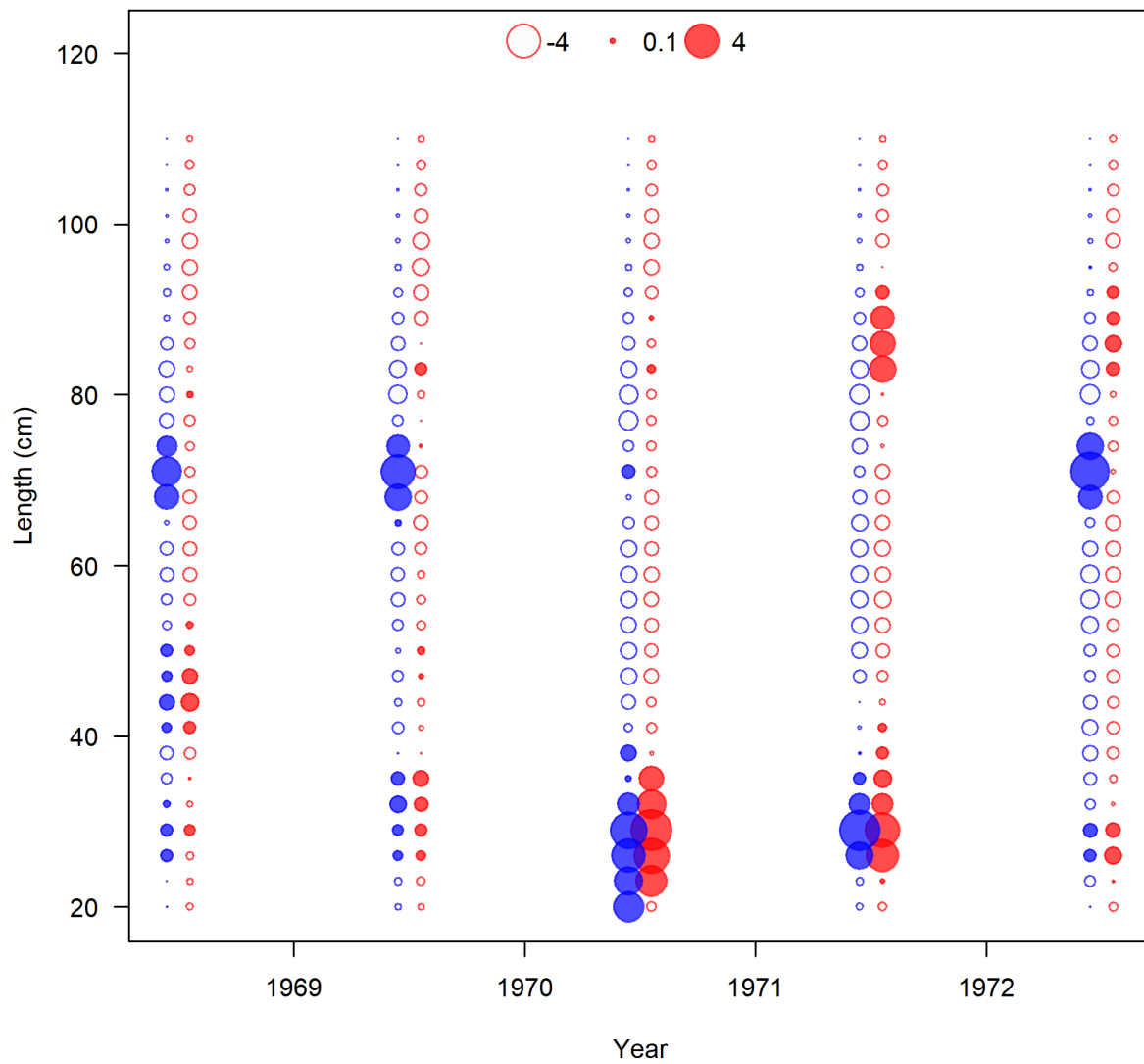


Figure 26: Pearson residuals for the fit to length compositions by year and sex for fleet 6: NEFSC_Spring_BTS_OFFSHORE_Y36. Closed bubbles are positive residuals (observed > expected) and open bubbles are negative residuals (observed < expected).

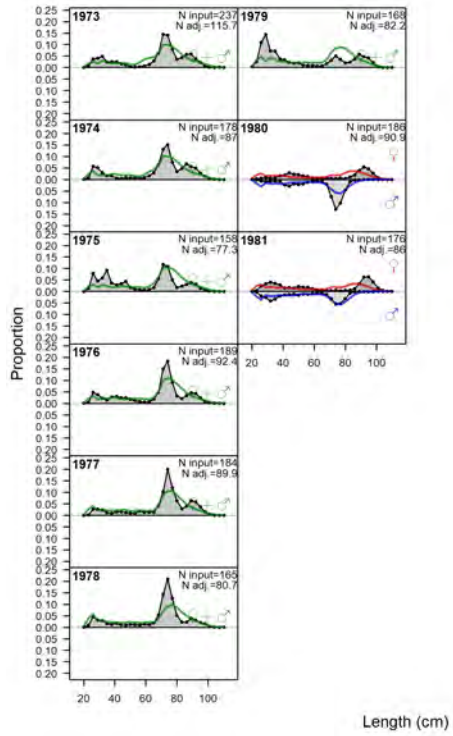


Figure 27: Fit to length compositions by year and sex for fleet 7: NEFSC_Spring_BTS_OFFSHORE_Y41.

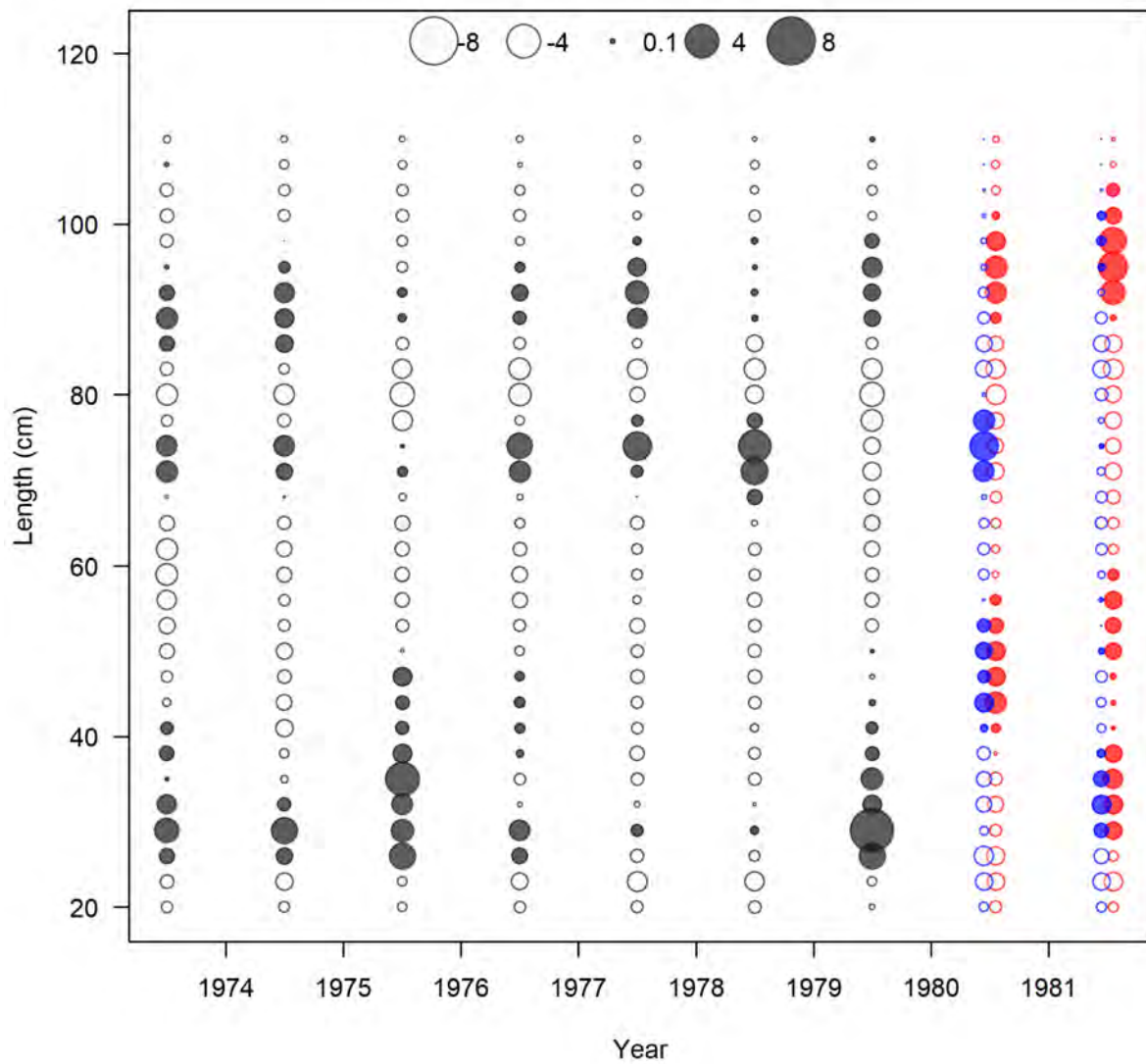


Figure 28: Pearson residuals for the fit to length compositions by year and sex for fleet 7: NEFSC.Spring.BTS.OFFSHORE.Y41. Closed bubbles are positive residuals (observed > expected) and open bubbles are negative residuals (observed < expected).

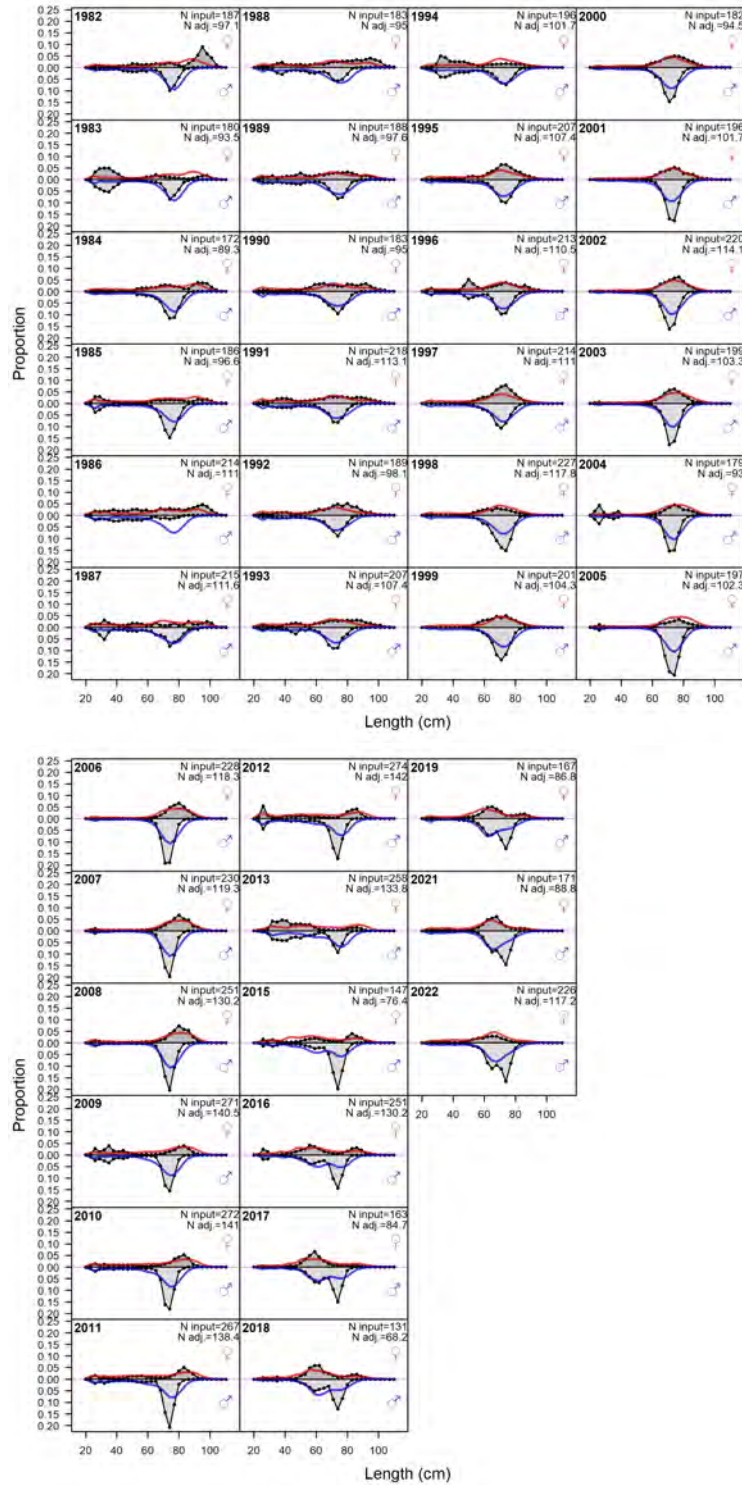


Figure 29: Fit to length compositions by year and sex for fleet 8: NEFSC_Spring_BTS.

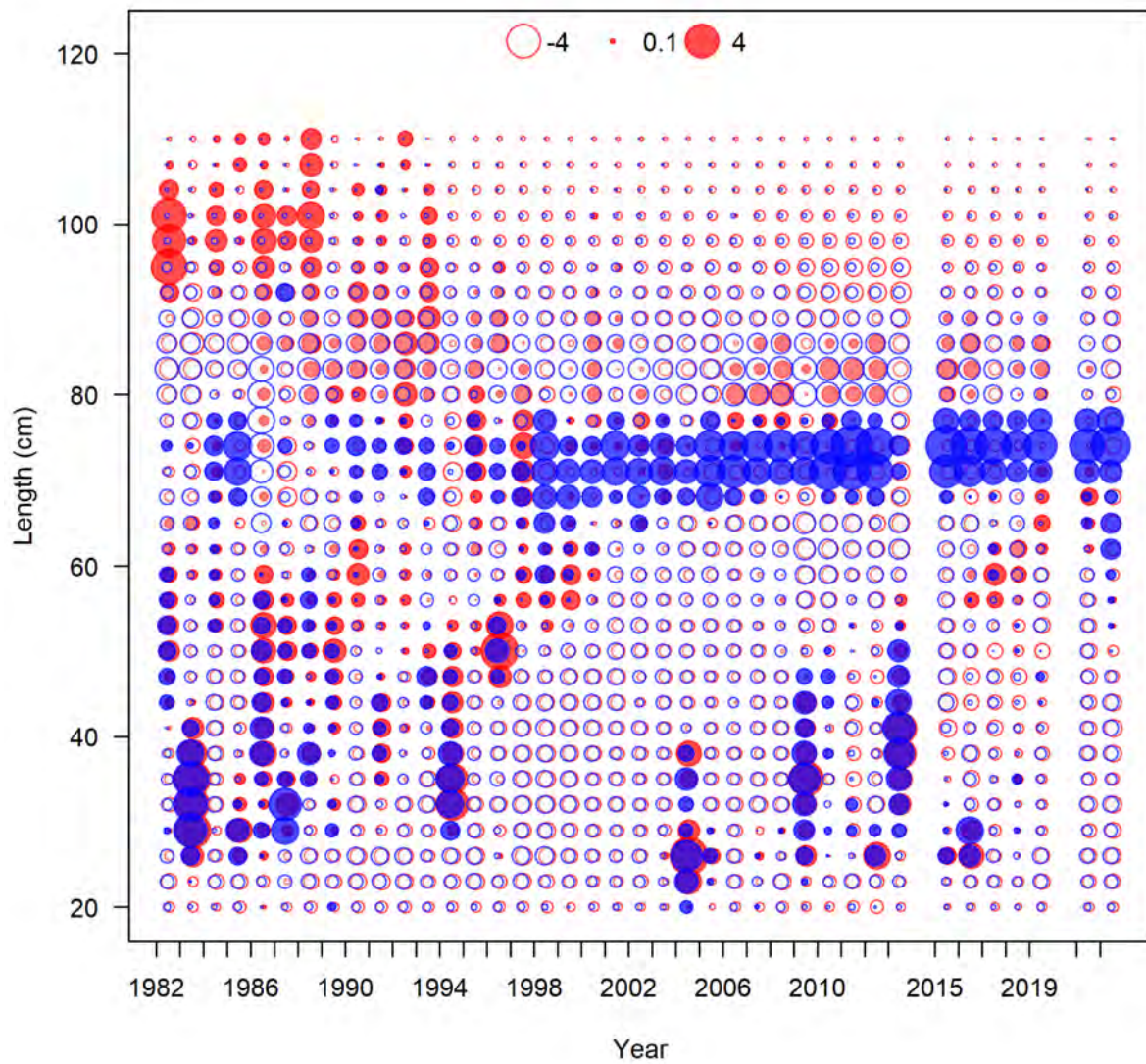


Figure 30: Pearson residuals for the fit to length compositions by year and sex for fleet 8: NEFSC_Spring_BTS. Closed bubbles are positive residuals (observed > expected) and open bubbles are negative residuals (observed < expected).

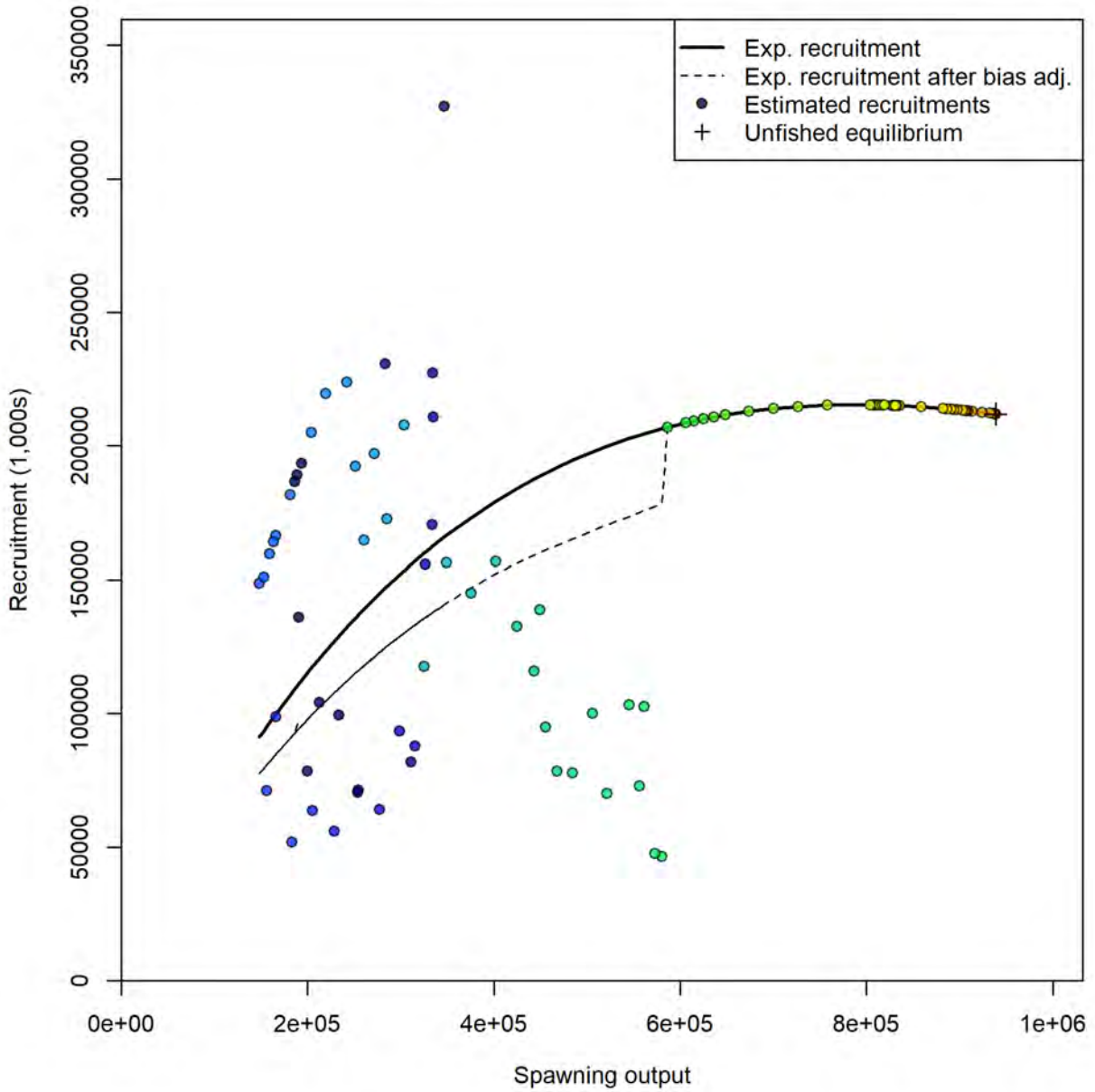


Figure 31: Fixed survivorship spawner-recruitment relationship, estimated age-0 recruitment (1,000s), and estimated spawning output (1,000s) for Atlantic spiny dogfish.

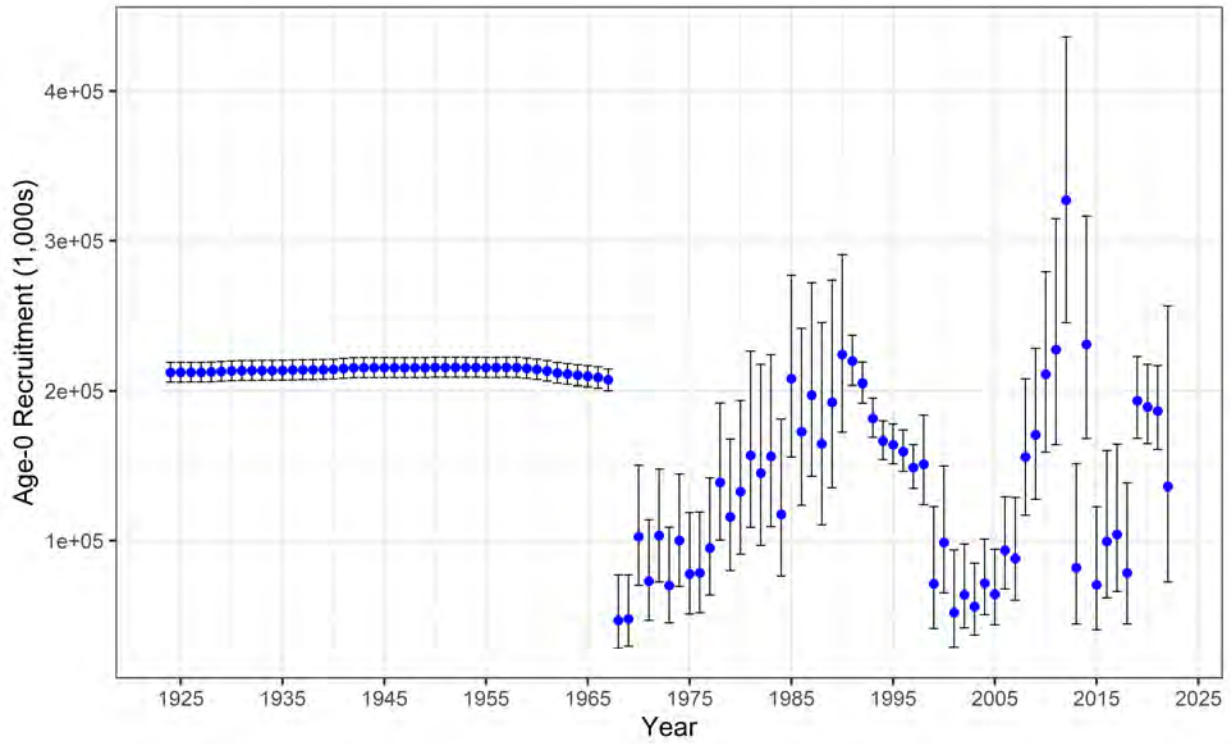


Figure 32: Estimated age-0 recruitment (1,000s) with $\sim 95\%$ asymptotic intervals from 1924 to 2022 for Atlantic spiny dogfish.

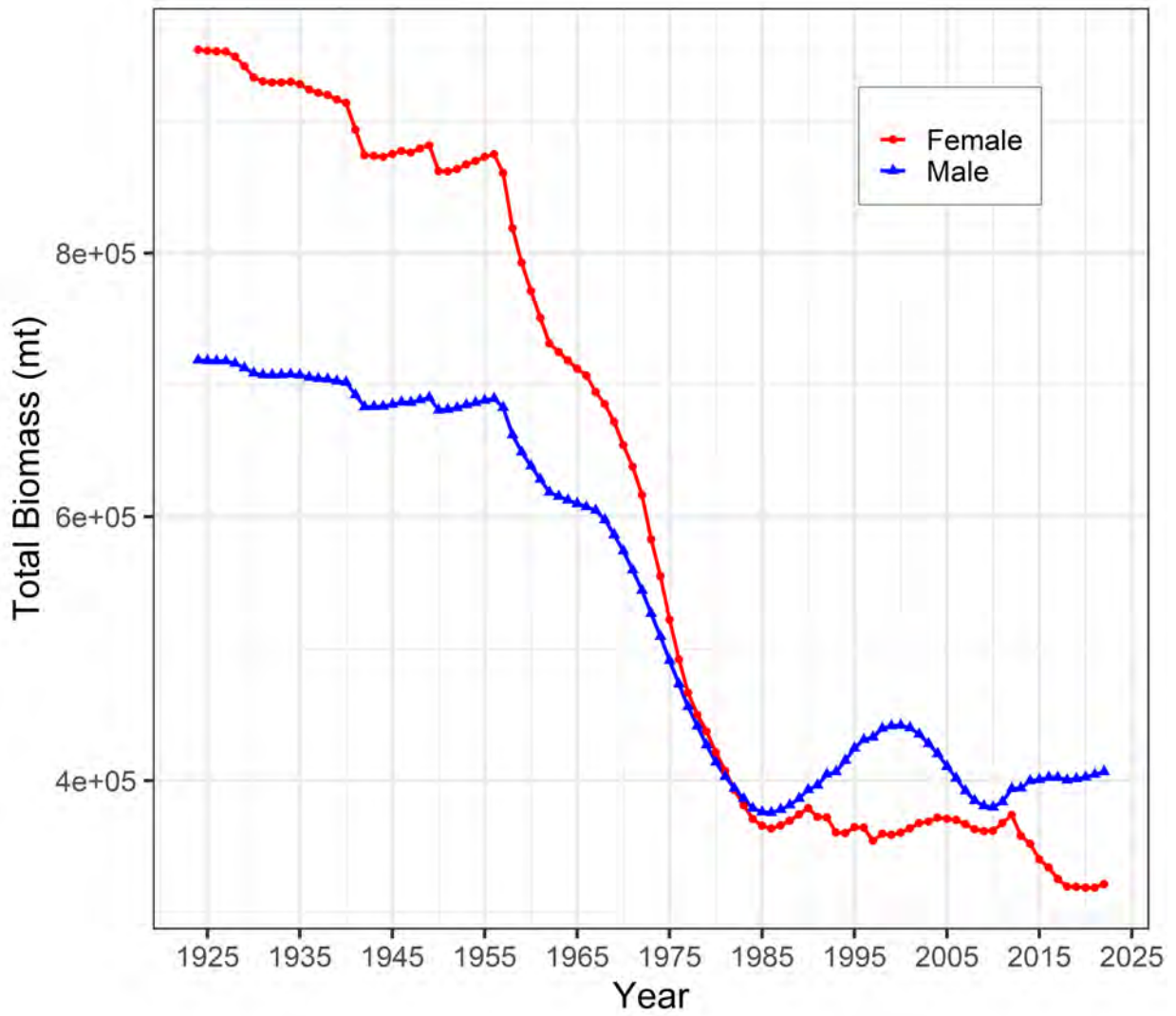


Figure 33: Estimated total biomass (mt) by sex from 1924 to 2022 for Atlantic spiny dogfish.

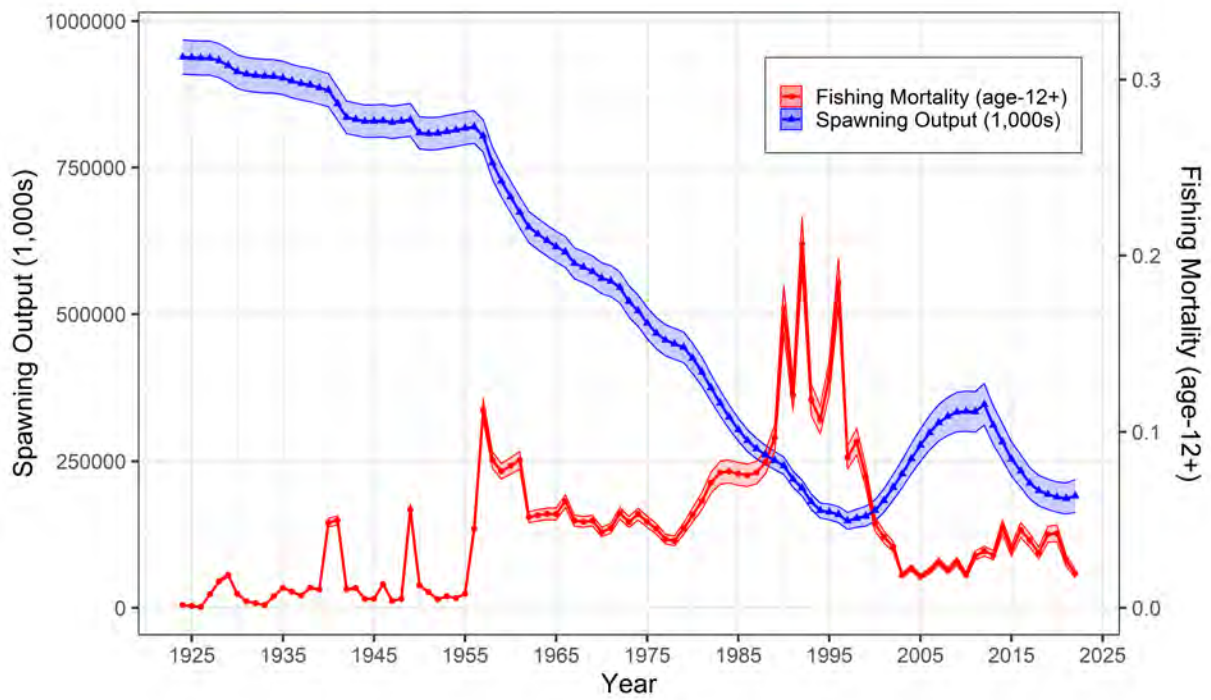


Figure 34: Estimated spawning output and fishing mortality (age-12+) with $\sim 95\%$ asymptotic intervals from 1924 to 2022 for Atlantic spiny dogfish.

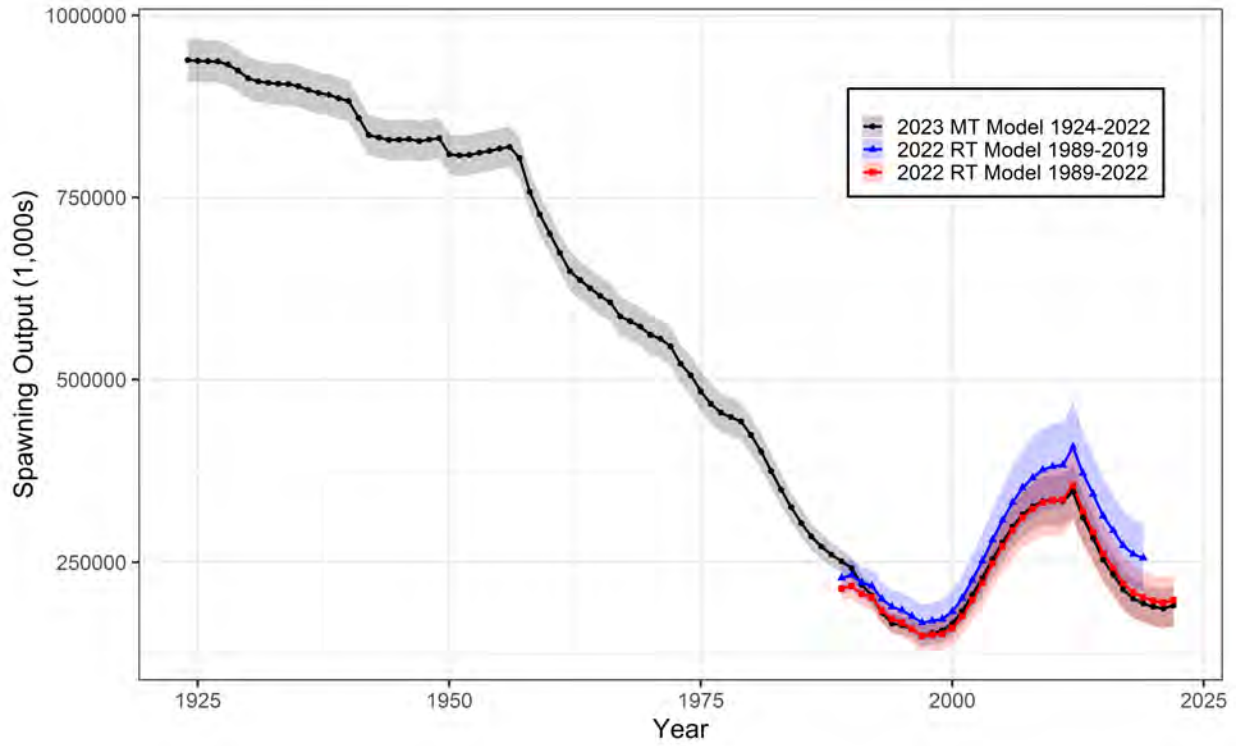


Figure 35: Spawning output (1,000s) with $\sim 95\%$ asymptotic intervals estimated using the original 2022 research track model (1989-2019), updated 2022 research track model (1989-2022), and 2023 management track model (1924-2022).

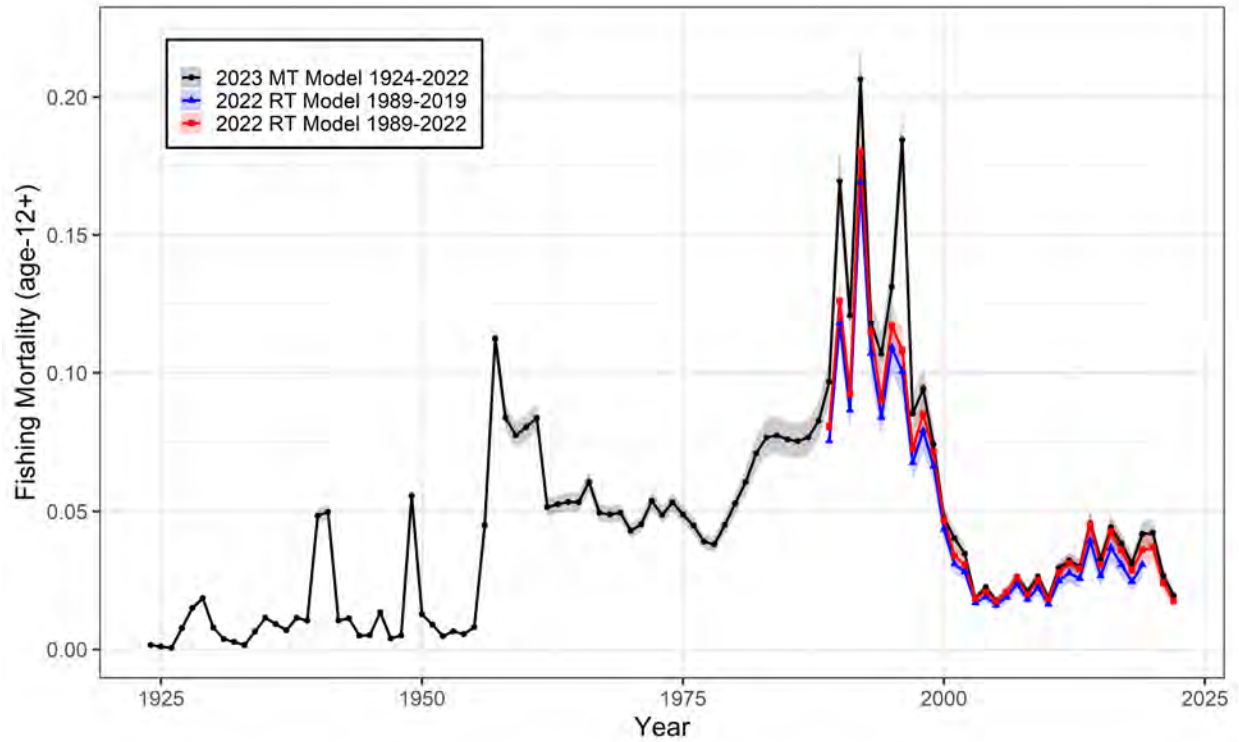


Figure 36: Fishing mortality (age-12+) with $\sim 95\%$ asymptotic intervals estimated using the original 2022 research track model (1989-2019), updated 2022 research track model (1989-2022), and 2023 management track model (1924-2022).

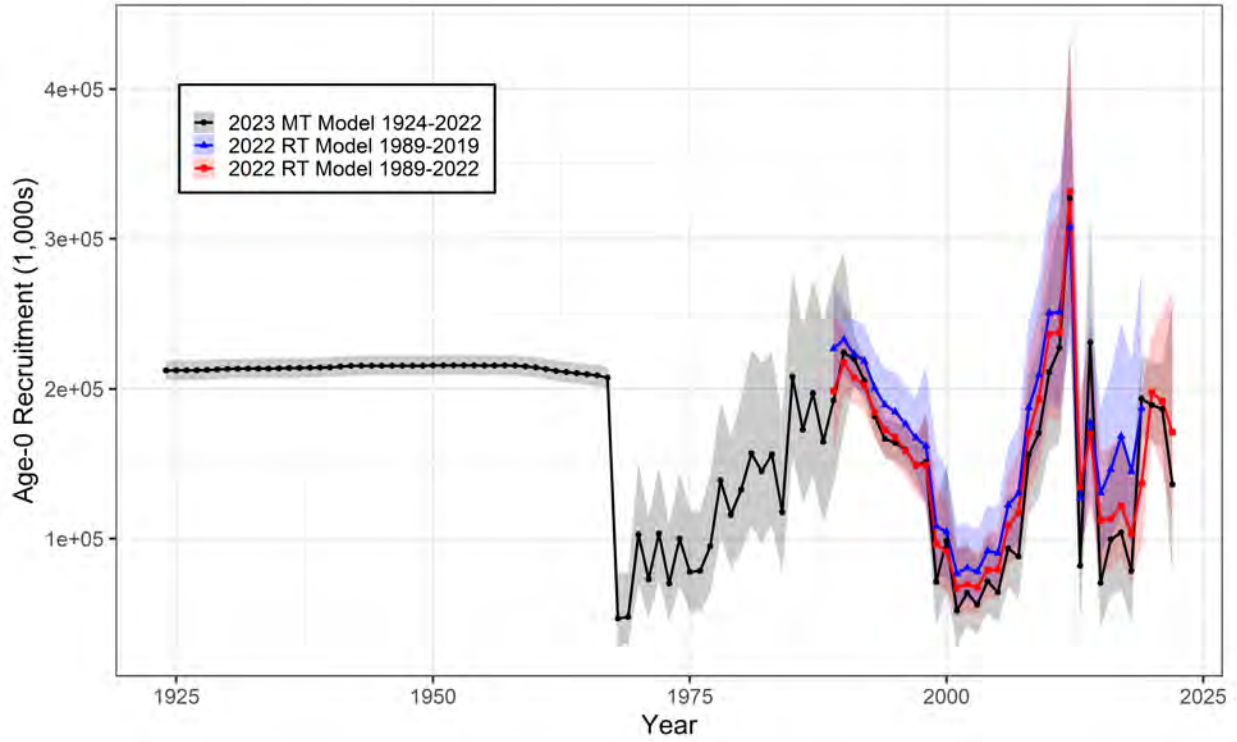


Figure 37: Age-0 recruitment (1,000s) with $\sim 95\%$ asymptotic intervals estimated using the original 2022 research track model (1989-2019), updated 2022 research track model (1989-2022), and 2023 management track model (1924-2022).

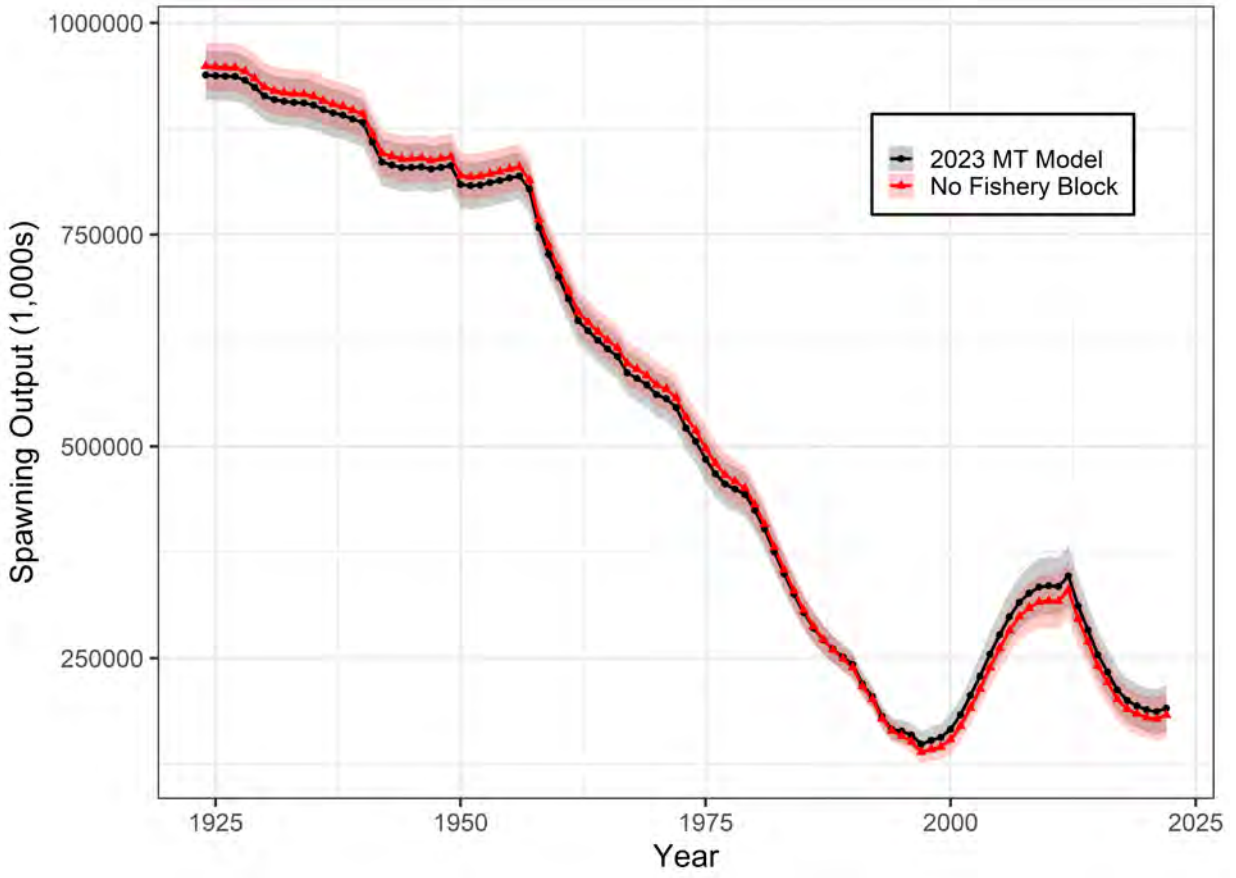


Figure 38: Spawning output (1,000s) with $\sim 95\%$ asymptotic intervals estimated with and without the fishery block assumption.

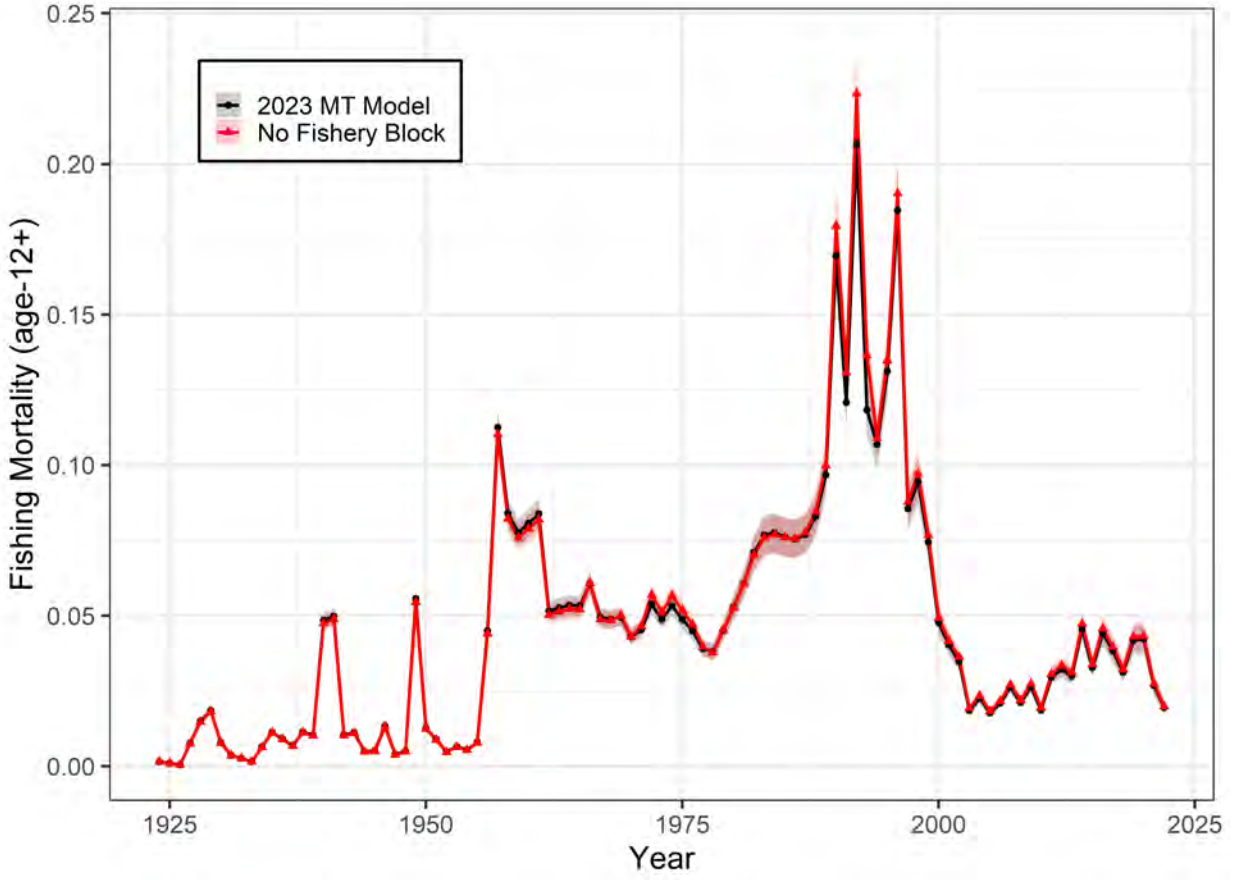


Figure 39: Fishing mortality (age-12+) with $\sim 95\%$ asymptotic intervals estimated with and without the fishery block assumption.

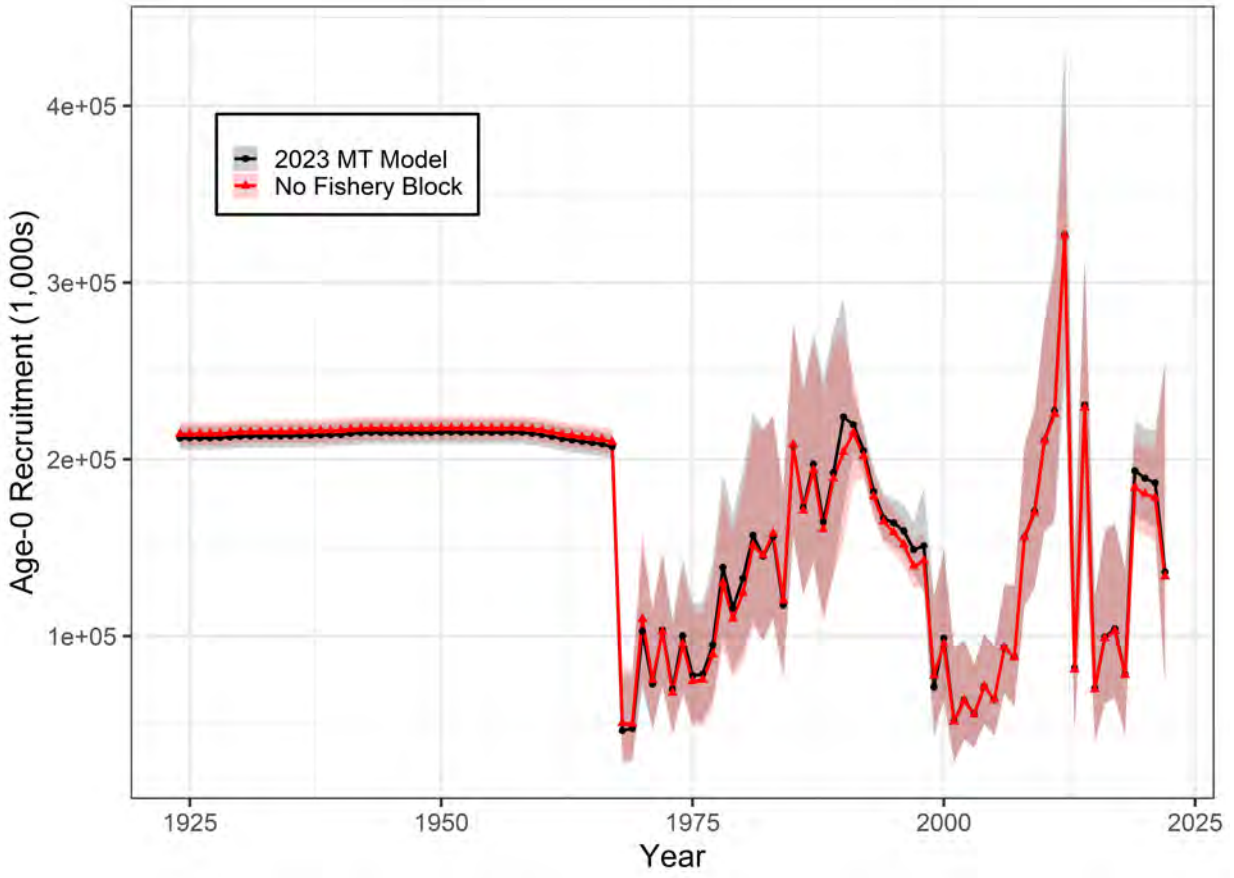


Figure 40: Age-0 recruitment (1,000s) with $\sim 95\%$ asymptotic intervals estimated with and without the fishery block assumption.

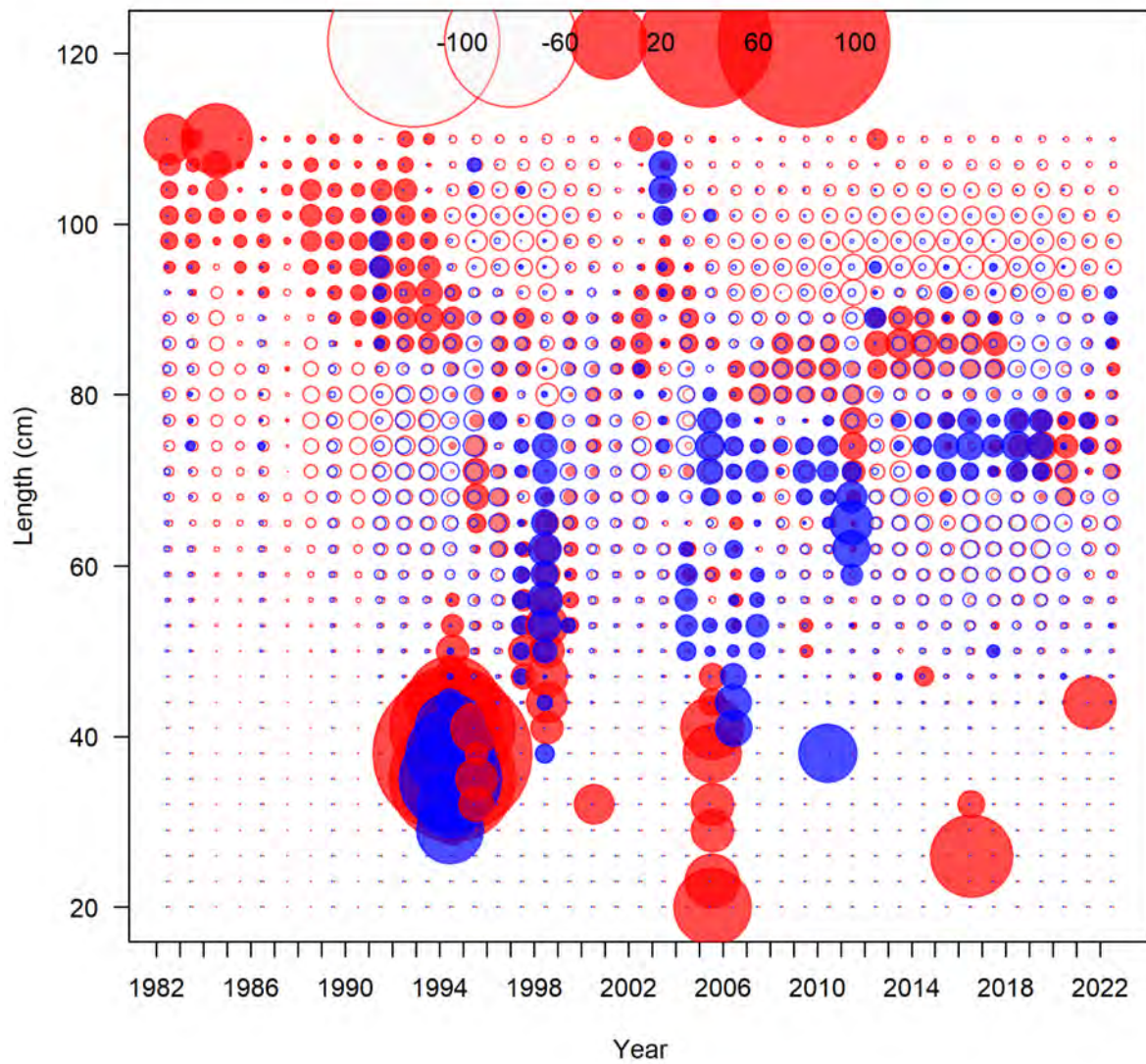


Figure 41: Pearson residuals for the fit to length compositions by year and sex for fleet 1: Landings_SGN_Rec_Others using the model without assuming a fishery block. Closed bubbles are positive residuals (observed > expected) and open bubbles are negative residuals (observed < expected).

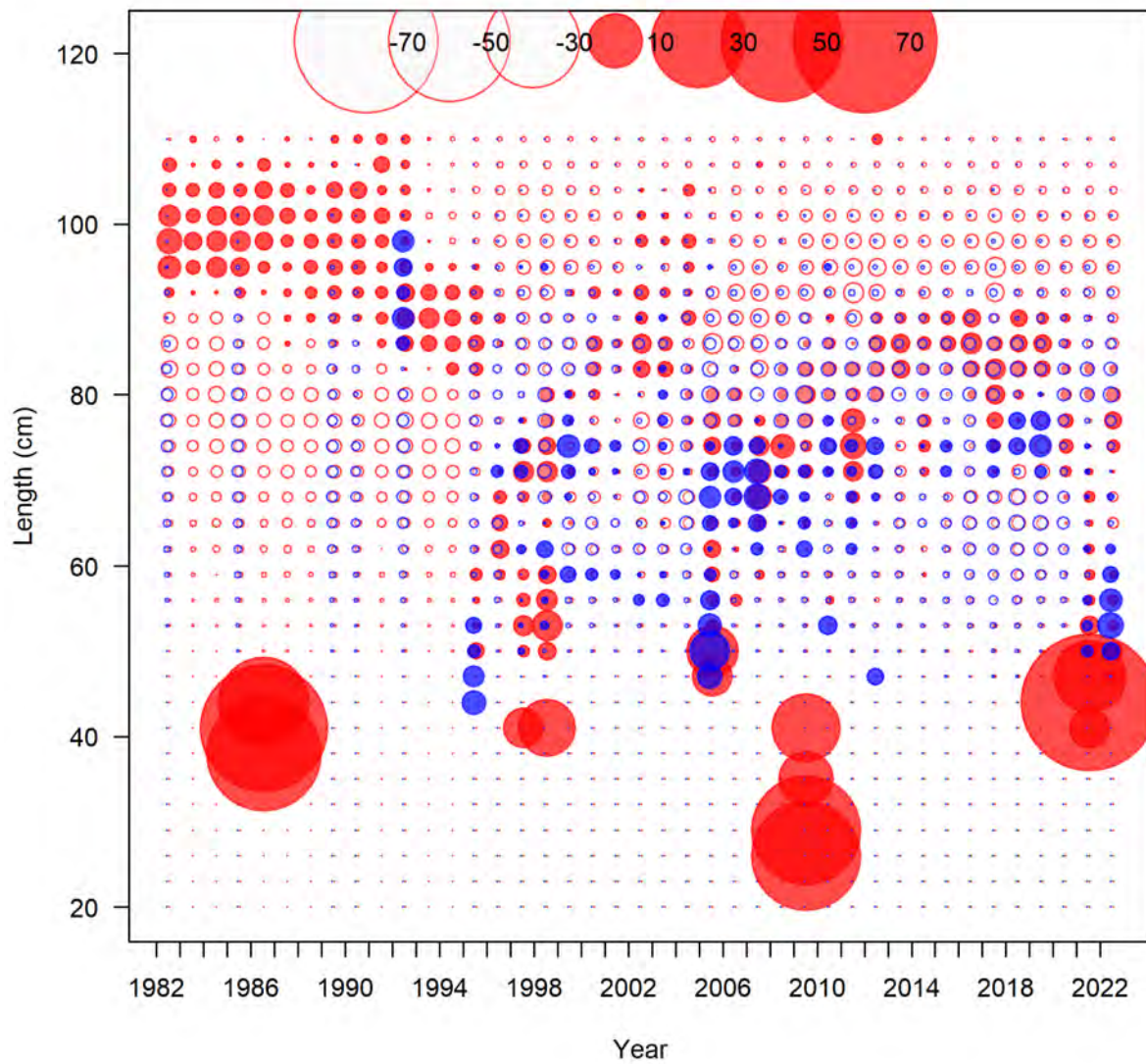


Figure 42: Pearson residuals for the fit to length compositions by year and sex for fleet 2: Landings_LL_OT_Foreign using the model without assuming a fishery block. Closed bubbles are positive residuals (observed > expected) and open bubbles are negative residuals (observed < expected).

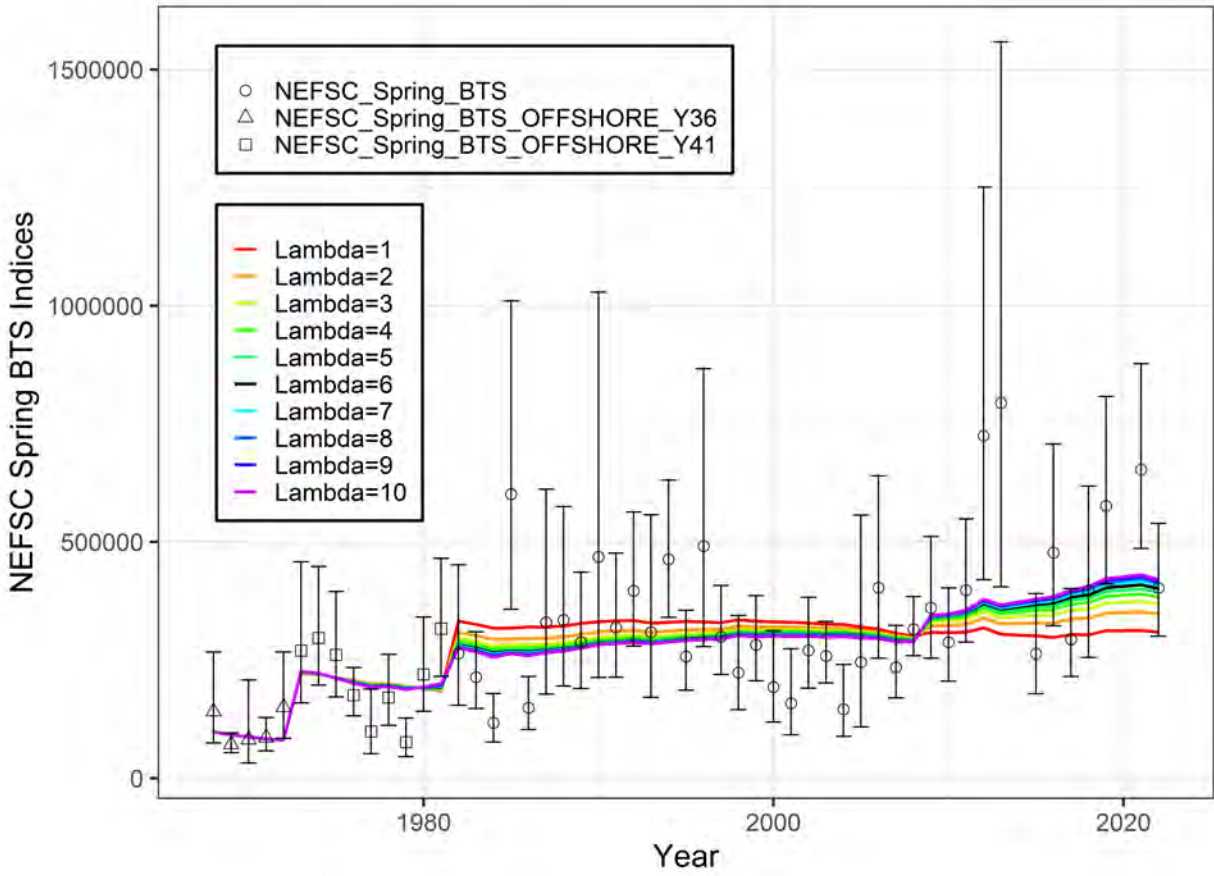


Figure 43: Survey indices with $\sim 95\%$ asymptotic intervals for fleets 6-8 estimated with different likelihood weights for survey indices.

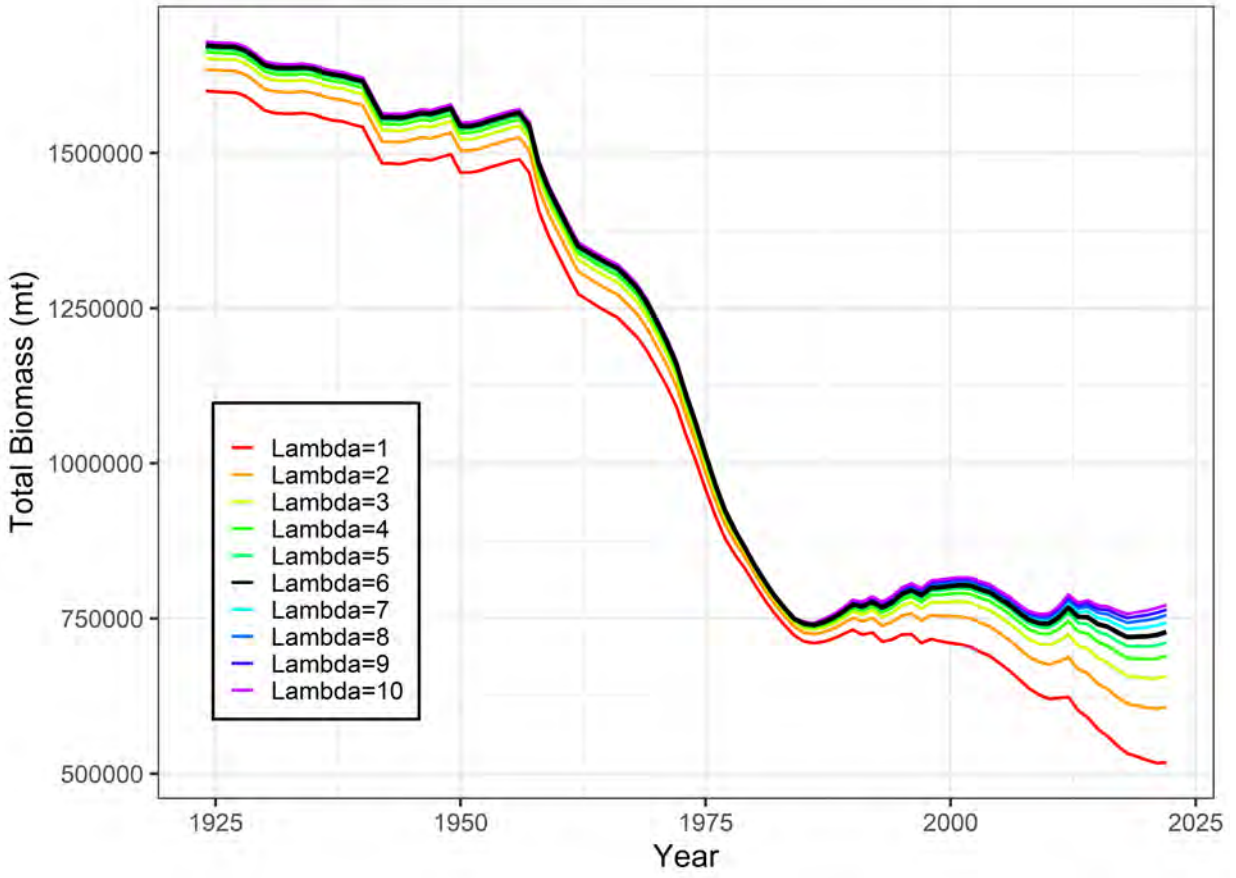


Figure 44: Total biomass (mt) estimated with different likelihood weights for survey indices.

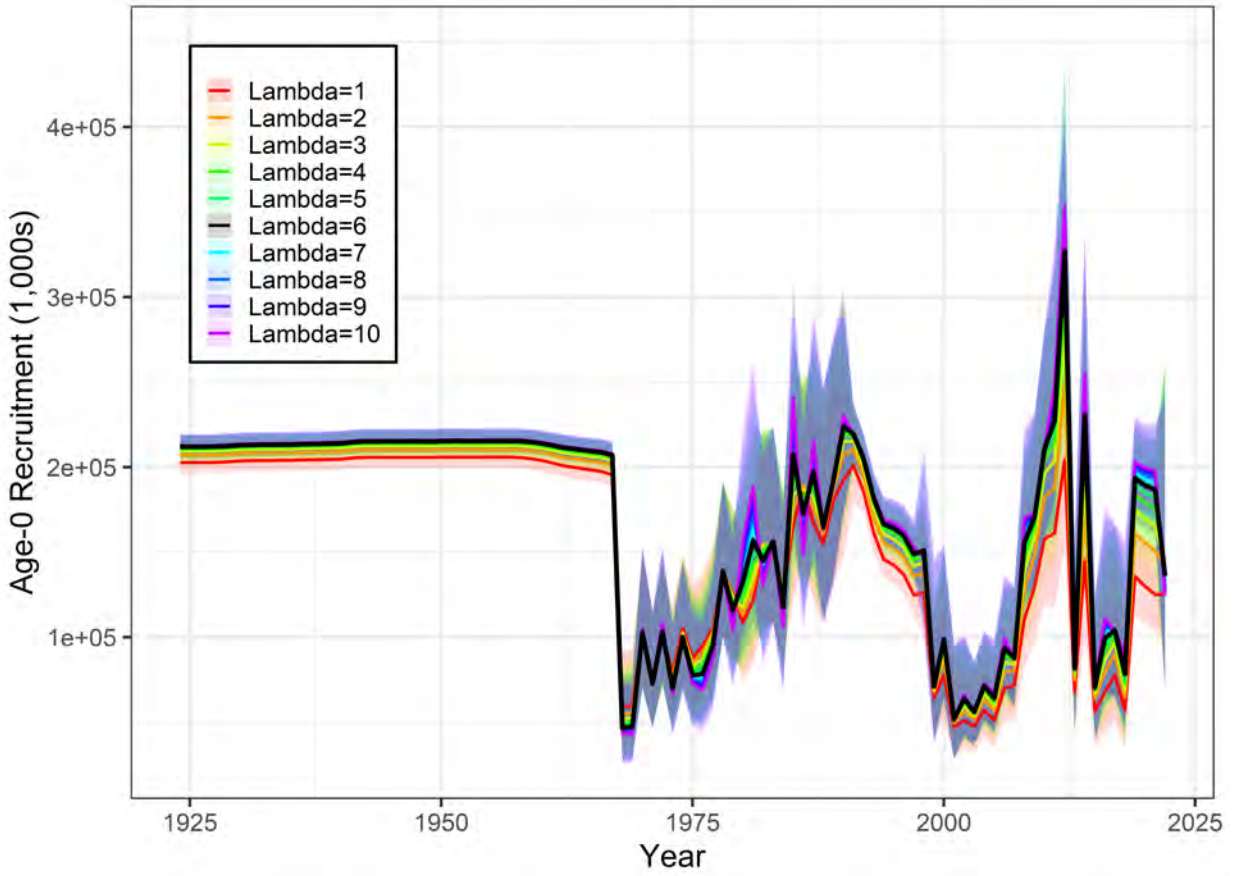


Figure 45: Age-0 recruitment (1,000s) with $\sim 95\%$ asymptotic intervals estimated with different likelihood weights for survey indices.

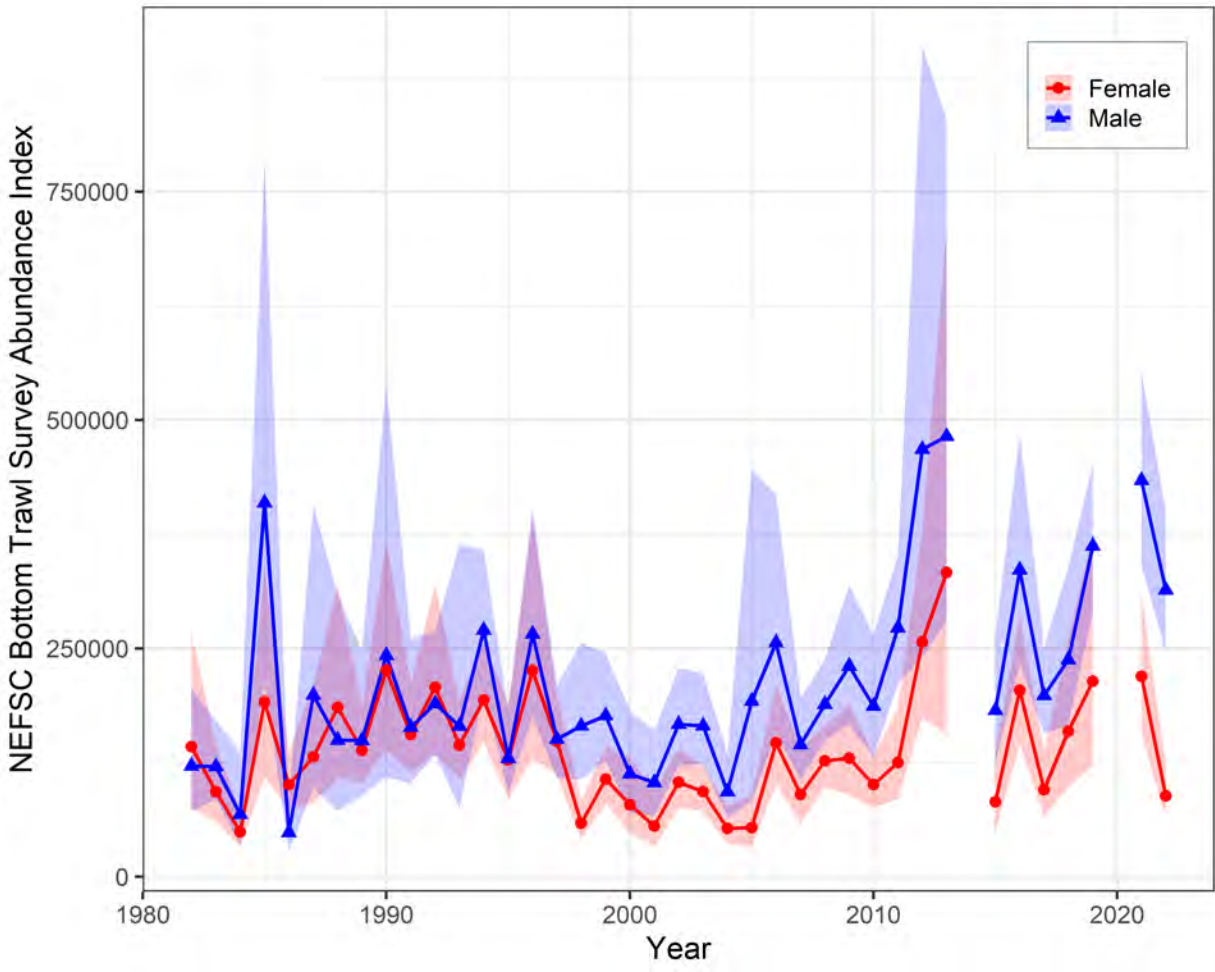


Figure 46: NEFSC spring bottom trawl survey abundance index with $\sim 95\%$ asymptotic intervals by sex for fleet 8.

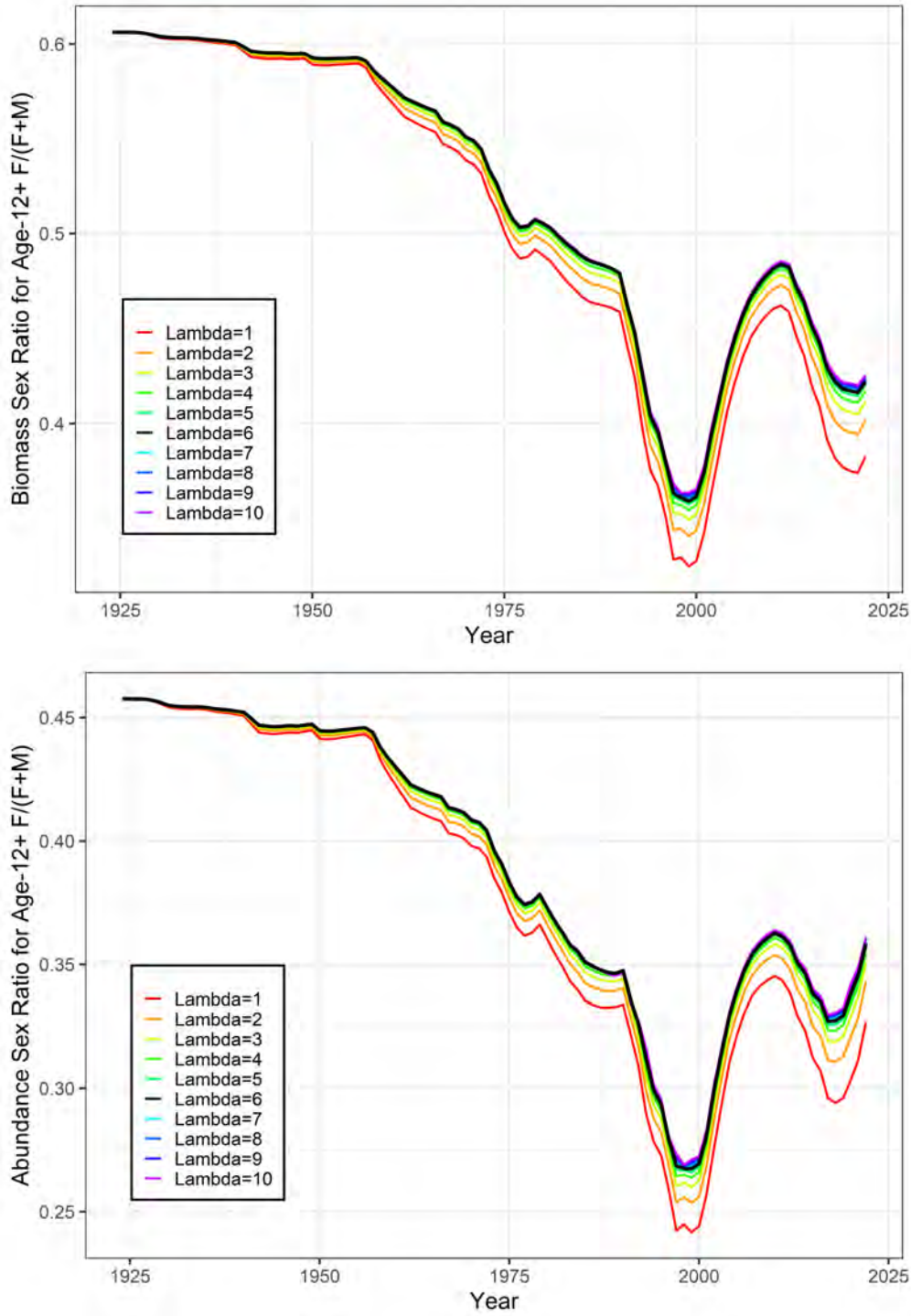


Figure 47: Female sex ratio (female/total) calculated using the estimated age-12+ numbers (top) and biomass (bottom) by likelihood weights for survey indices.

