

**Atlantic States Marine
Fisheries Commission**

1050 N. Highland Street
Arlington, VA 22201

Robert E. Beal, Executive Director



**New York State Division
of Marine Resources**

205 N. Belle Mead Road
East Setauket, NY 11733

James J. Gilmore, Jr., Director

MEMORANDUM

October 10, 2018

TO: Commissioners; Proxies; American Eel Management Board; American Lobster Management Board; Atlantic Coastal Cooperative Statistics Program Coordinating Council; Atlantic Herring Management Board; Atlantic Striped Bass Management Board; Coastal Sharks Management Board; Executive Committee; Horseshoe Crab Management Board; ISFMP Policy Board; Law Enforcement Committee; South Atlantic State/Federal Fisheries Management Board; Spiny Dogfish Management Board; Summer Flounder, Scup, and Black Sea Bass Management Board; Tautog Management Board; Weakfish Management Board

FROM: Robert E. Beal *REB*
Executive Director

RE: **77th Annual Meeting of the Atlantic States Marine Fisheries Commission**
October 21-25, 2018

The Atlantic States Marine Fisheries Commission's 77th Annual Meeting will be held October 21-25, 2018 at The Roosevelt Hotel, Madison Avenue @ 45th Street, New York, NY. Meeting materials are available on the Commission website <http://www.asmfc.org/home/2018-annual-meeting>. Supplemental materials will be posted to the website on Wednesday, October 17th.

Board meeting proceedings will be broadcast daily via webinar beginning October 22nd at 8:30 a.m. and continuing daily until the conclusion of the meeting (expected to be 1:00 p.m.) on Thursday, October 25th. The webinar will allow registrants to listen to board/section deliberations and view presentations and motions as they occur. No comments or questions will be accepted via the webinar. Should technical difficulties arise while streaming the broadcast the boards/sections will continue their deliberations without interruption. We will attempt to resume the broadcast as soon as possible. Please go to <https://attendee.gotowebinar.com/register/4350173068754736387> to register.

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

Enclosures: Final Agenda
TA # 18-114



Public Comment Guidelines

With the intent of developing policies in the Commission's procedures for public participation that result in 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 use a speaker sign-up list in deciding 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 3 weeks prior to the start of a meeting week will be included in the briefing materials.
2. Comments received by **5:00 PM on the Tuesday, October 16, 2018** will be distributed electronically to Commissioners/Board members prior to the meeting and a limited number of copies will be provided at the meeting.
3. Following the Tuesday, **October 16, 2018 5:00 PM** deadline, the commenter will be responsible for distributing the information to the management board prior to the board meeting or providing enough copies for the management board consideration at the meeting (a minimum of 50 copies).

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, fax, 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.

Sunday, October 21

2:00 – 7:00 p.m. **Registration**

6:30 – 7:30 p.m. **Hosts' Reception at the Roosevelt Hotel**

Monday, October 22

7:00 a.m. – 1:00 p.m. **Registration**

8:30 a.m. – 12:30 p.m. **American Lobster Management Board**

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

Other Members: NEFMC, NMFS

Chair: Train

Other Participants: Perry, Reardon, Cloutier, Asaro

Staff: Ware

1. Welcome/Call to Order (*S. Train*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from May 2018
3. Public Comment
4. Review NOAA Technical Memorandum on North Atlantic Right Whale Status and Recovery Challenges (*M. Asaro*)
5. Report on October 2018 Atlantic Large Whale Take Reduction Team Meeting (*M. Asaro, M. Ware*)
Possible Action
6. Discuss American Lobster Addendum XXVII Timeline (*M. Ware*)
7. Discuss Protocol for Identifying Bait Sources (*P. Keliher, M. Ware*) **Possible Action**
8. Update from the Electronic Tracking and Reporting Subcommittees (*M. Ware*)
9. Consider Approval of 2018 American Lobster and Jonah Crab Fishery Management Plan Reviews and State Compliance Reports (*M. Ware*) **Action**
10. Review and Populate Jonah Crab Advisory Panel Membership (*T. Berger*) **Action**
11. Other Business/Adjourn

9:00 – 11:00 a.m. **Welcome Tea for Spouses/Guests**

12:30 – 1:30 p.m. **Lunch (*On Your Own*)**

1:30 – 3:30 p.m.

Atlantic Herring Management Board

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

Other Members: NEFMC

Chair: Keliher

Other Participants: Zobel, Eastman

Staff: Ware

1. Welcome/Call to Order (*P. Keliher*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from August 2018
3. Public Comment
4. Review 2018 Atlantic Herring Benchmark Assessment Peer Review Report (*P. Campfield*)
Final Action
 - Review and Consider Approval of Benchmark Stock Assessment and Peer Review Report for Management Use
5. Review and Discuss White Paper on Atlantic Herring Spawning Protections (*M. Ware*) **Possible Action**
6. Update on 2019-2021 Fishery Specifications Process (*M. Ware*)
7. Set 2019 Specifications for Area 1A (*M. Ware*) **Final Action**
8. Review and Populate Advisory Panel Membership (*T. Berger*) **Action**
9. Other Business/Adjourn

2:00 – 5:00 p.m.

Registration

3:45 – 4:45 p.m.

American Eel Management Board

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

Other Members: DC, NMFS, PRFC, USFWS

Chair: Gary

Other Participants: Zimmerman, Cloutier, Leuteritz, Noguchi

Staff: Rootes-Murdy

1. Welcome/Call to Order (*M. Gary*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from August 2018
3. Public Comment
4. Presentation on Convention on International Trade in Endangered Species Workshop and Discuss Next Steps (*T. Leuteritz, L. Noguchi*) **Possible Action**
5. Other Business/Adjourn

6:30 – 8:00 p.m.

Welcome Reception at the Intrepid Sea, Air & Space Museum

Tuesday, October 23

7:00 a.m. – 1:00 p.m.

Registration

8:00 – 10:15 a.m.

Strategic Planning Workshop

Purpose: Thorough discussion by Commissioners, proxies, and federal partners regarding the Commission's 2019-2023 Strategic Plan and annual action planning process

9:45 a.m. – 3:00 p.m.

Spouse and Guest Tour

10:15 – 11:15 a.m.

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: Gilmore

Staff: Beal

1. Welcome/Call to Order (*J. Gilmore*)
2. Committee Consent
 - Approval of Agenda
 - Approval of Proceedings from October and November 2017
3. Public Comment
4. Review and Consider Approval of 2019 Action Plan (*R. Beal*) **Action**
5. Elect Chair and Vice-Chair (*R. Beal*) **Action**
6. Recess

11:30 a.m. – 12:30 p.m. **Coastal Sharks Management Board**

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

Other Members: NMFS

Chair: Miller

Other Participants: Frazier, Garner

Staff: Rootes-Murdy

1. Welcome/Call to Order (*R. Miller*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from August 2018
3. Public Comment
4. Consider Addendum V for Final Approval (*K. Rootes-Murdy*) **Final Action**
 - Review Options and Public Comment Summary
 - Advisory Panel Report
5. Set 2019 Specifications (*K. Rootes-Murdy*) **Final Action**
6. Other Business/Adjourn

12:30 – 1:30 p.m.

Lunch (*On Your Own*)

12:30 – 5:00 p.m.

Law Enforcement Committee

(A portion of this meeting will be a closed session for Law Enforcement Committee members only to discuss ongoing enforcement activities. Only members of the LEC, authorized law enforcement personnel and the LEC Coordinator may attend)

Members: Anthony, Blanchard, Chapelle, Cloutier, Donovan, Eastman, Furlong, Gadomski, Garner, Hettenbach, Hogan, Kersey, King, Lauderman, Lynn, Messeck, Moore, Moran, Noel, Pearce, Snellbaker, Williams

Chair: Anthony

Other Participants: Loftus

Staff: Robson

1. Call to Order/Roll Call of the Law Enforcement Committee (LEC) Representatives (*S. Anthony, M. Robson*)
2. Approval of Agenda and May 2018 Minutes (*S. Anthony*)
3. Public Comment
4. Review and Discuss Federal Transit Zone for Striped Bass in Block Island Sound (*M. Appelman*)
5. Review and Discuss Transit Zones in Block Island Area for Summer Flounder, Scup and Black Sea Bass (*C. Starks*)
6. Mid-Atlantic Fishery Management Council Enforcement For-Hire Workshop (*A. Loftus*)
7. Review and Discuss Ongoing Enforcement Activities (**Closed Session**)
8. Discuss Enforcement Issues with Dual Landings/Landings Flexibility
9. Review 2018 Action Plan Results and New 2019 Tasks (*M. Robson*)
10. Recess

1:30 – 2:30 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: O'Reilly

Other Participants: Newlin, Moran, Didden

Staff: Rootes-Murdy

1. Welcome/Call to Order (*R. O'Reilly*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from October 2017
3. Public Comment
4. Review 2018 Stock Assessment Update (*J. Didden*)
5. Discuss Adjustments to Federal Commercial Trip Limit (*K. Rootes-Murdy*)
6. Review and Set 2019-2021 Specifications **Final Action**
 - Review Mid-Atlantic Fishery Management Council's Recommended 2019-2021 Specifications (*K. Rootes-Murdy*)
 - Set 2019-2021 Specifications (*R. O'Reilly*)
7. Review and Populate Advisory Panel Membership (*T. Berger*) **Action**
8. Other Business/Adjourn

2:00 – 5:00 p.m. **Registration**

2:45 – 4:00 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: Armstrong

Other Participants: Lengyel, Blanchard

Staff: Appelman

1. Welcome/Call to Order (*M. Armstrong*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from August 2018
3. Public Comment
4. Review Advanced Notice of Proposed Rulemaking Regarding Lifting the Ban on Atlantic Striped Bass Fishing in the Federal Block Island Sound Transit Zone (*D. Orner*) **Possible Action**
5. Update on North Carolina Cooperative Winter Tagging Program (*M. Appelman*)
6. 2018 Benchmark Stock Assessment Progress Update (*K. Drew*)
7. Review and Populate Advisory Panel Membership (*T. Berger*) **Action**
8. Other Business/Adjourn

7:00 – 10:00 p.m. **Annual Dinner - Bateaux New York**

Wednesday, October 24

8:00 – 10:00 a.m. **Executive Committee**

Breakfast Buffet will be available at 7:30 a.m. *(A portion of this meeting may be a closed session for Committee members and Commissioners only)*

Members: Abbott, Blazer, Bowman, Boyles, Jr., Cimino, Clark, Estes, Gilmore, Grout, Haymans, Keliher, McNamee, Miller, Miner, Murphey, Pierce, Shiels

Chair: Gilmore

Staff: Leach

1. Welcome/Call to Order (*J. Gilmore*)
2. Committee Consent
 - Approval of Agenda
 - Approval of Meeting Summary from August 2018
3. Public Comment
4. Consider Approval of Fiscal Year 2018 Audit (*P. Keliher, L. Leach*) **Action**
5. Discuss Priorities for Use of Plus-up Funding (*R. Beal*)
6. Discuss Changes to the Appeals Process (*J. McNamee*)
7. Discuss Appointment of Aquaculture Committee (*R. Beal*)
8. Review Quarterly Meeting Schedule (*R. Beal*)
9. Report from the Awards Committee (*S. Woodward*)
10. Other Business/Adjourn

8:30 a.m. – Noon **Law Enforcement Committee (continued)**

11. Social
12. Reconvene/Review Agenda Adjustments or Change (*S. Anthony*)
13. Discuss Enforcement Issues with Sale of Undersized Product from Other States
14. Discuss Offshore Enforcement for American Lobster
15. Review and Discuss ASMFC-managed Species as Needed
16. Federal and State Agency Reports
17. Other Business or Emerging Issues for Future Meetings
18. Adjourn

10:15 – 11:00 a.m. **Weakfish Management Board**

Member States: Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida
Other Members: NMFS, PRFC, USFWS
Chair: O'Reilly
Other Participants: Levesque, Anthony
Staff: Schmidtke

1. Welcome/Call to Order (*R. O'Reilly*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from February 2018
3. Public Comment
4. Technical Committee Report on Commercial Discards (*K. Drew, M. Schmidtke*)
5. Consider Approval of 2018 Fishery Management Plan Review and State Compliance Reports (*M. Schmidtke*) **Action**
6. Review and Populate Advisory Panel Membership (*T. Berger*) **Action**
6. Elect Vice-Chair **Action**
7. Other Business/Adjourn

11:15 a.m. – 12:15 p.m. **Horseshoe Crab Management Board**

Member States: Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida
Other Members: NMFS, PRFC, USFWS
Chair: Rhodes (Kerns will Serve as Chair for this Meeting)
Other Participants: Sysak, Messeck
Staff: Schmidtke

1. Welcome/Call to Order (*T. Kerns*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from October 2017
3. Public Comment

4. Set 2019 Harvest Specifications **Final Action**
 - Review Horseshoe Crab and Red Knot Indices of Abundance for 2018 Adaptive Resource Management (ARM) Model Runs (*K. Anstead*)
 - Review Results of 2018 ARM Model Runs (*K. Anstead*)
 - Set 2019 Harvest Specifications (*M. Schmidtke*)
5. Progress Update on Horseshoe Crab Benchmark Stock Assessment (*K. Anstead*)
6. Consider 2018 Fishery Management Plan Review and State Compliance Reports (*M. Schmidtke*) **Action**
7. Elect Vice-Chair **Action**
8. Review and Populate Advisory Panel Membership (*T. Berger*) **Action**
9. Other Business/Adjourn

12:15 – 1:30 p.m.

Captain David H. Hart Award Luncheon

Commissioner Photo Shoot: *If time permits, the photo will be taken immediately following the luncheon*

1:30 – 3:30 p.m.

Summer Flounder, Scup, and Black Sea Bass Management Board

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

Other Members: NMFS, PRFC, USFWS

Other Participants: Wojcik, Snellbaker

Chair: Ballou

Staff: Rootes-Murdy, Starks

1. Welcome/Call to Order (*R. Ballou*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from August 2018
3. Public Comment
4. Review Ongoing Board Activities and Actions (*C. Starks*)
5. Consider Approval of Draft Addendum XXXII (Black Sea Bass and Summer Flounder Recreational Management) for Public Comment (*C. Starks, K. Rootes-Murdy*) **Action**
6. Progress Update on Black Sea Bass Commercial Working Group (*C. Starks*) **Possible Action**
7. Review and Populate Advisory Panel Membership (*T. Berger*) **Action**
8. Other Business/Adjourn

3:45 – 4:45 p.m.

Atlantic Coastal Cooperative Statistics Program Coordinating Council

Partners: ASMFC, Connecticut, Delaware, District of Columbia, Florida, Georgia, MAFMC, Maine, Maryland, Massachusetts, NEFMC, New Hampshire, New Jersey, New York, NMFS, North Carolina, Pennsylvania, PRFC, Rhode Island, SAFMC, South Carolina, USFWS, Virginia

Chair: Fegley

Staff: Cahall

1. Welcome/Introductions (*L. Fegley*)
2. Council Consent
 - Approval of Agenda
 - Approval of Minutes from May 2018
3. Public Comment
4. Program/Committee Updates (*M. Cahall*)
5. Progress Report on SAFIS Redesign (*M. Cahall*)
6. Consider Recommendations of FY2019 Submitted Proposals (*L. Fegley*) **Action**
7. Clarify Funding Decision Process (*M. Cahall*) **Possible Action**
8. Discuss Formation of Data Reporting Committee on Data Accountability (*M. Cahall*) **Possible Action**
9. Other Business/Adjourn

Thursday, October 25

8:00 – 9:00 a.m.

Tautog Management Board

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

Other Members: NMFS, USFWS

Other Participants: Barry, Snellbaker

Chair: McKiernan

Staff: Starks

1. Welcome/Call to Order (*D. McKiernan*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from May 2018
3. Public Comment
4. Review Technical Committee Report on Biological Sampling Requirements (*L. Barry*) **Possible Action**
5. Discuss Commercial Harvest Tagging Program Implementation (*C. Starks*)
6. Consider Approval of 2018 Fishery Management Plan Review and State Compliance Reports (*J. Kuesel*) **Action**
7. Other Business/Adjourn

9:15 – 11:00 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

Chair: Gilmore

Other Participant: Lengyel

Staff: Kerns

1. Welcome/Call to Order (*J. Gilmore*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from August 2018
3. Public Comment
4. Update from the Executive Committee (*J. Gilmore*)
5. Update on the October 2018 Atlantic Large Whale Take Reduction Team Meeting and Possible Impacts to Commission-managed Species
6. Update on the Risk and Uncertainty Policy (*J. McNamee*)
7. Update on the Northeast Area Monitoring and Assessment Program (*N. Lengyel*) **Action**
8. Update on River Herring Technical Expert Working Group (*C. Starks*)
9. Standing Committee Reports
 - Atlantic Coastal Fish Habitat Partnership (*L. Havel*)
 - Habitat Committee (*L. Havel*) **Action**
 - Consider Approval of Living Shorelines Factsheet
 - Law Enforcement Committee (*M. Robson*)
 - Assessment Science Committee (*S. Murray*) **Action**
 - Consider Approval of Stock Assessment Schedule
10. Progress Update on Benchmark Stock Assessments
 - Shad (*K. Drew*)
 - Atlantic Menhaden and Ecological Reference Points (*K. Drew*)
11. Review Noncompliance Findings, If Necessary **Action**
12. Other Business/Adjourn

11:00 – 11:15 a.m.

Business Session (continued)

7. Consider Noncompliance Findings, If Necessary **Final Action**
8. Other Business/Adjourn

11:30 a.m. – 1:00 p.m.

South Atlantic State/Federal Fisheries Management Board

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

Other Members: DC, PRFC, NMFS, SAFMC, USFWS

Other Participants: McDonough, Rickabaugh, Lynn, Powers

Chair: Geer

Staff: Schmidtke

1. Welcome/Call to Order (*P. Geer*)
2. Board Consent
 - Approval of Agenda
 - Approval of Proceedings from August 2018
3. Public Comment
4. Review Public Comment Summary for Cobia Draft Amendment 1 Public Information Document (*M. Schmidtke*)
5. Provide Guidance to the Cobia Plan Development Team on Options for Inclusion in Draft Amendment 1 (*P. Geer*) **Possible Action**
6. Consider 2018 Fishery Management Plan Reviews and State Compliance Reports for Black Drum, Spotted Seatrout, and Spanish Mackerel (*M. Schmidtke*) **Action**
7. Other Business/Adjourn

Atlantic States Marine Fisheries Commission

American Lobster Management Board

October 22, 2018
8:30 a.m. – 12:30 p.m.
New York, New York

Draft Agenda

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

1. Welcome/Call to Order (*S. Train*) 8:30 a.m.
2. Board Consent 8:30 a.m.
 - Approval of Agenda
 - Approval of Proceedings from May 2018
3. Public Comment 8:35 a.m.
4. Review NOAA Technical Memorandum on North Atlantic Right Whale Status and Recovery Challenges (*M. Asaro*) 8:45 a.m.
5. Report on October 2018 Atlantic Large Whale Take Reduction Team Meeting **Possible Action** (*M. Asaro; M. Ware*) 10:00 a.m.
6. Discuss American Lobster Addendum XXVII Timeline (*M. Ware*) 11:00 a.m.
7. Discuss Protocol for Identifying Bait Sources (*P. Keliher; M. Ware*) **Possible Action** 11:10 a.m.
8. Update from the Electronic Tracking and Reporting Subcommittees (*M. Ware*) 11:40 a.m.
9. Consider Approval of 2018 American Lobster and Jonah Crab FMP Reviews and State Compliance Reports (*M. Ware*) **Action** 11:55 a.m.
10. Review and Populate Jonah Crab Advisory Panel Membership (*T. Berger*) **Action** 12:25 p.m.
11. Other Business/Adjourn 12:30 p.m.

The meeting will be held at the Roosevelt Hotel, 45 East 45th Street & Madison Avenue, New York, NY; 212.661.9600

MEETING OVERVIEW

**American Lobster Management Board Meeting
 October 22, 2018
 8:30 a.m. – 12:30 p.m.
 New York, New York**

Chair: Stephen Train (ME) Assumed Chairmanship: 02/18	Technical Committee Chair: Kathleen Reardon (ME)	Law Enforcement Committee Representative: Rene Cloutier (ME)
Vice Chair: Dan McKiernan (MA)	Advisory Panel Chair: Grant Moore (MA)	Previous Board Meeting: May 2, 2018
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 May 2018

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. NMFS Technical Memo on North Atlantic Right Whales (8:45 – 10:00 a.m.)
Background <ul style="list-style-type: none"> • In September 2018, a technical memorandum was released by NMFS reviewing the status of the North Atlantic Right Whale and factors affecting their recovery. (Briefing Materials)
Presentations <ul style="list-style-type: none"> • Review of the technical memorandum by M. Asaro

5. Report on October 2018 ALWTRT Meeting (10:00 – 11:00 a.m.) Possible Action
Background <ul style="list-style-type: none"> • The Atlantic Large Whale Take Reduction Team met October 9-12 to deliberate on the scope of measures which may be considered to reduce the effects of US fisheries on the right whale population. • A series of recommendations regarding potential action were developed at the meeting. These will undergo further review ahead of the next ALWTRT meeting in March 2019.

Presentations

- Report on the ALWTRT Meeting by M. Asaro, M. Ware

Board Actions for Consideration at the Meeting

- Consider any management responses to the ALWTRT recommendations

6. American Lobster Addendum XXVII Timeline (11:00 – 11:10 a.m.)**Background**

- The Board initiated Draft Addendum XXVII to increase the resiliency of the GOM/GBK stock. The PDT and TC continue to work on developing this document.
- Given there may be regulatory action in response to the ALWTRT recommendations, the Board will need to provide guidance to staff on the prioritization and timing of multiple actions.

Presentations

- Overview of current Draft Addendum XXVII timeline by M. Ware

7. Protocol for Identifying Bait Sources (11:10 – 11:40 a.m.) Possible Action**Background**

- Given the results of the 2018 Atlantic Herring Stock Assessment, it is expected that there will be reductions in the Atlantic herring ABCs for 2019 through 2021. This could have impacts on the lobster fishery given herring is a preferred bait source.
- Maine currently has a protocol for identifying alternative bait sources and classifying potential bio-hazards. **(Briefing materials)**

Presentations

- Overview of Maine's bait protocol by P. Keliher, M. Ware

Board Actions for Consideration at this Meeting

- Consider a coastwide protocol for identifying alternative bait sources

8. Electronic Reporting and Tracking Subcommittee Updates (11:40 – 11:55 a.m.)**Background**

- In response to final action on Addendum XXVI, the Board established Electronic Reporting and Tracking Subcommittees. The Electronic Reporting Subcommittee is charged with guiding the development of electronic harvester reporting. The Electronic Tracking Subcommittee is charged with implementing a 1-year tracking pilot program.

Presentations

- Updates on the Electronic Reporting and Tracking Subcommittees by M. Ware

9. Fishery Management Plan Reviews (11:55 a.m. – 12:25 p.m.) Action**Background**

- State compliance reports for American lobster and Jonah crab were due August 1, 2018.
- The Plan Review Teams reviewed state compliance reports and compiled the annual FMP Reviews.
- Delaware, Maryland, and Virginia have requested and meet the requirements for *de minimis* in the lobster and Jonah crab fisheries.

Presentations

- | |
|---|
| <ul style="list-style-type: none">• Overview of the FMP Review Reports by M. Ware (Briefing Materials) |
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Board Actions for Consideration at this Meeting
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- | |
|---|
| <ul style="list-style-type: none">• Accept the 2018 FMP Reviews and State Compliance Reports• Approve <i>de minimis</i> requests |
|---|

10. Jonah Crab Advisory Panel Membership (12:25 – 12:30 p.m.) Action

Background

- | |
|---|
| <ul style="list-style-type: none">• Marc Palombo from MA has been nominated to the Jonah Crab Advisory Panel. |
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Presentations

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| <ul style="list-style-type: none">• Nominations by T. Berger (Briefing Materials) |
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Board Actions for Consideration at this Meeting
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- | |
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| <ul style="list-style-type: none">• Approve Jonah Crab Advisory Panel nomination |
|--|

11. Other Business/Adjourn

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

**The Westin Crystal City
Arlington, Virginia
May 2, 2018**

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 Order, Chairman Stephen Train 1

Approval of Proceedings, February 2018..... 1

Lobster Conservation Management Team Proposals to Reduce Latent Effort 1

 Review Board Task Regarding Latent Effort 1

 Review of the LCMT Proposals 1

 Discuss Board Goals and Objectives Regarding Task..... 3

 Consider Board Action in Response to the Proposals 3

Law Enforcement Committee Report 4

 Enforceability of Ropeless Fishing 4

Plan Development Team Update on the Lobster Draft Addendum XXVII 11

Other Business 12

Adjournment..... 12

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

INDEX OF MOTIONS

1. **Approval of Agenda by Consent** (Page 1).
2. **Motion to adjourn by Consent** (Page 12).

ATTENDANCE

Board Members

Pat Keliher, ME (AA)	John McMurray, NY, proxy for Sen. Boyle (LA)
Steve Train, ME (GA)	Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)
Douglas Grout, NH (AA)	Jeff Brust, NJ, proxy for L. Herrighty (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Tom Fote, NJ (GA)
G. Ritchie White, NH (GA)	Roy Miller, DE (GA)
Raymond Kane, MA (GA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
Dan McKiernan, MA, proxy for D. Pierce (AA)	John Clark, DE, proxy for D. Saveikis (AA)
Rep. Sarah Peake, MA (LA)	Russell Dize, MD (GA)
Jay McNamee, RI (AA)	Mike Luisi, MD, proxy for D. Blazer (AA)
David Borden, RI (GA)	Pat Geer, VA, proxy for S. Bowman (AA)
Colleen Giannini, CT, proxy for P. Arrestad (AA)	Peter Burns, NMFS
Maureen Davidson, NY, proxy for J. Gilmore (AA)	Allison Murphy, NOAA
Emerson Hasbrouck, NY (GA)	

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

Ex-Officio Members

Rene Cloutier, Law Enforcement Representative

Staff

Robert Beal	Jessica Kuesel
Toni Kerns	Megan Ware
Jeff Kipp	

Guests

Joe Cimino, NJ DFW	Arnold Leo, E. Hampton, NY
Heather Corbett, NJ DFW	Andrew Petersen, Baton Rouge, LA
Matt Gates, CT DEEP	Melissa Smith, ME DMR

The American Lobster Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; Wednesday, May 2, 2018, and was called to order at 1:25 o'clock a.m. by Chairman Stephen Train.

CALL TO ORDER

CHAIRMAN STEPHEN TRAIN: I want to thank everybody for showing up for the American Lobster Management Board meeting. My name is Steve Train from the state of Maine, and I'll be Chair of the meeting. I assume everyone has the packets. Do we have consent on approval of the agenda? Is there any opposition to the agenda; if not I'll assume it's approved? I guess we have consent.

APPROVAL OF PROCEEDINGS

CHAIRMAN TRAIN: Does everyone have the meeting proceedings from our last meeting? Are there any additions, changes or deletions? If there is no objection I'll consider them approved with consent. We have nobody signed up for public comment. If somebody forgot to sign up and would like to speak to something that is not on the agenda, please step up to the microphone. Okay then.

LOBSTER CONSERVATION MANAGEMENT TEAM PROPOSALS TO REDUCE LATENT EFFORT

CHAIRMAN TRAIN: The fourth item Lobster Conservation Management Team, the LCMTs Proposals to Reduce Latent Effort, there is four bullets. Review Board Task Regarding Latent Effort, Review the LCMT Proposals, Discuss the Board Goals/Objectives Regarding Task, and Consider Board Action in Response to the Proposals. Megan will bring us through this. There is a potential action here; and if there is action it's going to require an addendum. Megan.

MS. MEGAN WARE: At the 2017 Annual Meeting, the Lobster Board tasked all of the LCMTs with developing proposals to reduce

latent effort. To provide some context for this tasking, in August the Board decided not to move forward with Addendum XXV for management use in southern New England.

REVIEW BOARD TASK REGARDING LATENT EFFORT

MS. MEGAN WARE: As a result they established a workgroup to discuss future management of that stock. In October the Workgroup identified potential paths forward; including a recommendation to reduce latent effort in LCMTs 4, 5, and 6. The Board decided to task all LCMTs with assessing levels of latent effort; and developing proposals to reduce latent effort in the fishery.

REVIEW OF THE LCMT PROPOSALS

MS. MEGAN WARE: Proposals were received by Areas 4, 5, and 6. For Areas 4 and 6, separate proposals were submitted by each state; given the state's managed trap allocation separately. Some of the other LCMTs have indicated initial discussions amongst state staff; but no proposals have been developed. As a reminder, Areas 2 and 3 are going through a series of trap allocation reductions; aimed at scaling the size of the fishery to the size of the resource, and Year 3 will be impacting the 2018 allocations. I'm now going to go through each of the proposals. For Area 4, the New York proposal is to reduce permit holders trap tag allocation by 50 percent if they haven't reported actively fishing 50 days during 2013 to 2017. For this proposal, actively fishing means the permit holder must have reported fishing for any species; not just lobster. The minimum allocation would be capped at 50 traps; and this proposal is expected to decrease trap allocations by 19 percent.

The proposal does note considerations for federal waters; particularly that reducing trap allocations for some permit holders rather than a percent reduction across all of the Area 4 permits would be akin to a new trap allocation program, and state and federal decisions on revised allocations would have to match, in

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order to avoid a disconnect on the number of traps a permit holder can fish.

Next is the Area 4 New Jersey proposal. Consensus was not reached at this meeting. There was concern about the validity of New Jersey permit information; since federal permits are not required to report through VTRs, and were only recently required to report to the state. Two concepts were put forward in the proposal; the first was status quo, and rationale for this was that New Jersey has had a moratorium on permits since 2002, and the number of permits has decreased from 42 in 2008 to 32 in 2017.

Another concept put forward was latency by owner, not vessel. Several active harvesters possess multiple lobster permits; but due to the poor stock status, have not utilized all permits in recent years. As a result if a fisherman actively fished on one permit, the recommendation was that all lobster permits under their possession would be exempt from latency.

Next is the Area 5 proposal; and their proposal was for status quo or natural attrition. Rationale for this was that permit numbers have decreased from 28 permits in 2009 to 26 permits in 2017. Traps allocated to each fisherman are based off of historical allocations and cannot increase. The Delmarva states contribute less than 3 percent of landings in southern New England, and less than 0.1 percent of landings coastwide.

Harvesters in the region really participate in the multiple fisheries; and their choice on which species to harvest depends on market, quotas, availability, et cetera. Next is the Area 6 Connecticut proposal. There were two options here. The preferred option was status quo. Rationale was that there is a substantial decrease in effort in Long Island Sound since 1999.

Connecticut, their commercial fishery statutes were amended in 2015; and mandate yearly renewal of limited entry lobster licenses. In the initial year of this program, trap allocations fell by 46.7 percent. The non-preferred option was a trigger approach. Through this approach trap reductions would be required if there is an 80 percent increase in the number of lobster traps actively fished.

The baseline here would be 2016; so that would require an 80 percent increase from 2016 levels. If that were to be triggered, then we would go to the table on the right; and the trap allocation reduction would be based on the number of years fished between 2013 and 2017. As an example, if a fisherman fished four out of those five years that individual would have a 20 percent allocation reduction. The proposal did note trap allocations at 50 traps or fewer would not be reduced; and it's expected that if this were to trigger, it would reduce the state's trap allocation by another 41.8 percent from 2017 levels. Finally we have the New York Area 6 proposal. Consensus was not reached at this meeting; but the proposal included three of the options that were discussed.

The first option was status quo; and rationale for this was that New York has a moratorium on lobster licenses, and there is no trap transferability. Then trap allocations have decreased on average by 4 percent each year since 2008. Another option that some members supported was an 800 trap cap; and that would result in about a 30 percent reduction in allocations.

There was also some consideration of increasing the cost of trap tags to a dollar; as this would limit the purchase to the amount permittees intend to fish, and funds could support research. The third idea was to decrease allocations on non-active permits. Some of the other members proposed that permit holders who haven't submitted at least 50 harvester reports, and that would be for any type of fishing, in the last five years would A,

have their trap allocations reduced by 50 percent, or B, have their trap allocations reduced to 800.

Those are the proposals we received. Going through these I just had some staff observations. The first is that these LCMTs are all using different definitions of active permits. Some people are thinking of permits associated with lobster landings. Some are thinking about permits associated with landings of any species. Some are thinking about permits that are renewed; that may not have landings.

Then some are thinking about permits that are owned by a fisherman that has at least one permit with landings. There are also a variety of response levels. Some are proposing action after a trigger is met. Others are proposing a reduction from current levels, and then others are recommending natural attrition.

DISCUSS BOARD GOALS AND OBJECTIVES REGARDING TASK

As a result, it may be helpful in the future to be more specific in the tasking of LCMTs. For example, what does the Board consider to be latent or active effort; and is there a desired percent reduction in trap allocations? The primary question for the Board today is the Board interested in reducing latent effort via these LCMT proposals?

I think very much akin to that question is thinking about the future management of lobster, what priority level would the Board give this potential action? Just as a reminder, there are several other discussions and actions ongoing. We have the 2020 stock assessment; which is being worked on by the TC and Stock Assessment Subcommittee. We have Addendum XXVII, which is being worked on by the TC and the PDT.

Then there are ongoing whale discussions; which is primarily staff and state personnel. If the Board is interested in pursuing one of these proposals that would require an addendum;

and some of the questions for the Board to think about are is this action specific to LCMTs, or a biological stock? How does the Board want to define latent effort; and what is the goal or target of the Addendum? With that I will take any questions.

CHAIRMAN TRAIN: That was a very good presentation; and the summary towards the end to bring it all back into the specific questions was helpful. Do we have any questions for Megan? I guess that was really good. Okay if there aren't any questions, is there anybody that thinks we have an action item here at this point, remembering that this will require an addendum? This might not take long. Okay, can we get the Law Enforcement Committee report? Oh, we've got somebody's hand up. Go ahead, Dan.

CONSIDER BOARD ACTION IN RESPONSE TO THE PROPOSALS

MR. DANIEL MCKIERNAN: I can't help myself here. I just want to have the Board recall what we did in Area 2 about ten years ago; for a couple of reasons. First, there was an effort control plan that was enacted through an addendum; that when we went to the National Marine Fisheries Service, they basically said it was a nonstarter.

In other words, the rules that the fishermen had developed in terms of the eligibility for traps, given a certain level, NMFS rejected it. It's critical that if we do anything, other than Area 6. NMFS has to be a partner and really embrace this; because if you get too far down the road and NMFS won't adopt it, then you've wasted everybody's time.

Then the other issue is because Rhode Island and Massachusetts have driven out most of the latent effort in Area 2, and continues to cut traps in a way that we think is going to get to bone within the end of that schedule. I think it's really an issue that the states of Connecticut, New York, New Jersey and others really need to address personally; in terms of

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administrative burden, because what you're seeing on the board is a lot of work that I don't think is going to pay dividends for lobster conservation.

As someone recently said at the last two meetings we decided not to regulate the active lobster fishery; and now we're thinking about regulating the non-active lobster fishery. It is just counterintuitive. I think if the other states want to proceed with the National Marine Fisheries Service, then we can hear from them. But I think it's not wise at this time; based on what I see in terms of some of the chaos, the lack of consistency, the lack of terms, and lack of definitions.

CHAIRMAN TRAIN: Is anyone else having second thoughts on speaking on this topic?

LAW ENFORCEMENT COMMITTEE REPORT

ENFORCEABILITY OF ROPELESS FISHING

CHAIRMAN TRAIN: Okay under the Law Enforcement Committee Report, Rene, do you have it?

MS. WARE: I'm going to jump in before Rene; an intro. We'll wait for the presentation to get up, thank you. Just some very brief background; so everyone is on the same page here. There have been several ongoing discussions regarding the role that human activities have on right whale populations.

This has been primarily prompted by the decline of the right whale population since 2010. Specifically there have concerns about the entanglement of right whales in fishing gear. A subgroup of the Take Reduction Team was formed to investigate the feasibility of ropeless fishing, and then also in February the Board tasked the Law Enforcement Committee with reviewing the enforceability of ropeless fishing in the lobster fishery.

While some members have been involved in the discussions on ropeless fishing; others have not.

As a result these slides are intended to provide a baseline of what ropeless fishing could mean. The intent of this overview and the Board's discussion today is not to analyze these technologies; but to provide context for Rene's discussion. For full transparency these schematics are borrowed from others. Ropeless fishing at the most basic level means the elimination of vertical lines from the water column.

This is proposed to be done through an acoustic modem; which sends an acoustic signal to a trap, and either triggers its release or the release of a rope, so that the trap can be retrieved. Here are some schematics for different retrieval methods. One idea is a lift bag; which would upon a trigger from acoustic modem inflate a bag, and then lift the trap to the surface of the water column.

This idea comes from the salvage industry. Another idea is to have a spool; which upon trigger would unwind through the water column, providing rope for the trap retrieval. This is not a complete list of the different ropeless prototypes; but hopefully this provides some visual images of what ropeless fishing could mean, and provide context for Rene, now Rene, on to you.

MR. RENE CLOUTIER: Hello everyone, my name is Rene Cloutier; I'm the LEC representative to the Lobster Board. The LEC met on May 1, to discuss the enforceability of ropeless fishing. We outlined five primary concerns with enforcement of current technology. Consensus statement is that significant enforcement concerns about the technology as presented.

I want to also say that I've been to several ropeless fishing seminars; and a lot of the equipment they're talking about is yet to be developed. We're being asked to say how this would work if we could make this work. The first one is the inability to enforce current lobster regulations, trap tag allocations and

vent sizes are management measures which are verified on the trap and require gear retrieval. If measures cannot be enforced, there is greater incentive for cheating and reduced conservation in the fishery. The third one is the inability to enforce regulations is detrimental to a sustainable lobster fishery. Our second concern was additional cost in time required to retrieve ropeless fishing gear.

Ropeless gear will require new retrieval technologies and the ability to reset the gear. These are higher cost technologies; which will require greater enforcement time. Multiple technologies mean enforcement vessels will need to have multiple retrieval methods. Then we get into the security of the location information.

Who is the gate keeper of the information that is going to be stored? How do we protect against fishermen stealing acoustic frequencies? There is limited ability to conduct covert operation if a fisherman is notified every time a trap comes to the surface that is a very big concern for us. Four is the limitation of enforcement vessels.

Technologies require additional deck space to store spools, rope, bags, et cetera. This results in limits on the amount of gear that enforcement can haul and inspect. One of the technologies that we looked at that is available, and they're using in Australia right now. A Maine fisherman went over and fished with the guy for a day, an entire day he fished 14 traps. The scale of it is just completely different when you come back to the northeast. Ropeless technology involves all vessels; with no buoys, no surface system to indicate where traps are located. This means that all vessels, including mobile gear, all the draggers, everything else that's towing anything around in the ocean, will have to have the technology onboard, not only to determine that his traps are there, but what direction they're going in. The gear conflicts that we see just among fixed gear fishermen are a giant, and then when you involve mobile gear

it just gets a lot bigger. Does anyone have any questions about ropeless fishing?

CHAIRMAN TRAIN: Go ahead, Ritchie.

MR. G. RITCHIE WHITE: I've heard that this technology is ten years away. Do they talk about what they're going to do in ten years? This clearly is not workable today; so what are they talking about that they can figure out that would make it workable?

MR. CLOUTIER: Like I said earlier at the beginning, this technology some of it is there, some of it is yet to be developed; so we really can't comment on what's going to happen in ten years from now. We all have smart phones now and 20 years ago nobody said that would ever happen. But this is a lot bigger than that probably.

CHAIRMAN TRAIN: I saw a hand over here, Colleen.

MS. COLLEEN GIANNINI: Rene, aside from the operational inefficiencies, I always think about budgetary limitations. Did they give you all any kind of an idea, like what it would cost say an enforcement vessel to outfit?

MR. CLOUTIER: They were very vague about the cost. They said that the cost should be passed on to some government agency or something; it shouldn't be passed on to the fisherman. But just something that maybe a lot of you can equate is the lift bag. What that is; anybody that dives they have a little buddy pack, in case they have problems with air.

Those are fairly expensive; so that's what's hooked to that thing. That whole thing, that whole system would be cost prohibitive. When that bag comes to the surface you need to be right there; because it's an opening in the bag, and that bag isn't going to hold that air forever, it's going to lay down in the wind and that's going to sink. There are a lot of questions with this whole technology; all of it.

CHAIRMAN TRAIN: Emerson.

MR. EMERSON C. HASBROUCK: I know that there are acoustic releases that are currently being used in oceanographic studies. They are fairly expensive. I mean you're talking about at least a couple thousand dollars for the unit that's in the water that's going to release whatever you want it to release; as well as at least a couple thousand dollars for the deck unit to communicate with what's underwater, to trigger it. In terms of what's available now, it's fairly expensive. Whether it's for a lobsterman to put it on his boat and put it on his traps, or for a law enforcement entity to put it on their boat.

MR. CLOUTIER: Agreed. One of the technologies was probably 18 inches long, maybe 4 or 5 inches through it. In order to make that work you took a little piece of filament wire, threaded it through there, had to tighten off both ends of it just right and it is filament wire. You're trying to do that with gloves on. It just didn't seem very practical.

CHAIRMAN TRAIN: Sarah Peake.

REPRESENTATIVE SARAH PEAKE: Wearing my Legislators hat here, since I sit here as a Legislative member. What strikes me is for myself and my colleagues who are either proxies for or actual legislators who are here. If this technology is ten years out, now is the time for us to start to lay the groundwork about the importance of this industry in our respective states.

I'm thinking about Massachusetts, where we spend something north of a hundred million dollars a year in film tax credits, in order to support that industry. We're about to take up a tech industry bond bill, to invest another hundred, hundred and fifty million dollars in the tech industry; the same thing for the biotech industry.

What this is to me is a wakeup call that what we're talking about is not nearly that much funding. The research seems to be being done through other funded agencies. But the lobster industry and the fishing industry are important industries certainly in the state of Massachusetts; and as I look across the aisle here to my colleagues to the north in New Hampshire and Maine, it's still a critical part of the economy in our coastal communities.

I think that we need to really start making the case that although it's an old and traditional industry, it is still a viable industry that sends a lot of kids to college, and puts a lot of meals on people's dining room tables, and puts a lot of roofs over people's heads, and offers a good way for a lot of families to earn a very sustainable living.

Let's start having those conversations when we go back home, with the folks that have an eye on economic development, environmental issues. I mean this is where economic development and environmentalists can and should come together. The Center for Coastal Studies should be as concerned about this and looking for funding support as the Mass Lobsterman's Association is.

When I spoke with the Executive Director of the Mass Lobsterman's Association at Ag Day at the State House in Boston, I said wow, these things are expensive. Her response to me was, yes but Sarah, who is the lobsterman that wants to be responsible for entangling the last right whale. That is sort of the point that we're coming to on this.

CHAIRMAN TRAIN: Dennis Abbott.

MR. DENNIS ABBOTT: I sat in on the LEC meeting yesterday when they had the presentation made to them. I appreciate Representative Peake's remarks. But I think we're really at this point so far away from the practicality of this; and I think the Law Enforcement Committee acknowledged that.

Several of them raised their cell phones up and said you know 20 years ago or X number of years ago they didn't believe the technology would be available. However, it just seems that at this point in time that we're way ahead of looking at this very serious, not very seriously, but we're just in the beginning stages, and looking at the economics of it and the issues with Law Enforcement that it's really at the moment I think sort of pie in the sky to think that we could have this. It's technologically possible, but practically possible from every angle, from the Law Enforcement angle, from the lobstermen's point of view, from others that use the ocean and the resource.

It's just a difficult situation; but one I think we should keep our eyes on and do what we can, and it's just to monitor things as they move forward. We all recognize the problem with the right whales. We can't not acknowledge that and make efforts to do something about entanglements. Well, I'll leave it at that.

CHAIRMAN TRAIN: I think we just heard two divergent opinions on this; they're not totally separate. Unless we have something different than those two, would the Board consider sending a letter, kind of incorporating both of those; that this technology has a lot of promise, but we're not ready for it yet? The enforcement has something like that. Should we be sending such a letter, or are we just going to sit here and wait for the next thing to come around? Pat Keliher.

MR. PATRICK C. KELIHER: I think we should send a letter; but I see nothing in the technology that holds any promise. I don't want to diminish the fact that technology in the future couldn't play a role here. But as it exists, and I think this gets to Representative Peake's point. There needs to be investment in that technology for the future.

I don't disagree with that. But I think in the statements that I've made to the subgroups, the TRT Subgroups is, and the NGOs, you should

be focused on that technology. But right now this is a non-starter when it comes to enforcing the conservation rules and laws that we have set up to protect this fishery. We've done a good job at doing that.

I don't want to tie the hands of, in my case the Maine Marine Patrol, in doing their jobs. We haul somewhere between 20 and 30,000 traps a year; and if we don't have the ability to do that trap limits don't matter, there will be no escape vents, they will be able to block those escape vents without our knowing. We will see rampant problems with the enforcement.

I would support a letter being sent, and I don't know what the motion should look like. But a letter being sent that after review of the Law Enforcement Committee at ASMFC; that the Commission does not support ropeless fishing at this time, and would certainly be willing to reengage in the topic once technology is advanced.

CHAIRMAN TRAIN: Ritchie White, you had your hand up before. You're good. Doug Grout.

MR. DOUGLAS E. GROUT: Yes, and based on the conversations I've had with my staff who is on the Large Whale Take Reduction Team, there is a subgroup that is working on this that was looking into this. They were the ones that came back to me with the conclusion that they were unanimously going to have to recommend that this technology is ten years away.

That's another issue about making this viable; because what they're looking at is trying to put something in place sooner, rather than ten years from now, because if we're having problems with mortalities with whales, they are looking at something that can be done in the short term. Now whether that's something that would be done here in the U.S. or in Canada, I don't know. But I think that's another point that it's reason not to move forward with this right now, because we need to do something sooner rather than later.

EXECUTIVE DIRECTOR ROBERT E. BEAL: Maybe I missed it, but who would this letter be addressed to; is it GARFO, Take Reduction Team, to ourselves?

MS. WARE: I think it would be to GARFO, is my understanding.

CHAIRMAN TRAIN: David Borden, then Pat Keliher.

MR. DAVID V. BORDEN: I support what Doug and Pat are advocating here; I think it's appropriate. I also attended the Enforcement Committee meeting, and I thought that was a good discussion pointing out a lot of the nuances of the implications of this. I would also point out that I've attended as a member of the Take Reduction Team.

I have attended a number of meetings where the same technology had been discussed, and the lead advocates for the technology acknowledged that it's at least five years away. This won't come as any shock to anyone that more time is needed. I think it's also important for us to support the positions that the Enforcement Committee advocated, because they are legitimate concerns, and have to be addressed as part of the process.

We don't want to necessarily go forward with one strategy that works on whales, but causes significant problems in terms of lobster conservation. It's a net loss for us. As far as addressing the letter, Mr. Chairman, I think it should go to Mike Pentony and David Warren, who is the head of the program that is considering this technology.

CHAIRMAN TRAIN: Pat.

MR. KELIHER: The Ropeless Fishing TRT Subgroup did meet. There was conversations that resulted from input from the Commonwealth of Massachusetts in regard to the closed areas that you guys deal with; and I think that is frankly the perfect spot for some of

this technology to be looked at, because if it gives the ability of your fishermen to be able to access these closed areas while at the same time protecting right whales. By all means I think that is a very appropriate place to try to determine if that technology is even feasible.

CHAIRMAN TRAIN: Dan.

MR. McKIERNAN: Pat is right. If I could identify one really important thing I would like to see in that letter is to urge GARFO to work diligently to approve experimental fisheries to test out some of this gear in the ocean. We have a closure in Cape Cod Bay, and elsewhere around Cape Cod, February through April.

We just extended that closure because we have over 100 right whales in Cape Cod Bay right now. We're probably going to extend it another week; hoping that the whales leave soon. But we are interested in trying out this technology. I did speak to the proponents of some of the folks from WHOI, Woods Hole Oceanographic Institute. But I guess I was a little disappointed when we had that seminar down at Woods Hole. I don't think the National Marine Fisheries Service really understood the urgency to try to get this stuff tested in the water; or if they do, I think maybe the first task is to facilitate an easier path forward to get the gear in the water and test it out.

CHAIRMAN TRAIN: Peter Burns, are you volunteering to receive the letter?

MR. PETER BURNS: Well, not specifically no. But I can get it where it needs to go, I guess. But no, I was just going to add that this is an important problem and there aren't a lot of solutions out there right now that are being vetted. I certainly understand the implications with the costs and with the limitations in the technology right now; and also with the limitations on enforcement.

But as I heard people say at the Law Enforcement Committee meeting that they

didn't want to dismiss it out of hand, because they know that the technology could potentially improve over time, and that could change things. Certainly we had some interest on the part of the lobster industry, like Mr. Keliher said.

They might be interested in looking at some pilot programs to test the feasibility of these technologies under certain circumstances. That is certainly a good thing forward. I guess that is just my thought going forward is just to certainly understand the limitations on these types of technologies, but also in the absence of other types of alternatives here, I think it's something still worth considering.