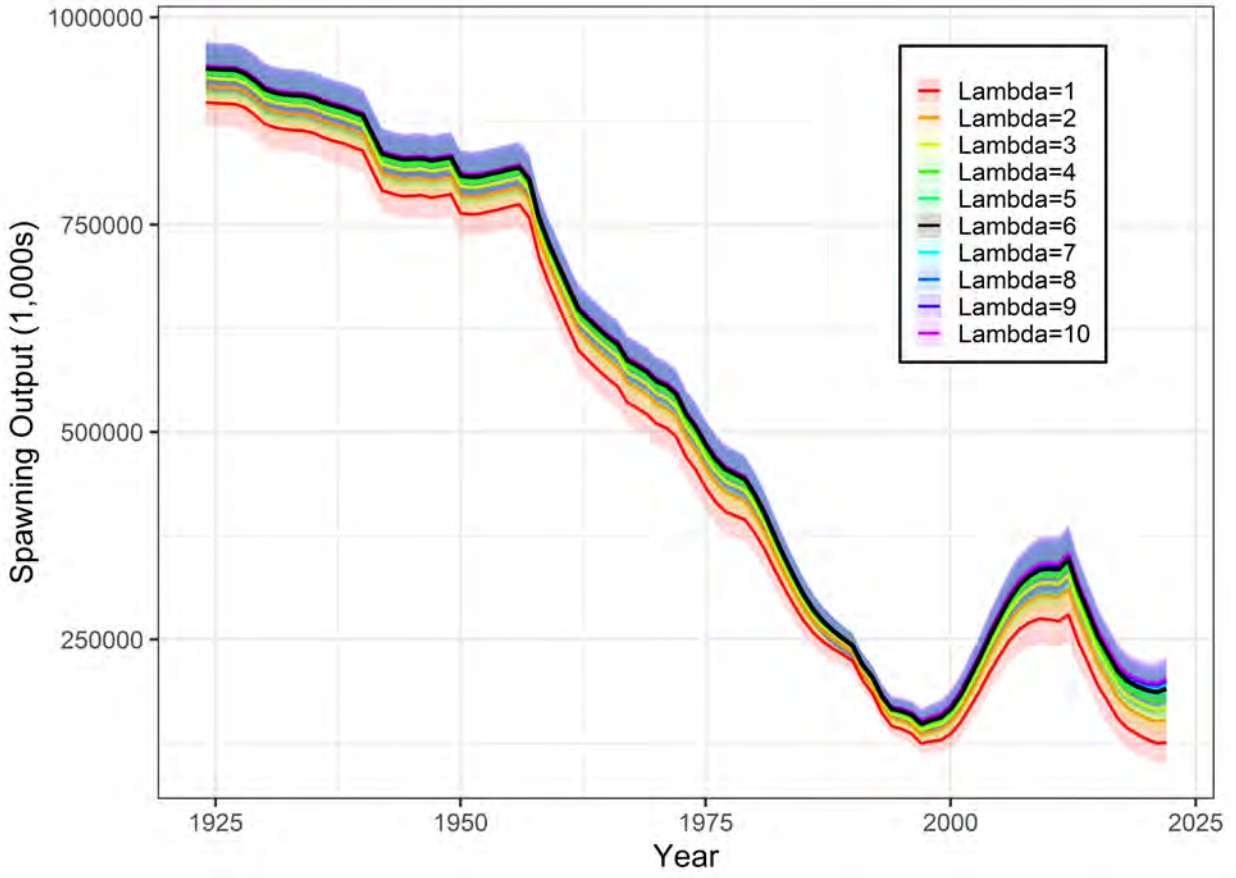


Figure 48: Spawning output (1,000s) with $\sim 95\%$ asymptotic intervals estimated with different likelihood weights for survey indices.

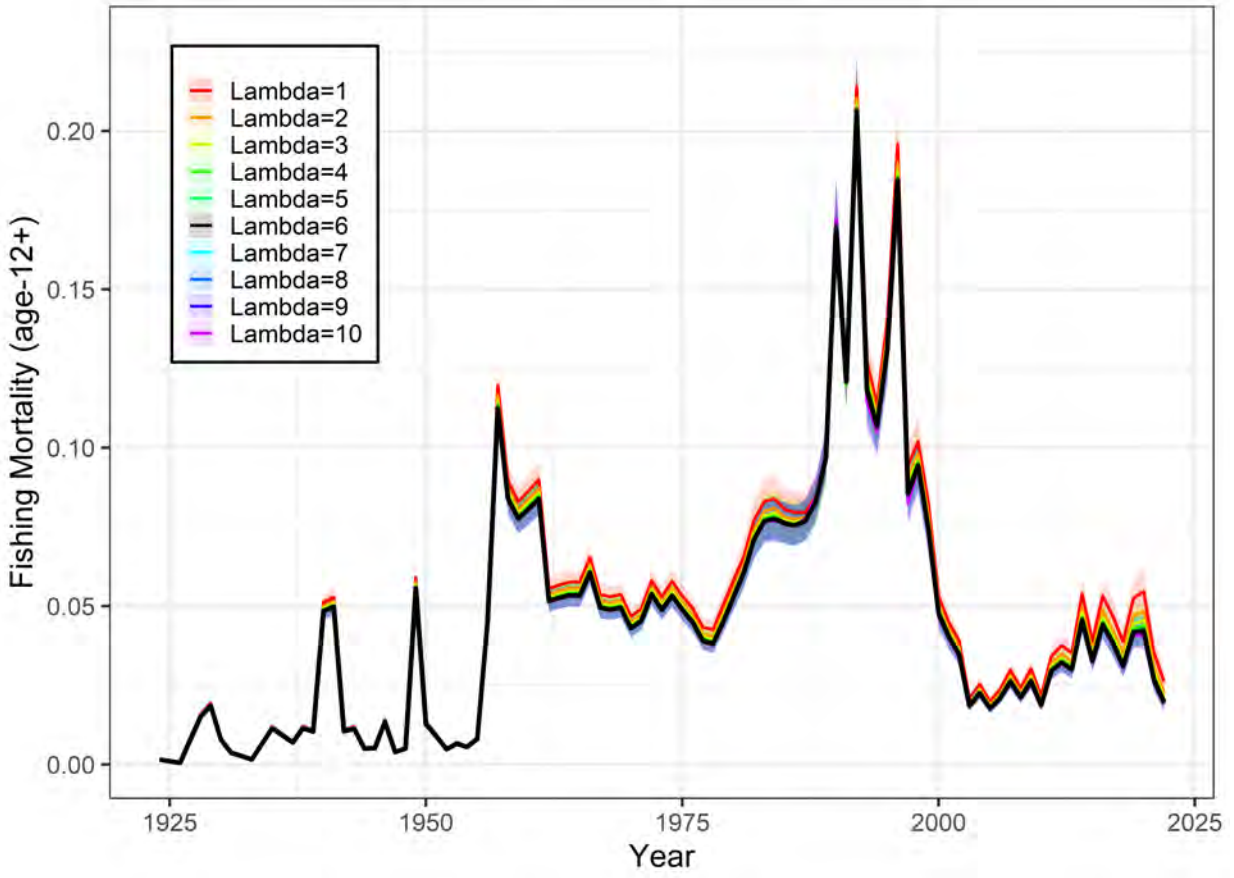


Figure 49: Fishing mortality (age-12+) with $\sim 95\%$ asymptotic intervals estimated with different likelihood weights for survey indices.

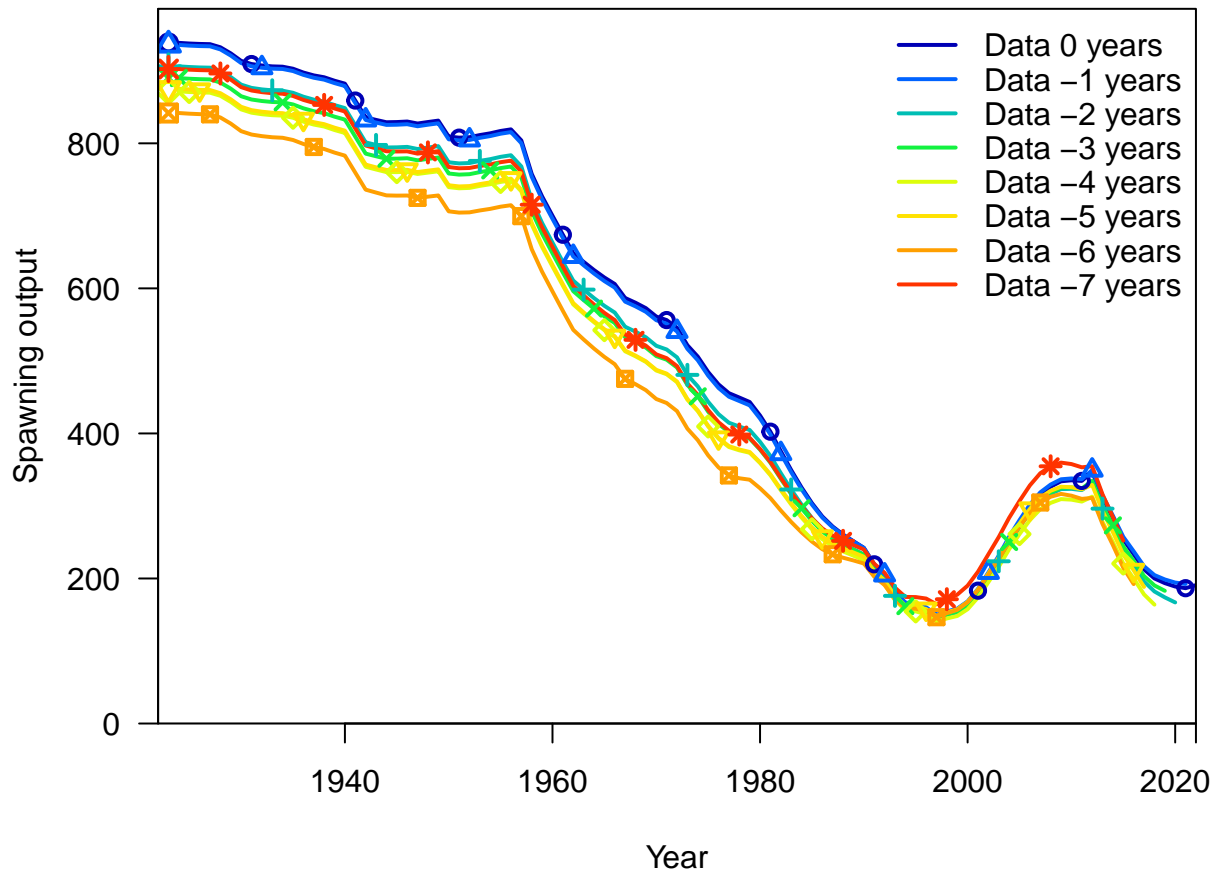


Figure 50: Retrospective plot for spawning output (1,000s).

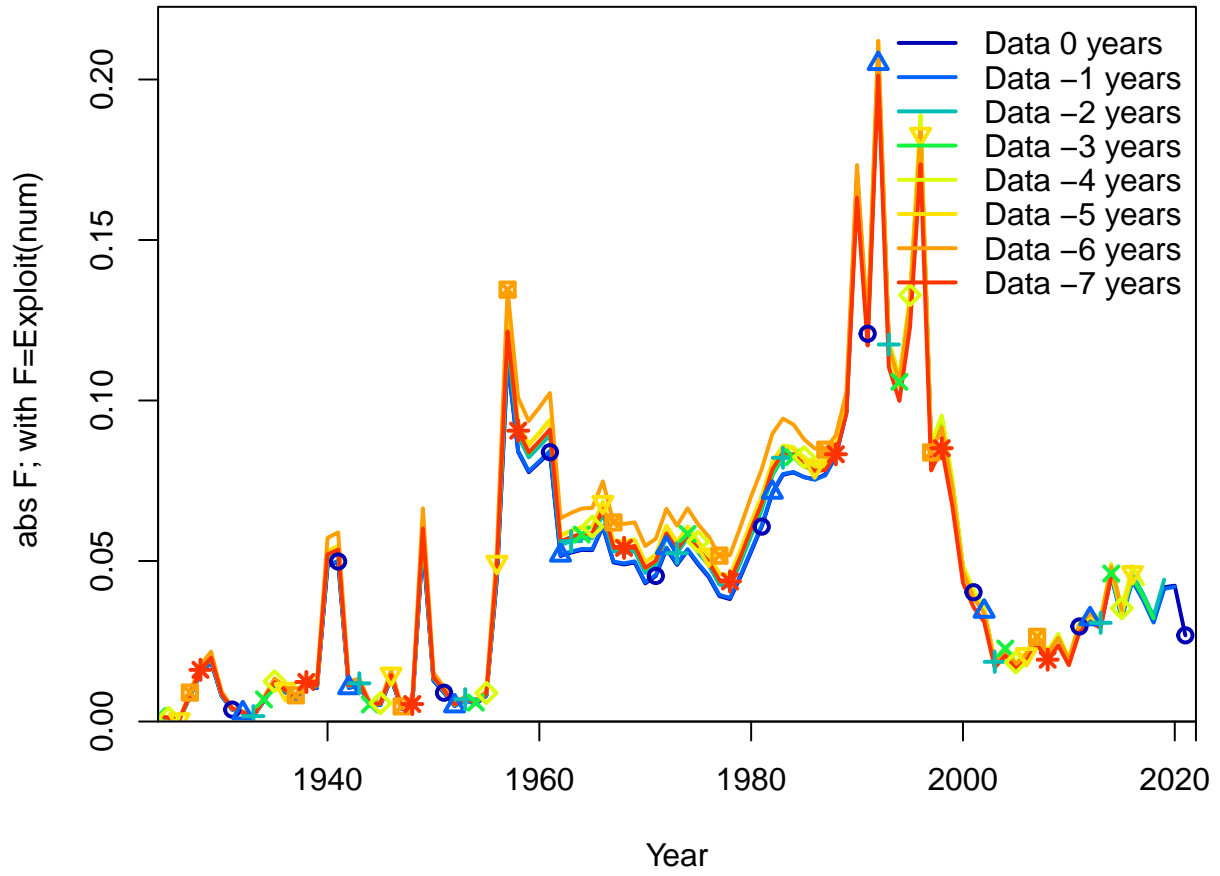


Figure 51: Retrospective plot for fishing mortality (age-12+).



December 2023 Council Meeting Summary

The Mid-Atlantic Fishery Management Council met December 12-14, 2023, in Philadelphia, PA. Presentations, briefing materials, motions, and webinar recordings are available at <http://www.mafmc.org/briefing/december-2023>.

HIGHLIGHTS

During this meeting, the Council:

- Reviewed analysis of several summer flounder commercial mesh regulations and agreed to develop a framework/addendum to further consider potential changes to the Small Mesh Exemption Program and the flynet exemption*
- Approved the use of regional conservation equivalency to achieve the required 28% reduction in recreational harvest of summer flounder in 2024-2025*
- Agreed that the states will work through the Commission process to achieve the required 10% reduction in the recreational harvest of scup in 2024-2025*
- Recommended removing the previously-adopted closure of the recreational scup fishery in federal waters from January 1-April 30 (resulting in a year-round open season in federal waters)*
- Approved status quo recreational black sea bass measures for 2024*
- Modified the preliminary range of alternatives for the Summer Flounder, Scup, Black Sea Bass, and Bluefish Recreational Measures Setting Process Framework/Addenda
- Approved a Guidance Document for Council review of Exempted Fishing Permit (EFP) applications for species designated as Ecosystem Components through the Unmanaged Forage Amendment
- Adopted spiny dogfish specifications 2024-2026, including a 10.7-million-pound commercial quota for 2024
- Adopted Atlantic mackerel specifications for 2024-2025, including a 1.9-million-pound commercial quota for both years
- Reviewed the golden tilefish Individual Fishing Quota program review and initiated a 30-day public comment period
- Approved the 2024 Implementation Plan
- Received a presentation from the Responsible Offshore Science Alliance (ROSA)

** Items denoted with an asterisk (*) were undertaken during joint meetings with the Atlantic States Marine Fisheries Commission's Summer Flounder, Scup, Black Sea Bass Management Board or Interstate Fisheries Management Program Policy Board*

Summer Flounder Commercial Mesh Size Regulations and Exemptions

The Council met jointly with the Atlantic States Marine Fisheries Commission's Summer Flounder, Scup, and Black Sea Bass Management Board (Board) to review analysis of, and public input on, several summer flounder commercial mesh regulations, including: 1) the current 5.5-inch diamond and 6.0-inch square minimum mesh size, 2) the summer flounder Small Mesh Exemption Program (SMEP), and 3) the summer flounder flynet exemption.

The Council and Board recommended no change to the current summer flounder minimum mesh sizes, due to the lack of sufficient evidence to suggest a change is warranted. They agreed that additional selectivity studies should

be considered as a research priority, including exploring the selectivity of a wider range of square mesh sizes and further comparing selectivity between square and diamond mesh.

The Council and Board also recommended development of a framework/addendum to further consider potential changes to the two mesh exemptions as a priority in 2024. Specifically, this action would consider revisions to the definition of a flynet as well as modifications to the western boundary of the small-mesh exemption area. The changes are intended to be implemented by November 1, 2024, if possible.

Summer Flounder, Scup, and Black Sea Bass Recreational Management Measures

The Council and Board also adopted recreational management measures (i.e., bag, size, and season limits) for summer flounder, scup, and black sea bass. This was the second year of setting measures under the Percent Change Approach, and the first year of setting measures for two-year cycles for summer flounder and scup. Black sea bass measures were set for 2024 only due to the timing of the management track assessment.

The Percent Change Approach uses a comparison of the RHL to an estimate of expected harvest, in addition to stock size, to determine if measures should be restricted, liberalized, or remain unchanged for the next two years.

Prior to their deliberations for each species, the Council and Board received a brief overview of the Recreation Demand Model (RDM). The RDM was developed by the Northeast Fisheries Science Center (NEFSC) to predict the effect of proposed recreational measures on angler satisfaction, fishing effort, recreational harvest, and recreational discards of summer flounder, scup, and black sea bass. The RDM was first used in setting 2023 measures and will be used again for the upcoming years.

2024-2025 Summer Flounder Recreational Measures

The Percent Change Approach requires a 28% reduction in recreational harvest of summer flounder in 2024-2025. This reduction is needed because the RHL for 2024-2025 (6.35 million pounds) falls below the confidence interval around projected harvest for these years, and the stock size is below the target level. Measures will be restricted to achieve the full 28% reduction in 2024 and then will remain unchanged in 2025 unless new information suggests a major change in the expected impacts of those measures on the stock or the fishery.

The Council and Board also approved the use of regional conservation equivalency in 2024-2025. Non-preferred coastwide measures, which are written into the federal regulations but waived in favor of state measures, include an 18.5-inch minimum size, 3 fish possession limit, and open season from May 8-September 30. Precautionary default measures include a 20-inch minimum size, 2 fish possession limit, and open season from July 1-August 31. These measures are only intended to be used for states/regions which do not comply with the conservation equivalency process. State waters measures will be determined through the Commission process in early 2024.

2024-2025 Scup Recreational Measures

A 10% reduction in recreational harvest of scup in 2024-2025 is required under the Percent Change Approach. This reduction is needed because the average RHL for 2024-2025 (12.51 million pounds) falls below the confidence interval around estimated harvest under status quo measures for these years, and stock biomass is more than 150% of the target level. Measures will be restricted to achieve the full 10% reduction in 2024 and then will remain unchanged in 2025 unless new information suggests a major change in the expected impacts of those measures on the stock or the fishery. The Council and Board agreed that the 10% coastwide harvest reduction will be achieved by the states through the Commission process in early 2024.

The Council and Board revisited their previous decision to close the recreational scup fishery in federal waters from January 1 to April 30. The shortened season was recommended by the Council and Board in December 2022, but due to the timing of federal rule making, it is not expected to go into effect until 2024. During this meeting,

the Council and Board discussed concerns that some states may be disproportionately impacted by the federal waters closure. Staff presented an analysis of Vessel Trip Report (VTR) data which were used to estimate total recreational harvest during this time period. The analysis suggests the closure would have minimal impact on overall coastwide harvest given the limited recreational effort for scup that typically occurs between January and April. Based on this analysis and recommendations from the Monitoring Committee, the Council and Board recommended a year-round open season in federal waters for 2024-2025 to give the states greater flexibility when modifying measures to meet the 10% reduction. The Council and Board recommended no changes to the current 40 fish possession limit and 10-inch minimum size in federal waters.

2024 Black Sea Bass Recreational Measures

The Council and Board discussed the approach for recreational black sea bass management in 2024. Recreational measures for 2023 were set for a single year with the intent of setting 2024-2025 measures based on a 2023 management track assessment. However, this assessment was later delayed to 2024 to allow more time to fully develop a research track assessment.

The RDM indicates the confidence interval around the estimated 2024 harvest based on 2023 measures exceeds the 2024 RHL. Combined with the most recent estimate of biomass from the 2021 management track assessment (i.e., 210% of the target level), this would require a 10% reduction in harvest under the Percent Change Approach. However, the Percent Change Approach did not contemplate a situation where the RHL would be revised without updated stock assessment information, as was the case with the 2024 black sea bass RHL. The 2024 RHL is about 5% lower than the 2023 RHL due to three additional years of catch data in the calculations. As such, updated information is only available for one of the two factors that guide decision making under the Percent Change Approach (i.e., an updated comparison of the harvest estimate confidence interval to the RHL, but no updated biomass information). Therefore, the Council and Board agreed with the Monitoring Committee's recommendation to leave recreational black sea bass measures unchanged in 2024. This would treat 2024 as the second year in a two-year cycle with 2023. They noted that this is the only opportunity for unchanged measures across two years for black sea bass under the Percent Change Approach given the expected timing of management track assessments and the sunset of the Percent Change Approach after 2025. Measures for 2025 and 2026 will be set based on updated stock assessment information and updated runs of the RDM.

If states wish to consider slight season adjustments under this status quo approach (e.g., to maintain a Saturday opening), those proposals must be supported by additional runs of the RDM and approved by the Board.

The Council and Board also agreed to continue the use of conservation equivalency to waive federal waters measures in favor of state waters measures. Under the status quo approach, the non-preferred coastwide measures will remain a 15-inch minimum fish size, a 5 fish possession limit, and a May 15 – October 8 open season. Under conservation equivalency, these measures are waived in favor of state measures. The precautionary default measures will remain a 16-inch minimum fish size, a 2 fish possession limit, and a June 1 – August 31 open season. These measures are only intended for states/regions which do not comply with the conservation equivalency process.

Summer Flounder, Scup, Black Sea Bass and Bluefish Recreational Measures Setting Process Framework/Addenda

The Council met jointly with the ASMFC's Interstate Fisheries Management Program Policy Board (Policy Board) to receive an update on the Summer Flounder, Scup, Black Sea Bass, and Bluefish Recreational Measures Setting Process Framework/Addenda. The Council and Policy Board agreed to refine the preliminary range of alternatives by modifying the Biological Reference Point Approach and Biomass Based Matrix Approach alternatives such that measures will no longer be assigned to all bins the first time either approach is used through the specifications process. Over the next several months, the Fishery Management Action Team (FMAT)/Plan Development Team

(PDT) will continue to develop all alternatives under consideration, including providing greater detail on how measures would be set under the Biological Reference Point and Biomass Based Matrix Approaches.

Guidance Document for Council Review of Exempted Fishing Permit Applications for Unmanaged Forage Amendment Ecosystem Component Species

The Council reviewed and approved a Guidance Document for Council Review of Exempted Fishing Permit (EFP) Applications for Unmanaged Forage Amendment Ecosystem Component (EC) Species. The document is intended to establish a standard process for Council review of EFP applications for the 50+ species listed as EC species under the Unmanaged Forage Omnibus Amendment (Forage Amendment). Implemented in 2017, the Forage Amendment established a 1,700-pound possession limit for EC species in Mid-Atlantic Federal waters. The goal of this amendment was to prohibit the development of new and expansion of existing directed commercial fisheries for these species until the Council has had an adequate opportunity to assess the relevant scientific information and consider potential impacts. The Forage Amendment requires use of an EFP as a first step towards the Council considering allowing landings beyond the 1,700-pound possession limit. In addition to establishing a standardized process for EFP review, the guidance document is intended to communicate the Council’s priorities regarding EC species to prospective EFP applicants. The final document is available on the Council website at <https://www.mafmc.org/forage>.

Spiny Dogfish 2024-2026 Specifications

After reviewing advice from its Scientific and Statistical Committee (SSC) and considering input from the public, the Council adopted spiny dogfish specifications for the 2024-2026 fishing years. The Council’s recommendations are summarized in the table below.

	2024	2025	2026
	<i>Million pounds</i>		
Acceptable Biological Catch	15.7	16.1	16.5
Commercial Quota	10.7	11.0	11.2

The Council recommended no changes to the current federal trip limit of 7,500 pounds. These specifications are expected to keep the stock slightly above its target biomass. The 2023 management track assessment concluded that the spiny dogfish stock was neither overfished nor experiencing overfishing in 2022. However, due to the stock’s reduced productivity, these relatively low future catches are needed for the stock to stay at the target. The 2024 quota is an 11% decrease compared to the 2023 quota and a 64% decrease compared to the 2022 quota. During the meeting, several fishing industry participants expressed serious concerns about the potential consequences of lower quotas.

A key debated component of setting the commercial quota was the set-aside for dead commercial discards. The Council considered several approaches and ultimately decided to set aside the same amount in 2024 as the assessment estimated in 2022, the most recent year available – about 4.7 million pounds (2,134 MT). The Council noted that there has been a downward trend in discards over the last 10 years, making the most recently estimated discard amount a reasonable proxy for near-future discards. To account for the assessment’s prediction of slight increases in biomass for 2025 and 2026, the Council voted to set aside slightly more discards in those years (about 4.8 million pounds and 4.9 million pounds respectively). There are no recreational regulations, but recreational mortality is accounted for when calculating the commercial quota.

Because the spiny dogfish fishery is managed jointly, the New England Fishery Management Council must also make recommendations for spiny dogfish specifications at its upcoming meeting in January 2024.

2024-2025 Atlantic Mackerel Specifications

After reviewing advice from the SSC and considering input from the public, the Council adopted Atlantic mackerel specifications for the 2024-2025 fishing years. The Council’s recommendations are summarized in the table below.

	2024	2025
	<i>Metric Tons</i>	
Acceptable Biological Catch	3,200	3,200
Commercial Quota	868	868

These specifications will replace the preliminary measures approved by the Council in August. As requested by the Council, the SSC provided two sets of ABC recommendations – one using a “varying” approach, which would set the ABC lower in 2024 and higher in 2025, and one using an “averaged” approach, which would produce an average ABC for both years. The Council ultimately selected the averaged approach, resulting in ABCs of 3,200 MT for both years. After accounting for expected Canadian catch, U.S. recreational catch, and U.S. commercial discards, the Council recommended setting the commercial quota at 868 metric tons (1.9 million pounds) for both years. Given the low quota, the commercial fishery will be limited to mostly incidental landings. To constrain catch to the very low quotas while avoiding excessive discarding, the Council recommended setting an initial trip limit of 20,000 pounds for limited access permits and 5,000 pounds for open access permits. Once 80% of the quota has been landed, trip limits would change to 10,000 pounds for limited access permits and 2,500 pounds for open access permits. No changes were recommended for the recreational sector; the impacts of recent recreational measures (a first ever 2023 bag-limit of 20 fish per person) will be evaluated in the future.

Atlantic mackerel has been under a rebuilding program since November 2019, and a revised rebuilding plan was implemented in 2023. The most recent management track stock assessment found that the stock remains overfished, with spawning stock biomass estimated to be at about 12% of the biomass target. While these measures should support rebuilding across a range of recruitments, achieving a rebuilt Atlantic mackerel stock that regularly supports optimum yield near the assessment’s target fishing rate will depend on getting more typical recruitment and increased survival of more mackerel into older age classes.

Golden Tilefish Individual Fishing Quota Program Twelve-Year Review

The Council received a presentation on the golden tilefish Individual Fishing Quota (IFQ) program review report prepared by Northern Economics, Inc. The golden tilefish fishery has operated under an IFQ program, which is a type of limited access privilege (LAPP) program, since the implementation of Amendment 1 in 2009. The 2007 reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) established new requirements related to the monitoring and review of LAPP programs. In 2017, the Council conducted the first golden tilefish IFQ program review, which covered performance from fishing year (FY) 2010 to FY2015. The current review includes updated data and analyses through FY2021. This presentation marked the beginning of a 30-day public comment period which will end on January 12, 2024. Details and comment instructions are available at <https://www.mafmc.org/newsfeed/2023/golden-tilefish-ifq-review>.

2024 Implementation Plan

The Council reviewed and approved the 2024 Implementation Plan after making several revisions. The Council recommended removing Deliverable #9 (scup GRA framework) from the main list of deliverables and replacing it with a framework to consider moving the western boundary of the summer flounder small-mesh exemption area and to clarify the regulatory definition of a flynet, along with several associated issues (enrollment period, evaluation criteria). The Council also agreed to modify the wording of Deliverable #74 and move it from Possible Additions to the main list of deliverables. This task will involve coordinating with the New England Council to

explore the utility of Vessel Monitoring Systems (VMS) for enforcement. The approved implementation plan is available at <https://www.mafmc.org/strategic-plan>.

Responsible Offshore Science Alliance

The Executive Director of the Responsible Offshore Science Alliance (ROSA) provided an update to the Council on ROSA's mission and 5-year strategic goals and objectives. ROSA is a non-profit organization that advances research, monitoring, and methods on the effects of offshore wind energy development on fisheries across US federal and state waters. Key strategies include: 1) coordinating offshore wind fisheries research and monitoring, 2) facilitating assessment of regional and cumulative impacts, and 3) maintaining ROSA offshore wind project monitoring framework and guidelines.

Next Meeting

The next Council meeting will be held **February 6-7, 2024, in Arlington, VA**. A complete list of upcoming meetings can be found at <https://www.mafmc.org/council-events>.



Mid-Atlantic Fishery Management Council

800 North State Street, Suite 201, Dover, DE 19901

Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org

P. Weston Townsend, Chairman | Michael P. Luisi, Vice Chairman

Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: November 29, 2023
To: Chris Moore
From: J. Didden, Staff
Subject: 2024-2026 Spiny Dogfish Specifications

The Council plans to adopt 2024-2026 Spiny Dogfish specifications at the December 2023 Council Meeting, with New England Fishery Management Council action following in January 2024 (the plan allows NMFS to resolve differences). Council staff supports the Joint Spiny Dogfish Committee recommendations, which are detailed in the first supporting document below:

- Spiny Dogfish Committee Nov 2023 Meeting Summary (with Committee recommendations)
- Spiny Dogfish Monitoring Committee Nov 2023 Summary
- Scientific and Statistical Committee (SSC) Oct 2023 Report (see Committee Reports Tab)
- Staff Oct 2023 Acceptable Biological Catch (ABC) Memo
- Advisory Panel (AP) 2023 Fishery Performance Report
- 2023 Fishery Information Document
- Submitted Comments

Supplemental Material Links

- [Preliminary 2023 Partial Year Discards](#)
- [SSC October 2023 Meeting Page \(includes links to assessment materials\)](#)



Spiny Dogfish Committee Meeting Summary

November 17, 2023 - Webinar

Overview: The Joint¹ Spiny Dogfish Committee met on November 17, 2023 from 9 am to 11:40 am and developed recommendations for 2024-2026 spiny dogfish specifications, detailed below. The regulations guiding these recommendations are detailed in 50 CFR 648.230-232, but generally involve ensuring that the Annual Catch Limit (ACL) is unlikely to be exceeded – any ACL overages trigger pound-for-pound paybacks from a subsequent year. The MAFMC and NEFMC will meet in the coming months to consider the Committee’s recommendations and adopt specifications.

Committee Member Attendees: Sonny Gwin (Chair), Dan Farnham, Mark Alexander, Skip Feller, Daniel Salerno, Michael Luisi (ex-officio), Adam Nowalsky, Joe Grist, Wes Townsend (ex-officio), Eric Reid (ex-officio), Alan Tracy, Chris Batsavage, Jay Hermsen (NMFS), Nichola Meserve, Rick Bellavance, and Toni Kerns (ASMFC).

Other Attendees: Jason Didden, Alan Bianchi, Aubrey Church, Bob Blais, Cynthia Ferrio, David McCarron, Dvora Hart, James Fletcher, James Boyle, John Whiteside, Jonathan Auguste, Megan W, Michelle Passerotti, Paul Rago, Pierre Juillard, Renee Zobel, Roger Rulifson, Scott MacDonald, Didden2, and Mark Sanford.

Background Discussion Summary

Jason Didden of MAFMC staff first provided an overview of: the spiny dogfish assessment; the Scientific and Statistical Committee’s (SSC) Acceptable Biological Catch (ABC) recommendations; the Advisory Panel’s (AP) Fishery Performance Report; and the Monitoring Committee’s recommendations (detailed supporting documents were provided and will also be available for the Councils’ meetings). Several clarifying discussions preceded Committee deliberations including:

- The 54% target chance of not overfishing is a result of the MAFMC’s risk policy.
- Uncertainties about data inputs are considered as part of assessment peer reviews.
- The large quota changes from, for example 2016 (about 40 million pounds), to 2024 (likely about 10 million pounds) are primarily the result of earlier overestimation of productivity. Follow-up by staff found that according to the current assessment, the 2016 quota should have been only around 11 million pounds (2016 landings were about 25 million pounds, still too high even though substantially below the 40-million pound quota). (Values are approximate given the assessment uses calendar years.)

¹ The federal spiny dogfish fishery is managed with a joint plan by the Mid-Atlantic Fishery Management Council (MAFMC, lead) and the New England Fishery Management Council (NEFMC).

-Discard estimates were generated based on both the ratio of observed discards to kept fish and overall fishing activity as measured by landings (the discard ratio is applied to totaled landings by gear type to estimate discards). If there are less boats and less activity and less landings now than earlier, the lower activity/landings result in lower discard estimates (unless the discard rate increased to offset the lower fleet activity). The modeled future discards coming out of the assessment integrate the historic discard information as well as the trends in biomass forecasted by the model.

Summary of General Public Comments Provided During Background Discussion

- Fishermen do not see downward trends in either abundance or size of fish in landings.
- This is history repeating itself just like in 1999 – we are once again begging you not to put us out of business unnecessarily.

Committee Specifications Motion/Recommendation Summary

The Committee passed the following motion regarding specifications:

Move to recommend that the Councils adopt 2024-2026 dogfish specifications that include the following deductions from the SSC-specified ABCs: the most recent estimate of Canadian landings (36 MT²); no buffer for management uncertainty (0 MT); the model-predicted year-specific discards (2,382 MT for 2024; 2,441 MT for 2025; and 2,494 MT for 2026); and the most recent 3-year average recreational landings (112 MT). This results in commercial quotas of 4,605 MT (10.15 mil. pounds) for 2024; 4,723 MT (10.41 mil. pounds) for 2025; and 4,831 MT (10.65 mil. pounds) for 2026. (Reflected in Table 3 of Monitoring Committee summary.)

Meserve/Luisi, 14/1/1 Motion passes

Rationale for the motion included:

-The model-generated discards are objective and more likely to reflect actual discards than a recent three-year average or the most recent year (2022) estimate. It also is in between the amounts generated by those other two approaches, though closer to the 2022 estimate.

-Not using a management uncertainty buffer does not indicate a lack of uncertainty or zero risk of exceeding the Annual Catch Limit (ACL), but the model discard approach is more rigorous than last year's staff ad-hoc approach, and industry has again clearly indicated that they are willing to accept the higher risk of future paybacks given the current tenous existence of the spiny dogfish fishery. There have been no recent overages, and small future overages could be absorbed by the slight ABC increases in 2025 and 2026. The Atlantic States Marine Fisheries Commission (ASMFC) quota rollover provisions could increase the quota by potentially up to 600,000 pounds depending on 2023 fishing year performance (too soon to predict), but the state/regional allocations also add a de-facto buffer because states are unlikely to relinquish all of their quota through transfers.

-Overall this approach balances responsibility to the resource and needs of industry as best possible.

² MT = metric ton. One metric ton equals about 2,204.6 pounds, so 100 MT equals about 220,000 pounds and 1,000 MT equals about 2.2 million pounds.

A motion to substitute the lower 2022 discard estimate of 2,134 MT failed on an 8/8/0 vote. The rationale for the failed substitute referenced the industry input, historical trends, socioeconomic impact (including the dogfish fishery's gap-filling role for many participants particularly January-April), and the various uncertainties involved. There was also concern about dogfish's impact on the ecosystem. It was noted the industry has clearly stated they are willing to risk future paybacks/disruptions if there are overages given the current tenuous state of the industry. Concern about the static nature (same discards for all three years) of this approach was noted given the predicted biomass increases. The NMFS representative noted they would not support the substitute motion,

During discussion of the substitute, it was clarified that if the two Councils adopt different measures, NMFS can implement either Council's measures or implement a modified version, but NMFS can't implement something that was rejected by both Councils. In recent years the ASMFC has mirrored the federal measures, but the ASMFC plan is not directly linked to the federal plan, and the ASMFC has adopted differing quotas in the past (NMFS will still close federal waters when the federal quota is reached). There was also discussion of whether specifications could just be set for one year and then reviewed. Staff noted that even if multi-year specifications are set, the specifications are reviewed each year by the SSC and MAFMC, and can be modified year to year. If the SSC changes the ABC(s) after review, then specifications would need to be modified. It was noted that the NEFMC may need to build in dogfish specifications review into its workload planning, depending on the nature of the review.

Summary of Public Comments Provided During Motion Discussion

John Whiteside: The above motion's quota is too low and we need to consider the de-facto buffer created by the ASMFC's state/regional allocations. The risk of an overage is overshadowed by the risk of not having a viable business due to unnecessarily low quotas. The 2,134 MT 2022 discard estimate is more appropriate, and would give industry another 500,000 pounds of quota. At this point every little bit helps significantly, because European buyers are starting to explore other sources given uncertainty about supply from the US, and if we lose our market, this industry is over (the supply disruption from Virginia and inability to maintain year-round Massachusetts processing staff is already critically challenging).

Pierre Juillard: Agree with John. We are at a critical point and Europeans are starting to turn to local markets – we need every pound to have a chance of still being here in a few years.

Scott MacDonald: We need to listen to John and Pierre. I'm out of the fishery/packing because I could not re-sign a lease given all of this uncertainty. We will also lose Pierre/SeaTrade if we don't take this seriously.

Trip Limit Discussion Summary

While no action is required regarding the federal trip limit (currently 7,500 pounds per trip), there was some discussion of how trip limits might relate to potential specifications changes and/or future performance. No rationale to change the federal trip limit emerged and no related motions were made. There was a question whether a relationship existed between trip limit changes and discard changes, but that question has not been examined in detail, and most

discards are not occurring in the directed fishery that is constrained by trip limits. Staff observed that in recent years the fishery has utilized higher trip limits quickly upon implementation.

Male Fishery Discussion Summary

A question was asked what the next steps might be for facilitating a male-focused spiny dogfish fishery. Staff responded that the recent assessments do estimate biomass by sex but had not had time to explore options for a mostly separate harvest of male fish. A next step would be for the NMFS Northeast Fisheries Science Center to conduct analyses that could evaluate higher male harvest, and then related management measures could be considered (associated ABC, times/areas where mostly males would likely be caught, female by-catch set aside, etc.). It is not yet clear whether markets could be established for the smaller males, but there is some persisting interest in at least allowing the potential for such a fishery.



Spiny Dogfish Monitoring Committee Meeting Summary

November 6, 2023 - Webinar

The Mid-Atlantic Fishery Management Council's (Council) Spiny Dogfish Monitoring Committee met on November 6, 2023 from 12:30pm to 3:15pm to develop recommendations for 2024-2026 specifications. The regulations guiding these recommendations are detailed in 50 CFR 648.230-232, but generally involve ensuring that the Annual Catch Limit (ACL) is unlikely to be exceeded – any ACL overages trigger pound-for-pound paybacks from a subsequent year. A key theme was the tradeoff between maximizing the limited available quota for 2024-2026 versus avoiding ACL overages and paybacks that could be disruptive to future fishing years.

Monitoring Committee Attendees: Jason Didden, Angel Willey, Conor McManus, Cynthia Ferrio, David McCarron, Dvora Hart, John Whiteside, Melinda Lambert, Nichola Meserve, and Scott MacDonald (100% attendance).

Other Attendees: Sonny Gwin, Bob Blais, Chris Batsavage, Chris Rainone, James Fletcher, Jared Auerbach, Joe Grist, Pierre Juillard, Wes Townsend, and Daniel Salerno.

Assessment Discussion

Jason Didden began the meeting with a summary of the assessment and the Council's Scientific and Statistical Committee's (SSC) findings. The assessment concluded that 2022 biomass (measured as pups/spawning output) was just above its target despite being relatively low, and that relatively low future catches are needed to stay at the target (due to the stock's reduced productivity). The SSC utilized the assessment model's conclusions and projections to set the following Acceptable Biological Catches (ABCs): 2024: 7,135 metric tons (MT), 2025: 7,312 MT; 2026: 7,473 MT. The 2024 ABC of 7,135 MT is 8.4% lower than the 2023 fishing year ABC of 7,788 MT. Both the Monitoring Committee and Public first engaged in discussion regarding the assessment, summarized below:

John Whiteside noted that the SSC remarked that recent changes in growth/size/maturity/maximum-observed-female-size cannot be explained by direct effects from fishing (unlike the changes seen in the 1990s during more intense size-selective fishing). Dvora Hart hypothesized that there may be an indirect effect occurring where the smaller surviving females from the 1980s-1990s have been producing smaller fish.

Pierre Juillard noted that the primary processor has seen similar sized fish for the last 3-4 years. Dvora Hart highlighted Figure 3 from the [SS3 assessment report](https://www.mafmc.org/ssc-meetings/october-30-2023) (at <https://www.mafmc.org/ssc-meetings/october-30-2023>), which indicated landings did show a relatively similar/stable proportion of larger females from 2020-2022 but also declines both during the initial 1980s/1990s directed fishery and after the more recent 2012 landings peak. Other data (the

NMFS spring bottom trawl survey and other commercial fleets' landings and discards) also show historical declines of larger females. There was substantial discussion on whether recent reduced portside sampling could create a distorted understanding of the landings' length composition used within the assessment. Given the likely seasonal and/or spatial variability, higher sample sizes would be worthwhile. Follow-up discussions with Northeast Fisheries Science Center (NEFSC) staff clarified that the length data for the gillnet landings (where most landings come from) stem from both portside sampling of gillnet trip landings and at-sea sampling of kept fish on observed gillnet trips (mostly observer trip data in recent years). Scott MacDonald noted that vessels have been using smaller gear inshore in recent years to minimize trip costs, which could influence the size of dogfish in the landings (this could potentially be examined with observer data in the future). He observed relatively larger dogfish during the most recent Virginia fishing season - late 2022/early 2023 (the current assessment includes data through 2022). Discussion noted that there are some large fish seen in landings data in recent years, but a lower proportion compared to the 1980s or the early 2010s. Having state samplers collect landings' length information was raised as a possible solution, as was the possibility of sampling at the Massachusetts processor since almost all spiny dogfish landings are shipped to one Massachusetts processor.

Scott MacDonald observed that catch limits must have been set way too high during recent overfishing (2011-2021), since recent catches were substantially below their respective Acceptable Biological Catches (ABCs). According to the new assessment, this is true. Scott suggested that we should be wary of destroying this fishery with lower quotas given the variability we've seen in ABC recommendations in recent years (indicating high uncertainty).

Chris Rainone highlighted that the erroneous yo-yo assessment/management is making it impossible to sustain participation, and putting portions of the fishery out of business. He stated we should have a gillnet survey to avoid being in such a data poor situation and need to better account for climate/ecosystem impacts. He and Scott MacDonald also questioned whether we know if this model is better than previous approaches. Dvora Hart followed-up that this is the first standard statistical model that has been produced for the U.S. Atlantic spiny dogfish stock, and one advantage of now having a statistical population model is that there should be improved interannual stability in population size estimates and projections moving forward.

Specifications Discussion and Recommendations¹

The ABCs recommended by the SSC, which are binding catch constraints are: 7,135 metric tons (MT) for 2024, 7,312 MT for 2025, and 7,473 MT for 2026. These resulted from application of the Council's risk policy to address scientific uncertainty, which, for a stock slightly above its biomass target (as dogfish is predicted to be for these years) dictates about a 54% chance of not overfishing. On average for these years, about 663 MT (a little more in 2024 and a little less in 2026) is set aside from the estimated overfishing level catch estimate to achieve the slightly better than 50% chance of avoiding overfishing (i.e. the 54% chance goal). This equates to setting aside 8%-9% of each year's estimated overfishing level of catch to address scientific uncertainty (i.e. to be slightly more than 50% certain that overfishing is not occurring).

¹ Current 2023 fishing year specifications are detailed in Table 4.

Canadian Landings Set-Aside:

The Monitoring Committee has previously recommended the most recent available Canadian estimates for a set-aside. The Canadians updated their 2019 landings estimate to 36 MT (previously 37 MT). This value is now somewhat outdated but does not cause concern given the small magnitude of Canadian landings. Some recent years have been a bit higher and others a bit lower (1 MT-54 MT range 2015-2019). The Monitoring Committee recommended setting aside 36 MT to account for Canadian landings.

Recreational Set-Aside:

The Monitoring Committee recommended setting aside the most recent 3-year average of 112 MT to account for recreational landings, a small component of total catch. This is less than the 2021 estimate of 214 MT used to set the 2023 specifications. The assessment's 2020, 2021, and 2022 recreational harvest estimates of 101 MT, 215 MT, and 19 MT respectively have PSEs in the 30-50% range (i.e. PSE's which warrant a "caution" from NMFS in terms of precision).

Dead discard set-aside and management uncertainty buffer:

The specific charge of the Monitoring Committee to recommend measures that "ensure" overages do not occur would be impossible without very large buffers that result in very small commercial quotas and would regularly fail to catch optimum yield. Accordingly, in recent years the Monitoring Committee has taken the approach of making recommendations that would constitute a good faith effort to avoid substantial overages in typical years. This approach should enable optimum yield to be caught in most years but in any given year there will be a possibility of unexpectedly high discards (primarily from other fisheries), possibly causing substantial ACL overages and potentially disruptive pound-for-pound paybacks in future years (especially if the full landings quota is also attained).

The discard set-aside and management uncertainty buffer are linked because the primary management uncertainty issue that could cause ACL overages (and then paybacks) is the difficulty in setting aside an appropriate amount for dead discards. In the last ten years of the assessment (2013-2022) dead discards varied from about 7,400 MT (2014) to 2,100 MT (2022). Note the management track assessment report provides discard amounts before gear-specific discard mortality rates are applied (these rates have been reviewed and accepted but are likely imprecise). The trend since 2013 is downward, though much of the trend is driven by 2013-2014 being relatively high and 2022 being relatively low. Annual discards vary due to both trends in actual discards as well as estimation imprecision, though spiny dogfish discards are not particularly uncertain relative to other species in the region.

The ex-officio industry members of the Monitoring Committee (John Whiteside and Scott MacDonald) recommended that the 2022 discard estimate, 2,134 MT, be set-aside for 2024-2026 along with taking no deduction for a management uncertainty buffer (Table 1 below). Their rationale for using the 2022 discard estimate was that it is the most recent discard estimate and discards have been trending down. The 2022 discard estimate (2,134 MT) is close to what was set aside for 2023 (2,088 MT), so the scaling down approach taken last year appears to be working. Also, 2,134 MT would be a small increase from the current discard set aside. Their

rationale for not needing a management uncertainty buffer included that the state/regional landings allocations create an implicit massive buffer in landings versus the commercial quota to offset any theoretical issues with higher-than-expected discards. Also, it was noted that any catch overages could be offset by the planned increases in the ABC in 2025/2026. Finally, Scott MacDonald closed his business that previously bought almost all the dogfish landed in Virginia, and it is unclear whether another dealer will be able to facilitate similar annual volume from Virginia (averaging 4 million pounds). They noted the critical negative impact from sequestering potentially available quota at these low catch limits – there won't be an industry left if any potential quota is made uncatchable, forcing the last processor to close. John and Scott disagreed that the approaches (either "A" or "B" below) suggested by the rest of the Monitoring Committee were reasonable or appropriate, given their rationale described above and tenuous state of the industry at even the current 2023 quotas (12.0 million pounds). It was also suggested that federal dealers could be required to switch to daily reporting of landings to minimize any potential landings overages.

The rest of the Monitoring Committee was concerned that combining the lowest recent discard estimate with no management uncertainty buffer may not be objective and could lead to large ACL overages and paybacks/disruptions in future years. The low overall 2022 discard estimate was also unusually low for small mesh gear. There is also a possibility of landings over-running the commercial quota after a federal waters closure, but some states match the federal measures (including Virginia which typically harvests toward the latter part of the fishing year). Discussion noted that part of the rationale last year for a potential management uncertainty buffer was [the ad-hoc approach used for discards](#), and the two approaches for discards suggested below may reduce the need for uncertainty buffers. Conversely, discards are primarily the result of activity in other (trawl) fisheries, and the model is not integrating potential future effort changes in other relevant fisheries. The Monitoring Committee did not recommend a specific buffer amount, but noted the same buffer trade-off evaluated in previous years: higher buffers provide less quota now but lower chances of overages/paybacks; lower buffers result in more quota now but greater chances of overages/paybacks. This group did reach consensus on two approaches that should avoid substantial ACL overages (though an unexpectedly very high discard estimate could still lead to substantial ACL overages):

- A) If a three-year average of discards is set aside (3,128 MT), that amount captures recent discard variability sufficiently such that a management uncertainty buffer would probably not be needed to avoid substantial overages. This would mean setting aside 3,128 MT for discards, which will substantially reduce commercial quotas from current levels even without any management uncertainty buffer. (Table 2 below)
- B) The assessment model generates expected discards for the projection period in an objective manner despite uncertainty – as biomass slowly increases the model projects that discards will increase slowly as well. The Monitoring Committee noted that there is sensibility in using the model generated projected discards, just as is done by using the model generated ABCs. The projected amounts set aside for discards would be 2,382 MT for 2024, 2,441 MT for 2025, and 2,494 MT for 2026. The Monitoring Committee could not reach consensus on whether a management uncertainty buffer was needed if setting aside these model-generated discards, but did concur with the following statement: If the model-generated discard amounts are set-

aside, then the Committee may want to consider at least a small management uncertainty buffer given there is a 50% chance that realized discards will be higher (or lower) than those projected (due to the statistical nature of such estimates). Table 3 below describes the specifications using these discard amounts and zero uncertainty buffer, but staff will be able to illustrate varied management uncertainty buffers during the Committee meeting. Any management uncertainty buffer reduces the commercial quota by the same amount. A buffer amount therefore largely depends on the Councils' tolerances for potential overages and future paybacks, weighed against the immediate effect of reducing quota via a buffer.

Additional Public Comment

Pierre Juillard: The zero percent buffer is almost a necessity to get enough quota to keep processing beyond 2024. The peaks and valleys of quota have gotten us from four processors to just one.

Jared Auerbach: You can't decimate an industry where there's inexact science. Without a higher quota we're going to lose the current generation of participants as well as the next generation of entrepreneurs to invest in boats/processing/marketing.

Chris Rainone: The 30% discard mortality for gill nets is not believable given how we fish our gear for short soaks – the fish I released today out of Barnegat Light all swam away. If you put this quota below 10 million pounds we're in trouble as a fishery and we're already losing docks to wind – we won't have anywhere to go. You're going to put us out of business and yourselves because if there's no fishery to manage what are you going to do. At this rate you might as well put the nail in the coffin.

Daniel Salerno: I'm a little concerned about how you're looking at discards – if you take out 2013/2014 and 2022, discards were pretty flat from 2015-2021 and 2022 seems unnaturally lower than the previous 6-7 years. You may be underestimating the potential for higher dead discards occurring in 2024-2026.

Trip Limits

The Monitoring Committee also discussed trip limits, noting that trip limits (pounds per trip) have increased sequentially over the last decade (3,000 in 2009-2012, 4,000 in 2013, 5,000 in 2014-2015, 6,000 in 2016-2021, 7,500 in 2022-2023). Given recent performance, it's not clear whether the current 7,500-pound trip limit may cause early closures of the fishery, but all else being equal the quota will be utilized faster at higher trip limits compared to lower trip limits (many trips land right at the trip limit). Depending on fishery performance at the expected lower quotas, consideration of trip limit modifications may be warranted in the future. Scott MacDonald also mentioned that lowering the trip limits can make it harder to pack a truckload for shipment to the Massachusetts processor and lowering the trip limit could hurt vessels given high fuel prices. Thus, the Monitoring Committee did not see justification for recommending changes to the federal trip limit at this time.

Table 1. Whiteside/MacDonald Recommended Specifications

Specifications	2024 (pounds)	2024 (mt)	Basis
OFL (from SSC)	17,235,719	7,818	SS3 Assessment
ABC (from SSC)	15,729,964	7,135	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	15,650,597	7,099	= ABC – Canadian Landings
ACL	15,650,597	7,099	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	15,650,597	7,099	= ACL - mgmt uncert buffer
U.S. Discards	4,704,659	2,134	=2022 estimate
TAL	10,945,938	4,965	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	10,699,021	4,853	TAL – Rec Landings
Specifications	2025 (pounds)	2025 (mt)	Basis
OFL (from SSC)	17,570,821	7,970	SS3 Assessment
ABC (from SSC)	16,120,181	7,312	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	16,040,815	7,276	= ABC – Canadian Landings
ACL	16,040,815	7,276	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	16,040,815	7,276	= ACL - mgmt uncert buffer
U.S. Discards	4,704,659	2,134	=2022 estimate
TAL	11,336,156	5,142	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	11,089,239	5,030	TAL – Rec Landings
Specifications	2026 (pounds)	2026 (mt)	Basis
OFL (from SSC)	17,905,924	8,122	SS3 Assessment
ABC (from SSC)	16,475,125	7,473	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	16,395,759	7,437	= ABC – Canadian Landings
ACL	16,395,759	7,437	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	16,395,759	7,437	= ACL - mgmt uncert buffer
U.S. Discards	4,704,659	2,134	=2022 estimate
TAL	11,691,100	5,303	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	11,444,182	5,191	TAL – Rec Landings

Table 2. Specifications using 3-year average discards and no management uncertainty buffer.

Specifications	2024 (pounds)	2024 (mt)	Basis
OFL (from SSC)	17,235,719	7,818	SS3 Assessment
ABC (from SSC)	15,729,964	7,135	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	15,650,597	7,099	= ABC – Canadian Landings
ACL	15,650,597	7,099	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	15,650,597	7,099	= ACL - mgmt uncert buffer
U.S. Discards	6,896,051	3,128	2020-2021-2022 avg
TAL	8,754,546	3,971	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	8,507,629	3,859	TAL – Rec Landings
Specifications	2025 (pounds)	2025 (mt)	Basis
OFL (from SSC)	17,570,821	7,970	SS3 Assessment
ABC (from SSC)	16,120,181	7,312	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	16,040,815	7,276	= ABC – Canadian Landings
ACL	16,040,815	7,276	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	16,040,815	7,276	= ACL - mgmt uncert buffer
U.S. Discards	6,896,051	3,128	2020-2021-2022 avg
TAL	9,144,764	4,148	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	8,897,846	4,036	TAL – Rec Landings
Specifications	2026 (pounds)	2026 (mt)	Basis
OFL (from SSC)	17,905,924	8,122	SS3 Assessment
ABC (from SSC)	16,475,125	7,473	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	16,395,759	7,437	= ABC – Canadian Landings
ACL	16,395,759	7,437	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	16,395,759	7,437	= ACL - mgmt uncert buffer
U.S. Discards	6,896,051	3,128	2020-2021-2022 avg
TAL	9,499,708	4,309	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	9,252,790	4,197	TAL – Rec Landings

Table 3. Specifications using modeled discards and no management uncertainty buffer.

Specifications	2024 (pounds)	2024 (mt)	Basis
OFL (from SSC)	17,235,719	7,818	SS3 Assessment
ABC (from SSC)	15,729,964	7,135	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	15,650,597	7,099	= ABC – Canadian Landings
ACL	15,650,597	7,099	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	15,650,597	7,099	= ACL - mgmt uncert buffer
U.S. Discards	5,251,405	2,382	Assessment Predicted
TAL	10,399,193	4,717	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	10,152,275	4,605	TAL – Rec Landings
Specifications	2025 (pounds)	2025 (mt)	Basis
OFL (from SSC)	17,570,821	7,970	SS3 Assessment
ABC (from SSC)	16,120,181	7,312	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	16,040,815	7,276	= ABC – Canadian Landings
ACL	16,040,815	7,276	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	16,040,815	7,276	= ACL - mgmt uncert buffer
U.S. Discards	5,381,477	2,441	Assessment Predicted
TAL	10,659,338	4,835	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	10,412,420	4,723	TAL – Rec Landings
Specifications	2026 (pounds)	2026 (mt)	Basis
OFL (from SSC)	17,905,924	8,122	SS3 Assessment
ABC (from SSC)	16,475,125	7,473	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	16,395,759	7,437	= ABC – Canadian Landings
ACL	16,395,759	7,437	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	16,395,759	7,437	= ACL - mgmt uncert buffer
U.S. Discards	5,498,322	2,494	Assessment Predicted
TAL	10,897,437	4,943	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	10,650,519	4,831	TAL – Rec Landings

Table 4. 2023 Fishing Year Specifications.

Specifications	2023 (pounds)	2023 (mt)	Basis for 2023 Specifications
OFL (from SSC)	na	na	na
ABC (from SSC)	17,169,581	7,788	SSC
Canadian Landings	81,571	37	= 2019 estimate, most recent
Domestic ABC	17,088,010	7,751	= ABC – Canadian Landings
ACL	17,088,010	7,751	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	Higher risk of ACL overages but minimizes potential 2023 disruption to industry
Amount of buffer	0	0	
ACT	17,088,010	7,751	= ACL - mgmt uncert buffer
U.S. Discards	4,603,247	2,088	scaled down from 2017-2019 average
TAL	12,484,763	5,663	ACT – Discards
U.S. Rec Landings	471,789	214	= 2021 estimate
Comm Quota	12,012,974	5,449	TAL – Rec Landings

[See Committee Reports Tab for
Scientific and Statistical Committee \(SSC\) Report on
Spiny Dogfish Acceptable Biological Catches \(ABCs\)](#)



Mid-Atlantic Fishery Management Council

800 North State Street, Suite 201, Dover, DE 19901

Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org

P. Weston Townsend, Chairman | Michael P. Luisi, Vice Chairman

Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: October 25, 2023
To: Chris Moore, Executive Director
From: Jason Didden, staff
Subject: 2024-2026 Spiny Dogfish Acceptable Biological Catches (ABCs)

Summary

Based on the 2023 Management Track Assessment, the spiny dogfish stock was neither overfished nor experiencing overfishing in 2022.

The 2022 fishing year (May 1, 2022 to April 30, 2023) landings were about 19% higher than the prior year, but there has been a downtrend in landings since 2012.

The Mid-Atlantic Fishery Management Council (MAFMC) will meet in December 2023 to review the recommendations of the Advisory Panel (AP), the Scientific and Statistical Committee (SSC), the Monitoring Committee, the Spiny Dogfish Committee, and input from the public. The MAFMC will recommend catch and landings limits and other management measures. The New England Fishery Management Council will take similar action in January 2024, and the Atlantic States Marine Fisheries Commission will also meet in January 2024 to consider interstate measures.

Based on the SSC’s evaluation of uncertainty, the Council’s risk policy suggests Acceptable Biological Catches (ABCs) near or slightly above 7,000 metric tons (MT) for 2024-2026. Staff is concerned about the impact on industry and projection uncertainty. However, the Council’s codified control rule and risk policy are designed to integrate such concerns with avoidance of overfishing - as such, staff recommends applying the control rule and risk policy to determine 2024-2026 ABCs (see ABCs in Table 1 and additional discussion under “Staff Recommendation,” below).

Current Measures and Review of Prior SSC Recommendations

The last setting of spiny dogfish specifications occurred in 2022 for the 2023 fishing year. The resulting 7,788 MT (17.2 million pounds) ABC and 5,449 MT (12.0 million pounds) quota was a result of the SSC scaling down the previous ABC based on the NEFSC spring survey trends:

“In absence of a stock assessment, the SSC developed an ad hoc approach that addresses the apparent recent decline in abundance pending confirmation in the upcoming assessment. The method reduced the previous ABC (defined in 2018) by first adjusting it to be consistent with the current Council Risk Policy. The adjusted ABC was then multiplied by

the ratio of current average female spawning stock abundance (2021 and 2022) to the average for 2016 to 2018. The SSC recommended an ABC of 7,788 mt for the 2023 fishing year. This represents a 55% decrease from the 2022 ABC of 17,498 mt ([MAFMC SSC September 2022](#)).”

These specifications represented a 59% reduction in commercial quota for the spiny dogfish fishery from 2022. However, it is not yet clear whether the 2023 quota will be limiting for the 2023 fishing year. Once the coastwide quota is caught, federal waters will be closed for possession of spiny dogfish. If the Annual Catch Limit (ACL) is exceeded, overages are deducted as soon as possible from the ACL for the subsequent fishing year. In 2021, the Councils voted to increase the trip limit for spiny dogfish to 7,500 pounds, which was implemented for the 2022 fishing year.

Recent Landings and Catch

Recent landings peaked in the 2012 fishing year near 12,138 MT (26.8 million pounds) and declined to about 4,797 MT (10.6 million pounds) by 2021. 2022 landings rose to 5,730 MT (12.6 million pounds). The Fishery Performance Report documents industry perspectives on why recent landings have been low relative to quotas, including market constraints, quota disruptions, and other more attractive fishing opportunities. The closure of the primary Virginia spiny dogfish dealer may limit landings later in the 2023 fishing year. Discards (calendar year) accounted for 24%-43% of fishing mortality from 2013-2022. The Fishery Performance Report also notes the tenuous viability of this fishery given the relatively low price per pound, shrinking quotas in recent years, and other challenges.

Stock Status and Biological Reference Points

Based on the Spiny Dogfish Management Track Assessment, which used the Stock Synthesis 3 (SS3) assessment model, the spiny dogfish stock was neither overfished nor experiencing overfishing in 2022. Biomass (spawning output) in 2022 was estimated to be at 101% of the reference point/target, despite being relatively near its all-time low. Fishing mortality in 2022 was 81% of the overfishing threshold (the first time in the last decade without overfishing).

Staff Recommendation

The new assessment’s ability to accurately project future biomass trends given various catch levels is untested, and the uncertainties associated with growth mean the biomass reference point/target has considerable uncertainty (note the large biomass reference point changes between the research track and management track assessments). These uncertainties and concerns about the status of the fishery led staff to consider recommending a status-quo ABC (7,788 MT) for 2024-2026. However, considering the successful peer review of the management track assessment, there is no justification to deviate from the Council’s codified control rule and risk policy, especially given the recent overfishing and historical trends in both spawning output and total female biomass. The resulting projected ABCs are provided in a spreadsheet at <https://www.mafmc.org/ssc-meetings/october-30-2023> and reproduced on the next page in Table 1. Depending on the SSC’s assignment of uncertainty (100% or 150% coefficient of variation or “CV” for the calculated overfishing levels), the Council’s risk policy suggests Acceptable Biological Catches (ABCs) near or slightly above 7,000 metric tons (MT) for the 2024-2026 fishing years.

Table 1. Council Risk Policy-Based ABCs.

Year	Overfishing Level (OFL)	ABC	Biomass - Spawning Output	Biomass/ Target (188)
	mt	mt	millions pups	
Assuming 100% CVs				
2024	7,818	7,135	202.8	1.08
2025	7,970	7,312	208.7	1.11
2026	8,112	7,473	213.3	1.13
Assuming 150% CVs				
2024	7,818	6,940	202.8	1.08
2025	7,975	7,130	208.9	1.11
2026	8,122	7,301	213.6	1.14



Spiny Dogfish AP Fishery Performance Report September 20, 2023

The Mid-Atlantic Fishery Management Council's (Council) Spiny Dogfish Advisory Panel (AP) met via webinar on September 20, 2023 to review the Spiny Dogfish Fishery Information Document and develop the following Fishery Performance Report. The primary purpose of this report is to contextualize catch histories for the Scientific and Statistical Committee (SSC) by providing information about fishing effort, market trends, environmental changes, and other factors. Trigger questions (see below) were posed to the AP to generate discussion of observations in the spiny dogfish fishery. Advisor comments described below are not necessarily consensus or majority statements.

Advisory Panel members attending: Chris Rainone, James Fletcher, Jeremy Hancher, John Whiteside, Kevin Wark, Roger Rulifson, Scott Curatolo-Wagemann, Scott MacDonald, and Mark Sanford.

Others attending: Jason Didden (Council staff lead), Sonny Gwin, Alan Bianchi, Angel Willey, Cynthia Ferrio, David McCarron, and Yan Jiao.

Trigger questions:

The AP was presented with the following trigger questions:

1. What factors have influenced recent catch (markets/economy, environment, regulations, other factors)?
2. Are the current fishery regulations appropriate? How could they be improved?
3. What would you recommend as research priorities?
4. What else is important for the Council to know?

Market/Economic Conditions

Artificially low quota and low quota expectations are dampening demand. If you don't think you can maintain production you're not going to try. Increased fuel costs and dogfish prices also combine to keep landings low.

COVID-19 did not have a large impact on this fishery. Similar market issues persist as with previous years – demand has been low but stable recently – the market could support more landings than in the most recent year if participation/production at the vessel level increases.

Changing the name to Chip Fish would help with marketing/exports. We could sell these in the U.S. if we could change the name (like snakehead). No advisors were opposed but practical name-change challenges have been highlighted in the past.

There are no Southern processors – they were “burnt” by previous management and won’t get back in without quota stability on a decadal timeframe. They would need to know that the quota won’t go down for 5-10 years. Southern fishermen have to ship to MA. Previous reports have noted not having a processor also depresses NY landings. High fuel costs add to trucking costs, which is a substantial issue for this fishery given the processing situation.

Developing industrial markets, be it fertilizer, processed export, or pharmaceutical (livers), requires a higher trip limit for trawlers. Expanding use of liver components could increase overall value – several outreach efforts have occurred to pharmaceutical companies with no interest expressed back. Industrial uses could help develop a market for male dogfish.

Regarding the fin market – there are self-imposed bans by cargo lines that prohibit fin transport even from sustainable sources (i.e. this is beyond our control).

Better opportunities in other fisheries reduce spiny dogfish effort. For example, in Virginia, fishermen have calculated that oysters and shrimp can be better opportunities. It’s hard to attract/pay/retain a crew, often must fish solo. Any disruption to this fishery will exacerbate these issues and make it impossible to sustain participation.

Cornell has tried to expand domestic consumption of spiny dogfish and other undervalued/underutilized/lesser-known species through chefs’ sampler events, underserved communities/foodbanks, etc. See <https://www.localfish.org/>.

Environmental Conditions

Environmental conditions are always a factor in terms of dogfish distribution and availability to fishermen.

In NJ, we see fluctuations in the spring and different behavior seasonally but no major swings in recent years and consistent fall availability.

In VA, also don’t see a problem with dogfish – just like there wasn’t a problem when we were first forced to “rebuild” dogfish in the 2000s. Science does not reflect our experiences.

Condition of NC and MA inlets makes it very difficult to get product into ports. NC trawl fishermen can’t land spiny dogfish in VA due to state regulations. Fish houses continue to go out of business due to low seafood supply.

Management Issues

There’s no higher-perspective view of this fishery that you are going to eliminate it totally with further reductions given the likely impacts on the last remaining processor. We need a holistic approach to keep the fishery functioning given the financial impacts of low trip limits (given product is low value), and/or fishery closures. We are at a threshold where interest, and fishermen, will evaporate. Don’t say we didn’t tell you what the results of further reductions would be.

The artificially-low quota (flawed assessment and previous SSC decisions) broke the supply chain from the south, eliminating the primary southern fish house. The AP has been warning about the impacts on infrastructure of management decisions that are destroying this fishery with rollercoaster-style management and resulting shoreside gentrification. Industry needs managers to improve their awareness of the impacts of decisions. Loss of fish houses is a coast-wide issue – and the loss of infrastructure needs to be addressed to maintain a healthy fishery.

Regulations (especially the trip limit) do not allow a male fishery. State regulations do not allow new fishermen to participate. The current regulations are geared to keep price up and production limited and do not allow industrial production.

There was discussion whether state by state quotas should be reconsidered. (There are no Council-federal state/regional quota allocations but there are Atlantic States Marine Fisheries Commission (ASMFC) quota allocation measures in their inter-state plan.) Eliminating or modifying regional quotas could theoretically expand opportunities and encourage additional processors. There was concern however that eliminating regional allocations may disadvantage southern states given the seasonal rotation of landings regionally and the May 1 fishing year start. A trial of any changes would be warranted. There was also concern about creating more of a derby fishery and additional processing disruptions if quotas are very low and could potentially be landed quickly with less regional constraints. If quota was higher then there would be different considerations. The overall consensus conclusion was that allocation changes would be risky with the current quota situation, and not warranted at this time.

Other Issues

The surveys are not representative of the biomass. Given the lack of an off-shelf survey and vertical water column usage by dogfish, we don't really know the population size. 1/10 of the needed area is surveyed. See Carlson AE, Hoffmayer ER, Tribuzio CA, Sulikowski JA (2014) The Use of Satellite Tags to Redefine Movement Patterns of Spiny Dogfish (*Squalus acanthias*) along the U.S. East Coast: Implications for Fisheries Management. PLoS ONE 9(7): e103384. <https://doi.org/10.1371/journal.pone.0103384>. Also see Garry Wright's thesis that concluded that the NEFSC trawl survey is not accurately representing spiny dogfish biomass.

The AP would like a meeting regarding the new assessment and an open discussion with the AP of how the new assessment model works and why it is improved from previous efforts that have been apparent failures.

Windfarm impacts squeeze the fishery from the ocean-side and shoreside gentrification squeezes from the land-side – both are critical stressors in terms of fishery survival.

Allowing dogfish populations to increase has hurt all other fish populations. We need better calculations regarding consumption by dogfish of other fish.

You should account for the continual nature of embryo development/pupping in the assessment.

Bigelow performance issues are doing a disservice to all the fisheries and fishermen. The repeated failure of the Bigelow since 2014 to complete its mission in terms of not fishing at a consistent time seasonally and not achieving planned stations eliminates our ability to have good information about spiny dogfish abundance, given the dependence on the survey for spiny dogfish abundance trends. This compounds uncertainty concerns and the Bigelow performance degrades the credibility of the resulting information (both regarding individual years and interpreting the time series). We have 2/10 years of full surveys in recent years. This affects all species' management. The Council should call in NEFSC's maritime operations manager to account for Bigelow performance issues.

There is concern whether the NEFSC is continuing wire/net measurements to ensure survey consistency. The timing of the survey is critical for spiny dogfish due to the observed migration patterns and not sampling the same areas consistently reduces the meaningfulness of the resulting data.

Research Priorities

We need to utilize commercial fishermen more in developing indices of abundance (not just the Bigelow). Fishermen are losing trust in the process with constant changes and new models. The CPUE-type indices being developed for monkfish should be considered for dogfish.

Explore using 3-D printing technology to improve "fillet" production from spiny dogfish.

Consider whether/how electro-fishing surveys could be used.

To add fishery value, we should research the value and production of squalamine in spiny dogfish livers for medical use.

We should conduct research into the purposes of the horn/spine – is it offensive (weakening potential prey), or defensive?

Off the shelf sampling needs to occur to understand biomass. Why can't Bigelow do some deeper sampling? Could we send a drone to monitor?

East Carolina Univ has tagged 43,000+ spiny dogfish – trying to get graduate student to publish. Appears to be an availability gap from years 2-8/10 where if not caught in first few years fish are not caught for a number of years but then eventually show back up in commercial catches.

Updated bycatch mortality information could help us understand biomass trends.

Could there be electromagnetic energy being transferred to the trawl affecting survey catches?

Why are people opting out of this fishery? Greying of the fleet? Costs? Other fisheries? We need to understand the vast drop in participation and what is projected for future trends.

Spiny dogfish fishing could have an environmental justice component as a relatively low-priced seafood.



Spiny Dogfish Fishery Information Document

September 2023

This Fishery Information Document provides an overview of the biology, stock condition, management system, and fishery performance for spiny dogfish (*Squalus acanthias*) with an emphasis on recent data. Data sources for Fishery Information Documents are generally from unpublished National Marine Fisheries Service (NMFS) survey, dealer, vessel trip report (VTR), permit, and Marine Recreational Information Program (MRIP) databases and should be considered preliminary. For more resources, including previous Fishery Information Documents, please visit <http://www.mafmc.org/dogfish>.

Key Facts

- 2022 fishing year landings were about 19% higher than the previous year, but still relatively low in the context of the most recent 10 years.
- The current 2023 fishing year quota is about 12.0 million pounds (59% lower than 2022).
- A peer review of the 2023 Management Track Assessment is pending – the assessment uses data through 2022. Staff will summarize the peer review of the assessment at the Advisory Panel meeting on September 20, 2023.

Basic Biology

Spiny dogfish is the most abundant shark in the western north Atlantic and ranges from Labrador to Florida, being most abundant from Nova Scotia to Cape Hatteras, North Carolina. Migrations are believed to primarily occur in response to changes in water temperature. Spiny dogfish have a long life, late maturation, a long gestation period, and relatively low fecundity, making them generally vulnerable to depletion. Fish, squid, and ctenophores dominate the stomach contents of spiny dogfish collected during the Northeast Fisheries Science Center (NEFSC) bottom trawl surveys, but spiny dogfish are opportunistic and have been found to consume a wide variety of prey. More detailed life history information can be found in the essential fish habitat (EFH) source document for spiny dogfish at: <https://www.fisheries.noaa.gov/region/new-england-mid-atlantic#science>.¹

Status of the Stock

A peer review of the 2023 Management Track Assessment is pending. While the 2023 Management Track Assessment and the 2022 Research Track Assessment both indicate recent declines in spiny dogfish biomass, the status of the stock is not yet clear.

Management System and Fishery Performance

Management

The Council established management of spiny dogfish in 2000 and the management unit includes all federal East Coast waters. Quotas are set based on the current science and Council's risk policy to avoid overfishing and rebuild stocks if/when necessary.

Access to the fishery is not limited, but a federal permit must be obtained to fish in federal waters and there are various permit conditions (e.g. trip limit and reporting). There is a federal trip limit of 7,500 pounds (increased from 6,000 for the 2022 fishing year). Some states mirror the federal trip limit, but states can set their own trip limits. The annual quota has been allocated to states through the Atlantic States Marine Fisheries Commission (<http://www.asmfc.org/species/spiny-dogfish>).

Commercial Fishery (Recreational catch comprises a relatively low portion of fishing mortality)

Figure 1 and Table 1 illustrate spiny dogfish landings for the 2000-2022 fishing years relative to the quotas in those years. The Advisory Panel has previously noted that the fishery is subject to strong market constraints given weak demand. 2022 fishing year landings were about 19% higher than the previous year, but still relatively low in the context of the most recent 10 years.

Figure 2 provides inflation-adjusted spiny dogfish ex-vessel prices in "2022 dollars." Partial-year 2023 prices to-date are also provided (also in "2022 dollars").

Figure 3 illustrates preliminary landings from the 2023 and 2022 fishing years relative to the current quota. The last data point (2023) is typically the most incomplete.

Tables 2-4 provide information on landings in the 2020-2022 fishing years by state, season, and gear type. The seasonal periods were changed since the last document to maintain data confidentiality.

Table 5 provides information on the numbers of participating vessels that have at least one federal permit. State-only vessels are not included, but the table should still illustrate overall trends in participation.

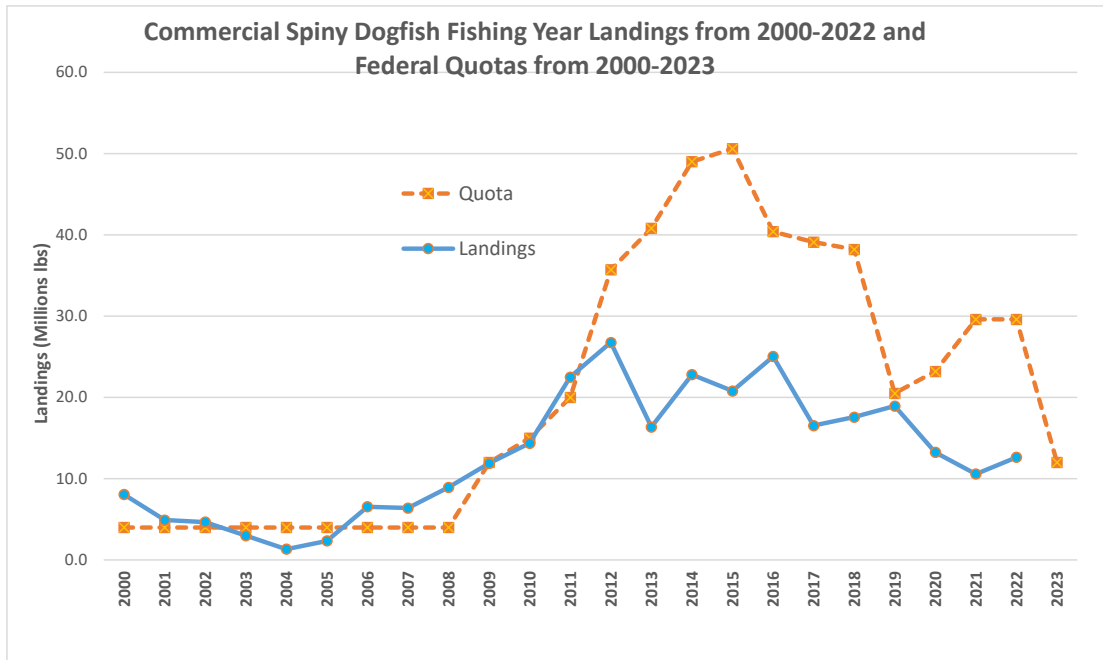


Figure 1. Annual spiny dogfish landings and federal quotas 2000-2023 Source: NMFS unpublished dealer data.²

Table 1. Annual spiny dogfish landings and federal quotas 2000-2023 Source: NMFS unpublished dealer data.²

Fishing year	Fed Quota (M lb)	Landings (M lb)
2000	4.0	8.1
2001	4.0	4.9
2002	4.0	4.7
2003	4.0	3.0
2004	4.0	1.3
2005	4.0	2.3
2006	4.0	6.6
2007	4.0	6.4
2008	4.0	8.9
2009	12.0	11.9
2010	15.0	14.4
2011	20.0	22.5
2012	35.7	26.8
2013	40.8	16.4
2014	49.0	22.8
2015	50.6	20.8
2016	40.4	25.0
2017	39.1	16.5
2018	38.2	17.6
2019	20.5	18.9
2020	23.2	13.3
2021	29.6	10.6
2022	29.6	12.6
2023	12.0	

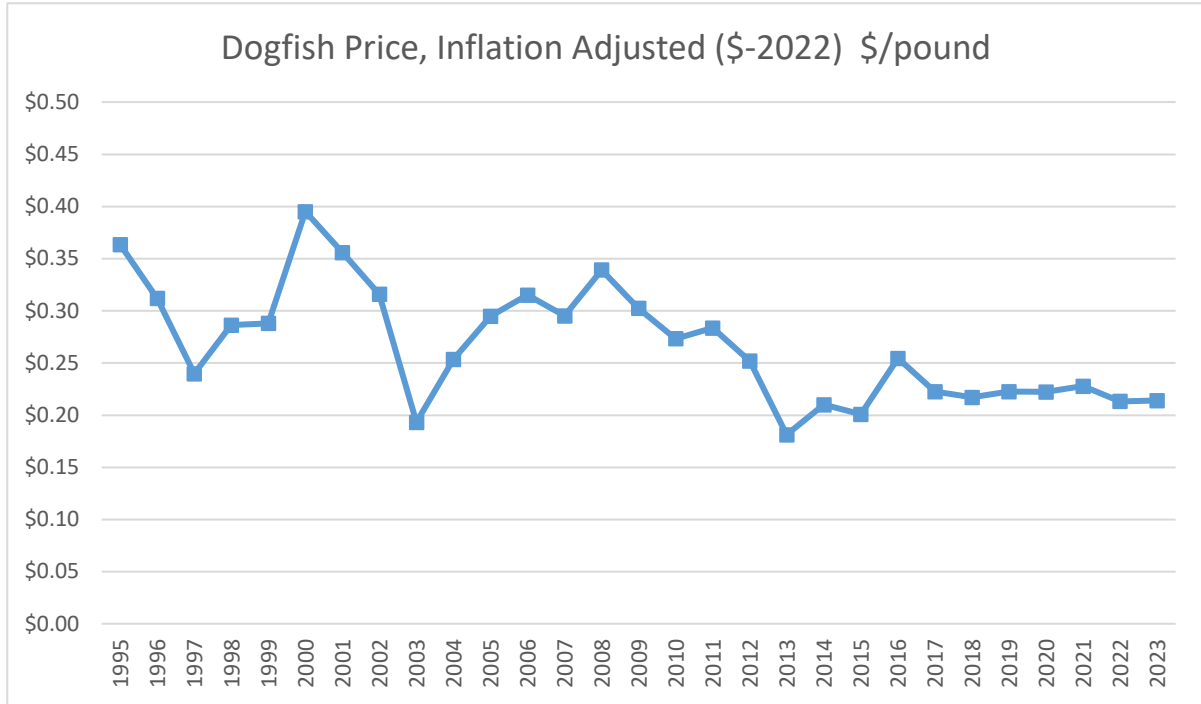


Figure 2. 1995-2023 fishing years' average prices of spiny dogfish in 2022 dollars per live pound (adjusted to "2022 dollars" using the GDP deflator). 2023 data is through early September only. Source: NMFS unpublished dealer data.²

THIS SPACE INTENTIONALLY LEFT BLANK

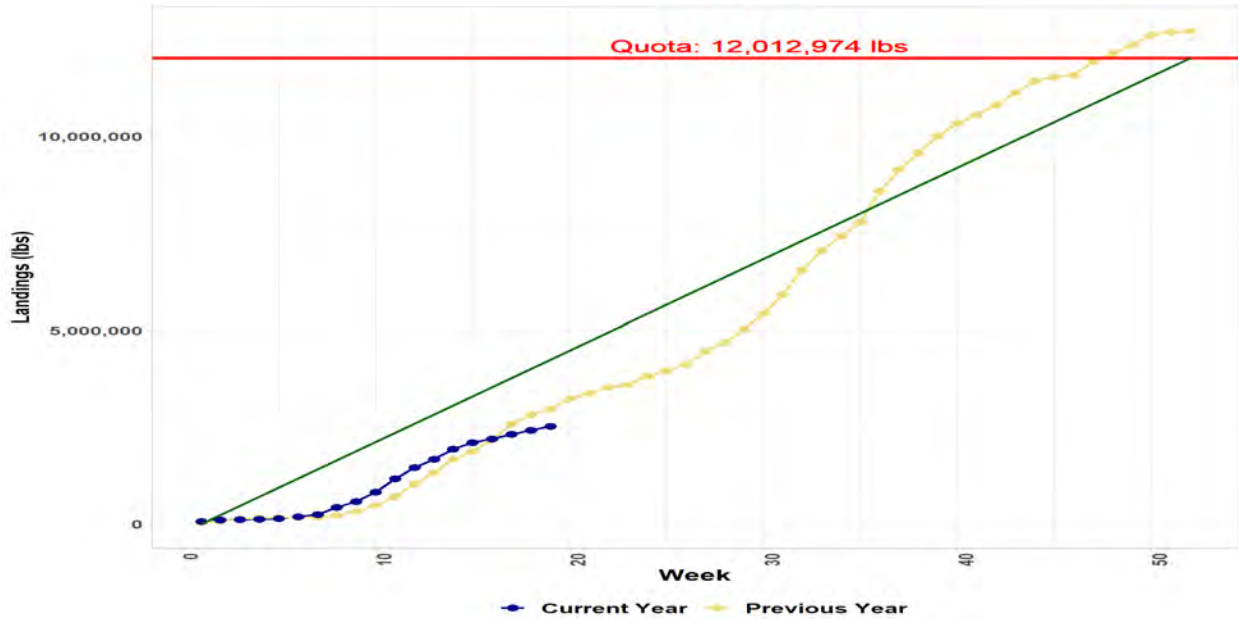


Figure 3. Preliminary Spiny dogfish landings; the 2023 fishing year (Starts May 1) is in blue (through September 13, 2023), and the 2022 fishing year is in yellow-orange. Source: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/commercial-fishing/quota-monitoring-greater-atlantic-region> . ²

Table 2. Commercial Spiny Dogfish landings (live weight – millions of pounds) by state for 2020-2022 fishing years. Source: NMFS unpublished dealer data. ³

Year	MA	VA	NJ	Other (ME, NH, RI, CT, NY, MD, NC)	Total
2020	6.6	3.3	2.0	1.4	13.3
2021	3.8	4.0	1.6	1.2	10.6
2022	3.8	6.0	1.7	1.1	12.6

Table 3. Commercial Spiny Dogfish landings (live weight – millions of pounds) by months for 2020-2022 fishing years. Source: NMFS unpublished dealer data. ²

Year	May-Aug	Sept-Dec	Jan-April	Total
2020	4.9	5.5	2.8	13.3
2021	2.9	4.6	3.1	10.6
2022	2.7	5.0	4.9	12.6

Table 4. Commercial Spiny Dogfish landings (live weight – millions of pounds) by gear for 2020-2022 fishing years. Source: NMFS unpublished dealer data. ²

Year	GILL_NET_SINK_OTHER	LONGLINE_BOTTOM	TRAWL_OTHER_BOTTOM_FISH	Unknown/Other	Total
2020	9.7	1.8	0.4	1.4	13.3
2021	9.2	0.5	0.3	0.6	10.6
2022	10.1	0.9	0.2	1.3	12.6

Table 5. Participation in fishing years 2000-2022 by federally-permitted vessels. State-only vessels are not included. Source: NMFS unpublished dealer data.²

YEAR	Vessels 200,000+	Vessels 100,000 - 199,999	Vessels 50,000 - 99,999	Vessels 10,000 - 49,999	Total with at least 10,000 pounds landings
2000	16	10	8	43	77
2001	4	12	10	33	59
2002	2	14	8	31	55
2003	4	5	3	17	29
2004	0	0	0	42	42
2005	0	0	1	67	68
2006	0	4	11	114	129
2007	1	2	21	72	96
2008	0	5	20	119	144
2009	0	11	42	166	219
2010	0	26	54	124	204
2011	1	48	73	135	257
2012	25	55	56	146	282
2013	10	27	45	87	169
2014	27	38	38	81	184
2015	31	33	36	59	159
2016	52	26	14	45	137
2017	28	27	24	32	111
2018	28	26	20	35	109
2019	29	25	21	29	104
2020	23	27	15	22	87
2021	15	27	11	26	79
2022	28	9	14	29	80

References

¹ Stehlik, Linda. 2007. Essential Fish Habitat source document: Spiny Dogfish, *Squalus acanthias*, Life History and Habitat Characteristics. NOAA Technical Memorandum NMFS-NE-203; 52 p.

² Unpublished NMFS dealer and/or Vessel Trip Report data.

END OF DOCUMENT

EAST COAST SEAFOOD, LLC
SEATRADE INTERNATIONAL

November 14, 2023

Dr. Christopher Moore
Executive Director
Mid-Atlantic Fishery Management Council
800 North State Street, Suite 201
Dover, DE 19901

Re: Spiny Dogfish Quota 2024-26

Dear Dr. Moore:

I am the Chief Executive Officer of East Coast Seafood, LLC also known as Seatrade International. Seatrade is one of the original commercial dogfish processors and marketers of Spiny Dogfish dating back to the 1980's under the leadership of Steve Barndollar. I became affiliated with Seatrade in 1992 and have experienced the growth and slow demise of the industry. The industry has failed to attract any domestic interest in the species, the government has no purchase program, ocean carriers have refused to carry our cargo, governments have attempted to ban Spiny Dogfish, and there are fewer and fewer fishermen and offloaders with each passing season. To say the least, the fishery is very challenging.

As an original, and only remaining stakeholder in the sustainable certification of Spiny Dogfish, we are very supportive of sustainability measures. However, we need to keep in mind that we are protecting a predator and a nuisance fish formerly referred to as a "trash" fish, that if left unchecked will have a negative impact on North Atlantic fisheries. Nobody wants Dogfish to become extinct, but nobody should want the industry to become extinct either. The demise of the fishery will create new management concerns for the Councils as they attempt to find a way to compensate fishermen to harvest Dogfish to allow other species to flourish. Although dogfish is not a huge fishery, its extinction by implementing an unnecessarily low commercial quota would impact fishermen and fish houses from NH to NC, a New Bedford workforce, and many ancillary services including freezer, packaging, and transportation.

I do not believe that the science is as sound as the Science and Statistical Committee would have us believe. The Bigelow continues to fail to complete its surveys, observers tasked with measuring fish are spotty at best due to financial constraints, and the scientists are not surveying other areas like the Gulf of Maine. We hear from trawlers that vessels are forced to cut nets or move to in order to find targeted groundfish.

We recommend that the Dogfish committee put additional measures in place to increase the confidence in the science and Seatrade is pleased to assist in any way that we can. You should require additional surveys, including off the coast of Maine. The Committee should also require observers inspect dogfish one day per month at the only remaining production facility to measure fish, as this is the most efficient, cost effective and reliable means of completing this task. As previously mentioned, we are happy to make available our internal graded dogfish back reports that do not corroborate a measurable decline in the size of the species. We should work together on the possibility of a seasonal male dragger fishery to reduce the male population and sustain the industry. And jointly work on a government purchase program that will increase the price paid to fishermen.



Salt & Sky

Mid-Atlantic Fishery Management Council
November 14, 2023
Page Two

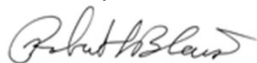
As far as the quota is concerned, we are not asking the Committee and Councils to ignore that science that has been presented but use its powers to adopt certain measures that will give the industry a fighting chance. First of all, you can adopt a projected discard of 2,134 MT. The Science and Statistical Committee claims with certainty that the ABC is 7,135 MT but that 2023 discard projection of 2,088 MT could be understated!?

Secondly, you can adopt a management buffer of zero, as there are inherent buffers built into the fishery. It's impossible to catch 100% of the quota, with the quota divided between the north and south and then subsequently divided again by state. It's unrealistic to think that each state will either catch or relinquish its entire quota. We have also heard that there is instability with the loss of the largest offloader in the South and uncertainty if there is going to be a successful successor. In addition, it's unlikely that we will catch the 2023 TAL of 5.449 MT. Because of the inherent buffer, we were never expecting to catch the quota and currently anticipating a 2023 harvest of ~4,700 MT, barely enough for the industry to survive. With a TAL of 4,852 I expect a final harvest in the vicinity of 4.300 MT. And this leads me to my final observation, doesn't the balance add to the 2024 buffer?

In summary, I am asking the Councils to make the best of a bad situation by using its available powers to maximize the 2024 harvest by minimizing discard projection, adopting a zero buffer and consider rolling over remaining quota.

I would like to thank all of the members and councils for their dedication and service to US fisheries.

Sincerely



Bob Blais
Chief Executive Officer

Cc: Dr. Cate O'Keefe, Executive Director New England Fisheries Management Council
Sonny Gwin, Chair Joint Spiny Dogfish Committee Mid-Atlantic Fisheries Management Council
Nichola Meserve, Vice Chair New England Fisheries Management Council
Eric Reid, Chair NEFMC
Wes Townsend, Chair MAFMC

Atlantic States Marine Fisheries Commission

American Eel Management Board

January 23, 2024

4:00 – 5:30 p.m.

Hybrid Meeting

Draft Agenda

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

1. Welcome/Call to Order (*K. Kuhn*) 4:00 p.m.
2. Board Consent 4:00 p.m.
 - Approval of Agenda
 - Approval of Proceedings from October 2023
3. Public Comment 4:05 p.m.
4. Consider Approval of Draft Addendum VI on Maine’s Glass Eel Quota for Public Comment (*C. Starks*) **Action** 4:15 p.m.
5. Consider Approval of Draft Addendum VII on Yellow Eel Coastwide Cap and Monitoring Requirements for Public Comment (*C. Starks*) **Action** 4:45 p.m.
6. Consider Approval of Fishery Management Plan Review and State Compliance Reports for the 2022 Fishing Year (*C. Starks*) **Action** 5:20 p.m.
7. Review and Populate Advisory Panel Membership (*T. Berger*) **Action** 5:25 p.m.
8. Other Business/Adjourn 5:30 p.m.

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

MEETING OVERVIEW

American Eel Management Board

January 23, 2024

4:00 – 5:30 p.m.

Hybrid Meeting

Chair: Kris Kuhn (PA) Assumed Chairmanship: 10/23	Technical Committee Chair: Danielle Carty (SC)	Law Enforcement Committee Representative: Rob Beal (ME)
Vice Chair: VACANT	Advisory Panel Chair: Mari-Beth DeLucia (TNC)	Previous Board Meeting: October 19, 2023
Voting Members: ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, PRFC, VA, NC, SC, GA, FL, D.C, NMFS, USFWS (19 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from October 2023

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

4. Consider Draft Addendum VI on Maine’s Glass Eel Quota for Public Comment (4:15-4:45 p.m.) Action
<p>Background</p> <ul style="list-style-type: none"> • In August 2023, the Board initiated Draft Addendum VI to address the quota for Maine’s glass eel fishery for the 2025 fishing year and beyond. The current quota expires at the end of 2024. • The Plan Development Team met several times to develop the Draft Addendum for Public Comment. Draft Addendum VI considers options for Maine’s commercial glass eel quota level and duration (Briefing Materials).
<p>Presentations</p> <ul style="list-style-type: none"> • Draft Addendum VI on Maine’s Glass Eel Quota for Public Comment by C. Starks
<p>Board Actions for Consideration</p> <ul style="list-style-type: none"> • Approve Draft Addendum VI for Public Comment

5. Consider Draft Addendum VII on Yellow Eel Management and Monitoring Requirements for Public Comment (4:45-5:25 p.m.) Action

Background

- In response to the stock assessment findings that the American eel stock is depleted to historically low levels, and recommendation to reduce yellow eel fishing mortality, the Board initiated an addendum to consider changes to the coastwide cap for yellow eel harvest.
- The PDT met several times to develop the Draft Addendum for Public Comment. The Draft Addendum includes options that consider reducing the coastwide cap for commercial yellow eel harvest using the *I_{TARGET}* tool recommended in the assessment, and the management response if the cap is exceeded (**Briefing Materials**).
- Draft Addendum VII also considers options to modify monitoring and harvester reporting requirements consistent with stock assessment and Technical Committee recommendations (**Briefing Materials**).

Presentations

- Overview of Draft Addendum VII for Public Comment by C. Starks

Board Actions for Consideration

- Approve Draft Addendum VII for Public Comment

6. Consider Fishery Management Plan Review and State Compliance Reports for the 2022 Fishing Year (5:20-5:25 p.m.) Action

Background

- State Compliance Reports were due on September 1, 2023.
- The Plan Review Team reviewed each state report and compiled the annual FMP Review (**Briefing Materials**).
- New Hampshire, Massachusetts, Pennsylvania, District of Columbia, and Georgia have requested and meet the requirements for *de minimis* for their yellow eel fisheries. Florida requested but does not qualify for *de minimis* as the state landings in 2022 exceed 1% of the coastwide yellow eel landings.

Presentations

- Fishery Management Plan Review for the 2022 Fishing Year for American Eel by C. Starks

Board Actions for Consideration

- Approve Fishery Management Plan Review, State Compliance Reports, and *de minimis* requests

7. Review and Populate Advisory Panel Membership (5:25-5:30 p.m.) Action

Background

- Sara Rademaker, an eel aquaculturist from Maine, has been nominated to serve on the Advisory Panel (**Briefing Materials**).

Board Actions for Consideration at the Meeting

- Approve Advisory Panel nomination

8. Other Business/Adjourn

American Eel

Activity level: Low

Committee Overlap Score: Medium (SAS overlaps with BERP, Atlantic herring, horseshoe crab)

Committee Task List

- TC –July 2024 review of Maine’s aquaculture proposal
- TC – September 1st: Annual compliance reports due

TC Members: Danielle Carty (SC, TC Chair), Bradford Chase (MA), Caitlin Craig (NY), Casey Clark (ME), Chris Adriance (DC), Chris Wright (NOAA), Ingrid Braun (PRFC), Jennifer Pyle (NJ), Jordan Zimmerman (DE), Troy Tuckey (VIMS), Jim Page (GA), Keith Whiteford (MD), Kevin Molongoski (USGS), Kimberly Bonvechio (FL), Mike Porta (PA), Patrick McGee (RI), Robert Atwood (NH), Sheila Eyles (USFWS), Tim Wildman (CT), Todd Mathes (NC), Caitlin Starks (ASMFC)

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
AMERICAN EEL MANAGEMENT BOARD**

**Beaufort Hotel
Beaufort, North Carolina
Hybrid Meeting**

October 19, 2023

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

TABLE OF CONTENTS

Call to Order, Chair Philip A. Edwards III1

Approval of Agenda1

Approval of Proceedings from August 1, 2023.....1

Public Comment1

Progress Update on Development of Draft Addenda to Address Yellow Eel Commercial Quota and Maine Glass
Eel Commercial Quota.....1

Advisory Panel Report7

Adjournment8

INDEX OF MOTIONS

1. **Approval of agenda** by consent (Page 1).
2. **Approval of Proceedings of August 1, 2023** by consent (Page 1).
3. **Move to adjourn** by consent (8).

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

ATTENDANCE

Board Members

Megan Ware, ME, proxy for P. Keliher (AA)	Kris Kuhn, PA, proxy for T. Schaeffer (AA)
Stephen Train, ME (GA)	Loren Lustig, PA (GA)
Rep. Allison Hepler, ME (LA)	John Clark, DE (AA)
Cheri Patterson, NH (AA)	Roy Miller, DE (GA)
Doug Grout, NH (GA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Lynn Fegley, MD (AA, Acting)
Dan McKiernan, MA (AA)	David Sikorski, MD, proxy for Del. Stein (LA)
Raymond Kane, MA (GA)	Shanna Madsen, VA, proxy for J. Green (AA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	Chris Batsavage, NC, proxy for K. Rawls (AA)
Phil Edwards, RI, proxy for J. McNamee (AA)	Chad Thomas, NC, proxy for Rep. Wray (LA)
David Borden, RI (GA)	Malcolm Rhodes, SC (GA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Ben Dyar, SC, proxy for Sen. Cromer (LA)
Justin Davis, CT (AA)	Doug Haymans, GA (AA)
Robert LaFrance, CT, proxy for B. Hyatt (GA)	Spud Woodward, GA (GA)
Craig Miner, CT, proxy for Rep. Gresko, CT (LA)	Erika Burgess, FL, proxy for J. McCawley (AA)
Jesse Hornstein, NY, proxy for M. Gary (AA)	Dan Ryan, DC, proxy for R. Cloyd
Emerson Hasbrouck, NY (GA)	Ingrid Braun, PRFC, proxy for M. Gary
Joe Cimino, NJ (AA)	Chris Wright, NMFS
Jeff Kaelin, NJ (GA)	Rick Jacobson, US FWS
Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)	

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

Ex-Officio Members

Mari-Beth Delucia, Advisory Panel Chair	Rob Beal, Law Enforcement Committee Rep.
---	--

Staff

Bob Beal	Jeff Kipp	Emilie Franke
Toni Kerns	Tracy Bauer	James Boyle
Tina Berger	Caitlin Starks	Kristen Anstead
Madeline Musante	Katie Drew	Chelsea Tuohy

Guests

Debra Abercrombie, US FWS	Margaret Conroy, DE DNREC	Pat Geer, VMRC
Max Appelman, NOAA	Caitlin Craig, NYS DEC	Lewis Gillingham, VMRC
Pat Augustine	Dustin Delano, NEFSA	Joseph Grist, VMRC
Richard Balouskus, RI DEM	Julie Evans	Pat Keliher, ME (AA)
Carolyn Belcher, GA DNR	Sheila Eyler, US FWS	John Maniscalco, NYS DEC
Jessica Best, NYS DEC	Cynthia Ferrio, NOAA	Todd Mathes, NC DEQ
Alan Bianchi, NC DMF	James Fletcher, United National	Joshua McGilly, VMRC
William Brantley, NC DEQ	Fishermen's Assn.	Patrick Moran, MA
Jeffrey Brust, NJ DEP	Tony Friedrich, ASGA	Environmental Police
Haley Clinton, NC DEQ	Marty Gary, NY (AA)	Allison Murphy, NOAA

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

Guests (continued)

Thomas Newman
John Nielsen, Sly Fishing
Outfitters
Emily Paribello, NYS DEC
Jeffrey Pierce, MEFA
Jennifer Pyle, NJ DEP
Jill Ramsey, VMRC

Kathy Rawls, NC (AA)
Harry Rickabaugh, MD DNR
Jason Rock, NC DMF
Kirby Rootes-Murdy, BOEM
Mike Ruccio, NOAA
Alexandra Schwaab, AFWA
Somers Smott, VMRC

Scott Travers, RI Saltwater
Anglers Assn.
Keith Whiteford, MD DNR
Darrell Young, MEFA
Daniel Zapf, NC DEQ
Jordan Zimmerman, DE DFW

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

The American Eel Management Board of the Atlantic States Marine Fisheries Commission convened in the Rachel Carson Ballroom via hybrid meeting, in-person and webinar; Thursday, October 19, 2023, and was called to order at 8:30 a.m. by Chair Phillip A. Edwards III.

CALL TO ORDER

CHAIR PHILLIP A. EDWARDS III: I would like to call to order the American Eel Management Board meeting. My name is Phil Edwards; I'm the Administrative Proxy for Rhode Island. Joining me today from the Commission is Caitlin Starks and Kristen Anstead. Also joining me today is Major Robert Beal from Enforcement, and Mari-Beth DeLucia representing the Advisory Panel from the Nature Conservancy.

APPROVAL OF AGENDA

CHAIR EDWARDS: The first item on our agenda is the Approval of the Agenda. Are there any proposed changes or modifications? If so, please raise your hands. Anything online? Seeing none; the agenda is approved by consent.

APPROVAL OF PROCEEDINGS

CHAIR EDWARDS: Moving on to the approval of the proceedings from August of 2023, which was in your materials. Are there any corrections or edits? Seeing none; it is approved by consent.

PUBLIC COMMENT

CHAIR EDWARDS: Next up is public comment. We have one person signed up for public comment, Jeff Pierce.

MR. JEFFREY PIERCE: Chairman Edwards, members of the American Eel Board, my name is Jeffrey Pierce. I'm here on the behalf of the Maine Elver Fishermen's Association, that sent meeting notes and information for you to review. In July we provided the rationale for reviewing and increasing the glass eel quota for fishermen in Maine waters.

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

At that time, we provided a summary of restoration activities. We were on the mainstem of the Penobscot River, completed since 2012. It selected some of their fish passage improvements that have taken place in other waterways in the state of Maine since 2012. Please know, there has been many other fish passage improvements in the region during this time, but they are not shown on this table.

We plan on submitting further summaries that will help qualify these projects, the summaries attached include dam removals, fish construction and passage improvement that have impacted 380 miles of rivers and streams and over 35,000 acres of lake. American eels at various stages of their life benefit from these projects. Thank you for reviewing this information, and we hope to be able to use the conservation credits that were set forth in Addendum IV. Thank you.

CHAIR EDWARDS: Thank you, Jeffrey for your public comment. Is there any other public comment that is not on the agenda? Anything online? Okay. We'll move to Agenda Item Number 4.

PROGRESS UPDATE ON DEVELOPMENT OF DRAFT ADDENDA TO ADDRESS YELLOW EEL COMMERCIAL QUOTA AND MAINE GLASS EEL COMMERCIAL QUOTA

CHAIR EDWARDS: Caitlin Starks will provide us with a progress update on the development of Draft Addenda to address the yellow eel commercial quota, and the Maine glass eel commercial quota.

MS. CAITLIN STARKS: This will just be a short update on what the PDT has been working on since the last meeting. Starting off with the background. In August, the Board approved the recent American Eel Benchmark Stock Assessment for management use, and the assessment found that the American eel stock is depleted, and recommended that yellow eel catch be reduced.

At that same meeting, the Board initiated two addenda. The first was in response to the stock assessment findings and recommendation, and it

addresses the coastwide catch of yellow eel. The second is to address Maine's glass eel quota, because the current quota expires after 2024. These are the motions that initiated these two addenda.

For yellow eel the Board specifically asked the PDT to consider options that use the ITARGET tool that was used in the assessment to recommend various coastwide caps. I'm going to start off with the development of the Draft Addendum for Maine's glass eel quota, since it's a little faster. But the PDT has met once to discuss the development of the Addendum, and potential management options to include.

The PDT all agreed that the status quo of 9,688 pounds is a valid option to be considered, and should be included, and one PDT member felt that an option should also be included to consider reducing Maine's glass eel quota, because the assessment indicates that the stock is depleted and the Board is considering reducing the catch of yellow eel. The PDT also talked about options for how long the Maine glass eel quota should stay in place, and whether there should be a sunset clause or not.

One suggestion was that the quota should be reevaluated when there is a new stock assessment. Because there was only one meeting so far, the PDT has not made any more specific recommendations, but is planning to further review the Addendum V provisions that are relevant to glass eel, and determine if the current addendum should consider any improvements to those, such as the reporting requirements and the allowance for additional restoration projects. This is a potential timeline for the next steps of the development of the glass eel Addendum.

I think it's feasible to get a draft document to the Board at the winter meeting, so the Board could consider that Draft Addendum for public comment. If approved at that meeting, hearings and the public comment period could take place in February or early March, and the

Board could then review the public comment, and consider the Addendum for final approval at the Spring 2024 Commission meeting.

If the Addendum is approved at that meeting, then it would give adequate time for the new quota to be implemented before 2025. Moving on to the yellow eel Draft Addendum. The PDT for this action met twice in September, and they've started to draft potential management options for yellow eel.

Status quo will be the first option, and the PDT also recommended that one option for the coastwide cap be based on the ITARGET configurations that was recommended in the stock assessment, and that a second option for the coastwide cap to be based on using the ITARGET tool with the later reference period, which is 1988 through 1999. Just as a reminder, when using ITARGET there are three variables or "knobs" that can be adjusted to configure the tool, and these are the reference period, the multiplier and the threshold.

The reference period is meant to be a time period where the population is stable or at a desirable abundance level. The multiplier determines the level of abundance that management is aiming to achieve. If the multiplier is set to 1, then that means you're aiming to achieve the same abundance from the reference period.

If you set the multiplier to 1.25 that means you're aiming to achieve an abundance that is 25 percent higher than what it was during the reference period. Then the threshold value is a proportion of the ITARGET value that depends on the goals of the fishery. A threshold of 0.5 is less conservative, and would generally result in higher catch caps, whereas a threshold of 0.8 was recommended by the New England Fishery Science Center as a more conservative value.

These are the two options that the PDT is recommending for inclusion in the Addendum at this point. The top option is what was recommended in the assessment, in terms of the ITARGET configuration, so it uses the reference period of 1974 through 1987. That is the higher

These minutes are draft and subject to approval by the American Eel Management Board.

The Board will review the minutes during its next meeting.

abundance regime that was identified in the stock assessment, and it uses a multiplier value of 1.25, meaning it aims to achieve an abundance 25 percent greater than the abundance during those years, and a threshold value of 0.8, and with those values the ITARGET recommends that the catch in 2020 should not have exceeded 202,453 pounds.

So, 2020 is the last year of data in the assessment, and that is why we're using this year from ITARGET. The bottom row is then the second option that the PDT recommended, and this one uses the later reference period 1988 to 1999, a multiplier of 1.5, and a threshold of 0.5.

That resulted in a recommended catch cap of 509,780 pounds. Then to provide a better picture of how those two options are working, this is the graph of the yellow eel abundance index, which is the dotted gray line and their landings, which is the black line, and the two reference periods are shown in the shaded areas with the blue one being the earlier reference period, where the abundance was higher, and the orange area is the later reference period when the abundance was lower.

These two reference periods were based on distinct regimes that were identified in the assessment. For that first option that I just showed you, it uses the abundance levels in the blue shaded areas as a reference, and it's aiming to achieve a 25 percent increase from that. For the second option, it uses the abundance levels in the orange area, and is aiming to achieve a 50 percent increase from that level.

Then in addition to those options, the PDT also made some general recommendations for the Draft Addendum. First, they recommend that in each option it be clear what abundance level it's aiming to achieve. This would be done by explaining the relationship of that multiplier and reference period. The PDT also recommends that the Addendum consider

additional options for what the management response would be if the catch cap is exceeded, in addition to status quo from Addendum V. Then lastly, when the catch cap is reevaluated in the future, it's recommended that whatever ITARGET configuration is selected by the Board, that should not be changed, so we have a solid baseline to compare to, and instead additional years of landings and index data could just be added and run through ITARGET to update the catch cap recommendation.

To help the PDT further develop the Addendum options, they are looking for some input from the Board in a few specific areas. First, they want to know what abundance level the Board is looking to achieve, so is it 25 percent higher than the higher abundance regime, or 50 percent higher than the lower abundance regime, or something else?

Does the Board want to reconsider using state by state quotas to control landings, and if not, how would the states then control landings so that the cap is not exceeded? The PDT noted that Maryland's landings alone are close to some of those ITARGET recommended catch caps, so this warrants some consideration by the Board.

Then, are there limits around what catch caps the Board is willing to consider, and if the catch cap is exceeded, does the Board want to stick with the same process that was established in Addendum V, or consider other options for paying back quota? Then lastly, how often should the catch cap be reevaluated?

On this topic the PDT did recommend that it should be at least three years from when it's implemented, no less time. Then last here, similar to glass eel, this is a timeline outlining the fastest possible schedule for moving this Addendum forward. This would involve considering the Draft Addendum for public comment at the 2024 winter meeting, and then holding public hearings and a comment period during February and March.

If that goes through, then the Board could consider the public comments at the spring meeting, and consider final approval of the Addendum. The

These minutes are draft and subject to approval by the American Eel Management Board.

The Board will review the minutes during its next meeting.

Board could then set the implementation date, but this would probably allow the states enough time to implement any changes by 2025. With that I can take any questions.

CHAIR EDWARDS: A great update, questions for Caitlin. Craig.

MR. CRAIG D. PUGH: Effort values, how are they considered in this? I don't see any information about that. That seems to be a huge question since the 1980s effort has dropped off. I know here lately dropped off even more. One would be bait resources and Number 2 would be marketability. Marketability has fell off lately, especially since COVID, to back to 1980 levels of sales driving the market to the point where fishing for eel is unfeasible.

Then of course, that results in no landings. It doesn't necessarily mean there aren't any fish, it doesn't mean there aren't any eels, it just means that we're not fishing. How does that factor into these findings you have?

MS. STARKS: The PDT has not discussed effort levels as a part of this so far, because the task from the Board was specifically asking to look at using the ITARGET tool to set the catch cap, so that is not something the PDT discussed.

CHAIR EDWARDS: John Clark.

MR. JOHN CLARK: Thanks for the presentation, Caitlin. Just following up on Craig's point. Is there really any pressing need to move ahead with this yellow eel addendum at this point? I've spoke to the largest buyer of eels on the east coast. There is no market anymore for yellow eels. I now a lot of the data we get is actually based on the commercial fishery. It just seems like we're looking for a problem that doesn't exist right now. When the fishery comes back, if it comes back, I mean it seems like this could be postponed until we start seeing more interest in catching eels.

MS. STARKS: I think the Board initiated this Addendum because the stock assessment found that the catch levels, even in the last few years where they've been lower, are too high, in terms of comparing them to the recommended catch that comes out of the ITARGET tool. If we want to change course, then I would need direction from the Board.

CHAIR EDWARDS: John Clark.

MR. CLARK: If I could just follow up. I mean the stock has been depleted, based on the assessments we've done, since we've been, this is what the third benchmark assessment? Each time, or the second, each time it has been we have deficiency in the data. Each time we do it we just have like five more years of deficient data.

I just don't want to see us getting into a situation where we have a population of eels out there that can sustain more, and then we end up taking management actions unnecessarily, when and if a market for eels ever comes back. Anyhow, just putting that out there. I don't see any pressing need to pursue this further at this time.

CHAIR EDWARDS: Lynn Fegley.

MS. LYNN FEGLEY: Thank you, Caitlin, and I apologize, because I am maybe a little bit less prepared than I wanted to be. But I just wanted to ask about the multiplier value and the reference period. Is the PDT planning to use the 1.25 multiplier with the 1988 to 1999 reference period? Was that the one that resulted in a higher cap than what we currently have?

MS. STARKS: There are two options, Madeline if you could put Slide 8 up, that the PDT has discussed. One of those uses the earlier reference period with the 1.25, and the other uses the later reference period with the 1.5 multiplier. However, as with all of our addenda, if these two options were in the document for public comment, then the Board could pick other options between those values.

CHAIR EDWARDS: Lynn.

MS. FEGLEY: Yes, because I think that is going to be important to include, because in my mind, I mean the idea here right, if you're aiming to get higher than some sort of condition you've seen in the past. From my perspective, trying to get ourselves 1.25 the level of that most recent reference period is a really good incremental start.

You know sort of to John's point, you know we've got a lot of market conditions here, and it seems like given the uncertainty around whether management action is really going to exert and enforce at all on changing the trajectory of the stock. One way to go at it is to take your step, take smaller incremental steps. I don't remember what the cap result was when you did 1988 to 1999 with a 1.25 multiplier. But I would love to see that in the document.

MS. STARKS: Thanks, Lynn, we can add that.

CHAIR EDWARDS: Dan McKiernan.

MR. DANIEL MCKIERNAN: I would like to follow upon the comments coming from the Delaware delegation concerning effort. I don't know where the answer lies, maybe it's from the TC. Is it possible to describe the reduction in effort? Do the states collectively have effort data that could corroborate what they're describing as a serious drop off in effort?

CHAIR EDWARDS: Kristen.

DR. KRISTEN ANSTEAD: Several states submitted commercial CPUEs and we put them in the appendix of the assessment, and they are not entirely fresh in my mind, but I believe most of them were declining, with the exception of Maryland. But we don't have extensive effort data.

MR. MCKIERNAN: If I could follow up. There is another species board, the Horseshoe Crab Board that I think could really use the holistic

view of the use of that organism as bait, and it would be really valuable to crossover. Now there is a third species, which is the whelk, that uses the horseshoe crabs as bait.

At some point I think we need to kind of rise up above just the single species challenges, and maybe ask the states to describe the effort levels of these fisheries that use the controversial horseshoe crab. I'll bring that up at the policy board, but thank you for that.

CHAIR EDWARDS: Rick Jacobson.

MR. RICK JACOBSON: In many fisheries I can understand taking an incremental approach, for instance applying a 1.25 multiplier to a lower abundance reference period of '88 to '99. But in this case, where we have a species that has been considered for a listing under ESA here in the United States. It has been listed European eels in Europe, it's considered under CITES, and in the absence of a real active market and fishery, it seems counterintuitive to explore an incremental approach when we have an opportunity to aim for a higher target. I just question the wisdom of including the 1.25 multiplier for the '88 to '99 period.

CHAIR EDWARDS: Shanna.

MS. SHANNA MADSEN: I'm going to go back to question time. I don't know that we've moved on to comments. Caitlin, can you remind us what, so you're asking us a question about whether or not we want to use the same process established in Addendum V, if we exceed the cap. Can you remind us what the process is for exceeding the cap from Addendum V?

MS. STARKS: Under Addendum V, which I actually have a slide on this so I'll put it up. Only states withwith, so if the cap is exceeded, then the Board would initiate an addendum to reduce landings to or below the cap, and a PDT could consider actions to reduce harvest back to the cap. But only the states with greater than 1 percent of landings, in the years when the management trigger is tripped,

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

would be responsible for reducing their landings to achieve the coastwide cap in the subsequent year.

States with greater than 1 percent of landings would work collectively to achieve an equitable reduction to the coastwide cap. There is a tree in Addendum V that gives all of the details for exactly how each step would work, depending on when the overage is and how much the overage is.

CHAIR EDWARDS: Shanna.

MS. MADSEN: Just a quick follow up to that. Another question that you guys have asked us that I just want a little bit of clarification on is, if we want to reconsider the use of state-by-state quotas, can you kind of remind us? I know that this has come up previously. I just want to make sure that my understanding is correct. Last time we talked about this, I think the states were concerned about administrative burden. Is that right on why we did not want to look into doing state by state quotas?

MS. STARKS: I believe that is accurate.

CHAIR EDWARDS: Are there any other questions for Caitlin? Are there any questions online? John Clark.

MR. CLARK: Not so much a question, I think Dan was asking about effort, and we've kept catch per unit effort in Delaware since we started the plan. We have seen changes over time, but a lot of it was related to when female horseshoe crabs were no longer available to use as bait. Then the other things happened related to effort, it's an open license in Delaware. A lot of the older people that, what do you call yourself, Craig, young/old?

MR. PUGH: New old guy.

MR. CLARK: Yes, the new old guys have stopped dealing, some young people will get into it or new to it. They don't have good bait,

they don't really know what they're doing, and the catch won't be as good. There has been some change there, but overall, it really hasn't changed that much.

CHAIR EDWARDS: Are there any other questions? Caitlin, do you have what you need to bring back to the Plan Development Team? Shanna.

MS. MADSEN: Yes, so if we're going to move into comment period, and it seems like you've been given some tasking from some of the other states. Something that I would like to see is the first reference period with the 1.25 multiplier, but I would like to see the threshold at 0.5. That kind of seems to be closest to what the assessment had suggested that we look into, but I'm guessing that it probably falls within the two options that you've put before us.

However, I think it's important for us to not just kind of pick between the two options, but to understand why we're taking those options. One suggestion that I would give to the PDT is to maybe try to run through kind of these various scenarios. I know you guys don't want to give up, you know you don't want to do a ton of crazy scenarios, but I think that seeing how those levels vary, and what thresholds, time periods, multipliers they are associated with would make good sense for all of us.

MS. STARKS: Just to respond to that. I put a slide up with all of the sensitivity runs that were done for the assessment, and we are considering these. You can see in this table how the recommended catch cap differs, based on changing the threshold value. Those first three rows, if you look at that. That is the earlier reference period with a 1.25 base multiplier.

Changing the threshold value gets you a pretty significant range of different catch caps. I believe the SAS recommended using that threshold value to adjust the ITARGET tool, rather than the reference period and multiplier, but the PDT did want to look at using that closer reference period from 1988 to 1999.

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

CHAIR EDWARDS: Shanna.

MS. MADSEN: Just a quick follow up. Thank you, so much, Caitlin, I think that this is really helpful. One thing that I would recommend, maybe to the PDT is, I like seeing this range of options. However, I think it's really important when this document ends up going out to the public, or even ends up coming back to the Board, that it has some justification and reasons for, like you just said, this is what the SAS has recommended that we use, in order to vary these catch caps. I would love to just see some of that in the document when it comes back to us.

CHAIR EDWARDS: Are there any other comments from the Board for Caitlin to bring back to the Plan Development Team? John Clark.

MR. CLARK: Sorry, Mr. Chair, I'm just repeating what I say in a lot of ways, but it seems like we want to have fun with numbers here, and get to an option that is closer to the cap we have now, which begs the question, why don't we just put this all on hold, is my comment.

CHAIR EDWARDS: Are there any other comments or questions? Seeing no other comments or questions, we're going to move on to Agenda Item Number 5, the Advisory Panel Report by Mari-Beth DeLucia.

ADVISORY PANEL REPORT

MS. MARI-BETH DeLUCIA: Good morning, everybody. I'm just going to give a brief overview of the Advisory Panel report, and I guess one comment I really want to make is there was only three members on the call, so it's a small AP, and I'll mention more about that in a minute. Myself, Mitch Feigenbaum, and Richard Stoughton from South Carolina were on the call, as well as our chairman. On that call, Kristen gave an overview of the stock assessment, and Caitlin did an update to the Addendum on the call. Most of the comments

that are going to follow are usually one AP members comments, not necessarily the whole AP agreeing with each other.

Basically, the staff recommends that the states look at the membership of the AP, and see if we can get some more participation. I know when I first started this almost six years ago, we had about 10 or 15 people around the table, and now calls are two or three people, which isn't really an effective AP.

One AP member felt that the stock assessment results are heavily driven by the fishery dependent data, which we've talked about already this morning, and a low catch can be influencing the results. Another AP member felt this is not enough data to call the stock depleted. One of the choices that we did agree, the entire AP agreed on, was that the young of year surveys, you know are really important.

But we have a lot of them, and a lot of them don't seem to be showing us anything. Maybe the TC could evaluate and identify ones that are more meaningful, and kind of focused our resources on those, not so much quantity but the quality young of year surveys. There was a suggestion that some genetic work be done, so that we can look at the spawning stock, or how reproductive the stock is.

A suggestion was made that the yellow eel addendum should include an option for no change, I think Mr. Clark has suggested that as well this morning. It seems as if the status quo seems effective, and the catch is not going to increase due to the market, or the lack of a market. Even though the price for eels have gone up worldwide over the last five or six years, the demand is being supplied by European aquaculture farms.

That seems to be what is driving the lack of a market here in the states, as well as COVID and a lot of the issues we've had over the last few years. It is clear, it seems like the low harvest does not equate to low abundance necessarily, and it's just decreased effort. I think there are a lot of folks that would like to see some effort, and that was a strong

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

suggestion from the AP, put into some of the analyses.

Back to the AP, I've been the Chair for the last six years. I can't remember who asked me to be the Chair, but it was supposed to be for two years, which was fine. But the Advisors that were on the call would like to elect a new Chair. Caitlin mentioned that they understand that, but there is a lack of participation, so that is a challenge.

As I mentioned, participation has been nearly nonexistent in the last two years, and there are two or three calls, you now often it's Mitch and myself, we kind of sometimes negate each other on the call. Last time there was only two commercial fishermen on the call, and it definitely wasn't, it was two people from Pennsylvania and one from South Carolina, so it's a very small group on the call. That's all I have, any questions?

CHAIR EDWARDS: Thank you, Mari-Beth. Are there any questions for Mari-Beth? Online? Okay, Other Business. Is there any other business to be brought before this Board? I would just like to add, this is the end of my term as Chair, and I would like to welcome Kris Kuhn from Pennsylvania; he will be the Chair in 2024.

ADJOURNMENT

CHAIR EDWARDS: Could I have a motion to adjourn this meeting, John Clark, could I have a second, Shanna? Thank you, this meeting is adjourned.

(Whereupon the meeting adjourned at 9:30 a.m. on October 19, 2023)

"Enhancing Eel Stock Assessment Methods through Collaborative Efforts with the Eel Industry."

"At present, the status of the eel resource in North America is still classified as either depleted or unknown. I appeal to the members of the A.S.M.F.C. to take a step back and contribute to elevating our data collection efforts to the next level. Due to insufficient funding for eel population studies, I propose a collaborative partnership with the industry to enhance our understanding of the eel population through the use of IP technology for data collection" and a more efficient monitoring of the adult eel population through more sophisticated trapping methods at pre-approved locations.

"I would like to acknowledging the success of one of the A.S.M.F.C. policies.

The A.S.M.F.C. implemented a minimum eel size of 9 inches, resulting in a remarkable 50% reduction in piece count harvesting. To put it simply, harvesting 200 tons of eels today would equate to the same piece count as harvesting 100 tons in 1998. By enforcing the 9-inch minimum size, the eel fishing piece count quota has effectively been halved. The cumulative impact of this measure alone is evident in the increased abundance of baby eel recruitment in Maine and Canada over the last few years."

"Is compromised eel data leading to a misunderstanding of the coastal eel population?"

Upstream Eel Passage Data.

The true value of this data lies in the fixed locations of dams and the consistency in collection methods, minimizing the introduction of human error and ensuring the integrity of documented trends.

However, there are challenges:

Solutions for upstream eel migration across dams are technically complicated, with many non-eel-related factors influencing the location of an eel ladder. Even with the best intentions, upstream migrating eels face the challenge of accessing the eel ladder, especially in locations with a robust coastal eel habitat and population, where only a few eels may be able or willing to migrate **(1)**.

The default compromised data indicator, particularly in areas with a large coastal eel habitat, is significant. The majority of the coastal eel population may never intend to go upstream in the first place. What we measure here is the seed stock data for the inland eel population, not an accurate representation of the health of the coastal eel population. Using this acquired data to assess the health of the coastal eel population perpetuates the illusion of a distressed coastal eel population" **(2)**.

Baby Eel Recruitment Data:

The baby eel recruitment data from Maine and South Carolina's eel harvests offers valuable insights, but caution must be exercised due to inherent biases arising from incomparable fishing efforts. As a result, a nuanced interpretation is necessary to accurately grasp the significance of this data **(3)**.

Present Status of Baby/Elver Eel Recruitment Data:

Currently, the baby/elver eel recruitment data remains largely absent, presenting a significant gap in our understanding. This void exists because there has been a lack of consistent and cohesive baby/elver eel recruitment surveys that could truly contribute to comprehending the resources. What is crucial is the

implementation of data collection at fixed locations over an extended period, recognizing that baby/elver eel recruitment occurs over a prolonged duration.

The fraud of using adult eel landing data as an eel population health indicator.

The key points and conclusion showing the fraud of such an assumption can be summarized as follow:

Inefficiency of Eel Trapping:

If eels where an invasive species needed to be wiped out an eel trap would be the very last tool in our tool box because it is inefficient and unreliable for harvesting eels. The ineffectiveness depends on various factors such as natural feeds, fishing bait used, eel trap design, limited size of funnel. **The inefficiency of the eel trapping method in a natural rich environment dictates the viability of eel exploitation not the presents or abundance of the eel resources.**

Eels are not scavengers but selective eaters with a preference for live bait, in a rich environment the effectiveness of an eel trap is reduced to a minimum and once the bait spoils the effectiveness is zero.

What is needed for data collection purpose is permission for industry to use a more effective technology at pre-approved locations along the East Coast reflecting the real health of the eel population not like in the present a kind of lottery mechanism method the right technology exists and would give ASMFC members instead of the present distorted a true picture of the eel population.

Fishermen's long-term Investment

Over the last decades the eel market has shifted, with a declined demand has become economically challenging, with marginal returns on investment, incentive to reinvest hasn't been there.

Prices of the most efficient eel baits like horseshoe crab and razor clams have risen since the nineties by 500% to 700%, if the eel prices had increased at the same rate the eel market price today would be around \$ 15 /Lbs. at these market prices we would have seen much higher landings.

Eel trap design by default exclude a % of the eel population in favor of conservation.

Not all eel trap designs are created equal some are good for eel production but exclude the larger sizes however all designs are limited in producing the largest eels because of the funnel size legal limits.

Catfish hoop nets with large funnels allows the largest eels to enter, in the past, N.C. and Louisiana catfish fishermen producing volume of not silver large females too big in size to enter an eel trap.

The fact that catfish hoop nets allowed the capture of the largest eels in volume in the coastal waters challenges the assumption that commercial eel traps are representative of the entire eel population, especially regarding larger not being silver eel individuals.

Deserted eel harvesting territories:

The inefficiency of eel trapping in a rich environment and live eel collection logistics over a certain distance, can decide the economic viability of eel fishing hence 90% of the coastal eel population is today a by default eel sanctuary.

This includes the often-overlooked eel territory in the Gulf of Mexico, drawing from my experience collaborating with local fishermen in Louisiana, Mississippi, Alabama, and the Florida Panhandle, I've gained a deep appreciation for the vast potential of eel resources in this region. The coastal eel populations here play a pivotal role in sustaining a healthy eel population in North America. It is crucial to recognize that their contribution has been significantly underestimated, and optimism regarding a substantial eel population is well-founded.

Aquaculture Policies & Inland Eel Population:

In Europe, eel aquaculture plays a crucial role in addressing the challenges of the eel population by incorporating the restocking of inland waters with farmed juvenile eels. In the past, the successful restocking of juvenile eels from my RAS eel-farm in Virginia has demonstrated the potential of this approach. Although the restocking concept remains relevant, it may require adaptation under a different structure to become a significant contributing force for the inland eel population.

A.S.M.F.C. deserves commendation for putting forward policies regarding eel aquaculture. However, the industry, with the exception of Maine, faces significant barriers **(4)**. One notable challenge is the lack of existing baby eel fisheries, leading to a deficiency in local data on baby eel recruitment numbers or trends. Addressing these barriers is crucial for the sustainable development of eel aquaculture and its positive impact on the inland eel population.

Proposal for Aquaculture Quota and Integrated Data Collection Fishery:

Given the absence of eel aquaculture in all member states except Maine, this proposal suggests integrating aquaculture quotas and data collection fishery quotas to enhance resource management. The integrated approach aims to:

1) Year-Round Baby Eel/Elver Data Collection:

Implement year-round baby eel/elver data collection using user-friendly and efficient IP technology **(5)** at pre-approved locations in participating states.

Utilize the collected data to inform management decisions.

2) Restocking and Resource Improvement:

Require the industry to restock juvenile eels of 3 to 5 grams, contributing to resource enhancement.

Grant access to industry in exchange for their commitment to improving resources.

3) Infrastructure Development:

Establish the necessary infrastructure for the supply of baby eels to support future candidates in the aquaculture industry.

4) Qualified Aquaculture Applicants:

When a qualified aquaculture applicant enters, they become the beneficiary of the data collection fishery.

Ensure that year-round baby eel/elver data collection continues under the aquaculture operation.

Law Enforcement Efficiency:

Alleviate law enforcement burden by deploying tamper-free equipment at pre-approved locations.

5) Market Allocation and Ownership:

In the absence of eel aquaculture in participating states, market the allotted quota on the open market during the baby eel season.

Document and release collections beyond the established quota and continue outside the season.

Service aquaculture operations through the data collection fishery, but ownership of the collection permit should reside independently **(6)**.

6) Achieving Year-Round Data and Industry Development:

Implementing the integrated data collection fishery will address the urgent need for year-round baby eel/elver recruitment data along the East Coast **(7)**.

Serve as a foundational step for the future eel aquaculture industry, making restocking inland waters a matter of policy funded by the industry and simultaneously enhancing resources.

This comprehensive approach seeks to synergize aquaculture and data collection efforts, paving the way for sustainable resource management and the development of a thriving eel aquaculture industry.

Conclusion:

The current data pool perpetuates the illusion of a distressed coastal eel population, despite evidence to the contrary—such as the abundance of baby eel recruitment observed in both the USA and Canada over the past few years.

Needed is collaboration with industry shifting the eel data collection mechanism into a collective effort to demonstrate year-round baby eel recruitment/elver and adult eel population trends. The latter coupled with strategic restocking efforts, would provide the A.S.M.F.C. with new tools and comprehensive data crucial for effective management—an outcome that benefits both resources and industry, creating a win-win scenario.

I sincerely hope that the comments and proposals presented are received with an open mind. Please accept my advance gratitude for your time and consideration.

Willy Bokelaar / emergo22@hotmail.com

Exhibition #1: The Challenge of Upstream Passage

The journey for eels to achieve an upstream passage is fraught with challenges. To embark on this journey, they must locate the entrance of an eel ladder strategically positioned in what is often the most unnatural and predator-laden environment. We task them not only to enter this passage but also to ascend it—sometimes at a degree angle so steep that only the smallest of eels are both able and willing to undertake this arduous ascent.

Exhibition #2: Eel Opportunism and Coastal Population Dynamics

Eels are inherently opportunistic creatures. In locations with a robust coastal population, the brackish waters offer a wealth of feeding opportunities, far surpassing what the inland waters can provide. This abundance sustains a dense coastal eel population. The evidence is apparent in the brackish waters bordering the ocean, especially in the Southeastern USA, where shrimp houses discharging shrimp heads attract a mix of conger and predominantly female *Anguilla* eels to eel traps.

Past experiences strongly suggest that the numbers recorded in upstream eel ladders represent, at best, a mere single-digit percentage of the eel population present in nearby tributaries. Therefore, drawing conclusions based solely on eel passage data at locations with substantial coastal eel habitats is crucial, primarily for the benefit of understanding the health and dynamics of the inland eel seed stock.

Exhibition #3: Rethinking Resource Distress

Imagine if every member state replicated the successful and equitable quota fishing efforts observed in Maine. Would we still conclude that the resource is in distress? It's essential to recognize that most member states boast a robust and healthy baby eel recruitment, readily able to meet Maine like quotas. (Disclaimer: While not claiming uniformity in baby eel resources across all states, the assertion here is that they possess more than presently acknowledged.)

The crucial missing piece is a robust mechanism for consistently measuring coastal baby eel recruitment data over an extended period at fixed locations. Such a mechanism would serve to monitor trends, providing a more comprehensive and accurate understanding of the abundance and health of baby eel populations along the coast.

Exhibition #4: Empowering Eel Aquaculture in the USA

The use of hormones to feminize eels stands as a critical practice in the eel farming process in Asia, a technique currently prohibited in the USA. This restriction places American eel aquaculture at a competitive disadvantage. Until eel feminization becomes feasible through either technological advancements or a shift in policies, the industry faces challenges.

Implementing strategic steppingstones, such as establishing a data collection fishery to produce essential baby eel data, and fostering collaboration between government entities or NGOs and the aquaculture industry for juvenile restocking, could prove transformative. This collaborative effort holds the potential to rapidly cultivate a healthy inland eel population in a matter of years, as opposed to the extended timeline of decades. Additionally, the indirect constructive consequence of the data collection fishery's established infrastructure further enhances the prospects for sustainable eel aquaculture in the USA.

Exhibition #5: Revolutionizing Eel Data Collection

Introducing a patented and compact technology—a highly efficient baby eel and elver harvesting trap, an innovative upstream elver passage solution, and an independent collection device designed to be tamper and poaching-proof. This user-friendly device requires no specialized fishing skills, allowing it to be placed and operational within a matter of minutes. It is capable of functioning in the most challenging environments, surpassing the accessibility limitations of traditional fyke-nets.

Transforming any fixed location, such as private or public docks, marinas, and waterfront properties, into a 24/7/365 collection station becomes a feasible reality with this technology. Member states will face no challenges in identifying suitable locations to execute the data collection fishery efficiently. Additionally, this versatile device can operate on either solar or deep cycle battery power, featuring a 12-volt bilge pump for enhanced functionality.



Baby eel / elver trap shown here on dry land normally it would be submerged.

Exhibition #6: Ensuring Active Engagement in Aquaculture Baby Eel Collection

Addressing issues such as those observed in North Carolina, where aquaculture baby eel collection permits are granted but licensees remain inactive, is essential. Implementing effective measures to ensure permit holders actively engage in the intended activities is crucial for the success and integrity of the data baby eel collection program.

Exhibition #7: Unveiling the Prolonged Phenomenon of Baby Eel Recruitment

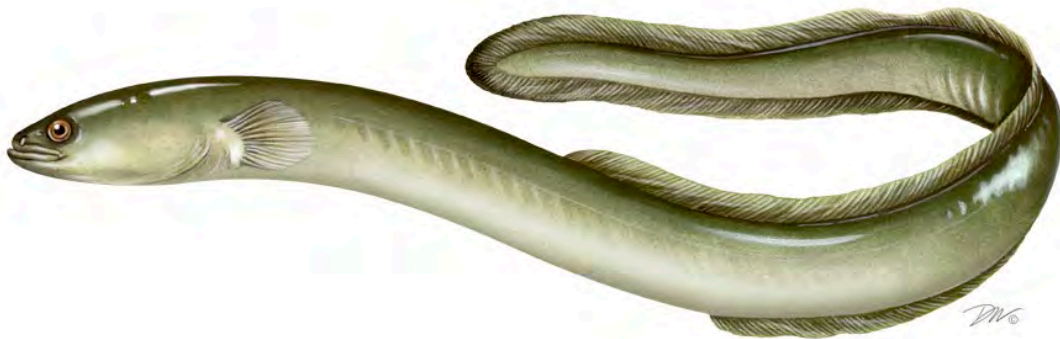
Baby eel recruitment, far from occurring over a brief period, unfolds as a prolonged migration extending over a much longer timeframe. In the Caribbean, the harvesting of baby eels takes place year-round, with a peak during a 5-month period. However, the reality is that recruitment happens consistently throughout the entire year. This pattern is mirrored in the USA, though the documentation and research on this phenomenon are currently insufficient.

Late-season baby eel migration coincides with warm water temperatures, marking the onset of feeding; regardless of their geographic location resulting of juvenile eels migrate upstream from the ocean. Simultaneously, pigmented baby eels can be observed upstream inland during late fall—an intriguing occurrence that, while not fully understood, undeniably takes place. This underscores the pressing need for a comprehensive data collection fishery to shed light on these events enhancing our understanding.

Atlantic States Marine Fisheries Commission

**DRAFT ADDENDUM VI TO THE INTERSTATE FISHERY
MANAGEMENT PLAN FOR AMERICAN EEL**

Commercial Glass/Elver Eel Management



This draft document was developed for Management Board review and discussion.

This document is not intended to solicit public comment as part of the Commission/State formal public input process. Comments on this draft document may be given at the appropriate time on the agenda during the scheduled meeting. If approved, a public comment period will be established to solicit input on the issues contained in the document.

January 2024



Sustainable and Cooperative Management of Atlantic Coastal Fisheries

Public Comment Process and Proposed Timeline

In August 2023, the American Eel Management Board initiated the development of an addendum to the Interstate Fishery Management Plan (FMP) to address the Maine commercial quota for glass eel starting in the 2025 fishing season. This Draft Addendum presents background on the Atlantic States Marine Fisheries Commission's (Commission) management of American eel, the addendum process and timeline, and a statement of the problem. This document also provides management options for public consideration and comment.

The public is encouraged to submit comments regarding this document at any time during the public comment period. The final date comments will be accepted is **XX, XX, 2024 at 11:59 p.m.** Comments may be submitted at state public hearings or by mail or email. If you have any questions or would like to submit comment, please use the contact information below.

Mail: Caitlin Starks, Senior FMP Coordinator
Atlantic States Marine Fisheries Commission
1050 North Highland Street, Suite 200A-N
Arlington, VA 22201

Email: comments@asmfc.org
(Subject: Draft Addendum VI
Phone: (703) 842-0740

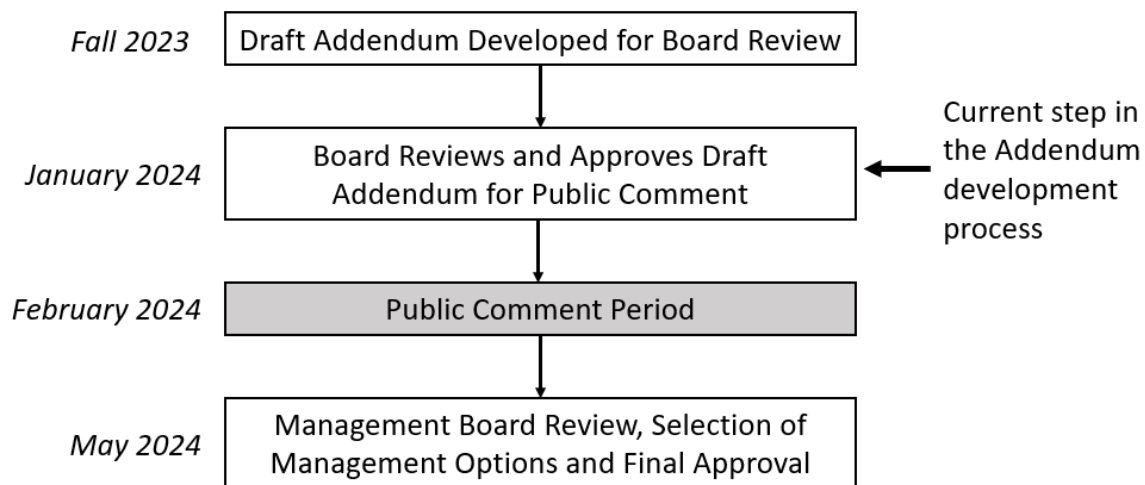


Table of Contents

1.0 Introduction 2

2.0 Overview 2

 2.1 Statement of Problem..... 2

 2.2 Background 2

 2.3 Description of the Fishery..... 3

 2.3.1 Glass Eel/Elver Fishery 3

 2.4 Status of the Stock 5

3.0 Proposed Management Options..... 8

 3.1 Maine Glass Eel Quota 9

 3.2 Timeframe for Maine Glass Eel Quota..... 9

4.0 Compliance 10

5.0 References 10

DRAFT

Draft Document for Board Review. Not for Public comment.

1.0 Introduction

The Atlantic States Marine Fisheries Commission (Commission) has coordinated interstate management of American eel (*Anguilla rostrata*) from 0-3 miles offshore since 2000. American eel is currently managed under the Interstate Fishery Management Plan (FMP) and Addenda I-V to the FMP. Management authority in the exclusive economic zone (EEZ) from 3-200 miles from shore lies with NOAA Fisheries. The management unit is defined as the portion of the American eel population occurring in the territorial seas and inland waters along the Atlantic coast from Maine to Florida.

The Commission's American Eel Management Board (Board) approved the following motion on August 1, 2023:

Move to initiate an addendum to address the Maine glass eel quota.

This Draft Addendum proposes options for commercial quota provisions for Maine's glass eel fishery including quota level and duration.

2.0 Overview

2.1 Statement of Problem

Addendum V, approved in August 2018, examined Maine's glass/elver eel quota based on updated information but made no changes to the state's quota of 9,688 pounds. The Addendum specified Maine's 9,688 pound glass eel quota be set for three years (starting in 2019; from 2019-2021), and could be revisited before year four (2022). At that point, the quota of 9,688 pounds could be extended for an additional three years (2022-2024) without requiring a new addendum. Fishing beyond 2024 would need to be addressed through a new addendum.

Therefore, Maine's current glass eel quota of 9,688 pounds expires after 2024, and a new addendum is required to establish a quota for the 2025 fishing season and beyond.

2.2 Background

American eel inhabit fresh, brackish, and coastal waters along the Atlantic, from the southern tip of Greenland to Brazil. American eel eggs are spawned and hatch in the Sargasso Sea. After hatching, leptocephali (the larval stage) are transported to the coasts of North America and the upper portions of South America by ocean currents. Leptocephali then transform into glass eels via metamorphosis. In most areas, glass eel enter nearshore waters and begin to migrate up-river, although there have been reports of leptocephali found in freshwater in Florida. Glass eels settle in fresh, brackish, and marine waters, where they undergo pigmentation, reaching the elver life stage. Elvers subsequently mature into the yellow eel phase, most by the age of two years.

The Commission's American Eel Board first convened in November 1995 and finalized the FMP for American Eel in November 1999. The goal of the FMP is to conserve and protect the

Draft Document for Board Review. Not for Public comment.

American eel resource to ensure its continued role in its ecosystems while providing the opportunity for commercial, recreational, scientific, and educational uses. The FMP requires a minimum recreational size and possession limit and a state license for recreational harvesters to sell eels. The FMP requires that states and jurisdictions maintain existing or more conservative American eel commercial fishery regulations for all life stages, including minimum size limits. Each state is responsible for implementing management measures within its jurisdiction to ensure the sustainability of its American eel population.

Since the FMP was approved in 1999, it has been modified four times. Addendum IV (2014) specified an annual glass eel commercial quota for Maine of 9,688 pounds for the 2015-2017 fishing seasons, and that it be re-evaluated after 3 years (prior to the start of the 2018 fishing season). In October 2017, the Board specified a glass eel commercial quota for Maine of 9,688 pounds for the 2018 fishing season. Addendum V (2018) examined Maine's glass/elver eel quota based on updated information but made no changes to the state's quota. In 2021 the Board extended the quota of 9,688 pounds through 2024.

Addendum V also maintained other provisions of Addendum IV relevant to the glass eel/elver fishery. Overages of any state's commercial glass/elver eel quota would require that state or jurisdiction to deduct their entire overage from their quota the following year, on a pound for pound basis. Any state or jurisdiction with a commercial glass eel fishery harvesting at least 750 pounds is required to implement daily trip-level reporting with daily electronic accounting to the state for both harvesters and dealers. Additionally, any state or jurisdiction with a commercial glass eel fishery harvesting at least 750 pounds must implement a fishery-independent life cycle survey covering glass/elver, yellow, and silver eels within at least one river system. Any state or jurisdiction can request an allowance for commercial harvest of glass eels based on stock enhancement programs implemented after January 1, 2011, subject to TC review and Board approval. To qualify for the allowance the state must demonstrate that the stock enhancement program has resulted in a measurable increase in glass eel passage and/or survival.

2.3 Description of the Fishery

2.3.1 Glass Eel/Elver Fishery

Life stage glass and elver eel harvest along the Atlantic coast is prohibited in all states except Maine and South Carolina. Prior to the implementation of the FMP, Maine was the only state compiling glass eel and elver fishery catch statistics. Under the FMP, all states are now required to submit fishery-dependent information. In recent years, Maine was the only state reporting substantial glass eel or elver harvest.

Maine Glass Eel/Elver Fishery

Since the implementation of the 9,688 pound Maine glass eel quota in 2015, landings have tracked closely with the quota. Since 2016, landings have remained above 94% of the quota, but have not exceeded it.

Draft Document for Board Review. Not for Public comment.

Table 1. Maine's Glass/Elver Eel Landings in pounds 2007-2022 (Source: Maine DMR)

Year	Landings	Value	Year	Landings	Value
2007	3,714	\$1,287,479	2015	5,259	\$11,422,831
2008	6,951	\$1,486,353	2016	9,400	\$13,446,828
2009	5,199	\$519,569	2017	9,343	\$12,166,417
2010	3,158	\$584,851	2018	9,194	\$21,753,350
2011	8,585	\$7,653,332	2019	9,620	\$20,119,194
2012	21,611	\$40,384,618	2020	9,652	\$5,067,521
2013	18,080	\$32,931,077	2021	9,106	\$16,681,103
2014	9,690	\$8,474,302	2022*	9,429	\$20,163,965

*Preliminary landings

In 2012, Maine’s glass eel landings hit an all-time high of 21,610 pounds with a landed value of over \$38 million. This huge spike in price per pound created a gold rush mentality that brought with it poaching problems that most thought Maine could not overcome, and there was a call to close the fishery all together. Over the next two years, the Maine Department of Marine Resources (ME DMR) responded by instituting a voluntary reduction in harvest of 35% from the 18,076 pounds that was landed in 2013. This established the first glass eel quota for Maine at 11,749 pounds. With the implementation of Addendum IV, the elver quota was cut another 11%, reducing Maine’s glass eel quota to 9,688 pounds. Since the implementation of the 9,688 pound glass eel quota, landings have tracked closely with the quota with the exception of 2015 where a late spring with ice and high water contributed to a drop in landings down to 5,260 pounds.

In 2013, Maine instituted individual fishing quotas, and penalties were moved from civil to criminal and included a “two-strike” provision where a harvester license would be permanently revoked. Also in 2013, ME DMR developed a swipe card program that allows dealers to enter daily landings data and allows ME DMR to analyze that data within 24 hours of receipt; it also serves as a fishery management tool to implement an individual fishing quota (IFQ) for harvesters. The program was expanded in 2015 to include dealer-to-dealer transactions. Using the swipe card program, ME DMR has effectively tracked the overall quota by closely monitoring the IFQs of over 1,000 harvesters, which includes quota for the four indigenous tribes and non-tribal quota. In 2022 and 2023 over 5,500 daily landings reports did not need to be key-entered as a result of the swipe card program, which has reduced the burden on ME DMR staff. The swipe card program has also shown to be reliable with no card failures reported in the last 3 years (2020 to 2023).

In addition, the number of fishery-related infractions reported by the ME Marine Patrol dropped from over 200 in 2013 to under 20 in 2014 through 2016. Elver related violations have

Draft Document for Board Review. Not for Public comment.

continued to remain low in 2016 through 2023. The addition of the dealer-to-dealer swipe card program allows the ME DMR to track the glass eels from initial purchase to export out of the state. For a dealer to export out of Maine, they are required to have a separate “export” license and ME Marine Patrol must be present to weigh the shipment. ME Marine Patrol will also weigh the glass eels at the dealer facilities and report that verified amount along with the amount the swipe card program indicates should be at the facility. ME Marine Patrol can also remove any dead loss to reconcile the dealer’s inventory.

Given the high market value, poaching of glass eels and elvers remains a serious concern in several states. Enforcement of the regulations is challenging due to the nature of the fishery (very mobile, nighttime operation, and high value for product). Cooperation between the State’s enforcement agencies and the U.S. Fish and Wildlife Service remains a high priority. This cooperation resulted in several convictions for violation of the Lacey Act in 2013 through 2016. From 2016 through 2023, the number of federal investigations and violations followed the same decreasing trend as fishery-related infractions.

Aquaculture

Addendum IV to the FMP also allows approved Aquaculture Plans from states and jurisdictions to harvest up to 200 pounds of glass/elver eel annually from within their state waters for use in domestic aquaculture activities. Aquaculture Plans have been approved each year for Maine starting in 2018 for the 2019 fishing season.

2.4 Status of the Stock

The last peer reviewed and accepted benchmark stock assessment was approved for management use in 2023. The Assessment and Peer Review Reports indicate the American eel stock is depleted and has likely been experiencing overfishing in the last few decades. The stock assessment recommended a drastic reduction to the yellow eel coastwide cap to between 21% and 33% of the current cap.

The abundance indices developed and used in the 2023 assessment are more robust and better defined than previous assessments. State-mandated young-of-year (YOY) surveys have been in operation for twenty years or more in some cases. From Maine to Florida, 25 surveys were developed into individual indices of relative abundance and then combined into a coastwide YOY index using a multivariate auto-regressive state-space (MARSS) model. A declining trend in coastwide YOY abundance was observed from 1987-2020. Ten elver indices were developed from multiple surveys from Maine to Virginia that were combined into a coastwide index using the MARSS model. The coastwide index indicated no trend in elvers from 1999-2020. There were also 14 yellow eel indices developed from multiple surveys from New Hampshire to South Carolina that were combined into a coastwide index using the MARSS model. There was a declining trend in coastwide yellow eel abundance from 1974-2020.

Additional analyses provide convergent results indicating the stock has decreased over the monitored time series. The Mann-Kendall test detected significant trends in 6 of the 26 YOY indices; of these two (33%) were increasing (Maine and New York) and four (67%) decreasing.

Draft Document for Board Review. Not for Public comment.

For elver, two of nine indices had significant Mann-Kendall detected trends with one increasing and one decreasing (both in Virginia). For the yellow eel indices, the Mann-Kendall test detected significant trends in 7 of the 15 Yellow Eel indices; of these two (29%) were increasing and five (71%) decreasing. The Traffic Light method also showed similar results for both YOY and yellow eel indices, indicating green values for the 1980s, changing to orange, then to red by the end of the time series.

2.4.1 Maine Eel Lifecycle Monitoring

In 2011, the glass eel life stage was identified as a unique opportunity to assess the annual recruitment of each year's cohort, because glass eels result from the previous year's spawning activity and are all the same age. In order to assess the annual variation in recruitment of American eel, Addendum III (2011) required that each member state conduct an annual survey of YOY abundance. In 2018, Addendum V further required: *“Any state or jurisdiction with a commercial glass eel fishery must implement a fishery-independent life cycle survey covering glass/elver, yellow, and silver eels within at least one river system. If possible and appropriate, the survey should be implemented in the river system where the glass eel survey (as required under Addendum III) is being conducted to take advantage of the long-term glass eel survey data collection.”* Maine's YOY survey has been running since 2001 and the yellow and silver eel surveys since 2018. Each year ME DMR staff summarize the results of the YOY, yellow, and silver eel lifecycle surveys into a compliance report. The methods and a summary of results are described below.

Methods

Fishery-independent monitoring for young-of-year eels at West Harbor Pond in Maine has been carried out continuously since 2001. Each year eel ramps with collection traps are installed at the site in early spring, typically in March, and are checked daily throughout the run, which typically ends in late June. Glass eels and elvers are separated and enumerated before being released into the pond.

Monitoring of yellow and silver eels was initiated in 2018. The survey was initially on Cobbosseecontee Stream, but ME DMR moved the surveys to West Harbor Pond in 2019. Monitoring for yellow eels includes sampling with baited eel pots beginning in July and continuing through September of each year. Each time the pots are checked all eels are removed, measured for length and weight, tagged with a PIT tag if they are not already tagged, and released. Monitoring for silver eels includes daily checking of a fyke net set at the outlet of West Harbor Pond. The fyke net is set starting in September and continues until December. All eels are removed from the fyke net each day, scanned for a PIT tag, a subsample is measured for length and weight, and released downstream.

Results

A total of 942,327 glass eels were captured during 2022. The catch of glass eels in 2022 far exceeded any previous catches and was more than seven times the average of 127,591 since 2001. Preliminary data from 2023 indicate a total of 307,216 glass eels were captured in 2023, more than double the average, which continues a trend five of the last seven years significantly

Draft Document for Board Review. Not for Public comment.

exceeding average annual catch since 2001 (Figure 1). A total of 4,356 elvers were also captured in the trap boxes during 2022, which was the second largest catch of elvers from 2001 through 2022. Preliminary data from 2023 report a total of 6,344 elvers were captured in trap boxes, which is the highest amount to date.

A total of 459 yellow eels were caught in baited pots in West Harbor Pond at least once in 2022, with many being caught multiple times (up to 4 recaptures). Of the yellow eels caught in 2022, 51 were tagged in 2018, 77 were tagged in 2019, 92 were tagged in 2020, 123 were tagged in 2021, and 116 eels were untagged when captured in 2022 and received a PIT tag before release. 1,019 yellow eels have been caught, tagged, and released into West Harbor Pond as of December 2022.

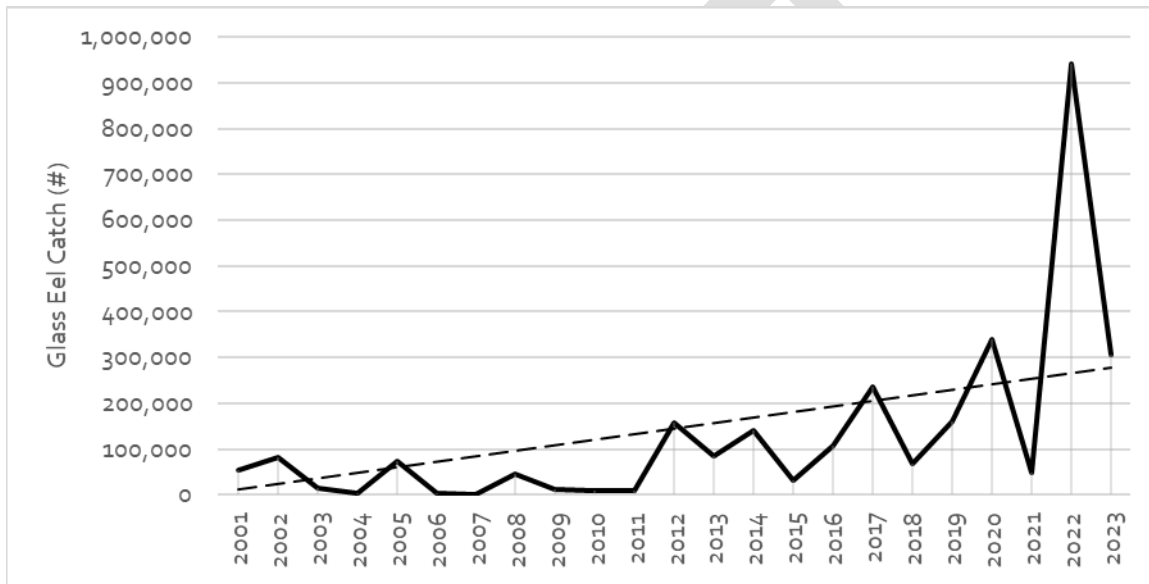


Figure 1. Glass eel capture at West Harbor Pond Maine as part of the ME DMR Eel Lifecycle study (solid line). The linear trendline, with the intercept set to zero and an R² value of 0.5009, shows an increase over time (dashed line).

In 2022 a total of 269 eels were caught in the fyke net set at the outlet of West Harbor Pond, all of which were silver phase. Including the 2022 season, 5,888 silver eels have been captured and released at the site since 2018 and the annual average catch is 1,178. In 2022, length ranged from 24.8 cm to 102.6 cm TL, with an average of 34.6 cm TL, and weight ranged from 25.7 g to 2600 g, with an average of 119.7g. These lengths and weights did not differ significantly from previous years.

2.4.2 Maine Glass/Elver Eel Index

In addition to the in-season reporting of landings that allows for the close management of the Glass/Elver eel fishery in Maine, ME DMR also requires each harvester to report gear type, location, and set time for each gear type. These data were analyzed to produce a catch-per-unit-effort (CPUE) index for the Glass/Elver Eel fishery, which adds additional context to the proposed management options. Data from 2016-2022 were reviewed and a subset of that data

was included in this analysis. Due to the difference between fyke nets and dip nets, in terms of the method for fishing each and the impact on set times, dip nets were excluded from the analysis to standardize the results. In addition, harvesters had the option to report set times in minutes, hours, days, and weeks. However, only those harvesters that reported in hours were included in the analysis due to irregularities in reporting in other units of time (e.g., reporting of: ‘0 days’; ‘1300 days’). With the exclusions described above, the remaining data accounted for the majority of harvesters in all years. For example, harvesters that reported both the use of fyke nets and set times in hours accounted for 75.5% of harvesters in 2022.

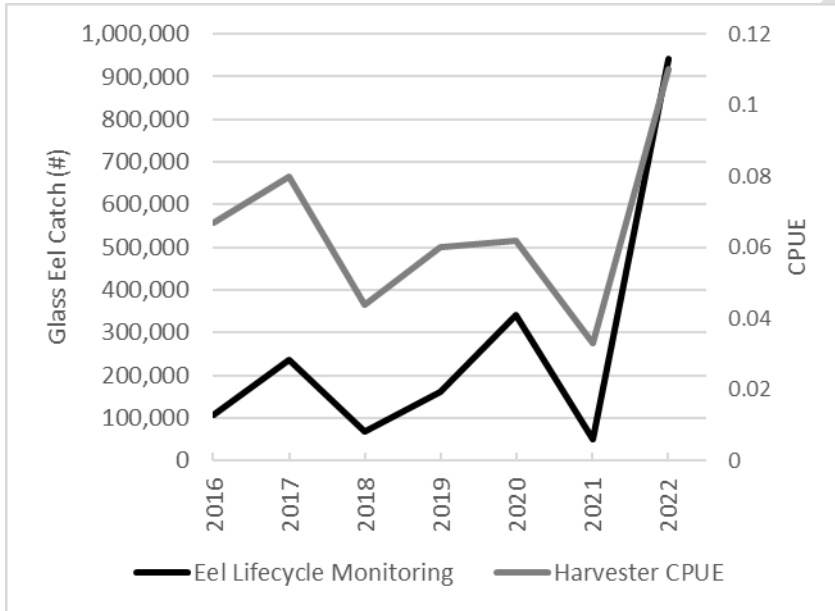


Figure 2. Glass eel capture at West Harbor Pond Maine as part of the ME DMR Eel Lifecycle study (black line) and CPUE of Harvesters from 2016-2022 (gray line).