CHAIRMAN TRAIN: Ritchie White.

MR. WHITE: I would suggest the letter also include that we're clearly on top of this issue as new technology comes available we'll be reconsidering this on a regular basis; something to soften it a little bit.

CHAIRMAN TRAIN: I see a hand going up in the back; and I can't tell who it is. My eyes aren't that good. Go ahead.

MR. ARNOLD LEO: It's Arnold Leo. I represent the fishing industry of the town of East Hampton, Long Island. Actually I have a question. I realized I'm really puzzled how entanglement occurs on these lines which are single lines from a buoy down to the bottom. Can someone explain that to me?

MS. WARE: I'll try my best, Arnold, but my sense is that there will be some acting in this. When a whale approaches a line it hits it, and it gets a little nervous and it might spin. It's that spinning of the whale in the water column which causes the wrapping.

MR. LEO: You're telling me that the whale actually spins around and wraps the rope around itself?

MS. WARE: Unintentionally so, but yes that is what happens.

MR. LEO: Okay thanks. It does sound farfetched, but I gather there is evidence that that has been happening.

CHAIRMAN TRAIN: David Borden and I think that has been enough on this topic.

MR. BORDEN: Well, I was going to suggest Mr. Chairman that it seems to be a consensus around the table to send a letter, and unless somebody objects, my suggestion to you is we just allow the staff to prepare a letter on behalf of the Management Board, reflective of the discussion today, and then present the results to the Policy Board tomorrow.

CHAIRMAN TRAIN: Toni, you have input?

MS. TONI KERNS: I was just going to say we just make a recommendation to the Policy Board that the Commission send the letter.

CHAIRMAN TRAIN: Okay so a letter will be sent either from us or from the Commission; recommendation to the Policy Board, if they don't send it we will.

MS. KERNS: No. The Policy Board would have to approve that letter; so the letter will only be sent if the Policy Board approves it. Individually as states you can send your own letters, if the Policy Board does not approve it.

CHAIRMAN TRAIN: Do we have any Policy Board members present, we can get this up? No, I'm kidding. Okay we'll finish that up and we'll pass that to the Policy Board for recommendation. I'm going to jump back to Item Number 4 quickly, just to see if anyone here wants to reconsider. We moved through it. We presented it. There wasn't much; and if anyone wants to reconsider anything on that re-tasking or anything else, before we jump down to the next item. Pat.

MR. KELIHER: I don't want to reconsider. But in light of the lack of conversation around Board action as it deals with latent effort. I'm wondering if we should be doing any additional work regarding latency. The LCMT-1 within the Gulf of Maine with Maine, New Hampshire and Mass, we talked about doing this.

The state of Maine has done a lot to engage the industry to try to address latency. Latency does become a hot button topic within our state and how to address it. We've advanced legislation to try to address it; it has failed. But frankly, and I've said this to several of you. We caught 130 million pounds two years ago, we caught 110 million pounds last year, and we still have a thousand licenses that are not active.

If that latency wasn't going to be active during the height of this fishery; when is it ever going to be active? It becomes in my mind kind of a state issue on how we deal with it. I'm going to have to be dealing with 100 percent lobster reporting and there is still going to be a price tag to that. If I got rid of latency, and the tags associated with latency, you think I've got a budget problem now. Wait until that happens; when those licenses aren't purchased and when those tags aren't purchased. I would just as soon not do anymore work in regards to conversations around latency; if there is no interest in the Board to take any action.

CHAIRMAN TRAIN: Dan McKiernan.

MR. McKIERNAN: Yes thanks Pat for reminding me. We did have a couple conference calls since the last Board meeting; and the three states of New Hampshire, Maine and Massachusetts, we talked about the potential to convene the LCMT in the future to talk about this. It's not just for the resiliency issues of a potential declining Gulf of Maine/Georges Bank stock.

But it's inevitably part of the conversation when you talk about right whale conservation; in terms of the number of vertical lines. We've

decided as a group of three states that we would work collectively on kind of a white paper that compares and contrasts each of the jurisdictions permitting rules, statistics about active permits, without necessarily a proposal or any kind of changes in policy intended.

But just to inventory it, because as someone who deals with permitting in Massachusetts, I don't always understand the range of permitting issues in the other states. Of course NMFS would be valuable to include as well; and so this is something that we've created outlines. We intend to bring this to the Board in the future. I was remiss in not bringing that up.

I imagine our goal is probably if not by the next Board meeting, probably by the end of the summer we would like to complete that. I'm speaking for myself; but I think that was the consensus of the group. Then in the Area 2 Zone, we've been talking with the state of Rhode Island about trying to assess the actual performance of the effort control plan that is well on its way to driving out effort, including latent effort. We want to continue to track that progress, and to demonstrate whether that plan is working and to what extent.

Those two issues are ongoing. Jay and I have been talking about, comparing notes, because sometimes the vessels can move from one state to another. If you're not doing it jointly you can see an increase in one state, when in fact there was an overall decrease in the zone. Those two issues are ongoing. I just want to let the Board know that.

CHAIRMAN TRAIN: David Borden and then Doug Grout.

MR. BORDEN: A quick point, Mr. Chairman. I totally agree with what Dan said; and I won't repeat it, but I think we're going to have an evolving need to go back and revisit this issue as this issue kind of comes together with whales and some other issues that seem to be developing.

I would hope that over the next six months at some point, we could get the type of report that Dan has been characterizing. Then we'll know a little bit more about where we stand; in terms of some of the whale issues, and there may be a need to kind of bring some of these issues together and try to find solutions that cut across all of those types of alternatives.

CHAIRMAN TRAIN: Doug.

MR. GROUT: As we've had this discussion between the three states dealing with LCMA-1. I originally when this was brought forward, I thought of this as a way that at least we could potentially consider some mechanism to build resiliency into this particular lobster management area. I think it's a good idea to continue to move forward with a white paper; to at least see if there is some mechanism that we can utilize out of that for building resiliency.

The state of New Hampshire is already, at the request of our lobster industry, been trying to address some of our latent effort, and in fact have effectively removed several hundred latent licenses out of our licensing, just ones that weren't being used. We're going to move down this road anyways, whether this is done through the ASMFC or just at the state level.

CHAIRMAN TRAIN: Colleen Giannini.

MS. GIANNINI: Kind of just a follow up question to the indexing that Dan was talking about. Will that include any kind of accounting for individuals with multiple federal permits? I mean I do agree with that 800 cap and the systematic reductions for a single federal permit holder. It is addressing latency. But it was my understanding that there are still individuals out there with multiple permits for the same management area, above 800 or above the reduction would then be latent.

CHAIRMAN TRAIN: Go ahead, Dan.

MR. MCKIERNAN: Yes, Colleen. That was brought to our attention in the conference call; and we would want to describe and then maybe partition those permits that we know are held by active fishermen but remain unfished. We see this in Area 2, because with the trap cuts that are still coming, we have fishermen who have obtained and have pocketed second permits as sort of their own personal trap allocation bank. We'll do our best to describe the status of those permits that is a little bit separate than simply an unfished permit, an unfished business really.

CHAIRMAN TRAIN: Okay, I'm the one who brought that back around; and it appears that the states can do what they want, and we're not going to act as a Commission on it. Is that understood? Pat, go ahead.

MR. KELIHER: I would just say, Mr. Chairman, I think my point was to bring it up in relationship to possible Board action; the issues that Dan brought up, and David as well in regard to cataloguing some of this information, in particular to the whale conversation I certainly understand and support. We'll do our part.

PLAN DEVELOPMENT TEAM UPDATE ON THE LOBSTER DRAFT ADDENDUM XXVII

CHAIRMAN TRAIN: Okay, we have a PDT Update on the Lobster Draft Addendum XXVII. Megan.

MS. WARE: This is just a very brief update on the progress of that Addendum. As a reminder, the Board did initiate Addendum XXVII in August to increase the resiliency of the Gulf of Maine/Georges Bank stock; by considering the standardization of management measures across LCMAs. The Addendum is intended to be a proactive-management action in response to signs of reduced settlement; as well as the joining of the Gulf of Maine/Georges Bank stocks following the 2015 stock assessment. With Addendum XXVI complete, the PDT has focused its attention onto Addendum XXVII, and we've started to develop that document. Then

the TC is also in the process of starting analysis for the Addendum. This will be one of the discussion topics at their upcoming meeting; which is in about a week and a half. Just to update that the work is going on for Addendum XXVII, and a reminder that the Board did initiate that Addendum; so that will be something we continue to work on.

CHAIRMAN TRAIN: Questions for Megan. Pat Keliher.

MR. KELIHER: Megan, can you remind me. The way we move forward with this Addendum, does it include the – I know it's about resiliency – but does it include the discrepancies between the minimum sizes throughout the range, to get at this issue of commerce that keeps popping up?

MS. WARE: Yes, so it would include considering standardization of measures; such as the gauge sizes. That would be included, yes.

CHAIRMAN TRAIN: Is there anybody else? Megan, you're on a roll this week. You've got shortened meetings. Is there any other business? Peter Burns.

OTHER BUSINESS

MR. BURNS: Just an announcement, really. All the talk about resilience here is making me realize that I wanted to let everyone know that we're having a Fishing Community Resilience Workshop down in Cape May, New Jersey on Monday, June 4. This is co-hosted by the Greater Atlantic Regional Fisheries Office, and also our Northeast Fisheries Science Center.

This is something that stems from our recent strategic plan that tries to figure out ways how we can help communities be more resilient in the wake of changes in fishing regulations, fish stocks, and climate change and other things like that. We had our first workshop last June in our Gloucester Office, and we were graced and privileged to have our own Pat Keliher and Mike Luisi there as VIP speakers.

They are off the hook for this one I guess, although you guys are certainly welcome to come. But we have ASMFC Chair Jim Gilmore is going to be giving a presentation at this workshop too. If anyone is interested in coming, please let me know, I can make sure you get the registration information. But we're looking forward to it. We have two mayors from southern New Jersey who are going to be speaking at the event; as well as members of the commercial fishing industry and aquaculture industry. I hope you can come. Thank you.

CHAIRMAN TRAIN: Thank you, Peter; Pat.

MR. KELIHER: I don't know if this was brought up at the Law Enforcement Committee meeting; so I'm going to bring it up here. We recently had a Coast Guard recently wrote a ticket for a high fly violation off the coast of Maine several weeks ago. Was that addressed at Law Enforcement Committee? It's a non-enforceable issue.

MR. CLOUTIER: Mr. Burns and I have talked about that.

MR. KELIHER: Mr. Burns and Major Cloutier have good resolution?

MR. CLOUTIER: Absolutely.

CHAIRMAN TRAIN: Go ahead, Peter, if you've got input too.

MR. BURNS: No, I'll just try to be the conduit between our enforcement folks and whatever the issue is here; just to make sure that it gets fully reviewed, so thank you.

ADJOURNMENT

CHAIRMAN TRAIN: If there is nothing else, would the next hand be a motion to adjourn. We have a motion to adjourn, consensus, thank you.

Draft Proceedings of the American Lobster Management Board Meeting May 2018

(Whereupon the meeting adjourned at 2:20
o'clock p.m. on May 1, 2018)

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

American Lobster and Jonah Crab TC Task List

Activity level: High

Committee Overlap Score: Low

Committee Task List

Lobster TC

- Conduct analysis to evaluate results of changes to the lobster minimum and maximum gauge size for Addendum XXVII (aiming to be completed in spring 2018)
- 2020 Benchmark Stock Assessment
 - Assessment Workshop – January 2019
- Annual state compliance reports are due August 1

Jonah Crab TC

- Annual state compliance reports are due August 1

TC Members

American Lobster: Kathleen Reardon (ME, TC Chair), Joshua Carloni (NH), Chad Power (NJ), Colleen Giannini (CT), Jeff Kipp (ASMFC), Kim McKown (NY), Conor McManus (RI), Tracy Pugh (MA), Burton Shank (NOAA), Megan Ware (ASMFC), Craig Weedon (MD), Sara Blachman (VA)

Jonah Crab: Derek Perry (MA, TC Chair), Joshua Carloni (NH), Chad Power (NJ), Jeff Kipp (ASMFC), Conor McManus (RI), Allison Murphy (NOAA), Kathleen Reardon (ME), Burton Shank (NOAA), Jeffrey Shields (VA), Megan Ware (ASMFC), Craig Weedon (MD)

SAS Members

American Lobster: Kim McKown (NY, SAS Chair), Joshua Carloni (NH), Larry Jacobson (NOAA), Jeff Kipp (ASMFC), Conor McManus (RI), Tracy Pugh (MA), Kathleen Reardon (ME), Burton Shank (NOAA), Megan Ware (ASMFC)

Jonah Crab: None



NOAA Technical Memorandum NMFS-NE-247

North Atlantic Right Whales- Evaluating Their Recovery Challenges in 2018

**US DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Northeast Fisheries Science Center
Woods Hole, Massachusetts
September 2018**



NOAA Technical Memorandum NMFS-NE-247

This series represents a secondary level of scientific publishing. All issues employ thorough internal scientific review; some issues employ external scientific review. Reviews are transparent collegial reviews, not anonymous peer reviews. All issues may be cited in formal scientific communications.

North Atlantic Right Whales - Evaluating Their Recovery Challenges in 2018

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**US DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
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Woods Hole, Massachusetts
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Table of Contents

ABSTRACT.....	1
INTRODUCTION	1
Signs of Trouble.....	1
Demographic Effects	2
Distribution Change	3
Increased Mortality	3
POTENTIAL CAUSES OF THE DECLINE	4
Ecosystem Dynamics	4
Whales and Fisheries Are On the Move	4
Prey Availability Drives Reproductive Success	4
Right Whales Follow Prey in a Changing Ocean	6
Reproduction Requires Robust Females.....	6
Anthropogenic Stressors	7
Ship Strikes	7
Entanglement	8
Increase in Entanglement Risk.....	8
Sublethal Challenges- Skinny Whales and Few Calves	11
Biological Cost of Stressors.....	11
Biological Demands of Right Whale Pregnancy	12
HOW LONG DO NORTH ATLANTIC RIGHT WHALES HAVE?.....	13
A Long-Lived Animal.....	13
An Illustration of Potential Decline, 2017-2067	14

A Matrix Model	14
Results.....	14
INDICATORS OF SUCCESSFUL MANAGEMENT MEASURES	16
ACKNOWLEDGMENTS	17
REFERENCES CITED.....	17
APPENDIX 1 Data Sources for Figure 4	22
APPENDIX 2 Model Inputs and Methods used for Population Projection.....	22

Figures and Tables

Figure 1 North Atlantic right whale serious injury/mortality rates 2000-2017.....	2
Figure 2 American lobster landings in Maine	5
Figure 3 Timeline of significant management actions focused on reducing fishing entanglement	9
Figure 4 Index of fishing effort, US and Canada	10
Figure 5 Right whale entanglements from 1997 through 2017 with set location	11
Figure 6 Cumulative annual probability of no entanglement.....	13
Figure 7 Matrix population projection model output of North Atlantic right whale female population trend under current population conditions	15
Table Matrix projection model output of female North Atlantic population trends for 5-year intervals, 2017-2067.....	15

ABSTRACT

The North Atlantic right whale (*Eubalaena glacialis*) population has been in decline for 8 years due to increased mortality and sublethal effects from multiple factors. Together these have contributed to a decrease in calving. Shifting ecosystem conditions have also changed North Atlantic right whale behavior and fishing patterns. For example:

- North Atlantic right whales have expanded their distribution farther into northern waters, and are visiting different foraging areas.
- Calanoid copepod distributions appear to be in a similar state of change and this may be affecting available forage for North Atlantic right whales
- The whales' range expansion has exposed them to vessel traffic and fisheries in Canadian waters, which did not have protections for right whales in place until late last summer (2017).
- American lobster (*Homarus americanus*) populations are also changing distribution, moving north and into deeper, cooler waters of the Gulf of Maine. The US fisheries are moving farther offshore to capitalize on this, increasing the overlap between their fishing activity and North Atlantic right whale foraging areas and migration corridors.

The net result of these events is that severe entanglements have increased among North Atlantic right whales. Animals are in poor body condition likely from a combination of repeated entanglement stress, potentially limited forage and increased migratory costs- all contributing to a decrease in female calving rate. Ship strikes are still a real threat to the population. At the current rate of decline, all recovery achieved in the population over the past three decades will be lost by 2029.

INTRODUCTION

Signs of Trouble

After several decades of recovery and years of collaboration among stakeholders, the North Atlantic right whale (*Eubalaena glacialis*), hereafter referred to as the right whale, began to decline (Pace et al. 2017). This trend was subtle at first, initially signaled by fewer sightings in traditional survey areas, but other warning signs began to emerge (Kraus et al. 2016). The number of documented mortalities increased markedly in 2016 and 2017 (Hayes et al. 2018; Hayes et al. 2017) and an improved way of modeling the population's numbers (Pace et al. 2017) revealed a clearer picture of the population size and decline in numbers. Concern further escalated throughout 2017 and 2018 when only 5 calves were born and there were 19 confirmed mortalities through August.

Taken together these signs meant that risks posed to right whales and associated management measures needed to be revisited for multiple US fisheries on the Atlantic coast. This occurs through the biological opinion process under the federal Endangered Species Act, which was reinitiated in October 2017, and through the take reduction team process under the federal Marine Mammal Protection Act.

Demographic Effects

Increased mortality rates and decreased calving have moved the population into a decline that has continued for at least the last 8 years. At present, right whale deaths attributable to human activity are mostly caused by ship strikes and entanglement in pot/trap and anchored gillnet fishing gear. An encounter with fishing gear is the most frequent cause of documented right whale serious injuries and deaths in recent years. The odds of an entanglement event are now increasing by 6.3% per year, while ship strikes events remain flat (Fig. 1). At the current rate of decline, the population will have returned to its 1990 numbers, likely with comparatively reduced genetic diversity, and could decline past a point of no return in just a few decades.

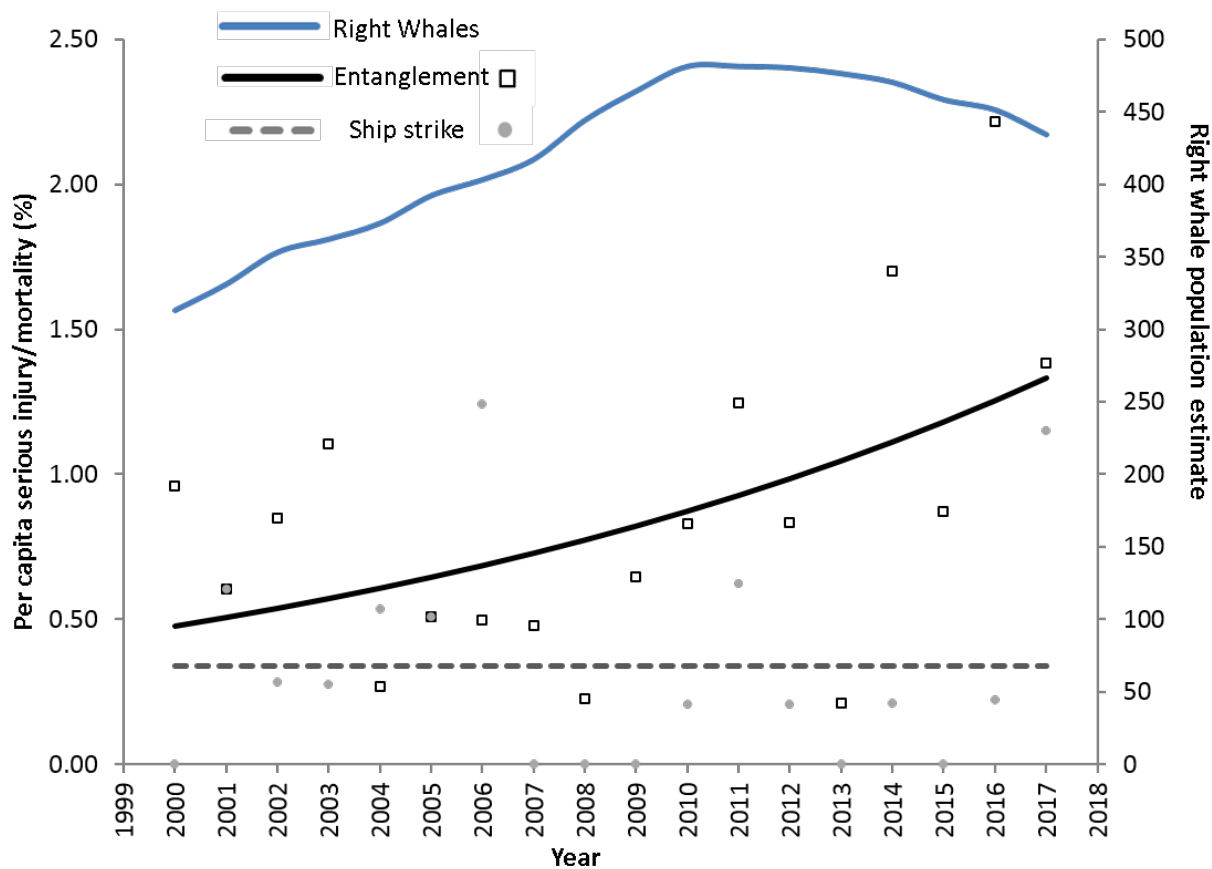


Fig. 1 North Atlantic right whale serious injury/mortality rates from known sources 2000-2017 (Henry et al 2017; 2016 & 2017 values preliminary). Models are simple logistic regressions fit using maximum likelihood-based estimation procedures available in R. The right whale population trend is overlaid and referenced to right y-axis (Hayes et al, 2018).

Distribution Change

Historically, right whales have returned to habitats in specific geographic locations annually, ensuring that a large portion of the population could be seen in each year. Therefore annual population estimates were conducted by simply sighting and counting as many animals as possible each year. Resulting estimates also assumed that an animal had died if it were not seen for 6 consecutive years.

Changes in this distribution pattern began around 2010 when the population peaked at 481 individuals. The whales were no longer using some of their established habitat areas in as great a number, and not staying within them for as long. This meant a new method was needed to account for animals, even those not sighted in a year. Once developed, this more advanced assessment tool, based upon mark recapture methods, enabled rapid assessment of the population with increased precision within one calendar year, much faster than the five or so years required to get good confidence on an annual estimate using the previous method. It also provided precise population estimates with greater resolution on the number of whales that likely died in any given year. Estimates made using the new method confirmed that in recent years, many deaths (around 10 to 20/yr) were going undetected annually and that by the end of 2016, the right whale population had declined to 451 individuals. A revised population estimate accounting for the many deaths and few births of 2017 is being developed and will be available later this year.

Increased Mortality

The large number of observed right whale mortalities in 2017 triggered an unusual mortality event (UME) to investigate the causes. The National Marine Fisheries Service (NMFS) is authorized to declare UMEs under the federal Marine Mammal Protection Act when an unanticipated significant die-off occurs in a marine mammal population, requiring an immediate response. Two other UMEs were declared that year due to 80 humpback whale and 40 minke whale deaths. Ongoing investigations for these two species have preliminarily identified causes of death that include entanglements, ship strikes, and disease.

In contrast to other large whale species, the problems of right whales are often more apparent because they are monitored more intensely and their coastal distribution means more opportunity for overlap with human activities, leading to it being nicknamed 'the Urban Whale' (Kraus et al. 2007).

While perhaps more attention is paid to the right whale given their more dire population status, it can be an indicator of more chronic problems that need addressing, not just for the sake of right whales but also for other populations of large whales. By example, although Gulf of Maine humpback whale status has improved, entanglement mortalities still remain high for this stock (Hayes et al. 2018).

There is considerable urgency to address the issues of mortalities that stem from human activities. Large whales, including right whales, are long-lived and can breed multiple times during their lives. This means these species can be resilient and able to recover after periods of

poor reproduction. However, recovery for any species cannot take place if the number of deaths is more than the number of births in the population.

POTENTIAL CAUSES OF THE DECLINE

Ecosystem Dynamics

One of the constant challenges of resource management is that things change. While it is much easier to make management decisions if conditions are static, ecosystems are inherently dynamic and will change over time in response to a variety of influences. This is the case for the emerging story for right whales.

Sometime around 2010, ecosystem shifts occurred within their habitat that changed right whale movements and fishing practices in a way that has increased interaction between whales and fishing gear, and that potentially presents other environmental challenges.

Currently the Gulf of Maine is warming faster than 99.9% of all other ocean regions on the planet (Pershing et al. 2015). This is having dramatic impacts across the food web, from the middle and upper trophic level organisms such as American lobster (*Homarus americanus*), Atlantic cod (*Gadus morhua*) and right whales (Greene 2016); to the zooplankton at the base of the food web such as calanoid copepods (Grieve et al. 2017; NEFSC 2018).