The CPUE for catches in fyke nets in the Glass/Elver fishery, expressed as pounds caught per one hour unit, ranged from 0.033 to 0.110 from 2016 to 2022 with an average of 0.065. The CPUE was greatest in 2022, at nearly double the average, but otherwise the CPUE decreased slightly from 2016-2021. In addition, the CPUE for harvesters is closely correlated to the glass eel capture at West Harbor Pond as part of the Maine Eel Lifecycle Monitoring program (Figure 2).

3.0 Proposed Management Options

The following options were developed from the Board motion from August 2023.

When the Board takes final action on the addendum, there is the opportunity to select any measure within the range of options that went out for public comment, including combining options across issues.

Draft Document for Board Review. Not for Public comment.

3.1 Maine Glass Eel Quota

Selection of one of the following options would determine the annual quota level for the Maine commercial glass eel fishery, starting in the 2025 fishing year.

Option 1. Status quo

Under this option, the annual quota for Maine's commercial glass eel fishery would remain at 9,688 pounds.

Option 2. Reduce Maine's glass eel quota by 21.8%

Under this option, the annual quota for Maine's commercial glass eel fishery would be reduced by 21.8%, resulting in an annual quota of 7,576 pounds. This reduction is being considered in light of the recent stock assessment results indicating the coastwide stock of American eel is depleted. The reduction of 21.8% is equal to the smallest percent reduction that is being considered for the yellow eel coastwide cap. Given glass eel experience a higher natural mortality rate than yellow eel, glass eel harvest is expected to have a lower relative impact to the coastwide population than the yellow eel harvest and so a lesser reduction may be warranted to the glass eel quota than to the yellow eel quota.

3.2 Timeframe for Maine Glass Eel Quota

Selection of one of the following options would determine the number of years the Maine quota would remain in place once it is implemented, and whether or not an addendum would be required to maintain the same quota for subsequent years.

Option 1: No sunset

Under this option, the commercial quota selected for Maine's glass eel fishery in section 3.1 will remain in place until modified through an addendum or amendment to the FMP.

Option 2: Three years

Under this option, the quota selected for Maine's glass eel fishery in section 3.1 may remain in place for up to three years (2025-2027). Prior to the 2028 fishing year, the Board must initiate an action to establish Maine's glass eel commercial quota for 2028 and beyond. If a change to the quota is desired before 2028, the Board must initiate an addendum or amendment to modify the FMP.

Option 3: Three years, with the ability to extend via Board action

Under this option, the quota selected for Maine's glass eel fishery in section 3.1 may remain in place for three years (2025-2027). If no change to Maine's quota is desired, the Board may extend the selected quota for up to three years at a time via Board action, until this provision is modified by an addendum or amendment to the FMP. If a change to the quota is desired for 2028 or earlier, the Board must initiate an addendum or amendment to establish Maine's glass eel commercial quota.

Draft Document for Board Review. Not for Public comment.

4.0 Compliance

If the existing American Eel FMP is revised by approval of this Draft Addendum, the American Eel Management Board will designate implementation deadlines for the addendum provisions.

5.0 References

Atlantic States Marine Fisheries Commission (ASMFC). 2000. Interstate Fishery Management Plan for American Eel (*Anguilla rostrata*). Washington D.C. NOAA Oceanic and Atmospheric Administration Award No. NA97 FGO 0034 and NA07 FGO 024.

ASMFC. 2014. Addendum IV to the Interstate Management Plan for American Eel. Arlington, VA.

ASMFC. 2018. Addendum V to the Interstate Management Plan for American Eel. Arlington, VA.

ASMFC. 2023. American Eel Benchmark Stock Assessment and Peer Review Reports. Arlington, VA.

DRAFT



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmf.org

American Eel Glass Eel Plan Development Team Meeting Summary

Webinar
September 14, 2023

Plan Development Team Members: Brad Chase (MA), Casey Clark (ME), Robert Atwood (NH), Dani Carty (SC), Margaret Conroy (DE) Caitlin Starks (ASMFC)

The American Eel Plan Development Team (PDT) for glass eel met via webinar to begin developing a draft addendum to address the quota for Maine's glass eel fishery. Maine's glass eel quota has been set at 9,688 pounds since 2015. However, a new addendum is needed to establish a quota for the 2025 fishing year and beyond.

Staff reviewed the current management program, the general outline for the addendum, and then the PDT discussed potential management options. All PDT members supported the status quo option. One PDT member would like to see an option included to reduce Maine's glass eel quota, because the assessment indicates the stock is depleted and the Board initiated an action to reduce fishing mortality at the yellow eel life stage.

Other PDT members mentioned that in Maine and Massachusetts glass eel numbers have been relatively high in recent years. Increased CPUE in the Maine fishery and in the life cycle survey have been observed. South Carolina also saw a peak in the glass eel CPUE in 2022.

The PDT decided to investigate the current glass eel provisions further to identify any improvements that could be made through this addendum. In particular they will look into the success of the reporting requirements, the provision for allowing glass eel harvest based on restoration efforts, and the duration of the Maine glass eel quota. They discussed that the reevaluation of the quota could be linked to the stock assessment.

Staff assigned writing tasks to PDT members.



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmfc.org

American Eel Glass Eel Plan Development Team Meeting Summary

Webinar
November 15, 2023

Plan Development Team Members: Brad Chase (MA), Casey Clark (ME), Robert Atwood (NH), Dani Carty (SC), Margaret Conroy (DE) Caitlin Starks (ASMFC)

Additional Attendees: Megan Ware (ME DMR)

The American Eel Plan Development Team (PDT) for glass eel met via webinar to continue the development of a draft addendum to address the quota for Maine's glass eel fishery. Staff gave an overview of the draft addendum document, including the background information, statement of the problem, fishery description, stock status, and draft management options.

For quota options the PDT members agreed to include two options: a status quo quota of 9,688 pounds, and an option to decrease Maine's glass eel quota by 21.8%. The PDT members support the status quo option given recent positive trends observed in Maine's fishery dependent and fishery independent monitoring data. They also noted that the assessment did not recommend a reduction of fishing mortality on the glass eel life stage as it did for yellow eel. The second option to decrease the Maine quota is provided so the Board has an opportunity to consider a reduction in the fishery based on the coastwide stock status being depleted, and the stock assessment results showing a declining trend in coastwide young-of-year (YOY) abundance from 1987-2020. The PDT could not identify a technical method that could be used to determine an appropriate reduction level to the Maine glass eel fishery. Therefore, the PDT chose to consider a reduction of 21.8%, which is analogous to the lowest reduction being considered for the yellow eel coastwide cap. The PDT noted that reductions to the glass eel fishery may not need to be as large as those taken for yellow eel because the glass eel life stage experiences a much higher natural mortality rate, which could mean that glass eel harvest has a smaller relative impact on the population than yellow eel harvest. Other reduction levels could be discussed and recommended by the Board for inclusion in the draft addendum for public comment if desired.

The PDT also discussed options for the duration of the Maine glass eel quota. Three options were considered: 1) an option where the Maine quota remains in place until changed through a new addendum or amendment; 2) an option allowing the quota to stay in place for three years, after which a new addendum would be required to reestablish the quota; and 3) an option allowing the quota to stay in place for three years, and to be extended for additional years if maintained at the same level. The PDT agreed that all three options should be considered for

public comment. However, the PDT members expressed a preference for the second option because they feel the quota should be reevaluated every few years.

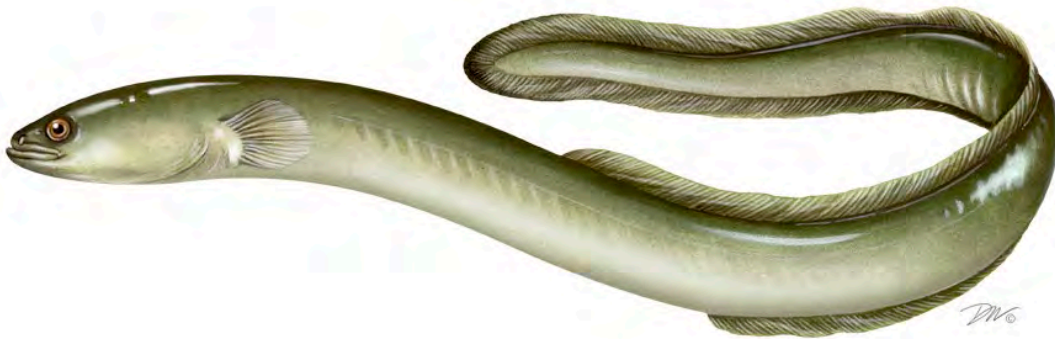
The PDT discussed the other current glass eel provisions, including the reporting requirements, the provision for allowing glass eel harvest based on restoration efforts, and the aquaculture allowance. Casey Clark commented on Maine's experience with reporting, and noted that there have been very few enforcement issues in the last few years while the state has been using the swipe card system for reporting landings. He also commented that the aquaculture provision is working well for Maine at this time. Given the states have not expressed concerns with these provisions, and no proposals have been submitted for additional aquaculture efforts outside of Maine nor for glass eel allowances for restoration, the PDT agreed that changes to these provisions are not needed at this time. If these conditions change in the future the Technical Committee could provide further guidance on state proposals.

Staff will update the document based on this discussion and send it to the PDT for final edits. The PDT will finalize the document for consideration at the Board meeting in January.

Atlantic States Marine Fisheries Commission

DRAFT ADDENDUM VII TO THE AMERICAN EEL FISHERY MANAGEMENT PLAN FOR PUBLIC COMMENT

Commercial Yellow Eel Management and Monitoring Requirements



This draft document was developed for Management Board review and discussion.

This document is not intended to solicit public comment as part of the Commission/State formal public input process. Comments on this draft document may be given at the appropriate time on the agenda during the scheduled meeting. If approved, a public comment period will be established to solicit input on the issues contained in the document.

January 2024



Sustainable and Cooperative Management of Atlantic Coastal Fisheries

Public Comment Process and Proposed Timeline

In August 2023, the American Eel Management Board initiated the development of an addendum to the Interstate Fishery Management Plan (FMP) initiated an addendum to consider changes to the coastwide yellow eel harvest cap. The results of the recent benchmark stock assessment indicate the stock is at or near historically low levels due to a combination of historical overfishing, habitat loss, food web alterations, predation, turbine mortality, environmental changes, and toxins, contaminants, and disease. The benchmark assessment proposed a new tool for setting the coastwide cap based on abundance indices and catch. This Draft Addendum presents background on the Atlantic States Marine Fisheries Commission's (Commission) management of American eel, the addendum process and timeline, and a statement of the problem. This document also provides management options for public consideration and comment.

The public is encouraged to submit comments regarding this document at any time during the public comment period. The final date comments will be accepted is **XX, XXX, 2024 at 11:59 p.m.** Comments may be submitted at state public hearings or by mail or email. If you have any questions or would like to submit comments, please use the contact information below.

Mail: Caitlin Starks, Senior FMP Coordinator
Atlantic States Marine Fisheries Commission
1050 North Highland Street, Suite 200A-N
Arlington, VA 22201

Email: comments@asmfc.org
(Subject: Draft Addendum VII)
Phone: (703) 842-0740

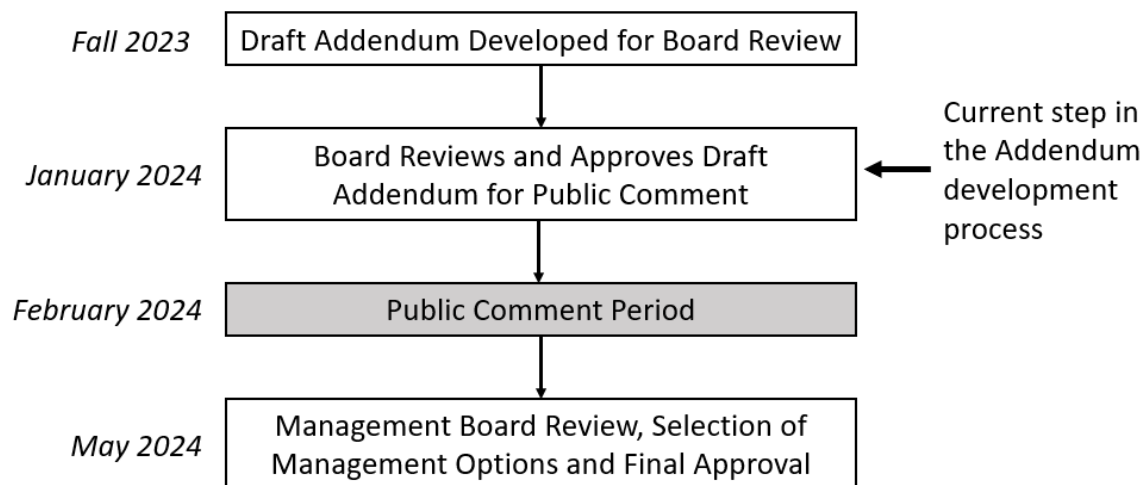


Table of Contents

1.0 Introduction 3

2.0 Overview 3

2.1 Statement of Problem..... 3

2.2 Background 4

2.4 Status of the Stock..... 5

2.3 Description of the Yellow Eel Fishery..... 5

2.3.1 Coastwide Description 5

2.3.2 State-by-state Descriptions..... 8

2.3.3 Catch per Unit Effort..... 10

3.0 Proposed Management Program..... 14

3.1 Yellow Eel Coastwide Cap and Management Response to Exceeding the Coastwide Cap. 14

Issue 1: Coastwide Cap..... 14

Issue 2: Management Response to Exceeding the Coastwide Cap 18

3.2 Timeframe for Yellow Eel Provisions 20

3.3 Annual Young-of-Year Abundance Survey 21

3.4 Catch and Effort Monitoring Program..... 21

4.0 Compliance..... 22

Appendix..... 23

1.0 Introduction

The Atlantic States Marine Fisheries Commission (Commission) has coordinated interstate management of American eel (*Anguilla rostrata*) from 0-3 miles offshore since 2000. American eel is currently managed under the Interstate Fishery Management Plan (FMP) and Addenda I-V to the FMP. Management authority in the exclusive economic zone (EEZ) from 3-200 miles from shore lies with NOAA Fisheries. The management unit is defined as the portion of the American eel population occurring in the territorial seas and inland waters along the Atlantic coast from Maine to Florida.

The Commission's American Eel Management Board (Board) approved the following motions on August 1, 2023:

Move to draft an addendum to consider using I_{TARGET} to recommend various catch caps, but not use I_{TARGET} to set biological reference points or stock status.

This Draft Addendum proposes options for coastwide commercial landings caps for yellow eel, and alternative management responses if the coastwide cap is exceeded. The objective of Addendum VII is to recommend a coastwide cap using the I_{TARGET} tool from the stock assessment based on abundance indices and catch to reduce coastwide landings of yellow eel. The addendum also considers options to modify the biological sampling requirements of the annual YOY survey, and the harvester catch per unit effort (CPUE) reporting requirements.

2.0 Overview

2.1 Statement of Problem

The Commission established the FMP for American Eel in November 1999, which has since been modified through five addenda. The FMP goal and objectives highlight the conservation, protection, and enhancement of American eel abundance in its current range as priorities for management. In response to the 2012 American Eel Benchmark Stock Assessment recommendation to reduce mortality on all life stages, the Board adopted Addendum IV. Addendum IV (2014) established a coastwide harvest cap of 907,671 pounds of yellow eel, reduced Maine's glass eel quota to 9,688 pounds, and allowed for the continuation of New York's silver eel weir fishery in the Delaware River. Addendum V was approved in 2018, which increased the yellow eel coastwide cap to 916,473 pounds starting in 2019 to reflect a correction in the historical harvest data. It also adjusted the process for reducing total landings to the coastwide cap when the cap has been exceeded.

The coastwide cap was intended to control fishing mortality on the coastwide population of eel at the yellow eel life stage. Because the assessment could not establish biological reference points for American eel, historical harvest was used as the basis for setting the coastwide cap. The cap was set at a level equivalent to the average annual harvest between 1998 and 2010. The selected cap was greater than the Technical Committee's recommendation at the time, which was to establish a cap equivalent to a 12% reduction from the 1998-2010 average landings.

Despite these management changes, the 2023 benchmark stock assessment found that the yellow eel population remains depleted, and was at lower levels than the previous assessment. The assessment and peer review recommend reducing fishing mortality on the yellow eel life stage, while also recognizing that stock status is affected by other factors including historical overfishing, habitat loss due to damming mainstems and tributaries of rivers, mortality from passing through hydroelectric turbines, pollution, possibly parasites and disease, climate change, and other unexplained factors at sea. Similar to previous assessments, a statistical model could not be developed for the species to determine stock status or give management advice. However, the assessment explored several index-based methods and recommended a new tool called I_{TARGET} for management use to provide advice on coastwide catch. I_{TARGET} is an index-based method that needs only catch and abundance data to provide management advice on coastwide landings.

2.2 Background

Since its implementation in 2000, the Commission's FMP for American Eel has aimed to conserve and protect the American eel resource to ensure its continued role in its ecosystems while providing the opportunity for commercial, recreational, scientific, and educational uses. The FMP requires all states and jurisdictions to implement an annual young-of-year (YOY) abundance survey to monitor annual recruitment of each year's cohort. In addition, the FMP requires a minimum recreational size and possession limit and a state license for recreational harvesters to sell eels. The FMP requires that states and jurisdictions maintain existing or more conservative American eel commercial fishery regulations for all life stages, including minimum size limits. Each state is responsible for implementing management measures within its jurisdiction to ensure the sustainability of its American eel population.

Because of the unique life history of American eel, separate management measures have been developed to address fisheries targeting each life state (i.e., glass eel, yellow eel, and silver eel). Management measures for yellow eel, which is the primary life stage harvested by commercial and recreational fishermen, have been modified through Addendum I (2006), Addendum III (2013), Addendum IV (2013), and Addendum V (2018). Addendum I established a mandatory catch and effort monitoring program for American eel, requiring trip-level landing and effort data by state. Addendum III made changes to the commercial yellow eel fishery, specifically increasing the yellow eel size limit from 6 to 9 inches, and requiring a $\frac{1}{2}$ by $\frac{1}{2}$ minimum mesh size in commercial yellow eel pots. Responding to the 2012 Benchmark American Eel Stock Assessment, which found the American eel population in U.S. waters to be depleted, Addendum IV set goals of reducing overall mortality and maximizing the conservation benefit for American eel stocks (ASMFC 2014). The Addendum established a coastwide commercial harvest cap for yellow eel of 907,671 pounds to limit fishing mortality. The coastwide cap was implemented starting in the 2015 fishing year and established two management triggers: (1) if the coastwide cap is exceeded by more than 10% in a given year, or (2) the coastwide cap is exceeded for two consecutive years regardless of the percent overage. If either trigger were met, states would implement state-specific allocations based on average landings from 1998-2010 with allocation percentages derived from 2011-2013.

Following the implementation of Addendum IV states expressed some concerns about the management program, including 1) the lack of information available to determine what changes in landings would be necessary to affect fishing mortality rates and spawning stock status, 2) the administrative burden on the states associated with moving to state-specific quotas, and 3) the difficulty of achieving an equitable allocation of this resource given the variation in availability and market demand for eels along the Atlantic coast. To address concerns about state allocations the Board approved Addendum V, which established a new commercial coastwide landings cap for the yellow eel fishery based on corrected landings data, developed new management triggers, and modified the allocation process that would occur if the coastwide cap were exceeded by more than 10% of the coastwide cap for two consecutive years (ASMFC 2018).

2.4 Status of the Stock

The 2023 Benchmark Stock Assessment and Peer Review indicates the American eel stock remains depleted at or near historically low levels due to a combination of historical overfishing, habitat loss, food web alterations, predation, turbine mortality, environmental changes, toxins and contaminants, and disease (ASMFC 2023), consistent with the results of the 2012 and 2017 stock assessments. Despite the large number of surveys and studies available for use, the American eel stock is still considered data-poor. Additionally, eels have an extremely complex life history that is difficult to describe using traditional stock assessment models. The 2023 assessment explored additional approaches for assessing American eel that were suggested in past stock assessments including a delay-difference model, traffic light analysis and surplus production models, and developing an egg-per-recruit model, but overfished and overfishing determinations still could not be made due to data limitations. However, the 2023 stock assessment found that the yellow eel population has declined since the previous assessment (2017), and recommended reducing yellow eel harvest. Unlike previous assessments, the 2023 assessment and peer review identified a tool to provide management advice without requiring an assessment model, which is being considered for management use through this draft addendum.

The Commission's assessments only consider the portion of the stock residing in US coastal waters, but there have been efforts to characterize the stock in other regions. In 2003, declarations from the International Eel Symposium (AFS 2003, Quebec City, Quebec, Canada) and the Great Lakes Fisheries Commission (GLFC) highlighted concerns regarding the health of eel stocks worldwide. In 2010, Fisheries and Oceans Canada (DFO) conducted a stock assessment on American eels in Canadian waters and found that region-specific status indices showed abundance is very low in comparison to levels in the 1980s for the Lake Ontario and upper St. Lawrence River stock, and is either unchanged or increasing in the Atlantic Provinces.

2.3 Description of the Yellow Eel Fishery

2.3.1 Coastwide Description

Yellow eel fisheries exist in all Atlantic Coast states and jurisdictions with the exception of Pennsylvania and the District of Columbia. American eels are harvested for food, bait, and export markets. Yellow eel landings have varied considerably over the years due to a

combination of market trends and availability. These fluctuations are evident both within states and jurisdictions, as well as at a regional level. American eel landings ranged from over 3 million pounds in the 1970s to early 1980s to around 1 million pounds or less since the late 1990s (Figure 1). Since 2014, when the coastwide cap for yellow eel was adopted under Addendum IV, total coastwide landings have generally experienced a steady decline to a time series low of 263,892 pounds in 2020. Landings in 2021 and 2022 increased slightly, but still remain near all-time low levels.

Fishery participants have noted that recent declines in landings have primarily been related to market demand; demand for wild-caught American eel from the US for European food markets has decreased in recent years due to increased aquaculture in Europe. Additionally, demand for domestic bait in 2020 was negatively impacted by COVID-19 restrictions. A smaller proportion of US yellow eel landings typically goes to the domestic bait market, and landings are not expected to increase significantly from current levels in the near future.

DRAFT

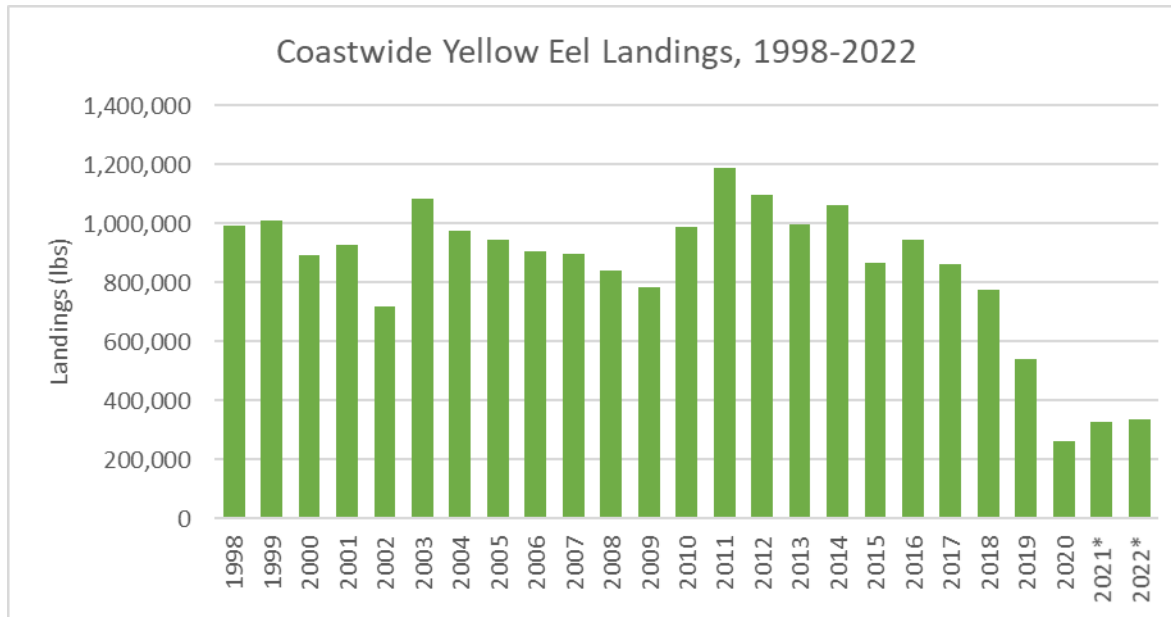


Figure 1. Yellow Eel Coastwide Landings 1998-2022. *2021 and 2022 data are considered preliminary.

Table 1. State-by-state Yellow Eel Landings: 2014-2023. Source: Atlantic Coastal Cooperative Statistics Program, 2023, and state compliance reports. *2021 and 2022 data are considered preliminary.

Year	ME	NH	MA	RI	CT	NY	NJ	DE	MD	PRFC	VA	NC	SC	GA	FL	Total
2014	7,578	Time series average < 400 pounds	3,903	2,353	1,390	38,143	91,225	62,388	619,935	49,293	109,537	60,755	Time series average < 400 pounds	Time series average < 400 pounds	14,092	1,060,725
2015	4,142		2,213	1,538	2,271	50,194	88,828	44,708	493,043	31,588	86,715	57,791			5,632	868,663
2016	6,811		1,705	2,651	2,445	36,371	67,422	44,558	583,578	58,223	96,336	39,911			6,034	946,045
2017	6,358		592	2,968	905	41,732	77,499	29,945	541,270	33,555	97,328	24,752			7,456	864,360
2018	2,832		375	3,988	3,268	39,218	69,679	31,378	514,226	31,151	57,281	18,058			4,659	776,112
2019	2,567		1,577	4,056	5,275	33,039	76,241	13,628	331,878	27,111	34,247	8,140			1,542	539,301
2020	7,012		84	1,425	2,783	16,411	23,742	1,942	159,816	24,971	21,916	3,291			499	263,892
2021*	457		C	1,863	3,255	16,097	26,273	4,433	204,701	10,439	46,345	5,705			9,050	328,618
2022*	877		0	605	3,755	16,570	52,585	2,967	187,810	12,814	36,525	4,202			6,073	317,456

2.3.2 State-by-state Descriptions

All states are subject to the FMP requirements for a yellow eel minimum size limit of 9 inches and a ½ by ½ minimum mesh size in commercial yellow eel pots. The yellow eel fishery in Maine occurs in both inland and tidal waters. Yellow eel fisheries in southern Maine are primarily coastal pot fisheries managed under a license requirement, minimum size limit, and gear and mesh size restrictions. Yellow eel are taken by a very small number of harvesters (four to five annually) for use as bait. Reported landings have been under 10,000 pounds annually since 2013, and were below 1,000 pounds in 2022.

The New Hampshire fishery has diminished significantly since the early 2000s. Commercial harvest of yellow eel in Massachusetts occurs only in coastal waters; commercial permitting for inland harvest was eliminated in 2013. Massachusetts allows eel harvest by nets, pots, spears, or angling. The commercial fishery is now mainly conducted using baited pots with over 200 permits issued and reported harvest under 2,000 pounds since 2015. Reporting of activity under commercial permits is mandatory, however, underreporting of eels harvested for commercial striped bass fishing bait is expected.

Small-scale, commercial eel fisheries occur in Rhode Island and are mainly conducted in coastal rivers and embayments with pots during May through November. Connecticut has a similar small-scale, seasonal pot fishery for yellow eel in the tidal portions of the Connecticut and Housatonic rivers. All New England states presently require commercial fishing licenses to harvest eels and maintain trip-level reporting.

Licensed eel fishing in New York occurs primarily in the Hudson River, the upper Delaware River (Blake 1982), and in the coastal marine district. A slot limit (greater than 9 inches and less than 14 inches to limit PCB exposure) exists for eels fished in the tidal Hudson River, strictly for use as bait or for sale as bait only. Due to PCB contamination of the main stem, commercial fisheries have been closed on the freshwater portions of the Hudson River and its tributaries since 1976. The fishery in the New York portion of the Delaware River consists primarily of silver eels collected in a weir fishery. New Jersey fishery regulations require a commercial license when using more than two pots or selling catch. Mandatory trip level reporting is required for every month of the year a license is possessed, even if no fishing occurs. Eel pot diameter may not exceed 16" if cylindrical or 201 square inches in cross section if any other configuration.

The Delaware eel commercial fishery exclusively uses baited pots equipped with one half inch by one half inch mesh. Delaware mandated catch reporting in 1999 and more detailed effort reporting in 2007. The fishery occurs primarily in the tidal tributaries of Delaware Bay although a small proportion of annual harvest may occur in the Atlantic coastal or "Inland Bays" in some years. American eels are sold for both food and bait, dependent upon market demand. Historically, total annual landings in Delaware were consistently greater than 100,000 pounds and ranked in the top three in value for the State among all Delaware commercial fisheries. A suite of variables (bait supply, market demand, aging out of the most knowledgeable eel fishers) has contributed to recent low annual landings for Delaware.

Maryland, Virginia, and Potomac River Fisheries Commission primarily have pot fisheries for American eels in the Chesapeake Bay. Maryland required eel fisherman to be licensed in 1981 and effort reporting began in 1990. Over 99% of all eel harvest in Maryland occurs with the use of eel pots, and all harvest occurs in tidal waters. Average annual landings and effort have declined 50% and 60%, respectively, from 2018 levels. However, catch per unit effort (CPUE, pounds per pot) in recent years is at the highest levels since effort reporting began in 1990.

Large eels are generally exported whereas small eels are used for bait in the crab trotline fishery, except in Virginia. Almost all of the eel harvest in Virginia is done using eel pots as the main gear. Virginia formerly had a voluntary buyer reporting system that was replaced by a mandatory harvester reporting system for all species in 1993. Most of Virginia's American eel are sold locally for bait with no harvest being exported for sale in recent years. Eel harvesters can sell their eels directly to consumers or to businesses with a VMRC issued eel self-market permit. Some eel harvesters also buy and sell eels from other harvesters and are required to have a seafood buyer permit and an eel buyer permit; monthly reporting of the weights of any purchased eels is required. The Potomac River Fisheries Commission has had harvester reporting since 1964, and has collected eel pot effort since 1988.

North Carolina has a coastal pot fishery with fluctuating effort depending on market demands. While a standard commercial fishing license is required for participation in the commercial eel pot fishery, a permit is not, but a notification letter must be provided as part of the mandatory reporting system. Most commercial yellow eel landings in North Carolina occur in October and November, but there is also a small fishery in the spring. Most landings come from the Albemarle Sound area, with additional landings reported from the Pamlico Sound and southern waterbodies under the jurisdiction of North Carolina Division of Marine Fisheries. No catch records are maintained for freshwater inland waters, and the sale of eels harvested from these waters is prohibited. Trip-level commercial landings are required to document all transfers of fish sold from coastal waters from the fishermen to the dealer. Data reported on these forms include transaction date, area fished, gear used, species landed, and fishermen and dealer information. In 2007, to comply with Addendum I, an eel pot logbook program was implemented at the individual commercial fisherman level to collect additional information not reported on trip tickets including pot soak time, the number of pots fished, and landings (pounds) per pot. Annual yellow eel landings in North Carolina historically were greater than 100,000 pounds; however, market demand and attrition of the most knowledgeable eel fishers has contributed to recent low annual landings.

South Carolina instituted a permitting system in 1998 to document total eel gear and commercial landings. Traps or pots used to capture yellow or silver eels must be permitted by water area fished. Restrictions include specific water designations, possession and size limits. Permit conditions outline fishing closure from 1 September through 31 December and immediate by-catch release. Mandatory reporting of effort and catch is required by the 10th of each month. Since 1999, a total of 583.80 pounds of eels were reported.

American eel fishing in Georgia was restricted to coastal waters prior to 1980 but has since expanded to approved inland waters, including portions of the following rivers: Savannah River, Ogeechee River, Altamaha River, Oconee River, Ocmulgee River, Satilla River, and St. Marys River. Landings data are available for Georgia, and as of April 1, 2018, effort data are available due to commercial eel fishermen being required to possess an eel endorsement stamp in addition to a commercial fishing license. Florida's commercial eel pot fishery is operated under a permit system; the recreational fishery has a 25 fish/angler/day bag limit.

2.3.3 Catch per Unit Effort

Fishery-dependent CPUE data are available for some states prior to the mandatory catch and effort reporting required by Addendum I, but these data were not considered indicative of trends in the stock as a whole in the 2023 stock assessment (ASMFC 2023). Fishery-dependent CPUE is almost exclusively composed of positive trips only; trip reports with zero eels caught are rare because most agencies don't require reports of zero catches. While the CPUE indices provided by individual states do not tend to agree and are not useful for assessing trends in the coastwide stock, they may be useful for understanding fishery trends within each state.

The Connecticut commercial CPUE index was calculated for yellow eels from the pot fishery (Figure 2). The index has fluctuated up and down with no clear trend.

The New York commercial CPUE is an arithmetic mean of pounds per pot per hour fished, based on data from VTR monthly harvester reports (Figure 3). With only five years of data, there is no clear trend in the index.

The New Jersey index generally declined until 2015 then exhibited an upward trend (Figure 4), though it is possible it overestimates CPUE since there were very few trips reported with zero catch.

Delaware considers its American eel catch and effort records since 1999 fairly accurate, and the CPUE in the Delaware fishery has remained fairly stable since 2003 (Figure 5).

Maryland has calculated a commercial CPUE index for the pot fishery since 1992 (Figure 6). The CPUE index was relatively flat from 1992–2002 and then generally increased until hitting the time series high CPUE in the terminal year.

Virginia's commercial eel pot fishery CPUE has shown a general decline since the beginning of the time series (Figure 7). Only data associated with positive effort are included in the calculations as commercial harvesters only report positive catches to the VMRC.

North Carolina logbook data (which began in 2007) was used for calculating a fishery-dependent index of abundance, which has been fairly stable over time (Figure 8).

South Carolina Department of Natural Resources has calculated CPUE for the commercial fishery using monthly dealer reports but the data are confidential.

Commercial catch and effort data collection for American eel in Florida began in 2006, and the CPUE index is available for 2007-2019 but shows no clear trend (Figure 9).

The state CPUE data have not been used in the stock assessment as originally intended when the reporting requirement was established under Addendum I. In the 2012 and 2023 benchmark stock assessments, these data were considered but the assessment team decided against their inclusion because they were not considered indicative of trends in the stock as a whole, and differences in baiting practices and bait preference vary geographically which can confound the accuracy and analysis of fishery-dependent CPUE data. The 2023 stock assessment peer review panel also noted that given the variety of fishing gears and fishing areas, the analysis of fishing effort would not be straightforward. The 2023 stock assessment and peer review reports indicate that there is no plan to use the fishery-dependent CPUE data moving forward. As such, this Draft Addendum includes options to make it voluntary for states to collect these CPUE data for American eel.

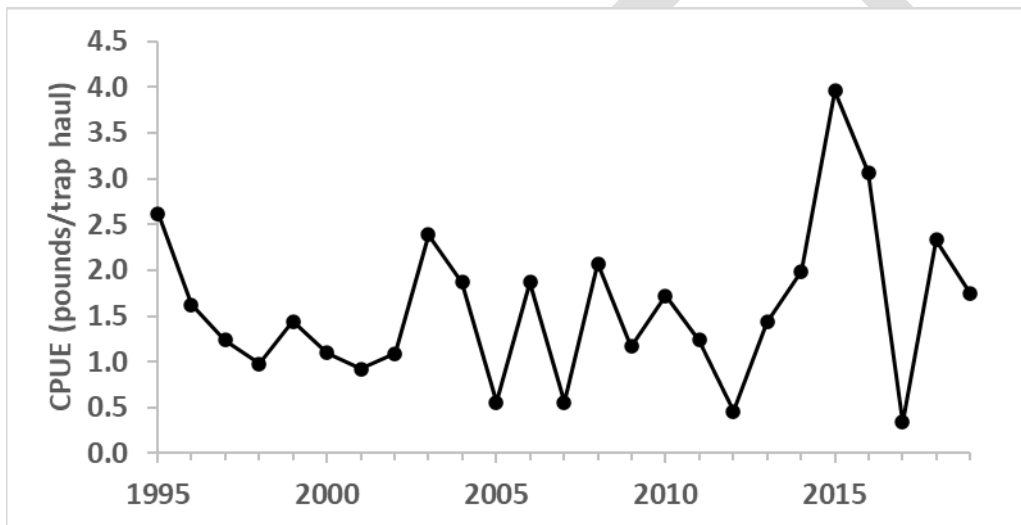


Figure 2. Fishery-dependent catch-per-unit-effort for Connecticut's yellow eel pot fishery. Estimated errors associated with the index were not provided.

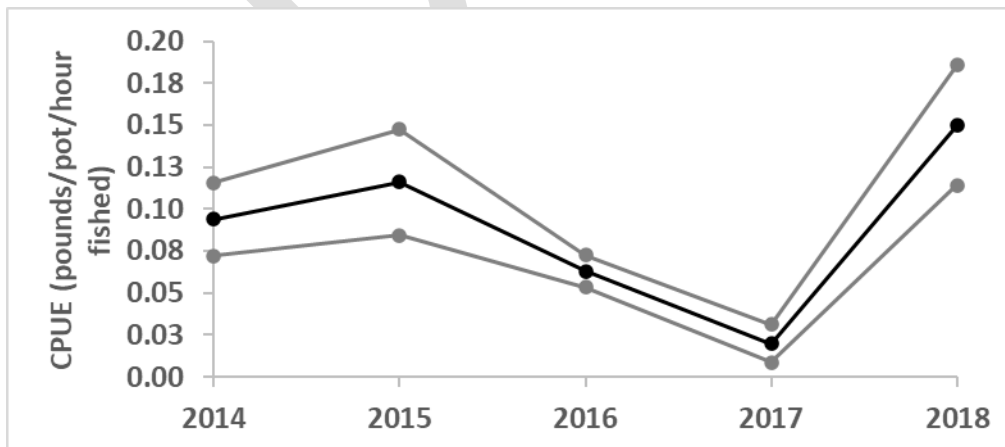


Figure 3. Fishery-dependent catch-per-unit-effort for New York's yellow eel pot fishery. The black line indicates the CPUE and the grey lines indicate 95% confidence intervals.

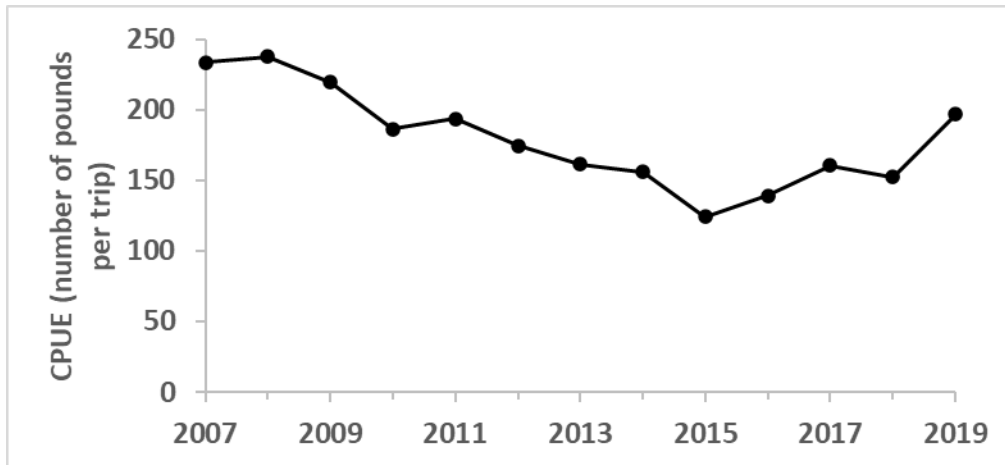


Figure 4. Fishery-dependent catch-per-unit-effort for New Jersey's yellow eel fyke net fishery. Estimated errors associated with the index were not provided.

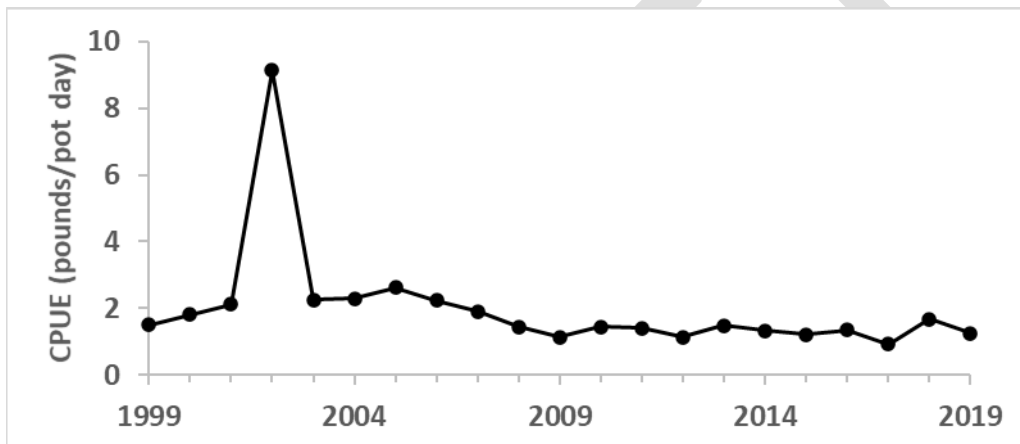


Figure 5. Fishery-dependent catch-per-unit-effort for Delaware's yellow eel pot fishery. Estimated errors associated with the index were not provided.

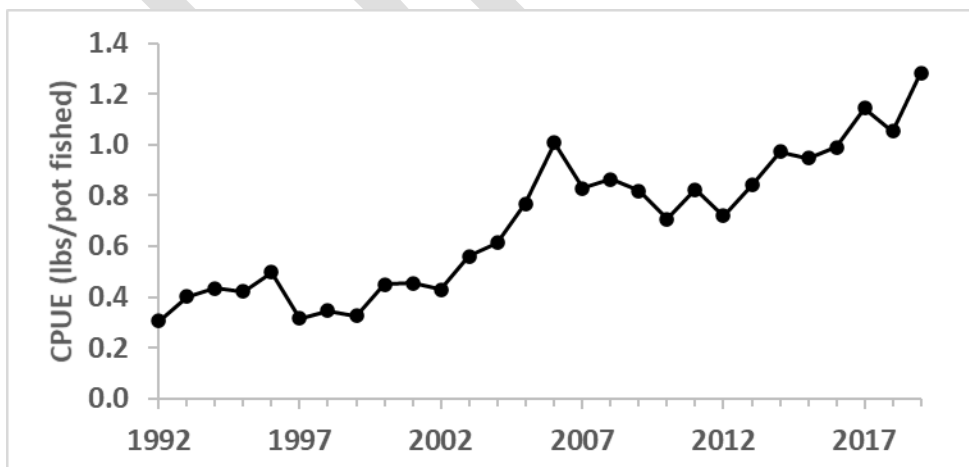


Figure 6. Fishery-dependent catch-per-unit-effort for Maryland's yellow eel pot fishery. Estimated errors associated with the index were not provided.

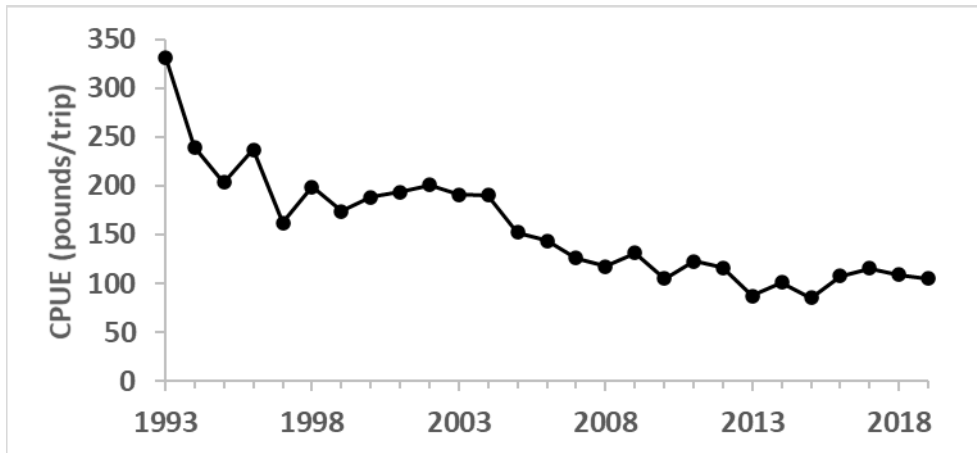


Figure 7. Fishery-dependent catch-per-unit-effort for Virginia's yellow eel pot fishery. Estimated errors associated with the index were not provided.

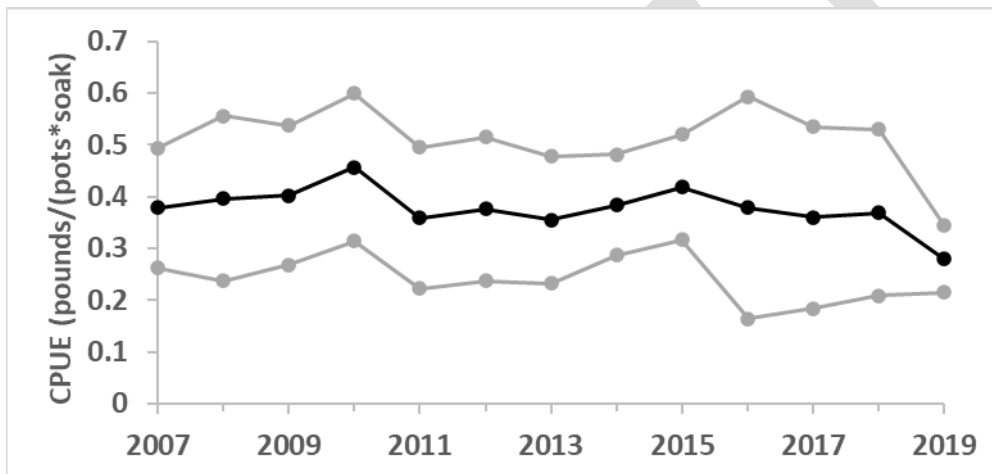


Figure 8. Fishery-dependent catch-per-unit-effort for North Carolina's yellow eel pot fishery. The black line indicates the CPUE and the grey lines indicate 95% confidence intervals.

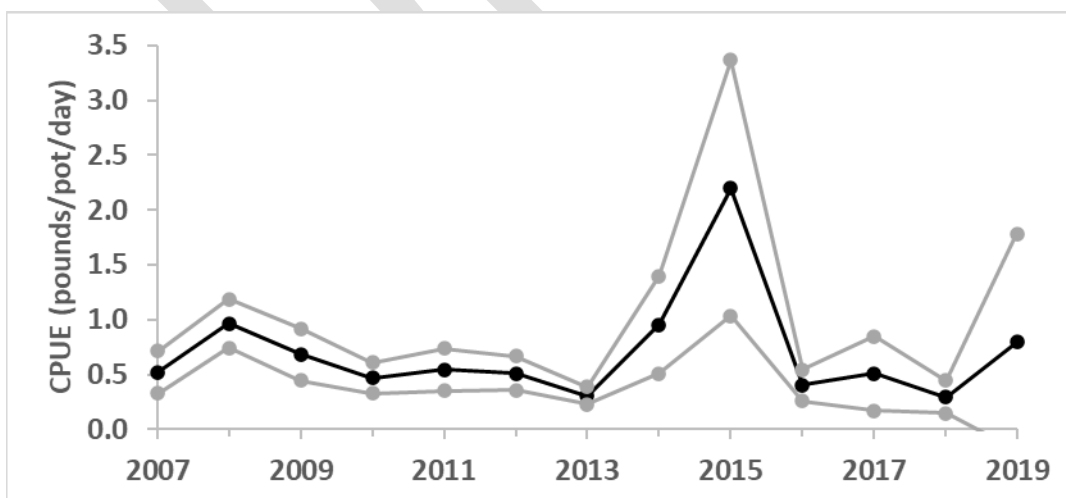


Figure 9. Fishery-dependent catch-per-unit-effort for Florida's yellow eel pot fishery. The black line indicates the CPUE and the grey lines indicate 95% confidence intervals.

3.0 Proposed Management Program

The following options were developed in response to the Board motion from August 2023. The options are organized by issue item.

When the Board takes final action on the addendum, there is the opportunity to select any measure within the range of options that went out for public comment, including combining options across issues. This means when selecting final management measures, the Board may select a coastwide cap that falls within the range of options, i.e., between 202,453 and 916,473 pounds.

3.1 Yellow Eel Coastwide Cap and Management Response to Exceeding the Coastwide Cap

Issue 1: Coastwide Cap

Addendum V established a coastwide cap of 916,473 pounds, which is the coastwide average landings during the years of 1998 through 2010 (based on revised landings information through 2016 as of January 2018). This timeframe was also the period covered by the 2012 benchmark stock assessment.

Alternative options for coastwide caps were developed using I_{TARGET} , an index-based method that provides management advice based on abundance indices and catch information, as well as management goals specified by the Board.

When using I_{TARGET} to recommend a catch cap, there are three parameters that must be specified: the reference period, multiplier, and threshold. The reference period should be a time period where the population is stable or at a desirable abundance level. The multiplier represents the target level of abundance that management is aiming to achieve, and can range from 1 to 1.5. A multiplier of 1 indicates that the target abundance level is equal to the abundance over the reference period, and a multiplier equal to 1.5 indicates that the target is 1.5 times the average index value over the reference period. The threshold value reflects goals of the fishery. If landings exceed the threshold, then future landings are reduced. A threshold of 0.5 is less conservative, whereas a threshold of 0.8 is more conservative. Adjusting these three parameters affects the resulting coastwide catch cap recommendation.

The stock assessment included analyses that identified regimes in the American eel abundance index data. Regimes are time periods where the abundance index data are more similar compared to other time periods. There were three regimes detected in the yellow eel index: a high yellow eel abundance regime in 1974-1987, a low regime in 1988-1999, and an even lower regime in 2000-2020. The first two regimes are included as reference period options in this addendum. A stable period of relative high abundance (1974-1987) was recommended in the stock assessment. The Management Board requested a reference period when more surveys were available (1988-1999) also be evaluated. This reference period reflects lower relative abundance levels, but relative abundance during this period was higher than in recent years (2000-2020).

Figure 10 shows the relative abundance index and catch time series, with the two reference periods identified by the shaded areas.

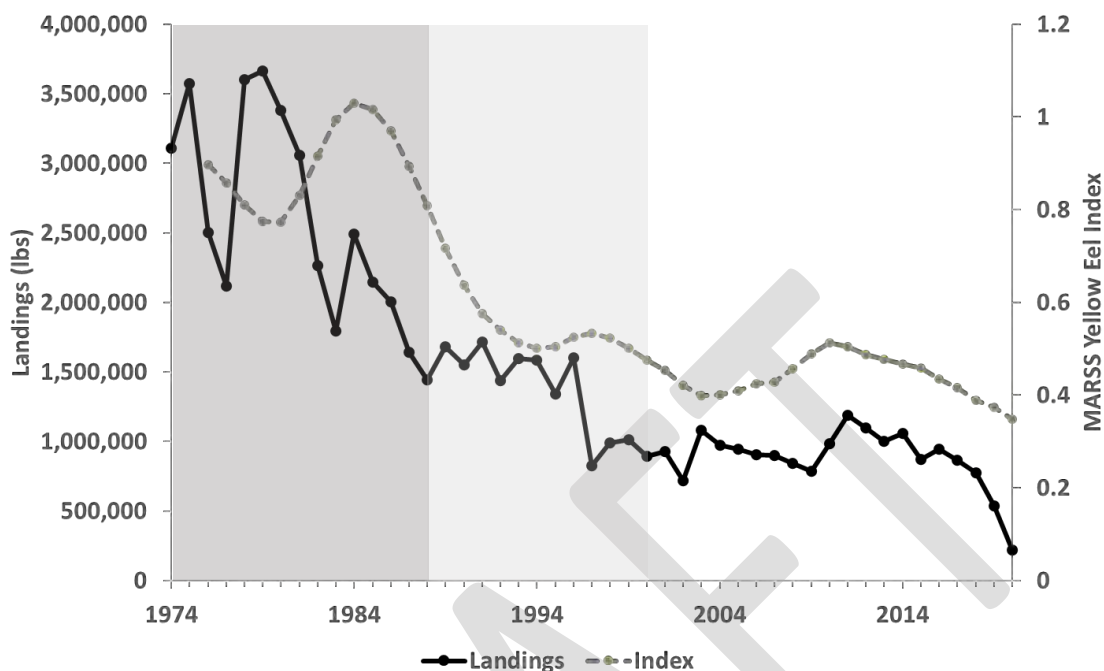


Figure 10. Yellow eel landings and abundance index, 1974-2020. The high abundance regime (1974-1987) is represented by the dark gray shaded area. The lower abundance regime (1988-1999) is represented by the light gray shaded area.

Option 1: Status Quo

Under this option, the coastwide cap for yellow eel of 916,473 pounds would be maintained. Based on the 2023 stock assessment advice, this option is not recommended.

Option 2: Coastwide Cap set at 202,453 pounds using I_{TARGET} configuration recommended in the 2023 benchmark stock assessment

The coastwide cap for yellow eel would be set at 202,453 pounds, using the following configuration of I_{TARGET} , which was recommended in the 2023 Benchmark Assessment and Peer Review Report:

- Reference Period: 1974-1987
- Multiplier: 1.25
- Threshold: 0.8

The assessment recommended using I_{TARGET} with a reference period of 1974-1987, which represents a stable period of relative high abundance of yellow eel. The stock assessment used a multiplier of 1.25 rather than 1.5, because it recognizes that more factors beyond fishing have influenced the stock and may have changed the carrying capacity for American eel, therefore

higher abundance levels (e.g., 1.5 times the abundance during the higher abundance regime) might not be achievable under current conditions. Thus, this option aims to achieve a relative abundance level that is 1.25 times the average index value from 1974-1987. The abundance index during this reference period is equal to 0.894; thus, the target value is equal to 1.118.

The assessment used a threshold value of 0.8 because it reflects a more conservative approach, and was recommended in the recent research track assessment conducted by the Northeast Fisheries Science Center (NEFSC) that examined methods for providing catch advice in data-limited fisheries.

Option 3: Coastwide Cap set at 518,281 pounds using I_{TARGET}

Under this option, the catch cap is set at 518,281 pounds, which is based on the following configuration of I_{TARGET} :

Reference Period: 1974-1987

Multiplier: 1.25

Threshold: 0.5

This option uses a reference period of 1974-1987 and a multiplier of 1.25, which were recommended in the stock assessment. This option aims to achieve a relative abundance level that is 1.25 times the average index value from 1974-1987, which is the same target value as in Option 2. The threshold value of 0.5 reflects a less conservative approach to managing the fishery to achieve the target abundance than what was recommended in the assessment. This would likely increase the amount of time needed to achieve the target index compared to Option 2.

Option 4: Coastwide Cap set at 509,780 pounds using I_{TARGET}

Under this option, the catch cap is set at 509,780 pounds, which is based on the following configuration of I_{TARGET} :

Reference Period: 1988-1999

Multiplier: 1.5

Threshold: 0.5

This option uses a reference period of 1988-1999, which represents a period of lower abundance, and a multiplier of 1.5. Thus, this option aims to achieve a relative abundance level that is 1.5 times the average index value from 1988-1999. The abundance index during this reference period is equal to 0.544; thus, the target value is equal to 0.816. The abundance target in this option is slightly lower than the abundance target in Options 2 and 3. The threshold value of 0.5 reflects a less conservative approach to managing the fishery to achieve the target abundance.

Option 5: Coastwide Cap set at 716,497 pounds using I_{TARGET}

Under this option, the catch cap is set at 716,497 pounds, which is based on the following configuration of I_{TARGET} :

Reference Period: 1988-1999

Multiplier: 1.25

Threshold: 0.5

This option uses a reference period of 1988-1999, which represents a period of lower abundance, and a multiplier of 1.25. Thus, this option aims to achieve a relative abundance level that is 1.25 times the average index value from 1988-1999. The abundance index during this reference period is equal to 0.544; thus, the target value under this option is equal to 0.680. The abundance target this option aims to achieve is 39% lower than the target recommended in the stock assessment. The threshold value of 0.5 reflects a less conservative approach to managing the fishery to achieve the target abundance.

The PDT does not recommend consideration of this option. The catch cap recommended when using this configuration is more than three times the catch cap that was recommended in the stock assessment (Option 2).

Figure 11 illustrates the difference in the catch caps produced by each of the above configurations of I_{TARGET} , where each line consists of annual data points representing the catch cap that would have been produced with each year as the terminal year of data. The assessment used 2020 as the terminal year, and therefore the catch caps considered in this draft addendum are based on landings and index data through 2020.

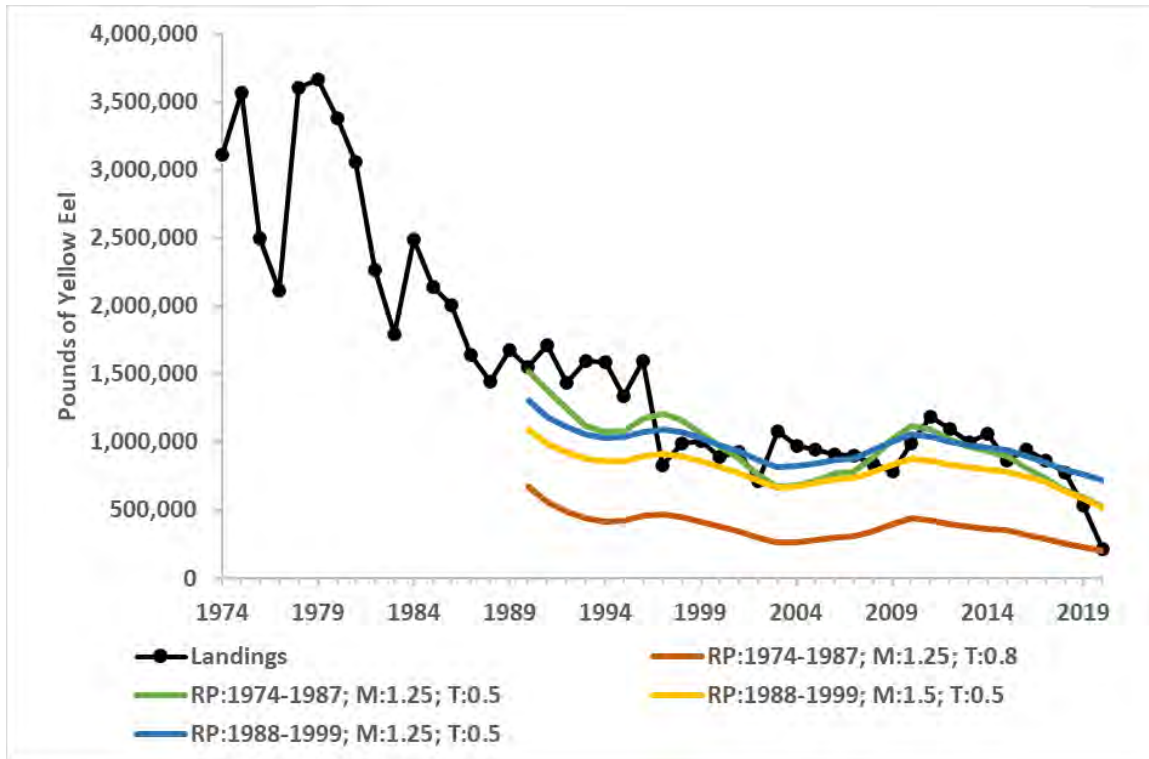


Figure 11. Comparison of catch advice produced by each of the proposed configurations of I_{TARGET} relative to annual coastwide catch. RP=reference period; M=multiplier; T=threshold value. The orange line represents Option 2, the green line represents Option 3, the yellow line represents Option 4, and the blue line represents Option 5.

Issue 2: Management Response to Exceeding the Coastwide Cap

Addendum V established that the coastwide landings are annually evaluated against a two-year management trigger. If the coastwide cap is exceeded by 10% (10% of the coastwide cap = 91,647 pounds; coastwide cap + 10% = 1,008,120 pounds) for two consecutive years, then only states with landings greater than 1% of the coastwide landings, in the year(s) when the management trigger is tripped, will be responsible for reducing their landings to achieve the coastwide cap in the subsequent year. States with landings greater than 1% of the coastwide landings will work collectively to achieve an equitable reduction to the coastwide cap. For states with landings less than 1% of the coastwide landings, if in subsequent years a state's landings exceeds 1% of the coastwide landings after reductions have been applied, that state must reduce their individual state landings in the subsequent year to return to the less than 1% level. More details on the process the Management Board will undertake to respond to overages of the coastwide cap are outlined in the Appendix.

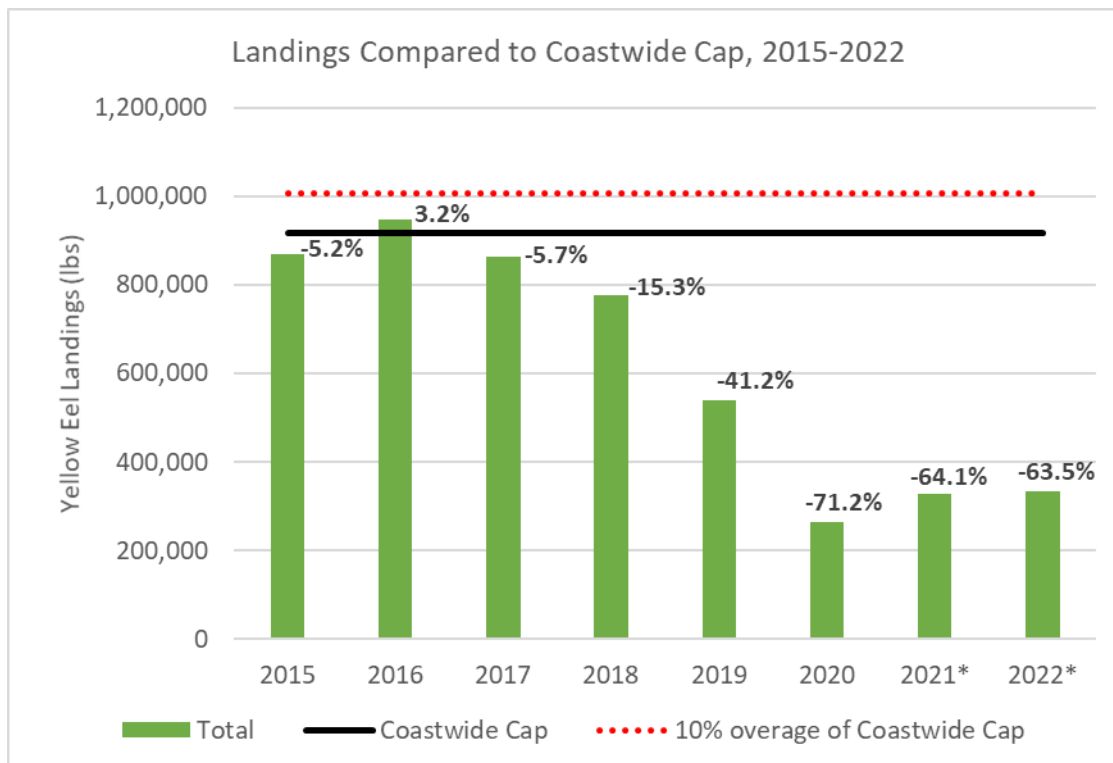


Figure 12. Coastwide yellow eel landings from 2015-2022 compared to the Addendum V coastwide cap and a 10% overage of the cap (the Management Trigger). Percentages above each bar indicate percent above or below the coastwide cap.

Option 1: Status Quo

The management trigger, landings evaluation process, and management response established in Addendum V would remain in place (see Appendix).

Option 2: States with 5% or greater of coastwide landings

This option would modify the management response that would take place if the coastwide cap is exceeded by 10% under the addendum V guidelines. Under this option, only states with landings greater than 5% of the coastwide landings in the year(s) when the management trigger is tripped will be responsible for reducing their landings to achieve the Coastwide Cap in the subsequent year. Those states with landings greater than 5% of the coastwide landings will work collectively to achieve an equitable reduction to the Coastwide Cap. For those states with landings less than 5% of the coastwide landings, if in subsequent years a state’s landings exceeds 5% of the coastwide landings after reductions have been applied, that state must reduce their individual state landings in the subsequent year to return to the <5% level.

For reference, Table 2 shows the percent of the coastwide landings contributed by each state in recent years.

Table 2. Percent of total coastwide yellow eel landings contributed by each state. Shaded cells represent > 5% of the annual coastwide landings.

Year	ME	NH	MA	RI	CT	NY	NJ	DE	MD	PRFC	VA	NC	SC	GA	FL
2014	0.7%	Time series average < 0.1%	0.4%	0.2%	0.1%	3.6%	8.6%	5.9%	58.4%	4.6%	10.3%	5.7%	Time series average < 0.1%	Time series average < 0.1%	1.3%
2015	0.5%		0.3%	0.2%	0.3%	5.8%	10.2%	5.1%	56.8%	3.6%	10.0%	6.7%			0.6%
2016	0.7%		0.2%	0.3%	0.3%	3.8%	7.1%	4.7%	61.7%	6.2%	10.2%	4.2%			0.6%
2017	0.7%		0.1%	0.3%	0.1%	4.8%	9.0%	3.5%	62.6%	3.9%	11.3%	2.9%			0.9%
2018	0.4%		0.0%	0.5%	0.4%	5.1%	9.0%	4.0%	66.3%	4.0%	7.4%	2.3%			0.6%
2019	0.5%		0.3%	0.8%	1.0%	6.1%	14.1%	2.5%	61.5%	5.0%	6.4%	1.5%			0.3%
2020	2.7%		0.0%	0.5%	1.1%	6.2%	9.0%	0.7%	60.6%	9.5%	8.3%	1.2%			0.2%
2021*	0.1%		C	0.6%	1.0%	4.9%	8.0%	1.3%	62.3%	3.2%	14.1%	1.7%			2.8%
2022*	0.3%		C	0.2%	1.1%	8.1%	15.7%	0.9%	56.4%	3.8%	10.6%	1.1%			1.8%

3.2 Timeframe for Yellow Eel Provisions

The following options would determine how long the selected coastwide cap would remain in place before any changes are considered.

Option 1: No sunset date, cap can be updated after three years

Under this option there would be no sunset date for this Addendum. The selected coastwide landings cap for yellow eel would remain in place for three years (2025-2027). After three years, the Board may choose whether to update the coastwide cap with additional years of data, or maintain the same coastwide cap. If the Board chooses to update the cap using the selected I_{TARGET} configuration established in this addendum, this could be done via Board action and a new addendum would not be required. The additional years of data available at that time would be included in the I_{TARGET} model to provide an updated coastwide cap.

The PDT recommends three years as the minimum amount of time that the cap should remain static before being updated. This is because less than three years of additional data from the yellow eel abundance index and the coastwide landings would not be sufficient to evaluate the performance of the cap and provide an updated catch limit.

If a new or different management program is desired than what is specified in the prior sections (e.g., a different configuration of I_{TARGET}), a new addendum would be required.

Option 2: No sunset date, cap can be updated after five years

Under this option there would be no sunset date for this Addendum. The selected coastwide landings cap for yellow eel would remain in place for five years (2025-2029). After five years, the Board may choose whether to update the coastwide cap with additional years of data, or maintain the same coastwide cap. If the Board chooses to update the cap using the selected I_{TARGET} configuration established in this addendum, this could be done via Board action and a new addendum would not be required. The additional years of data available at that time would be included in the I_{TARGET} model to provide an updated coastwide cap.

A time period of five years is provided as an alternative to three years. Five years of additional data from the yellow eel abundance index and the coastwide landings would be more robust for providing an updated catch limit.

If a new or different management program is desired than what is specified in the prior sections (e.g., a different configuration of I_{TARGET}), a new addendum would be required.

3.3 Annual Young-of-Year Abundance Survey

The following options consider modifying the biological sampling requirements of the annual YOY abundance survey established in the FMP.

Option 1: Status Quo

Under this option all requirements for the annual YOY abundance survey established in Section 3.1.1 of the FMP would remain in place. This means states must continue to collect individual lengths and pigment stage of the entire survey catch, or a statistical subsample where the catch of young-of-year is too large.

Option 2: Voluntary biological sampling in the YOY survey

Under this option the requirements of the annual YOY abundance survey established in Section 3.1.1 of the FMP would be modified such that the states would no longer be required to collect individual lengths and pigment stage of the YOY catch. All other survey requirements would remain in place. States may continue to collect biological data voluntarily.

This option is proposed in response to a recommendation from the American Eel Stock Assessment Subcommittee (SAS) and Technical Committee (TC). The SAS and TC recommend that the biological sampling requirement for YOY surveys be made optional, given the lack of trends in pigment, length, and weight within and among sampling sites (ASMFC 2023).

3.4 Catch and Effort Monitoring Program

Addendum I established fishery-dependent monitoring requirements for commercial eel fisheries. Specifically, since 2007 states have been required to implement mandatory reporting of eel catch and effort by either harvesters or dealers as a condition of their permit. The following options consider changing the Addendum I fishery-dependent monitoring requirements.

Option 1: Status Quo

Under this option there would be no change to the current fishery-dependent reporting requirements. Harvesters or dealers would still be required to report trip-level data including soak time, number of units of gear fished, and pounds landed by life stage.

Option 2: Voluntary collection of fishery-dependent catch-per-unit-effort (CPUE) for yellow eel harvest

Under this option states would no longer be required to mandate that harvesters or dealers report trip-level CPUE data (i.e., soak time, number of units of gear fished, and pounds landed)

for yellow eel harvest. If a state wishes to maintain this reporting requirement it may do so voluntarily. All states must continue to report commercial yellow eel catch annually. This option would not modify any fishery-dependent reporting requirements for the glass eel life stage.

4.0 Compliance

If the existing American Eel FMP is revised by approval of this draft addendum, the American Eel Management Board will establish dates by which states will be required to implement the addendum provisions.

5.0 References

Atlantic States Marine Fisheries Commission (ASMFC). 2000. Interstate Fishery Management Plan for American Eel (*Anguilla rostrata*). Washington D.C. NOAA Oceanic and Atmospheric Administration Award No. NA97 FGO 0034 and NA07 FGO 024.

ASMFC. 2012. American Eel Benchmark Stock Assessment. Arlington, VA.

ASMFC. 2014. Addendum IV to the Interstate Management Plan for American Eel. Arlington, VA.

ASMFC. 2017. American Eel Stock Assessment Update. Arlington, VA.

ASMFC. 2018. Addendum V to the Interstate Management Plan for American Eel. Arlington, VA.

ASMFC. 2023. American Eel Benchmark Stock Assessment and Peer Review Reports. Arlington, VA.

Blake, L. M. 1982. Commercial fishing for eel in New York State. In K. H. Loftus (ed). Proceedings of the 1980 North American eel conference. Ont. Fish. Tech. Rep. Ser. No. 4. 97pp

Appendix

Policy to Address Coastwide Cap Overages for the Yellow Eel Commercial Fishery

This appendix describes the Board response that was established under Addendum V for in the event that the coastwide cap of 916,473 pounds of American eel is exceeded in a given year. Sections 3.3.2 and 3.3.3 of this Addendum state the following regarding the management trigger and the response:

3.3.2 Yellow Eel Coastwide Cap Management Trigger

Starting in 2019, the coastwide landings are annually evaluated against a two-year management trigger. If the coastwide cap is exceeded by 10% (10% of the coastwide cap = 91,647 pounds; coastwide cap + 10% = 1,008,120 pounds) for two consecutive years, the Board is required to alter the management program as specified below to ensure the objectives of the management program are achieved.

3.3.3 Allocation

The yellow eel fishery is managed without state-specific quotas through adaptive management. If the management trigger is tripped. Only states with landings greater than 1% of the coastwide landings, in the year(s) when the management trigger is tripped, will be responsible for reducing their landings to achieve the coastwide cap in the subsequent year. States with landings greater than 1% of the coastwide landings will work collectively to achieve an equitable reduction to the coastwide cap. For states with landings less than 1% of the coastwide landings, if in subsequent years a state's landings exceeds 1% of the coastwide landings after reductions have been applied, that state must reduce their individual state landings in the following year to return to the less than 1% level¹.

A management objective under this Addendum is to manage landings to the coastwide cap (cap). Annual landings are not finalized until the spring of the following fishing year. Therefore, if an overage occurs, a year lag time will likely occur before full action is taken to reduce harvest to the cap. For example, a cap overage in 2019 would not be determined until 2020, and action would likely be delayed until 2021 since some states do not have authority to act within the same fishing year when the overage is determined.

One way to proactively manage the yellow eel fishery is to closely monitor landings and encourage states to take voluntary action when it is clear an overage has occurred in the previous year. By engaging with states before the management trigger is tripped, but after landings have exceeded the cap, a lengthy addendum process can be avoided and more immediate action can be taken to ensure the fishery is managed to the cap. This proactive approach encourages vigilance and voluntary action in the first year of an overage, and provides opportunity for collaborative, rapid action to prevent an overage in the second

¹ To clarify, reduction measures apply when the management trigger is tripped. States are not held to a landings level until coastwide landings have exceeded the coastwide cap.

consecutive year, thereby preventing the triggering of mandatory management action through an addendum.

Thus, to improve the expediency in reacting to an overage, it is recommended that preliminary commercial yellow eel landings from the ACCSP Data Warehouse be made available for the Board's consideration prior to the ASMFC Spring Meeting, annually. Based on the preliminary data review, if it's determined the cap has likely been exceeded in one year the Board will convene a work group (WG) consisting (at a minimum) of one representative from each state/jurisdiction that harvested more than 1% of the coastwide landings in the year of the overage. The charge of the WG is to consider the overage relative to the decision trees (Figure 1) and determine if and how the Board should recommend voluntary action by those states that harvested more than 1% of the coastwide landings (1% states).

Response Strategy When Cap is exceeded in One Year

Once convened by the Board, the WG will review the magnitude and the pattern of the overage relative to the decision trees (Figures 1-3) to determine the need for voluntary action. "Pattern" refers to whether landings of American eel increased in all states or in some states while harvest decreased in others. "Magnitude" refers to the extent of the overage and, for individual states, the amount of harvest increase relative to the previous year. It will be important for the WG to examine potential reasons for increasing harvest, such as increased effort, increased availability of eels, improved market conditions, etc. Once the Board recommends states decrease landings it will be up to the states to take action.

States may utilize (but are not restricted to) the following voluntary methods to reduce eel harvest as considered by the Board in Draft Addendum II (2007):

- Seasonal restrictions,
- Gear limits, and
- Size limits.

Note: Harvest reductions were not approved by the Board and were not included in Addendum II (2008).

Seasonal restrictions are the simplest method of reducing harvest, but there was strong opposition to the seasonal restrictions from the Advisory Panel when proposed in Draft Addendum II. However, those seasonal closures were designed to increase escapement of silver eels and occurred in the fall during times of maximal fishing effort, so it is conceivable that a seasonal closure could be designed that would reduce harvest without imposing a severe hardship on the fishery. The Board considered a maximum size limit as a method to allow more escapement of silver eels and increase eggs-per-recruit (EPR). A range of size limits were presented in the Draft Addendum ranging from a 19" maximum size limit, which was estimated to increase EPR by 138%, but at a reduction of 40% to the harvest, to a 23" maximum size, which only increased EPR by 3.8% and reduced harvest by less than 10%. A larger minimum size also will reduce harvest if harvest reduction is the sole goal. Size limits could either be enforced by gear modifications or by grading the eels on the water. Gear modifications can impose a

large financial burden on harvesters, depending on the number of pots fished and length limit. If a minimum length is used, eel pots can be modified by installing an escape panel of a mesh size that would only retain eels above the minimum length. If a maximum eel length is used, the funnel(s) on the eel pots can be modified by restricting the circumference. A grader can also be used to comply with length limits at a lower cost to the harvesters than gear modification. Grader bars can be set to pass all eels below a minimum length or to hold all eels above a maximum length. Although the Advisory Panel favored grading for complying with a maximum length limit during the Draft Addendum II deliberations, the Law Enforcement Committee thought on-water enforcement of the length limit by grading would be difficult.

Response Strategy if the Two-Year Management Trigger is Tripped

If a review of landings at the Commission's Spring Meeting indicate the two-year management trigger has been met, the Board will initiate an addendum to reduce landings to or below the cap. A Plan Development Team (PDT) will be convened to draft the addendum (Table 1). The PDT will consider a variety of actions to reduce harvest back to the cap, including but not limited to: (1) an equal percent reduction taken only from the 1% states whose harvest increased in the overage year(s); (2) an equal percent reduction taken from all 1% states regardless of whether their harvest increased or decreased; (3) each 1% state takes a base reduction that is less than the total reduction needed, and the remainder of the reduction is taken only by those 1% states who had substantially increased harvest leading up to the overage year. The PDT should consider the impacts of calculating a reduction in harvest from a single overage year, the 2 years over which the trigger was reached or from a baseline within the last 5 years using a maximum of 3 years that ensures equitable reductions.

Once action is taken to reduce harvest to the cap (either voluntary after the first year of an overage or required after the management trigger is tripped), actions will remain in place until the coastwide harvest returns to a level that is at or below the cap. At this point, states may propose adjustments to the Board recognizing the process will begin again if another year's overage occurs or a management action is enacted.