Whales and Fisheries Are On the Move

American lobster are experiencing strong population fluxes and redistributions with temperature warming. The southern New England lobster fishery has been severely limited by epizootic shell disease, which lobsters become susceptible to at warmer temperatures. In the Gulf of Maine, coastal waters remain cool enough and offshore, deeper waters have warmed enough for lobsters, and lobster fishing, to expand farther offshore. As a result, Maine lobster landings have increased steadily for the past 30 years, with an increasing portion of this caught 3 or more miles offshore over the past 10 years (Fig. 2). Note that Maine lobster landings did downturn sharply in 2017, and future trends are uncertain.

Prey Availability Drives Reproductive Success

It is essential to also recognize that environmental factors and lower trophic level dynamics also contribute to right whale birth and mortality rates. Changes in prey availability influence right whale health and reproduction. In particular, abundance of the copepod *Calanus finmarchicus* in the Gulf of Maine is a strong predictor of right whale reproductive success (Greene and Pershing 2004; Meyer-Gutbrod and Greene 2014; Meyer-Gutbrod et al. 2015).

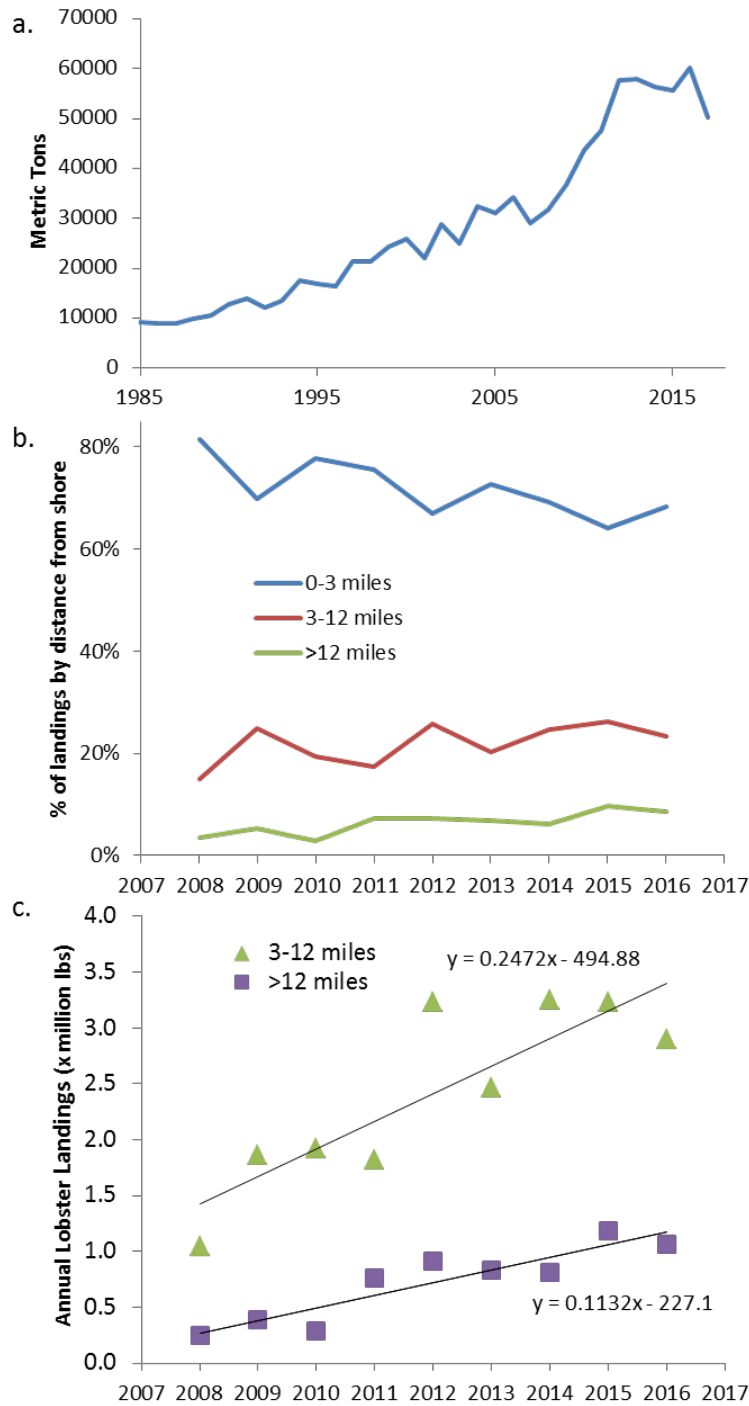


Fig 2. American lobster landings in Maine: a) total annual landings b) relative proportion of landing by distance from shore c) increase in landings from 3-12 and >12 miles offshore from Maine's 10% harvester reporting, no VTR data included. <https://www.maine.gov/dmr/commercial-fishing/landings/>

Meyer-Gutbrod and Greene (2018) followed individual whales over the past three decades to evaluate the relationship of calving and mortality rates to prey availability. They found that prey availability is a driver of decadal differences in the right whale population's recovery. Periods of

low prey availability coincided with reduced birth rates (Meyer-Gutbrod and Greene 2018) and the interval between births has been observed to lengthen during periods when prey availability is low (Meyer-Gutbrod et al. 2015).

Similarly, years with few births contribute to years of decline or stagnation in population growth, indicating the pronounced effect of reproductive variability on species viability (Pace et al. 2017). That said, Meyer-Gutbrod and Greene (2018) modeled population growth rates under scenarios of high and low prey availability and found that the population should continue to grow even with poor prey availability and only fails to do so when whale mortalities reach 8 to 10 per year. It is worth noting natural mortality seems to be very rare in adult right whales: there has been no confirmed case of natural mortality in adult right whales in the past several decades (Corkeron et al. *Accepted with revision*; Henry et al. 2017; van der Hoop et al. 2013).

Right Whales Follow Prey in a Changing Ocean

The copepod *C. finmarchicus* has shifted in distribution and abundance in recent years due to unprecedented warming in the Gulf of Maine, and this is likely to impact the right whale population (Greene 2016; Mills et al. 2013; Reygondeau and Beaugrand 2011). It appears that in the last decade (~2005-2015), that there has been a general decline in *C. finmarchicus* in the Gulf of Maine (2009-2014, but 2015 was average abundance) and on Georges Bank (below average abundance since 2008) (NEFSC 2018) as well as the Scotian Shelf (Johnson et al. 2017).

Changes in plankton forage species abundance likely played a role in the changing movement patterns of right whales that began sometime in the past 10 years. There have been decreases in both acoustic detections and physical observations of right whales in the northern Gulf of Maine and the Bay of Fundy, and a concurrent increase in sightings of many of the same animals in the Canadian Gulf of St. Lawrence (Daoust et al. 2018; Davis et al. 2017; Meyer-Gutbrod et al. 2018; Meyer-Gutbrod and Greene 2018).

During winter, whales are spending more time offshore in the mid-Atlantic, and less time on the coastal calving grounds just off the southeastern U.S., where in 2017 and 2018 calving has been quite poor.

Reproduction Requires Robust Females

Reproduction depends on adequate adult female health and body condition. Reproductive females are particularly vulnerable to prey reductions because pregnancy and lactation increases caloric demand and they have less access to prey during migration to calving grounds (Fortune et al. 2013; Miller et al. 2012; Rolland et al. 2016).

Several of the ecosystem shifts mentioned earlier are likely to have negative consequences for reproduction in right whales. First, a reduction in prey will have energetic costs for females. Northward shifts in the right whales' feeding grounds, as a result of changes in prey availability, will increase energetic cost of the calving migrations from the southern calving grounds off the coast of Florida and Georgia, particularly if animals do not adapt to also calve farther north.

The cost of entanglement has also been shown to have direct and indirect consequences for right whales (van der Hoop et al. 2017b; van der Hoop et al. 2017c). This will be detailed next, but in the Gulf of Maine where ecosystem shifts are occurring more trap fishing is also occurring offshore, increasing the overlap with right whale foraging areas.

Whales have also expanded their range, foraging into the Gulf of St. Lawrence. This increased the whales' exposure to risk from fixed gear fisheries. Some of this risk has reduced by strong protections put in place by the Canadian government during the spring of 2018 (DFO/TC Canada 2018; DFO Canada 2018).

Anthropogenic Stressors

In a review of mortality sources for all large whales, entanglement in fishing gear was the number one cause, followed by natural causes and then vessel strikes. An exception to this is the right whale for which there is very little evidence of natural mortality in adult whales, likely due to shortened life spans associated with anthropogenic causes (Corkeron et al. *Accepted with revision*), as all confirmed causes of adult mortality and serious injury since 1970 have been due to fishing gear and vessel strike (Henry et al. 2017; van der Hoop et al. 2013).

The relative contribution from these two causes was approximately equal through the year 2000 (van der Hoop et al. 2013), but entanglement events resulting in death or serious injury have increased steadily since then, while ship strike frequency has remained lower with no specific trend (Fig. 1). For the recent 19 known right whale mortalities (17 in 2017 and 2 to date in 2018), the cause of death could be determined for 10. Ship strikes are implicated in five blunt force trauma cases and entanglement in the remaining five. In 2017, seven other entangled whales were observed: three were disentangled, three shed the gear, and one was not seen again.

Ship Strikes

Reducing Risk

Ship strikes are currently the second most frequently documented cause of mortality in right whales. The per capita mortality frequency has not varied much, hovering around 0.34% deaths or serious injury events per year (Fig. 1). Several management actions were implemented in U.S. and Canadian waters beginning in 2008 to reduce the risk of collisions between right whales and large vessels. Major actions include:

- Voluntary two-way routes for commercial vessels off the Southeast U.S. and in Cape Cod Bay
- Modification of the Boston, Massachusetts Traffic Separation Scheme
- Canada and the International Maritime Organization established the voluntary Area To Be Avoided concept in the Roseway Basin
- Seasonal Management Areas in habitats off of Massachusetts, ports along the Mid-Atlantic coast, and the southeastern U.S. where vessels are required to slow to speeds less than 10 knots during transits for vessels 65 ft in length or longer

- Intermittent implementation of voluntary speed restrictions in Dynamic Management Areas within which right whale aggregations are observed outside the boundaries of the Seasonal Management Areas

Several analyses have been conducted to evaluate the effectiveness of these management efforts (Conn and Silber 2013; Lagueux et al. 2011; Silber et al. 2014; van der Hoop et al. 2012). In general, while these analyses were based on a short time-series of available data, collectively they suggest that after ship-strike rules put in place, a reduction in right whale mortality from ship strikes followed, and in general were at the lowest on record per capita from 2010 through 2016.

Responding to Changing Risk

In 2017, right whale deaths by ship strike increased when 5 ship-strike mortalities were confirmed, 1 in U.S. and 4 in Canadian waters (Fig. 1), likely caused in part when right whales began to spend more time in new areas with high vessel traffic and no speed restrictions. Increased survey effort in these areas also made it more likely that these events would be observed and reported.

Entanglement

Reducing Risk

Management efforts to reduce entanglement risks in U.S. waters have focused on gear technology to make entanglements less likely to harm or kill whales, restricting where and when gear that poses a threat can be used when whales are likely to be present, and reducing the amount of gear in the water column (Fig 3). Measures are recommended through a take reduction team, as mandated under the federal Marine Mammal Protection Act. Each team comprises a variety of experts and stakeholders, who assist NOAA Fisheries in developing a take reduction plan when necessary.

Since 1997, a series of rules have been implemented based on the take reduction plan (Fig. 3). These include the sinking groundline (2009) and vertical line (2015) rules. While there appears to have been a subsequent reduction in entanglements caused by groundline (Morin et al. 2018), which moved 27,000 miles of line from the water column to the bottom (NMFS, 2014), absolute entanglement rates appear to be on the rise (Fig 1).

Increase in Entanglement Risk

Fewer but Stronger Lines in US Waters

There may also have been unintended consequences of the 2015 vertical line rule. The rule required ‘trawling up’ (using more traps per trawl) in some regions. While this reduced the number of lines, it also meant that lines had to be stronger to accommodate the increased load of multiple traps. This natural adaptation, and the fact that stronger rope was available, contributed to an increase in the severity of entanglements as found by Knowlton et al. (2016), who observed very little evidence of entanglement with ropes weaker than 7.56 kN (1700 lbsf).

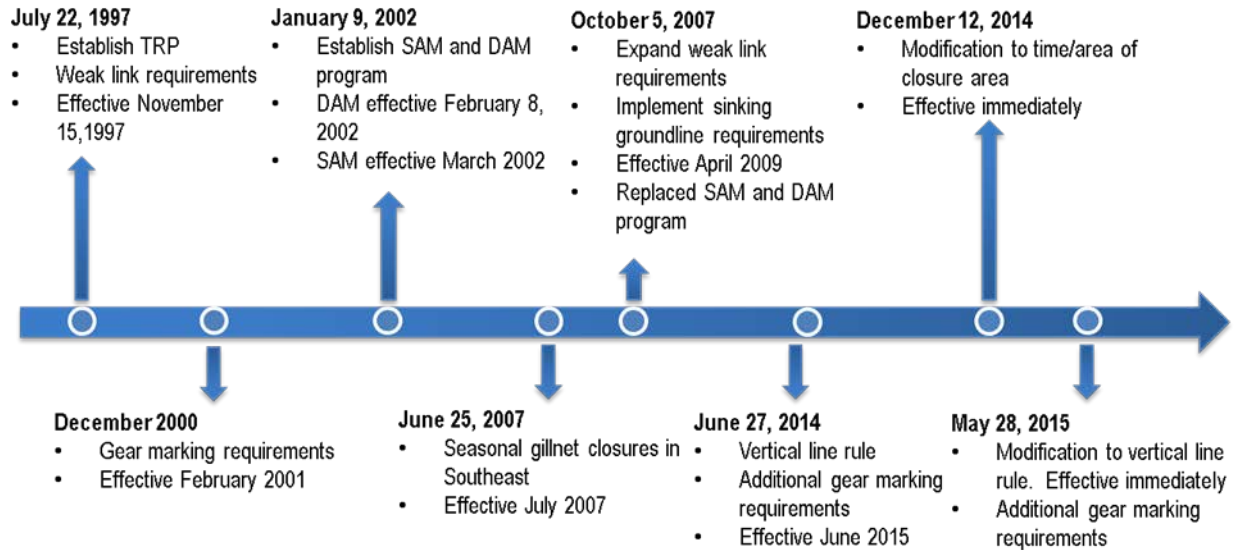


Fig 3. Timeline of significant management actions focused on reducing fishing entanglement

Entanglement Trends Upward

Knowlton et al.(2012) showed that nearly 85% of right whales have been entangled in fishing gear at least once, 59% at least twice, and 26% of the regularly seen animals are entangled annually. These findings represent a continued increase in the percentage of whales encountering and entangling in gear, which grew from to 61.5% in 1995 (Hamilton et al. 1998), to 75.6% in 2002 (Knowlton et al. 2005), confirming further the growing severity of the problem.

More Vertical Line in Right Whale Habitat

Rough estimates are that approximately 622,000 vertical lines are deployed from fishing gear in U.S. waters from Georgia to the Gulf of Maine. Notably until spring of 2018, very few protections for right whales were in place in Canadian waters. In comparison to recent decades, more right whales now spend significantly more time in more northern waters and swim through extensive pot fishery zones around Nova Scotia and into the Canadian Gulf of St. Lawrence (Daoust et al. 2018).

Taken together, these fisheries exceed an estimated 1 million vertical lines (100,000 km) deployed throughout right whale migratory routes, calving, and foraging areas. Figure 4 illustrates the scale of the challenge by providing fishery statistics for the various regions (data sources provided in Appendix 1).

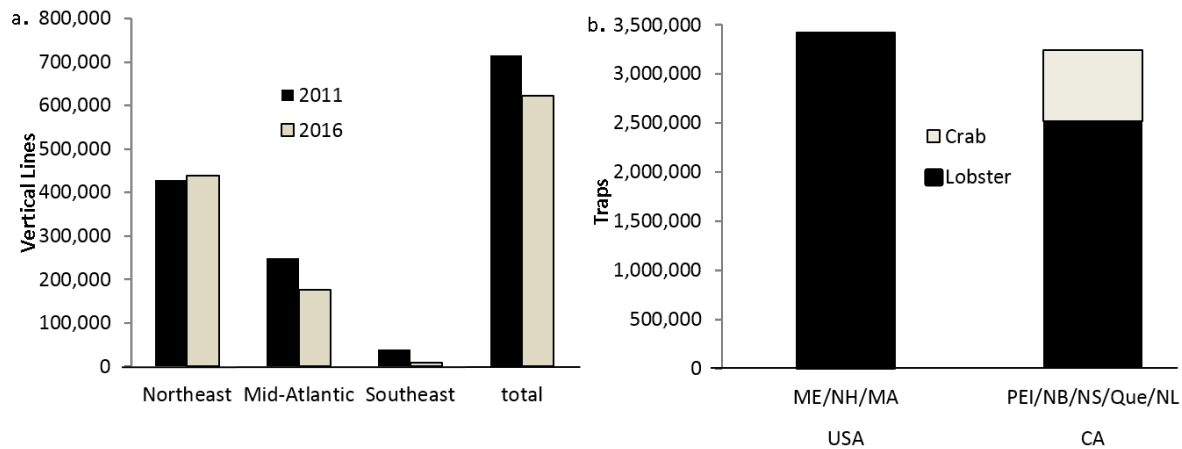


Fig 4. Index of fishing effort. a) The change in number of vertical lines in US waters from 2011 to 2016, b.) The approximate number of traps in USA Northeastern states and Canadian provinces. Data sources in Appendix 1.

Closures Are Effective, But May Not be Enough

A great deal of effort has been put into identifying entanglement ‘hot-spots’: relatively small areas where focused management measures can have minimal impact to fishing while providing great benefit to whales. Clear examples of this approach include the seasonal closure of Cape Cod Bay, and now the static closure within the Area 12 fishing zone of the Canadian Gulf of St. Lawrence. Both are relatively small areas where a significant portion (30 to 50+ %) of the right whale population has reliably occurred for several weeks to months over the past few years. Management actions have a population level benefit with impacts restricted to very local portions of fisheries. While still difficult choices, this has been the preferred management approach.

However, these closures, while likely very effective regionally, may not be enough. Each vertical line out there has some potential to cause an entanglement. With a 26% annual entanglement rate in a population of just over 400 animals, this translates to about 100 entanglements per year, which is significant for such a small population. But from the perspective of an individual fixed gear fisherman, they may never encounter a right whale. With more than 1 million lines out there, any single line has perhaps a 1 in 10,000 chance of entangling a whale in any one-year period. This can vary somewhat from regions with high to low densities of lines and/or whales.

However, in general, this means a fisherman and his or her descendants could go several generations without ever entangling a right whale. Given this, it’s easy to believe that ‘*all these entanglements are happening somewhere else*’ regardless of where one fishes. Being able to directly link an entanglement with specific gear deployed at a specific place in time is rare, but by mapping known locations of gear that led to the entanglement of a right whale, one can see that there is no place within the fished area along the East Coast of North America for which entanglement risk is zero (Fig 5).

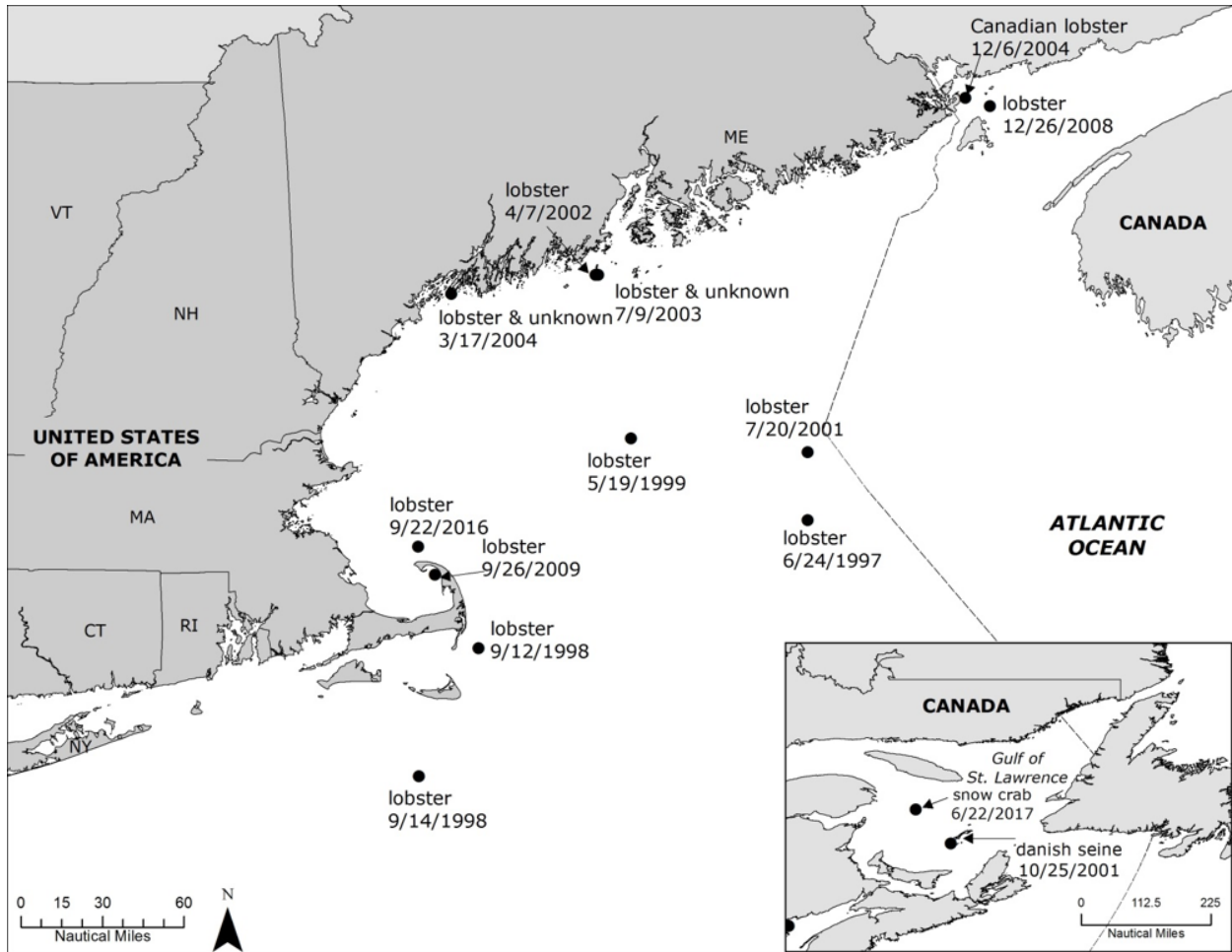


Fig 5. Right whale entanglements from 1997 through 2017 for which the set location and type of gear are known, and gear was recovered from a whale.

Sublethal Challenges- Skinny Whales and Few Calves

Fundamentally, a population increases when there are more births than deaths. Much attention has been paid to direct mortality caused by ship strikes and entanglement, but less focus has been put on the secondary effects of these and other variables where animals survive but fail to thrive because of the harm done. This is particularly evident in calving among mature females.

Biological Cost of Stressors

The abundance of photographs of known individual right whales taken over several decades have been used to develop health indicators associated with natural and human-caused stressors (Schick et al. 2013). This has been refined into a quantitative health score, including a predictive threshold below which females seem incapable of having a calf (Miller et al. 2012; Rolland et al. 2016).

We understand that right whales are exposed to numerous sublethal stressors, including fluctuating food resources (Meyer-Gutbrod and Greene 2014) and even underwater noise (Rolland et al. 2012). Several recent studies have also focused on sublethal effects of entanglement, the first of which includes increased swimming energy costs from dragging gear (van der Hoop et al. 2016). Even if disentangled, there are several injuries that can have costs lasting long after disentanglement. These include trauma wounds from rope cuts that may or may not eventually heal, and damage to baleen plates that can prevent efficient filter feeding for many years since these plates grow slowly.

Recent studies have also shown that even without accounting for injury, the drag from carrying rope and other gear for long periods of time can be energetically more expensive for a female than the migratory and developmental costs of a pregnancy (van der Hoop et al. 2017a; van der Hoop et al. 2017b; van der Hoop et al. 2017c).

Biological Demands of Right Whale Pregnancy

While serious injuries represent 1.2% of all entanglements, there are often sublethal costs to less severe entanglements. Should an entanglement occur but the female somehow disentangles and recovers, it still has the potential to reset the clock for this “capital” breeder. She now has to spend several years acquiring sufficient resources to get pregnant and carry a calf to term, the probability of a subsequent entanglement is fairly high, and this will create a negative feedback loop over time, where the interval between calving becomes longer. This is certainly a contributing factor in the longer calving interval for females, which has now grown from 4 to 10 years (Pettis et al. 2017).

Figure 6 demonstrates a simple model for estimating the probability that an animal will NOT become entangled over time. Similar to asking what are the odds of NOT getting ‘heads’ in 10 coin tosses, this model simply asks what are the odds of not getting entangled over time if there is a 74% chance of not getting entangled each year (Knowlton et al. 2012). Historically the median calving interval of a female right whale is 3 to 4 years (Pettis et al. 2017). The model estimates that animals have a about a 30 to 40% chance of not getting entangled during that period, or, conversely, a 60 to 70% chance of getting entangled.

With the calving interval now nearly twice as long as in the past, half as many calves are being born. So while entanglements often do not kill an animal, they may have a large impact by reducing or preventing births in the population. There is an additional variable, stress, which is much harder to quantify but known to have costs in mammals that are foraging in an environment with some mortality threat (Hernández and Laundré 2005).

It is difficult to tease out the relative effects of poor foraging conditions and the energetic costs of entanglement on the increased frequency of thin whales and the subsequent decrease in calving. Both are likely having some influence. While there are dozens of documented cases of

ship strikes and entanglement linked to right whale mortality, to date there is no confirmed observation of a right whale starving to death from poor forage.

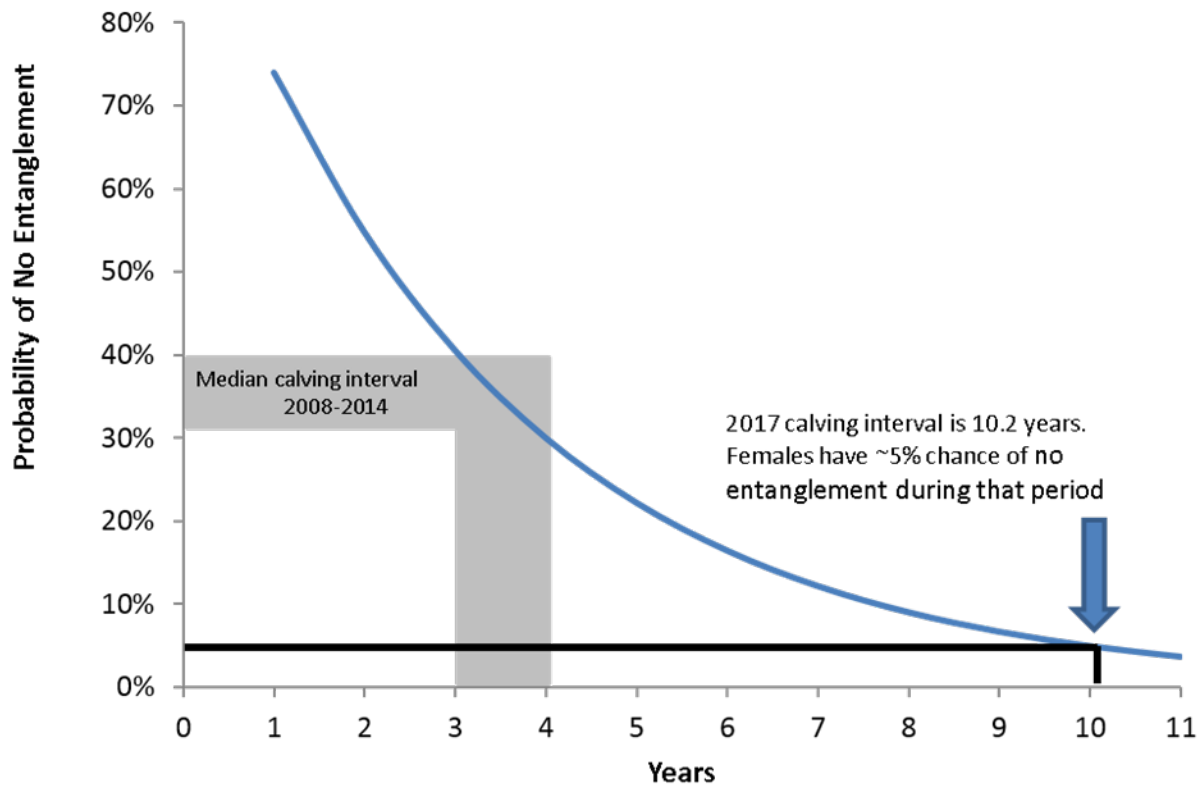


Fig 6. Cumulative annual probability of no entanglement (annual rate = 74%)

HOW LONG DO NORTH ATLANTIC RIGHT WHALES HAVE?

A Long-Lived Animal

Right whales have the potential to be a very long-lived species. In the southern hemisphere where shipping and fishing pressures are much lower, there is little evidence of human activities causing right whale mortality. There is also little evidence of natural mortality in adult animals (Corkeron et al. *Accepted with revision*). Since the ban on commercial whaling of Southern right whales in 1935 (Gambell 1993) these animals have not yet lived long enough to die of natural causes.

Meyer-Gutbrod and Greene (2018) demonstrated that even under poor foraging conditions, right whales should be able to recover if annual human-caused mortality is kept somewhere below 8-10 deaths per year. This means that in the absence of human-caused mortalities, right whales could potentially endure several decades under poor foraging conditions and still recover once environmental conditions improve. However, in the current situation in the northern hemisphere,

where animals are living much shorter lives, there is great cause for concern that the risk of extinction is much higher than in the southern hemisphere, where animals are not regularly subject to human caused mortality.

An Illustration of Potential Decline, 2017-2067

A Matrix Model

In order to measure current population trends, we used a three-stage (calf, juvenile, adult) matrix population projection model (Caswell 2006) for female right whales, derived from Corkeron et al. (*Accepted with revision*), to project the future abundance of right whales. Survival values used for input into the population projection model were calculated using a Cormack-Jolly-Seber (Pace et al. 2017) variant of a mark-resight model (see Appendix 2 for details) and determined the population is declining at 2.33% per year.

We started the model estimating an abundance of 160 females alive at the end of 2017. With approximately 1.5 males per female (Pace et al. 2017), 160 females would result in an overall species abundance of about 400. It is possible that this abundance estimate may be marginally low, but since the model overestimates calving success, we assumed that these biases should cancel each other out.

Using the stage derived from the matrix model, we assumed that the 2017 starting population of 160 females was composed of 10 calves, 60 juveniles, and 90 adults. We ran 1000 stochastic projections forward 50 years (Fig. 7). We then extracted median and 95% quantile estimates of projected abundance from those projections, and estimates of the number of adult females remaining, for 5, 10, 15, 20, 25 and 50 years. Results are shown in the Table.

Results

The model projects that in 2067, 50 years from 2017, there would be 49 female North Atlantic right whales remaining, of which only 32 would be adults. In 20 to 25 years (2037-2042) there would be fewer than 50 adult females. In the near term, at the current rate of decline, all recovery in the population over the past 3 decades will be lost by 2029, with the population returning to the 1990 estimate of 123 females.

Notably, the model does not adjust for varying environmental conditions, which are known to fluctuate on a decadal time scale for North Atlantic Ecosystems (Nye et al. 2014) and are presently unfavorable. This approach may overestimate the rate of population decline but not the overall trajectory.

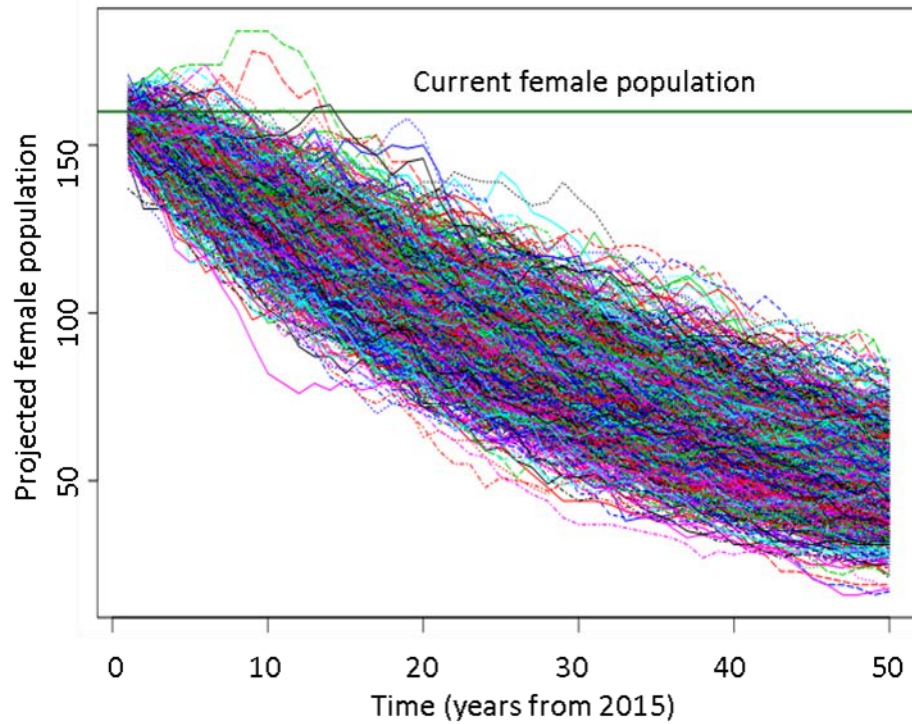


Fig. 7 Matrix population projection model output of North Atlantic right whale female population trend under current population conditions.

Table of matrix projection model output of female North Atlantic population trends for 5-year intervals, 2017-2067

Years from 2017	Number of females	Cis	Number of adult females
5	144	126 to 161	75
10	129	107 to 150	67
15	114	91 to 141	59
20	102	77 to 130	53
25	90	66 to 119	47
50	49	27 to 76	32

The threshold for functional extinction is very hard to define and likely varies by species. If the population declines to the 1990 level, there is a new threat: a repeated genetic bottleneck. Genetic bottlenecks happen when a population is so small that the genetic make-up of remaining group is not the same as that of the initial population. The effect of repeated bottlenecks is likely to mean that if the population returned to the 1990 level, that group would have less genetic diversity than the group that existed in 1990. This can lead to reduced resilience and contribute to increased risk of extinction (Amos and Harwood 1998; Melbourne and Hastings 2008).

INDICATORS OF SUCCESSFUL MANAGEMENT MEASURES

Determining the management actions necessary to reverse the current population trend is beyond the scope of this document. However, the scale of the actions will need to be quite significant to be successful. Entanglement has increased dramatically and ship strikes continue to occur.

The population decline began in 2010 (Fig. 1), when entanglement was occurring at a rate of 26% among sited animals per year (Knowlton et al. 2012). Since then, the right whale range expansion has put them in the path of more shipping and more fishing gear – encountering almost twice the amount of gear owing to expansion of more fishing farther offshore in US waters and northward into Canadian waters (Fig. 4).

It is logical to conclude that to reverse the right whale decline, it may be necessary to reduce the impacts of entanglements and other harmful human interactions with right whales across their expanded range to pre-2010 levels. For recovery it may be necessary to go further, considering more modifications to fishing and shipping practices to compensate for potentially reduced forage opportunity and increased migratory costs.

Several biological indicators can be recommended for monitoring the short- and long-term effectiveness of any management actions that might be put in place to reduce the rate of both ship strikes and fishing gear entanglement.

Short-term indicators include fewer observed numbers of ship strikes and entanglements. These could be noticeable within 6 months to 1 year, but there is considerable variation around detectability of these events and the results will initially have a great deal of uncertainty. It takes approximately 1 year to conduct a population assessment and determine any changes in abundance. The assessment will alleviate some the uncertainty in detecting mortality risks that that might be mitigated by management actions. It should be noted that number of mortalities is the bluntest indicator of management success.

However, teasing the relative effects of management actions and natural variability on population size and condition will take several years of data and analysis. Metrics such as the frequency of scarring, improvements in body condition, and overall health scores could be detectable under stable environmental conditions in 2 to 3 years. Similarly, if environmental conditions are adequate for females to accumulate enough resources to calve, it will likely take at least 2 to 4 years to separate the impact of management action that reduced the frequency of, say, costly entanglements from the impact of natural variability. Ultimately, confidence in any estimate of population trajectory will emerge over 5 to 10 years.

In an ideal situation, evidence of human-caused injuries and mortality decreases, body condition improves, and the birth rate exceeds the death rate, resulting in more North Atlantic right whales.

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REFERENCES CITED

Amos W, Harwood J. 1998. Factors affecting levels of genetic diversity in natural populations. *Philos Trans R Soc of Lond B Biol Sci* 353(1366):177-186.

Caswell H. 2006. *Matrix population models*. 2nd edition. Chichester (UK): John Wiley & Sons, Ltd.

Conn PB, Silber GK. 2013. Vessel speed restrictions reduce risk of collision-related mortality for North Atlantic right whales. *Ecosphere* 4(10):43.

Corkeron P, Hamilton P, Bannister J, Best P, Charlton C, Groch KR, Findlay K, Rowntree V, Vermeulen E, III, Pace RM. *Accepted with revision*. The recovery of North Atlantic right whales, *Eubalaena glacialis*, has been constrained by human-caused mortality.

Daoust P-Y, Couture EL, Wimmer T, Bourque L. 2018. Incident report: North Atlantic right whale mortality event in the Gulf of St. Lawrence, 2017. Ottawa (CA): Department of Fisheries and Oceans Canada

Davis GE, Baumgartner MF, Bonnell JM, Bell J, Berchok C, Bort Thornton J, Brault S, Buchanan G, Charif RA, Cholewiak D, et al.. 2017. Long-term passive acoustic recordings track the changing distribution of North Atlantic right whales (*Eubalaena glacialis*) from 2004 to 2014. *Sci Rep* 7(1):13460.

DFO Canada. 2018. Notice of fisheries closures - Gulf Region: Presence of North Atlantic Right Whale. Ottawa: Department of Fisheries and Oceans. [modified 06-14-2018, accessed 08-31-2018] <http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/comm/atl-arc/right-whale-baleine-noires-1406-gulf-golfe-en.html>.

DFO/TC Canada. 2018. Government of Canada unveils its plan for protecting North Atlantic right whales in 2018. Ottawa: Department of Fisheries and Oceans, Transport Canada. [modified 03-38-3018, accessed 08-14-2018]. [News release NR-HQ-18-13E](#).

- Fortune SME, Trites AW, Mayo CA, Rosen DAS, Hamilton PK. 2013. Energetic requirements of North Atlantic right whales and the implications for species recovery. *Mar Ecol Progs Ser* 478:253-272.
- Gambell, R. 1993. International management of whales and whaling: an historical review of the regulation of commercial and aboriginal subsistence whaling. *Arctic* 46(2):97-107.
- Greene CH. 2016. North America's iconic marine species at risk due to unprecedented ocean warming. *Oceanography* 29(3):14-17.
- Greene CH, Pershing AJ. 2004. Climate and the conservation biology of North Atlantic right whales: the right whale at the wrong time? *Front Ecol Environ* 2(1):29-34.
- Grieve BD, Hare JA, Saba VS. 2017. Projecting the effects of climate change on *Calanus finmarchicus* distribution within the U.S. Northeast Continental Shelf. *Sci Rep* 7(1):6264.
- Hamilton PK, Marx MK, Kraus SD. 1998. Scarification analysis of North Atlantic right whales (*Eubalaena glacialis*) as a method of assessing human impacts. Boston MA: New England Aquarium.. NOAA Contract 46 EANF-6-0004. Report to National Marine Fisheries Service, Northeast Fisheries Science Center, Woods Hole, MA.
- Hayes SA, Josephson E, Maze-Foley K, Rosel P, Byrd B, Chavez-Rosales S, Cole T, Engleby L, Garrison L, Hatch J and others. 2018. US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2017. Woods Hole, MA: NOAA Northeast Fisheries Science Center. NOAA Tech Memo NMFS NE-245.
- Hayes SA, Josephson E, Maze-Foley K, Rosel P, Byrd B, Cole T, Engleby L, Garrison L, Hatch J, Henry A et al. 2017. US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2016. Woods Hole, MA: NOAA Northeast Fisheries Science Center. NOAA Tech Memo NMFS NE-241.
- Henry AG, Cole TVN, Garron M, Ledwell W, Morin D, Reid A. 2017. Serious injury and mortality a determinations for baleen whale stocks along the Gulf of Mexico, United States East Coast, and Atlantic Canadian provinces, 2011–2015. Woods Hole, MA:US Department Commerce Northeast Fisheries Science Center. Ref Doc. 17-19.
- Hernández L, Laundré JW. 2005. Foraging in the ‘landscape of fear’ and its implications for habitat use and diet quality of elk *Cervus elaphus* and bison *Bison bison*. *Wildl Biol* 11(3):215-220.
- Johnson C, Devred E, Casault B, Head E, Spry J. 2017. Optical, chemical, and biological oceanographic conditions on the Scotian Shelf and in the Eastern Gulf of Maine in 2015. Dartmouth (NS): Department of Fisheries and Oceans Canada. Report No.:CSAS Research Document 2017/012.
- Knowlton AR, Hamilton PK, Marx MK, Pettis HM, Kraus SD. 2012. Monitoring North Atlantic right whale *Eubalaena glacialis* entanglement rates: a 30 yr retrospective. *Mar Ecol Prog Ser* 466:293-302.

- Knowlton A, Marx M, Pettis H, Hamilton P, Kraus SD. 2005. Analysis of scarring on North Atlantic right whales (*Eubalaena glacialis*): monitoring rates of entanglement interaction 1980–2002. Report to National Marine Fisheries Service, Northeast Fisheries Science Center, Woods Hole, MA NOAA Contract #43EANF03017.
- Knowlton AR, Robbins J, Landry S, McKenna H, Kraus SD, Werner TB. 2016. Effects of fishing rope strength on the severity of large whale entanglements. *Conserv Bio* 30(2):318-328.
- Kraus SD, Kenney RD, Mayo CA, McLellan WA, Moore MM, Nowalcek DP. 2016. Recent scientific publications cast doubt on North Atlantic right whale future. *Front Mar Sci* 3(137).
- Kraus SD, Rolland RM, editors. 2007. *The Urban Whale; North Atlantic Right Whales at the Crossroads*. Boston (MA): Harvard University Press.
- Lagueux KM, Zani MA, Knowlton AR, Kraus SD. 2011. Response by vessel operators to protection measures for right whales *Eubalaena glacialis* in the southeast US calving ground. *Endang Species Res* 14(1):69-77.
- Melbourne BA, Hastings A. 2008. Extinction risk depends strongly on factors contributing to stochasticity. *Nature* 454(7200):100-103.
- Meyer-Gutbrod EL, Greene CH. 2014. Climate-associated regime shifts drive decadal-scale variability in recovery of North Atlantic right whale population. *Oceanography* 27(3):148-153.
- Meyer-Gutbrod EL, Greene CH. 2018. Uncertain recovery of the North Atlantic right whale in a changing ocean. *Glob Chang Biol* 24(1):455-464.
- Meyer-Gutbrod EL, Greene CH, Davies KTA. 2018. Marine species range shifts necessitate advanced policy planning: the case of the North Atlantic right whale. *Oceanography* 31(2). Early online release manuscript, posted June 11, 2018.
- Meyer-Gutbrod EL, Greene CH, Sullivan PJ, Pershing AJ. 2015. Climate-associated changes in prey availability drive reproductive dynamics of the North Atlantic right whale population. *Mar Ecol Prog Ser* 535:243-258.
- Miller CA, Best PB, Perryman WL, Baumgartner MF, Moore MJ. 2012. Body shape changes associated with reproductive status, nutritive condition and growth in right whales *Eubalaena glacialis* and *E. australis*. *Mar Ecol Prog Ser* 459:135-156.
- Mills KE, Pershing AJ, Brown CJ, Chen Y, Chiang F-S, Holland DS, Lehuta S, Nye JA, Sun JC, Thomas AC, et al. 2013. Fisheries management in a changing climate; lessons from the 2012 ocean heat wave in the Northwest Atlantic. *Oceanography* 26(2):191-195.
- Morin, D., Salvador G, Higgins J, Minton M. 2018. Gear analysis and protocols; Overview of preliminary gear analysis. 2007-2017. PowerPoint presentation to the Atlantic Large Whale Take Reduction Team, April 3-4, Warwick RI. Gloucester, MA: NOAA Greater Atlantic Regional Fisheries Office. [modified 04-2018, accessed 08-15-2018].

[https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/Weak%20Rope%20Subgroup/2007 - 2017 alwtrt gear update 4 18.pdf](https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/Weak%20Rope%20Subgroup/2007-2017_alwtrt_gear_update_4_18.pdf).

NEFSC. 2018. State of the ecosystem - Gulf of Maine and Georges Bank. Woods Hoole MA: NOAA Northeast Fisheries Science Center. [modified April 3, 2018, accessed 08-14-2018]. https://s3.amazonaws.com/nefmc.org/2_Ecosystem-Status-Report.pdf.

NMFS. 2014. Final environmental impact statement for amending the Atlantic large whale take reduction plan: vertical line rule. Gloucester, MA: National Marine Fisheries Service.

Nye JA, Baker MA, Bell R, Kenny A, Halimeda Kilbourne K, Friedland KD, Martino E, Stachura MM, Van Houtan KS, Wood R. 2014. Ecosystem effects of the Atlantic Multidecadal Oscillation. *J Mar Sys* 133:103-116.

Pace RM, Corkeron PJ, Kraus SD. 2017. State–space mark–recapture estimates reveal a recent decline in abundance of North Atlantic right whales. *Ecol Evol.* 7(21):8730-8741.

Pershing AJ, Alexander MA, Hernandez CM, Kerr LA, Le Bris A, Mills KE, Nye JA, Record NR, Scannell HA, Scott JD, et al.. 2015. Slow adaptation in the face of rapid warming leads to collapse of the Gulf of Maine cod fishery. *Science* 350(6262):809-12.

Pettis HM, Pace RM, Schick RS, Hamilton PK. 2017. North Atlantic Right Whale Consortium 2017 annual report card. Boston MA: North Atlantic Right Whale consortiumm. [accessed 8-26-2018] Report to the North Atlantic Right Whale Consortium, October 2017, amended 8-18-2018. <https://www.narwc.org/report-cards.html>.

R_Core_Team. 2017. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. Website. <https://www.R-project.org/>.

Reygondeau G, Beaugrand G. 2011. Future climate-driven shifts in distribution of *Calanus finmarchicus*. *Glob Change Biol* 17(2):756-766.

Rolland RM, Parks SE, Hunt KE, Castellote M, Corkeron PJ, Nowacek DP, Wasser SK, Kraus SD. 2012. Evidence that ship noise increases stress in right whales. *Proc R Soc B*.

Rolland RM, Schick RS, Pettis HM, Knowlton AR, Hamilton PK, Clark JS, Kraus SD. 2016. Health of North Atlantic right whales *Eubalaena glacialis* over three decades: from individual health to demographic and population health trends. *Mar Ecol Prog Ser* 542:265-282.

Schick RS, Kraus SD, Rolland RM, Knowlton AR, Hamilton PK, Pettis HM, Kenney RD, Clark JS. 2013. Using hierarchical bayes to understand movement, health, and survival in the endangered North Atlantic right whale. *PLoS ONE* 8(6):e64166.

Silber GK, Adams JD, Fannesbeck CJ. 2014. Compliance with vessel speed restrictions to protect North Atlantic right whales. *PeerJ* 2:e399. [accessed 08-18-2018]. <https://peerj.com/articles/399/>

- van der Hoop JM, Corkeron P, Henry AG, Knowlton AR, Moore MJ. 2017a. Predicting lethal entanglements as a consequence of drag from fishing gear. *Mar Poll Bull* 115(1):91-104.
- van der Hoop JM, Corkeron P, Kenney J, Landry S, Morin D, Smith J, Moore MM. 2016. Drag from fishing gear entangling North Atlantic right whales. *Mar Mamm Sci* 32(2):619-642.
- van der Hoop J, Corkeron P, Moore M. 2017c. Entanglement is a costly life-history stage in large whales. *Ecol Evol* 7(1):92-106.
- van der Hoop JM, Moore MJ, Barco SG, Cole TV, Daoust PY, Henry AG, McAlpine DF, McLellan WA, Wimmer T, Solow AR. 2013. Assessment of management to mitigate anthropogenic effects on large whales. *Conserv Biol* 27(1):121-133.
- van der Hoop JM, Nowacek DP, Moore MJ, Triantafyllou MS. 2017b. Swimming kinematics and efficiency of entangled North Atlantic right whales. *Endang Species Res* 32:1-17.
- van der Hoop JM, Vanderlaan ASM, Taggart CT. 2012. Absolute probability estimates of lethal vessel strikes to North Atlantic right whales in Roseway Basin, Scotian Shelf. *Ecolog Appl* 22(7):2021-2033.