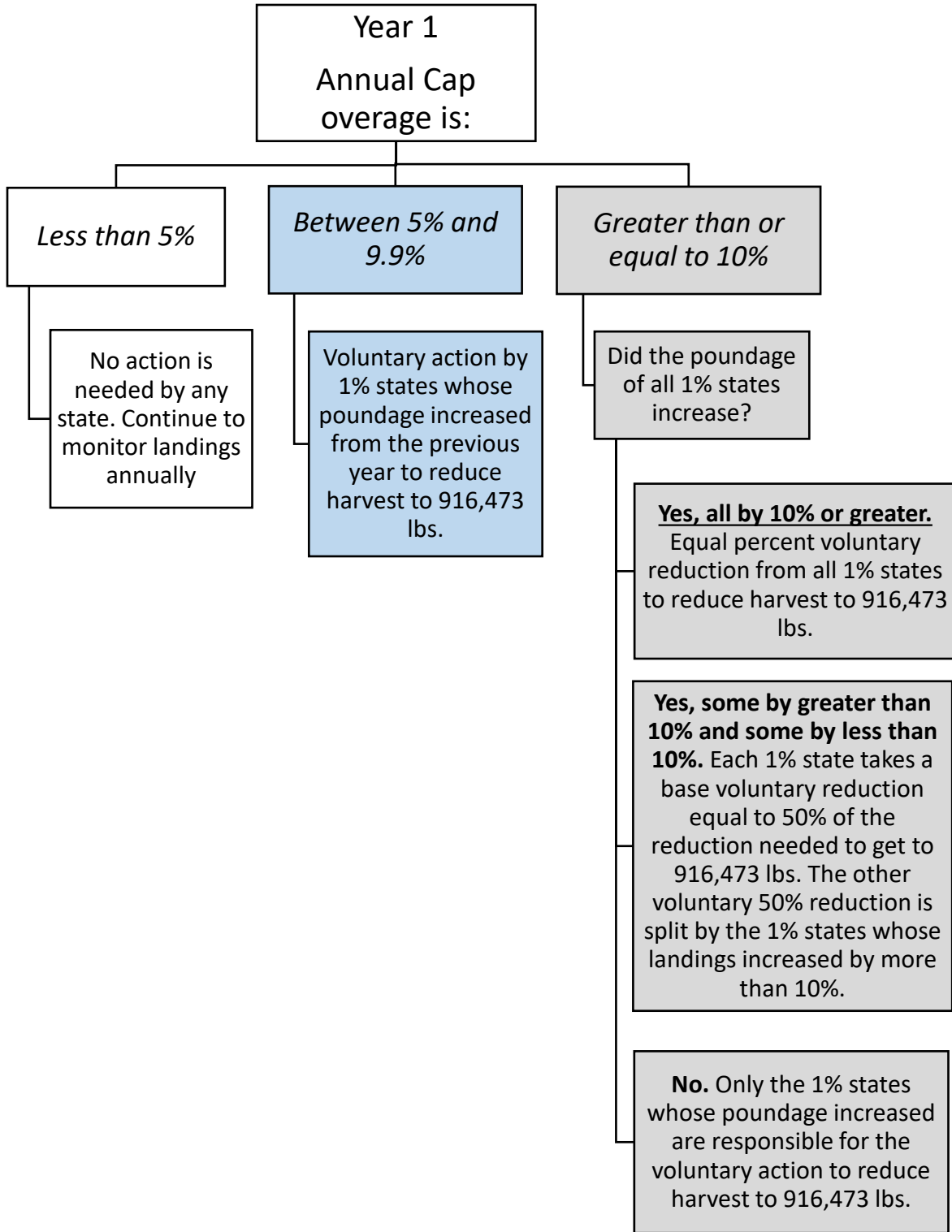


Figure A1. Decision tree for management response to cap overage in Year 1.

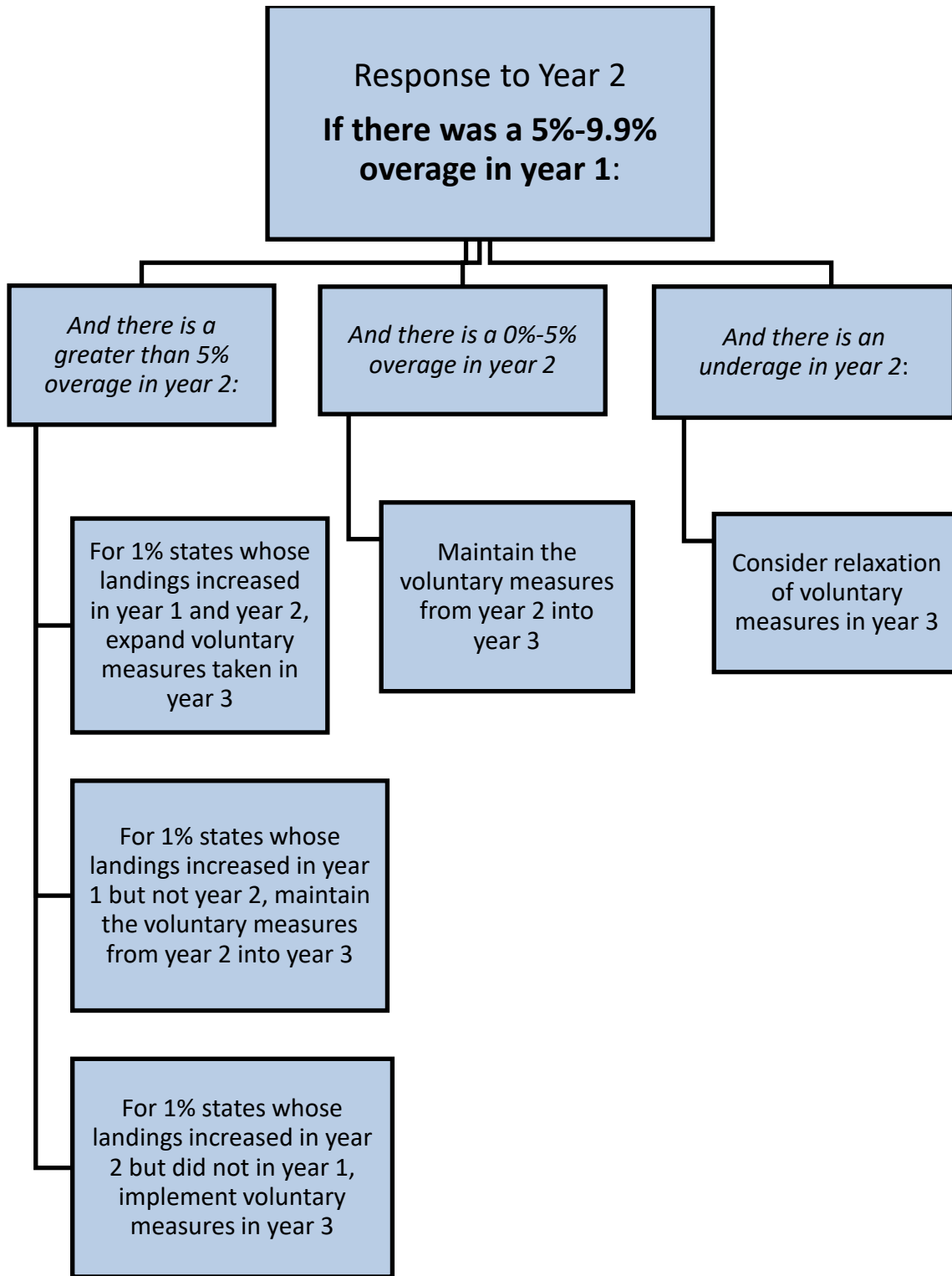


Figure A2. Decision tree for management response in Year 3 if overage is less than 10% in Year 1.

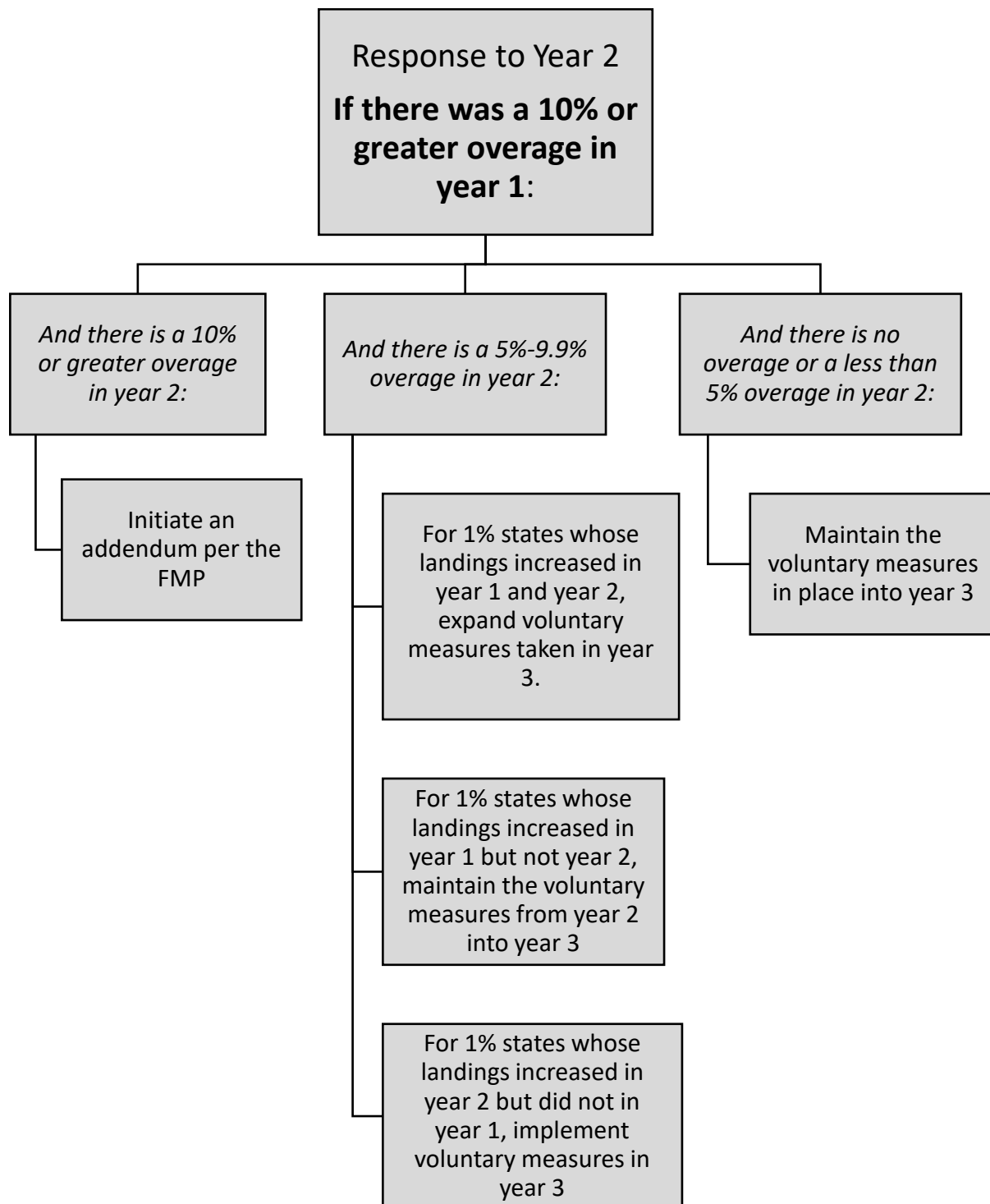


Figure A3. Decision tree for management response in Year 3 if overage is more than 10% in Year 1.



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • www.asmfc.org

MEMORANDUM

TO: American Eel Technical Committee
FROM: American Eel Plan Development Team
DATE: December 1, 2023
SUBJECT: Request for Recommendation on Continuation of Addendum I Mandatory American Eel Harvester Trip Level Catch and Effort Monitoring Program

At its November 28, 2023 meeting, The American Eel Plan Development Team (PDT) discussed the mandatory American eel harvester trip level catch and effort monitoring program required under Addendum I. Specifically, the PDT is considering whether or not to include options in the current draft addendum related to discontinuing this requirement. This memo requests the American Eel TC review the fishery-dependent catch-per-unit-effort (CPUE) harvester level reporting requirement in Addendum I, discuss state data collection programs, and provide a recommendation to the PDT regarding continuing this requirement.

Background

Addendum I required states to report harvest data provided as CPUE (by life stage and gear type). To improve future stock assessments, the Stock Assessment Subcommittee (SAS) recommended that states should be required to report effort by gear type including the number of units of gear fished per person per trip, and soak time or fishing time on an annual basis. Addendum III maintained the mandate to collect harvester CPUE data; however, the purpose of the collection shifted from harvester effort to increasing the accuracy of reporting where states and jurisdictions with a commercial yellow eel fishery were required to implement a trip level reporting system for both dealer and harvester reporting. Cross referencing between dealer and harvester trip level reporting was recommended to ensure accuracy. However, at this point fishery-dependent CPUE data have not been used for stock assessment purposes or to inform management and are not meeting the intended purpose.

The information below provides rationale for removing mandatory state fishery-dependent CPUE harvester level reporting required by the Atlantic States Marine Fisheries Commission (ASMFC) under Addendum I to the Interstate Fishery Management Plan (FMP) for American Eel.

1. Fishery-Dependent CPUE Data Not Used

Fishery-dependent CPUE data from some states was available for use in the 2017 American Eel Stock Assessment Update (October 2017), but the SAS concluded they were not indicative of trends in the stock as a whole and therefore were not used. Additionally, although fishery-dependent CPUE data from seven states met the minimum ten-year time series to be considered for inclusion in the 2023 American Eel Benchmark Stock Assessment (terminal year of 2019), the SAS again decided against inclusion because they were not considered indicative

M23-078

of trends in the stock as a whole and differences in baiting practices and bait preference vary geographically which can confound the accuracy of fishery-dependent CPUE data. The SAS noted fishery-dependent CPUE data are almost exclusively composed of positive trips only; trip reports with zero eels caught are rare because most agencies do not require reports of zero catches. Moreover, the stock assessment Peer Review Panel noted that given the variety of fishing gears and fishing areas, the analysis of fishing effort would not be straightforward. Fishery-dependent indices (n=9), as calculated by state partners, were only included as an appendix in the 2023 benchmark stock assessment. The requirement for states to collect harvest data provided as CPUE by life stage and gear type was intended to improve stock assessments; but has yet to be used for that purpose.

2. No Plan to Use Fishery-Dependent CPUE Data

Traditional stock assessments for American eel have not been possible in the past and the 2023 Benchmark Stock Assessment utilized a new index-based model (ITARGET) approach for management. Model inputs for the ITARGET model are catch (commercial landings submitted annually to ACCSP by the states), and the MARSS (Multivariate Auto-Regressive State-Space model) yellow eel fishery-independent index. If use of ITARGET is continued, fishery-dependent CPUE harvester data are not likely to be used in future assessments. The Peer Review Panel noted fishing effort data is not critical for subsequent assessment analysis. The Board accepted the 2023 Benchmark Stock Assessment and Peer Review Report for management use at their August 2023 business meeting and a motion to form a PDT to draft an addendum using ITARGET to recommend various coastwide catch caps for yellow eels. If the new yellow eel addendum is adopted using ITARGET for management, fishery-dependent CPUE data will continue to not be used to inform management decisions.

3. Voluntary Data Collection

Given fishery-dependent CPUE data collection has not met its intended purpose and there are no plans for the data to be incorporated into the management framework, the collection of this data should be made optional. This would allow several states that were collecting harvester CPUE data prior to the 2007 mandate to continue collection of this data if they choose and continue to allow this data to be available for re-evaluation.

Questions for TC Discussion

Below are several questions the TC should focus on addressing:

States with fishery-dependent CPUE data:

- If harvester CPUE data were not required, would the state keep collecting them?
- Does the state use this data for their own purposes outside of the ASMFC stock assessment?

All states:

- Are there concerns about removing the requirement?
- Would the TC recommend the Board consider removing the harvester reporting requirement?



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmfmc.org

American Eel Technical Committee Meeting Summary

Webinar
December 18, 2023

Technical Committee Members: Danielle Carty (TC Chair, SC), Brad Chase (MA), Caitlin Craig (NY), Chris Adriance (DC), Ingrid Braun (PRFC), Jen Pyle (NJ), Jim Page (GA), Josh McGilly (VA), Keith Whiteford (MD), Kevin Molongoski (USGS), Kim Bonvechio (FL), Mike Porta (PA), Pat McGee (RI), Robert Atwood (NH), Sheila Eyler (FWS), Todd Mathes (NC), Troy Tuckey (VA), Wendy Morrison (NOAA)

ASMFC Staff: Kristen Anstead, Caitlin Starks

Additional Attendees: Chris Batsavage

The American Eel Technical Committee (TC) met via webinar to consider a request from the Plan Development Team (PDT) to discuss and provide recommendations regarding a proposal to consider options in Draft Addendum VII to remove the requirement for states to collect harvester trip-level catch per unit effort (CPUE) data established under Addendum I. Addendum I requires states to implement either harvester or dealer permits for the commercial harvest of American eel, with a requirement to report eel catch and effort on a trip-level basis. Effort data components included in this requirement are soak time and number of units of gear fished.

The proposal being considered by the PDT is to include in the Draft Addendum options to modify the CPUE reporting requirement. The rationale for considering such options is that the CPUE data have not been used in the stock assessment as originally intended. In the 2012 and 2023 benchmark stock assessments, these data were considered but the assessment team decided against their inclusion because they were not considered indicative of trends in the stock as a whole, and differences in baiting practices and bait preference vary geographically which can confound the accuracy of fishery-dependent CPUE data. The 2023 stock assessment peer review panel also noted that given the variety of fishing gears and fishing areas, the analysis of fishing effort would not be straightforward. The 2023 stock assessment and peer review reports indicate that there is no plan to use the fishery-dependent CPUE data moving forward. As such, the PDT is considering including an option that would make it voluntary for states to collect these CPUE data for American eel. This would allow states to continue collecting the data if desired, but relieve some burden from states that do not have a need for them.

The TC discussed this proposal and concluded that there are no concerns with considering an option to make this reporting requirement optional. The TC members reported on whether their state would continue to collect harvester CPUE data if it were not required by the

Commission, and what their states use these data for. All states with commercial fisheries indicated they would continue to collect effort data in their harvester reports, except for North Carolina. Todd Mathes from NC DMF commented that the state uses dealer reports to collect landings data and eel is one of the only species for which they require harvester reporting. North Carolina does not use the data and it did not meet the intended purpose of improving stock assessments, so they do not anticipate collecting the CPUE data if it were voluntary.

Some of the states that collect CPUE data do use it for state purposes. A few TC members mentioned that it is used for tracking compliance and understanding effort and catch by different gear types.

The TC noted that if the PDT includes options in the Draft Addendum to consider removing this requirement, the language should be clear that state collection of the trip level effort data would become voluntary or optional, and it will be determined by the state whether harvester or dealer reporting of these data is required. They also clarified that they do not recommend any changes to the requirements for reporting landings.

The TC also discussed a recently published peer-reviewed study by Hiromi Shiraishi and Kenzo Kaifu entitled *Early warning of an upsurge in international trade in the American Eel*. This study has raised some concerns about the American eel stock and international demand since it indicates there has been a drastic increase in imports of live American eel, specifically glass eel or elvers, in Asia in recent years. Notably, imports of juvenile American eel in Asia have surged from only 2 metric tons (MT) in 2004, to 53 MT in 2021, and then 157 MT in 2022. The majority of these imports originate from Haiti, but there have been increases in the numbers coming from the US and Canada as well. The main concern with this large increase is the potential negative impact on the range-wide population. The TC agreed that this paper should be shared with the Board via email to bring it to their attention. The TC did not recommend that this information should impact the development of and decisions related to Draft Addendum VI on Maine's glass eel quota.



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • www.asmfc.org

MEMORANDUM

TO: American Eel Management Board

FROM: American Eel Plan Development Team for Yellow Eel

DATE: October 3, 2023

SUBJECT: Request for Feedback on Management Options for Yellow Eel Draft Addendum

In August, in response to the assessment findings the American Eel Management Board (Board) initiated an addendum to consider changes to the coastwide yellow eel harvest cap. The current coastwide cap of 916,473 pounds was set based on the average landings from 1998 to 2010. The benchmark assessment proposes a new tool, called I_{TARGET} for setting the coastwide cap based on abundance indices and catch. The Plan Development Team (PDT) was tasked with developing a draft addendum that considers using this tool to recommend a range of coastwide caps and management options.

The PDT met twice in September 2023 to discuss potential management options for consideration in the addendum. Below are some preliminary recommendations from the PDT.

- The addendum should include as an option one catch cap based on the stock assessment recommended configuration of I_{TARGET} (1974-1987 reference period, 1.25 multiplier, and 0.8 threshold).
- The addendum should also include an option using the 1988-1999 reference period with different multipliers and thresholds.
- Each option should clearly indicate what target abundance level (relative to the reference period) it is aiming to achieve.
- The addendum should consider some additional options for a management response to exceeding the catch cap, in addition to status quo from Addendum V. It should be noted that landings from Maryland alone could be high enough to exceed some of the caps recommended by I_{TARGET} .
- The catch cap should be reevaluated no sooner than three years after implementation.
- When reevaluating the catch cap, the PDT does not recommend changing the I_{TARGET} configuration, but rather adding additional years of data.

Another management strategy the PDT discussed is considering options that would allow states to explore implementing a glass eel fishery in exchange for significantly reducing yellow eel landings or closing their commercial yellow eel fishery. This idea is grounded in the understanding that the glass eel fishery could withstand a greater amount of fishing mortality than the yellow eel fishery in part due to the greater natural mortality that glass eels experience compared to yellow eels. These options could build off of the Addendum IV (2014)

M23-86

provision that allowed states to request an allowance for commercial glass eel harvest based on stock enhancement programs. The PDT is interested in further exploring options for states to pursue glass eel harvest as an alternative to yellow eel harvest in order to reduce mortality on the yellow eel life stage.

The PDT is seeking additional guidance from the Board on the development of draft management options. Specifically, the PDT is looking for input on the following questions:

- What levels of abundance should the addendum options aim to achieve? I.e., what multiplier values should be considered (1, 1.25, 1.5)?
- Does the Board want to reconsider the use of state-by-state quotas? If not, how will states control or reduce yellow eel landings to prevent exceeding the coastwide cap?
- Are there bounds on the landings caps the Board is willing to consider?
- Does the Board want to use the same process established in Addendum V if the coastwide landings exceed the cap?
- Should the PDT further explore options for states to pursue glass eel harvest in exchange for reducing or eliminating yellow eel harvest?



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmfc.org

American Eel Yellow Eel Plan Development Team Meeting Summary

Webinar
September 12, 2023

Plan Development Team Members: Brad Chase (MA), Jen Pyle (NJ), Todd Mathes (NC), Troy Tuckey (VA), Sheila Eyler (FWS), Kirby Rootes-Murdy (USGS), Caitlin Starks (ASMFC)

Additional Attendees: Raymond Kane

The American Eel Plan Development Team (PDT) for yellow eel met via webinar to begin developing a draft addendum to consider using the *I_{TARGET}* tool recommended in the recent benchmark stock assessment to recommend various catch caps. This addendum was initiated in response to the assessment findings that the American eel stock is depleted, and fishing is likely having a negative impact on the stock.

Staff reviewed the current management program. Sheila Eyler presented on the *I_{TARGET}* tool and how it can be configured. There are three “knobs” that can be adjusted in the tool.

1. Reference period: the reference period should be a time period where the population is stable or at a desirable abundance level.
2. Multiplier: The multiplier determines the level of abundance that management is aiming to achieve. A multiplier of 1 is equal to the abundance from the reference period, and a multiplier of 1.25 increases the abundance from the reference period by 25%.
3. Threshold: This value reflects goals of the fishery. If landings exceed the threshold, then future landings are reduced. A threshold of 0.5 is less conservative, whereas a threshold of 0.8 was recommended by the NEFSC.

The assessment recommended using a reference period of 1984-1987, which represents a period of high abundance. The management Board also requested evaluating a reference period when more surveys were available (1988-1999). This reference period reflects a lower abundance value relative to the first, but higher than recent years. The stock assessment used a multiplier of 1.25 rather 1.5, because it recognizes that more factors beyond fishing have influenced the stock and it might not be achievable to aim for higher abundance. The Stock Assessment Subcommittee (SAS) recommends using the values recommended in the assessment for the reference period and the multiplier, and using the threshold value to produce alternate catch caps.



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmfmc.org

The PDT noted that it would be a challenge to update the I_{TARGET} annually because of the timing of data availability. They recommend considering reevaluating the catch cap using I_{TARGET} on the same schedule as assessment updates. It was also noted that this addendum would most likely not be implemented before the 2025 fishing year.

The PDT discussed the merits of considering use of the later reference period. They agreed it should be considered because of data reliability issues in older years, and more surveys being available for the later period.

The PDT agreed on the following preliminary recommendations for the draft addendum:

- Include as an option one catch cap based on the stock assessment recommended configuration of I_{TARGET} (earlier reference period, 1.25 multiplier, and 0.8 threshold)
- The addendum should include some options using the later reference period with different multipliers and thresholds
- It should be clear in each option what the target abundance level is that it is aiming to achieve
- The addendum should consider some additional options for a management response to exceeding the catch cap, in addition to status quo from Addendum V

The PDT discussed the following topics where they feel guidance is needed from the Management Board:

- The Board should provide input on what abundance level they want to aim to achieve
- Does the Board want to reconsider the use of state-by-state quotas? If not, how will states control or reduce yellow eel landings to prevent exceeding the coastwide cap?
- Are there bounds on the landings caps the Board is willing to consider?
- Does the Board want to use the same process established in Addendum V if the coastwide landings exceed the cap?
- How often does the board want to reevaluate the catch cap?
- When reevaluating the catch cap, the PDT does not recommend changing the I_{TARGET} configuration, but rather adding additional years of data.

The PDT identified the following tasks to be completed before the next meeting.

- Draft a memo to the Board with draft options and a request for feedback
- Develop questions and/or options for fishery goals and how to control landings
- Develop language to explain the scientific basis of the “knobs” in I_{TARGET}
- Run additional combinations in I_{TARGET} using the later reference period

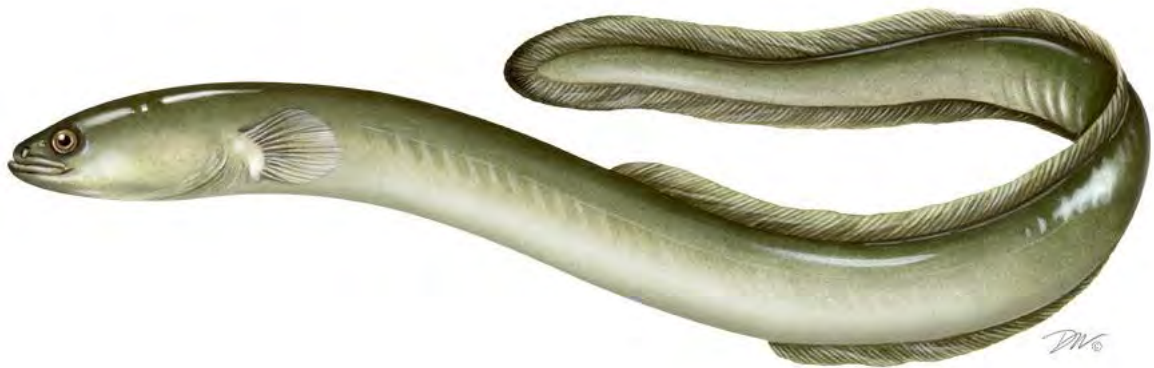
DRAFT FOR BOARD REVIEW

ATLANTIC STATES MARINE FISHERIES COMMISSION

**REVIEW OF THE INTERSTATE FISHERY MANAGEMENT
PLAN**

**AMERICAN EEL
(*Anguilla rostrata*)**

2022 FISHING YEAR



Prepared by the American Eel Plan Review Team

January 2024



Sustainable and Cooperative Management of Atlantic Coastal Fisheries

**REVIEW OF THE ASMFC FISHERY MANAGEMENT PLAN AND STATE COMPLIANCE FOR
AMERICAN EEL (*Anguilla rostrata*) FOR THE 2022 FISHERY**

Management Summary

<u>Date of FMP approval:</u>	November 1999
<u>Addenda:</u>	Addendum I (February 2006) Addendum II (October 2008) Addendum III (August 2013) Addendum IV (October 2014) Addendum V (August 2018)
<u>Management unit:</u>	Migratory stocks of American Eel from Maine through Florida
<u>States with a declared interest:</u>	Maine through Florida, including the District of Columbia and the Potomac River Fisheries Commission
<u>Active committees:</u>	American Eel Management Board, Plan Review Team, Technical Committee, Stock Assessment Subcommittee, and Advisory Panel

I. Status of the Fishery Management Plan

The ASMFC American Eel Management Board (Board) first convened in November 1995 and finalized the Fishery Management Plan (FMP) for American Eel in November 1999 (ASMFC 2000).

GOAL

The goal of the FMP is to conserve and protect the American eel resource to ensure its continued role in the ecosystems while providing the opportunity for its commercial, recreational, scientific, and educational use.

OBJECTIVES

1. Improve knowledge of eel utilization at all life stages through mandatory reporting of harvest and effort by commercial fishers and dealers, and enhanced recreational fisheries monitoring.
2. Increase understanding of factors affecting eel population dynamics and life history through increased research and monitoring.
3. Protect and enhance American eel abundance in all watersheds where eel now occur.
4. Where practical, restore American eel to those waters where they had historical abundance but may now be absent by providing access to inland waters for glass eel, elvers, and yellow eel and adequate escapement to the ocean for pre-spawning adult eel.
5. Investigate the abundance level of eel at the various life stages, necessary to provide adequate forage for natural predators and support ecosystem health and food chain structure.

DRAFT FOR BOARD REVIEW

The FMP requires all states and jurisdictions to implement an annual young-of-year (YOY) abundance survey to monitor annual recruitment of each year's cohort. In addition, the FMP requires a minimum recreational size, a possession limit and a state license for recreational fishermen to sell eels. The FMP requires that states and jurisdictions maintain existing or more conservative American eel commercial fishery regulations for all life stages, including minimum size limits. Each state is responsible for implementing management measures within its jurisdiction to ensure the sustainability of its American eel population.

The FMP has been adapted through the following addenda:

[Addendum I \(February 2006\)](#)

In August 2005, the Board directed the American Eel Plan Development Team (PDT) to initiate an addendum to establish a mandatory catch and effort monitoring program for American eel. The Board approved Addendum I at the February 2006 Board meeting.

[Addendum II \(October 2008\)](#)

In January 2007, the Board initiated a draft addendum with the goal of increasing escapement of silver eels to spawning grounds. In October 2008, the Board approved Addendum II, which placed increased emphasis on improving the upstream and downstream passage of American eel. The Board chose to delay action on management measures in order to incorporate the results of the 2012 stock assessment.

[Addendum III \(August 2013\)](#)

In August 2012, the Board initiated Draft Addendum III with the goal of reducing mortality on all life stages of American eel. The Addendum was initiated in response to the findings of the 2012 Benchmark Stock Assessment, which declared American eel stock along the US East Coast depleted. The Board approved Addendum III in August 2013.

Addendum III requires states to reduce the yellow eel recreational possession limit to 25 eel/person/day, with the option to allow an exception of 50 eel/person/day for party/charter employees for bait purposes. The recreational and commercial size limit increased to a minimum of 9 inches. Eel pots are required to be ½ by ½ inch minimum mesh size or have at least a 4" by 4 inch escape panel of ½ by ½ inch mesh escape panel. The glass eel fishery is required to implement a maximum tolerance of 25 pigmented eels per pound of glass eel catch. The silver eel fishery is prohibited to take eels from September 1st to December 31st from any gear type other than baited traps/pots or spears. The Addendum also set minimum monitoring standards for states and required dealer and harvester reporting in the commercial fishery.

[Addendum IV \(October 2014\)](#)

In October 2014, the Board approved Addendum IV. This addendum was also initiated in response to the 2012 American Eel Benchmark Stock Assessment and the need to reduce mortality on all life stages. The Addendum established a coastwide cap of 907,671 pounds of yellow eel, reduced Maine's glass eel quota to 9,688 pounds (2014 landings), and allowed for the continuation of New York's silver eel weir fishery in the Delaware River. For yellow eel

DRAFT FOR BOARD REVIEW

fisheries, the coastwide cap was implemented for the 2015 fishing year and established two management triggers: (1) if the cap is exceeded by more than 10% in a given year, or (2) the cap is exceeded for two consecutive years regardless of the percent overage. If either one of the triggers are met, then states would implement state-specific allocation based on average landings from 2011-2013. The addendum also requires any state or jurisdiction with a commercial glass eel fishery to implement a fishery independent life cycle survey covering glass, yellow, and silver eels within at least one river system.

[Addendum V \(August 2018\)](#)

In August 2018, the Board approved Addendum V. The Addendum increases the yellow eel coastwide cap starting in 2019 to 916,473 pounds to reflect a correction in the historical harvest data. Further, the Addendum adjusts the method (management trigger) to reduce total landings to the coastwide cap when the cap has been exceeded, and removes the implementation of state-by-state allocations if the management trigger is met. Management action will now be initiated if the yellow eel coastwide cap is exceeded by 10% in two consecutive years. If the management trigger is exceeded, only those states accounting for more than 1% of the total yellow eel landings will be responsible for adjusting their measures. A workgroup was formed to define the process to equitably reduce landings among the affected states when the management trigger has been met (see appendix, approved October 2019). Additionally, the Addendum maintains Maine's glass eel quota of 9,688 pounds. The Board also slightly modified the glass eel aquaculture provisions, maintaining the 200 pound limit for glass eel harvest, but adjusting the criteria for evaluating the proposed harvest area's contribution to the overall population consistent with the recommendations of the Technical Committee.

II. Status of the Stock

The first benchmark stock assessment for American eel was peer reviewed in March 2012 and was approved for management use in May 2012 (ASMFC 2012). Due to biological data limitations and the extremely complex life history of American eel, traditional stock assessment models could not be developed and several data-poor methods were used to assess the American eel resource. The stock status was determined to be depleted, and overfishing and overfished status could not be determined with confidence.

The 2017 American Eel Stock Assessment Update updated the 2012 American Eel Benchmark Stock Assessment with data from 2010-2016. The trend analysis results in this stock assessment update were consistent with the 2012 results, with few exceptions. Despite downward trends in the indices, commercial yellow American eel landings were shown to be stable in the decades leading up to the assessment, but landings still remained much lower than historical levels. The conclusion of the assessment update was that the American eel population in the assessment range remains depleted (ASMFC 2017).

The most recent benchmark stock assessment was peer reviewed in late 2022 and accepted for management use in 2023. The 2023 assessment concludes that the stock is depleted at or near

DRAFT FOR BOARD REVIEW

historically low levels due to a combination of historical overfishing, habitat loss, food web alterations, predation, turbine mortality, environmental changes, toxins and contaminants, and disease. Despite exploring additional approaches for assessing American eel that were suggested in past stock assessments including a delay-difference model, traffic light analysis and surplus production models, and developing an egg-per-recruit model, overfished and overfishing determinations still could not be made due to data limitations. However, the 2023 stock assessment found that the yellow eel population has declined since the previous assessment, and yellow eel harvest should be decreased.

III. Status of the Fishery

Commercial fisheries for American eel occur throughout their range in North America, with the most significant of those fisheries occurring in the US Mid-Atlantic region and Canada. These fisheries are executed in riverine, estuarine, and ocean waters. In the US, commercial fisheries for glass eel/elvers only exist in Maine and South Carolina, a silver eel weir fishery exists in New York's Delaware River, and yellow eel fisheries exist in all states and jurisdictions except Pennsylvania and the District of Columbia.

Although eel have been continuously harvested, consistent data on harvest has not always been available. Harvest data from the Atlantic coastal states (Maine to Florida) indicate that the harvest fluctuated widely between 1970 and 1980, but showed an increasing trend that peaked in 1979 at 3,951,936 pounds. From then landings declined to a low of 641,000 pounds in 2002, recovered steadily to exceed one million pounds on average from 2010-2014, and have since experienced a general downward trend, reaching a time series low in 2020. Because fishing effort data are unavailable for the entire time series, finding a correlation between population numbers and landings data is difficult.

The Advisory Panel (AP) has provided feedback that recent declines in landings have primarily been related to market demand; demand for wild-caught American eels from the US for European food markets has decreased in recent years due to increased aquaculture in Europe. Demand for domestic bait decreased from 2019 to 2020 due in part to COVID-19 restrictions. A smaller proportion of landings traditionally goes to the domestic bait market, and the AP indicated that it does not anticipate landings to increase significantly from current levels in the near future.

Commercial Fishery

State reported commercial landings of yellow/silver eels in 2022 totaled approximately 334,653 pounds¹ (Table 1, Figure 1), which represents a 2% increase in landings from 2021 (328,618 pounds). Yellow eel landings increased in eight states and jurisdictions, while decreasing in three. In 2022, state reported landings from Maryland, Virginia, New Jersey and New York together accounted for 91% of the coastwide commercial total landings. Glass eel

¹ Preliminary landings data for 2022 come from ACCSP and state compliance reports. Landings information from state compliance reports updates the preliminary landings presented to the American Eel Management Board.

DRAFT FOR BOARD REVIEW

landings reported from Maine totaled 9,459 pounds; South Carolina’s glass eel landings are confidential.

Table 1. Preliminary 2022 Commercial Landings by State and Life Stage¹

State	Glass	Yellow
Maine	9,459	856
New Hampshire	No Fishery	0
Massachusetts	No Fishery	Confidential
Rhode Island	No Fishery	585
Connecticut	No Fishery	3,755
New York	No Fishery	27,038
New Jersey	No Fishery	52,543
Pennsylvania	No Fishery	0
Delaware	No Fishery	2,967
Maryland	No Fishery	188,903
D.C.	No Fishery	0
PRFC	No Fishery	12,814
Virginia	No Fishery	35,516
North Carolina	No Fishery	3,602
South Carolina	Confidential (<750 pounds)	0
Georgia	No Fishery	Confidential
Florida	No Fishery	6,073
Total	Glass: Approx 9,459 Elver: 0	334,653

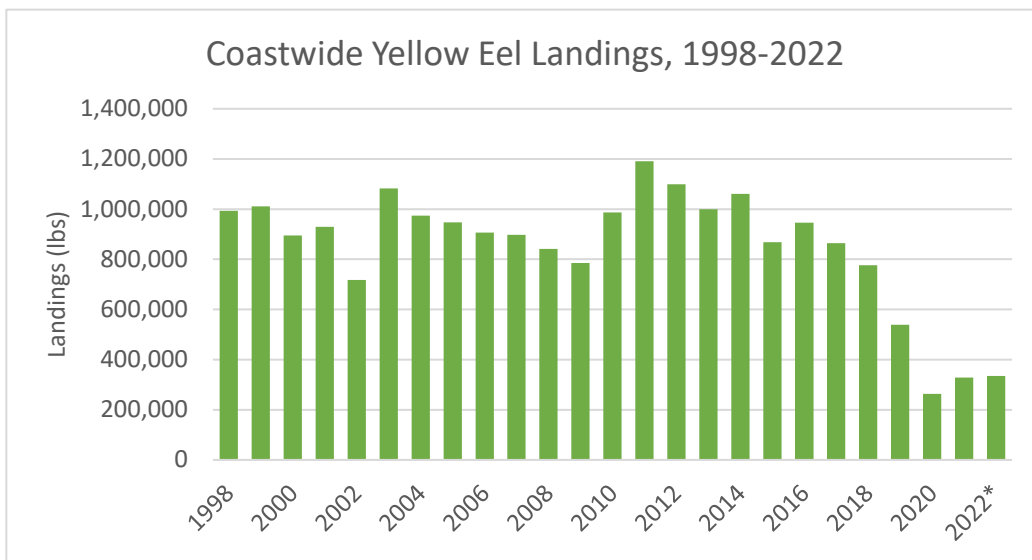


Figure 1. American Eel Yellow-Life Stage Coastwide Landings 1998-2022.

DRAFT FOR BOARD REVIEW

Table 2. State commercial regulations for the 2022 fishing year.*

State	Min Size	License/Permit	Other
ME	Glass	Daily dealer reports/swipe card program; monthly harvester report of daily landings. Tribal permit system in place for some Native American groups.	In 2017, the Legislature authorized the DMR commissioner to adopt rules to implement the elver fishing license lottery, including provisions for the method and administration of the lottery.
	No minimum size		
	Yellow 9"	Harvester/dealer license and monthly reporting. Tribal permit system in place for some Native American groups.	Seasonal closures. Gear restrictions. Weekly closures.
NH	9"	Commercial saltwater license and wholesaler license. No dealer reports. Monthly harvester reporting includes dealer information.	Gear restrictions in freshwater.
MA	9"	Commercial permit with annual catch report requirement. Registration for dealers with purchase record requirement. Dealer/harvester reporting.	Traps, pots, spears, and angling only. Mesh restrictions.
RI	9"	Commercial fishing license. Dealer/harvester reporting.	Seasonal gear restrictions.
CT	9"	Commercial license (not required for personal use). Dealer/harvester reporting.	Gear restrictions.
NY	9"	Harvester/dealer license and monthly reporting.	Gear restrictions. Maximum limit of 14" in some rivers.
NJ	9"	License required. No dealer reports. Monthly harvester reporting includes dealer information.	Gear restrictions.
PA	NO COMMERCIAL FISHERY		
DE	9"	Harvester reporting, no dealer reporting. License required.	Commercial fishing in tidal waters only. Gear restrictions.
MD	9"	Dealer/harvester license and monthly reporting.	Prohibited in non-tidal waters. Gear restrictions. Commercial crabbers may fish 50 pots per day, must submit catch reports.
DC	NO COMMERCIAL FISHERY		
PRFC	9"	Harvester license and reporting. No dealer reporting.	Seasonal gear restrictions. Mesh size restrictions on eel pots.
VA	9"	Harvester license required. Dealer/harvester monthly reporting.	Mesh size restrictions on eel pots. Seasonal closures.
NC	9"	Standard Commercial Fishing License for all commercial fishing. Dealer/harvester monthly combined reports on trip ticket.	Mesh size restrictions on eel pots. Seasonal closures.

DRAFT FOR BOARD REVIEW

State	Min Size	License/Permit	Other
SC	Glass No minimum size	Fyke and dip net only permitted. Dealer/harvester monthly combined reports on trip ticket. License required.	Max 10 individuals. Gear and area restrictions.
	Yellow 9"	Pots and traps permitted only. Dealer/harvester monthly combined reports on trip ticket. License required.	Gear restrictions.
GA	9"	Personal commercial fishing license and commercial fishing boat license. Dealer/harvester monthly combined reports on trip ticket.	Gear restrictions on traps and pots. Area restrictions.
FL	9"	Permits and licenses. Harvester reporting. No dealer reporting.	Gear restrictions.

* For specifics on licenses, gear restrictions, and area restrictions, please contact the individual state.

Recreational Fishery

Available information indicates that few recreational anglers directly target American eel. For the most part, hook-and-line fishermen catch eel incidentally when fishing for other species. American eel are often purchased by recreational fishermen for use as bait for larger gamefish such as striped bass, cobia, and catfish. Some recreational fishermen may catch their own to use as bait.

Despite the incidental nature of hook-and-line eel catches, the National Marine Fisheries Service (NMFS) Marine Recreational Information Program (MRIP) does encounter enough observations to indicate widespread and common presence as a bycatch species. However, there is low precision associated with the recreational fishery statistics for American eel due to the limited numbers that have been encountered during surveys of recreational anglers along the Atlantic coast. These limited numbers are partly due to the design of the MRIP survey, which does not sample from the areas and gears assumed to be responsible for the majority of recreational fishing for American eels. As such, the recreational fishery statistics for American eels provided by MRIP should be interpreted with caution.

MRIP shows a declining trend in the coastwide recreational eel catch starting in the 1980s, but the total annual harvest values are highly uncertain. As of 2009, MRIP no longer provides recreational data for American eel due to the survey design being unsuitable for sampling targeted eel fishing. At the state level, only New Hampshire and Georgia collect recreational data for American eel outside of MRIP.

DRAFT FOR BOARD REVIEW

Table 3. State recreational regulations for the 2022 fishing year.*

State	Min Size	Daily Possession Limit	Other
ME	9"	25	Gear restrictions. License requirement and seasonal closures (inland waters only). Bait limit of 50 eels/day for party/charter boat captain and crew.
NH	9"	25	Coastal harvest permit needed if taking eels other than by angling. Gear restrictions in freshwater.
MA	9"	25	Nets, pots, traps, spears, and angling only; seasonal gear restrictions and mesh requirements. Bait limit of 50 eels/day for party/charter boat captain and crew.
RI	9"	25	Bait limit of 50 eels/day for party/charter boat captain and crew.
CT	9"	25	
NY	9"	25	Maximum limit of 14" in some rivers. Bait limit of 50 eels/day for party/charter boat captain and crew.
NJ	9"	25	Bait limit of 50 eels/day for party/charter boat captain and crew. Mesh size restriction on pots.
PA	9"	25	Gear restrictions.
DE	9"	25	Two pot limit/person.
MD	9"	25	Gear restrictions.
DC	9"	10	
PRFC	9"	25	
VA	9"	25	Recreational license. Two pot limit. Mandatory monthly catch report. Gear restrictions. Bait limit of 50 eels/day for party/charter boat captain and crew.
NC	9"	25	Gear restrictions. Non-commercial special device license. Two eel pots allowed under Recreational Commercial Gear license. Bait limit of 50 eels/day for party/charter boat captain and crew.
SC	9"	25	Gear restrictions. Permits and licenses. Two pot limit.
GA	9"	25	
FL	9"	25	Gear restrictions. Wholesale/retail purchase exemption applies to possession limit for bait.

* For specifics on licenses, gear restrictions, and area restrictions, please contact the individual state.

IV. Status of Research and Monitoring

The FMP requires states and jurisdictions with a declared interest in the species to conduct an annual YOY survey to monitor annual recruitment of each year's cohort.

In 2022, the states and jurisdictions of Maine, New Hampshire, Massachusetts (Wankinco River), Connecticut (Lamprey River), New Jersey, Delaware, the Potomac River Fisheries

DRAFT FOR BOARD REVIEW

Commission, and South Carolina all observed relatively high YOY counts. The catch in Maine was the highest in the time series, far exceeding previous catches, and the yellow eel catch was the second highest in the time series. The Lamprey River catch and CPUE of YOY eel in New Hampshire were also time series highs. In Massachusetts the YOY catch from the Wankinco River was the second highest in the data series, but catches from the Saugus Eel ramp and the Jones River were below average. However, the removal of the Elm Street Dam on the Jones River in 2019 may have contributed to the decline. The Connecticut YOY CPUE was the highest in the time series. The New Jersey YOY catch was the second highest in the 19-year time series. In Delaware the YOY catch was the second highest annual catch for the 23-year time series; the geometric mean daily catch in 2022 was 2,809% higher than the 2021 geometric mean. The PRFC index for elvers was above average, returning to levels observed prior to the recent record highs observed in 2019 and 2020. The catch rates in the Goose Creek YOY survey in South Carolina increased in 2022 from recent years.

All other YOY surveys in 2022 (Rhode Island, New York, Pennsylvania, Maryland, North Carolina, and Florida) had at or below average survey counts. The New Hampshire Cochecho River YOY survey catch in 2022 was the second lowest in the time series, and the Hamilton Fish Lift count in Rhode Island was the lowest. The 2022 YOY CPUE in Maryland was 24% lower than the time series mean, but the 2022 CPUE in the Sassafras River pot survey has generally increased since 2006. Relative abundance of American Eel in the SCDNR Electrofishing Survey in 2022 was 2nd lowest in time series. Catch at Florida's Guana River Dam was the lowest in the time series. North Carolina samples from the Beaufort Bridge Net survey for 2021 and 2022 have not been processed yet due to a data backlog.

D.C. and Georgia do not have YOY surveys, but instead have yellow eel surveys. New Jersey additionally developed and implemented a fishery-independent eel pot survey to collect abundance data of yellow American eels within nursery grounds. This survey, which began in 2015, supplements the current glass eel survey by sampling more life stages and will allow biologists to collect additional biological samples (age-length-weight data). The 2022 yellow eel CPUE in New Jersey was above the mean.

As required by Addendum IV, Maine continued the fishery independent life cycle survey of glass, yellow, and silver eels within at least one river system (West Harbor Pond) in 2022. This site was changed from Cobboosecontee Stream to West Harbor Pond to improve collection of eels at all life stages by Maine Department of Marine Resources staff starting in 2019.

Maine's glass eel aquaculture proposal for the 2022 season was approved and 200 pounds were harvested for aquaculture grow out. Maine submitted a similar proposal for the 2023 fishing season that was also approved. For both years, the approved proposals allow for an additional 200 pounds of glass eels to be harvested for aquaculture; this amount is in addition to the Maine's glass eel quota of 9,688 pounds.

V. Research Needs

DRAFT FOR BOARD REVIEW

The FMP does not require any other research initiatives for participating states and jurisdictions. Nonetheless, the American Eel Technical Committee (TC) has identified several research topics to further understanding of the species' life history, behavior, and biology. Research recommendations from ASMFC 2012, 2017 remain important, but the following list was provided in the 2023 benchmark stock assessment, and is specific to what the Stock Assessment Subcommittee thinks could improve the next stock assessment. Research needs for American eel identified by the TC include:

Future Research and Data Collection

- Improve upstream and downstream passage for all life stages of American eels.
- Continue to improve the accuracy of commercial catch and effort data through ACCSP and state partners
- Characterize the length, weight, age, and sex structure of commercially harvested American eels along the Atlantic coast over time.
- Research coastwide prevalence of the swim bladder parasite *Anguillacolla crassus* and its effects on the American eel's growth and maturation, migration to the Sargasso Sea, and spawning potential.
- Improve understanding of the spawning contribution of unexploited portions of the stock (i.e., freshwater areas of coastal US).
- Characterize the length, weight, and sex structure in unharvestable habitats.
- Conduct a tagging study throughout the species range.
- Quantify recreational removals in marine and freshwater habitats and characterize length, weight, and sex structure.
- Evaluate the passage/passage efficiency of American eels through existing fishways at dams/barriers and evaluate barrier physical attributes (height, material) that can be passed by eel without fishways.
- Evaluate the use vs. availability of habitat in the inland portion of the species range, and how habitat availability has changed through time, including opening of habitat from recent dam and barrier removals. This could and should include assisted migration by trucking around dams.
- To the extent that the data allows, account for the proportion of the population (yellow, silver phase) represented by the inland portion of the species range.
- Evaluate the relative impact that commercial harvest has on population status versus the accessibility to inland habitats.

Assessment Methods

- Develop methods to assess spawner escapement and biological information pertinent to silver eels in major river basins.
- Perform a range-wide American eel assessment with various countries and agencies (e.g., Canada DFO, ASMFC, USFWS, Caribbean, US Gulf and inland states).

DRAFT FOR BOARD REVIEW

- Explore methods to characterize data by sex to support a female-only delay-difference model.

VI. Status of Management Measures

The FMP requires that all states and jurisdictions implement an annual YOY abundance survey in order to monitor annual recruitment of each year's cohort. Addendum III requires a 9 inch minimum size restriction in the commercial and recreational yellow eel fisheries, as well as a minimum mesh size of ½ by ½ inch in the commercial yellow eel pot fishery. The recreational bag limit is 25 fish/angler/day, and the silver eel fishery is restricted, as is the development of pigmented eel fisheries.

VII. Current State-by-State Implementation of FMP Compliance Requirements

The PRT reviewed the state compliance reports for the 2022 fishing year. The PRT notes the following issues with state implementation of the required provisions of the American Eel FMP:

Yellow Eel Measures

- New York's regulations for minimum mesh size do not meet the requirements of the FMP. Addendum III requires states and jurisdictions to implement a ½ by ½ inch minimum on the mesh size used in commercial yellow eel pots. New York's regulation is as follows: "Minimum mesh size must be one inch by one-half inch, unless such pots contain an escape panel that is at least four inches square with a mesh size of one inch by one-half inch located so that the panel is on a side, but not at the bottom of a pot." Addendum III allowed states to use a 4 by 4 inch escape panel constructed of a mesh size of at least ½ by ½ inch mesh in order to reduce the financial burden of gear changes on the fishery for three years (until January 1, 2017). Because this provision has expired, New York should require the minimum mesh size for all yellow eel pots, regardless of the presence of an escape panel.

Silver Eel Fishery Measures:

- Delaware has not implemented regulations preventing harvest of eels from pound nets from September 1 through December 31. No pound net landings have been reported in the state in over 50 years. Delaware will address this issue as part of any future changes to the eel regulations.
- Florida does not have a regulation preventing harvest of eels from pound nets from September 1 through December 31, but the state is unaware of any active pound net fishery in the past 10-15 years.

Reporting Measures:

- The following jurisdictions do not have dealer reporting:
 - New Hampshire and New Jersey do not have dealer reporting (there are no permitted eel dealers for either state), but harvesters report some information on dealers.

DRAFT FOR BOARD REVIEW

- Delaware (no permitted eel dealers)
- Potomac River Fisheries Commission (jurisdiction reports harvest, not landings)
- Florida (considered a freshwater species and there is dealer reporting for freshwater species)
- New York was unable to provide data on commercial CPUE for the last two fishing years.
- New York has yellow and silver eel fisheries but does not report commercial landings by life stage, as required by the FMP.
- Many states have been unable to provide information on the percent of commercial harvest sold as food versus bait; only Maine, New York, New Jersey, Delaware, and Florida provided this information for 2022.

Section 4.4.2 of the FMP stipulates that a state may apply for *de minimis* status for each life stage if (given the availability of data), for the preceding two years, its average commercial landings (by weight) of that life stage constitute less than 1% of the coastwide commercial landings for that life stage for the same two-year period. States meeting this criterion are exempted from having to adopt commercial and recreational fishery regulations for a particular life stage listed in Section 4 and any fishery-dependent monitoring elements for that life stage listed in Section 3.4.1.

Qualification for *de minimis* is determined from state-reported landings found in annual compliance reports. New Hampshire, Massachusetts, Pennsylvania, District of Columbia, Georgia, and Florida have requested continued *de minimis* status for their yellow eel fisheries. Florida does not qualify as the state landings in 2022 exceed 1% of the coastwide yellow eel landings. All other states that applied for *de minimis* of the yellow eel fishery meet the *de minimis* criteria.

VIII. Recommendations/Findings of the Plan Review Team

1. The PRT recommends the Board consider state compliance notes as detailed in Section VII.
2. The PRT recommends *de minimis* be granted to New Hampshire, Massachusetts, Pennsylvania, District of Columbia, and Georgia for their yellow eel fisheries.
3. The PRT requests that New York separate its yellow and silver eel landings when reporting harvest.
4. The PRT requests that states quantify escapements, changes in upstream and downstream passage (e.g. dam removals, new impediments to passage) annually and provide this information to the Technical Committee for evaluation. The PRT recommends that a section be added to the compliance reports for this information.
5. The PRT had previously requested that the Board reevaluate the requirement that states provide estimates of the percent of harvest going to food versus bait, as there is a high level

DRAFT FOR BOARD REVIEW

of uncertainty and subjectivity inherent in the data. Additionally, the PRT notes that this information does currently impact regulations and is unclear of the benefit for management. The PRT requests again that the Board consider tasking the Committee on Economic and Social Sciences (CESS) to conduct an analysis of the market demand for all life stages of eel, specific to food vs bait markets, as well as international market demand.

6. The PRT recommends that the Commission and USFWS work together to annually compare domestic landings data to export data for American eel across all life stages.

VIII. Works Cited

Atlantic States Marine Fisheries Commission (ASMFC). 1998. Interstate Fishery Management Plan for American Eel (*Anguilla rostrata*). Washington D.C. NOAA Oceanic and Atmospheric Administration Award No. NA97 FGO 0034 and NA07 FGO 024.

Atlantic States Marine Fisheries Commission (ASMFC). 2012. American Eel Benchmark Stock Assessment. Arlington, VA.

Atlantic States Marine Fisheries Commission (ASMFC). 2017. American Eel Stock Assessment Update. Arlington, VA.



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • www.asmfc.org

MEMORANDUM

December 4, 2023

To: American Eel Management Board
From: Tina Berger, Director of Communications
RE: Advisory Panel Nomination

Please find attached a new nomination to the American Eel Advisory Panel – Sara Rademaker, an eel aquaculturist from Maine. She replaces David Allen on the Panel. 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: Caitlin Starks

M23-103

AMERICAN EEL ADVISORY PANEL

Bolded names await approval by the American Eel Management Board
Bolded and italicized name denotes Advisory Panel Chair

December 4, 2023

Maine

Sara Rademacher (aquaculture)
186 One Pie Road
Waldoboro, ME 04572
Phone: 260.417.2883
sara@americanunagi.com

Patricia Bryant (glass eel harvester)
74 Duck Puddle Road
Nobleboro, ME 04555
Phone/FAX: (207)563-5611
Phone (eve): (207) 563-3365
pbeelandurchins@yahoo.com
Appt. Confirmed 5/10/05
Appt Reconfirmed 5/10

New Hampshire

Vacancy – comm/trap

Massachusetts

Vacancy – dealer/comm fisherman

Connecticut

Steve Lewis (rec/non-eel angler)
654 Cypress Road
Newington, CT 06111
Phone: (860)667-2515
Appt. Confirmed: 5/21/97
Appt. Reconfirmed 10/1/01
Appt Reconfirmed 10/05
Appt Reconfirmed 5/10

New York

Vacancy – rec/pot for bait eels

New Jersey

Vacancy – commercial

Pennsylvania

Mitchell Feigenbaum (buyer/exporter)
17 Weirwood Road
Radnor, PA 19087
Phone (day): (215)859-0428
Phone (eve): (610)964-8465
FAX: (610)277-4051

feigen15@yahoo.com

Appt. Confirmed: 8/17/04
Appt Reconfirmed 8/07

Vacancy – recreational

Delaware

Lawrence Voss (comm./pot)
3215 Big Oak Road
Smyrna, DE 19977
Phone: (302)359-0951
shrlyvss@aol.com
Appt Confirmed 10/22/18

Maryland

William R. Legg (comm./pot)
110 Rebel Road
Grasonville, MD 21638
Phone (eve): (410)310-4072
Phone (eve): (410) 820-5841
Appt. Confirmed 8/17/05
Appt Reconfirmed 5/10

Vacancy – comm/pot

Virginia

Warren M. Cosby Jr. (comm/fyke & gillnet/aquaculture)
9321 Turkey Hill Lane
New Kent, VA 23124
Phone: (804)932-4735
Appt. Confirmed: 5/21/97
Appt. Reconfirmed 10/1/01
Appt Reconfirmed 10/05
Appt Reconfirmed 5/10

Vacancy – comm/pot, fyke & gillnet

North Carolina

2 Vacancies – comm/pot & dealer

AMERICAN EEL ADVISORY PANEL

Bolded names await approval by the American Eel Management Board
Bolded and italicized name denotes Advisory Panel Chair

December 4, 2023

South Carolina

Richard Stoughton (comm/fyke net)
1933 Culver Avenue
Charleston, SC 29407
Phone: 843.729.5203
captrichard@live.com
Appt Confirmed 10/22/18

Florida

Vacancy (dealer/aquaculture/
intl exp.)

PRFC

James I. Trossbach (comm/pot)
46377 Drayden Road
Drayden, MD 20630
Phone (day): (301)481-8906
Phone (eve): (301)994-3577
Appt Confirmed 11/10/04
Appt Reconfirmed 11/07

At-Large Seats

Tim Brush (hydropower)
Normandeau Associates
917 Route 12, #1
Westmoreland, NH 03467
603-355-2333
603-355-2332 fax
tbrush@normandeau.com
Appt. Confirmed: 10/21/97
Appt. Reconfirmed 10/1/01
Appt. Confirmed 8/05

Mari-Beth DeLucia (environmental)
The Nature Conservancy
2101 North Front St.
Building #1 Suite 200
Harrisburg, PA 17110
(717)232-6001 x 215
mdelucia@tnc.org
Appt Confirmed 5/21/13



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: _____ State: _____
(your name)

Name of Nominee: _____

Address: _____

City, State, Zip: _____

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

Phone (day): _____ Phone (evening): _____

FAX: _____ Email: _____

.....
FOR ALL NOMINEES:

1. Please list, in order of preference, the Advisory Panel for which you are nominating the above person.

- 1. _____
- 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 _____

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

yes _____ no _____

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?

_____	_____
_____	_____
_____	_____

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? _____ years

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

If "yes," please explain.

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 started working with eels in 2012 in an effort to bring eel aquaculture to Maine. In 2014, I founded American Unagi and started growing out eels using land-based aquaculture.

Nominee Signature: Sam Rubin

Date: 11/27/23

Name: _____
(please print)

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

State Director

Megan Ware

State Legislator

On Behalf of Maine Commissioners

Governor's Appointee

Atlantic States Marine Fisheries Commission

Executive Committee

Wednesday, January 24, 2024

8 - 10 a.m.

Hybrid Meeting

Draft Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary. A portion of this meeting may be closed for Committee members and Commissioners only.

1. Welcome/Introductions (*J. Cimino*)
2. Committee Consent
 - Approval of Agenda
 - Approval of Meeting Summary from October 2023
3. Public Comment
4. Legislative Update (*A. Law*)
5. Tasking for the Committee on Economics and Social Sciences (*J. Patel*)
6. Commission Officer Election Procedures (*R. Beal*)
7. Review 2024-2028 Strategic Plan (*R. Beal*)
8. Discuss Future Meeting Week Format; In-Person vs. Virtual (*R. Beal*)
9. Other Business/Adjourn

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

**DRAFT MEETING SUMMARY OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
EXECUTIVE COMMITTEE**

**Beaufort Hotel
Beaufort, NC**

October 18, 2023

For Review and Action by the Executive Committee January 24, 2024

INDEX OF MOTIONS

- 1.** On behalf of the Administrative Oversight Committee, move acceptance of the FY23 Audit. Motion by Joe Cimino on behalf of the AOC. Motion passed unanimously.
- 2.** Move the Commission approve a 30% increase to the per diem allowance which will come from G&A, not federal funds. Motion made by Mr. Abbott; seconded by Mr. Miller. Motion passed 14-1-1.
- 3.** Adjourn by Consent (Page 2).

ATTENDANCE

Committee Members

Pat Keliher, ME
Cheri Patterson, NH
Dennis Abbott, NH (LA Chair)
Dan McKiernan, MA
Jason McNamee, RI
Justin Davis, CT
Marty Gary, NY
Joe Cimino, NJ, Vice Chair
Kris Kuhn, PA

Roy Miller, DE (GA Chair)
John Clark, DE
Lynn Fegley, MD
Pat Geer, proxy for Jamie Green, VA
Chris Batsavage, proxy for Kathy Rawls, NC
Ben Dyer, proxy for Mel Bell, SC
Spud Woodward, GA, Chair
Erika Burgess, FL

Other Commissioners/Proxies

David Borden, RI GA
Phil Edwards, RIDEM
Jamie Green, VMRC
Emerson Hasbrouck, NY GA
Doug Haymans, GA AA
Jesse Hornstein, NY DEC
Bill Hyatt, CT GA
Jeff Kaelin, NJ GA

Ray Kane, MA GA
John Maniscalco, NY DEC
Connor McManus, RI DEM
Nichola Meserve, MA DMF
Kathy Rawls, NCDMF
Eric Reid, RI LA Proxy
Steve Train, ME GA
Ritchie White, NH

Staff

Bob Beal
Tina Berger
Lisa Carty

Emilie Franke
Laura Leach
Alexander Law

Guests

Max Appelman, NOAA
Colleen Bouffard, CT
Jeff Brust, NJ DEP
Julie Evans, East Hampton Fisheries
Angela Giuliano, MDDNR
Beth Govoni, NCDMF

Joe Grist, VMRC
Rick Jacobson, USFWS
Ronald Owens, PRFC
Chip Lynch, NOAA
Brandon Muffley, MAFMC
Chris Wright, NOAA

CALL TO ORDER

The Executive Committee of the Atlantic States Marine Fisheries Commission convened October 18, 2023 in the Rachel Carson Ballroom at The Beaufort Hotel in Beaufort, North Carolina. The meeting was called to order at 8:10 a.m. by Chair Spud Woodward.

APPROVAL OF AGENDA

The agenda was approved as modified.

APPROVAL OF SUMMARY

The summary minutes from the August 2, 2023 meeting were approved as presented.

PUBLIC COMMENT

There was no public comment.

FY23 AUDIT

The FY23 Audit was reviewed by the Administrative Oversight Committee and forwarded to the Executive Committee with a recommendation for approval. "On behalf of the Administrative Oversight Committee, move acceptance of the FY23 Audit." Motion by Joe Cimino on behalf of the AOC. Motion passed unanimously.

PER DIEM RATES

Mr. Beal presented a report on the potential for an increase in Per Diem rates for Commission meetings. The increase would be from Commission General and Administrative (G&A) funds, not federal funds. Staff presented an analysis of the impact this increase would have on the Commission budget and it was determined to be less than \$15,000 annually. "Move the Commission approve a 30% increase to the per diem allowance which will come from G&A, not federal funds." Motion made by Mr. Abbott; seconded by Mr. Miller. Motion passed 14-1-1.

LEGISLATIVE COMMITTEE UPDATE

Mr. Law presented a legislative update per the recommendation of the Legislative Committee. Topics included: the speakership battle and its potential impacts on the budget, the Recovering America's Wildlife Act, the FISHERIES Act, unconfirmed upcoming priorities for Congress, and updates on internal Commission planning documents.

CARES & CAA UPDATE

Mrs. Leach gave an update on the CARES and CAA activities. The CARES program funds are completely disbursed. This award has been extended until January 31, 2024 to allow for final close-out procedures to be completed. CAA has approximately \$7 million remaining, and the states are expected to disburse it all by the completion date of July 31, 2024.

OTHER BUSINESS

Mr. Keliher presented an overview of the American Unagi aquaculture facility in Hancock County, Maine. The facility is highly effective in growing out glass eels to supply the domestic unagi market.

ADJOURN

The Executive Committee adjourned at 9:30 a.m.

Commission Leadership Election Process

December 7, 2023

OFFICERS. The Commission's Rules and Regulations require an annual election ~~elects from among the Commissioners of~~ a Chair and a Vice Chair, ~~each of whom serves a one-year term.~~ Officers can succeed themselves. In the absence or disability of the Chair, the Vice Chair shall have all the power and authority of the Chair.

The following guidelines, detailing the Commission's nomination and election process for Chair and Vice-Chair, were adopted by the Commission at its 2009 Summer Meeting. At the 2024 Winter Meeting, the process language was clarified, but the underlying election process was not substantively modified. ~~This process was used for the nomination and election of Commission leadership at the 2009 Annual Meeting and will be continued in future years unless modified by the Commission.~~

TERM LIMITS. While officers are elected annually, the Commission's tradition is to have the Chair and Vice Chair serve two one-year terms. This requires officers to be re-elected after completion of their first one-year term. ~~The current annual election process and practice of a two-year term should be maintained where possible.~~ The two-year ~~tenure~~ term could be extended or shortened to accommodate circumstances with the leadership and Commission membership.

REGIONAL ROTATION OF LEADERSHIP. The practice of having the Chair and Vice-Chair rotate between the North, Mid-Atlantic, and South should be ~~maintained~~ encouraged where possible. However, this practice should not be followed at the expense of electing the most qualified leadership.

MEMBERSHIP OF NOMINATING COMMITTEE. The current three-member Nominating Committee will be maintained. The membership will generally consist of one Commissioner from the North, Mid-Atlantic, and South and will be appointed annually by the Chair.

ROLE OF NOMINATING COMMITTEE PRIOR TO ELECTION.

- A member of the Nominating Committee shall contact the Administrative Commissioner from each state, and request they communicate with the States' L/GA Commissioners to solicit recommendations for nominees.
- Follow-up on Commissioner recommendations to gauge the individual's interest in being included as a nominee.
- Develop separate ballots for Chair and Vice-Chair based on input from Commissioners. A ballot will be prepared even if there is only one nominee in order to provide the opportunity to write-in a candidate.

ELECTION PROCESS.

- Ballots will be distributed to state delegations at the Commission Business Session when the election is held (usually at the Annual Meeting).
- Each state delegation will receive one ballot and cast one vote based on the result of the Commissioner caucus from that state.
- State delegations may identify a write-in candidate. States should verify the interest of their candidate before submitting his or her name on the ballot.
- In the event that more than two candidates receive votes for either Chair or Vice-Chair, a run-off will be conducted between the two candidates that received the most votes.
- In the event of a tie, a vote will be retaken until there is a majority winner.
- The Nominations Committee will tally the votes and report the results to the Commission after each vote. substantially

Atlantic States Marine Fisheries Commission

Coastal Pelagics Management Board

January 24, 2024

10:15 – 11:45 a.m.

Hybrid Meeting

Draft Agenda

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

- | | |
|--|------------|
| 1. Welcome/Call to Order (<i>S. Woodward</i>) | 10:15 a.m. |
| 2. Board Consent | 10:15 a.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from October 2023 | |
| 3. Public Comment | 10:20 a.m. |
| 4. Consider Approval of Terms of Reference for the SouthEast Data, Assessment and Review Atlantic Migratory Group (AMG) Cobia Stock Assessment (<i>C. Tuohy & A. Giuliano</i>) Action | 10:30 a.m. |
| 5. Update from Cobia Plan Development Team on Recreational Reallocation Addendum Scoping (<i>C. Tuohy</i>) | 11:00 a.m. |
| 6. Consider Approval of Spanish Mackerel Fishery Management Plan Review and State Compliance Reports for the 2022 Fishing Year (<i>E. Franke</i>) Action | 11:20 a.m. |
| 7. Update from the South Atlantic Fishery Management Council on Mackerel Port Meetings and Coastal Migratory Pelagics Framework Amendment 13 (<i>J. Carmichael</i>) | 11:35 a.m. |
| 8. Elect Vice-Chair Action | 11:40 a.m. |
| 9. Other Business/Adjourn | 11:45 a.m. |

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

MEETING OVERVIEW

Coastal Pelagics Management Board

January 24, 2023

10:15 a.m. – 11:45 a.m.

Hybrid Meeting

Chair: Spud Woodward (GA) Assumed Chairmanship: 1/24	Technical Committee Chair: Cobia: Angela Giuliano (MD)	Law Enforcement Committee Rep: Capt. N. Scott Pearce (FL)
Vice Chair: Vacant	Advisory Panel Chair: Craig Freeman (VA)	Previous Board Meeting: October 17, 2023
Voting Members: RI, NY, NJ, DE, MD, PRFC, VA, NC, SC, GA, FL, SAFMC, NMFS (13 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from October 2023

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

4. Consider Approval of SouthEast Data, Assessment, and Review (SEDAR) Atlantic Migratory Group (AMG) Cobia Stock Assessment Terms of Reference (10:30-11:00 a.m.) Action

Background

- The AMG Cobia Benchmark Assessment (SEDAR 95) is scheduled to be completed through the SEDAR process in early 2025.
- The Cobia Technical Committee (TC) met on January 4, 2024 to refine the assessment terms of reference (TORs) for approval by the Coastal Pelagics Management Board (**Briefing Materials**).
- Most notably, the Cobia TC suggested reviewing the stock structure and unit stock definition for AMG Cobia through the new assessment.
- Following approval of the TORs, a call for assessment data will occur in February 2024 followed by data scoping webinars scheduled for June-August 2024.

Presentations

- Terms of Reference Presentation by C. Tuohy and A. Giuliano

Board actions for consideration at this meeting

- Approve Terms of Reference for the AMG Cobia Benchmark Assessment (SEDAR 95)

5. Update from Cobia Plan Development Team on Recreational Reallocation Addendum Scoping (11:00-11:20 a.m.)

Background

- In October 2023, the Coastal Pelagics Management Board initiated an Addendum to address recreational reallocation of Atlantic cobia.
- The Coastal Pelagics Management Board specified interest in exploring Addendum alternatives that consider options outside of the current state-by-state quota allocation system, specifically the consideration of the need for fishing opportunity based on the seasonality of the species in various regions.
- The Cobia Plan Development Team met on January 8, 2024 to discuss preliminary scoping of the Addendum and develop questions for Board clarification (**Supplemental Materials**).

Presentations

- Plan Development Team Update by C. Tuohy

Board guidance for consideration at this meeting

- Guidance on the scope of the reallocation draft addendum

6. Consider Approval of Spanish Mackerel Fishery Management Plan Review and State Compliance Reports for the 2022 Fishing Year (11:20-11:35 a.m.) Action

Background

- State Compliance Reports for Spanish mackerel were due on October 1, 2023.
- The Spanish Mackerel Plan Review Team (PRT) reviewed each state report and compiled the annual FMP Review (**Supplemental Materials**).

Presentations

- Overview of the FMP Review Report by E. Franke

Board actions for consideration at this meeting

- Accept 2023 FMP Review and State Compliance Reports for Spanish Mackerel.
- Approve *de minimis* requests for Spanish mackerel.

7. Update from the South Atlantic Fishery Management Council (SAFMC) on Mackerel Port Meetings and CMP Framework Amendment 13 (11:35-11:40 a.m.)

Background

- In June 2023, SAFMC initiated Framework Amendment 13 to the Coastal Migratory Pelagics (CMP) FMP to adjust catch levels for Atlantic Spanish mackerel based on the Scientific and Statistical Committee's recommendations and results of the 2022 stock assessment.
- SAFMC plans to conduct port meetings for king and Spanish mackerel fisheries in 2024 to gain a comprehensive understanding of those fisheries to improve management efforts.
- SAFMC met on December 5, 2023 to approve alternatives for Framework Amendment 13 and review next steps for planning the 2024 Spanish and king mackerel port meetings (**Briefing Materials**).

Presentations

- CMP Framework Amendment 13 and Port Meetings Update by J. Carmichael

8. Elect Vice-Chair (11:40 - 11:45 a.m.) Action

9. Other Business/Adjourn (11:45 a.m.)

Coastal Pelagics Board

Activity level: Moderate

Committee Overlap Score: Moderate

Committee Task List

- Cobia TC – Develop Atlantic Migratory Group (AMG) Cobia Benchmark Stock Assessment (SEDAR 95) terms of reference for Board approval
- Cobia PDT – Continue scoping of recreational reallocation Addendum
- Spanish Mackerel TC – Develop a paper that characterizes the recreational and commercial Spanish mackerel fisheries along the Atlantic Coast
- Spanish Mackerel PRT – October 1: Compliance Reports Due
- Cobia PRT – July 1: Compliance Reports Due

Technical Committee Members:

Cobia TC: Angela Giuliano (MD, Chair), Nichole Ares (RI), Zachary Schuller (NY), Brian Neilan (NJ), Somers Smott (VA), Lee Paramore (NC), Justin Yost (SC), Chris Kalinowsky (GA), Christina Wiegand (SAFMC), Michael Larkin (SERO), Emilie Franke (ASMFC), Chelsea Tuohy (ASMFC)
Spanish Mackerel TC: Reuben Macfarlan (RI), Jamie Darrow (NJ), Harry Rickabaugh (MD), Ingrid Braun (PRFC), Joshua McGilly (VA), McLean Seward (NC), Pearse Webster (SC), Christina Wiegand (SAFMC), Emilie Franke (ASMFC), Chelsea Tuohy (ASMFC)

Plan Review Team Members:

Cobia PRT: Angela Giuliano (MD), Somers Smott (VA), Chris McDonough (SC), Emilie Franke (ASMFC)
Spanish Mackerel PRT: McLean Seward (NC), Pearse Webster (SC), BJ Hilton (GA), Chris Swanson (FL), Christina Wiegand (SAFMC), John Hadley (SAFMC), Emilie Franke (ASMFC)

Plan Development Team Members:

Cobia PDT: Nichole Ares (RI), Zachary Schuller (NY), Brian Neilan (NJ), Angela Giuliano (MD), Somers Smott (VA), Kathy Knowlton (GA), Emilie Franke (ASMFC), Chelsea Tuohy (ASMFC)

SEDAR

SouthEast Data, Assessment, and Review

4055 Faber Place Drive #201
North Charleston, SC 29405

Phone (843) 571-4366
Fax (843) 769-4520
www.sedarweb.org

SEDAR 95 Atlantic Cobia

Benchmark Assessment Terms of Reference

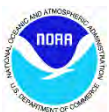
DRAFT December 2023

Data Workshop Terms of Reference

1. Review stock structure and unit stock definitions; consider whether changes are required. Consider genetic and/or tagging data and other data sources as available.
2. Review, discuss, and tabulate available life history information available through 2023 as appropriate for inclusion in the stock assessment.
 - Evaluate age, growth, natural mortality, and reproductive characteristics.
 - Provide appropriate models to describe population growth, maturation, and fecundity by age, sex, and/or length by appropriate strata as feasible.
 - Evaluate and discuss the sources of uncertainty and error, and data limitations (such as temporal and spatial coverage) for each data source. Provide estimates or ranges of uncertainty for all life history information.
3. Characterize discard mortality rates.
 - Review available research and published literature.
 - Consider research directed at cobia as well as similar species from similar depths in the southeastern United States and other areas.
 - Provide estimates of discard mortality rate for each assessed stock by fishery, gear type, depth, and other feasible or appropriate strata, if possible.
 - Provide justification for any recommendations that deviate from the range of discard mortality provided in the last benchmark or other prior assessment.
 - Provide estimates of uncertainty around recommended discard mortality rates.
4. Provide measures of relative population abundance that are appropriate for stock assessment.
 - Consider and discuss all available and relevant fishery-dependent and -independent data sources using a terminal year of 2023.
 - Document all programs evaluated, address program objectives, methods, coverage, sampling intensity, and other relevant characteristics.



- Provide maps of fishery and survey coverage.
 - Develop fishery and survey CPUE indices by appropriate strata (e.g., age, size, area, and fishery) and include measures of precision and accuracy.
 - Discuss the degree to which available indices adequately represent fishery and population conditions.
 - Recommend which data sources adequately and reliably represent population abundance for use in assessment modeling.
 - Provide appropriate measures of uncertainty for the abundance indices to be used in stock assessment models.
 - Categorize the available indices with regard to their appropriateness for use in assessment modeling.
5. Provide commercial catch statistics through 2023, including both landings and discards in both pounds and number.
 - Evaluate and discuss the adequacy of available data for accurately characterizing harvest and discard by fishery sector or gear.
 - Provide length and age distributions for both landings and discards if feasible.
 - Provide maps of fishery effort and harvest and fishery sector or gear.
 - Provide estimates of uncertainty around each set of landings and discard estimates.
 6. Provide recreational catch statistics through 2023, including both landings and discards in both pounds and number.
 - Evaluate and discuss the adequacy of available data for accurately characterizing harvest and discard by species and fishery sector or gear.
 - Explore the transition from MRIP-CHTS to MRIP-FES.
 - Explore the Southeast For Hire Integrated Electronic Reporting (SEFHIER) data for potential inclusion in the Atlantic cobia assessment.
 - Explore whether the recreational fleet structure can be realigned into individual fleets as appropriate.
 - Provide length and age distributions for both landings and discards if feasible.
 - Provide maps of fishery effort and harvest and fishery sector or gear.
 - Provide estimates of uncertainty around each set of landings and discard estimates.
 7. Identify and describe ecosystem, climate, species interactions, habitat considerations, and/or episodic events that would be reasonably expected to affect population dynamics.
 - Consider any known evidence regarding ecosystem, climate, species interactions (e.g. predation studies), habitat considerations, species range modifications (expansions or contractions), regime shifts, larval movement between stock boundaries, and/or episodic events (including red tide, upwelling events, and hypoxia) that would reasonably be expected to affect Cobia population dynamics and are appropriate for inclusion in the stock assessment.



8. Incorporate social and economic information that affect stock status and related fishing effort and catch levels as practicable.
9. Provide recommendations for future research in areas such as sampling, fishery monitoring, tagging, genetics, and stock assessment.
10. Review, evaluate, and report on the status and progress of all research recommendations listed in the last assessment and peer review reports concerning this stock.
11. Prepare the Data Workshop report providing complete documentation of workshop actions and decisions in accordance with project schedule deadlines (Section II of the SEDAR assessment report).



Assessment Workshop Terms of Reference

1. Review any changes in data and data sources following the data workshop and any analyses suggested by the data workshop. Summarize data as used in each assessment model. Provide justification for any deviations from Data Workshop recommendations.
2. Develop population assessment models that are compatible with available data and document input data, model assumptions and configuration, and equations for each model considered.
 - Fully document and describe the impacts (on population parameters and management benchmarks) of any changes to the model structure, methods, application or fitting procedures made between this assessment and the prior benchmark (SEDAR 58) assessment.
 - Provide a continuity model consistent with the prior benchmark (SEDAR 58) assessment configuration, if one exists, updated to include the most recent observations, if feasible. Alternative approaches to a strict continuity run that distinguish between model, population, and input data influences on findings, may be considered. Provide additional continuity models that update the prior assessment configurations and terminal years with MRIP-FES landings and discards.
3. Provide estimates of stock population parameters, if feasible:
 - Include fishing mortality, abundance, biomass, selectivity, stock-recruitment relationship (if applicable), and other parameters as necessary to describe the population.
 - Include appropriate and representative measures of precision for parameter estimates.
 - Compare and contrast population parameters and time series estimated in this assessment with values from the previous benchmark (SEDAR 58) assessment, as feasible, and comment on the impacts of changes in data, assumptions, or assessment methods on estimated population conditions.
4. Characterize uncertainty in the assessment and estimated values.
 - Consider uncertainty in input data, modeling approach, and model configuration.
 - Consider and include other sources of uncertainty as appropriate for this assessment.
 - Provide appropriate measures of model performance, reliability, and ‘goodness of fit’.
 - Provide measures of uncertainty for estimated parameters.
5. Provide estimates of yield and productivity, as feasible.
 - Include yield-per-recruit, spawner-per-recruit, and stock-recruitment models.
6. Provide estimates of population benchmarks or management criteria consistent with available data, applicable FMPs, proposed FMPs and Amendments, other ongoing or proposed management programs. Include values for fishing mortality (including assumed discard mortality if appropriate), spawning stock biomass, fishery yield, SPR



and recruitment for potential population benchmarks as appropriate with available data and modeling methods.

- Evaluate existing or proposed management criteria as specified in the management summary.
 - Review and provide recommendations for proxy values (e.g. MSY) when necessary, and provide appropriate justifications.
 - Compare and contrast reference values (e.g. equilibrium yield at $F_{MSYProxy}$) estimated in this assessment with values from the previous benchmark (SEDAR 58) assessment, and comment on the impacts of changes in data, assumptions or assessment methods on reference point differences.
 - Define recent fishing mortality rates ($F_{Current}$) and recent spawning stock biomass ($SSB_{Current}$) that will be compared to management benchmarks to determine management benchmarks as the geometric mean of the most recent three years and the terminal data year, respectively.
7. Incorporate known applicable environmental covariates into the selected model; provide justification if covariates cannot be included at the time of the assessment.
 8. Provide declarations of stock status relative to management benchmarks or alternative data poor approaches if necessary.
 9. Provide uncertainty distributions of proposed reference points, stock status, and yield.
 - Provide the probability of overfishing at various harvest or exploitation levels.
 - Provide a probability density function for biological reference point estimates.
 - If the stock is overfished, provide the probability of rebuilding within mandated time periods as described in the management summary or applicable regulations.
 - Characterize the differences in fishing mortality, virgin biomass, terminal total biomass, terminal spawning stock biomass, and equilibrium yield at $F_{MSYProxy}$ as a result of updating recreational catch and effort data from MRIP-CHTS to MRIP-FES by comparing SEDAR 58 to a continuity model with MRIP-FES landings and discards and SEDAR 58 configuration and terminal year, as feasible.
 10. Project future stock conditions (biomass, abundance, and exploitation) and develop rebuilding schedules if warranted; include estimated generation time.
 - Request estimates of retained landings in numbers and biomass from data providers for interim years between the terminal year and first year of the projections, if available, to be used to project future stock conditions. If estimates of retained landings are unavailable, use the average of the previous three years.
 - Recommend levels of recruitment to be used in the projections.
 - Stock projections (including yields) shall be developed to inform the recommended overfished and overfishing definitions. If data limitations preclude classic projections,



explore alternative models to provide management advice. If an alternative proxy for F_{MSY} is recommended, provide outputs for both the current and recommended proxies.

11. Provide recommendations for future research and data collection.
 - Be as specific as practicable in describing sampling design and sampling intensity.
 - Emphasize items that will improve future assessment capabilities and reliability.
 - Consider data, monitoring, and assessment needs.
12. Review, evaluate, and report on the status and progress of all research recommendations listed in the last assessment and peer review reports concerning this stock.
13. Complete the Assessment Workshop Report in accordance with project schedule deadlines (Section III of the SEDAR Stock Assessment Report).

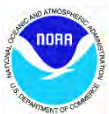


Review Workshop Terms of Reference

1. Evaluate the data used in the assessment, including discussion of the strengths and weaknesses of data sources and decisions, and consider the following:
 - a) Are data decisions made by the DW and AW panels sound and robust?
 - b) Are data uncertainties acknowledged, reported, and within normal or expected levels?
 - c) Are input data series reliable and applied properly within the assessment model?
2. Evaluate and discuss the strengths and weaknesses of the methods used to assess the stock, taking into account the available data, and considering the following:
 - a) Are methods scientifically sound and robust?
 - b) Are assessment models configured properly and consistent with standard practices?
 - c) Are the methods appropriate for the available data?
3. Evaluate the assessment findings and consider the following:
 - a) Are population estimates (model output – e.g. abundance, exploitation, biomass) reliable, consistent with input data and population biological characteristics, and useful to support status inferences?
 - b) Is the stock overfished? What information helps you reach this conclusion?
 - c) Is the stock undergoing overfishing? What information helps you reach this conclusion?
 - d) Is there an informative stock recruitment relationship? Is the stock recruitment curve reliable and useful for evaluation of productivity and future stock conditions?
 - e) Are the quantitative estimates of the status determination criteria for this stock reliable? If not, are there other indicators that may be used to inform managers about stock trends and conditions?
4. Evaluate the stock projections (or alternative models if data limitations prevent classic projections), including discussing strengths and weaknesses, and consider the following:
 - a) Are the methods consistent with accepted practices and available data?
 - b) Are the methods appropriate for the assessment model and outputs?
 - c) Are the results informative and robust, and useful to support inferences of probable future conditions?
 - d) Are key uncertainties acknowledged, discussed, and reflected in the projection results?
5. Consider how uncertainties in the assessment, and their potential consequences, are addressed.
 - Comment on the degree to which methods used to evaluate uncertainty reflect and capture the significant sources of uncertainty in the population, data sources, and assessment methods
 - Ensure that the implications of uncertainty in technical conclusions are clearly stated



6. Consider the research recommendations provided by the Data and Assessment workshops and make any additional recommendations or prioritizations warranted.
 - Clearly denote research and monitoring that could improve the reliability of, and information provided by, future assessments
 - Provide recommendations on possible ways to improve the SEDAR process
7. Consider whether the stock assessment constitutes the best scientific information available using the following criteria as appropriate: relevance, inclusiveness, objectivity, transparency, timeliness, verification, validation, and peer review of fishery management information.
8. Provide suggestions on key improvements in data or modeling approaches that should be considered when scheduling the next assessment.
9. Prepare a Peer Review Summary summarizing the Panel's evaluation of the stock assessment and addressing each Term of Reference. Develop a list of tasks to be completed following the workshop. Complete and submit the Peer Review Summary Report in accordance with the project guidelines.





THE SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

Coastal Migratory Pelagics Framework Amendment 13

Atlantic migratory group Spanish mackerel catch levels

Decision Document

December 2023

Background

Framework Amendment 13 to the Fishery Management Plan (FMP) for Coastal Migratory Pelagic (CMP) Resources in the Gulf of Mexico and Atlantic Region (CMP FMP) would change catch limits for Atlantic migratory group Spanish mackerel (Atlantic Spanish mackerel) based on the most recent stock assessment, SEDAR 78. The SEDAR 78 indicated, consistent with the original stock status determined by SEDAR 28, that Atlantic Spanish mackerel are not overfished or undergoing overfishing. Based on the results of SEDAR 78, the SSC made new Atlantic Spanish mackerel catch level recommendations for the South Atlantic Fishery Management Council (Council) to consider (**Table 1**).

SEDAR 78 update includes revised recreational landings that are based on the Marine Recreational Information Program's (MRIP) newer Fishing Effort Survey (FES) method. In August 2023, NOAA Fisheries published a report, Evaluating Measurement Error in the MRIP Fishing Effort Survey, that summarized results from a small-scale study to evaluate potential sources of bias in the FES. Using data from July to December 2015, the study found that switching the current sequence of survey questions resulted in fewer reporting errors and illogical responses. As a result, effort estimates for shore and private boat anglers were generally 30 to 40 percent lower. NOAA Fisheries is now conducting a large-scale follow up study to gain

a better understanding of differences in effort estimates between the current and revised survey designs. This study will be conducted throughout 2024, with results available the following year.

In September 2023, the Council’s Mackerel Cobia Committee discussed how dependent Framework Amendment 13 is on MRIP-FES data, the federal deadlines associated with completion of the amendment, and whether they were interested in moving forward. Ultimately, the Committee chose to continue work on Framework Amendment 13 noting the importance of moving away from MRIP CHTS to FES to reduce confusion in how the recreational annual catch limit (ACL) is tracked vs. how recreational landings are estimated. Additionally, stakeholders have been awaiting an updated stock assessment for many years and updated catch levels will help guide stakeholder input during upcoming port meetings (see below) for the king and Spanish mackerel fisheries.

Table 1. South Atlantic Scientific and Statistical Committee catch level recommendations for Atlantic migratory group Spanish mackerel, using data resultant from SEDAR 78 (2022).

Criteria		Deterministic		
Overfished evaluation (SSB ₂₀₂₀ /MSST)		1.40		
Overfishing Evaluation (F ₂₀₁₈₋₂₀₂₀ /F _{MSY})		0.77		
MFMT (F _{MSY proxy})		0.516		
SSB _{MSY} (metric tons)		6,406		
MSST (metric tons)		4,804		
MSY (1000 lbs.)		8,210		
Y at 75% F _{MSY} (1000 lbs.)		8,024		
ABC Control Rule Adjustment		10%		
P-Star		40%		
M		0.35		
OFL RECOMMENDATIONS				
Year	Landed (lbs ww)	Discard (lbs ww)	Landed (number)	Discard (number)
2023	8,210,000	581,000	5,413,000	1,147,000
2024	8,210,000	581,000	5,413,000	1,147,000
2025	8,210,000	581,000	5,413,000	1,147,000
2026	8,210,000	581,000	5,413,000	1,147,000
2027	8,210,000	581,000	5,413,000	1,147,000
ABC RECOMMENDATIONS				
Year	Landed (lbs ww)	Discard (lbs ww)	Landed (number)	Discard (number)
2023	8,024,000	469,000	4,977,000	916,000
2024	8,024,000	469,000	4,977,000	916,000
2025	8,024,000	469,000	4,977,000	916,000
2026	8,024,000	469,000	4,977,000	916,000
2027	8,024,000	469,000	4,977,000	916,000

The intent of Framework Amendment 13 to the CMP FMP is to revise the ACL, optimum yield (OY), and recreational annual catch target (ACT) for Atlantic Spanish mackerel based on the SSC’s recommendations.

Actions in this Framework Amendment

Action 1. Revise the acceptable biological catch, annual optimum yield, total annual catch limit, sector annual catch limits, and commercial zone quotas for Atlantic migratory group Spanish mackerel to reflect the updated acceptable biological catch level.

Objectives for this Meeting

- Review annual catch limit analysis.
- Consider whether to set a long-term optimum yield.
- Approve action and alternatives to be analyzed.

Tentative Amendment Timing

PROCESS STEP	DATE
✓ Council directs staff to start work on an amendment.	June 2023
✓ Council reviews options paper and approves amendment for scoping.	September 2023
✓ Mackerel Cobia Advisory Panel (MC AP) makes recommendations for the Council to consider.	November 2023
Council reviews MC AP and scoping comments and approves action/alternatives to be analyzed.	December 2023
Council reviews draft amendment, selects preferred alternatives, and approves for public hearings.	March 2024
Council reviews the draft amendment, conducts public hearings, and approves for formal review.	June 2024
CMP Framework Amendment 13 transmitted for Secretarial Review.	Summer 2024
Regulations implemented	2024/2025

Purpose and Need Statement

The *purpose* of this amendment is to revise the acceptable biological catch, annual catch limits, annual optimum yield? and recreational annual catch target for Atlantic migratory group Spanish mackerel, based on the results of the latest stock assessment.

The *need* for this amendment is to ensure catch limits are based on the best scientific information available and to ensure overfishing does not occur in the Atlantic migratory group Spanish mackerel fishery.

Proposed Action and Alternatives

Action 1. Revise the acceptable biological catch, annual optimum yield?, total annual catch limit, sector annual catch limits, and commercial zone quotas and for Atlantic migratory group Spanish mackerel.

***Purpose of Action:** Update the Atlantic Spanish mackerel catch levels to be consistent with SEDAR 78, SSC recommendations, and the best scientific information available. The Council may consider setting the Atlantic Spanish mackerel total ACL at the same level as the ABC recommended by the SSC or may consider including a buffer between the two values.*

Alternative 1 (No Action). The total annual catch limit and annual optimum yield for Atlantic migratory group Spanish mackerel are equal to the current acceptable biological catch (6,057,000 pounds as landed). The current acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program’s Coastal Household Telephone Survey.

Alternative 2. Revise the acceptable biological catch for Atlantic migratory group Spanish mackerel and set it equal to the most recent recommendation from the Scientific and Statistical Committee. Revise the total annual catch limit and annual optimum yield for Atlantic migratory group Spanish mackerel and set them equal to the recommended acceptable biological catch. Revise the sector annual catch limits and commercial zone quotas based on current allocation percentages. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program’s Fishing Effort Survey.

ABC	Buffer	Total ACL	Rec. ACL	Rec. ACT	Comm. ACL	Comm. Northern Zone	Comm. Southern Zone
8,024,000	None	8,024,000	3,610,800	3,112,510	4,413,200	882,640	3,530,560

Note: catch levels are in pounds as landed.

Alternative 3. Revise the acceptable biological catch for Atlantic migratory group Spanish mackerel and set it equal to the most recent recommendation from the Scientific and Statistical Committee. Revise the total annual catch limit and annual optimum yield for Atlantic migratory group Spanish mackerel and set them equal to 95% of the recommended acceptable biological catch. Revise the sector annual catch limits and commercial zone quotas based on current allocation percentages. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program’s Fishing Effort Survey.

ABC	Buffer	Total ACL	Rec. ACL	Rec. ACT	Comm. ACL	Comm. Northern Zone	Comm. Southern Zone
8,024,000	5%	7,622,800	3,430,260	2,956,884	4,192,540	838,508	3,354,032

Note: catch levels are in pounds as landed.

Alternative 4. Revise the acceptable biological catch for Atlantic migratory group Spanish mackerel and set it equal to the most recent recommendation from the Scientific and Statistical Committee. Revise the total annual catch limit and annual optimum yield for Atlantic migratory group Spanish mackerel and set them equal to 90% of the recommended acceptable biological catch. Revise the sector annual catch limits and commercial zone quotas based on current allocation percentages. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program’s Fishing Effort Survey.

ABC	Buffer	Total ACL	Rec. ACL	Rec. ACT	Comm. ACL	Comm. Northern Zone	Comm. Southern Zone
8,024,000	10%	7,221,600	3,249,720	2,801,259	3,971,880	794,376	3,177,504

Note: catch levels are in pounds as landed.

Discussion

Optimum Yield: OY is the harvest level for a species that achieves the greatest overall benefit, including economic, social, and biological considerations. OY is different from maximum sustainable yield (MSY) in that MSY considers only the biology of the species. MSY constitutes a “ceiling” for OY. OY may be lower than MSY, depending on relevant economic, social, or ecological factors. The South Atlantic Council has typically established annual OY values for coastal migratory pelagic species but could consider establishing a with a long-term OY, as had been discussed for some snapper grouper species.

Sector Allocations: Sector allocations for Atlantic Spanish mackerel were originally established in Amendment 2 to the CMP FMP based on the average ratio of catch from 1979 through 1985, resulting in an allocation of 76% to the

For recent commercial and recreational landings, see the [Atlantic Spanish Mackerel Fishery Overview](#).

commercial sector and 24% to the recreational sector. Amendment 4 to the CMP FMP revised sector allocations to be a 50/50 split. Council members at the time felt that because the resource was overfished from 1979-1985, the recreational sector experienced lower catch rates. Additionally, qualitative information indicated that recreational catch was high during the 1970s and was affected by the increase in commercial effort seen in the mid-1970s. Finally, the capacity and demand of both sectors had expanded such that either group could harvest all the available resource, making a 50/50 allocation the most equitable. The current allocation between the commercial (55%) and recreational sector (45%) was established via a 1998 Framework Action (effective September 1999). The commercial sector was regularly meeting or exceeding their allocation while the recreational sector was not reaching their allocation, so the Council shifted 5% of the sector allocation to the commercial sector.

Recreational ACT: The recreational ACT is based on adjusting the ACL by 50% or one minus the five-year average of the proportional standard error (PSE) from the recreational sector,

whichever is greater. The average PSE for the last five fishing seasons (2018-2022) was 13.8% (**Table 2**). The recreational ACT is utilized in the post-season recreational accountability measure for Atlantic Spanish mackerel. If the recreational landings exceed the recreational ACL and the sum of the commercial and recreational landings exceeds the total ACL, the bag limit may be reduced for the following fishing year by the amount necessary to ensure recreational landings may achieve the recreational ACT, but do not exceed the recreational ACL.

Table 2. The PSEs for Atlantic Spanish mackerel from harvest estimates for all recreational modes.

Fishing Year	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	5-Year Average
PSE Value	13.3	11.8	15.1	13.8	15	13.8

Commercial Quota Allocations Commercial quota allocations between the Northern Zone and Southern Zone were established in Amendment 20B to the CMP FMP (effective March 2015) and are based on the average proportion of commercial landings in each zone from the 2002/2003 fishing season through the 2011/2012 fishing season, resulting in an allocation of 19.9% to the Northern Zone and 80.1% to the Southern Zone.

Scoping Comments:

No scoping comments were submitted for Framework Amendment 13.

Mackerel Cobia Advisory Panel Comments:

- Allocation between the recreational and commercial sector and the commercial Northern Zone and Southern Zone will need to be addressed.
- There is no need for a buffer between the acceptable biological catch (ABC) and the annual catch limit (ACL).
 - The commercial sector has reliable reporting of Atlantic Spanish mackerel.
 - The recreational annual catch target (ACT) addresses uncertainty in private recreational landings.
- AP members expressed concern about how closures or a reduced bag limit in the commercial and recreational sectors, respectively, may affect dead discard estimates.
- There needs to be a mechanism to accurately account for private recreational landings and it should be similar to how commercial fishermen are required to report their catch.

MOTION 1: SELECT ALTERNATIVE 2 AS THE MACKEREL COBIA AP’S PREFERRED ALTERNATIVE.

Action 1. Revise the acceptable biological catch, annual optimum yield, total annual catch limit, sector annual catch limits, and commercial zone quotas and for Atlantic migratory group Spanish mackerel.

Alternative 2. Revise the acceptable biological catch for Atlantic migratory group Spanish mackerel and set it equal to the most recent recommendation from the Scientific and Statistical Committee. Revise the total annual catch limit and annual optimum yield for Atlantic migratory group Spanish mackerel and set them equal to the recommended acceptable biological catch. Revise the sector annual catch limits and commercial zone quotas based on current allocation percentages. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program’s Fishing Effort Survey.

MOTION APPROVED (11-0-1)

Annual Catch Limit Analysis:

Analyses were conducted to determine whether or not closures would occur for the commercial and recreational sectors (**Appendix A** and **Appendix B**, respectively) under alternatives proposed in Action 1. Closures were predicted based on three different landings scenarios:

1. **Highest Landings:** highest single fishing year of landings for the last five years.
 - a. Commercial Northern: 2021/2022
 - b. Commercial Southern: 2018/2019
 - c. Recreational: 2021/2022
2. **Three-Year Average:** average landings for the last three fishing years.
 - a. 2019/2020-2021/2022
3. **Five-Year Average:** average landings for the last five fishing years
 - a. 2017/2018-2021/2022.

The earliest the **commercial Northern Zone** is predicted to close in federal waters is August 21st (**Alternative 4**, highest landings scenario). The latest the commercial Northern Zone is predicted to close is September 12th (**Alternative 2**, five-year average scenario) (**Table 3**).

Table 3. The projected closure dates for the Northern Zone commercial quotas proposed in Amendment 13 for three different landings scenarios.

	Closure Dates			
	Quota	Highest Landings	3-Year Average	5-Year Average
Alternative 2	882,640	3-Sep	6-Sep	12-Sep
Alternative 3	838,508	27-Aug	31-Aug	6-Sep
Alternative 4	794,376	21-Aug	25-Aug	30-Aug

The commercial **Southern Zone** is not predicted to close in federal waters under any of the alternatives and landing scenarios. However, the commercial Southern Zone operates under an adjusted quota trip limit system. The adjusted quota is equal to the total Southern Zone quota

minus 250,000 pounds. The trip limit at the start of the fishing year is 3,500 pounds. Once 75% of the adjusted quota has been met, the trip limit steps down to 1,500 pounds. Once the total adjusted quota has been met, the trip limit steps down to 500 pounds. Finally, once the full Southern Zone quota has been met, the fishery is closed in federal waters. Trip limit step downs are predicted to occur as early as January 5th (**Alternative 4**, highest landings scenario) or as late as January 17th (**Alternative 2**-, three- and five-year average scenarios) (**Table 4**).

Table 4. Spanish mackerel Southern Zone predicted dates when 75% of the Adjusted Southern Zone quota, Adjusted Southern Zone Quota, and Quota are met for the three different predicted landings scenarios.

	75% of Adjusted Southern Zone Quota Met	Adjusted Southern Zone Quota Met	Quota Met
Highest Landings			
Alternative 2	12-Jan	14-Feb	No Closure
Alternative 3	8-Jan	4-Feb	No Closure
Alternative 4	5-Jan	28-Jan	No Closure
3-Year Average			
Alternative 2	17-Jan	26-Feb	No Closure
Alternative 3	14-Jan	15-Feb	No Closure
Alternative 4	10-Jan	5-Feb	No Closure
5-Year Average			
Alternative 2	17-Jan	24-Feb	No Closure
Alternative 3	13-Jan	14-Feb	No Closure
Alternative 4	10-Jan	4-Feb	No Closure

The **recreational sector** is predicted to meet their ACL as early as August 10th (**Alternative 4**, highest landings scenario). The latest the recreational sector is predicted to meet their ACL is October 20th (**Alternative 2**, five-year average scenario) (**Table 5**).

Table 5. The projected closure dates for the recreational ACLs proposed in Framework Amendment 13 for three different landings scenarios.

	ACL	Closure Dates		
		Highest Landings	3-Year Average	5-Year Average
Alternative 2	3,610,800	23-Aug	13-Sep	20-Oct
Alternative 3	3,430,260	17-Aug	5-Sep	10-Oct
Alternative 4	3,249,720	10-Aug	28-Aug	30-Sep

COMMITTEE ACTION

DISCUSS IF AN LONG-TERM OY FOR ATLANTIC SPANISH MACKEREL IS APPROPRIATE.

REVIEW AND APPROVE ACTION AND ALTERNATIVES FOR INCLUSION IN COASTAL MIGRATORY PELAGICS FRAMEWORK AMENDMENT 13.

Appendix A: Predicting Closure Dates for the Atlantic Spanish Mackerel Commercial Sector

Prepared by Mike Larkin, NMFS SERO Staff.

Introduction

In 2022, a stock assessment was conducted for Atlantic migratory group Spanish mackerel (Atlantic Spanish mackerel) (SEDAR 78). Results from the assessment showed Atlantic Spanish mackerel is not overfished and not experiencing overfishing. Following the results of SEDAR 78, the South Atlantic Fishery Management Council (South Atlantic Council) is exploring changes to both the Northern Zone and Southern Zone commercial quotas for Atlantic Spanish mackerel in Framework Amendment 13 to the Fishery Management Plan (FMP) for Coastal Migratory Pelagic (CMP) Resources in the Gulf of Mexico and Atlantic Regions (CMP FMP). The Northern Zone is from the New York/Connecticut/Rhode Island line to the North Carolina/South Carolina line. The Southern Zone is from the North Carolina/South Carolina line to the Miami-Dade/Monroe County line in Florida. Additionally, the commercial quotas are set in pounds as reported (lbs).

Northern Zone

New York/Connecticut/Rhode Island line to the North Carolina/South Carolina line

Commercial landings data were provided from the Southeast Fisheries Science Center (SEFSC) on September 18, 2023. The Northern Zone has experienced closures in federal waters and quota overages in each of the past five fishing years (2017/2018 through 2021/2022). The federal water closures ranged from as early as June 28th to as late as November 7th. While there were closures in federal waters, Atlantic Spanish mackerel commercial landings could continue in state waters. Commercial landings in recent years were reviewed to determine the percentage of the Northern Zone commercial landings that came from federal waters. Both federal and state waters were open in the Atlantic Spanish mackerel Northern Zone from March through May in 2019, 2020, and 2021. Additionally, both federal and state waters were also open in June of 2018, 2019, and 2020. The data during these time periods resulted in the commercial landings in federal waters accounting for less than 1% of the total commercial landings. Therefore, the majority of the Atlantic Spanish mackerel commercial landings in the northern zone occur in state waters.

When federal waters are closed, states are not required to close state waters. However, in recent years, Maryland, Virginia, and North Carolina implemented a reduced 500-pound trip limit in state waters when the Northern Zone federal waters were closed. A comparison was conducted of monthly commercial landings from recent years with the federal waters open compared to the same month with the federal waters closed. For example, the Northern Zone had federal waters open in August of 2018 (156,001 lbs. landed) and was compared to August of 2021 (207,906 lbs. landed) which had federal waters closed. The results show that, in most months, the Northern Zone Atlantic Spanish mackerel commercial landings were higher when federal waters were closed then in the same months in a different year when the federal waters were open (**Table A-1**).

Table A-1. Northern Zone Spanish mackerel commercial landings (pounds) by month for the fishing years of 2017/2018 through 2021/2022.

Fishing Year	April	May	June	July	August	September	October	Federal Waters Closure Date
2017/2018	329	146,252	110,523	140,260	135,799	141,077	169,032	11/7/2017
2018/2019	620	116,562	144,224	88,867	156,001	114,286	204,656	11/4/2018
2019/2020	5,948	190,711	217,661	215,411	155,697	68,487	100,460	8/24/2019
2020/2021	4,704	231,417	284,444	153,912	121,717	104,939	212,162	7/22/2020
2021/2022	6,267	247,611	266,022	188,036	207,906	216,825	208,684	6/28/2021

Cells with no color had federal waters open the entire month. Cells highlighted in yellow had federal waters closed for part of the month. Cells highlighted in red had federal waters closed the entire month. Landings from March and also November through February had low landings (<5,000 lbs.) and excluded to protect confidentiality.

An estimate of future landings is required to explore if the Framework Amendment 13 proposed commercial quotas will be met, and the federal waters closed. The Atlantic Spanish mackerel commercial sector has a fishing year from March 1st to February 29th. Three different scenarios were used for predicting future Northern Zone commercial landings for March through May: 1) using the highest fishing year of commercial landings in the past five years (fishing year 2021/2022), 2) three-year average of landings for the past three fishing years (2019/2020 to 2021/2022), and 3) five-year average of landings for the past five fishing years (2017/2018 to 2021/2022) (**Figure A-1**). Due to closures in the Northern Zone after May a patchwork of monthly commercial landings was used for predicting June through February landings. Predicted June landings came from a three-year average of the June 2018, 2019, and 2020 landings. Predicted July through February landings came from the 2021/2022 fishing year since this is the most recent year of complete commercial landings.

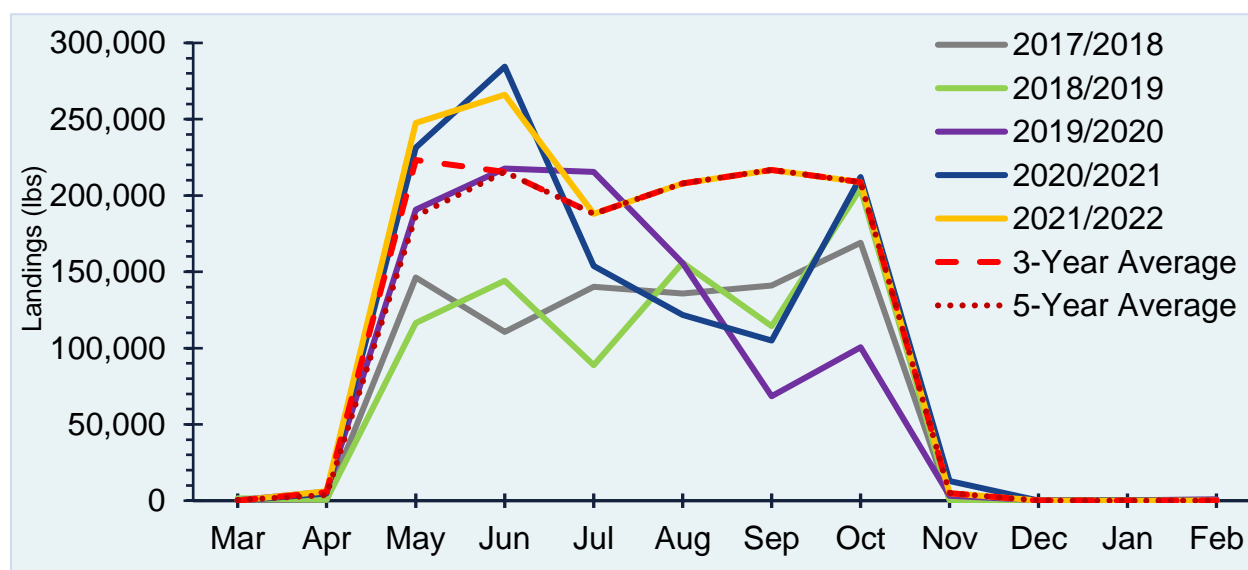


Figure A-1. Spanish mackerel Northern Zone commercial landings by month for the fishing years of 2017/2018 through 2021/2022.

Three different scenarios were used for predicting future Northern Zone commercial landings, and the scenarios are described in the text.

Closure dates were predicted by assuming uniform landings for each day in a month. Then the landings per day were cumulatively summed and compared to the proposed Northern Zone quotas in Framework Amendment 13. A closure date was determined as the day the cumulatively summed landings reached the quota. The predicted closure dates range from August 1st to September 12th (**Table A-2**).

Table A-2. The projected closure dates for the Northern Zone commercial quotas proposed in Amendment 13 for three different landings scenarios.

	Quota	Closure Dates		
		Highest Landings	3-Year Average	5-Year Average
Alternative 1	662,670	1-Aug	5-Aug	11-Aug
Alternative 2	882,640	3-Sep	6-Sep	12-Sep
Alternative 3	838,508	27-Aug	31-Aug	6-Sep
Alternative 4	794,376	21-Aug	25-Aug	30-Aug

Three different scenarios were used for predicting future Northern Zone commercial landings, and the scenarios are described in the text.

Southern Zone

North Carolina/South Carolina line to the Miami-Dade/Monroe County line in Florida

As stated earlier, commercial landings data were provided from the SEFSC on September 18, 2023. The Southern Zone has a specific trip limit reduction procedure that was implemented in Framework Amendment 2 (2015). The trip limit reductions are based on the adjusted Southern Zone quota, which is 250,000 less than the total Southern Zone quota. When 75% of the adjusted Southern Zone quota is reached the trip limit drops from 3,500 lbs. whole weight (ww) to 1,500 lbs. When 100% of the adjusted Southern Zone quota is met the trip limit drops to 500 lbs. When 100% of the total Southern Zone quota is met the fishery in federal waters is closed.

The Southern Zone has a fishing year from March 1st to the end of February. In the past six fishing years (2016/2017 to 2021/2022), the Southern Zone has experienced numerous trip limit reductions and closures in federal waters. The federal water trip limit reductions ranged from as early as December 24th and as late as February 6th. The closures in federal waters ranged from as early as January 5th and as late as February 5th.

An estimate of future landings is required to explore if the Framework Amendment 13 proposed commercial quotas will be met, and the federal waters closed. Three different scenarios were used for predicting future Southern Zone commercial landings for March through November: 1) Using the highest fishing year of commercial landings in the past five years (fishing year 2018/2019), 2) three-year average of landings for the past three fishing years (2019/2020 to 2021/2022), and 3) five-year average of landings for the past five fishing years (2017/2018 to 2021/2022) (**Figure A-2**). Due to both trip limit changes and closures in the Southern Zone after November a patchwork of monthly commercial landings were used for predicting December through February landings. Predicted December landings came from a two-year average of the most recent years that did not have a trip limit reduction (December landings in 2020 and 2021). January landings came from the most recent January landings without a trip limit reduction or

closure (January 2021). February landings came from the most recent February landings without a closure or a trip limit reduction (January 2016).

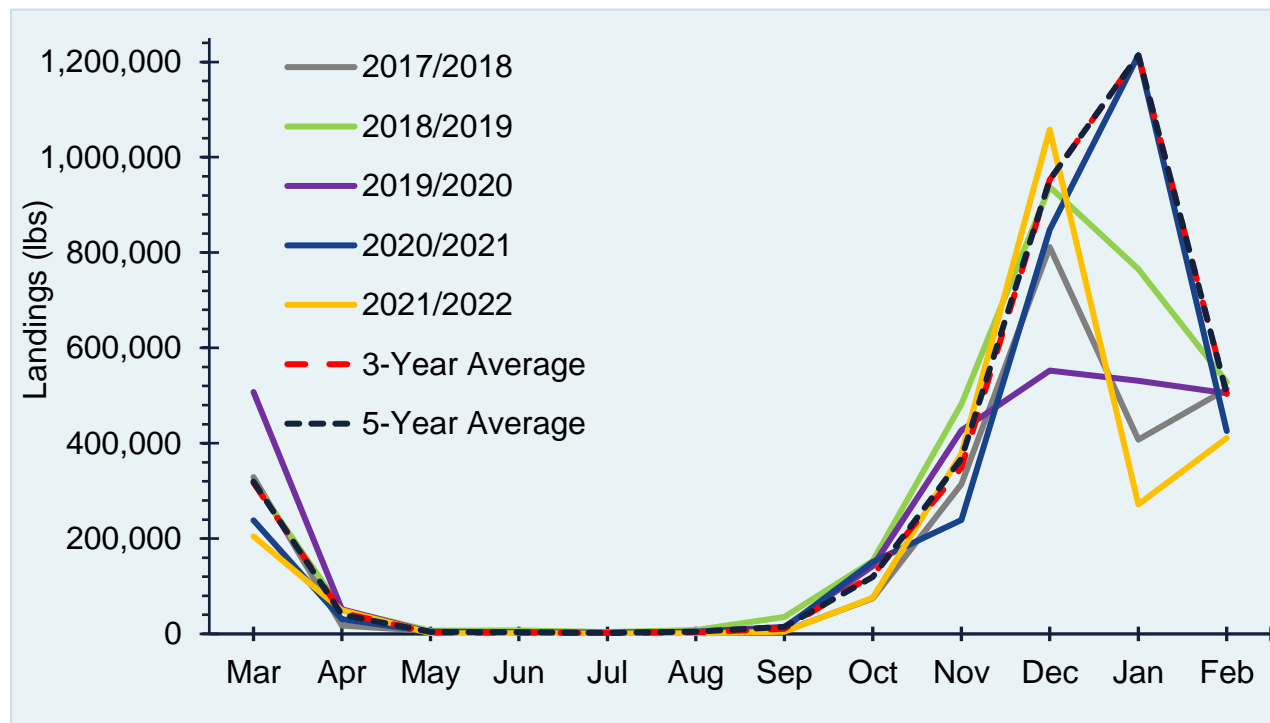


Figure A-2. Spanish mackerel Southern Zone commercial landings by month for the fishing years of 2017/2018 through 2021/2022.

Three different scenarios were used for predicting future Southern Zone commercial landings, and the scenarios are described in the text.

Framework Amendment 13 has four different alternatives for Southern Zone quotas (**Table A-3**). Following the trip limit reduction and closure procedure of the Southern Zone, an impact on the landings from the trip limit reduction is needed to predict when the quota will be met.

Commercial logbook data was provided from the SEFSC on March 1, 2023, and this logbook data was analyzed to determine the potential impact from trip limit reductions. The impact was calculated by choosing recent data from a time period where there were no trip limit changes or closures. The commercial data from December in 2020 and 2021 was used because it is relatively recent data and did not have any trip limit reductions or closures. The trip limits were analyzed by first modifying the catch per trip to match the trip limit under consideration then determining how much the new trip limit would decrease the landings. For example, when analyzing a reduction on the trip limit to 500 lbs., a trip with 800 pounds would be reduced to 500 pounds. Estimated reductions were calculated based on the difference in landings with no trip limit change (left at status quo of 3,500 lbs.) compared to landings when a trip limit was imposed. These reductions were converted to percentages based on the total harvest.

Additionally, the trip limit reductions assume the trip limits will be imposed in both federal and state waters. The trip limit reduction analysis was done for a reduction down to 1,500 lbs. and 500 lbs. (**Table A-4**)

Table A-3. Spanish mackerel Southern Zone commercial quotas (pounds) being considered in Framework Amendment 13.

	75% of Adjusted Southern Zone Quota	Adjusted Southern Zone Quota	Quota
Alternative 1	1,812,998	2,417,330	2,667,330
Alternative 2	2,460,420	3,280,560	3,530,560
Alternative 3	2,328,024	3,104,032	3,354,032
Alternative 4	2,195,628	2,927,504	3,177,504

Table A-4. Percent decreases in landings for the trip limit reductions of 1,500 lbs. and 500 lbs. for Atlantic Spanish mackerel in the Southern Zone.

Trip Limit (lbs)	Percent Reduction
1,500	20.3%
500	62.3%

Data was generated from commercial logbook data from December of 2020 and 2021.

Closure dates were predicted from assuming uniform landings for each day in a month. Then the landings per day were cumulatively summed and compared to the Southern Zone quota Alternatives in Framework Amendment 13 (**Table 3**). Predictions were first made when 75% adjusted southern zone quota is met. When 75% of the adjusted quota is met the time period after that date had the predicted landings reduced by 20.3% to reflect the trip limit reduction from 3,500 lbs. down to 1,500 lbs. Then when 100% of the adjusted quota is met the time period after that date had the predicted landings reduced by 62.3% to reflect the trip limit reduction from 1,500 lbs. down to 500 lbs. These landings are cumulatively summed per day until 100% of the Southern Zone quota is met. The federal closure date is determined when 100% of the Southern Zone quota is met. The predicted federal waters closure dates (when the Southern Zone quota was met) range from January 31 to no closure (**Table A-5**).

Table A-5. Spanish mackerel Southern Zone predicted dates when 75% of the Adjusted Southern Zone quota, Adjusted Southern Zone Quota, and Quota were met for the three different predicted landings scenarios.

	75% of Adjusted Southern Zone Quota Met	Adjusted Southern Zone Quota Met	Quota Met
Highest Landings			
Alternative 1	25-Dec	14-Jan	31-Jan
Alternative 2	12-Jan	14-Feb	No Closure
Alternative 3	8-Jan	4-Feb	No Closure
Alternative 4	5-Jan	28-Jan	No Closure
3-Year Average			
Alternative 1	1-Jan	20-Jan	13-Feb
Alternative 2	17-Jan	26-Feb	No Closure
Alternative 3	14-Jan	15-Feb	No Closure
Alternative 4	10-Jan	5-Feb	No Closure

	75% of Adjusted Southern Zone Quota Met	Adjusted Southern Zone Quota Met	Quota Met
5-Year Average			
Alternative 1	31-Dec	19-Jan	10-Feb
Alternative 2	17-Jan	24-Feb	No Closure
Alternative 3	13-Jan	14-Feb	No Closure
Alternative 4	10-Jan	4-Feb	No Closure

References

SEDAR 78. 2022. South Atlantic Spanish mackerel stock assessment. Southeast Data, Assessment and Review. North Charleston, South Carolina.
<http://www.sefsc.noaa.gov/sedar/>.

Appendix B: Predicting Closure Dates for the Atlantic Spanish Mackerel Recreational Sector

Prepared by Mike Larkin, NMFS SERO Staff.

Introduction

In 2022, a stock assessment was conducted for Atlantic migratory group Spanish mackerel (Atlantic Spanish mackerel) (SEDAR 78). Results from the assessment showed that Atlantic Spanish mackerel is not overfished and not experiencing overfishing. Following the results of SEDAR 78 the South Atlantic Fishery Management Council (South Atlantic Council) is considering changing the annual catch limit (ACL) for the Atlantic Spanish mackerel stock in Framework Amendment 13 to the Fishery Management Plan (FMP) for Coastal Migratory Pelagic (CMP) Resources in the Gulf of Mexico and Atlantic Regions (Framework Amendment 13). Additionally, following SEDAR 78, the new ACLs proposed in Framework Amendment 13 were set with Marine Recreational Information Program (MRIP) Fishing Effort Survey (FES) data instead of the previously used MRIP Coastal Household Telephone Survey (CHTS).

Data Sources and Predicted Landings

Recreational landings data for Atlantic Spanish mackerel are a combination of recreational landings from MRIP-FES and the Southeast Region Headboat Survey. These data were provided from the Southeast Fisheries Science Center (SEFSC) on August 25, 2023, and the recreational landings are organized by two-month waves. Framework Amendment 13 proposes a range of recreational ACLs. An estimate of future landings is required to estimate if the Framework Amendment 13 proposed recreational ACLs will be met, and the recreational sector will be closed. The Atlantic Spanish mackerel recreational sector has a fishing year from March 1st to February 29th. Three different scenarios were used for predicting future Atlantic Spanish mackerel recreational landings for the fishing year: 1) Using the highest fishing year of recreational landings in the past five years (fishing year 2021/2022), 2) three-year average of landings for the past three fishing years (2019/2020, 2020/2021, and 2021/2022), and 3) five-year average of landings for the past five fishing years (2017/2018 to 2021/2022) (**Figure B-1**).

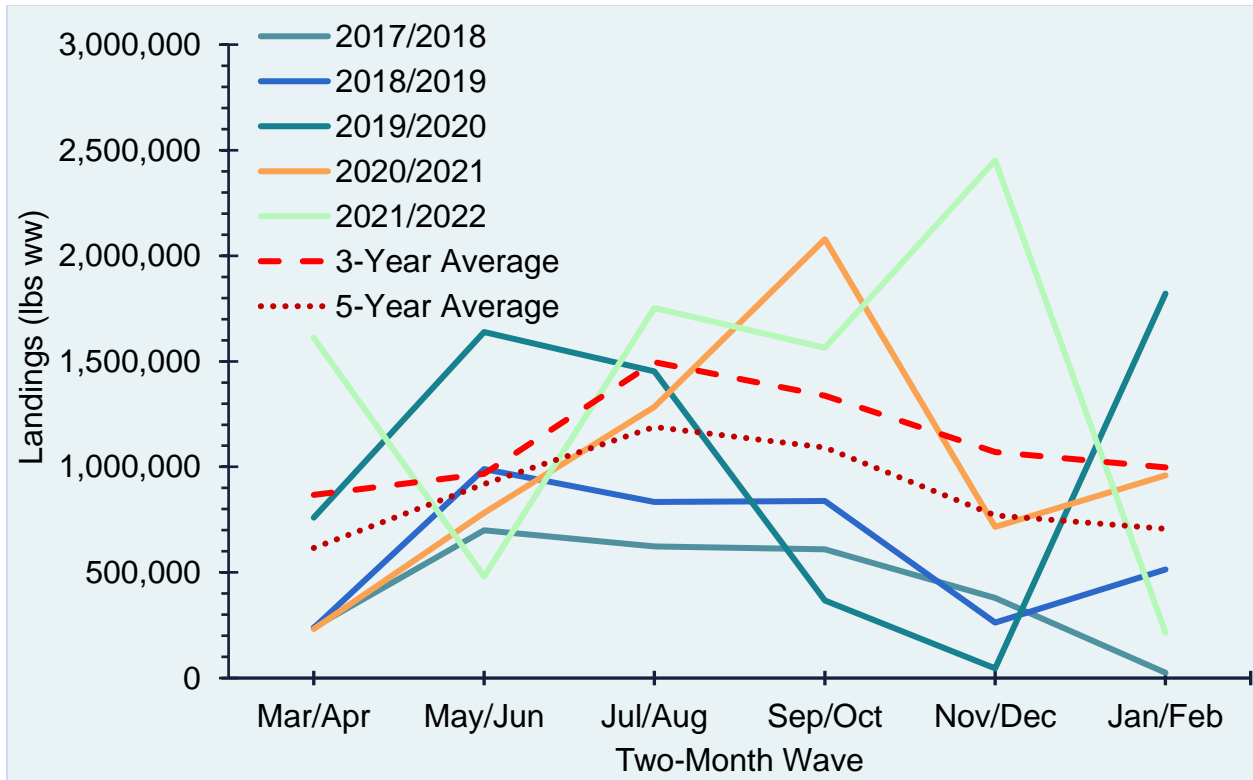


Figure B-1. Atlantic migratory group Spanish mackerel recreational landings by two-month wave for the fishing years of 2017/2018 through 2021/2022, and also the three- and five-year averages. All landings are in pounds whole weight (lbs ww).

Predicted Closure Dates

Closure dates were predicted by assuming uniform recreational landings for each day in a two-month wave for the three landings scenarios. Then the landings per day were cumulatively summed and compared to the recreational ACL alternatives in Framework Amendment 13. A closure date was determined as the day the cumulatively summed landings met or exceeded the ACL. The predicted closure dates range from August 10 to October 20th (**Table B-1**).

Table B-1. The projected closure dates for the recreational ACLs proposed in Framework Amendment 13 for three different landings scenarios.

	ACL	Closure Dates		
		Highest Landings	3-Year Average	5-Year Average
Alternative 1	2,727,000	Not Applicable		
Alternative 2	3,610,800	23-Aug	13-Sep	20-Oct
Alternative 3	3,430,260	17-Aug	5-Sep	10-Oct
Alternative 4	3,249,720	10-Aug	28-Aug	30-Sep

No prediction was made for Alternative 1 (No Action) since that recreational ACL was set in MRIP-CHTS which is no longer consistent with the best scientific information available and not a viable alternative.

References

SEDAR 78. 2022. South Atlantic Spanish mackerel stock assessment. Southeast Data, Assessment and Review. North Charleston, South Carolina.
<http://www.sefsc.noaa.gov/sedar/>.



THE SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

King and Spanish Mackerel Port Meetings

Discussion Document
December 2023

Background

During their April 2019 meeting and their October 2022 meeting, the Mackerel Cobia Advisory Panel (AP) passed motions requesting the South Atlantic Fishery Management Council (South Atlantic Council) set up a series of port meetings to gather more information on the Atlantic king and Spanish mackerel fisheries. The South Atlantic Council acknowledged the importance of gaining a comprehensive understanding of the commercial and recreational king and Spanish mackerel fisheries and how port meetings may provide an effective avenue to achieve that understanding. During their December 2022 meeting, the South Atlantic Council directed staff to begin developing a plan for conducting port meetings throughout the South Atlantic, Gulf of Mexico, Mid-Atlantic and New England regions.

In August 2023, the Atlantic States Marine Fisheries Commission (Atlantic States Commission) received an overview of the plan to conduct a series of port meetings for king and Spanish mackerel. Atlantic States Commission members are willing to participate in both the development and implementation of port meetings for the mackerel fisheries. There was wide agreement that port meetings would provide information beneficial for the management process and essentially function as pre-scoping for the forthcoming plan amendment addressing

management of Atlantic Spanish mackerel. Additionally, they recommend involving the Atlantic Spanish Mackerel Technical Committee (TC) in the planning process.

The Fishery Management Plan (FMP) for Coastal Migratory Pelagic (CMP) Resources in the Gulf of Mexico and Atlantic Regions (CMP FMP) is a joint management plan between the South Atlantic Council and the Gulf of Mexico Fishery Management Council (Gulf Council). The Gulf Council also received a port meetings overview during their August 2023 meeting. Gulf Council staff compared participation between public hearings and virtual tools (i.e., Fishermen Feedback, video views, and webinars) and noted the historic low participation to in-person CMP-focused meetings. Given that virtual tools seem to have a wider-reach and capture responses their constituents more efficiently, the Gulf Council recommended moving forward with a virtual approach, but also asked staff to consider ways to enhance feedback from king and Spanish mackerel fishermen during scheduled Council meetings.

The Port Meetings Planning Team met for the first time in October 2023 to discuss the best way to facilitate discussion during port meetings as well as port meeting locations. Additionally, the Mackerel Cobia Advisory Panel discussed meeting structure and locations at their November 2023 meeting.

Objectives for this Meeting:

- Review Mackerel Cobia Advisory Panel Input.
- Provide input on port meeting structure and locations.

South Atlantic Council Port Meeting Goals and Objectives:

- Evaluation of current goals and objectives of the CMP FMP.
- Achieving the maximum economic and social yield from the fishery.
- Maintaining the long-term sustainability of stocks.
- Maintaining the integrity of fishing communities under climate change.
- Achieving the most equitable management structure under climate change.
- Identification of underserved communities and EEJ concerns.
- Consideration of interjurisdictional management and cooperation with other councils and ASMFC.

Discussion Topics:

- How species movement/expansion may affect future management, especially how fishermen are responding to these changes and how the permit structure may influence their behavior.
- Dynamics of the commercial fleet, including the mobility of the fleet, market flexibility, and spatial seasonality.

- Differences in how commercial fishermen interact with the fishery (travel to different areas vs. only participate in one area).
- Differences in the size of fish being targeted at different times and in different areas.
- How the commercial and recreational sectors utilize and value the king and Spanish mackerel fishery.
 - Is there a big catch and release component to the king and Spanish mackerel fisheries?
- What role do king and Spanish mackerel fishing tournaments play in the fishery? How might these tournaments be affecting the fisheries?
 - Is there acceptance/interest within the recreational industry to move towards catch and release only tournaments?
- How water quality and harmful algal blooms affecting the king and Spanish mackerel fisheries.
- How king and Spanish mackerel fisheries interact with other important fisheries.
- What types of gear are currently being used in the fishery and how has this changed over time?
- How can the Council better reach underserved stakeholders and identify equity and environmental justice issues within the king and Spanish mackerel fishing communities?

Mackerel Cobia Advisory Panel Comments:

- How a uniform management structure along the Atlantic coast (state and federal waters) may be achieved.
- How much king and Spanish mackerel are being targeted by locals (recreational) and sold or consumed locally (commercial) versus how much is being targeted by tourists or being sent away from the local area.
- How severe weather (hurricanes) affect the king and Spanish mackerel fisheries.
- The effect of the limited access status of the commercial king mackerel permit.
 - How are businesses choosing to operate under limited entry as the fishery changes.
 - Is there a future for short-term leasing of commercial king mackerel permits, especially considering the seasonal nature of the fishery.
- Recreational permitting and reporting should be discussed with recreational attendees to learn what would be needed for them to be comfortable with such a system.
- Ask attendees if they have noticed a change in who is participating in the commercial and recreational king and Spanish mackerel fisheries.

Tentative Timeline:

Date		Development of Port Meetings
<input checked="" type="checkbox"/>	October 2022	Mackerel Cobia Advisory Panel unanimously passes a motion requesting the Council conduct a series of port meetings to gain a more comprehensive understanding of the king and Spanish mackerel fisheries.
<input checked="" type="checkbox"/>	December 2022	South Atlantic Council reviews the Mackerel Cobia Advisory Panel motion and directs staff begin work on a plan to conduct port meetings.
<input checked="" type="checkbox"/>	March 2023	South Atlantic Council discusses what information they feel is needed to gain a comprehensive understanding of the king and Spanish mackerel fisheries.
<input checked="" type="checkbox"/>	April 2023	Mackerel Cobia Advisory Panel discusses their goals and objectives for port meetings.
<input checked="" type="checkbox"/>	June 2023	South Atlantic Council reviews input from the Mackerel Cobia Advisory Panel and discusses their goals and objectives for port meetings.
<input checked="" type="checkbox"/>	August 2023	The Atlantic States Marine Fisheries Commission and the Gulf of Mexico Council are asked to participate in the development and execution of port meetings.
<input checked="" type="checkbox"/>	November 2023	Mackerel Cobia Advisory Panel meets and provides input on proposed structure for port meetings and key communities to hold meetings.
<input type="checkbox"/>	December 2023	South Atlantic Council meets and discusses proposed meeting structure and approves key locations so scheduling work can begin.
<input type="checkbox"/>	February 2024	Mock-port meeting held with the Mackerel Cobia Advisory Panel
<input type="checkbox"/>	March 2024	South Atlantic Council approves final plan for conducting port meetings.
Date		Port Meetings Conducted
<input type="checkbox"/>	April 2024	Port Meetings conducted in: North Carolina
<input type="checkbox"/>	May 2024	Port Meetings conducted in: New England
<input type="checkbox"/>	June 2024	South Atlantic Council receives an update on port meeting progress.
<input type="checkbox"/>	July 2024	Port Meetings conducted in: South Carolina and Georgia
<input type="checkbox"/>	August 2024	Port Meetings conducted in: Mid-Atlantic
<input type="checkbox"/>	September 2024	South Atlantic Council receives an update on port meeting progress.
<input type="checkbox"/>	October 2024	Port meetings conducted in: Florida
<input type="checkbox"/>	December 2024	South Atlantic Council receives an update on port meeting progress.
<input type="checkbox"/>	Throughout 2024	Gulf Council staff holds webinars to gather input from king and Spanish mackerel fishermen and updates the Gulf of Mexico Council, as appropriate.

	Date	Summary Report Prepared
<input type="checkbox"/>	Winter 2025	Staff conducts thematic analysis and prepares summary report.
<input type="checkbox"/>	March 2025	Final report presented to the South Atlantic Council and guidance on future actions provided.
<input type="checkbox"/>	April 2025	Final report presented to the Mackerel Cobia Advisory Panel

DRAFT Port Meeting Structure:

Port meetings would be conducted in the evenings, from 6:00pm to 8:00pm. Materials provided during the meeting could include a general fact sheet with room for note-taking and various tables and charts presented around the room to spur discussion.

Prelude: As stakeholders arrive at the meeting, there could be space for them to answer a question or two (ex. post-it notes to stick to a flipboard). Example questions include:

1. What is one thing you hope comes out of port meetings?
2. What is one key thing the Council needs to know about king and Spanish mackerel?

Meeting Introduction: A very brief presentation introducing port meetings, the Council's goals and objectives, and explaining how the night will operate.

Breakout Groups: A series of breakout groups to elicit information from attendees on the various topics identified by the Council. Example breakout group categories:

1. CMP FMP Goals and Objectives
2. Environmental conditions (species movement, expansion)
3. Changes needed to the current management structure.

Break: Time for attendees to relax and have informal conversations. Also include an interactive activity, such as a sticky wall where stakeholders can note the year you got into the fishery or key events in the fisheries or a keep/remove poll for the goals and objectives in the CMP FMP.

Sector Dynamics: Two breakout groups, by sector, discussing the dynamics of each fleet. Those that do not participate in a specific sector (ex. ENGOs) can select.

Wrap-Up: Final presentation to recap port meeting goals and objectives, note the next steps/timing, and thank participants.

Mackerel Cobia Advisory Panel Comments:

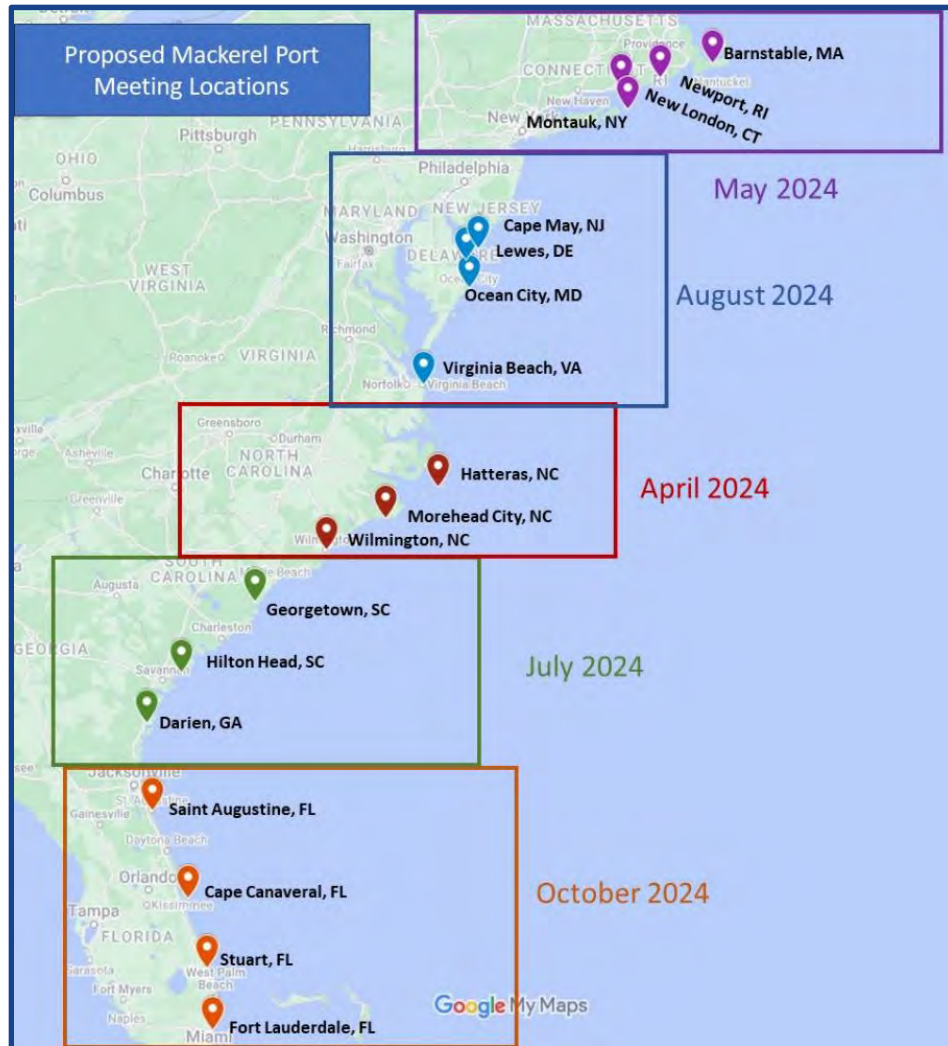
- Two-hours on a weekday evening is an appropriate amount of time to ask fishermen to attend and actively participate in a port meeting.
- Support for using breakout groups as a way to gather input from attendees.

- Breakout groups may make individuals feel more comfortable providing input and keep presentations to a minimum.
- Suggest that staff have a series of prepared questions to help get discussions started.
- Might need to consider an alternate method if meeting a has very high attendance or very low attendance because breakout groups may cause the meeting to run long or there won't be enough individuals to use breakout groups.
- AP members felt that they would be about to get a couple dozen fishermen to attend port meetings in their areas.
- Recommend using an online registration link to get an estimate of how many fishermen might attend a given port meeting.
- Create an online tool that would allow fishermen to provide input if they are unable to match their local port meeting.
 - Getting information about these port meetings out to fishermen will be incredibly important.
 - Recommendation to reach out to local chambers of commerce and other local organizations to reach underserved communities and fishermen who might not usually participate in the management process.
- Support for providing attendees with a short information sheet for them to reference during the meeting. If possible, providing access to the information sheet in advance of the meeting would be ideal. The sheet should include the following:
 - An introduction to the fishery management process.
 - Most recent stock assessment information for king and Spanish mackerel.
 - Recent commercial and recreational landings trends.

DRAFT Port Meeting Locations:

Port meeting locations were identified based on input from the Port Meeting Plannings Team and the Mackerel Cobia Advisory Panel, with the goal of holding three to four meetings in each state/region.

Month	State	Meeting One	Meeting Two	Meeting Three	Meeting Four
April	North Carolina	Wilmington	Morehead City	Hatteras	
May	New England	Montauk	New London	Newport	Barnstable
July	Georgia/South Carolina	Darien	Hilton Head	Georgetown	
August	Mid-Atlantic	Virginia Beach	Ocean City	Lewes	Cape May
October	Florida	Fort Lauderdale	Stuart	Cape Canaveral	Saint Augustine



Mackerel Cobia Advisory Panel Comments:

- Proposed Florida meeting locations look sufficient, but it was noted that Fort Lauderdale is too far south for most commercial fishing effort for king and Spanish mackerel and will likely have a crowd that leans toward the recreational sector.
 - The September/October time frame would be better than May for holding port meetings in Florida.
- In South Carolina and Georgia, it was recommended that the Council consider having a meeting in Savannah instead of Hilton Head Island. Savannah has a larger recreational component and is more easily accessible to Interstate 95. Georgetown/Murrells Inlet will have attendees, but also may want to consider the Charleston area as Haddrell’s Point Tackle is known for hosting various fishing seminars and events.
- The North Carolina locations hit the three main areas; however, it might be ideal to add a meeting in Wanchese. Both Hatteras and Wanchese have large king and Spanish mackerel fisheries and due to the time and distance fishermen from one community are unlikely to travel to the other community to participate in port meetings.

- Mackerel AP members were not as familiar with the Mid-Atlantic and New England regions but did note that there was a large gap between proposed port meetings in Cape May, New Jersey and Montauk, New York. It was also noted that there is a lot of king and Spanish mackerel fishing happening in Chincoteague, Virginia, and it may be helpful to hold a meeting or two along the Chesapeake Bay.
- All AP members provided specific locations in their communities (Bass Pro Shops, tackle shops, community colleges, etc.) that may be willing to host a port meeting.

FINAL
SUMMARY REPORT
MACKEREL COBIA COMMITTEE
SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
Beaufort, North Carolina
December 5, 2023

The Committee approved the minutes from the September 2023 meeting and the agenda.

Mackerel Cobia Advisory Panel Report

The Mackerel Cobia Advisory Panel met on November 7th and 8th, 2023 in Charleston, South Carolina. The AP Chair, Ira Laks, provided a summary of Advisory Panel discussion and recommendations. The Committee expressed their appreciation of the advisory panels' in-depth discussions and indicated that they would ask for input on recreational permitting and reporting, tournament sales, and for-hire limited entry during the mackerel port meetings process.

CMP Framework Amendment 13

Catch level recommendations for Atlantic Spanish mackerel based on SEDAR 78 were provided to the Council in June 2023 and the Council directed staff to begin work on a framework amendment to update catch levels to be consistent with the recommendations. SEDAR 78 includes revised recreational landings that are based on the Marine Recreational Information Program's (MRIP) newer Fishing Effort Survey (FES) method.

Staff presented an options paper with a draft action and alternative language as well as analysis on when the proposed annual catch limits and quotas are anticipated to be met and the number of Atlantic Spanish mackerel landed recreationally per person and per vessel.

The following motions were approved:

**MOTION 1: ADD AN ACTION TO FRAMEWORK AMENDMENT 13 TO CONSIDER MODIFICATION TO THE LONG-TERM OY FOR ATLANTIC SPANISH MACKEREL.
APPROVED BY COMMITTEE
APPROVED BY COUNCIL**

**MOTION 2: ADD AN ACTION TO FRAMEWORK AMENDMENT 13 TO INCLUDE IN-SEASON AND POST-SEASON ACCOUNTABILITY MEASURES FOR THE RECREATIONAL SECTOR.
APPROVED BY COMMITTEE
APPROVED BY COUNCIL**

Mackerel Port Meetings

Based on recommendations from the Mackerel Cobia Advisory Panel, the Council directed staff to begin work on a plan to conduct port meetings for king and Spanish mackerel to gain a comprehensive understanding of the fisheries to improve management efforts. Staff presented the Committee with a draft structure for port meetings and tentative meeting locations.

The Committee provided the following input on meeting structure:

- One of the Councils goals for Mackerel Port Meetings is to identify underserved communities and address equity and environmental justice concerns. To achieve this goal, staff should consider either adding an additional breakout group on this topic or ensuring that the topic is brought up within the context of other breakout groups.
- It will be important to provide stakeholders with information on port meetings in advance of the meeting so that they can come prepared to provide information on what they want to see come out of Mackerel Port Meetings.

The Committee modified the tentative meeting locations, as follows:

- Hold meetings in both Wanchese and Hatteras, North Carolina.
- Consider holding meetings in Port Judith, Rhode Island (as opposed to Newport, Rhode Island) and New Bedford, Massachusetts (as opposed to Barnstable, Massachusetts).
- Hold a meeting in Pooler, Georgia (as opposed to Hilton Head, South Carolina) and consider holding meetings in Charleston, South Carolina and Murrell's Inlet, South Carolina (as opposed to Georgetown, South Carolina).
- Consider holding a meeting in central New Jersey (as opposed to Cape May, New Jersey).
- When scheduling port meetings, make all efforts to avoid overlapping with scheduled saltwater fishing tournaments.
- There are several national seashores along the coast who might be helpful when trying to conduct outreach on port meetings.

Other Business

Note: Council staff drafts the timing and task motion based on Committee action. If points require clarification, they will be added to the draft motion. The Committee should review this wording carefully to be sure it accurately reflects their intent prior to making the motion.

Timing and Task(s)

MOTION 3: ADOPT THE FOLLOWING TIMING AND TASKS:

1. Ask the Law Enforcement Advisory Panel to provide input on the sale of tournament caught Atlantic king and Spanish mackerel.
2. Continue work on CMP Framework Amendment 13, bring an updated decision document to the March 2024 Council meeting.
3. Continue development of Mackerel Port Meetings, bringing a final plan for Council approval and implementation to the March 2024 Council meeting.

Atlantic States Marine Fisheries Commission

Shad and River Herring Management Board

January 24, 2024

12:45 – 1:30 p.m.

Hybrid Meeting

Draft Agenda

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

- | | |
|--|------------|
| 1. Welcome/Call to Order (<i>L. Fegley</i>) | 12:45 p.m. |
| 2. Board Consent | 12:45 p.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from October 2023 | |
| 3. Public Comment | 12:50 p.m. |
| 4. Consider Update to New Hampshire River Herring Sustainable Fishery Management Plan and Proposal to Reopen Fishery (<i>W. Eakin</i>) Final Action | 1:00 p.m. |
| 5. Update on the 2024 River Herring Benchmark Stock Assessment (<i>K. Drew</i>) | 1:20 p.m. |
| 6. Other Business/Adjourn | 1:30 p.m. |

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

Atlantic States Marine Fisheries Commission

MEETING OVERVIEW

Shad and River Herring Management Board

January 24, 2024

12:45 – 1:30 p.m.

Hybrid Meeting

Chair: Lynn Fegley (MD) Assumed Chairmanship: 2/23	Technical Committee Chair: Wes Eakin (NY)	Law Enforcement Committee Representative: Jeffrey Sabo (PA)
Vice Chair: Phil Edwards	Advisory Panel Chair: Pam Lyons Gromen	Previous Board Meeting: October 16, 2023
Voting Members: ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, DC, PRFC, VA, NC, SC, GA, FL, NMFS, USFWS (19 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from October 16, 2023

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

4. Consider Update to New Hampshire River Herring Sustainable Fishery Management Plan and Proposal to Reopen Fishery (1:00-1:20 p.m.) Final Action

Background

- Amendments 2 and 3 to the Shad and River Herring FMP require all states and jurisdictions that have a commercial fishery to submit a sustainable fishing management plan (SFMP) for river herring and American shad, respectively. Plans are updated and reviewed by the Technical Committee (TC) every five years.
- New Hampshire closed their river herring fishery in 2021 after failing to meet the fishery-independent sustainability target. An updated SFMP was submitted with a proposal to reopen the fishery for TC review and Board consideration at the 2024 Winter Meeting (**Supplemental Materials**).

Presentations

- River Herring Sustainable Fishery Management Plan Update for Board Consideration by W. Eakin

Board Actions for Consideration

- Consider approval of updated SFMP for New Hampshire

5. Progress Update on the 2024 River Herring Benchmark Stock Assessment (1:20-1:30 p.m.)

Background

- The river herring benchmark stock assessment was initiated in April 2022. The assessment workshop was conducted in August 2023.

Presentations

- Update on River Herring Stock Assessment Progress by K. Drew

6. Other Business/Adjourn

Shad and River Herring 2024 TC Tasks

Activity level: Medium

Committee Overlap Score: Medium (Multi-species committees for this Board)

Committee Task List

- 2024 River Herring Benchmark Stock Assessment
- Updates to state Shad SFMPs
- Annual state compliance reports due July 1

TC Members: Mike Brown (ME), Conor O'Donnell (NH), Brad Chase (MA), Patrick McGee (RI), Kevin Job (CT), Wes Eakin (Chair, NY), Brian Neilan (NJ), Brian Niewinski (PA), Johnny Moore (DE), Matthew Jargowsky (Vice-Chair, MD), Ingrid Braun (PRFC), Joseph Swann (DC), Patrick McGrath (VA), Holly White (NC), Jeremy McCargo (NC), Bill Post (SC), Jim Page (GA), Reid Hyle (FL), Ken Sprankle (MA), Ruth Hass-Castro (NOAA), John Ellis (USFWS), Ted Castro-Santos (USGS), C. Michael Bailey (USFWS)

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
SHAD AND RIVER HERRING MANAGEMENT BOARD**

**Beaufort Hotel
Beaufort, North Carolina
Hybrid Meeting**

October 16, 2023

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

TABLE OF CONTENTS

Call to Order, Chair Lynn Fegley1

Approval of Agenda1

Approval of Proceedings from August 1, 2023.....1

Public Comment1

Progress Update on River Herring Benchmark Stock Assessment1

Consider Fishery Management Plan Review and State Compliance for the 2022 Fishing Year.....1

Adjournment3

INDEX OF MOTIONS

1. **Approval of Agenda** by consent (Page 1).
2. **Approval of Proceedings of August 1, 2023** by consent (Page 1).
3. **Move to approve the Shad and River Herring Fishery Management Plan Review and state compliance reports, and de minimis requests for ME, NH, MA, and FL for American shad and NH, GA, and FL for river herring for the 2022 fishing year** (Page 4). Motion by Doug Grout; second by Spud Woodward. Motion approved by unanimous consent (Page 4).
4. **Move to adjourn** by consent (Page 4).

ATTENDANCE

Board Members

Pat Keliher, ME (AA)	Loren Lustig, PA (GA)
Rep. Allison Hepler, ME (LA)	John Clark, DE (AA)
Cheri Patterson, NH (AA)	Roy Miller, DE (GA)
Doug Grout, NH (GA)	Lynn Fegley, MD (AA, Acting)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Allison Colden, MD, proxy for Del. Stein (LA)
Mike Armstrong, MA, proxy for D. McKiernan (AA)	Joseph Grist, VA, proxy for J. Green (AA)
Raymond Kane, MA (GA)	Chris Batsavage, NC, proxy for K. Rawls (AA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	Chad Thomas, NC, proxy for Rep. Wray (LA)
Phil Edwards, RI, proxy for J. McNamee (AA)	Ross Self, SC, proxy for M. Bell (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Malcolm Rhodes, SC (GA)
Justin Davis, CT (AA)	Ben Dyar, SC, proxy for Sen. Cromer (LA)
Bill Hyatt, CT (GA)	Doug Haymans, GA (AA)
Craig Miner, CT, proxy for Rep. Gresko (LA)	Spud Woodward, GA (GA)
Jesse Hornstein, NY, proxy for M. Gary (AA)	Erika Burgess FL, proxy for J. McCawley (AA)
Emerson Hasbrouck, NY (GA)	Ingrid Braun, PRFC
Heather Corbett, NJ, proxy for J. Cimino (AA)	Dan Ryan, DC, proxy for R. Cloyd
Jeff Kaelin, NJ (GA)	Rick Jacobson, USFWS
Kris Kuhn, PA proxy for T. Schaeffer (AA)	Max Appelman, NOAA

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

Ex-Officio Members

Staff

Bob Beal	Katie Drew	Tracey Bauer
Toni Kerns	James Boyle	Jeff Kipp
Tina Berger	Caitlin Starks	Jainita Patel
Madeline Musante	Chelsea Tuohy	Kristen Anstead

Guests

Pat Augustine	Julie Evans	Steve Meyers
Jason Avila	Emily Farr, Manomet	Allison Murphy, NOAA
Alan Bianchi, NC DMF	Maria Fenton	Josh Newhard, US FWS
Emily Bodell, NEFMC	Tony Friedrich, ASGA	Conor ODonnell, NH FGD
Jason Boucher, NOAA	Marty Gary, NY (AA)	Jeffrey Pierce, Alewife
Colleen Bouffard, CT DEEP	Pat Geer, VMRC	Harvesters of Maine
Allen Burgenson, Lonza	Allie Hayser, Manomet	Michael Pierdinock
Benson Chiles	Derrek Hughes, NYS DEC	Paul Risi
Margaret Conroy, DE DNREC	Jon Hurdle, NJ Spotlight	Jeffrey Sabo, PA FBC
Jamie Cournane, NEFMC	Chip Lynch, NOAA	Christopher Scott, NYS DEC
Caitlin Craig, NYS DEC	John Maniscalco, NYS DEC	Melissa Smith, MA DMR

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

Guests (continued)

Renee St. Amand, CT DEEP
Kevin Sullivan, NH FGD
John Sweka, US FWS

Mike Thalhauser, Maine Center
for Coastal Fisheries
Verewe Wang, ECU
Craig Weedon, MD DNR

Chris Wright, NOAA
Darrell Young, Alewife
Harvesters of Maine
Renee Zobel, NH FGD

The Shad and River Herring Management Board of the Atlantic States Marine Fisheries Commission convened in the Rachel Carson Ballroom via hybrid meeting, in-person and webinar; Monday, October 16, 2023, and was called to order at 4:50 p.m. by Chair Lynn Fegley.

CALL TO ORDER

CHAIR LYNN FEGLEY: It looks like we are in order. My name is Lynn Fegley; I'm the Administrative Commissioner for the state of Maryland, happy to serve as your Chair. I have had enough Swedish fish at this point to talk very fast. I think we're going to roll right through this. The first order, well, first let me just remind everybody that we have James Boyle here to my right, Dr. Katie Drew to my left, to help with today's presentations.

We have just one action item, which is FMP Review, so I'll be looking for a motion for that towards the end of the meeting.

APPROVAL OF AGENDA

CHAIR FEGLEY: The first order of business is Board consent on the agenda. Does anybody have any suggested changes or modifications to the agenda? Okay, seeing none; we'll consider that approved by consent.

APPROVAL OF PROCEEDINGS

CHAIR FEGLEY: You have the proceedings from the May, 2023 meeting in your materials. Are there any edits, modifications, changes? Okay, seeing none; I'll consider that approved by consent. Next on the agenda is Public Comment. I know we have in our materials one letter from a Jeffrey Pierce. I would encourage everybody to read that.

PUBLIC COMMENT

CHAIR FEGLEY: Is there any other public comment in the room? Okay, is there anybody online who would like to make public comment? All right, and again, I would just

encourage everybody to read the letter from the Alewife Harvesters of Maine, there is some really interesting information in there.

PROGRESS UPDATE ON RIVER HERRING BENCHMARK STOCK ASSESSMENT

CHAIR FEGLEY: Moving on from that, we're going to move right over to, Katie Drew is going to give us a progress update on the river herring benchmark.

DR. KATIE DREW: If you recall from our August meeting, we were at the August Board meeting about to go into our August assessment workshop for the river herring assessment. After the conclusion of that workshop at the end of August, the SAS felt that we needed additional time to complete this assessment, that our original schedule was to have the assessment peer reviewed at the end of this year, and then presented to the Board in February.

But based on we were at the end of August, we felt that was not a reasonable timeline to produce the best product. We are pushing the assessment deadline back one meeting cycle, so that now the assessment will be peer reviewed in February or March, so that it can be presented to the Board at the May meeting, instead of at the February meeting of next year. That's the major progress update for that. We continue to work forward on that, and that seems like I think right now we're going to make that deadline, but I'm happy to answer any questions about that schedule change, or anything else about the assessment if you still have questions.

CHAIR FEGLEY: Are there any questions for Dr. Drew on the assessment timeline shift? Okay, nice work. With that, we're going to move on.

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

CHAIR FEGLEY: James is going to give us the FMP Review and State Compliance, and again, I'll be looking for a motion at the end of this.

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

MR. JAMES BOYLE IV: I'm going to try to go through this relatively quickly, I know the time crunch. Here is an outline for the presentation. I'm going to start with a short reminder of historical landings over time, and then cover the 2022 fishing year specifically. I'll move on to some of the monitoring efforts in the Compliance Reports, including fish passage, stocking efforts and sturgeon bycatch interactions.

Finally, I'll end with the de minimis requests and recommendations from the Plan Review Team. First a very quick reminder of the historical context. This figure shows the trajectories of commercial landings for river herring and American shad since 1950. Starting in the 1970s, river herring landings fell drastically, and then steadily decreased over time.

For shad there has also been a steady decrease in landings over time, which is of course due in part to the moratorium implemented through Amendments 2 and 3. For this next slide we're just going to zoom in since the 1990s for a better view. If you look at the landings since 1990, there is more variations from river herring, and for shad you can see a general downward trend in landings since the '90s.

I will note that the river herring number needs to be updated, which I'll get into a little bit shortly. Moving on to 2022. Again, the river herring number needs to be corrected, but this table shows state landings and coastwide totals for shad and river herring, excluding confidential data. The river herring coastwide commercial landings, including bycatch, totaled about 2.8 million pounds, so we'll correct that.

The Maine number is about 2.6 million pounds that should be in that table, so that updates the numbers accordingly. The nonconfidential bycatch data values increased by 761 percent from 2021 to 3,865 pounds, although bearing in mind as we talked about the last FMP review, that only 451 pounds were reported last year.

Additionally, Massachusetts reported 27,558 pounds of combined shad and river herring bycatch data from NEFOP. For American shad, the total 2022 commercial landings, directed and bycatch included, reported in compliance reports was 110,027 pounds, which is a 44 percent decrease from landings of 2021.

Bycatch landings of shad also decreased 75 percent, and represent 8 percent of total landings. Reported hickory shad commercial landings were 98,962 pounds, which is a 0.5 percent decrease from 2021. Although bycatch landings increased by 40 percent, but they still represent only 3 percent of total landings. As part of the requirements in Amendments 2 and 3 for river herring and shad, respectively, passage counts are required on select rivers in Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, Pennsylvania, Maryland and South Carolina, 4.55 million river herring were counted, which represents a 2.4 percent increase compared to 2021, and 483,587 shad is a 27 percent increase compared to 2021. Though I will note that this is still excluding Pennsylvania's passage numbers, as I'll get into shortly.

In 2022, 14.64 million hatchery reared American shad fry were stocked in the Pawcatuck, Nanticoke, Choptank, Patapsco, Potomac, Edisto, and the Santee Rivers, which is a 10 percent decrease from 2021. Maine also continues to participate in trap and transfer stocking of adult pre-spawning alewife of wild origin on the Androscoggin River, although it's not included in the table in the document.