APPENDIX 1 Data Sources for Figure 4

Several data sources were used to construct Fig 4. All vertical line estimates in 4A were provided by Industrial Economics. Trap counts provided in 4B were acquired from a variety of sources. Raw trap counts were provided for Maine and Massachusetts. Trap counts for New Hampshire and all Canadian provinces were generated by multiplying license counts by trap limits. These were quite variable across regions, in which case the multiplier used is reported in the Table in the report.

Table 2. Data sources for trap counts and license numbers by country and regions.

Location	species	# traps	data year	Source
Maine	Lobster	2,901,000	2016	https://www.maine.gov/dmr/commercial-fishing/landings/documents/lobster.table.pdf
New Hampshire	Lobster	133,700	2010	https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/2012/meeting/Day%202/day_2_1c_new_hampshire_alwtrp_proposal.pdf
Massachusetts	Lobster	383,447	2011	http://www.lobstermen.com/wp-content/uploads/2009/10/MASS-LOBSTER-INDUSTRY-2012.pdf
Canada	species	# license	2016	http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/species-especes/se16-eng.htm?
Nova Scotia	lobster	3,249	2016	http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/species-especes/se16-eng.htm?
	crab	748	2016	http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/species-especes/se16-eng.htm?
New Brunswick	lobster	1,460	2016	http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/species-especes/se16-eng.htm?
	crab	123	2016	http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/species-especes/se16-eng.htm?
Prince Edward Island	lobster	1,245	2016	http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/species-especes/se16-eng.htm?
	crab	39	2016	http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/species-especes/se16-eng.htm?
Quebec	lobster	591	2016	http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/species-especes/se16-eng.htm?
	crab	382	2016	http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/species-especes/se16-eng.htm?
Newfoundland	lobster	2,353	2016	http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/species-especes/se16-eng.htm?
	crab	3,379	2016	http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/species-especes/se16-eng.htm?
Canada	species	trap limit range	trap multiplier used	Source
Nova Scotia- GOSL	lobster	225-300	275	http://dfo-mpo.gc.ca/fm-gp/peches-fisheries/comm/atl-arc/lobster-notice-avis-homard-neiges-en.html
Nova Scotia- GOSL	crab	75-150	150	http://dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/snow-crab-neige/snow-crab-neiges2013-eng.htm
Nova Scotia- east	crab	30-60		
New Brunswick	lobster	240-300	275	http://dfo-mpo.gc.ca/fm-gp/peches-fisheries/comm/atl-arc/lobster-notice-avis-homard-neiges-en.html
	crab	75-150	150	
Prince Edward Island	lobster	240-300	275	http://dfo-mpo.gc.ca/fm-gp/peches-fisheries/comm/atl-arc/lobster-notice-avis-homard-neiges-en.html
	crab	75-150	150	
Quebec	lobster	235	235	http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/lobster-homard/index-eng.htm
	crab		200	
Newfoundland	lobster	185	235	https://thisfish.info/fishery/atlantic-lobster-canada-fa11/
		100-425		http://vaves-vagues.dfo-mpo.gc.ca/Library/282426.pdf
	crab	200	200	http://dfo-mpo.gc.ca/decisions/fm-2018-gp/atl-07-eng.htm

APPENDIX 2 Model Inputs and Methods used for Population Projection

In order to determine current rate of population decline we used a simple, three-stage matrix population projection model (Caswell 2006) for female right whales, derived from Corkeron et

al. (*Accepted with revision*), to project the future abundance of North Atlantic right whales. The model's three stages are: calf, juvenile and adult. Survival values used for input into the population projection model are derived from survival estimates calculated using a Cormack-Jolly-Seber (as opposed to the published Jolly-Seber, Pace et al 2017) variant of a mark-resight model (see Appendix 1 for details). We used the lower 95% credibility intervals of the median estimates of survival for 2011-2015 from the model. These were: calves: 0.86137, juveniles: 0.92684, and adult females: 0.92684. The matrix projections also assume: a calving interval of 4.75 years (the mean of median inter-calf intervals for calving females 2011-2017, from the 2017 North Atlantic Right Whale Report Card (Pettis et al. 2017), ; females maturing at 11; and a current maximum longevity of 50. With no calves born this year, this calving estimate is arguably optimistic, but the inter-calf interval estimate for 2018 would be undefined, and so is unusable. Survival and transition probabilities for stages were calculated as described in Corkeron et al. (*Accepted with revision*). The model was run in R 3.4.3 (R_Core_Team 2017), using the libraries *diagram* (Soetaert 2017), *popbio* (Stubben and Milligan 2007) and *popdemo* (Stott et al. 2016).

The matrix used for analyses is:

	calf	immat	adlt
calf	0.00000	0.00000	0.10526
immat	0.86137	0.86254	0.00000
adlt	0.00000	0.06430	0.92443

This gives an intrinsic rate of increase of 0.9767, or a decline of 2.33% per year.

To develop a stochastic projection from this model, we took a starting abundance estimate of 160 females alive at the end of 2017, as the unusually high observed mortality of right whales that year (Meyer-Gutbrod and Greene 2018) meant that starting earlier would not capture one important recent anthropogenic impact on this species. With approximately 1.5 males per female North Atlantic right whale now (Pace et al. 2017), 160 females would give an overall species abundance of ~400. It is possible that this abundance estimate may prove to be marginally low, but as the model overestimates calving success, we assume that these biases should cancel each other out. When an abundance estimate for 2017 is available (by October-November 2018) the model can be revised.

APPENDICES REFERENCES CITED

Corkeron P, Hamilton P, Bannister J, Best P, Charlton C, Groch KR, Findlay K, Rowntree V, Vermeulen E, III, Pace RM. *In review*. The recovery of North Atlantic right whales, *Eubalaena glacialis*, has been constrained by human-caused mortality.

Pace RM, Corkeron PJ, Kraus SD. 2017. State–space mark–recapture estimates reveal a recent decline in abundance of North Atlantic right whales. *Ecol Evol* 7(21):8730-8741.

Pettis HM, Pace RM, Schick RS, Hamilton PK. 2017. North Atlantic Right Whale Consortium 2017 annual report card. Boston MA: North Atlantic Right Whale Consortium. [accessed 8-26-

2018] Report to the North Atlantic Right Whale Consortium, October 2017, amended 8-18-2018. <https://www.narwc.org/report-cards.html>.

R_Core_Team. 2017. R: A language and environment for statistical computing. Vienna, Austria: R Foundation for Statistical Computing. <https://www.gbif.org/tool/81287/r-a-language-and-environment-for-statistical-computing>.

Soetaert K. 2017. diagram: Functions for Visualizing Simple Graphs (Networks), Plotting Flow Diagrams. R package version 1.6.4. <https://CRAN.R-project.org/package=diagram>.

Stott I, Hodgson D, Townley T. 2016. popdemo: Demographic Modelling Using Projection Matrices. R package version 0.2-3. <https://CRAN.R-project.org/package=popdemo>.

Stubben C, Milligan B. 2007. Estimating and Analyzing Demographic Models Using the popbio Package in R. J Stat Soft 22(11).

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**MEDIA
MAIL**

Publications and Reports of the Northeast Fisheries Science Center

The mission of NOAA's National Marine Fisheries Service (NMFS) is "stewardship of living marine resources for the benefit of the nation through their science-based conservation and management and promotion of the health of their environment." As the research arm of the NMFS's Northeast Region, the Northeast Fisheries Science Center (NEFSC) supports the NMFS mission by "conducting ecosystem-based research and assessments of living marine resources, with a focus on the Northeast Shelf, to promote the recovery and long-term sustainability of these resources and to generate social and economic opportunities and benefits from their use." Results of NEFSC research are largely reported in primary scientific media (*e.g.*, anonymously-peer-reviewed scientific journals). However, to assist itself in providing data, information, and advice to its constituents, the NEFSC occasionally releases its results in its own media. Currently, there are three such media:

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History

- In summer 2011, based on concerns regarding the potential risks posed by the importation of marine and freshwater fish from various parts of the world for lobster bait in Maine, DMR convened a meeting of Department staff, bait dealers, lobstermen, and fish health experts from the University of Maine.
- Bait was being imported from many locations globally, often as full shipping container loads in the frozen form. Although freezing will mitigate the risk of many parasites and aquatic nuisance species, it is not effective against many viral agents. Some distant bait sources were being imported in volumes measured in the millions of pounds on an annual basis and the risk of viral import was a factor for regulating bait import.
- There was consensus that, if left unchecked, imported bait was a vector that could endanger the lobster resource and/or Maine's other wild and farmed resources.
- In the winter of 2012, DMR introduced legislation giving the Commissioner authority to create "approved" and "prohibited" lists of freshwater and marine baits. The law was passed, and authorized the Department to develop regulations for the process of reviewing and approving or prohibiting specific baits.
- In 2013, DMR adopted the regulations governing the review process (attached).
- Under the original regulations, it was unlawful to sell a bait that had not been reviewed, or was on the prohibited list. Following a second law change in 2017, it became unlawful to use such a bait.

Process

- To make determinations regarding the safety of existing bait sources in 2013, DMR surveyed bait dealers to develop a comprehensive list of the species being used and their origin. This resulted in a list of ~35 baits for review.
- Due to scope of the review, DMR contracted out the initial review under the state RFP process.
- Kennebec River Biosciences conducted a qualitative and quantitative data driven risk assessment and provided the results to DMR in 2015. Their work included a literature review and information gathering, hazard identification and analysis, and risk evaluation. DMR engaged a USDA epidemiologist working in Maine in the design of the risk evaluation process.
- Since the initial review, DMR has used a committee comprised of governmental, university, and private industry aquatic animal health professionals to conduct risk assessments and provide recommendations to the Commissioner.
- Prospective bait sources are assessed in regards to their risk for introducing pathogens of regulatory concern using a multi-point assessment process, after which a recommendation for approval or disapproval is presented to the Commissioner for making a final decision. Climate match, species susceptibility, presence of susceptible species or hosts in the Gulf of Maine, pathogen status in the source region and the Gulf of Maine, source proximity and migratory connectivity to the Gulf of Maine, and bait treatment are some risk factors utilized in the current assessment model.
- Current lists of approved and prohibited baits are attached.

Current Status

- The existing process has been challenging. Requests for reviews may come in from any source, and DMR has little ability to evaluate the feasibility of the proposed bait source, or the likelihood that it will be of interest to the fishery (i.e. the Department could devote significant time to an analysis, for little benefit). It is a significant time commitment to research often obscure species and sources and accessible information is often limited. The review committee is mainly composed of non-DMR and non-State employees, who are providing the risk evaluation as a courtesy. DMR does not have the authority under the existing law to charge a fee for the evaluation to compensate these experts for their time.
- DMR is exploring an alternate model which would require the bait dealer to obtain the risk analysis from a qualified entity, for review by the Committee and a recommendation to the Commissioner.

Current Regulation

25.11 Lobster and Crab Bait Review Process

It shall be unlawful to sell or use any marine or freshwater organism as bait to fish for or take lobsters or crabs that has not been reviewed and approved by the Department of Marine Resources.

An individual may apply for the review of a bait source to the Department of Marine Resources on forms supplied by the Commissioner. The Department will provide a written response within 60 days, whether the bait will be placed on the “approved” freshwater list or “prohibited” marine list. A freshwater organism that has been reviewed and not listed as “approved” is prohibited as bait. A marine organism that has been listed as “prohibited” is also prohibited as bait.

Application forms and lists of “approved” freshwater and “prohibited” marine bait will be made available on the Department’s website at <http://www.maine.gov/dmr/rm/lobster/index.htm> or by contacting the DMR Lobster Resource Coordinator at (207) 624-6550.

A. Application Process

Applications for approval shall contain the following information about the bait source:

- Name, address, email, and phone number of the applicant;
- Species including scientific name;
- Life cycle stage;
- Body part;
- Farm raised or wild;
- Relevant certifications (disease or pest free, hazard analysis & critical control point, etc.);
- Area of origin;
- Proposed date(s) of removal;
- Intermediate processing location(s) and contact information of processing facility, if applicable and
- Additional information necessary to determine if a bait source is safe for aquatic and human populations.

B. Review

The Commissioner shall evaluate the level of risk associated with the proposed introduction of a bait source into the marine environment by considering the potential impacts to the marine ecosystem and consumers. Each evaluation shall consider the probable effects of the introduction of the bait into the recipient area, including, but not limited to:

1. The effects of any previous introduction of the same or a similar species in Maine or other areas;
2. The relationship of the species of aquatic organism to be introduced with other members of the recipient area ecosystem; and
3. The potential effects of infectious or contagious pathogens, pests, parasites, or invasive species that might be associated with the species of aquatic organism to be introduced upon other members of the ecosystem of the recipient area.

The Commissioner may conditionally approve a bait source by establishing conditions necessary to prevent the spread of infectious or contagious pathogens, pests, parasites, or invasive species to aquatic or human populations. The Commissioner may remove a bait source from either list at any time in response to changed conditions or additional information that merits reconsideration of the initial review.

If a species/location is placed on the “prohibited” marine list or not included on the “approved” freshwater list, the applicant may petition for a permit to import the bait, subject to testing requirements, proof of chain of custody and/or other information as requested by the Commissioner.

Summary of Regulation of Use of Lobster Bait by Maine DMR
Prepared for ASMFC Discussion 10/1/18

The Department shall annually review and update the “approved” freshwater and “prohibited” marine bait lists.

C. Lobster/Crab Bait Dealer

Any person who purchases lobster or crab bait for other than their own use and then sells the bait as a wholesale or retail bait product, and a harvester who sells lobster or crab bait to an individual(s) for personal use as bait are considered a lobster/crab bait dealer.

D. Lobster/Crab Wholesale Bait Dealer Permit

All lobster/crab bait dealers shall obtain a wholesale dealer license with bait endorsement issued by the Department of Marine Resources. There will be no additional charge for the lobster endorsement.

Lobster/crab bait dealers are required to provide a list of baits sold the previous year and a list of baits that they plan to sell the following year, by February 1 annually. Detailed records of each shipment of bait imported into the State of Maine shall be maintained by the purchasing dealer for a minimum of 2 years. These records shall be made available to the Department upon request.

E. Effective Date

This rule shall become effective upon the issuance of approved and prohibited bait lists following an initial review by the Commissioner of marine or freshwater organisms for use as bait to fish for or take lobster or crabs. The approved and prohibited bait lists will be posted on the Department’s web site. Copies of the lists will also be available from the Department.



MAINE DEPARTMENT OF MARINE RESOURCES

2018 MARINE LOBSTER AND CRAB BAIT CLASSIFICATION

The following list includes all marine species that have been reviewed by the Department of Marine Resources. **Beginning June 1, 2015**, it is illegal to sell or use any marine or freshwater organism as bait to fish for or take lobsters or crabs that is classified as “prohibited”, or that has not been reviewed by the Department. Bait dealers may be granted an exemption that allows them to sell a “prohibited” bait if they agree to follow specific procedures that the Department considers sufficient to remediate the risks of introduction (e.g. establishing a chain of custody, pre-importation testing, processing). **Individuals may apply for review of a non-listed bait source, or petition for use of a prohibited bait source by completing the “Lobster and Crab Bait Review Form”.** If you have questions regarding the use or sale of a bait source, contact Sarah Cotnoir sarah.cotnoir@maine.gov or (207) 624-6596. Applications and additional information about the use of lobster and crab bait is available at <http://www.maine.gov/dmr/rm/lobster/index.htm> under “Commercial Fishing, Lobsters, Maine Lobster Management”.

Marine Approved		
Species	Restrictions	Region of Origin
Any Species in the NEFMC Groundfish Complex		Gulf of Maine or Georges Bank
Atlantic Cod		US East Coast & Canada East Coast
Atlantic Herring		US East Coast & Canada East Coast
Croaker		US East Coast
Halibut		Atlantic & Pacific Ocean
Jamaican Weakfish (<i>Cynoscion jamaicensis</i>)	Wild caught, frozen, racks only	Suriname
King Weakfish (<i>Macrodon ancylodon</i>)	Wild caught, frozen, racks only	Suriname
Kinky (aka rockfish, long/short spinyhead, idiotfish) (Genus <i>Sebastes</i>)	Must be frozen	US West Coast & Canada West Coast
Lingcod		Atlantic & Pacific Ocean
Mackerel	Must be frozen if from China	US East Coast, Japan, Portugal and China
Mullet (Genus <i>Mugilidae</i>)		US & Canada
Orange Roughy		Australia & New Zealand
Menhaden (aka Pogie, Bunker)		US East Coast
Patagonian toothfish	Must be frozen	Australia and Argentina
Pollock		Atlantic Ocean <i>only</i>
Redfish		N. Atlantic Ocean & Pacific Ocean
Red Alphonsino		NE Atlantic Ocean
Roundnose Grenadier		NE Atlantic Ocean
River herring (alewife, blueback herring)		Maine
Rockfish (Genus <i>Sebastes</i>)	Must be frozen	US West Coast & Canada West Coast
Sablefish		Alaska & Western Canada
Skate		US Northeast Coast
Shad		Maine
Sole		US West Coast
Southern Kingfish (<i>Menticirrhus americanus</i>)	Wild caught, frozen, racks only	Suriname
Tuna		North Pacific Ocean
Any species that was legally caught in Maine coastal waters		

Marine Prohibited		
Species	Region of Origin	Unacceptable Risk
Any salmonid fish species (prohibited pursuant to DMR Chapter 24.23)		
Alphonsino	New Zealand	Exotic pathogens
Bonito	Panama West Coast	Exotic pathogens
Cobia	South Atlantic Ocean, Caribbean Sea	Unknown pathogen status
Cod	US West Coast & Canada West Coast	Possibility of exotic agent
Flatfish	Pacific Ocean	Possibility of exotic agent
Hake	US West Coast	Exotic pathogens
Horseshoe Crab	Asia	Possibility of invasives
Pollock	Pacific Ocean	Exotic pathogens
Pacific Sardine (South American Pilchard)	US West Coast & Canada West Coast	Exotic pathogens
Snapper	Panama West Coast	Exotic pathogens
Tilapia	Panama West Coast	Exotic pathogens



MAINE DEPARTMENT OF MARINE RESOURCES 2018 FRESHWATER LOBSTER AND CRAB BAIT CLASSIFICATION

The following list includes all freshwater species that have been reviewed by the Department of Marine Resources. **Beginning June 1, 2015**, it is illegal to sell or use any marine or freshwater organism as bait to fish for or take lobsters or crabs that is classified as “prohibited”, or that has not been reviewed by the Department. Bait dealers may be granted an exemption that allows them to sell a “prohibited” bait if they agree to follow specific procedures that the Department considers sufficient to remediate the risks of introduction (e.g. establishing a chain of custody, pre-importation testing, processing). **Individuals may apply for review of a non-listed bait source, or petition for use of a prohibited bait source by completing the “Lobster and Crab Bait Review Form”**. If you have questions regarding the use or sale of a bait source, contact Sarah Cotnoir sarah.cotnoir@maine.gov or (207) 624-6596. Applications and additional information about the use of lobster and crab bait is available at <http://www.maine.gov/dmr/rm/lobster/index.htm> under “Commercial Fishing, Lobsters, Maine Lobster Management”.

Freshwater Approved	
Species	Region of Origin
Carp	Maine
Pickereel	Central Canada
Suckerfish	Maine, Canadian provinces of Manitoba & Saskatchewan
Any freshwater species that was legally harvested in Maine	

Freshwater Prohibited		
Species	Region of Origin	Unacceptable Risk
All Carp, including Asian Carp (grass carp, common carp, Amur carp, silver carp, largescale silver carp, bighead carp, black carp, goldfish, crucian carp, mud carp)	Asia, US (caught outside of Maine) & Canada. Carp caught in Maine ARE approved.	Exotic pathogens
Catfish	Asia	Exotic pathogens
Mudshad	Central US & Virginia	Unknown pathogen status
Northern Pike	Central Canada	Exotic pathogens
Sheepshead (Freshwater Drum)	US & Canada	Exotic pathogens
Farmed or Wild Tilapia	Africa, Asia, Florida, Latin America and Vietnam	Exotic pathogens

2018 REVIEW OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
FISHERY MANAGEMENT PLAN

**For Jonah Crab
(*Cancer borealis*)**

2017 FISHING YEAR



Prepared by the Plan Review Team

Table of Contents

1.0 Status of the Fishery Management Plan	3
2.0 Status of the Fishery	3
2.1 Commercial Fishery	3
2.2 Recreational Fishery	4
3.0 Status of the Stock	4
4.0 Status of Management Measures.....	4
5.0 Fishery Monitoring.....	5
6.0 Status of Surveys	6
7.0 Recent and On-Going Research Projects	9
8.0 State Compliance	10
9.0 De Minimis Requests.....	10
10.0 Research Recommendations	10
11.0 Plan Review Team Recommendations.....	11
12.0 Tables	12
13.0 Figures	13

**2018 REVIEW OF THE ATLANTIC STATES MARINE FISHERIES COMMISSION FISHERY
MANAGEMENT PLAN FOR JONAH CRAB (*Cancer borealis*)**

2017 FISHING YEAR

1.0 Status of the Fishery Management Plan

<u>Year of ASMFC Plan's Adoption:</u>	FMP (2015)
<u>Framework Adjustments:</u>	Addendum I (2016) Addendum II (2017) Addendum III (2018)
<u>Management Unit:</u>	Maine through North Carolina
<u>States with a Declared Interest:</u>	Maine through Virginia (Excluding Pennsylvania and DC)
<u>Active Committees:</u>	American Lobster Management Board, Technical Committee, Plan Review Team, Advisory Panel, Electronic Reporting Subcommittee, Electronic Tracking Subcommittee

2.0 Status of the Fishery

2.1 Commercial Fishery

Historically, Jonah crab was taken as bycatch in the lobster fishery; however, in recent years a directed fishery has emerged causing landings to rapidly increase. Throughout the 1990's, landings fluctuated between approximately 2 and 3 million pounds, and the overall value of the fishery was low. In the early 2000's landings began to increase, with over 7 million pounds landed in 2005. By 2014, landings had almost tripled to 17 million pounds and a value of nearly \$13 million dollars. This rapid increase in landings can be attributed to an increase in the price of other crab (such as Dungeness), creating a substitute market for Jonah crab, as well as a decrease in the abundance of lobsters in Southern New England, causing fishermen to redirect effort on Jonah crab.

Today, Jonah crab and lobster are considered a mixed crustacean fishery in which fishermen can target lobster or crab at different times of the year based on slight gear modifications and small shifts in the areas in which the traps are fished. While the majority of Jonah crab is harvested as whole crabs, fishermen from several states, including New York, Maryland and Virginia, land claws. Jonah crab claws are relatively large and can be an inexpensive substitute for stone crab claws. As a result, they can provide an important source of income for fishermen. A historic claw fishery takes place along the Delmarva Peninsula where small boat fishermen harvest Jonah crab claws because they do not have a seawater storage tank on board to store whole crabs.

In 2017, 17.4 million pounds of Jonah crab were landed along the Atlantic Coast, representing \$16.3 million in ex-vessel value. The states of Massachusetts (66%) and Rhode Island (23%) were the largest contributors to landings in the fishery. Landings in descending order also occurred in Maine, New Jersey, New York, New Hampshire, Maryland, Delaware, Virginia, and Connecticut. 99% of coastwide landings in 2017 came from trap gear.

2.2 Recreational Fishery

The magnitude of the Jonah crab recreational fishery is unknown at this time; however, it is believed to be quite small as compared to the size of the commercial fishery.

3.0 Status of the Stock

Jonah crab are distributed in the waters of the Northwest Atlantic Ocean primarily from Newfoundland, Canada to Florida. The life cycle of Jonah crab is poorly described, and what is known is largely compiled from a patchwork of studies that have both targeted and incidentally documented the species. Female crab (and likely some males) are documented moving inshore during the late spring and summer. Motivations for this migration are unknown, but maturation, spawning, and molting have all been postulated. It is also generally accepted that these migrating crab move back offshore in the fall and winter. Due to the lack of a widespread and well-developed aging method for crustaceans, the age, growth, and maturity of Jonah crab is poorly described.

The status of the Jonah crab resource is relatively unknown and no range wide stock assessment has been conducted. Massachusetts, Rhode Island, Maine, and New Hampshire conduct inshore state water trawl surveys, and NOAA Fisheries conducts a trawl survey in federal waters which collects data on Jonah crab abundance and distribution. In addition, several studies are on-going (Section 7.0) to elucidate information on the species.