For sturgeon interactions in 2022, there were 49 reported interactions with three fatalities. However, New Jersey gillnetters report the weight of discarded sturgeon rather than the number of individuals, so they reported 653 pounds. Of those 49 interactions, 36 were identified as Atlantic sturgeon, and 13 as shortnose.

Rhode Island also reports NOAA NEFOP data and at-sea monitoring data, which is available after the compliance report deadline, so their data lagged by one year. In this compliance report for the 2022 fishing year, they reported 23 interactions in 2021,

and we will see the 2022 interactions in next year's compliance report in July.

For the upcoming fishing year, Maine, New Hampshire, Massachusetts and Florida have requested de minimis status to their American shad fisheries, and New Hampshire, Georgia and Florida request de minimis status for river herring. They all continue to meet the requirements and qualify for de minimis status, based on their commercial landings.

In evaluating the state compliance reports, the PRT noted some inconsistencies with the requirements in Amendments 2 and 3. First, the PRT did not receive a compliance report from Pennsylvania. Also, similarly last year, there are just a few longstanding issues that are related to funding and staffing shortages primarily, where a state either cannot complete a survey or can take samples and not process them, for example.

There were some other small inconsistencies with the compliance report template, such as not including a copy of the state's fishing regulations or a link to the regulations, or a section on hickory shad, which the PRT requests, even if that section is not applicable to that particular state.

With those minor issues, the PRT recommended approval for the compliance reports for 2022. Also, in this year's compliance reports, the PRT requested more detailed information on the sources of bycatch data, in response to the last FMP review. The results showed quite a wide variety of sources, included some states reporting that they had no information available. Therefore, the PRT is recommending the Board consider the inconsistency of bycatch reporting sources coastwide, and what its impact is on evaluating bycatch annually.

With that information, the action before the Board is to consider approval of the 2022 shad and river herring FMP Review, State Compliance Reports and de minimis status for Maine, New

Hampshire, Massachusetts, Georgia and Florida. With that I am happy to take any questions.

CHAIR FEGLEY: Excellent, thank you, James. Any questions on James' presentation? Questions from the Board. Okay, seeing none; does anybody have a motion around this? Anybody? Doug Grout.

MR. DOUGLAS E. GROUT: **I move to approve the shad and river herring Fishery Management Plan Review and State Compliance report for 2022**, and if you'll put up the list of states that requested de minimis, I'll be glad to list those.

CHAIR FEGLEY: I was waiting to see if you were going to be able to remember all that. While they're getting the motion up, is there a second? All right, Spud, Spud Woodward, thank you very much. Okay, we'll wait for the motion to come up.

MR. GROUT: **And de minimis requests for Maine, New Hampshire, Massachusetts, and Florida for shad and New Hampshire, Georgia and Florida for river herring for the 2022 fishing year.**

CHAIR FEGLEY: Okay, I think that looks about right. We have a motion on the board, is there any discussion about this? Okay, I'm going to read it into the record really quick. **Move to approve the shad and river herring Fishery Management Plan Review and State Compliance Reports and De Minimis requests from Maine, New Hampshire, Massachusetts and Florida for American shad, and New Hampshire, Georgia and Florida for river herring for the 2022 fishing year.**

Motion by Mr. Grout, second by Mr. Woodward. **Is there any objection to this motion? All right, seeing none; this motion is approved by consent, thank you very much.**

ADJOURNMENT

CHAIR FEGLEY: With that we're going to go right on to Other Business. Does anybody have any other business to bring before the Board? Okay, seeing none; unless there is an objection, I would move to

adjourn this meeting. It's been a long day,
thank you, everyone.

(Whereupon the meeting adjourned at 5:01
p.m. on October 16, 2023)

Atlantic States Marine Fisheries Commission

ISFMP Policy Board

January 25, 2024

8:30 – 10:30 am

Hybrid Meeting

Draft Agenda

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

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

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

MEETING OVERVIEW

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

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

2. Board Consent

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

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

4. Executive Committee Report (8:45- 9:00 a.m.) Action

Background

- The Executive Committee will meet on February 1, 2023
- The Legislative committee will present a draft a letter of support (**supplemental materials**) for establishing a federal working waterfront grant program. Rep. Pingree and Sen. Collins have introduced two bills ([H.R. 6641](#) and [S. 3180](#) respectively) that would do this, but they differ in sections.

Presentations

- J. Cimino will provide an update of the Executive Committee’s work
- A. Law will present the draft letter of support for establishing a federal working waterfronts grant program

Board action for consideration at this meeting

- Consider approval of the federal working waterfronts grant program letter

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

Background

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

Presentations

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

Board discussion for consideration at this meeting

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

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

Background

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

Presentations

- Staff will present changes to the species declared interest

Board action for consideration at this meeting

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

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

Background

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

Presentations

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

Board action for consideration at this meeting

- None

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

Background

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

Presentations

- Staff will present and overview of the NEFSC white paper

Board action for consideration at this meeting

- None

9. Review Non-Compliance Findings, if Necessary Action

10. Other Business

11. Adjourn

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
ISFMP POLICY BOARD**

**Beaufort Hotel
Beaufort, North Carolina
Hybrid Meeting**

October 19, 2023

These minutes are draft and subject to approval by the ISFMP Policy Board.
The Board will review the minutes during its next meeting.

TABLE OF CONTENTS

Call to Order, Chair Spud Woodward1

Approval of Agenda1

Approval of Proceedings from July 11, 2023 and August 3, 2023.....1

Public Comment1

Executive Committee Report1

Consider Approval of Revised Conservation Equivalency Policy and Technical Guidance Document3

NOAA Fisheries Update on North Atlantic Right Whale Funding from the Inflation Reduction Act 18

Committee Updates 20

 Assessment Science Committee 20

 Law Enforcement Committee 21

 Atlantic Coastal Fish Habitat Partnership 22

 Habitat Committee 23

Other Business..... 25

 Bigelow Trawl Survey..... 25

 Pot Fishery Effort 25

Adjournment 26

These minutes are draft and subject to approval by the ISFMP Policy Board.
The Board will review the minutes during its next meeting.

INDEX OF MOTIONS

1. **Approval of agenda** by Consent (Page 1).
2. **Approval of Proceedings of July 11, 2023 and August 3, 2023 Meeting** by Consent (Page 1).
3. **Move to delete “come from a period of high availability” from the closed period guidance of the document. The new sentence would read: Any closed period must include at least two consecutive weekend periods (Friday, Saturday and Sunday** (Page 8). Motion by Justin Davis; second by Doug Haymans. Motion passes by unanimous consent (Page 10).
4. **Main Motion**
Move to approve the 4th option for inclusion in the document for when CE is not allowed (Page 10). Motion by Jason McNamee; second by John Clark. Motion amended.

Motion to Amend
Move to amend to replace 4th with 3rd option (Page 11). Motion by Chris Batsavage; second by Shanna Madsen. Motion passes (12 in favor, 5 opposed) (Page 14).

Main Motion as Amended
Move to approve the 3rd option for inclusion in the document for when CE is not allowed.

Motion to Amend
Motion to amend to add “depleted” (Page 15). Motion by Justin Davis; second by Raymond Kane. Motion passes with one opposition (Page 16).

Main Motion as Amended
Move to approve the 3rd option for inclusion in the document for when CE is not allowed. The new Option 3 reads: CE is not permitted if the stock is overfished or depleted, unless allowed by board via 2/3 majority vote (the rules on voting in Article II. Section 1. apply) (Page 16). Motion passes (Page 16).
5. **Main Motion**
Move to approve Option 1 for non-quantifiable measures (Page 16). Motion by Doug Grout; second by Jason McNamee. Motion substituted.

Motion to Substitute
Move to substitute for Option 2 (Page 16). Motion by Erika Burgess; second by Ben Dyar. Motion fails (6 in favor, 11 opposed) (Page 17).

Main Motion
Move to approve Option 1 for non-quantifiable measures. Motion passes with on opposition (Page 17).
6. **Move to approve the Conservation Equivalency: Policy and Technical Guidance Document as modified today** (Page 18). Motion by Lynn Fegley; second by Ingrid Braun. Motion carries by unanimous consent (Page 18).
7. **Move to approve the Fish Habitats of Concern Document** (Page 24). Motion by John Clark; second by Malcolm Rhodes. Motion carries by unanimous consent (Page 24).

8. **Move that the Commission supports the New England and Mid-Atlantic Fisheries Management Council’s request for information on an industry-based survey and the Commission send a similar letter requesting the NEFSC completes a white paper by January 12, 2024 outlining an industry-based survey that is complementary to the Spring and Autumn bottom trawl survey for the Commission and Councils** (Page 25). Motion by Eric Reid; second by Raymond Kane. Motion passes by unanimous consent (Page 25).
9. **Move to adjourn** by Consent (Page 26).

ATTENDANCE

Board Members

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

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

Staff

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

Guests

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

These minutes are draft and subject to approval by the ISFMP Policy Board.
The Board will review the minutes during its next meeting.

Guests (continued)

Erin Schnettler, NOAA
Alexandra Schwaab, AFWA
Christopher Scott, NYS DEC
Ethan Simpson, VMRC
Melissa Smith ME DMR

Somers Smott, VMRC
Scott Travers, RI Saltwater
Anglers Assn.
Troy Tuckey, VIMS
Mike Waine, ASA

Shelby White, NC DMF
Kelly Whitmore, MA DMF
Chris Wright, NOAA
Daniel Zapf, NC DEQ
Erik Zlokovitz, MD DNR

These minutes are draft and subject to approval by the ISFMP Policy Board.
The Board will review the minutes during its next meeting.

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

CALL TO ORDER

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

APPROVAL OF AGENDA

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

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

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

APPROVAL OF PROCEEDINGS

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

PUBLIC COMMENT

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

have any public comment.

EXECUTIVE COMMITTEE REPORT

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

All three issues will significantly impact our management process, and our success in addressing them, allowing our ability to be open and honest

about the issues before us, and to seek solutions that are best for both the sustainability of the resource under our care, and the communities that depend on them.

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

CONSIDER APPROVAL OF REVISED CONSERVATION EQUIVALENCY POLICY AND TECHNICAL GUIDANCE DOCUMENT

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

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

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

We started off from a task from the Executive

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

DR. JASON McNAMEE: Thank you, Mr. Chair. Yes, Toni, the only question I had, I was thinking about the high availability are kind of subjective still, so I'll offer you how I interpret that. My concern is, you know if you put a closed period in, it might not be the

highest wave, let's say, but it has harvest in it that is relatively high for the year. That would be my interpretation of that. Is that what you think as well?

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

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

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

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

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

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

MR. DANIEL MCKIERNAN: My question follows up on

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

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

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

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

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

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

DR. McNAMEE: Yes, just to clarify. I think it is a goal of MRIP to get there. When that happens, I am not sure, given all of the things that they are trying to do. But to your point, Dan, I think there is still a need to, I think it gets better. You know you can be a little more refined a month with that. But you still have,

there have been in the past people trying to put in conservation equivalencies where they are like kicking off, like a couple of days, and then they sort of spread them out. I think that's what this is trying to avoid. I think there is still a need.

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

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

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

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

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

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

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

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

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

MR. BLANCHARD: The longer the duration the better.

CHAIR WOODWARD: All right, Erika.

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

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

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

then I'll come back to that.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

exactly where I was so that's fine.

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

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

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

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

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

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

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

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

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

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

CHAIR WOODWARD: Ray Kane.

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

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

I would just say, if we start getting into that type of nitty gritty of the document, it would be very, I don't know. We're going to start spinning our wheels here

a little bit. But Kurt can discuss the enforcement of those things. But we didn't get into retention versus no targeting at all, when we were discussing this as the Management Science Group, it was just about closed periods, period.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

CHAIR WOODWARD: All right, Jason.

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

CHAIR WOODWARD: I say make your motion.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

CHAIR WOODWARD: All right, Jason.

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

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

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

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

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

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

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

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

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

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

Then any CE program the board would need to work with that state to end those programs, and put new

measures in for that state at that time. It wouldn't be like immediate, must change everything right away. You would have to work through that process to bring those CE plans back to whatever is the standard of the FMP.

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

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

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

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

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

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

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

But I support Option 3, and I really like the idea of

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

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

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

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

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

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

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

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

MR. MILLER: Mr. Chair, I wonder if I might ask. If Option 3 were to pass, or perhaps even Option 4 as well. What happens to grandfathered conservation equivalency measures? I thinking of striped bass, for instance, where we have some grandfathered

conservation equivalency for an overfished stock. If someone could answer that for me, then it might color how I would vote on Option 3 or 4.

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

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

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

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

CHAIR WOODWARD: Okay, Lynn.

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

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

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

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

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

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

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

CHAIR WOODWARD: All right, John.

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

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

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

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

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

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

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

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

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

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

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

CHAIR WOODWARD: All right, Erika and then Chris.

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

leaving it with the previous motion is better than adding depleted or unknown.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

right, so that motion carries, so in the document going forward it will be Option 3 under that section. Ready to move on to the next one?

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

CHAIR WOODWARD: Doug, go ahead.

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

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

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

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

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

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

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

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

CHAIR WOODWARD: Further discussion, Erika.

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

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

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

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

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

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

CHAIR WOODWARD: Doug Grout and Jason.

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

CHAIR WOODWARD: Jason.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

activities that are going on.

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

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

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

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

were getting out in front on coordinating all the passive acoustic work that is going to be going on.

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

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

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

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

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

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

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

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

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

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

Just ask yourselves the questions, Board members. What can the Commission do right now to increase the menhaden coming into the Virginia Bay by at least 50,000 tons? Ask yourself the question, am I don't everything right now that is necessary to make

sure the Chesapeake Bay experience for our people and our children is the best it can be.

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

Is abandoning Amendment 3 and the ERP science the direction that this Policy Board wants to go? Isn't this situation so important that this Board right now can direct the staff to look into the cause of this catastrophe with the reproduction of striped bass. The cause shouldn't be too hard to figure, your ERP science defines it.

Really the question is, holistically, not quantitatively, how do you effectively reduce that harvest in Chesapeake Bay? I think the staff could give you some very clear options. I appreciate your giving me this time, but isn't this such a question that the staff could give you those options within a week or so, they are pretty obvious, and the Striped Bass Board, the Menhaden Board, isn't this important enough that they could have a special meeting within the next 30 days, and take some action.

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

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

COMMITTEE UPDATES

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

ASSESSMENT SCIENCE COMMITTEE

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

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

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

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

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

LAW ENFORCEMENT COMMITTEE

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

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

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

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

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

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

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

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

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

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

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

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

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

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

which was oversized.

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

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

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

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

ATLANTIC COASTAL FISH HABITAT PARTNERSHIP

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

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

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

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

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

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

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

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

than the classic Word document.

HABITAT COMMITTEE

MR. KAALSTAD: Moving on to the Habitat Committee. We met on Wednesday and today, and yesterday morning actually, I forgot to include this, Todd Miller gave us all a tour of the North River Wetlands Preserve, and we got to see one of the sites that actually helped fund for the Dunna Marsh Project, and it's beautiful out there, and they are doing really well.

If you ever have a chance, go check it out. But yes, Habitat Committee, we met on Wednesday and Thursday. We discussed the Habitat Hotline. Conversations surrounding maybe changing up the format, figuring out what topics we need, but most importantly there is a need to follow up with you all, and the broader audience, to kind of figure out what the most applicable content for that publication is.

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

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

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

The destinations for these fish habitats of concern

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

OTHER BUSINESS

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

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

BIGELOW TRAWL SURVEY

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

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

One alternative under development is using industry vessels to complement, not replace but complement, the current survey. New England and the Mid-Atlantic both passed similar motions at their last meeting, and I'm really looking for a unified position of support from all three management

bodies on the east coast, and I'm happy to read this motion for the record whenever you're ready, Mr. Chair.

CHAIR WOODWARD: Go ahead, Eric.

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

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

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

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

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

POT FISHERY EFFORT

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

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

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

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

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

CHAIR WOODWARD: Toni, do you have?

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

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

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

We will e-mail out the information on the webinar

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

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

ADJOURNMENT

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

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

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

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



Atlantic States Marine Fisheries Commission

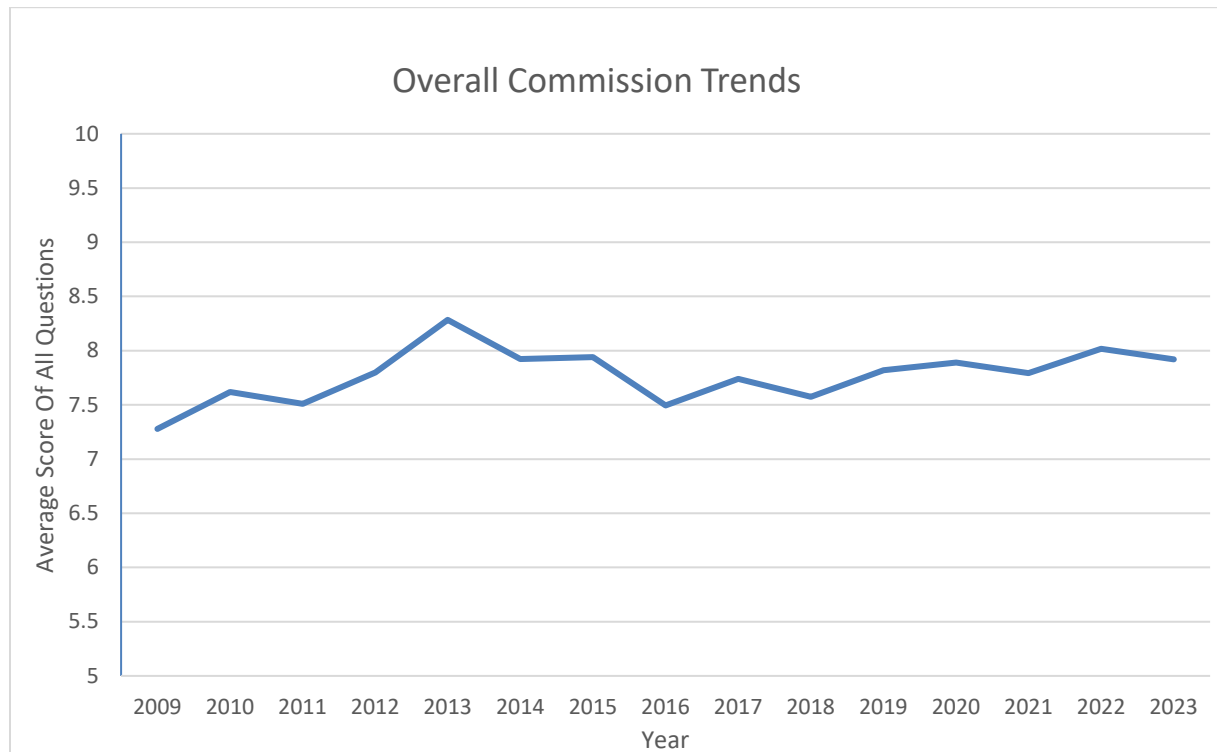
1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • www.asmfc.org

MEMORANDUM

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

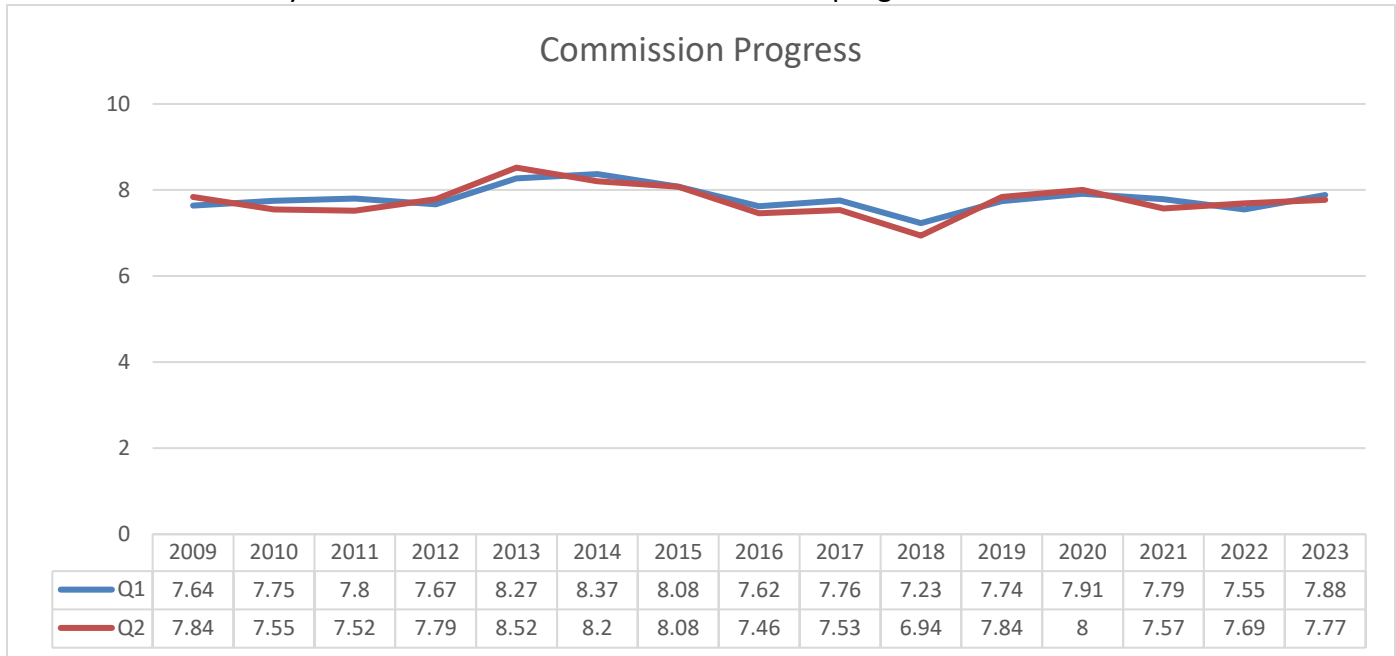
33 Commissioners and Proxies completed the 2023 ASMFC Commissioner Survey, which is based on the Commission's 2019-2023 Strategic Plan. Questions 1-16 prompted respondents to rate their answers on a scale of 1 to 10 (ten-point Likert scale) and questions 17-21 prompted respondents to provide a written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

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



Commission Progress

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



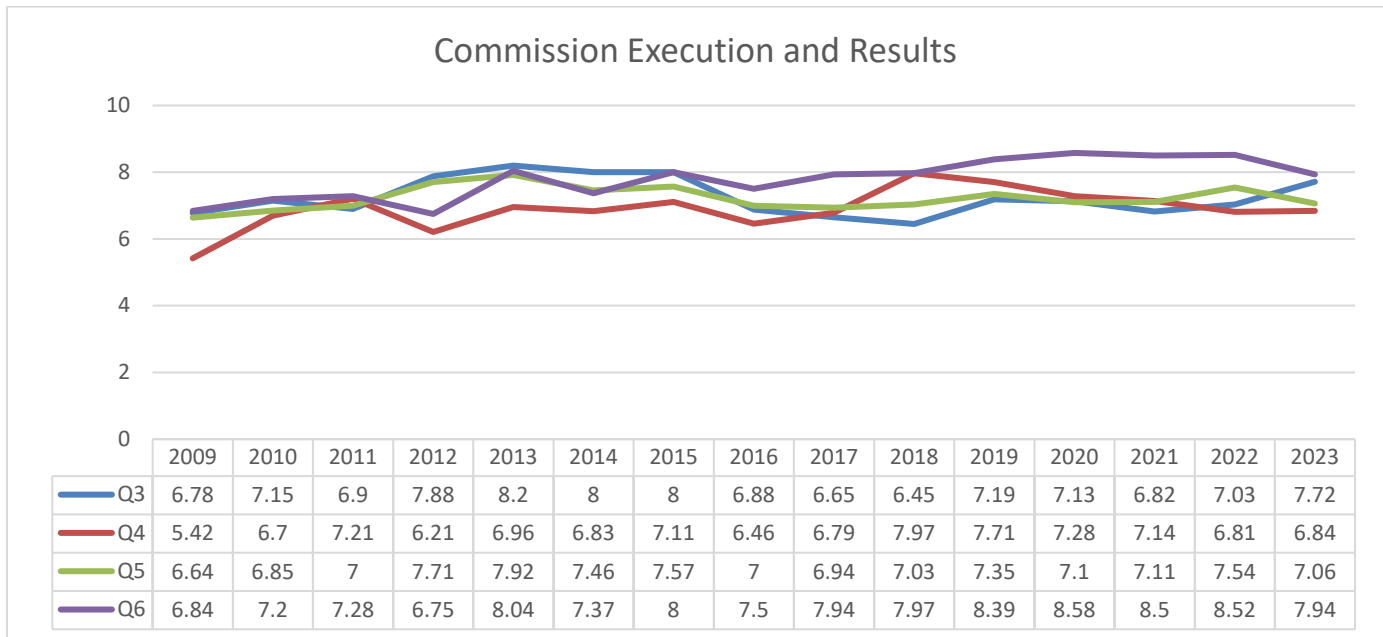
Commission Execution and Results

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

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

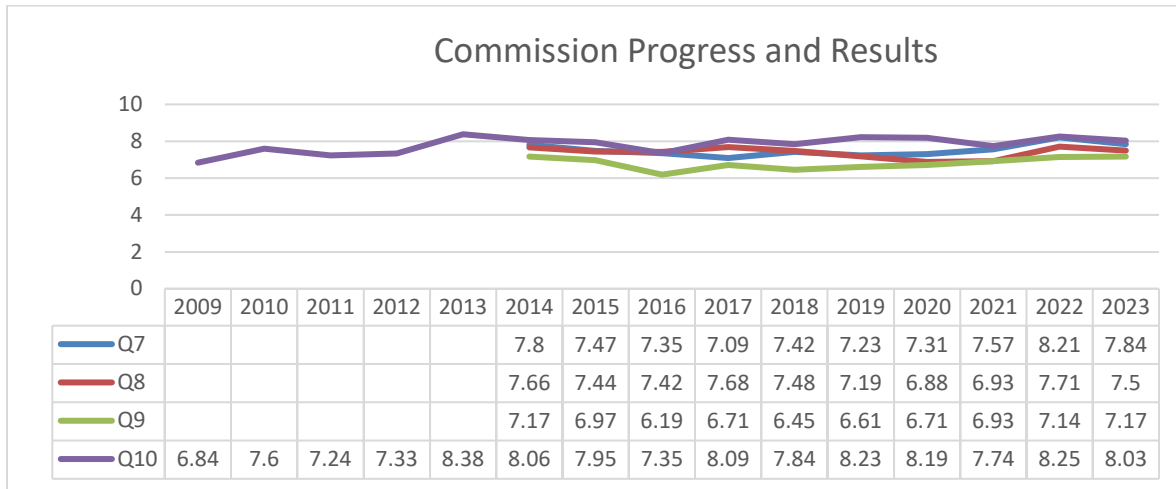
5. How satisfied are you with the Commission's working relationship with our constituent partners (commercial, recreational, and environmental)?

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



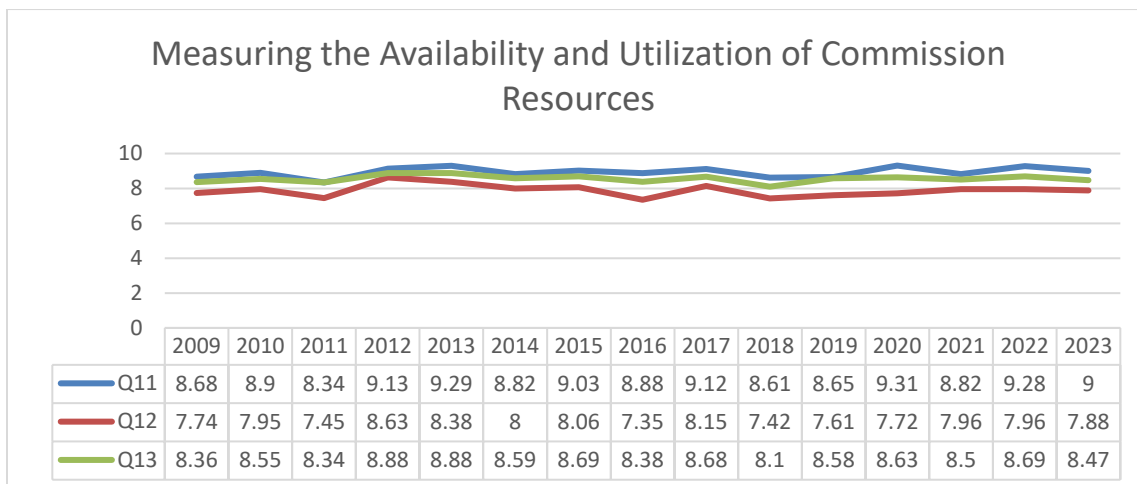
Commission Progress and Results

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



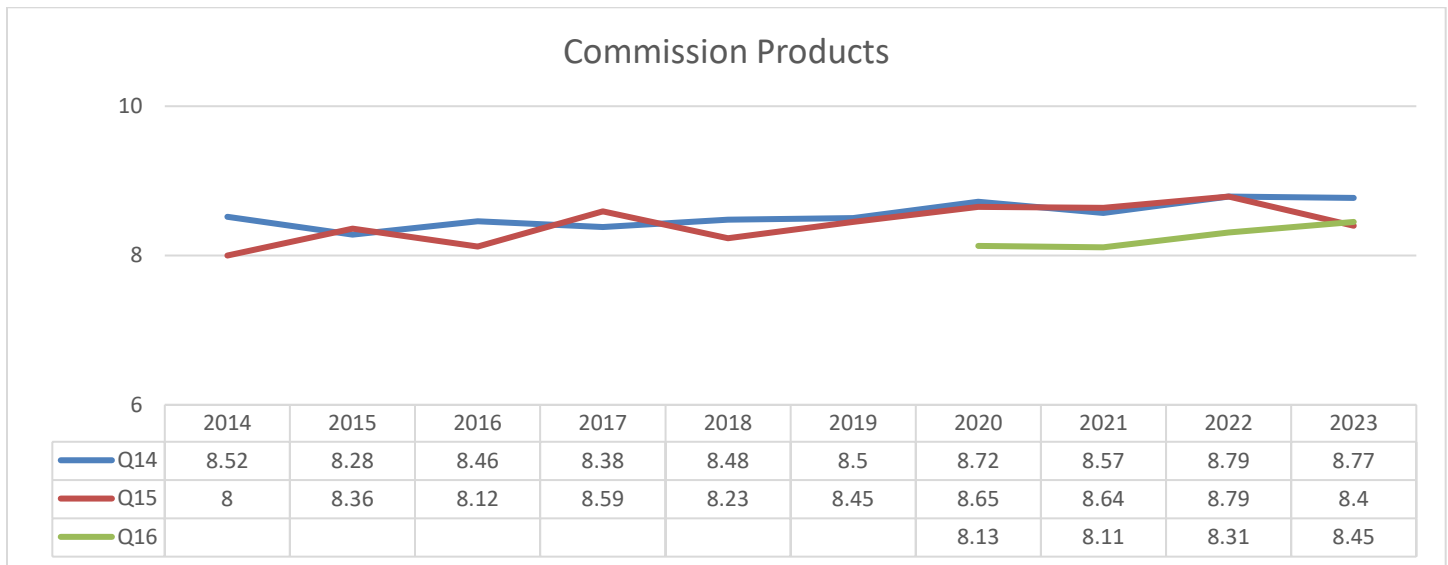
Measuring the Availability and Utilization of Commission Resources

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



Commission Products

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



Highlights of the Ten-Point Scale Questions:

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

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

Discussion Question Summaries

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

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

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

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

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

Additional comments (Q21)

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

Unabridged Answers to Questions 17-20

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

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

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

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

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

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

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

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

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

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

currently doesn't work as witnessed by the 12 year lag in some regulations. I think we need a different model or context that allows simultaneous development of FMP, particularly on the lobster issue in order to avoid significant implementation delays

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

Q21 Additional comments.

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

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

ATLANTIC STATES MARINE FISHERIES COMMISSION
STATE DECLARATION OF INTERESTED BY SPECIES – February 2021

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

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Marine Resources

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

November 6, 2023

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

Dear Mr. Beal,

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

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

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

Additionally, studies have shown that the suitable habitat for cobia is shifting northward. In 40 years it is projected that the waters off New Jersey will have the most suitable habitat for cobia in the summer¹. As coastal waters continue to warm, we can expect to see growth of cobia fisheries north of Virginia. Cobia may also spawn within estuaries and bays further north as the timing and spatial extent of cobia migration patterns shift and spawning habitat changes¹.

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

Sincerely,

Martin L. Gary, Director
NYSDEC Division of Marine Resources

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



Tina Berger

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

From: Phil Zalesak <flypax@md.metrocast.net>

Sent: Thursday, January 4, 2024 12:18 PM

To: Robert Beal <Rbeal@asmfc.org>

Cc: Conor McManus <conor.mcmanus@dem.ri.gov>; David Reed <david@chesapeakelegal.org>; Dale William Neal <dalewilliamneal@gmail.com>; Ron Smith <smitty3894@aol.com>; Joe Thorpe <jthorpe@umm.edu>; MICHAEL ACADEMIA <macademia@email.wm.edu>; KEN SCHULTZ <ken@kenschultz.com>; ROMARIC MONCRIEFFE <romaric.moncrieffe@audubon.org>; tomburkett@virginia.edu; 'Brian Collins' <brian.c1@me.com>; Bradley Bell <bellmarineservices@gmail.com>; Dr. Steven Zalesak <stzalesak@gmail.com>; Battista91@yahoo.com; 'Sal Icaza' <marylandospreyfestival@gmail.com>; juliekazz@comcast.net; ospreycbva@gmail.com; JEREMY COX <jcox@bayjournal.com>; THOMAS LILLY <foragematters@aol.com>; JON HURDLE <jonhurdle@gmail.com>; wsmckeever@gmail.com; George Scocca <george@nyangler.com>; Manasquantaxi@gmail.com; Floyd Warren <fdwarren@md.metrocast.net>; Rick Herdon <rzherndon@gmail.com>; Steve Fagan <steven.fagan60@icloud.com>; PHILIP ZALESAK <flypax@md.metrocast.net>; debbiescampbell@comcast.net; Christi Medice <cmedice10@gmail.com>; Bert Olmstead <boatman5@ymail.com>

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

Bob,

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

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

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

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

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

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

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

Regards,

Phil

PS – Teammates, please weigh in as required

From: Robert Beal [<mailto:Rbeal@asmfc.org>]

Sent: Thursday, January 4, 2024 10:08 AM

To: PHILIP ZALESAK

Cc: Conor McManus

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

Good Morning Phil,

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

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

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

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

Please note the public comment timeline in the preliminary meeting notice at the following link:

https://asmfc.org/files/2024WinterMeeting/2024WinterMtgFirstNotice_PreliminaryAgenda.pdf [asmfc.org]

Regards,
Bob

From: Phil Zalesak <flypax@md.metrocast.net>

Sent: Tuesday, January 2, 2024 8:41 AM

To: Conor McManus <conor.mcmanus@dem.ri.gov>

Cc: Robert Beal <Rbeal@asmfc.org>; Dennis Abbott <swamper199@gmail.com>; PHILIP ZALESAK <flypax@md.metrocast.net>; Floyd Warren <fdwarren@md.metrocast.net>; Rick Herdon <rzherndon@gmail.com>; Steve Fagan <steven.fagan60@icloud.com>; David Reed <david@chesapeakelegal.org>

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

Chairman Conor McManus,

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

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

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

Thanks for your help.

Very Respectfully,

Phil Zalesak (240-538-3626)

President

Southern Maryland Recreational Fishing Organization

Corporate Facebook Page: <https://www.facebook.com/profile.php?id=61552422541232>

Membership Facebook Page: <https://www.facebook.com/groups/598428253621775>



CHESAPEAKE
LEGAL ALLIANCE



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

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

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

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

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

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

TABLE OF CONTENTS

BACKGROUND.....	3
FORAGE FISH: CRITICAL FOOD WEB LINKS.....	3
ATLANTIC MENHADEN.....	4
Ecosystem and human values.....	4
Industrial menhaden fisheries.....	5
Menhaden and the Chesapeake Bay.....	8
Signs of concern: menhaden.....	9
Signs of concern: other species.....	10
Economic impacts.....	15
APPLICATION OF PRECAUTIONARY MEASURES.....	17
PRECAUTIONARY CATCH LIMITS.....	18
Recommendation 1:.....	18
Recommendation 2:.....	19
OTHER PRECAUTIONARY MEASURES.....	23
Recommendation 3:.....	23
Recommendation 4:.....	28
Recommendation 5a:.....	29
Recommendation 5b:.....	30
Recommendation 5c:.....	31
CONCLUSION.....	34
REFERENCES.....	37

BACKGROUND.

FORAGE FISH: CRITICAL FOOD WEB LINKS.

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

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

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

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

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

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

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

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

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

ATLANTIC MENHADEN.

Ecosystem and human values.

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

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

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

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

- Annual commercial harvests by the reduction fleet often top 1 billion pounds per year, and are concentrated in the Chesapeake Bay, a key nursery to menhaden and foraging ground for many of its predators; and,
- There are concerns related to the health of the menhaden population (e.g., diminished geographic distribution, average size-at-age, and age-to-maturity) and their dependent predators.

Industrial menhaden fisheries.

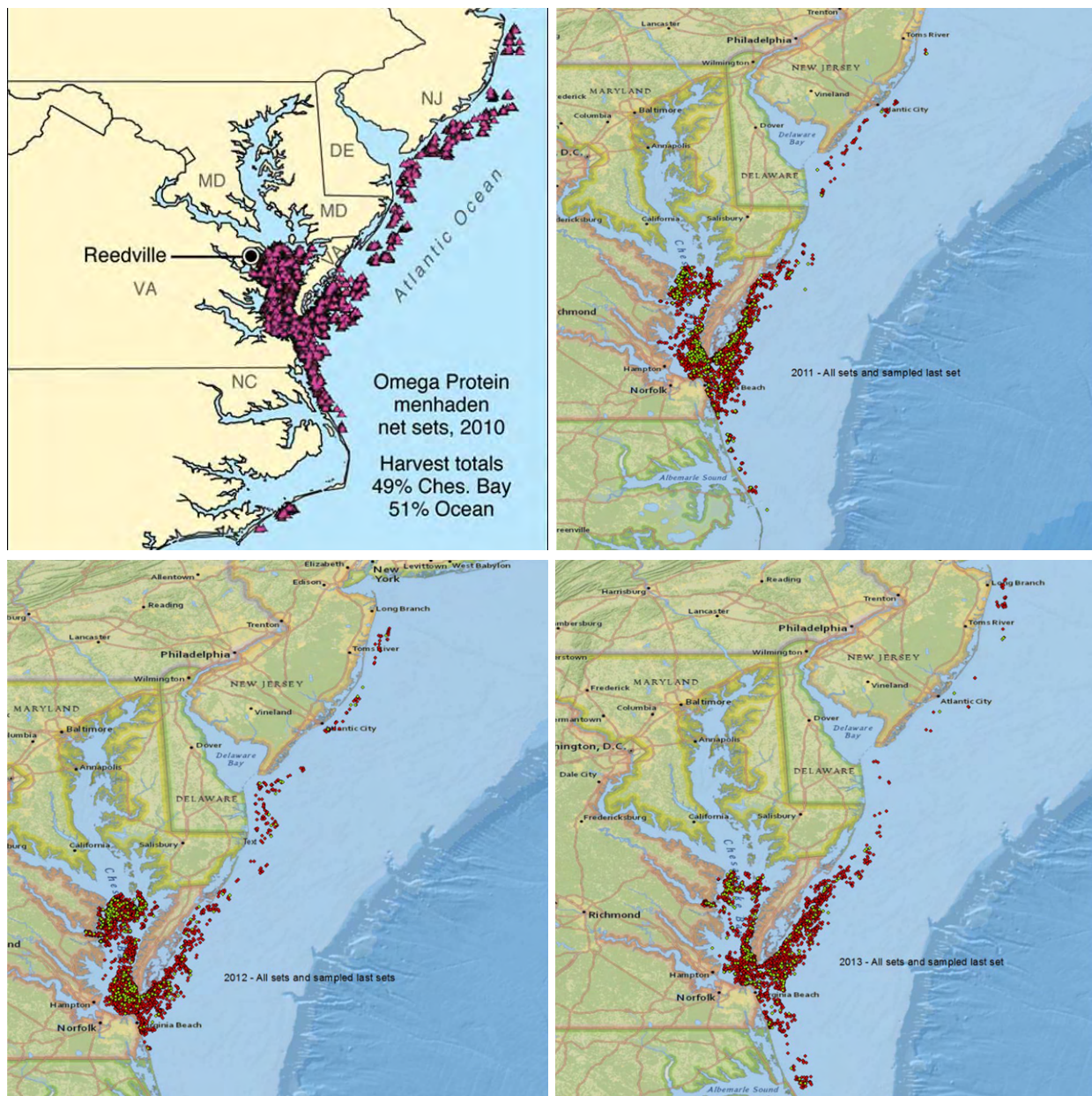
The Atlantic menhaden commercial fishery consists of a purse-seine reduction sector, which captures fish to produce fish meal and oil, and a bait sector that provides bait to support other commercial and recreational fishing. The management mechanisms in place for Atlantic menhaden are primarily governed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

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

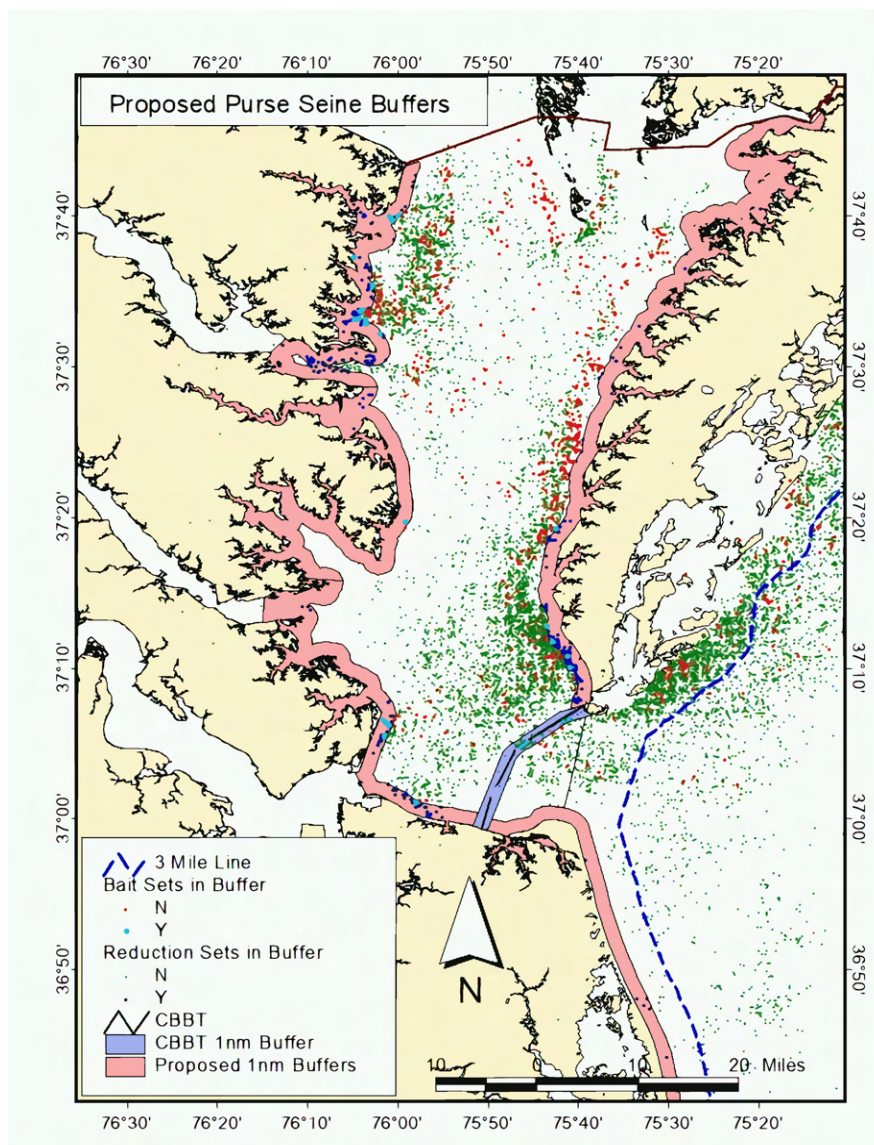
Distribution of menhaden fishing activity.

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

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



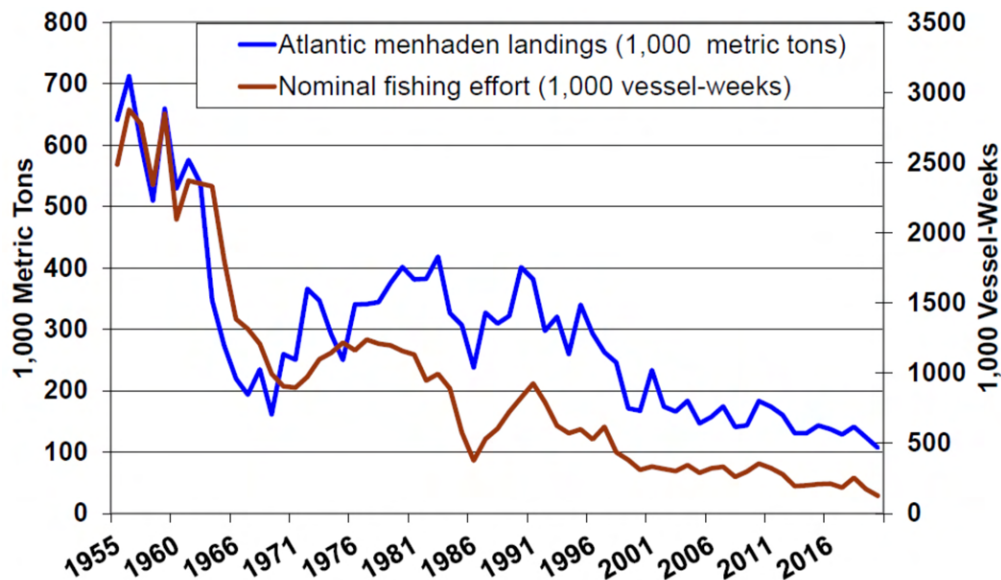
Sources: Top left: Joseph Smith, NOAA Fisheries (2011);
Top right to bottom right: Figures 4.1.3.4.1 - 4.1.3.4.3 in
(SouthEast Data, Assessment, and Review, 2015). Images cover the years 2010-2013.



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

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

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



Source: (GlobalTRUST, 2023)

Menhaden and the Chesapeake Bay.

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

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

Signs of concern: menhaden.

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

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

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

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

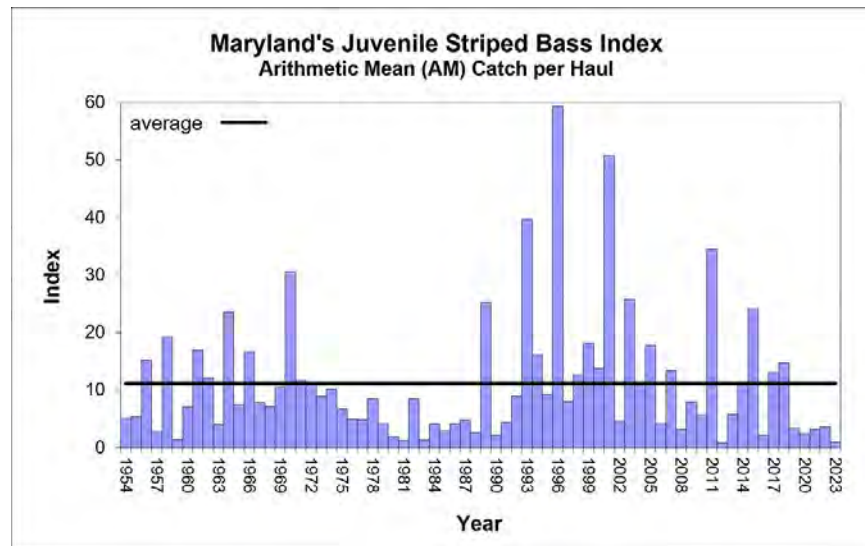
We request a response from VMRC regarding the foregoing conclusion that the menhaden fishery has and continues to experience declines within the Chesapeake Bay region, including the justification and analyses for any responsive actions or inaction.

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

Signs of concern: other species.

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

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



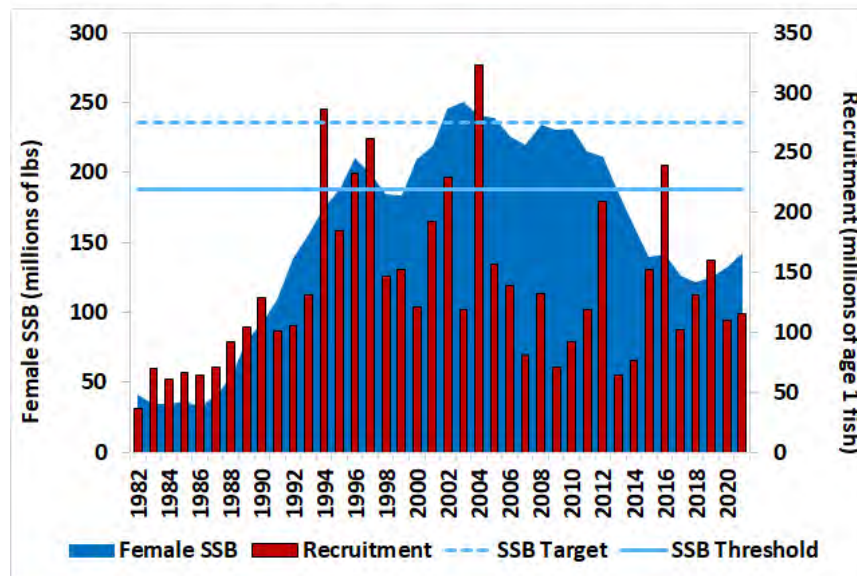
Source: (Maryland Department of Natural Resources, 2023a)

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

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

Atlantic Striped Bass Female Spawning Stock Biomass and Recruitment

Source: Atlantic Striped Bass Stock Assessment Update, 2022



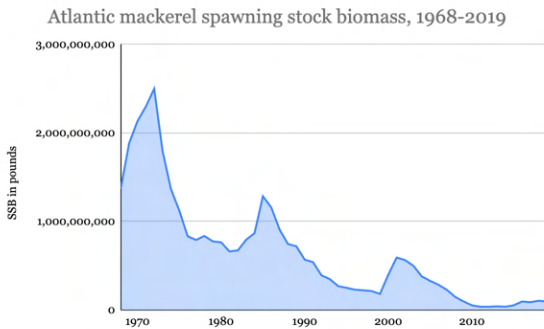
Source: (Atlantic States Marine Fisheries Commission, 2022)

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

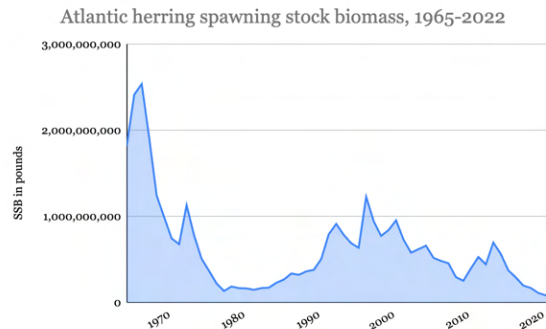
Other forage fish. Along the Atlantic coast, evidence shows that other forage fish populations have suffered steep declines, measured both by their declining population levels and harvests. Some of these species have historically been the focus of large-scale commercial fishing operations, while others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

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

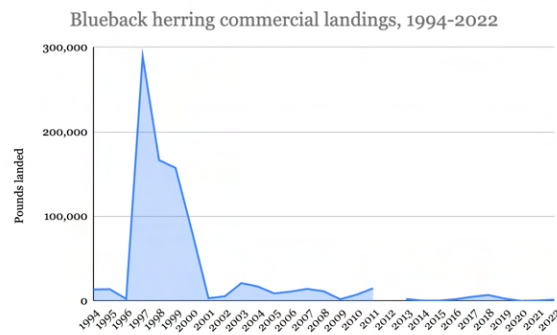
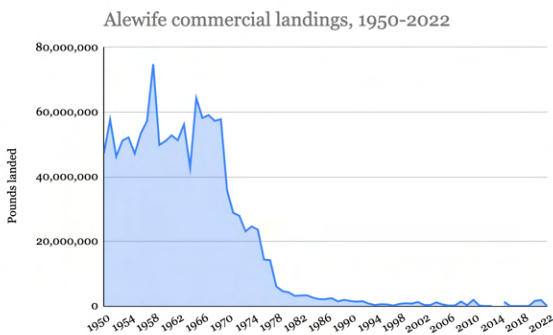
**Atlantic mackerel (*Scomber scombus*):
overfished & overfishing ([Source](#))**



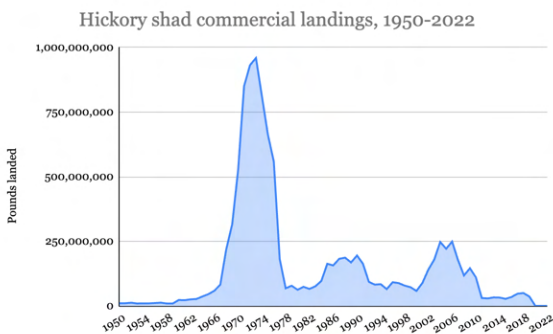
**Atlantic herring (*Clupea harengus*):
overfished ([Source](#))**



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



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



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

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

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

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

Economic impacts.

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

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

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

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

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

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

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

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

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

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

APPLICATION OF PRECAUTIONARY MEASURES.

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

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

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

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

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

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

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

PRECAUTIONARY CATCH LIMITS.

Recommendation 1: Establish a moratorium within the Chesapeake Bay.

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

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

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

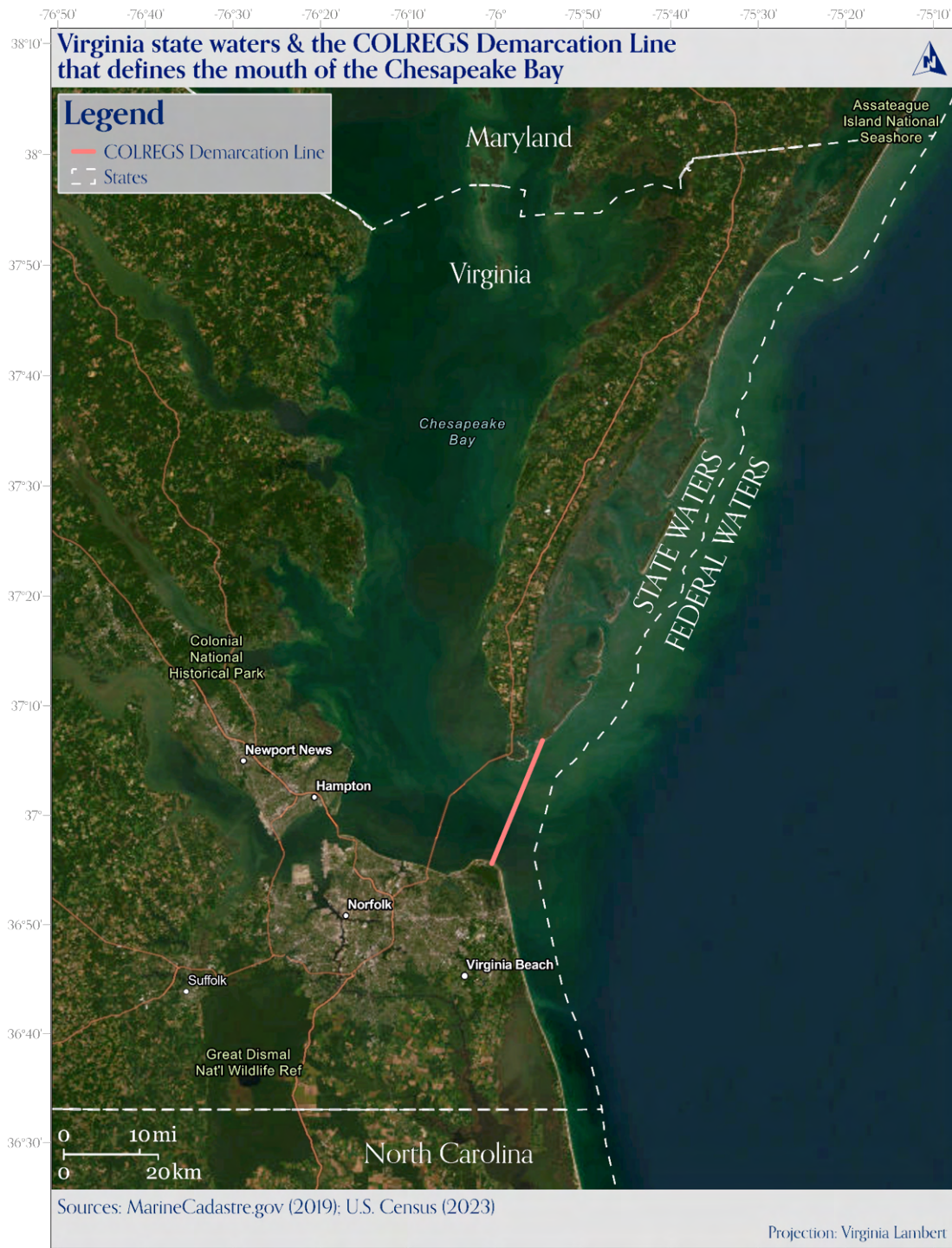
Chesapeake Bay extending to the COLREG Demarcation Line that separates the Chesapeake Bay entrance from the Atlantic Ocean (33 CFR 80.510, Chesapeake Bay Entrance, VA). This reduction should remain in force unless and until reliable, methodologically sound, Bay-wide estimates of menhaden stock abundance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

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

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

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

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



Justification.

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

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

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

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

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

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

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

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

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

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

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

OTHER PRECAUTIONARY MEASURES.

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

Recommendation 3:

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

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

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

Justification.

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

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

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

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

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

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

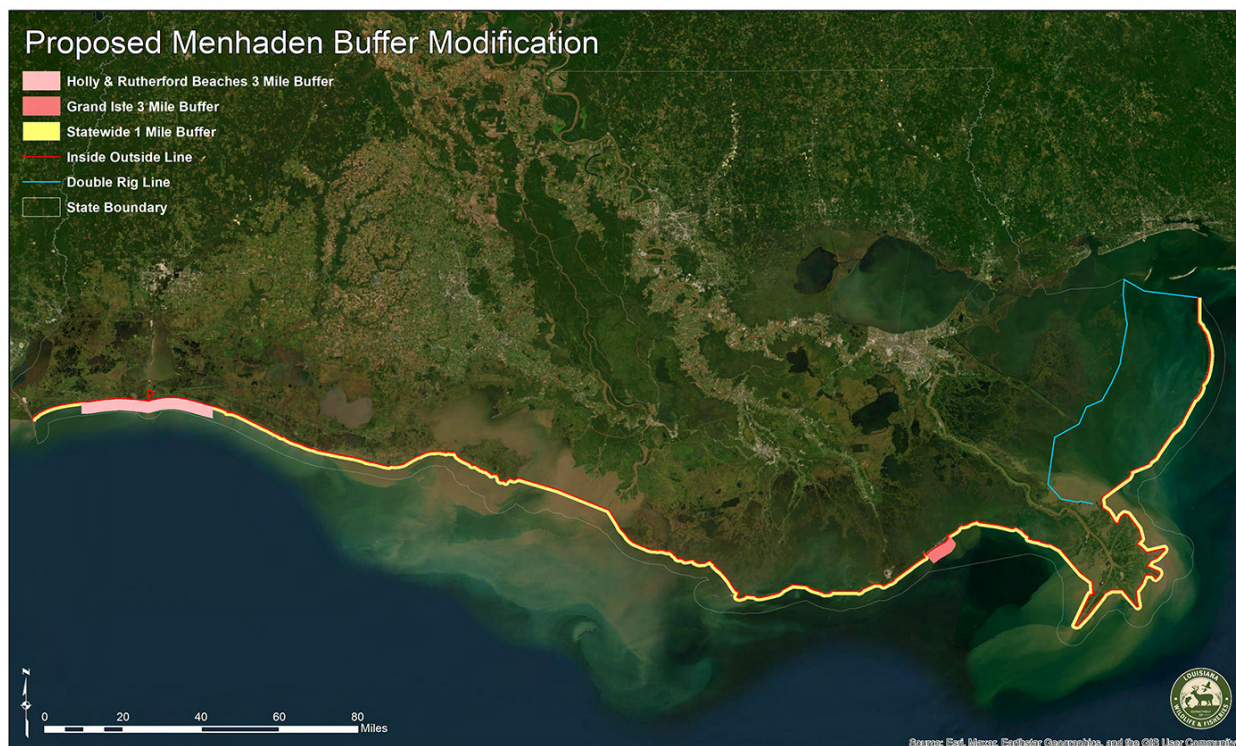
- “Omega Protein takes responsibility for some of the fish on Eastern Shore beach that enraged residents” (WAVY TV 10, 2022)
- “From 2010: Fishing company spills 50,000 fish, washing up on beaches” (13News Now, 2021)
- “Special Investigation: Huge menhaden haul, a controversial catch” (WAVY TV 10, 2015)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

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

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

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

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



Source: (LeBreton, 2023)

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

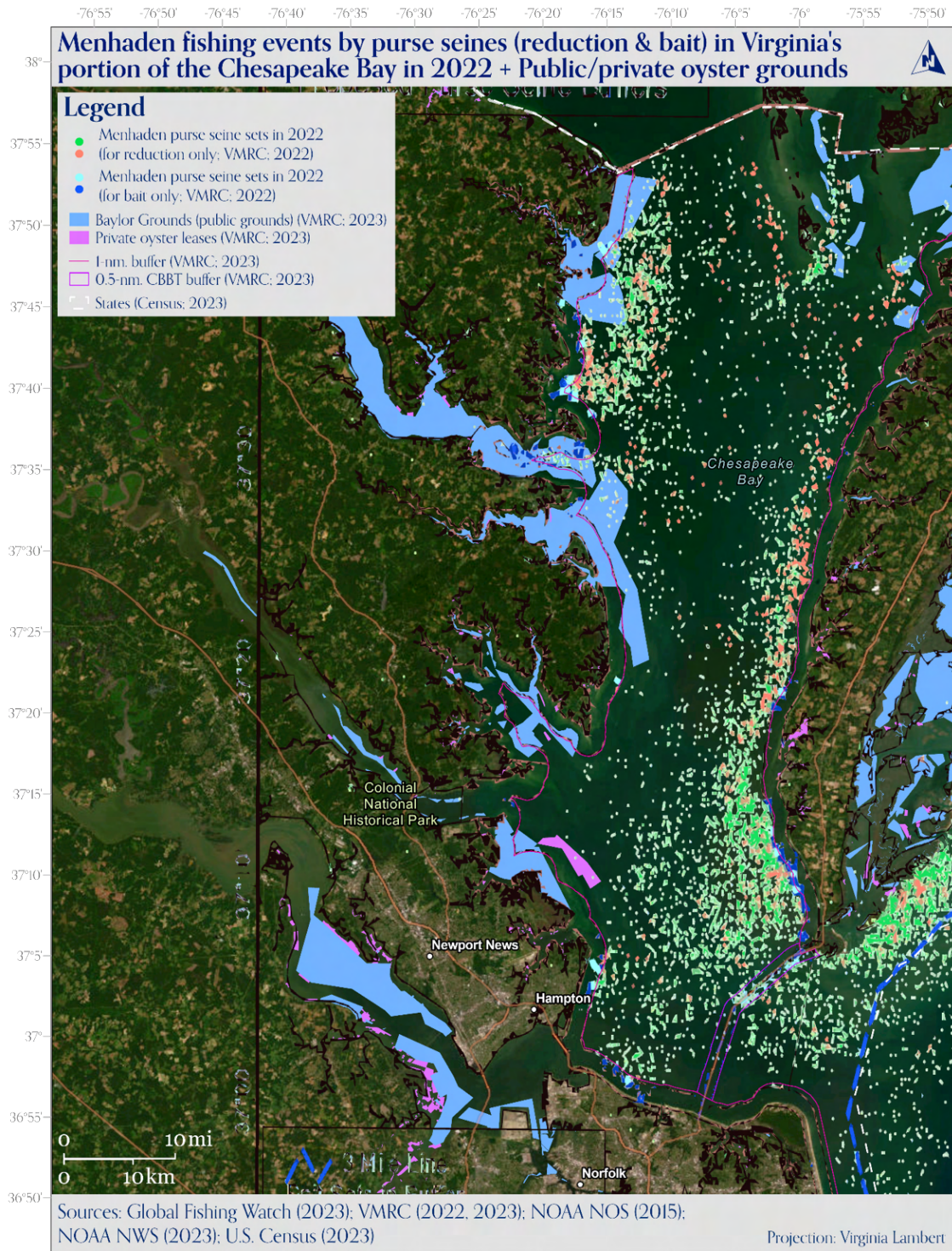
Virginia code § 28.2-314 prohibits any individual from catching fish, shellfish, or marine organisms using a trawl net, drag net, or similar device pulled through the waters by a boat or other craft. It also forbids buying, selling, or attempting to sell any fish captured with a trawl or drag net or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

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

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

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

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



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

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

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

Justification.

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

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

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

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

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

Recommendation 5a:

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

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

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

Justification.

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

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

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

Justification.

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

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

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

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

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

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

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

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

Justification.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

CONCLUSION.

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



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



David Reed, Executive Director
Chesapeake Legal Alliance
David@chesapeakelegal.org

Phil Zalesak, President
Southern Maryland Recreational Fishing
Organization
SMRFO2021@gmail.com



Dale William Neal, Senior Editor, Save
Our Menhaden



Julie Kacmarcik, Conservation Chair,
Richmond Audubon Society



Ron Smith, President, Atlantic Coast
Sportfishing Association



Remy Moncrieffe, Policy Manager,
Marine Conservation, National
Audubon Society



Joe Thorpe, Managing Editor,
Chesapeake Bay Sportfishing
Association



Joanie Millward, Executive Director of
the Virginia Osprey Foundation,
Colonial Beach, Virginia

Michael Academia, *MSc Biology, Osprey Researcher
& Science Advisor for the Virginia Osprey
Foundation, Williamsburg, Virginia*

Ken Schultz, *At-Large Member, VMRC Menhaden
Management Advisory Board, Former member,
VMRC Recreational Fishing Advisory Board,
Accomac, Virginia*

Roberta Kellam, *Former Member of Virginia State
Water Control Board, Franktown, Virginia*

Tom Burkett, *Northampton County Resident*

Brian Collins, *Alexandria, Virginia*

Bradley Bell, *Owner, Bell Marine Services*

Dr. Steven Zalesak, *US Government Consultant,
Moseley, Virginia*

Bert Olmstead, *President Kent Island Fishermen*

Alan Battista, *Author, Writer, Sponsored Athlete*



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

REFERENCES.

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

13News Now. (2021, September 10). *From 2010: Fishing company spills 50,000 fish, washing up on beaches*. Youtube. <https://www.youtube.com/watch?v=N2TdNB6YwgQ>

Atlantic States Marine Fisheries Commission. (2017). *Amendment 3 to the Interstate Fishery Management Plan for Atlantic Menhaden*.
https://asmfc.org/uploads/file//5a4c02e1AtlanticMenhadenAmendment3_Nov2017.pdf

Atlantic States Marine Fisheries Commission. (2022). *Atlantic Striped Bass*.
<https://asmfc.org/species/atlantic-striped-bass>

Atlantic States Marine Fisheries Commission. (2023). *Atlantic Striped Bass*.
<https://www.asmfc.org/species/atlantic-striped-bass>

Bailey, H., & Secor, D. (2016, August 2). *Researchers study impact of extreme weather events on striped bass*. University of Maryland Center for Environmental Science.
<https://www.umces.edu/cbl/release/2016/aug/02/researchers-study-impact-extreme-weather-events-striped-bass>

Buchheister, A., Miller, T. J., & Houde, E. D. (2017). Evaluating ecosystem-based reference points for Atlantic menhaden. *Marine and Coastal Fisheries: Dynamics, Management , and Ecosystem Science*, 9(1), 457–478. <https://doi.org/10.1080/19425120.2017.1360420>

Chesapeake bay 2023 young-of-year striped bass survey results announced. (n.d.). Retrieved December 7, 2023, from
<https://news.maryland.gov/dnr/2023/10/12/chesapeake-bay-2023-young-of-year-striped-bass-survey-results-announced/>

Commission for the Conservation of Antarctic Marine Living Resources. (2021). *Krill fisheries*.
<https://www.ccamlr.org/en/fisheries/krill>

Cuker, B. E. (2020). Menhaden, the Inedible Fish that Most Everyone Eats. In B. E. Cuker (Ed.), *Diet for a Sustainable Ecosystem: The Science for Recovering the Health of the Chesapeake Bay and its People* (pp. 95–106). Springer International Publishing.
https://doi.org/10.1007/978-3-030-45481-4_6

Curtis, J. (2023, October 11). *Eighteen reported menhaden spills this year finally leads to*

LWFC action. Louisiana Sportsman.

<https://www.louisianasportsman.com/fishing/eighteen-reported-menhaden-spills-this-year-finally-leads-to-lwfc-action/>

Deepwater Horizon Open Ocean Trustee Implementation Group. (2021). *Developing Methods to Observe Sea Turtle Interactions in the Gulf of Mexico Menhaden Purse Seine Fishery - Proof of Concept Summary Report*.

<https://www.gulfspillrestoration.noaa.gov/project?id=220>

Dunn, B. (2023, July 6). *Gear type use in Virginia waters pertaining to depth of current purse seine nets*. <https://townhall.virginia.gov/L/ViewPetition.cfm?petitionId=392>

Ecological Reference Point Work Group and Atlantic Menhaden Technical Committee. (2021). *Atlantic menhaden spatial model needs*. ASMFC.

https://asmfc.org/uploads/file/63d2884aAtlanticMenhadenSpatialModelNeeds_April2021.pdf

Essington, T. E., Beaudreau, A. H., & Wiedenmann, J. (2006). Fishing through marine food webs. *Proceedings of the National Academy of Sciences of the United States of America*, 103(9), 3171–3175. <https://doi.org/10.1073/pnas.0510964103>

GlobalTRUST. (2023). Omega Protein Corporation - U.S. Atlantic menhaden purse seine - 3rd Surveillance. *Marine Stewardship Council Fisheries Assessments*, 61.

<https://cert.msc.org/FileLoader/FileLinkDownload.aspx/GetFile?encryptedKey=8MMAtMsH5mT+2NvLaqUVY5g7z/e+a7MP/EvpZVQxhAVtBl8fieWqAXATemX3MwyF>

Jacobsen, N. S., & Essington, T. E. (2018). Natural mortality augments population fluctuations of forage fish. *Fish and Fisheries*, 19(5), 791–797. <https://doi.org/10.1111/faf.12290>

John Whitehead, J. H. (2017). *Socioeconomic Analysis of the Atlantic Menhaden Commercial Bait & Reduction Fishery.pdf*.

https://asmfc.org/uploads/file/5952c923ASMFC_MenhadenSocioeconomicReport_June2017.pdf

Kaplan, I. C., Brown, C. J., Fulton, E. A., Gray, I. A., Field, J. C., & Smith, A. D. M. (2013). Impacts of depleting forage species in the California Current. *Environmental Conservation*, 40(4), 380–393. <https://doi.org/10.1017/S0376892913000052>

Latour and Jim Gartland, R. (2023). *Atlantic Menhaden Research Planning: Report submitted by the Virginia Institute of Marine Science, William & Mary to the Virginia General Assembly and the Secretary of Natural and Historic Resources, Gloucester Point, VA*.

Virginia Institute of Marine Science.

https://asmfc.org/files/2023AnnualMeeting/AtlMenhadenBoardSupplemental_October2023.pdf

LeBreton, R. (2023, October 26). *LWFC passes NOI to modify rules for menhaden fishery.*

<https://www.wlf.louisiana.gov/news/lwfc-passes-noi-to-modify-rules-for-menhaden-fishery>

Leonard, S. O. B., & Sikorski, D. (2022, December 5). *Action needed to curb menhaden “net spills,” harvest.* SoMdNews.com.

https://www.somdnews.com/action-needed-to-curb-menhaden-net-spills-harvest/article_f67fed4c-8ff8-5cf0-938c-94ed040679fc.html

Liang, D., Nesslage, G. M., & Wilberg, M. J. (2020). A spatial simulation approach to hydroacoustic survey design: A case study for Atlantic menhaden. *Fisheries Research*, 222, 105402. <https://doi.org/10.1016/j.fishres.2019.105402>

Liljestrand, E. M., Wilberg, M. J., & Schueller, A. M. (2019). Estimation of movement and mortality of Atlantic menhaden during 1966–1969 using a Bayesian multi-state mark-recovery model. *Fisheries Research*, 210, 204–213.

<https://doi.org/10.1016/j.fishres.2018.10.015>

Link, T. V. (2012, June 1). *Menhaden: The Most Important Fish in the Bay.* Youtube.

<https://www.youtube.com/watch?v=9t921FHBiMY>

Louisiana Wildlife and Fisheries Commission. (2023). *NOTICE OF INTENT: Department of Wildlife and Fisheries Wildlife and Fisheries Commission Menhaden Season (LAC 76:VII.307).*

Lund’s Fisheries, Inc, H&L Axelsson, Inc & Axelsson Seiner, Inc Port of Cape May, NJ. (2021). *Development of An Experimental Purse Seine Fishery for Atlantic Thread Herring (Opisthonema oglinum).*

<https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/614b926f32bae23ec3002147/1632342640280/Thread+Herring+EFP+Sampling+Program+Description.pdf>

Marine Stewardship Council. (n.d.). *ISF Iceland capelin.* Retrieved December 6, 2023, from

<https://fisheries.msc.org/en/fisheries/isf-iceland-capelin/>

Maryland Department of Natural Resources. (2023a). *Juvenile striped bass survey.* Maryland Department of Natural Resources.

<https://dnr.maryland.gov/fisheries/pages/striped-bass/juvenile-index.aspx>

- Maryland Department of Natural Resources. (2023b). *Maryland Department of Natural Resources presents emergency regulations to increase protections for Maryland's striped bass spawning population.*
<https://news.maryland.gov/dnr/2023/11/29/maryland-department-of-natural-resources-presents-emergency-regulations-to-increase-protections-for-marylands-stripped-bass-spawning-population/>
- Michelson, R. (2022, March 16). *Atlantic menhaden a small fish with an outsized role to play.* Coastal Review; CoastalReview.org.
<https://coastalreview.org/2022/03/atlantic-menhaden-a-small-fish-with-an-outsized-role-to-play/>
- Mid-Atlantic Fishery Management Council. (2023). *Chub Mackerel Fishery Information Document.* MAFMC.
<https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/644c02ca8c649d6fabf74890/1682703051365/Chub-mackerel-2023-FID.pdf>
- Myers, R. A. (2003). *Rapid Worldwide Depletion of Predatory Fish Communities.* MacMillan.
<https://play.google.com/store/books/details?id=qBy5swEACAAJ>
- Nissar, S., Bakhtiyar, Y., Arafat, M. Y., Andrabi, S., Bhat, A. A., & Yousuf, T. (2023). A review of the ecosystem services provided by the marine forage fish. *Hydrobiologia*, 850(12), 2871–2902. <https://doi.org/10.1007/s10750-022-05033-1>
- NOAA Fisheries. (2021, July 22). *NOAA Fisheries.* Mid-Atlantic Menhaden Purse Seine Fishery - MMPA List of Fisheries.
<https://www.fisheries.noaa.gov/national/marine-mammal-protection/mid-atlantic-menhadenn-purse-seine-fishery-mmpa-list-fisheries>
- NOAA Fisheries. (2022). *Fisheries Economics of the United States, 2020* (NOAA Tech. Memo. NMFS-F/SPO-236A).
<https://www.fisheries.noaa.gov/national/sustainable-fisheries/fisheries-economics-united-states>
- Pauly, D., Christensen, V., Dalsgaard, J., Froese, R., & Torres, F., Jr. (1998). Fishing down marine food webs. *Science*, 279(5352), 860–863.
<https://doi.org/10.1126/science.279.5352.860>
- Sagarese, Skyler R. Nuttall, Matthew A. Serafy, Joseph E, & Scott-Denton, E. (2016). *Review of bycatch in the Gulf menhaden fishery with implications for the stock assessment of red*

drum. <https://repository.library.noaa.gov/view/noaa/39892>

SAI Global. (2019). *Marine Stewardship Council Full Assessment Final Report for or U.S. Atlantic purse seine.*

<https://cert.msc.org/FileLoader/FileLinkDownload.aspx/GetFile?encryptedKey=III6FnnZB7bbouqidJzo7Gucd7UUVH62P45kKWlaUj1TXioL92lhXtc8frcw3lqp>

Schueller, A. M., Leaf, R. T., Mroch, R. M., & Nesslage, G. M. (2018). Response to Turner 2017. *Geo: Geography and Environment*, 5(2), e00048. <https://doi.org/10.1002/geo.2.48>

Simpson, C. A., Wilberg, M. J., Bi, H., Schueller, A. M., Nesslage, G. M., & Walsh, H. J. (2016). Trends in Relative Abundance and Early Life Survival of Atlantic Menhaden during 1977–2013 from Long-Term Ichthyoplankton Programs. *Transactions of the American Fisheries Society*, 145(5), 1139–1151. <https://doi.org/10.1080/00028487.2016.1201004>

Smith, J. W., & O'bier, W. B. (1996). AN EXCEPTIONALLY LARGE ATLANTIC MENHADEN, *Brevoortia tyrannus*, FROM CHESAPEAKE BAY, VIRGINIA. *Journal of the Elisha Mitchell Scientific Society*, 112(3), 121–123. <http://www.jstor.org/stable/24335338>

South Atlantic Fishery Management Council, Dolphin Wahoo Committee. (2018). *Background document on potential for the addition of frigate and bullet mackerel to the Dolphin Wahoo Fishery Management Plan.*

https://safmc.net/documents/tab04_a02a_background_doc_frigate_and_bullet_mackerel-pdf/

SouthEast Data, Assessment, and Review. (2015). *SEDAR 40 – Atlantic Menhaden Stock Assessment Report.* SEDAR, North Charleston SC.

http://www.sefsc.noaa.gov/sedar/Sedar_Workshops.jsp?WorkshopNum=40

SouthEast Data, Assessment, and Review. (2020). *SEDAR 69 – Atlantic Menhaden Ecological Reference Points Stock Assessment Report.* SEDAR, North Charleston SC.

<http://sedarweb.org/sedar-69>

Southwick Associates. (2019). *The Economic Contributions of Recreational and Commercial Striped Bass Fishing.* The McGraw Center for Conservation Leadership.

https://mcgraw.org/wp-content/uploads/2022/01/McGraw-Striped-Bass-Report-FINAL_compressed.pdf

Theodore Roosevelt Conservation Partnership. (2022, June 6). *Stop industrial menhaden fishing in the Chesapeake bay.* Theodore Roosevelt Conservation Partnership.

<https://www.trcp.org/action-alert/stop-industrial-menhaden-fishing-chesapeake-bay/>

- The Saltwater Edge. (2021). *Rhode Island has seen a great resurgence in peanut bunker as a result of ..* Facebook.
https://www.facebook.com/permalink.php?story_fbid=pfbid02V7fUvE4SLgtejrKoVodnmr4YjzErGe4uSfcVkssHmSrQmpw6GkfU2jroVcmDqGBnl&id=47410672605
- Turner, R. E. (2017). Smaller size-at-age menhaden with coastal warming and fishing intensity. *Geo: Geography and Environment*, 4(2), e00044. <https://doi.org/10.1002/geo2.44>
- VIMS. (2023). *Atlantic Menhaden Research Planning*.
<https://rga.lis.virginia.gov/Published/2023/RD528/PDF>
- Virginia Institute of Marine Science. (2023). *An "off" year for juvenile striped bass in Virginia waters for 2023*. https://www.vims.edu/newsandevents/topstories/2023/sbss_2023.php
- Virginia Marine Resources Commission. (2022). *VMRC Menhaden Purse Seine Buffer Zone Map - Public Hearing*. <https://mrc.virginia.gov/Notices/2022/2022-12-Menhaden-Buffers.pdf>
- Virginia Marine Resources Commission. (2023). *Chesapeake Bay Map*.
https://webapps.mrc.virginia.gov/public/maps/chesapeakebay_map.php
- Virginia Marine Resources Commission et al. (2023). *Virginia Purse Seine Menhaden Fishery Memorandum of Understanding (MOU)*.
https://www.trcp.org/wp-content/uploads/2023/04/MOU-VA-Purse-Seine-Menhaden-Fishery_4.20.23.pdf
- Virginia Register of Regulations. (2009, September 14). *Vol. 26, Iss. 1 (Final Regulation) 4VAC20-1090, pertaining to licensing requirements and license fees September 14, 2009*.
<https://register.dls.virginia.gov/details.aspx?id=1709>
- WAVY TV 10. (2015, October 19). *Special Investigation: Huge menhaden haul, a controversial catch*. Youtube. <https://www.youtube.com/watch?v=qJvpauRXDMM>
- WAVY TV 10. (2022, July 7). *Omega Protein takes responsibility for some of the fish on Eastern Shore beach that enraged resident*. Youtube.
<https://www.youtube.com/watch?v=77WEL9111gs>

Tina Berger

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

-----Original Message-----

From: Brian Collins <brian.c1@me.com>

Sent: Friday, December 22, 2023 5:27 PM

To: Comments <comments@asmfc.org>

Cc: Emilie Franke <EFranke@asmfc.org>

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

> Hello, the Addendum II for striped bass is woefully remiss to exclude the over harvesting of Menhaden in the Chesapeake Bay.

>

> The Chesapeake Bay is a separate ecosystem for Menhaden and Striped Bass from the ocean and is the nursery for 90% of East Coast Striped Bass where the Striped Bass live for 9 years before heading to the ocean.

>

> We are starving the fish and the stock is collapsing along with Osprey nesting.

>

> What can explain the exclusion of consideration of industrial fishing of Menhaden in the Chesapeake Bay for preserving the Striped Bass population on the East Coast.

>

> Blaming recreational and commercial fishing of striped bass alone is an incomplete analysis and science to solve the problem.

>

> Thanks, Brian

> Brian Collins

> brian.c1@me.com

> 703-795-8169

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

Tina,

Please include this email.

Thanks,
Bob

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

Tom,

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

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

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

Regards,
Bob

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

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

To Conor McManus, Bob Beal and James Boyle

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

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

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

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

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

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

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

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

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

----- Forwarded Message -----

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

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

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

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

Best. – Tina

*Go to the MH
management plan -
just below founder's chart
to story map*

Understanding Ecological Reference Points

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

ASMFC Communications Team
June 22, 2021



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

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

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

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

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

ASMFC Atlantic Menhaden Board Adopts Ecological Reference Points

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

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

ASMFC Atlantic Menhaden Board Adopts Ecological Reference Points

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

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

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

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

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

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

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

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

###

PR20-15

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

Tina Berger
 Director of Communications
 Atlantic States Marine Fisheries Commission
 1050 N. Highland Street, Suite 200A-N
 Arlington, VA 22201
 703.842.0740
www.asmfc.org

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

SHARE ON

hey dont talk about the two central species being reproductive for the 1990s dont talk about them because the real world is not as the paper suggests see page 12

TOTAL VIEWS 4,617

Finds

TABLE OF CONTENTS
REVIEW article

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



Introduction
Assessment and Management History
Current Management
Challenges and Future Work

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

Kristen A. Anstead (<https://www.frontiersin.org/people/u/1089781>)^{1*}, Katie Drew (<https://www.frontiersin.org/people/u/990320>)¹, David Chagaris (<https://www.frontiersin.org/people/u/495125>)², Amy MeSchueller (<https://www.frontiersin.org/people/u/119106>)⁴, Jason E. McNamee (<https://www.frontiersin.org/people/u/1124192>)⁵, Andre Buchheister (<https://www.frontiersin.org/people/u/1120381>)⁶, Geneviève Nesslage (<https://www.frontiersin.org/people/u/1126723>)⁷, Jim H. Uphoff Jr. (<https://www.frontiersin.org/people/u/1171712>)⁸, Michael J. Wilberg (<https://www.frontiersin.org/people/u/344791>)⁷, Alexei Sharov⁹, Micah J. Dean¹⁰, Jeffrey Brust¹¹, Michael Celestino¹¹, Shanna Madsen¹², Sarah Murray (<https://www.frontiersin.org/people/u/1090785>)¹, Max Appelman¹, Joseph C. Ballenger (<https://www.frontiersin.org/people/u/1146004>)¹³, <https://www.frontiersin.org/article/10.3389/fmars.2021.607657>, <https://www.frontiersin.org/people/u/359070>)^{2,14}, Ellen Cosby¹⁵, Caitlin Craig¹⁶, Corrin Flora¹⁷, Kurt Gottschall¹⁸, Robert J. Latour (<https://www.frontiersin.org/people/u/1146038>)¹⁹, Eddie Leonard²⁰, Ray Mroch⁴, Josh Newhard (<https://www.frontiersin.org/people/u/111904>)²¹, Derek Orner²², Chris Swanson²³, Jeff Tinsman²⁴, Edward D. Houde (<https://www.frontiersin.org/people/u/615796>)⁷, Thomas J. Miller⁷ and Howard Townsend (<https://www.frontiersin.org/people/u/530527>)²⁵

is older? apply?

leaf not clear

They quote and dont mention the reader

The 3 most important are for and so it

the focus is on the ecosystem not the species @ and 3

- ¹Atlantic States Marine Fisheries Commission, Arlington, VA, United States
- ²Nature Coast Biological Station, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL, United States
- ³Maine Department of Natural Resources, Boothbay Harbor, ME, United States
- ⁴NOAA Fisheries, Beaufort, NC, United States
- ⁵Rhode Island Department of Environmental Management, Providence, RI, United States
- ⁶Department of Fisheries Biology, Humboldt State University, Arcata, CA, United States
- ⁷Chesapeake Biological Laboratory, University of Maryland Center for Environmental Science, Solomons, MD, United States
- ⁸Cooperative Oxford Lab, Maryland Department of Natural Resources, Oxford, MD, United States
- ⁹Maryland Department of Natural Resources, Annapolis, MD, United States
- ¹⁰Massachusetts Division of Marine Fisheries, Gloucester, MA, United States
- ¹¹New Jersey Division of Marine Fisheries, Port Republic, NJ, United States
- ¹²Virginia Marine Resources Commission, Hampton, VA, United States
- ¹³South Carolina Department of Natural Resources, Charleston, SC, United States
- ¹⁴OKEANOS Research Center, University of the Azores, Horta, Portugal
- ¹⁵Potomac River Fisheries Commission, Colonial Beach, VA, United States
- ¹⁶New York Department of Environmental Conservation, East Setauket, NY, United States

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

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

Current Management

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

FIGURE 4



A TALE OF TWO BAYS: OSPREY FORTUNES DIVERGE

By: Bryan Watts
7/5/2023

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



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

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



News Room

News Stories

Press Releases

Media Coverage

Photo Essays

Conservation Stories

Blogs

EagleTrak Blog

Eagle Nest Blog

OspreyTrak Blog

GET INVOLVED



TRACK BIRDS ONLINE



READ

News Stories

Conservation stories

Photo essays

NEWS ARCHIVES

Select Month

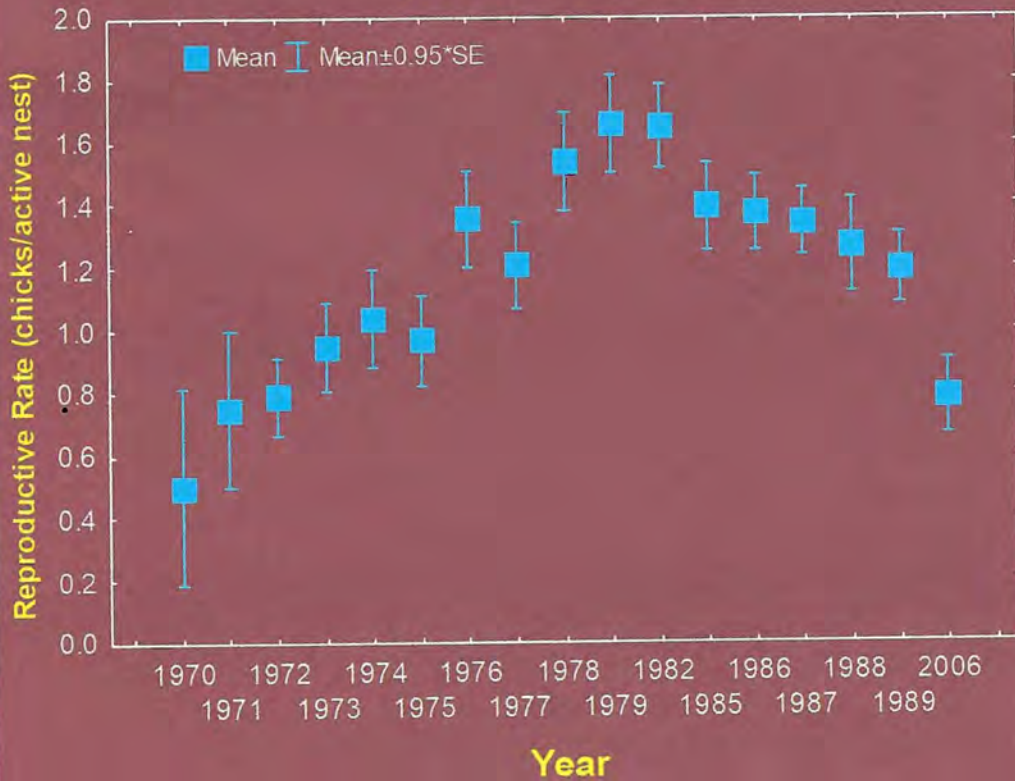
STAY CONNECTED

Sign up for the CCB Ne

Email Address*



MOBJACK BAY REPRODUCTIVE RATES (1970-2006)



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

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

First Name

Last Name

* = required field

Subscribe





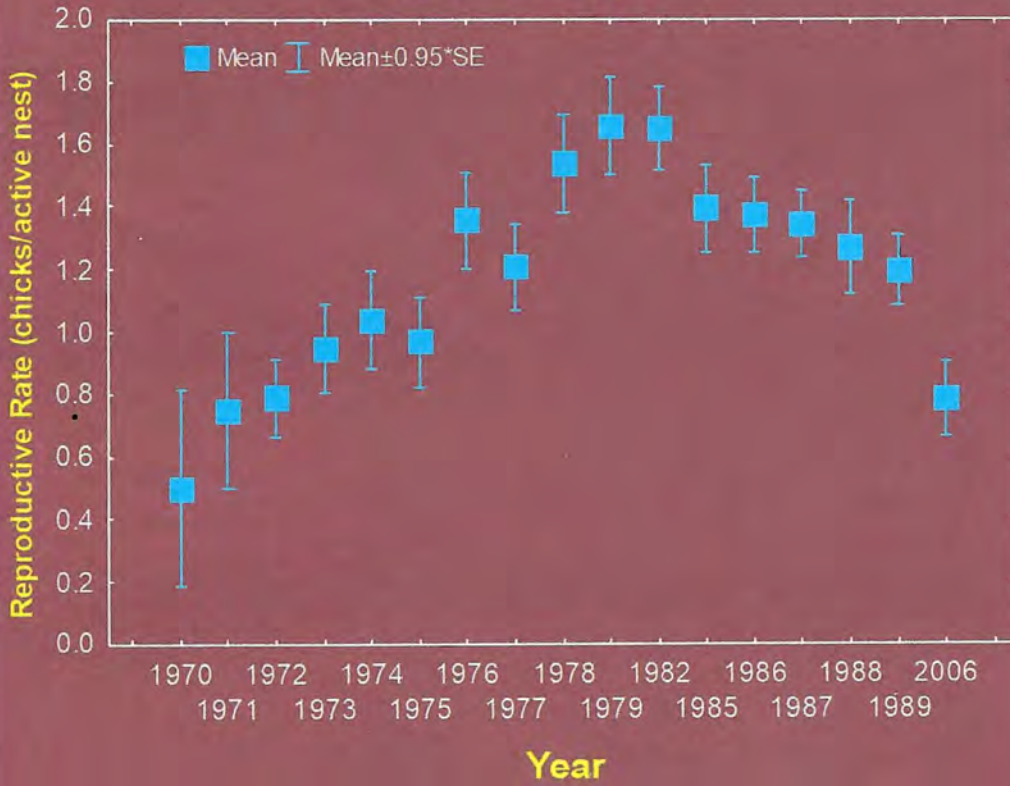
Michael Academia uses a mirror pole to check an osprey in Mobjack Bay. During the 2023 breeding season, CCB checked productivity for more than 250 nests to better understand the spatial pattern of failures. Photo by Bryan Watts.

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

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



MOBJACK BAY REPRODUCTIVE RATES (1970-2006)



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

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

First Name

Last Name

* = required field

Subscribe



June 14, 2022

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

Dear Governor Youngkin,

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

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

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

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

¹ Certificate of Apportionment For Dingell-Johnson Sport Fish Restoration, available at: https://www.fws.gov/sites/default/files/documents/SFR%20FY22%20Certificate%20of%20Final%20Apportionment%202022Feb3_508.pdf

² Fisheries Economics of the United States, 2021, available at: https://media.fisheries.noaa.gov/2021-11/FEUS-2018-final-508_0.pdf

³ The Economic Contributions of Recreational and Commercial Striped Bass Fishing, 2019, available at: <https://mcgrawconservation.org/wp-content/uploads/McGraw-Striped-Bass-Report-FINAL.pdf>

⁴ Evaluating Ecosystem-Based Reference Points for Atlantic Menhaden, 2017, available at: <https://www.tandfonline.com/doi/full/10.1080/19425120.2017.1360420>

⁵ ASMFC news release, 2019, available at: http://www.asmf.org/uploads/file/5dfbd30bpr40SecretarialSupport_Menhaden_VANoncompliance.pdf

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

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

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

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

Thank you for your consideration.

Whit Fosburgh
President & CEO



Theodore Roosevelt Conservation Partnership

Glenn Hughes
President



American Sportfishing Association

Frank Hugelmeyer

President

National Marine Manufacturers Association



Jim McDuffie

President & CEO

Bonefish & Tarpon Trust



Matt Gruhn

President

Marine Retailers Association of the Americas



Greg Jacoski

Executive Director

Guy Harvey Ocean Foundation



Patrick Murray

President

Coastal Conservation Association



Ellen Peel

President

The Billfish Foundation



Brett Fitzgerald

Executive Director

Angler Action Foundation



Jared Mott

Conservation Director

Izaak Walton League of America



Jason Schratwieser

President

International Game Fish Association



Ernie Padgette

President

Virginia Division of the Izaak Walton League of America



Virginia Angling Clubs

Steve Atkinson

President

Virginia Saltwater Sportfishing Association



Captain Mike Ostrander

President

Virginia Anglers Club



Chris Schneider

President

Virginia Beach Angler's Club



Joe Stephenson

President

Great Bridge Fisherman's Association



Henry Troutner

Vice President

Norfolk Anglers Club



Samuel A. Graham

President

Central Virginia Sport Fishing Association



Ed Pacheco

President

Virginia Coastal Fly Anglers



Dean Carroll

President

Eastern Shore Anglers Club



Steve Jones Jr.

President

Tidewater Anglers Club



Danny Forehand

President

Peninsula Salt Water Sport Fisherman's Association



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

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

Sent from my iPhone

Begin forwarded message:

From: Tom Lilly <foragematters@aol.com>
Date: January 2, 2024 at 1:44:13 PM EST
To: Robert Beal <rbeal@asmfc.org>, Mel Bell <BellM@dnr.sc.gov>, James Boyle <JBoyle@asmfc.org>, Tina Berger <tberger@asmfc.org>, Katie Drew <kdrew@asmfc.org>, CONOR MCMANUS <conor.mcmanus@dem.ri.gov>
Cc: Phil Zalesak <flypax@md.metrocast.net>
Subject: **Re: Menhaden concerns in the bay**

Bob and crew

Happy new year to all at the Commission. Could you please take a moment to reply to these emails? Possibly James could schedule a phone call this week to discuss it?

Sent from my iPhone

On Nov 30, 2023, at 12:30 PM, Tom Lilly <foragematters@aol.com> wrote:

Bob. Please try to find a few minutes to look at this request we sent in two weeks ago. Does the public have access to the factory catch in the bay / ocean on a weekly/monthly basis, the aging information and where it stands on the bay catch limit for 2023 to date ? Is the ERP stock assessment group using the 2023 fishing effort ,aging information and striped bass and osprey reproduction failure in their formulas? (under the ERP science these are the two indicator species for menhaden harvest levels)

Please be aware that our osprey chicks continued their die offs locally , that most of the striped bass we see caught have empty stomachs and that the fall run of juvenile menhaden exiting our river is again almost non existent. Also during this Summer there were no striped bass much smaller than 20 inches being caught that I heard off. The complete loss of our ibises and decreased great blue herons continues. This sad situation begs for a change in management that would move the factory fishing into the US Atlantic zone away from

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

Sent from my iPhone

On Nov 15, 2023, at 8:47 AM, Tom Lilly
<foragematters@aol.com> wrote:

Bob. Wondered if you had a chance to look at this mail. Has the staff taken a look at the factory "fishing effort" for 2023 and the aging of the catch ? The ship tracking information posted on Facebook showing daily failures to catch a load seem to be real evidence of a problem for the bay. The corroboration of the problem is the ongoing failure of reproduction of the two species that your ERP science says are menhaden harvest problem indicators. These are, of course, the striped bass and ospreys. I know of no evidence that would rebut the ERP definitions that lay the cause of serious striped bass problems with the menhaden harvest. Nothing to rebut the Commission's advice that striped bass are the "canary in the coal mine" as to menhaden harvests.

Is the staff looking at this and if so do they think the difficulty in catch and failure of the two indicators in the bay are matters of concern for the next meeting of the menhaden board? Please advise. Tom Lilly

Sent from my iPhone

On Oct 30, 2023, at 9:07 AM, Tom Lilly
<foragematters@aol.com> wrote:

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

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

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

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

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

Tom. 443 235 4465.



Sent from my iPhone

Atlantic States Marine Fisheries Commission

Business Session of the Commission

January 25, 2024

10:30 – 11 a.m.

Hybrid Meeting

Draft Agenda

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

- | | |
|--|------------|
| 1. Welcome/Call to Order (<i>J. Cimino</i>) | 10:30 a.m. |
| 2. Board Consent | 10:30 a.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from October 2023 | |
| 3. Public Comment | 10:35 a.m. |
| 4. Consider Approval of Revision to 2024 Action Plan (<i>T. Kerns</i>) | 10:40 a.m. |
| • Addition to Goal 1 to Develop an Action with the Mid-Atlantic Fishery Management Council for Summer Flounder Commercial Measures | |
| 5. Review and Consider Approval of 2024-2028 Strategic Plan Final Action | 10:45 a.m. |
| 6. Review Noncompliance Findings, if necessary Final Action | 10:55 a.m. |
| 7. Other Business/Adjourn | 11:00 a.m. |

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

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
BUSINESS SESSION**

**Beaufort Hotel
Beaufort, North Carolina
Hybrid Meeting**

October 18, 2022

These minutes are draft and subject to approval.
The Business Session will review the minutes during its next meeting.

TABLE OF CONTENTS

Call to Order, Chair Spud Woodward 1

Approval of Agenda 1

Approval of Proceedings from November 9, 2022 1

Public Comment 1

Review and Consider Approval of 2024 Action Plan 1

Review Draft 2024-2028 Strategic Plan..... 10

Elect Commission Chair and Vice-Chair..... 13

Adjournment 15

These minutes are draft and subject to approval.
The Business Session will review the minutes during its next meeting.

INDEX OF MOTIONS

1. **Approval of Agenda** by Consent (Page 1).
2. **Approval of Proceedings from November 9, 2022** by Consent (Page 1).
3. **Move to approve the 2024 Action Plan** (Page 10). Motion by Pat Keliher; second by John Clark. Motion carried without objection (Page 10).
4. **Move to elect Joe Cimino as ASMFC Chair** (Page 13). Motion by Pat Keliher on behalf of the Nominating Committee. Motion approved by unanimous consent (Page 14).
5. **Move to elect Dan McKiernan as ASMFC Vice-Chair** (Page 14). Motion by Pat Keliher on behalf of the Nominating Committee. Motion approved by unanimous consent (Page 14).
6. **Move to adjourn** by Consent (Page 15).

ATTENDANCE

Board Members

Pat Keliher, ME (AA)	Loren Lustig, PA (GA)
Cheri Patterson, NH (AA)	John Clark, DE (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Roy Miller, DE (GA)
Dan McKiernan, MA (AA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
Raymond Kane, MA (GA)	Lynn Fegley, MD (AA) (Acting)
Jason McNamee, RI (AA)	David Sikorski, MD, proxy for Del. Stein (LA)
David Borden, RI (GA)	Pat Geer, VA, proxy for J. Green (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Chris Batsavage, NC, proxy for K. Rawls (AA)
Justin Davis, CT (AA)	Chad Thomas, NC, proxy for Rep. Wray (LA)
Bill Hyatt, CT (GA)	Ben Dyar, SC, proxy for B. Keppler (AA)
Jesse Hornstein, NY, proxy for M. Gary (AA)	Malcolm Rhodes, SC (GA)
Emerson Hasbrouck, NY (GA)	Chris McDonough, SC, proxy for Sen. Cromer (LA)
Joe Cimino, NJ (AA)	Doug Haymans, GA (AA)
Jeff Kaelin, NJ (GA)	Spud Woodward, GA (GA)
Adam Nowalsky, NJ, proxy for Sen. Gopal (LA)	Erika Burgess, FL, proxy for J. McCawley (AA)
Kris Kuhn, PA, proxy for T. Schaeffer (AA)	Ingrid Braun, PRFC

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

Staff

Robert Beal	Geoff White	James Boyle
Toni Kerns	Julie Simpson	Chelsea Tuohy
Laura Leach	Lindsey Aubart	Caitlin Starks
Pat Campfield	Madeline Musante	Katie Drew
Tina Berger	Kristen Anstead	Jeff Kipp

Guests

Max Appelman, NOAA	Beth Govoni, NC DMF	Will Poston
Alan Bianchi, NC DMF	Joseph Grist, VMRC	Kathy Rawls, NC (AA)
Jeffrey Brust, NJ DEP	Jesse Hornstein, NYS DEC	McLean Seward, NC DEQ
Robert Corbett, NC DMF	Chip Lynch, NOAA	Somers Smott, VMRC
David Cupka	John Maniscalco, NYS DEC	Mike Spinney, Strippers Forever
Bob Danielson	Steve Minkinen, US FWS	Mike Tambone
Phil Edwards, RI DEM	Patrick Moran, MA	Steve Train, ME (GA)
Julie Evans	Environmental Police	Peter Whelan
Cynthia Ferrio, NOAA	Brandon Muffley, MAFMC	Anthony Wood, NOAA
James Fletcher, United Natl	Allison Murphy, NOAA	Chris Wright, NOAA
Fishermen's Assoc	Thomas Newman	Renee Zobel, NH FGD
F Joel Fodrie, Institute of Marine	Ronald Owens, PRFC	
Sciences (UNC-CH)	Chris Piatek	

These minutes are draft and subject to approval.
The Business Session will review the minutes during its next meeting.

The Business Session of the Atlantic States Marine Fisheries Commission convened in the Rachel Carson Ballroom via hybrid meeting, in-person and webinar; Wednesday, October 18, 2023, and was called to order at 10:15 a.m. by Chair Spud Woodward.

CALL TO ORDER

CHAIR SPUD WOODWARD: I want to call the Business Session of the Atlantic States Marine Fisheries Commission meeting to order here in Beaufort, North Carolina, on Wednesday, October the 18th. I want to welcome everybody.

APPROVAL OF AGENDA

CHAIR WOODWARD: First order of business is Approval of the Agenda. Do we have any requested modifications or additions to the agenda? Seeing none; any opposition to accepting the agenda as presented? Seeing none; we'll consider the agenda adopted by unanimous consent.

APPROVAL OF PROCEEDINGS

CHAIR WOODWARD: Next item is Approval of the Proceedings from our May, 2023 meeting, which are in the briefing materials. Any corrections, edits, modifications to the proceedings? If not; any opposition to accepting them as presented? Seeing none; we'll consider those accepted by unanimous consent.

PUBLIC COMMENT

CHAIR WOODWARD: At this point we provide an opportunity for Public Comment. Any member of the public in the room? I don't see anyone. Anybody online that is requesting public comment? Nobody online, very good. We'll move ahead.

REVIEW AND CONSIDER APPROVAL OF 2024 ACTION PLAN

CHAIR WOODWARD: Our next item is, I'm going to call on Bob to present the 2024 Action Plan, and he'll be doing that in conjunction with staff. Bob, the floor is yours.

EXECUTIVE DIRECTOR ROBERT E. BEAL: Great, thank you, Mr. Chair. The Draft Action Plan is in supplemental materials for the Business Session. The Administrative Oversight Committee has already gone through this once, so I think it is pretty close to reflecting the priorities that staff and the Chairs of each management board and respective committee and others have worked through over the last couple of months.

I think it's a very close document. But what we'll do, well the convention of this document is that the way it is presented here. Anything in bold is new for this year. Anything in un-bolded text is rollover or continuing work that we do each year, or is a multiyear project. I think focusing on the bolded text is probably the most important part here.

Then as we have always done in the past, we'll have each senior staff member of the Commission go through their goal, and present the highlights, and at the end of that we can ask any questions. I think for Goal 1, what we usually do is Toni will go through all the high priority species projects for next year, and then we'll pause, and then go into the medium and low priorities, since there is quite a bit of information in Goal 1. With that, Mr. Chair, if you're okay with it, I'll ask Toni to jump into Goal 1.

MS. TONI KERNS: The ISFMP Team worked with the chairs in each of the boards to come up with these actions. Start off, as Bob said, with a high priority species, American eel. We have two addenda, the first is looking at coastwide catch for yellow eel, in response to the stock assessment, and the second is to address Maine's glass eel quota, which expires at the end of 2024.

For American lobster, we'll start work on the assessment that will be completed in 2025. We'll

continue to update the indices, and then still a sort of holding pattern for the document is the Management Strategy Evaluation. If the Board does proceed with this, we'll have to, depending on the level of a management strategy evaluation. Some of these can be quite expensive, so funding may still be a question mark moving forward with this.

For Atlantic croaker, we'll conduct the traffic light analysis, respond as necessary, as well as review and present the stock assessment. For Atlantic striped bass, we'll finalize Addendum II, which is the reduction and recreational and commercial measures. We will conduct the stock assessment update, and present it to the Board and respond if necessary.

The TC is going to work on developing alternatives for bag and size limit analysis for effort controls. There is a possibility we may try to look into some season analyses while the Board does direct the TC to do that. For black sea bass, summer flounder, scup and bluefish, we'll continue to work with the Mid-Atlantic Council on the recreational measure setting process and framework and addenda.

The portion that we'll be doing this coming year with the Mid-Atlantic Council is conducting the public hearings for that document. For bluefish, we'll be implementing the new management uncertainty tool, in collaboration with the Mid-Atlantic Council. For horseshoe crab, we're going to set the 2025 Delaware Bay State Harvest Specification.

We will work to conduct the workshop to evaluate the Delaware Bay management goals and objectives, and we'll conduct the stock assessment update and respond if necessary. For red drum, we're going to present the stock assessment and peer review for the benchmark, and respond if necessary.

For scup, we'll be monitoring the management and research activities of the Mid-Atlantic Council on the scup discard and gear restricted

area analysis. We do not actually conduct these, since all of the GRAs are in federal waters. But we do follow along and help out when necessary. For shad and river herring, we will conduct and present the river herring benchmark stock assessment and peer review, and respond if necessary. That is all for the high priority species. I'll take any questions.

CHAIR WOODWARD: Yes, Adam, I see your hand is raised online, so go ahead with your question.

MR. ADAM NOWALSKY: Excellent, good morning, thank you very much. I think there is one typo here on the black sea bass, the second bullet point, I believe is meant to be separated into two and three. I think the presentation of the management track stock assessment is a separate item. The other comment I have is with regards to your comments on striped bass, about potential Board desire to look at seasonal analysis. Might it make more sense to change this third bullet for striped bass to simply read, develop alternatives and analysis for effort controls?

MS. KERNS: If the Board does add seasons, we can change it to that, Adam. We're waiting for direction from the Board on that though. That would be this afternoon.

MR. NOWALSKY: Yes, if you would like to wait and then change it, I think that's fine. You know my suggestion here was just to remove the specificity of bag and size limit, not necessarily add the seasonal part, and then just whatever the Board comes up with, whether it's bag, size, season or anything else, would seem like we're covered. But I'll defer to you the best way forward.

CHAIR WOODWARD: Thank you, Adam, any other questions for Toni? All right, move on.

MS. KERNS: The medium-low priorities, and just to state that this isn't that these species have any less importance to the Commission. This is about workload for staff and committees. For Atlantic herring, we'll monitor and respond if necessary to the activities of the New England Fishery Management Council, specifically looking at

These minutes are draft and subject to approval.

The Business Session will review the minutes during its next meeting.

Amendment 10, which addresses spatial and temporal allocation, and management of Atlantic herring at the unit level, to minimize user conflicts, contribute to optimum yield, and support rebuilding of that resource.

For Atlantic menhaden, we'll initiate work on the single-species stock assessment update to be completed in 2025, and also continue to work on the ERP benchmark stock assessment, which will also be peer reviewed in 2025. For Atlantic sturgeon, we'll conduct and present the stock assessment update, and respond if necessary.

For coastal sharks, we'll monitor activities of NOAA Fisheries HMS, and if necessary, we will initiate an addendum to consider moving Oceanic whitetip to the prohibited species group. HMS has, I think already, shifted this, so this would just be something to follow suite of what HMS has already done.

For cobia, I should have brought this up into the higher priority species, because the Board did initiate the addendum to address recreational quota reallocation. This will be a higher priority, and we'll also collaborate with the Southeast Fisheries Science Center and the states to conduct a 2026 SEDAR stock assessment.

For Jonah crab, we will work with our ACCSP and our partners on implementing and integrating the tracking data device collection, as a part of Addendum IV. In northern shrimp, we will work with the Section to develop management action to consider implementation of an ongoing moratorium for shrimp, until the resource improves. We'll also continue the development of a management trigger/wakeup index, to indicate when the stocks could support a commercial fishery, so when to end that ongoing moratorium. For Spanish mackerel, we will monitor the activities of the South Atlantic Council, looking at the framework amendment addressing the ABCs, as well as work with them in conducting Spanish

and king mackerel port meetings. The committee will also develop, the TC will develop a white paper characterizing the recreational and commercial Spanish mackerel fisheries along the coast. For spiny dogfish, we'll present the management track stock assessment.

For spot, we will work on the benchmark stock assessment that will be conducted in 2025. This stock assessment is being delayed one year, due to the loss of the lead assessment scientist for this species. We'll hear more about that at the Policy Board meeting. For tautog, we'll continue to work on monitoring the tagging program, and the tagging study, to look at the different types of tags. For weakfish, we'll initiate the stock assessment update for 2025. Any questions on medium priorities?

CHAIR WOODWARD: Questions, anybody online? I don't see any, so we'll move ahead.

MS. KERNS: Lastly, I'm just going to go through the Cross Cutting Issues. First, we are going to continue to monitor impacts of changes to the MRIP program, fishing effort survey design, and data presentation standards relative to our FMPs and our stock assessments. We will consider strategies for increasing the responsiveness in our management plans to climate change and start thinking more about what can we do to make our FMPs more adaptable, as we see species moving up and down the coast or east and west, due to climate change.

We will participate in the East Coast Climate Change Coordination Group to track the progress of the draft potential action plan. We'll provide support to the climate innovation group, to track information and challenges relevant to the east coast fisheries, and identify areas that are worthy of consideration by the East Coast Climate Coordination Group, and identify new possible actions to undertake in the draft action plan.

These are actions for all of the east coast management bodies to take into consideration, not just the Commission. We'll also work with the Mid-Atlantic Council to clarify the role that we work

These minutes are draft and subject to approval.

The Business Session will review the minutes during its next meeting.

towards when working on joint plans, to try to increase the efficiency and collaboration for these projects. This is really to put on paper how we work together as two management bodies. While we have a standard set of rules, they are not written down anywhere.

CHAIR WOODWARD: Thank you, Toni, any questions? John Clark.

MR. JOHN CLARK: It might be covered in some of the points made, but I didn't see anything about socioeconomics in here. It just comes to mind specifically for horseshoe crab, as we heard the other day. Of course, we deferred on allowing female harvest, and we heard from Craig Pugh that the females are worth more than the males.

One of the complaints we often hear from commercial fishermen is that we're always quick to take away quota, and very slow to give it back. I just didn't know whether, it probably would come up in the different things that are done, but whether it should be a specific bullet that we will look at such issues for some of these species.

CHAIR WOODWARD: Go ahead, Pat.

MR. PATRICK A. CAMPFIELD: John, I would suggest for the Socioeconomics Committee, if there is a specific task or some guidance that you could provide to the Committee, or the Horseshoe Crab Board could provide, we could take that up with the SES Committee.

CHAIR WOODWARD: All right, any other questions for Toni on Goal 1? Okay, thank you, Toni. Pat, are you going to handle Goal 2? All right.

MR. CAMPFIELD: Goal 2 covers all the fisheries research, stock assessment, and regional survey activities for the Commission for 2024. Again, we've consulted with the various scientific committees, as well as the science staff, like the

Assessment Science Committee, the Ecological Modeling Workgroup, and so on.

Under the Scientific Committee activities, the first new item is to consult the Assessment Science Committee for guidance on best practices related to the MRIP FES data and stock assessments., specifically reach out to MRIP statisticians to scope the magnitude of potential effort and catch estimate changes by species.

Then secondly, during stock assessments, conduct sensitivity analyses to evaluate the potential changes on assessment model results and stock status. Next, we will solicit the Assessment Science Committee input in the long-term stock assessment scheduling priorities, not just for the ASMFC schedule, but also our partners in the northeast through the NRCC and through SEDAR in the South Atlantic.

Under the Risk and Uncertainty activities, we will focus on red drum as the next test case, or test species for the Risk and Uncertainty Policy and Decision Tree. That had been a focus on cobia next, but because that assessment will be a few years out, we decided to switch to red drum, that is planned for completion in 2024. Then finally, support a Northeast Fish Passage Workshop to communicate and promote new innovations for improving passage efficiency.

That is an idea that was brought forth by Mass DMF, and USGS scientists recently. Under greater data collection, work with the three east coast regional management councils to characterize and address deficiencies, and NOAA Fisheries scientific support, and evaluate impacts to fisheries, including exploration of industry-based platforms to conduct fisheries research and surveys that was touched on earlier this morning.

Also, a request from the ERP Workgroup to increase the resolution of catch and survey information for future spatial modeling and stock assessments. It's relevant to ERP, but also stocks like striped bass, where we may be looking to shift to a spatial model. One of the outcomes or recommendations from the

Jonah crab stock assessment, was to explore the use of video surveys as a new fishery independent index.

We will work with the Northeast Science Center and other partners to see if that is feasible. Moving down to Fisheries Research. We will collaborate with USGS, New York DEC, and Delaware State University on a new project to develop sturgeon spawning stock abundance estimates in both the Hudson and Delaware Rivers. In other collaborations with universities, a new proposal has been funded through Saltonstall-Kennedy to conduct a striped bass management strategy evaluation. Again, that will have an emphasis on the spatial components of the striped bass stock, and potential management strategies. That is in collaboration with Virginia Tech University.

Moving down to ecosystem-based management and changing ocean conditions. Promote consistencies in fishery independent survey data collection across east coast geographic regions and jurisdictions, both state and federal, and develop data collection protocols to readily combine and use data, and coastwide modeling frameworks.

Also, improve coordination and knowledge sharing among the SSCs and the Commission Scientific Committee, particularly for species spanning multiple jurisdictions and jointly managed species. Another recommendation from the ERP Workgroup is to examine options to increase fisheries management integration across FMPs, in order to fully implement to a system-based modeling result.

Then finally, support the recreational study fleet pilot project. Monitor progress and respond if necessary. This is in collaboration with the Northeast Fisheries Science Center, to look at hook and line surveys for alternative surveys, due to the wind energy development in the northeast. In a similar vein, evaluate SEAMAP Survey interactions with wind energy

development in the southeast. I think that is all the new activities for Goal 2.

CHAIR WOODWARD: Any questions for Pat? Jason.

DR. JASON McNAMEE: Like all good stuff. I just wanted to thank you for a little update to the Risk and Uncertainty section there, and that's mostly to meet my contractual obligation to say risk and uncertainty at each annual meeting. My more serious point is, with the SSCs, I'm interested in that one.

I wonder, have you been thinking about ways. I'm wondering what the mechanism is to like connect the groups. Maybe you haven't thought about that yet. Maybe you have. But I would be interested to chat about that with you a little bit, to help scope that out. But I think it's a great idea, and I think it could help with some of these cross jurisdictional management issues, but also, it's just always good to network like that, just for ideas and things like that.

MR. CAMPFIELD: Yes, thanks, Jay, it's one of the recommendations coming out of the Climate Scenario planning activities. Of the favorable things there is a number of your state agency scientists are on the SSCs, so there is some overlap already. But I'll pitch it to Toni for elaboration.

MS. KERNS: I'll say that this is something that we thought would be something that could be achievable in this coming year from our perspective. The NRCC or the Climate Leadership Group will be meeting in November, and so we'll have to see collectively if this is a priority for the Councils, NOAA Fisheries, and the Science Centers as well. If not, then it may be a little bit harder to achieve this. But there may be some mechanisms that we can do to try to take little bites at it, if it's not something that is a priority for everybody else.

DR. McNAMEE: That's all awesome. I think you guys are probably thinking about Mid-Atlantic, New England. But maybe there are opportunities, there is actually a broader SSC collaboration that occurs, in fact it's going to be in New England the next time

These minutes are draft and subject to approval.

The Business Session will review the minutes during its next meeting.

they all meet. I'm not saying if there is any way to kind of connect in with that, but there are these opportunities where all of the SSCs come together. It would be awesome if the Commission could be a part of that as well, if there was a possibility.

CHAIR WOODWARD: Erika.

MS. ERIKA BURGESS: Like Jason, I'm going to bring up the Risk and Uncertainty part, I admit some unfamiliarity, but then I know you presented on it. But is there an opportunity to include, or does it already include a sensitivity analysis to the MRIP FES estimates into understanding risk and uncertainty for a species like red drum or anything else that would be considered through that? If not, could we add that to the tasks?

MR. CAMPFIELD: Yes, sorry, Erika. It's a little challenging to hear the first part of your question. If you could maybe repeat it. But I might pitch that to Jay, if it relates to the Risk and Uncertainty Decision Tree.

MS. BURGESS: I'll try and go back. I had a gummy bear in my mouth, thanks, Doug. I was also wanting to bring up the risk and uncertainty part of the list, and was not as familiar with it as I would like to be, and probably should be. But I was curious whether it included an analysis of sensitivity to the MRIP FES estimates. I know that that was brought to light after the risk and uncertainty tool was developed. As we move forward with that tool, I was asking if we could also incorporate at that time, it looks at red drum, looking at sensitivity to MRIP FES.

DR. McNAMEE: Great point, thanks for the opportunity to weigh in on it. I think the answer to that is yes. The way the current construct of the risk and uncertainty tool works, is there are these, you can think of it like there are questions in there, and one of them is about the underlying data.

Where normally you might, if you have MRIP data, some commercial data, you have some sense of the uncertainty around that, given this kind of new information that we have that would probably change the answer to that, and offer a change to how you would answer that and implement some sort of risk buffer to that. I think there is absolutely a way that can connect in with the information we heard about, I think that was yesterday. Good question.

CHAIR WOODWARD: Any other questions for Pat on Goal 2? Seeing none; we'll move on. I think our next one is Goal 3, and that is going to be Geoff.

MR. GEOFF WHITE: Goal 3 is focused on fisheries dependent data, collected and disseminated through the ACCSP. The introductory paragraph has added reference to biological and socioeconomic data, as those have gained focus coastwide. Of the items under continuing basis represent the bulk of the staff workload, and data activities to support the Commission and partner activities, including the 11 projects that were approved yesterday. Under partnerships, we did highlight the role of the ACCSP to coordinate regional recreational data needs and priorities as part of the recreational implementation plan developed last year, and then also an ongoing activity, as part of the MRIP regional implementation and infrastructure.

Under fisheries dependent data collection, it really highlights some software projects and preparation to develop modernized electronic dealer reporting applications. That would be better processing implementation that wouldn't occur until January, 2025. But the workload to get all the bits redeveloped, ready for both the online, mobile and bio upload portions to function takes a lot of work and coordination behind the scenes before it can be released.

The next item is to implement expanded at entry, quality control checks on the SAFIS eTrips, submissions for partner specific questions. That is automating a process that will tighten up the ranges of data that can be submitted, and automate

through the manual and paper processes that occur still today.

The other item is as exciting as the launch of the SciFish mobile application and project builder under the SAFIS umbrella for standardized citizen science data collection. Under recreational surveys, we will continue to develop and seek certification of a for-hire methodology to use logbook to estimate catch and effort with dockside validation.

The other item in process is to scope a pilot project to expand the data collection on discard data for recreational anglers. The intent there is to make modifications to how MRIP collects the discard information, and if that pilot is successful, to then ask that be a change to the core survey. Under data standards, distribution and use, we've updated the Atlantic coast data standards, but we really want to change how that is published to be a bit more of a searchable data standard on the ACCSP website.

We've already provided a lot of the databased driven standard code references, but making that a lot more accessible and maintained up to date, instead of under historical PDSI. Under data distribution and use, we really highlighted the list of species, where ACCSP staff have helped to validate the data provided for the stock assessment process and keep things moving in those areas. That's it.

CHAIR WOODWARD: Thank you, Geoff, any questions for Geoff? Okay, seeing none; we'll move on to Goal 4, and well, Bob will handle that.

EXECUTIVE DIRECTOR BEAL: Goal 4 is Law Enforcement Committee activities, essentially, and compliance with the FMPs. There really are minimal changes to that section every year, it's just kind of care and feeding of the Law Enforcement Committee monitors and provides feedback to the Board as requested.

In this section there are some highlights about vessel tracking system in the lobster addendum and Jonah crab addenda for implementing the trackers, they have to go on the vessels by December 15th of this year, sort of monitoring the progress of that. Then I think, if you could keep scrolling, Madeline, I don't have the document open in front of me. I think that is the only specific change in this section. As I mentioned, it's kind of care and feeding, and the continued activity of Law Enforcement Committee.

CHAIR WOODWARD: Any questions for Bob on that? All right, if not we'll move on to Goal 5, and I think you or Pat, you and Toni were going to tag team that. I guess it's not really a tag team, so I know you'll do the best.

MR. CAMPFIELD: Under Goal 5 in the Commission's Habitat Program, as well as the Atlantic Coastal Fish Habitat Partnership, just a couple of new items. The Habitat Committee will be deciding on the next habitat management series publication, so if you have any ideas for fresh topics there, please bring them forward. In the past they've worked on things like acoustics or offshore wind impacts on habitat.

Then the second item, if you could scroll down, please, is to support the Atlantic Fish Habitat Partnership in pursuing habitat restoration funding from the BIL and IRA acts of legislation. ACFHP has put in one proposal already for a pretty big request, 25 million dollars to do oyster restoration up and down the coast. There are several more opportunities through BIL and IRA, so they will be putting in more multimillion-dollar proposals up and down the coast. We'll see how they pan out, in terms of those applications and success. That is all, Mr. Chairman, under Goal 5.

CHAIR WOODWARD: Any questions on Goal 5? Yes, Loren.

MR. LOREN W. LUSTIG: Just above the leverage of partnerships. Were educational issues, could we hear a little bit about what there might be involved in that, please?

MR. CAMPFIELD: Yes, thanks, Loren. You know the Commission has a long track record of developing fish habitat outreach products, they can be anything from fact sheets on habitats important to individual species, the habitat management series itself is another format for education. Generally, they would just go out to habitat practitioners, folks doing coastal zone management or restoration activities. But I think there is also K through 12 educational level information, so it's a quick smattering of what that covers.

MR. LUSTIG: Yes, thank you for that. Has there been any assessment for the relative effectiveness of the various options that are included within the educational formats? For example, perhaps we should be seeking out nature centers that are directly adjacent to the coast, and working with them to enhance education at those sorts of locations.

MR. CAMPFIELD: Thanks for that question. The best I can tell you, Loren, is there is a broad distribution list, again for habitat practitioners. I'm not aware that it specifically covers nature centers. I don't know if Tina might have any more information on that.

MS. TINA L. BERGER: Loren, we frequently get requests from nature centers for our habitat or our fisheries related information that we freely share with them, and we are always open to information or guidance on new information if they would like.

CHAIR WOODWARD: Any other questions about habitat? Tina, I'm going to turn it over to you for Goal 6.

MS. BERGER: This is a goal on communications, outreach and media support. There is a lot of continuing items under this, but I will highlight some new focus in 2024, on the species that will be most prevalent, including striped bass, menhaden, horseshoe crabs, and continuing work on recreational reform initiatives with the Mid-Atlantic Council.

Science staff will continue to work with me on developing the overviews of stock assessments and there are quite a number of them for next year, including American lobster, croaker, herring, striped bass, ERP and red drum. We also have started to work on, but will do more next year on developing a story map on striped bass migration and spawning patterns, and the impact of environmental factors on recruitment.

This idea came out of one of our public hearings on striped bass emergency action and I just think it's a great idea, so we are working on that. We're also going to ask, as part of the website update, we'll create a page on best fishing practices and work to promote those, especially in increasingly catch and release fisheries.

Under new technologies, we will be upgrading and updating our website next year, based on staff input and recommendations from the Outreach Survey that you all participated in. The website was currently posted onsite, and we will look for opportunities to host that offsite, to increase security of our IT system and just to provide issues with maintenance.

I will be working with Jainita, who is our Fishery Science Coordinator, to redesign and migrate both the NEMAP and SEAMAP websites. She's already started with SEAMAP, and we'll be looking at potential RFPs or proposals for that. On to stakeholder participation. We sort of broadened the bullet on strengthening public input to look at a number of options, where we could do a better job of putting out what we are looking for soliciting information on, as well as gathering it.

Under Media Relations, obviously an important component of this action plan has been responding to the MRIP FES design issues, and I will continue to work with the MRIP staff on developing messaging to better explain what those impacts are, and next steps forward. Increasingly this year, we have been dealing with inaccuracies in media. We will continue to work towards trying to correct those, and get the Commission's story out there. That is it for Goal 6, thank you.

These minutes are draft and subject to approval.

The Business Session will review the minutes during its next meeting.

CHAIR WOODWARD: Thank you, Tina. Factual inaccuracies in news reports, hard to imagine, isn't it? Hard to imagine. Any questions for Tina? John.

MR. CLARK: Yes, just to that subject, Tina. I was very surprised by the lack of response for some pretty respected news agencies. Have you had any further follow up from any of those, about those horseshoe crab articles?

MS. BERGER: Yes, we were pretty assertive in going NER. We did pursue trying to get their ethics editor to take a stand. They put out a blanket statement saying, don't expect to hear back from us, unless we feel strongly about it. Their editors feel fairly strongly that they are on the right side of it, so they are not contemplating working with us on changing their story. They did modify one story that had to do with confidentiality. We feel like that is a minor win. But we still have an uphill battle with that.

CHAIR WOODWARD: Any other questions for Tina? If not, Bob, Goal 7.

EXECUTIVE DIRECTOR BEAL: Goal 7 is our legislative activities that Alexander and I engage in, with the help of many folks around the table here. We appreciate that. It falls under really four main headings, relationships, legislations, appropriations and partnerships. I'll go through them pretty quickly.

But a lot of things in here are kind of ongoing activities that we do every year, engaging congressional offices, and making sure they know the Commission priorities and have our feedback on any relevant legislation that they are considering. But there are a few bold items in there that are worth mentioning.

One of the things that we're willing to do, is if you guys want to meet with member staff in your local districts at home. In other words, if you don't want to go to Capitol Hill when you're down in DC for meeting weeks, and you know

some of the folks at home, or you want to get to know the folks at home that are in their local district offices, we're more than happy to reach out and set up some appointments.

Depending on if the member of Congress is there or not, you can fly out to be part of that. Just let us know if we can help you engage with the local offices a little more than you have been. Then down under Legislation, you know there is a number of issues and specific acts that we'll continue to monitor. Alexander mentioned a lot of those this morning, during the briefing during the Executive Committee. But you know shifting stocks and reallocation, and this idea of fisheries disaster efficiency and improving that is included here.

There is the notion of recreational data issue, it's talked about in a number of places in this document, as well as NOAA Organic action and a number of others. Those are all included here, and we obviously just anything, if new acts or other things come up that aren't listed here, it doesn't mean we won't react to them, we'll continue to react. These are the areas that we know right now that we'll need to work on.

Under support for management activities, which is appropriations. We'll just continue to highlight the important issues and line items within the federal budget, that we always bring forward, essentially the Atlantic Coastal Act and IJF and NEMAP funding and SEAMAP funding, and all the others that are listed there.

We'll continue to work on the partnership with USGS, it's highlighted in here and a number of places. They've been, I say extremely supportive of ASMFC, and able to provide and bring a number of scientists to the scientific priorities of the Commission and our partnership with USGS has been great. We've been able to get a lot of information. We're going to move that, try to actually get some support and funding pushed into USGS to further support that partnership. Then under partnership, it just again highlights the partnerships with Fish and Wildlife Service and USGS, as well as NOAA Fisheries and others. Those

These minutes are draft and subject to approval.

The Business Session will review the minutes during its next meeting.

are the highlight of the legislative section. I would say there is going to be a lot of action this year. We'll react to it as we need to.

CHAIR WOODWARD: All right, Alexander, I see your hand raised. Go ahead.

MR. ALEXANDER LAW: Yes, one thing to add, with meeting with members in your District is, this is particularly important for highlighting legislation such as RAWLA or Recovering America's Wildlife Act. In showing some of the on the ground examples that that funding can help support, support partnership and stuff like that.

CHAIR WOODWARD: Thank you, Alexander. Any questions for Bob? Seeing none; last but certainly not least, Goal 8, Laura.

MS. LAURA LEACH: As you all know, Goal 8 is the, ensure the fiscal stability and efficient administration of the Commission, which is an ongoing process, and so there aren't a lot of new tasks every year. We do what we do. But under manage operations and budgets. We did add some tasks. One is work with member states to effectively and efficiently administer Atlantic right whales, lobster, Congressional funding, which we've got two Cooperative Agreements right now for that.

One for the 14 million, which is already ongoing, and then the 26 million, which actually turned into 56 million, because we just added a second year, so I think that is a four or five year. That's how the feds wanted to do it. The second one is to assist member states in distributing fisheries disaster funds as requested, and Doug alluded to that earlier.

We're happy to do it, we can do it easily and quickly, so happy to help. Then complete distribution of remaining CARES needs CAA funding and respond to audit requirements as necessary. The rest of the tasks are ongoing. Under managing the resources, I did add, if

necessary, they continue to refine the telecommute policy if necessary, and that's it.

CHAIR WOODWARD: Thank you, Laura. Any questions for Laura, specific on Goal 8, or any questions about the overall Action Plan. John.

MR. CLARK: Laura, just curious. What is ASMFC's telecommute policy, since that is a big issue for all of us?

MS. LEACH: What is ASMFC's telecommute policy. Staff is required to be in the office one day a week.

EXECUTIVE DIRECTOR BEAL: That is the basis, but a lot of staff are in more than one day a week, and we're kind of letting it go organically, and see where we settle out. It seems to be working pretty well where we are right now.

CHAIR WOODWARD: All right, any other questions? As you can tell, it's another ambitious and very active year ahead of us, so I say tighten up your seatbelts and get ready for a ride, because it's coming. At this point, there are no further questions, I'll entertain a **motion to approve the 2024 Action Plan.**

Pat Keliher, second from John Clark. Any discussion on the motion? Seeing none; is there **any opposition to the motion? Seeing none; the motion passes by unanimous consent,** thank you all.

REVIEW DRAFT 2024-2028 STRATEGIC PLAN

CHAIR WOODWARD: We'll move on, and now I'm going to turn it over to Bob to talk about the 2024-2028 Strategic Plan.

EXECUTIVE DIRECTOR BEAL: A Draft document with a number of edits is included also in the supplemental material for this Business Session meeting. I don't think I'm going to go through all the edits that are suggested there. It would be a little bit tedious and painful. But talking with Spud and Joe and staff at the Commission. We've all kind

of come to the agreement or perspectives that this document does not need a major rewrite right now.

You know the overall goals that we just went through as part of the action plan, and the driving forces are fairly similar to what they were five years ago. You know it's the core function of ASMFC is still pretty similar to what it was a few years ago. There are some changes that I'll highlight a little bit, but that's kind of the idea here. The other, the timing is, we're not seeking approval of this document today.

What we would like to do is introduce it and hit a couple of the highlights in this document. Folks can go home and think about it for a month or so. We'll send out a reminder e-mail to provide feedback to us on this, and then we'll bring an edited version back to the meeting at the winter meeting, and that is when we'll seek approval from the Business Session on this document.

It is a living document, and you know the edits in here right now reflect conversations with Spud and Joe, as well as the edits from each of the staff members that actually you just heard presenting the Action Plan. With that I'll kind of go through a couple quick highlights in here. A couple major themes that we've done is we used to say changing ocean conditions, now we're just saying it's climate change.

We'll just be more direct about that. That's what we're dealing with, dealing with climate change. We have to react to that. The other thing that's woven in throughout this is that scenario planning, climate change project that went on for the last few years. There is a number of recommendations that came out of that process that relate to sort of being more nimble, and able to quickly react to climate change within our management process.

Those concepts again, are woven in here in a number of places. We're not suggesting changing the vision or the mission at this point,

where there again, the situation really hasn't changed much as it was in the past five years. Driving forces, we've maintained the main topics there again, but highlighting climate-induced changed and climate change. Things are happening quickly, and it's effecting, essentially everything that this Commission does, in one way or another. You know there are a number of species there that are examples of climate change and species that have been significantly impacted in their distribution and/or productivity from climate change, just to highlight those species for consideration. At the end of that section on climate change, we've added a paragraph that is really reflective of the Scenario Planning Process, and some of the output of that is that we can continue to consider during this five-year period that Strategic Plan.

The other driving force is pretty unchanged, allocation, science as a foundation of our decisions, ecosystem functions, competing ocean uses, protected species. Those are all still key pieces of what we do. Whether we want to or not, we can't avoid them, they are going to influence what we're up to. Then increased collaboration among the states and our federal partners is obviously a key part of this, and we've seen a couple areas where we've got some concerns.

A strained relationship between states and federal partners in some areas, we want to continue to work on those. The goals and objectives overall, again we have not changed the eight goals that are in here. We've adjusted some wording within some of the goals, but overall, they are fish policy, fish science, fish data and on down the line of outreach and law enforcement, habitat, legislative and the financial administration portion of this.

The only thing I'm going to highlight within these goals is Goal 8. You know we had some discussion at staff, and this is what Laura just talked about, the fiscal stability and efficient administration of the Commission. You know we have a choice. We have to manage the Commission efficiently.

These minutes are draft and subject to approval.

The Business Session will review the minutes during its next meeting.

We have to do these financial, you know all the grant processing and cooperative agreements, travel, reimbursement, meeting planning. All those things are really nonnegotiable, we have to do that. We're considering making Goal 8 much simpler and very basic, and just sort of noting that we've got to do those things.

That's the only goal that we were considering making a fairly significant change too, but still capturing the concept that responsible administration of the Commission is obviously critically important. But it's kind of an ongoing activity year to year, and there is not a whole lot of change within that goal.

Again, happy to answer any questions, and if you guys know or feel there is anything that should be added or taken out, or if you have comments right now, we would love to hear it. But I think maybe a month or so timeline to get comments back. We can process those and get them woven into a document for consideration at the winter meeting.

CHAIR WOODWARD: Questions for Bob or comments? Lynn.

MS. LYNN FEGLEY: I just wonder on Goal 8. You know we have these conversations around the table from time to time about, you know using the Commission as a bank, and you know you guys are, the floor shop is magnificently helpful. But I wonder if it would be useful for you, in order to prevent any kind of mission creep in being a little, I don't know if there is some sort of guard rail you want to put in there, into what sort of services you're willing to offer, because you guys are amazing. Every time we ask for help, you know you guys just step up and really bail us out of some tight spots. But at a certain spot you might find yourself unable to accommodate that. I don't know if that would be helpful for you in the long run or not.

EXECUTIVE DIRECTOR BEAL: Yes, I think that's a good idea, and maybe in hindsight, if there is another pandemic, we may treat any pandemic

assistance very differently than we did this time. No, I think it's good. You know there is a lot of work there, and people have started calling us the Atlantic States Marine Fiscal Commission, and taking out fish. We'll think about that. I think it's a good idea to make sure it doesn't get too overwhelming.

CHAIR WOODWARD: Any other questions about process? I certainly encourage you to dive into this and give us all the benefit of the collective wisdom, so Erika.

MS. BURGESS: I wanted to ask a few questions about Board changes under the values, and I appreciate that this is all done in short changes. I'm of the general mindset that sweeping changes probably are not necessary at this time. In the second sentence that is changed to say that the Commission is committed to the sustainable fishery management for the benefit of recreational and commercial industries, and it removes reference to anglers and harvesters.

I was curious if it actually is the Commission's value to manage for the benefit beyond the harvester stage. The current industry seems like it could creep a lot further than the role and responsibility of conservation of our resources. I wanted to bring that up for discussion.

EXECUTIVE DIRECTOR BEAL: Erika, that is a great point. The reason we made these edits was it didn't really include the for-hire industry before, it was just anglers and commercial fishermen. Fishermen may be not the right term anymore either. We were looking for something that was more, a broader umbrella to sort of say all fishing activities, and we want to manage for the good of those.

If you are reading that as if this appears to be too broad and it's looking at whatever, processors and dealers. You know it may be extending beyond what our management ability and priorities are. I'm open for wording, suggestions for sure. But that's the rationale why we made that change. But if there is a better way to say it, we're open, for sure.

These minutes are draft and subject to approval.

The Business Session will review the minutes during its next meeting.

CHAIR WOODWARD: Again, that's why I encourage folks to take a look at it, be thoughtful about it and provide some feedback, and we'll have a chance to review this and discuss it further at the winter, 2024 meeting. No action is required on this at this point.

ELECT COMMISSION CHAIR AND VICE-CHAIR

CHAIR WOODWARD: If there is no further discussion on that, I am going to call on Bob to conduct the election of officers.

EXECUTIVE DIRECTOR BEAL: I detect some glee in your voice there, Mr. Chairman. This is the part that Spud referred to earlier on Monday evening, which is vote early, vote often, I think is where we are here. But before I get into the actual election itself, I want to present our outgoing chair, that is what we assume will happen here, with a commemorative clock, you know on behalf of all 45 Commissioners and staff, thank you for the last two years.

Most folks don't know this, but Spud and Joe and I have a conversation every Monday morning at like ten. I don't know if it's a planning session or therapy session, or what it is. But it works out really well, and I'll miss those conversations with Spud. We've had a lot of fun with those conversations. I think we got a lot done, and really appreciate it. Somehow, you were able to pull off all eight meetings in person. The previous chair, for some reason, wasn't able to do that, Mr. Keliher. You can be very proud of that. But again, on behalf of all the Commissioners and staff, I just want to thank you for the last two years. We really appreciate all the hard work. (Applause)

CHAIR WOODWARD: I've got some remarks I'll make tomorrow at Policy Board in a little more detail. But I want to thank everybody for the support and the honor of being Vice-Chair and Chair of this organization. It's a significant milestone in my life. I certainly appreciate it. I do very much appreciate Joe and Bob's patience on those Monday morning calls.

I would wax philosophical about the state of the world, the state of fisheries management, all these other things. Like he said, it was very therapeutic. It helped me kind of start my week off on, kind of like shaking up a bottle of Mountain Dew and you've got to ease the cap off, if you want the liquid to stay in the bottle. That was very important. Thank you all, it's just been an honor.

EXECUTIVE DIRECTOR BEAL: I should have said this earlier, but it's worth noting that Spud is the first Governor's Appointee that has been Chair at the Commission for a long time. He put in all this time, completely as a volunteer. He wasn't part of his other job that he is being paid to do, and really appreciate all the many, many hours he's put into this. Thanks again, Spud. With that, I will call on the Chair of the Nominations Committee, Pat Keliher, for a report on the Chair nominations.

PATRICK C. KELIHER: Congratulations, Spud, on a really steady hand on the wheel here and guiding us through. You know the transition from COVID back into somewhat of a real world. On behalf of the Nominations Committee, we have two very excellent candidates for Chair and Vice-Chair.

Before bringing those forwards, I just would like to thank members of the Nomination Committee, Erika Burgess and John Clark. We spent days and days talking about this. We were all tasked at reaching out to our federal administrative commissioners, who in return were supposed to have those conversations with their governors and legislative appointees.

Very clear, based on the work of the two individuals that we have that we have two people who will continue to give strong guidance to the Atlantic States Marine Fisheries Commission. With that, Mr. Chairman, I am pleased to present our **nomination for Chair of the Atlantic States Marine Fisheries Commission as Joe Cimino from New Jersey.**

EXECUTIVE DIRECTOR BEAL: Thank you, Pat, for that report. Laura is going to **hand out the ballots now, one vote per state.** If you need to caucus with somebody who is not in the room, please do

These minutes are draft and subject to approval.

The Business Session will review the minutes during its next meeting.

that. Please fill out the ballot, have one person from your delegation sign it, I believe, then we'll round those ballots up and count off the votes. The ballots are in, the accounting firm of Leach and Associates has counted them up, and **it is unanimous, no write in votes, Joe has been unanimously elected as the next Chair of the Atlantic States Marine Fisheries Commission.** I will go back to Pat Kelliher for a report on Vice-Chair nominations.

MR. KELIHER: As is customary, we always try to ensure that leadership is shared geographically, up and down the coast. This being the northeast turn in line for Vice-Chair, and after consulting with the members of the Nomination Committee, we're pleased to **nominate Dan McKiernan as Vice-Chair.**

EXECUTIVE DIRECTOR BEAL: Thank you, Pat, we'll go through the same routine. Laura is going to **pass out the ballots**, and we will **collect them and count them up. The votes for Vice-Chair, again is unanimous, and Dan McKiernan has been elected as the next Vice-Chair of the Atlantic States Marine Fisheries Commission.** Congratulations, Dan! With that I will turn the microphone back over to our previous Chair to close out the Business Session.

CHAIR WOODWARD: Dennis, you have a comment?

MR. DENNIS ABBOTT: Yes, thank you, before you go any further. Having been here for a long time. It was always my understanding that we rotated between north and south, whatever that was. This year it seemed like we had a conversation that Pat just stated someone from the northeast, while Spud from the south is leaving.

I have no concern about who we selected or how we did it. I had again in my mind, I thought we were going to go to the south. Now we're talking about having three distinct areas, mid, northeast and south, apparently. I see that

limiting some of the state directors to be given the opportunity to be Chair or Vice-Chair, because you end up in sort of, you have to be around for eight years to get the Vice-Chair, Chair and so on and so forth.

It takes a long time for it to rotate back, you know to the different geographical areas. My thought is, we should eliminate the distinction between north and south and mid. If there are qualified candidates from any state, I think that is who we should be selecting. If we think about it, there is really no good reason to have to go north or south.

You think of the problems that have come up in the past, where you have a Vice-Chair speaking Maine and you have a Chair speaking Georgia. You know it causes difficulties. I guess I didn't even get a laugh out of that. I do think that we should formalize the nominating process, and eliminate the need for making a selection from any geographical area. That is just my thoughts, I don't know if anyone shares them. But that is what my thoughts are.

CHAIR WOODWARD: I'm going to let Bob sort of speak to that process.

EXECUTIVE DIRECTOR BEAL: Thanks, Dennis, for those comments. The most recent version of the nominating process and election process, as you said, does contemplate three regions. But it also, I don't have it open in front of me, but it states that as more of a goal than a requirement. It says, the Commission should elect the best person for leadership, regardless of what state they are from. But if available we should try to rotate through the three regions. It does contemplate this, elect the best person wherever they come from, but try to spread it out over the years. I think some of what you said is woven in there. I can dig out the election process and share it with everyone, and we can see if it needs updating.

MR. ABBOTT: Yes, if I may. Where is that written down that nominating process, and how did that come to pass that we went to three states?

These minutes are draft and subject to approval.

The Business Session will review the minutes during its next meeting.

EXECUTIVE DIRECTOR BEAL: I don't recall if it was developed by the Executive Committee or the Full Commission, but I know we modified that probably 15 years ago, and we really haven't changed it since. It's dated at this point. We can dig it out and share it with everyone, and we can put that on the agenda for the winter meeting, just to look it over and make sure it reflects what everybody wants.

MR. ABBOTT: Again, as I say, I have no real problem, but I'm just trying to think of how we would be better off if we didn't have a distinction geographically.

ADJOURNMENT

CHAIR WOODWARD: I want to conclude. We don't have a gavel up here, as you all noticed, to pass on. But your newly elected Vice-Chair felt like there needed to be some sort of emblematic transfer, so he's provided this very delicate balloon here, which I believe represents the new, which is Joe, and I'm providing him this container of Froot Loops as a reflection of what he'll be having to do over the next couple of years. With that, you are formally anointed now as the Chair.

(Whereupon the meeting adjourned at 11:22 a.m. on October 18, 2023)

ATLANTIC STATES MARINE FISHERIES COMMISSION

Proposed Revision to the 2024 Action Plan



Approved by the Business Session

October 18, 2023

Goal 1 – Rebuild, maintain and fairly allocate Atlantic coastal fisheries

Goal 1 focuses on the responsibility of the states to conserve and manage Atlantic coastal fishery resources for sustainable use. Commission members will advocate decisions to achieve the long-term benefits of conservation, while balancing the socio-economic interests of coastal communities. Inherent in this is the recognition that healthy and vibrant resources mean more jobs and more opportunity for those that live along the coast. The states are committed to proactive management, with a focus on integrating ecosystem services, socioeconomic impacts, habitat issues, bycatch and discard reduction measures, and protected species interactions into well-defined fishery management plans (FMPs). FMPs will also address fair (equitable) allocation of fishery resources among the states. Understanding global climate change and its impact on fishery productivity and distribution is an elevated priority. Improving cooperation and coordination with federal partners and stakeholders can streamline efficiency, transparency, and, ultimately, success. In the next five years, the Commission is committed to making significant progress on rebuilding overfished or depleted Atlantic fish stocks.

Fisheries management and stock assessment activities anticipated for 2024 and into 2025 are outlined below. Activities are divided into high priority species (those with significant management action, stock assessment activity, or are of critical importance to the states and their stakeholders) and medium-low priority species. For most species, there are several activities that occur on an annual or ongoing basis, including specification setting; FMP review and state compliance reports; and ensuring cooperation and consistent management programs among the states, regional councils, and NOAA Fisheries for shared resources. While ongoing activities are not listed below, they continue to be conducted. The focus of the Action Plan is to highlight new and high-profile activities where the Commission will focus its resources and energies for the next two years.

HIGH PRIORITY SPECIES FOR 2024

American Eel

- Draft and finalize an addendum to consider changes to the coastwide catch level for yellow eel, in response to the recent benchmark stock assessment
- Draft and finalize an addendum to address Maine’s glass eel quota
- Monitor international action on the Convention of International Trade of Endangered Species through communications with US Fish and Wildlife Service (USFWS)

American Lobster

- Initiate benchmark stock assessment for completion in 2025
- Work with partners and ACCSP on implementing and integrating tracking device data collection as part of Addendum XXIX
- Update annual indices of stock abundance and settlement and respond, if necessary
- Consider developing a management strategy evaluation to inform future management
- Continue to monitor and respond as necessary to NOAA rulemaking on Atlantic Large Whale Take Reduction Plan modifications
- Continue to work with the Law Enforcement Subcommittee, the states, and NOAA Fisheries to improve enforcement of management measures in both state and offshore waters

- Work with NOAA Fisheries to ensure consistency in state and federal regulations

Atlantic Croaker

- Conduct and present traffic light analysis, and respond if necessary
- Review and present benchmark stock assessment and peer review, and respond if necessary

Atlantic Striped Bass

- Finalize and implement Addendum II on reduction in recreational and commercial measures
- Conduct and present stock assessment update, and respond if necessary
- Develop alternatives for bag limit, size limit and season analysis for effort controls

Black Sea Bass

- Continue addressing recreational management reform in collaboration with the Mid-Atlantic Fishery Management Council (MAFMC), including:
 - Conduct scoping hearings and begin developing Recreational Sector Separation and Catch Accounting Amendment
- Continue development of Recreational Measures Setting Process Framework/Addenda and conduct public hearings
- Present management track stock assessment, and respond if necessary

Bluefish

- Continue addressing recreational management reform in collaboration with MAFMC, including:
 - Conduct scoping hearings and begin developing Recreational Sector Separation and Catch Accounting Amendment
 - Continue development of the Recreational Measures Setting Process Framework/Addenda and conduct public hearings
- Implement new management uncertainty tool in collaboration with MAFMC

Cobia

- Initiate development of management action to address recreational quota reallocation based on increasing catch of cobia in Mid-Atlantic states
- Collaborate with the Southeast Fisheries Science Center (SEFSC) and the states to conduct 2026 stock assessment

Horseshoe Crab

- Set 2025 Delaware Bay bait harvest specifications using the Adaptive Resource Management Framework Revision
- Consider Work Group input on Delaware Bay management goals, and respond if necessary
- Conduct and present stock assessment update, and respond if necessary
- Secure long-term funding for the Horseshoe Crab Benthic Trawl Survey for use in the ARM Framework

Red Drum

- Present benchmark stock assessment and peer review, and respond if necessary

Scup

- Continue addressing recreational management reform in collaboration with MAFMC, including:
 - Conduct scoping hearings and begin developing Recreational Sector Separation and Catch Accounting Amendment
 - Continue development of Recreational Measures Setting Process Framework/Addenda and conduct public hearings
 - Monitor management and research activities of MAFMC including, but not limited to, scup discards and gear restricted areas analysis

Shad and River Herring

- Conduct and present river herring benchmark stock assessment and peer review, and respond if necessary
- Complete updates to shad sustainable fishery management plans
- Complete updates to shad habitat plans
- Monitor management activities of MAFMC and New England Fishery Management Council (NEFMC) including, but not limited to, shad and river herring catch caps and bycatch avoidance programs

Summer Flounder

- Continue addressing recreational management reform in collaboration with MAFMC, including:
 - Conduct scoping hearings and begin developing Recreational Sector Separation and Catch Accounting Amendment
 - Continue development of the Recreational Measures Setting Process Framework/Addenda and conduct public hearings
- Develop an Addendum in collaboration with MAFMC to address the flynet definition and boundaries of the small-mesh exemption area

MEDIUM-LOW PRIORITY SPECIES

Atlantic Herring

- Monitor and respond if necessary to NEFMC activities including Amendment 10 to address spatial and temporal allocation and management of Atlantic herring at the management unit level to minimize user conflicts, contribute to optimum yield and support rebuilding of the resource Continue to improve coordination and collaboration with NEFMC
- Conduct meetings as necessary to establish state effort control (days-out) programs for Area 1A
- Explore funding options for biological sampling program

Atlantic Menhaden

- Initiate single-species stock assessment update to be completed in 2025 Continue work on ecological reference point (ERP) benchmark stock assessment for peer review in 2025

Atlantic Sturgeon

- Conduct and present stock assessment update, and respond if necessary
- Monitor state and federal activities in response to an Endangered Species Act listing, including 5-year status reviews and recovery plans
- Monitor federal activities in response to the Action Plan to Reduce Atlantic Sturgeon Bycatch in Federal Large Mesh Gillnet Fisheries

Black Drum

- Update and present indicators of fishery performance and indices of abundance, and respond if necessary

Coastal Sharks

- Monitor activities of NOAA Fisheries Highly Migratory Species (HMS) Division with regards to coastal shark management actions and consider development of complementary management actions as needed for consistency, including monitoring HMS Amendment 14 (annual catch limits and accountability measures), and proposed rule to consider prohibiting retention of sharks listed as threatened under the Endangered Species Act
 - Initiate addendum to consider moving oceanic whitetip shark to the prohibited species group, if necessary

Jonah Crab

- Work with ACCSP and partners on implementing and integrating tracking device data collection as part of Addendum IV
- Per the 2023 Peer Review Report, evaluate possible management measures or other options to address what appears to be deficiencies in the stock

Northern Shrimp

- Present results of 2023 traffic light analysis, and respond if necessary
- Continue to explore long-term management options given environmental changes in the Gulf of Maine and depleted stock status
- Consider development of management action to consider implementation of an ongoing moratorium until resource improves
- Continue development of management triggers and “wake-up index” to indicate when the stock can support a commercial fishery

Spanish Mackerel

- Consider development of management action to address differences between state and federal management plans in collaboration with South Atlantic Fishery Management Council (SAFMC)
- Monitor activities of SAFMC with regards to the Framework Amendment addressing acceptable biological catch limits
- Work in collaboration with SAFMC to plan and conduct Spanish mackerel and king mackerel port meetings
- Develop a white paper characterizing recreational and commercial Spanish mackerel fisheries along the Atlantic coast

Spiny Dogfish

- Present management track stock assessment and respond, if necessary, in collaboration with NEFMC and MAFMC
- Collaborate with NEFMC and MAFMC on changes to the Interstate FMP if changes to the federal FMP are made in response to the Action Plan to Reduce Atlantic Sturgeon Bycatch in Federal Large Mesh Gillnet Fisheries

Spot

- Conduct and present traffic light analysis, and respond if necessary
- Continue work on benchmark stock assessment for peer review in 2025

Spotted Seatrout

No new tasks

Tautog

- Continue to monitor the implementation of the commercial harvest tagging program to reduce illegal harvest and consider modifications if necessary

Weakfish

- Initiate stock assessment update to be completed in 2025

Winter Flounder

No new tasks

CROSS CUTTING ISSUES

- Continue to monitor impacts of changes to Marine Recreational Information Program (MRIP) Fishing Effort Survey (FES) design and data presentation standards relative to Commission FMPs and stock assessments
- Continue to update existing management programs to address the concerns of the recreational community with regard to Commission-managed and jointly-managed species
- Continue to work with the states and NOAA Fisheries on changes to the Take Reduction Plan for North Atlantic right whale
- Monitor developments related to changing ocean conditions, ocean acidification, stock distributions, ecosystem services, ocean planning and potential fisheries reallocations
- Continue to explore allocation strategies for the Commission's quota-managed species to reflect current fishery conditions
- Explore the development of a guidance or policy-level document on allocation and use of mode splits
- Consider strategies for increasing responsiveness in management to climate change
- Participate in the East Coast Climate Coordination Group to track progress of the Draft Potential Action Plan

- Provide support for the Climate Innovation Group to track information and changes relevant to East Coast fisheries, identify ideas that are worthy of consideration by the Coordination Group, and identify new possible actions to undertake in the Draft Action Plan
- Develop joint management agreement with MAFMC to clarify roles and increase efficiency on collaborative projects

Goal 2 – Provide the scientific foundation for stock assessments to support informed management actions

Sustainable management of fisheries relies on accurate and timely scientific advice. The Commission strives to produce sound, actionable science through a technically rigorous, independently peer-reviewed stock assessment process. Assessments are developed using a broad suite of fishery-independent surveys and fishery-dependent monitoring, as well as research products developed by a coastwide network of fisheries scientists at state, federal, and academic institutions. The goal encompasses the development of new, innovative scientific research and methodology, and the enhancement of the states' stock assessment capabilities. It provides for the administration, coordination, and expansion of collaborative research and data collection programs. Achieving the goal will ensure sound science is available to serve as the foundation for the Commission's evaluation of stock status and adaptive management actions.

Several fisheries science activities occur on an annual or ongoing basis, including development of stock assessments and conducting peer reviews; stock assessment scheduling and evaluation of scientists' workloads; updating Commission research priorities and distributing to funding agencies; external research proposal reviews; development of ecological reference points models; supporting multispecies/diet data collection; fish ageing and tagging programs; gear technology research; and participation in Marine Recreational Information Program (MRIP) and Atlantic Coastal Cooperative Statistics Program (ACCSP) committees. While ongoing activities are not listed below, they continue to be conducted.

SCIENTIFIC COMMITTEE ACTIVITIES

- Seek Assessment Science Committee (ASC) guidance on best practices for use of MRIP FES data in stock assessments; work with MRIP statisticians to scope magnitude of potential effort and catch estimate changes by species; during stock assessments, conduct sensitivity analyses to evaluate the effects of potential MRIP changes on model results and stock status
- Continue incorporating socioeconomic information in management documents and streamline processes for producing socioeconomic analyses through the Committee on Economics and Social Sciences
 - Participate in the development of Northeast Fisheries Science Center's (NEFSC) Ecosystem and Socioeconomic Profiles
 - Develop an American lobster socioeconomic data inventory to enhance current stock and fishery indicators
- Update the ASMFC Research Priorities; work with scientific committees to write proposals and pursue funding to conduct priority research