4.0 Status of Management Measures

Interstate Fishery Management Plan for Jonah Crab (2015)

Jonah crab is managed under the Interstate Fishery Management Plan (FMP) which was approved by the American Lobster Management Board in August 2015. The goal of the FMP is to promote conservation, reduce the possibility of recruitment failure, and allow for the full utilization of the resource by the industry. The plan lays out specific management measures in the commercial fishery. These include a 4.75" minimum size with zero tolerance and a prohibition on the retention of egg-bearing females. To prevent the fishery from being open access, the FMP states that participation in the directed trap fishery is limited to lobster permit holders or those who can prove a history of crab-only pot fishing. All others must obtain an incidental permit. In the recreational fishery, the FMP sets a possession limit of 50 whole crabs per person per day and prohibits the retention of egg-bearing females. Due to the lack of data on the Jonah crab fishery, the FMP implements a fishery-dependent data collection program. The Plan also requires harvester and dealer reporting along with port and sea sampling.

Addendum I (2016)

Addendum I establishes a bycatch limit of 1,000 pounds of crab/trip for non-trap gear (e.g., otter trawls, gillnets) and non-lobster trap gear (e.g., fish, crab, and whelk pots). In doing so, the Addendum caps incidental landings of Jonah crab across all non-directed gear types with a uniform bycatch allowance. While the gear types in Addendum I make minimal contributions to total landings in the fishery, the 1,000 crab limit provides a cap to potential increases in effort and trap proliferation.

Addendum II (2017)

Addendum II establishes a coastwide standard for claw harvest. Specifically, it permits Jonah crab fishermen to detach and harvest claws at sea, with a required minimum claw length (measured along the forearm of the claw) of 2.75" if the volume of claws landed is greater than five gallons. Claw landings less than five gallons do not have to meet the minimum claw length standard. The Addendum also establishes a definition of bycatch in the Jonah crab fishery, whereby the total pounds of Jonah crab caught as bycatch must weigh less than the total amount of the targeted species at all times during a fishing trip. The intent of this definition is to address concerns regarding the expansion of a small-scale fishery under the bycatch limit.

Addendum III (2018)

Addendum III improves the collection of harvester and biological data in the Jonah crab fishery. Specifically, the Addendum improves the spatial resolution of harvester data collection by requiring fishermen to report via 10 minute squares. It also expands the required harvester reporting data elements to collect greater information on gear configurations and effort. In addition, the Addendum established a deadline that within five years, states are required to implement 100% harvester reporting, with the prioritization of electronic harvester reporting development during that time. Finally, the Addendum improves the biological sampling requirements by establishing a baseline of ten sampling trips/year, and encourages states with more than 10% of coastwide landings to conduct additional sampling trips.

5.0 Fishery Monitoring

The provisions of Addendum III did not impact fishery monitoring programs in 2017. As a result, language in the FMP sets the standard for fishery monitoring. Specifically, the FMP requires that *"at a minimum, state and federal agencies shall conduct port/sea sampling to collect the following types of information on landings, where possible: carapace width, sex, discards, egg-bearing status, cull status, shell hardness, and whether the landings are whole crabs or parts."* The Plan also establishes coastwide mandatory reporting and fishery dependent sampling with 100% dealer and harvester reporting. Jurisdictions which currently require less than 100% harvester reporting in the lobster fishery are required to maintain, at a minimum, their current programs and extend them to Jonah crab. *De minimis* states are not required to conduct fishery-independent sampling or port/sea sampling. These requirements for fishery monitoring will be amended in future years to reflect implementation of Addendum III.

Overviews of the states' port and sea sampling are as follows:

- Maine: Maine conducted 8 sea sampling trips and sampled 523 Jonah crab. Sampling occurs through the Lobster Sea Sampling program, which has a sampling protocol for Jonah crab. Maine's lobster port sampling program was suspended in 2011.
- New Hampshire: Staff sampled 49 Jonah crab on 10 sea sampling trips and collected information on sex, the presence of eggs, cull condition, molt stage, and carapace length. NH initiated a quarterly port sampling program in late 2016. Sampling took place at shellfish dealers, where an interview with the captain occurred and a biological sample was taken. A total of 642 Jonah crab were sampled through this new program, of which a maximum of 250 crabs were sexed, measured for carapace length, and (when feasible) weighed.
- Massachusetts: Staff conducted 10 sea sampling trips and sampled 2,419 Jonah crab. Types of information collected include shell width, sex, egg bearing status, cull status, shell hardness, and whole crabs vs. parts. Massachusetts also inspected 19 vessels at port and sampled 11,707 Jonah crab.
- Rhode Island: Through a collaboration with URI-GSO and the state, 5 sea sampling trips measuring 3,684 Jonah crab were conducted in 2017. Due to staff and budget constraints, RI DFW did not conduct its own sea or port sampling but it hopes to continue this collaboration with URI-GSO in the future.
- Connecticut: No sea sampling or port sampling trips were conducted for Jonah crab.
- New York: Staff conducted two market sampling trips, collecting information on 25 Jonah crab. No sea sampling trips were conducted for Jonah crab.
- New Jersey: No sea or port sampling trips were conducted for Jonah crab.
- Delaware: No sea or port sampling trips were conducted for Jonah crab.
- Maryland: No sea or port sampling trips were conducted for Jonah crab.
- Virginia: No sea or port sampling trips were conducted for Jonah crab.

6.0 Status of Surveys

The Interstate Fishery Management Plan for Jonah crab encourages states to expand current lobster surveys (i.e. trawl surveys, ventless trap surveys, settlement surveys) to collection biological information on Jonah crab. The following outlines the fishery-independent surveys conducted by each state.

Maine

A. Settlement Survey

The Maine settlement survey was primarily designed to quantify lobster young-of-year (YOY), but has also collected Jonah crab data from the sites throughout the survey. Jonah crab information collected includes carapace width, sex (when large enough), ovigerous condition, claw status, shell hardness, and location. The density of Jonah crab has increased over the past two decades with high values in 2013 and 2016 (Figure 1). Similarly, the density of all Jonah crab noticeably increased in the early 2000's and has remained high since (Figure 1).

B. State Trawl Survey

The ME/NH Inshore Trawl Survey began in 2000 and is conducted biannually (spring and fall) through a random stratified sampling scheme. Jonah crab data has been collected throughout the history of this survey. The 2017 spring survey completed 122 tows and sampled a total of 339 Jonah crab. The spring abundance indices for Jonah crab have significantly increased since 2013, but noticeably decline in 2017 (Figure 2). The 2017 fall survey completed 101 tows and sampled 526 Jonah crab. Abundance indices for Jonah crab have declined in 2016 and 2017 (Figure 2).

C. Ventless Trap Survey

Maine began its Juvenile Lobster Ventless Trap Survey in 2006. Since the beginning of the survey, Jonah crab counts were recorded by the contracted fishermen, but the confidence in this data in the early years is low because of the confusion between the two *Cancer* crabs (Jonah crab vs. rock crab) and similar common names. In 2016, the survey began collecting biological data for Jonah crab including carapace width, sex, ovigerous condition, claw status, shell hardness, and location. Figure 3 shows the catch of Jonah crab per trap in 2017.

D. Sea Urchin Survey

Maine DMR conducts an annual dive survey of the sea urchin stock within state waters. Beginning in May and working through June, divers evaluated approximately 60 1-meter square quadrats at each site they visited. Beginning in 2004, the data collected on crabs was expanded to include carapace width and sex. A total of 117,337 quadrats have been evaluated for Jonah crab through 2016. Counts of Jonah crab from this survey show a marked increase from 2005-2008 (Figure 4).

New Hampshire

A. Settlement Survey

Since 2009, species information has been collected on Jonah crab in the New Hampshire Fish and Game portion of the American Lobster Settlement Index. Figure 5 depicts the CPUE (#/m²) of Jonah crab for all NH sites combined, from 2009 through 2017. This time series shows a general upward trend to a time series high in 2017.

B. Ventless Trap Survey

Since 2009, NHF&G has been conducting the coastwide Random Stratified Ventless Trap Survey in state waters (statistical area 513). A total of six sites were surveyed twice a month from June through September in 2017. Beginning in 2016 all Jonah crab were evaluated for sex and carapace length. A total of 23 Jonah crab over 8 trips were measured during the 2017 sampling season.

Massachusetts

A. Settlement Survey

The Juvenile Lobster Suction Survey has consistently identified Jonah crab since 2011, and has identified the *Cancer* crabs to genus since 1995. Figure 6 shows that Jonah crab are generally absent from the two sampled locations in stat area 538 (Buzzards Bay and Vineyard Sound) but are present at other sampled locations. The number of Jonah crab per square mile in Cape Ann

decreased from 2016 to 2017 but remained fairly stable in Beverly/Salem, Boston Harbor, South Shore, and Cape Cod Bay.

B. Ventless Trap Survey

CPUE of Jonah crab from the MA DMF Ventless Trap Survey within NMFS statistical areas 538 and 537 has been trending downward (Figure 7). Though the survey started in 2005, Figure 7 only shows data from 2011 through 2017 due to changes in areas surveyed prior to 2011. The 2017 data point is the lowest in the time series. The MA DMF Ventless Trap Survey catches fewer Jonah crab in NMFS statistical area 514 (Figure 8) compared to 538/537. Area 514 has been on an overall downward trend, but has been fairly stable since 2009.

C. Trawl Survey

The MA DMF Trawl Survey has seen a recent increase in the number of Jonah crab in the fall survey south and east of Cape Cod (Figure 9), and in the spring and fall surveys north of Cape Cod (Figure 9). All 2017 data points were above time series medians and trending upward based on a fitted generalized additive model.

Rhode Island

A. Ventless Trap Survey

Since its inception in 2006, the RI Ventless Trap Survey (VTS) has recorded counts of Jonah crab in each pot. In 2014, carapace width and sex were also recorded for all individuals. In 2017, the VTS was conducted during the months of June-August and over 18 sampling trips. A total of 314 Jonah crab were sampled. All sampling was conducted in LMA 2, NMFS Statistical Area 539. The stratified mean catch per ventless trap on a six pot (three ventless, three vented) trawl was 0.75 Jonah crab (Figure 10).

B. Trawl Survey

RIDEM has conducted Spring and Fall trawl surveys since 1979, and a monthly trawl survey since 1990. However, invertebrates (other than lobsters) have not been counted for much of these time series. In 2015, the survey began counting Jonah crab specifically. Given the short time series of Jonah crab data available and few Jonah crab observations by the surveys, the information is not available at this time. As the datasets for Jonah crab from these trawl surveys grow, these data will be provided as abundance indices.

Connecticut

A. Trawl Survey

Jonah crab abundance is monitored through the Long Island Sound Trawl Survey (LISTS) during the spring (April, May, June) and fall (September and October) cruises, all within NMFS statistical area 611. The survey documents the number of individuals caught and total weight per haul by survey site in Long Island Sound. The Long Island Sound Trawl Survey caught one Jonah crab in the fall 2007 survey and two in the fall 2008 survey. Both observations occurred in October at the same trawl site in eastern Long Island Sound. No Jonah crab have been observed in the survey since 2008.

New Jersey

A. Trawl Survey

An independent Ocean Trawl Survey is conducted from Sandy Hook, NJ to Cape May, NJ each year. The survey stratifies sampling in three depth gradients, inshore (18'-30'), mid-shore (30'-60'), offshore (60'-90'). The mean CPUE, which is calculated as the sum of the mean number of Jonah crab collected in each sampling area weighted by the stratum area, has remained low throughout the time series (Figure 11).

7.0 Recent and On-Going Research Projects

A. Maturity Study

MA DMF, in collaboration with CFRF, has conducted a Jonah crab maturity study. Results suggests that females mature at a smaller size than males (~88-94mm carapace width vs. ~103-117mm carapace width, depending on region sampled). Importantly, the sizes at maturity for both sexes are below the current minimum legal size for harvest (121 mm).

In addition, a graduate student at the University of Maryland Eastern Shore completed a master's thesis on the size at sexual maturity and reproductive biology of Jonah crabs in the Mid-Atlantic Bight in the spring of 2018. Jonah crabs were collected as bycatch in black sea bass and lobster pots from December 2015 to September 2017 as well as from the 2016 and 2017 Virginia Institute of Marine Science Mid-Atlantic Sea Scallop dredge survey. Measurements included: sex, weight, length, width, chela length and height, abdomen width (females), molt condition, presence/absence of egg clutches, and presence/absence of external sperm plugs. A gonadosomatic index was created for female Jonah crabs.

B. Tagging Study

MA DMF, in collaboration with AOLA, NH F&G, and ME DMR, is conducting a tagging study in the Jonah crab fishery. Preliminary data suggests that most Jonah crab are not migrating far; however, four tagged Jonah crab were recorded traveling over 100 km between Georges Bank and Southern New England. As of August 2018, 15,026 clinch tags and 17,037 t-bar tags have been deployed, and there is an overall tag return rate of 2.4%.

C. Declawing Study

NH F&G conducted a laboratory study to investigate the mortality associated with declawing of Jonah crab. 5 trials were completed over 3 seasons. Results indicate a 15% mortality rate for control crabs, a 56% mortality rate for crabs with one claw removed, and a 75% mortality rate for crabs with both claws removed. A field-based declawing study is being conducted in 2018 to see if the results are similar to those conducted in the lab.

D. Growth and Fishery Dependent Data

A graduate student at URI is completing a Master's Thesis on Jonah crab, focusing on fishery-dependent data collection and growth. From June 2016 to August 2017, a pilot sea sampling program was implemented to collect information on size distributions, length-weight relationships, sex ratios, molting condition, and shell disease levels. In addition, a laboratory study was conducted in 2016-2017 to describe the growth of Jonah crab in RI Sound. Results

include quantification of growth-per-molt in male and female Jonah crab, and a description of molting seasonality and molt probabilities in male Jonah crab. Finally, the Master's Thesis includes fifteen in-person interviews with Jonah crab fishermen to collect their knowledge concerning Jonah crab biology and fishery characteristics. Results of the interviews are anticipated to be submitted for publication this fall.

E. CFRF Research Fleet

The Commercial Fisheries Research Foundation (CFRF) has expanded their lobster commercial research fleet to sample Jonah crab. Biological data collected include carapace width, sex, shell hardness, egg status, and disposition. As of September 2018, 56,301 Jonah crab have been sampled through the program.

8.0 State Compliance

Two states have not implemented provisions of the Jonah Crab FMP and associated addenda. The implementation deadline for the Jonah Crab FMP was June 1, 2016; the implementation deadline for Addendum I was January 1, 2017; and the implementation deadline for Addendum II was January 1, 2018.

- New York has not yet implemented the full suite of management measures required under the Jonah Crab FMP or Addendum I and II. New York crab legislation currently prohibits the harvest of female crabs with eggs and recreational harvest is limited to 50 crabs. The 4.75" minimum carapace width, the 1000 crab bycatch limit, and commercial rules regarding crab part retention have not been implemented. In last year's compliance report it was expected that regulations would be implemented by early 2018.
- Delaware has not yet implemented the management measures required under the Jonah Crab FMP or Addendum I and II. Promulgation of Delaware's Jonah Crab regulations have to go through the state legislature and this has yet to occur. In last year's compliance report it was expected that regulations would be implemented by early 2018.

9.0 De Minimis Requests.

The states of Virginia, Maryland, and Delaware have requested *de minimis* status. According to the Interstate Fishery Management Plan for Jonah crab, states may qualify for *de minimis* status if, for the preceding three years for which data are available, their average commercial landings (by weight) constitute less than 1% of the average coastwide commercial catch. Delaware, Maryland, and Virginia meet the *de minimis* requirement.

10.0 Research Recommendations

The following research questions were compiled by the Jonah Crab TC and need to be answered in order to complete a coastwide stock assessment.

- **Growth Rates** – While there has been some research on Jonah crab growth rates, more studies are needed to determine growth rates along the entire coast. In particular, it is necessary to determine the molt frequency, molt increment, and if there is a terminal molt.
- **Maturity and Reproduction** – Studies are needed to determine the size at maturity of crabs in different regions, the size ratio of mating crabs, and sperm limitations.

- **Migration** – There are several tagging studies on-going in the Jonah crab fishery. Hopefully these studies will elucidate the migrations of Jonah crab as well as seasonal habitat preferences.
- **Natural Mortality** – An estimate of natural mortality must be developed for Jonah crab in order to carry out a stock assessment. In particular, it will be critical to determine the natural mortality of the adult size crabs.

11.0 Plan Review Team Recommendations

The following are recommendations from the Plan Review Team:

- The PRT recommends the Board approve the *de minimis* requests of DE, MD, and VA.
- The PRT raises concerns about the lack of Jonah crab regulations in NY and DE, particularly in regard to the lack of minimum carapace width and commercial bycatch limit. Similar issues were raised in the 2017 compliance reports and have not been addressed within the last year.
- The PRT recommends that jurisdictions with crab-only fishermen report on the number of these fishermen, their collective number of traps fished, and the rules governing their fishing activity.
- The PRT recommends continued research of the Jonah crab species so that a coastwide stock assessment can be completed in the near future.
- The PRT recommends the LEC review compliance in the Jonah crab fishery, given it is a fairly new fishery management plan and lessons may be learned.

12.0 Tables

Table 1. Landings (in pounds) of Jonah crab by the states of Maine through Virginia. 2010-2016 landings were provided by ACCSP based on state data submissions. 2017 landings were submitted by the states as a part of the compliance reports and should be considered preliminary. *C= confidential data*

	ME	NH	MA	RI	CT	NY	NJ	DE	MD	VA	Total
2010	1,093,962	C	5,689,431	2,922,404	C	968,122	28,400		18,045	C	10,890,910
2011	1,096,592	C	5,379,792	2,540,337	C	69,440	26,286		92,401	C	9,273,622
2012	556,675	C	7,540,510	3,286,569	2,349	410,349	68,252		C	C	12,072,452
2013	379,073	340,751	10,087,443	4,397,734	51,462	C	7,803		C	C	15,798,919
2014	344,290	404,703	11,858,702	4,123,040	49,998	C	33,104	C	153,714	C	17,050,643
2015	309,715	C	9,096,374	3,861,260	C	207,437	68,116	C	39,750	C	13,780,846
2016	604,023	150,342	10,657,785	3,669,939	C	165,427	260,856	C	C	C	15,527,171
2017	1,167,833	114,155	11,425,083	4,082,252	C	158,179	432,754	C	C	C	17,403,526

13.0 Figures

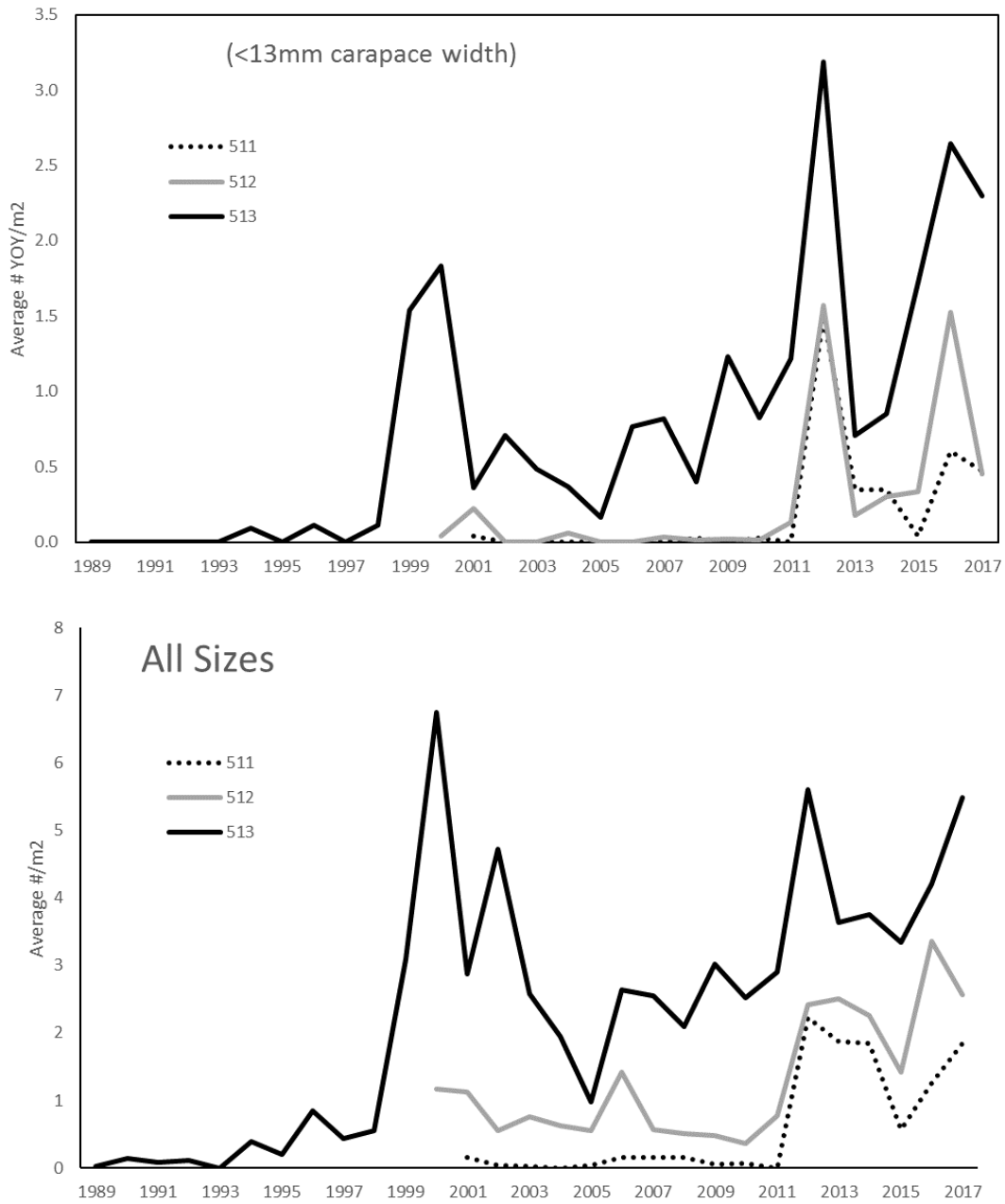


Figure 1: The density of Jonah crab measured over time in the Maine Settlement Survey by statistical area. The top graph shows the density of Jonah crab less than 13mm in carapace width and the bottom graph shows the density of all Jonah crab.

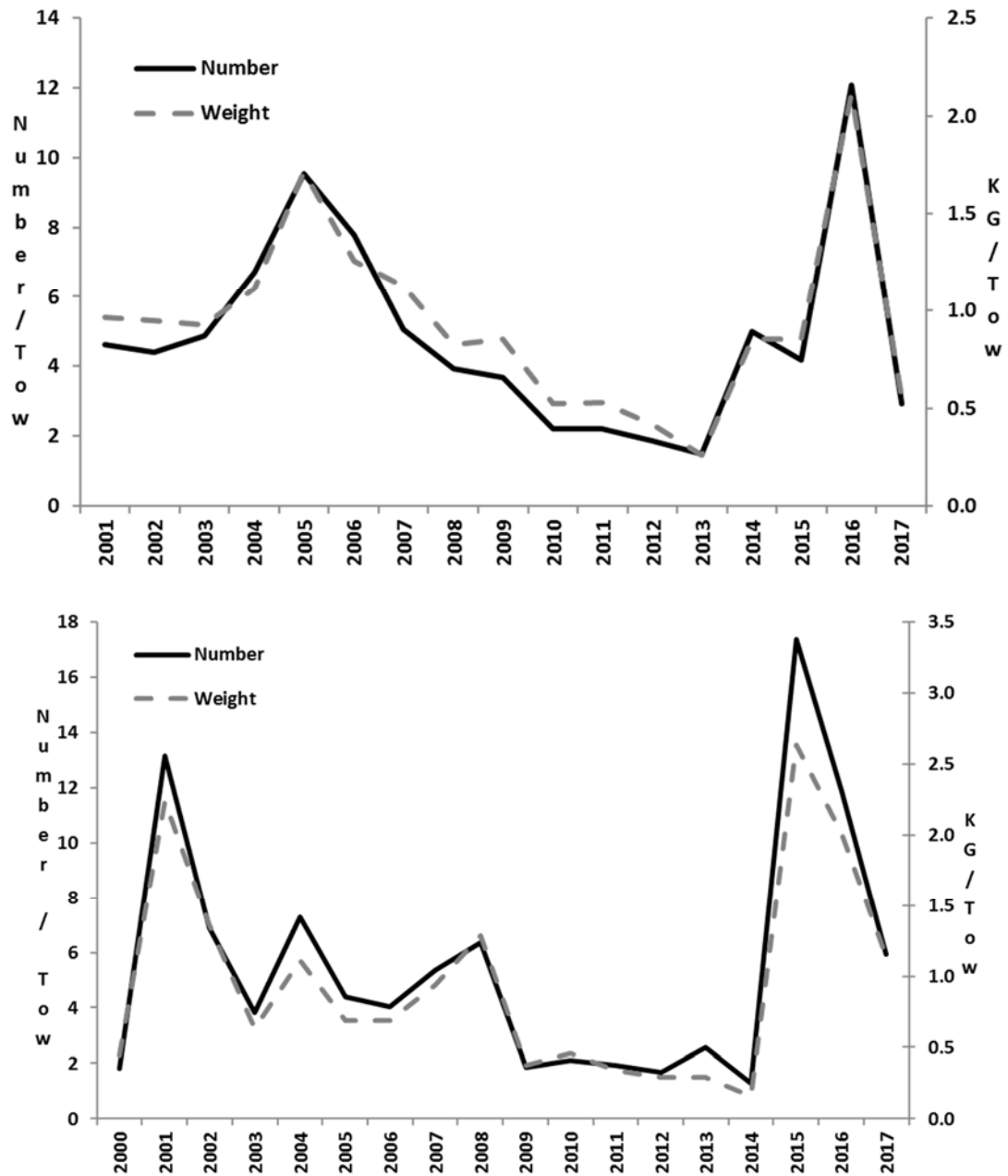


Figure 2: Maine-New Hampshire survey abundance indices for Jonah crab, 2001-2017. Results of the spring survey are on the top and results from the fall survey are on the bottom.

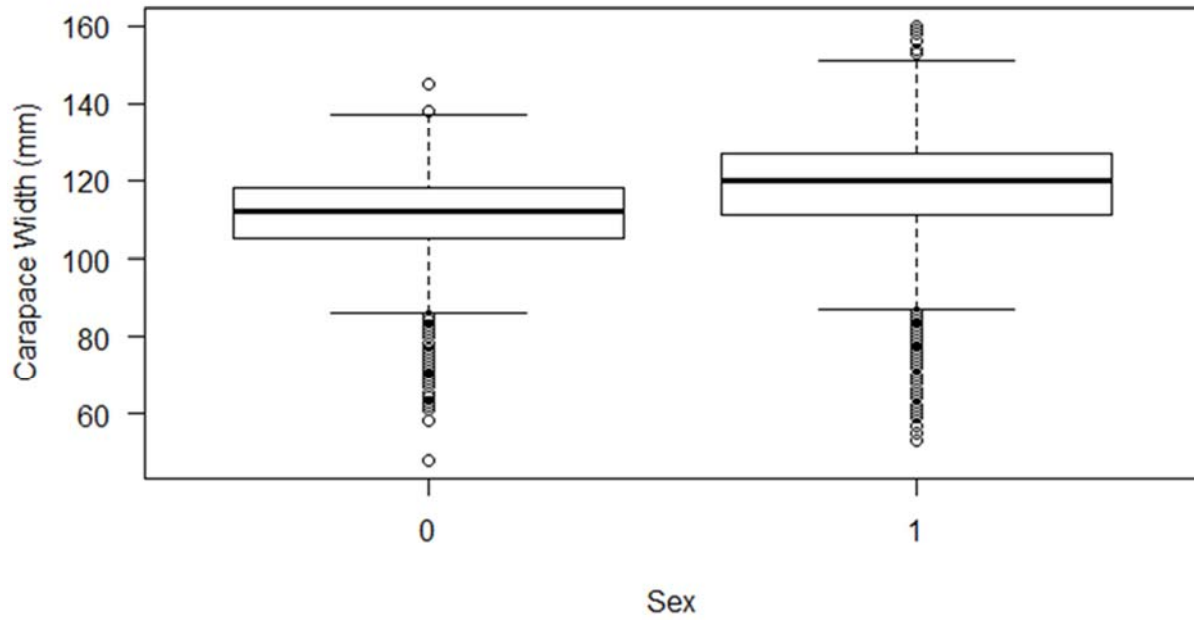


Figure 3: Female (0) and male (1) Jonah crab size from the 2017 Maine Ventless Trap Survey.

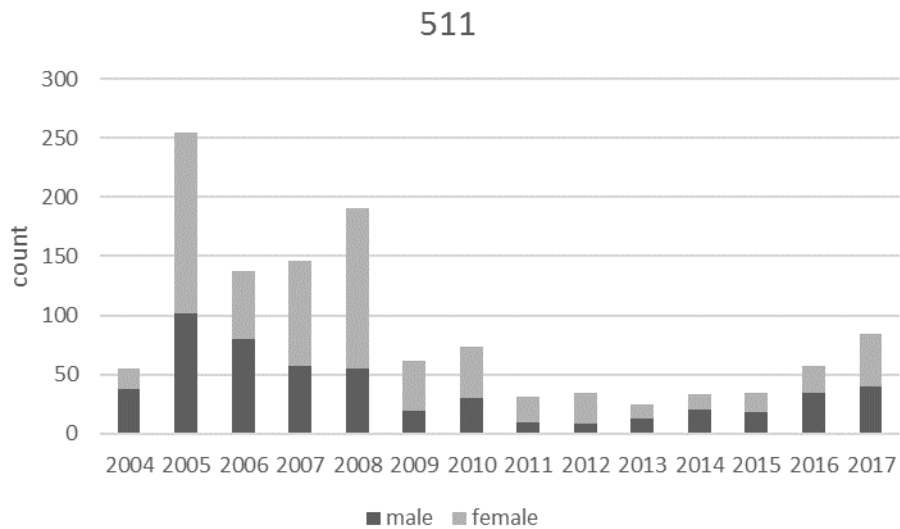


Figure 4: Observed crab from the Maine Sea Urchin Survey (statistical area 511).

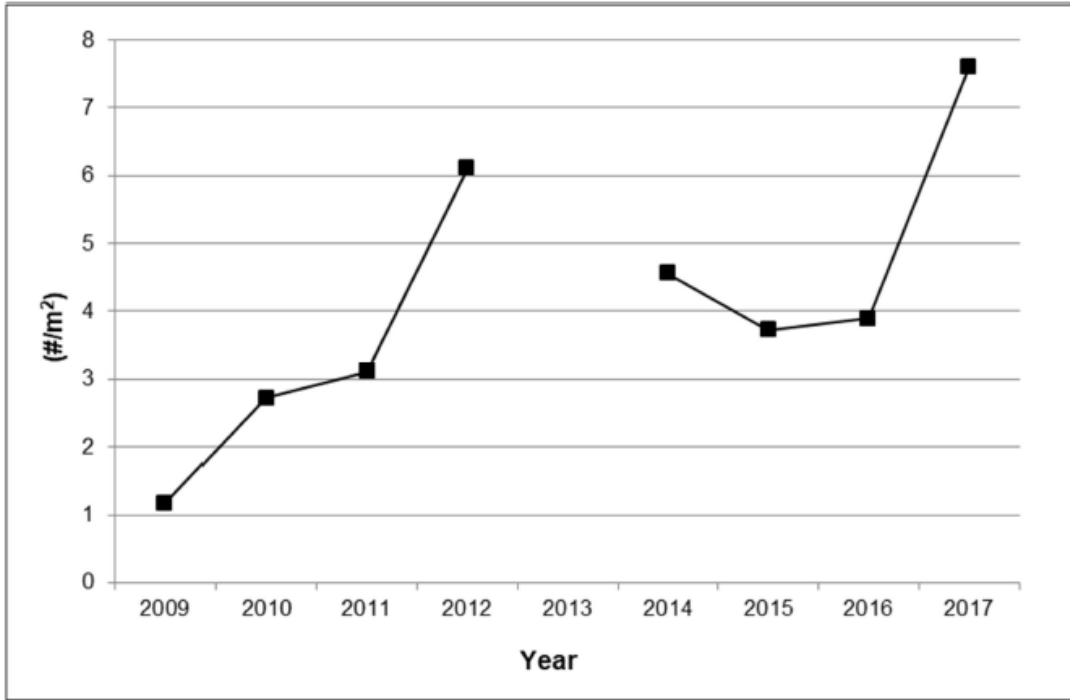


Figure 5: Catch per unit effort (#/m²) of Jonah crab during the American Lobster Settlement Index Survey, in New Hampshire, from 2009 through 2017.

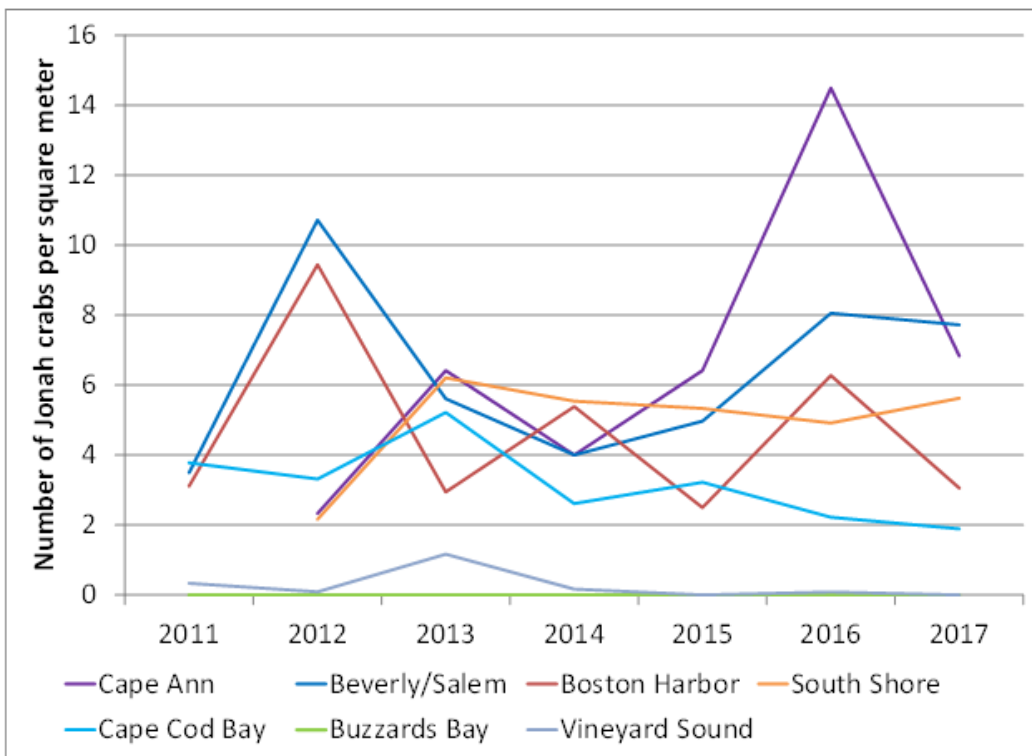


Figure 6: Number of Jonah crab per square meter from the MA DMF juvenile lobster suction survey. Cape Ann, Beverly/Salem, Boston Harbor, South Shore, and Cape Cod Bay are in NMFS statistical area 514; Buzzards Bay and Vineyard Sound are in statistical area 538.

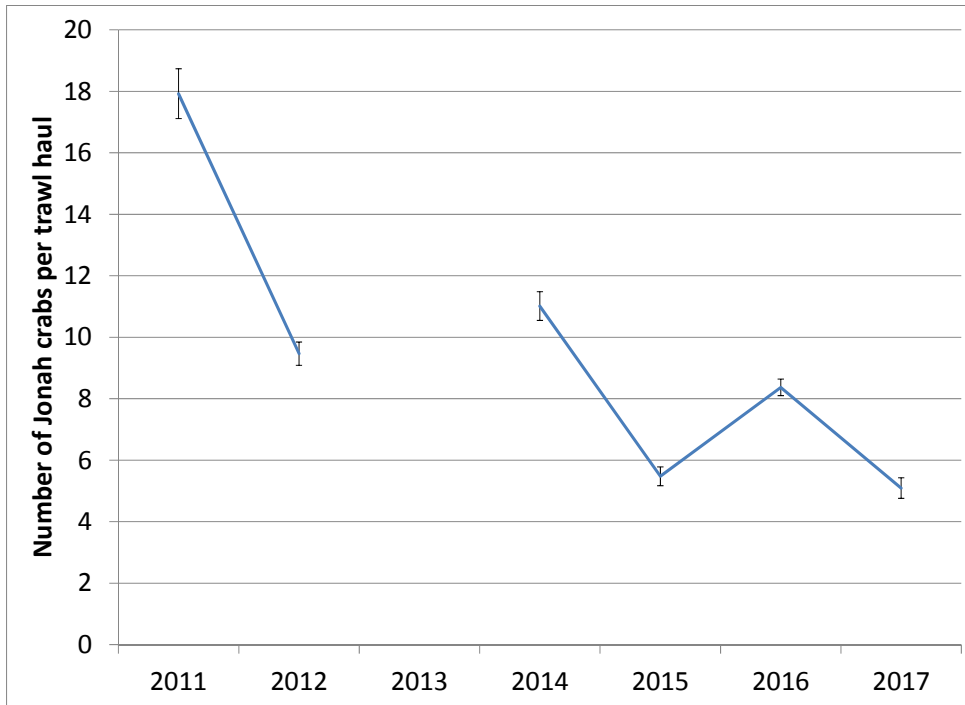


Figure 7. Number of Jonah crab per trawl haul from NMFS stat area 538 and 537 from the MA DMF Ventless Trap Survey. CPUE is standardized to a 6 pot trawl with three vented and three ventless traps. Error bars are \pm two times the standard error. The survey did not occur in 2013.

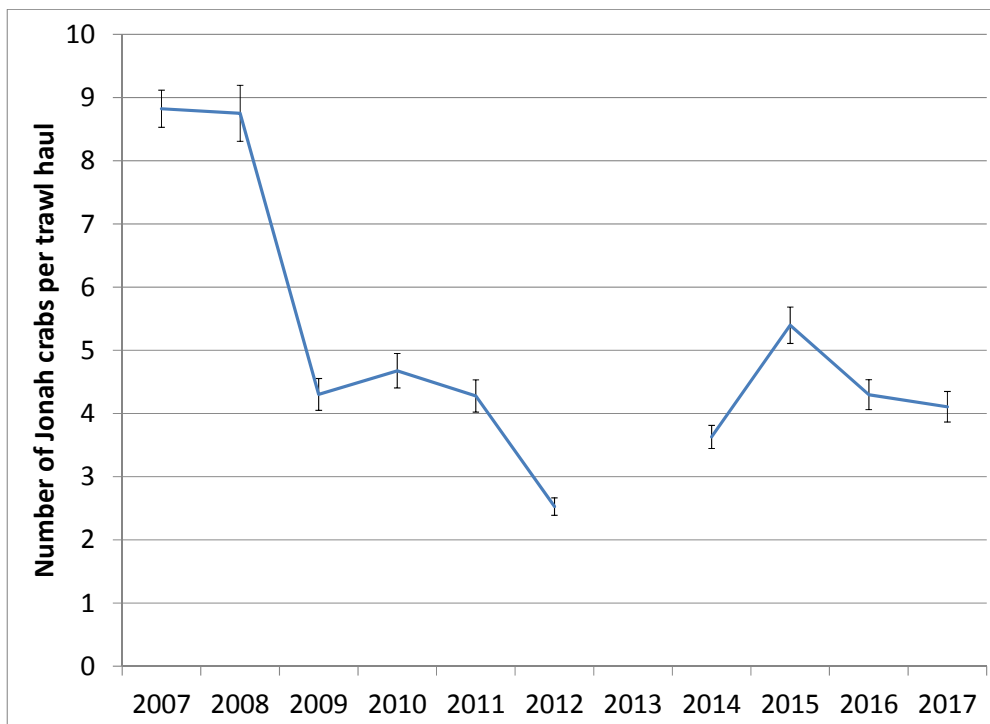


Figure 8. Number of Jonah crab per trawl haul from NMFS stat area 514 from the MA DMF Ventless Trap Survey. CPUE is standardized to a 6 pot trawl with three vented and three ventless traps. Error bars are \pm two times the standard error. The survey did not occur in 2013.

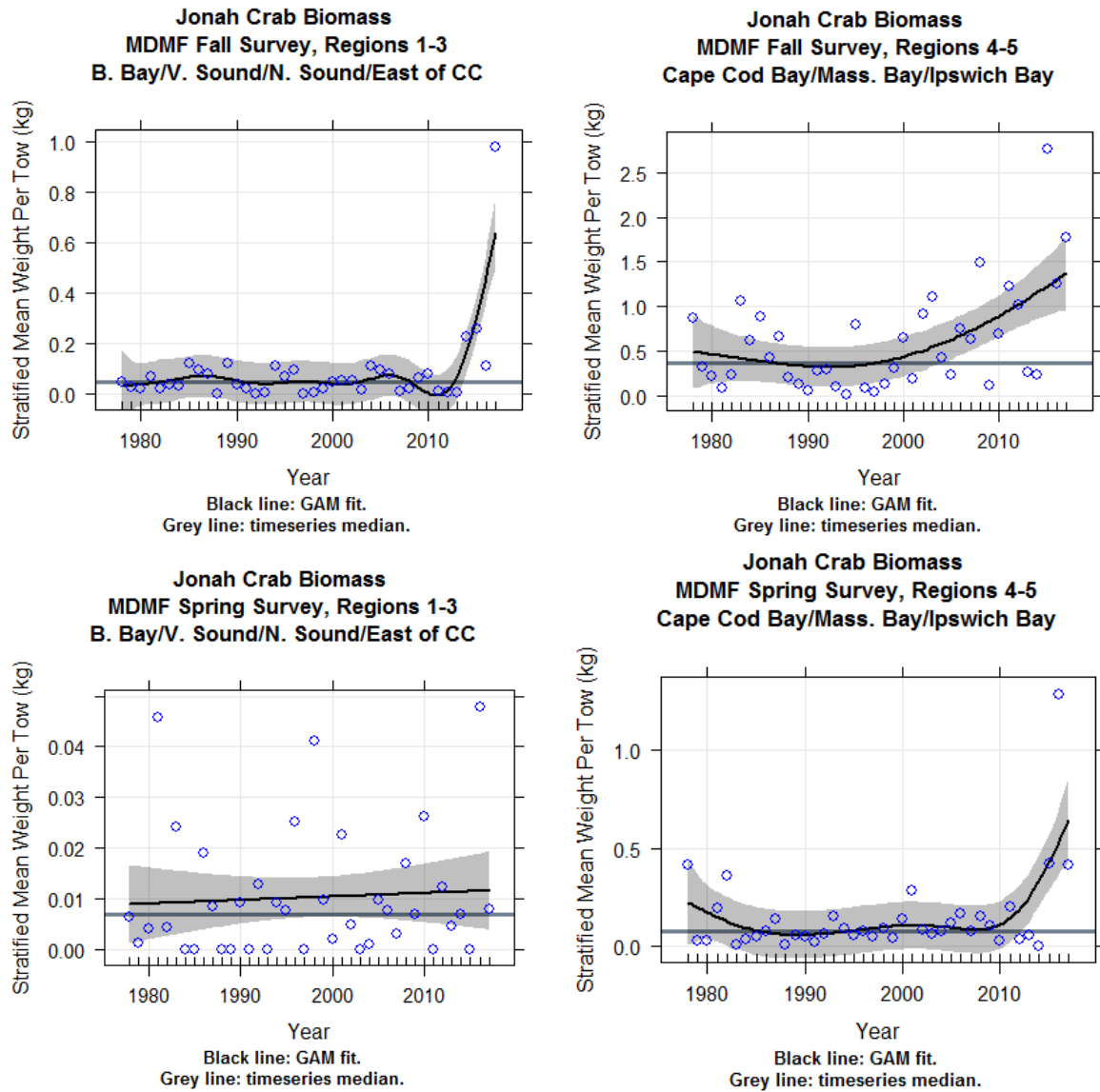


Figure 9. Jonah crab (sexes combined) stratified mean weight per tow from the MA DMF fall (top) and spring (bottom) trawl survey for regions 1–3 (south and east of Cape Cod, left) and regions 4 and 5 (north of Cape Cod, right). Black line is the generalized additive model fit, grey line is the time series median, shaded area is \pm two times the standard error of the predicted value.

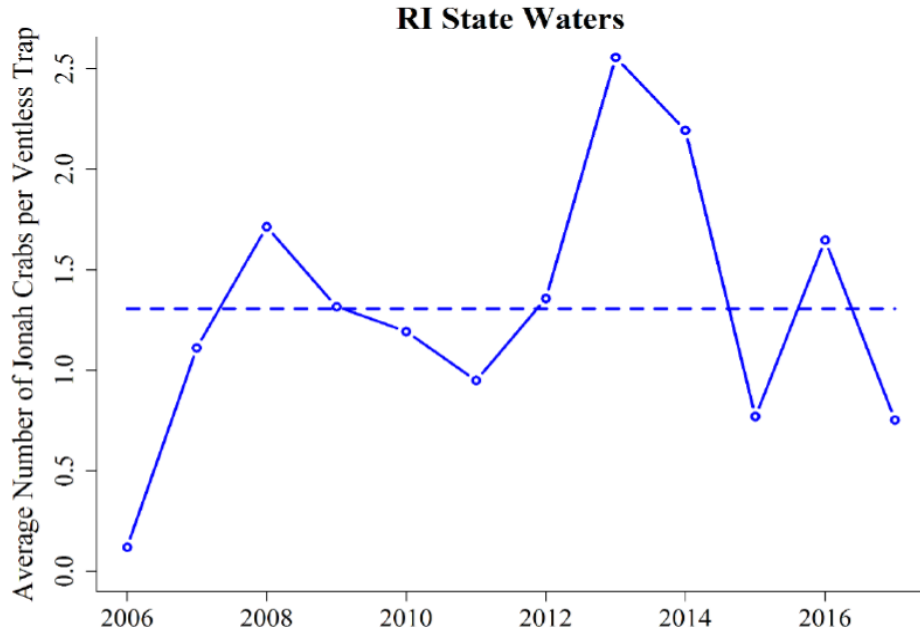


Figure 10: Stratified mean catch (#) per ventless trap in a VTS haul for Jonah crab. Dashed line indicates time series mean. (Source: RI DEM)

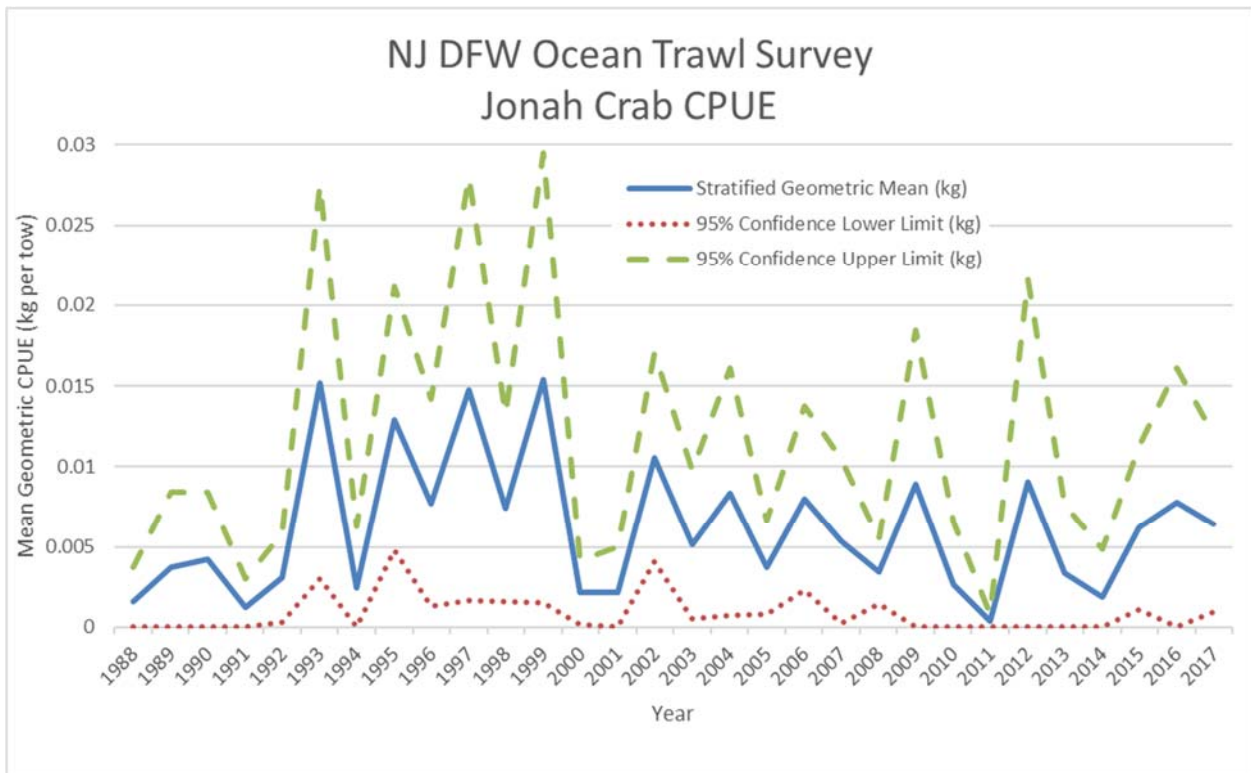


Figure 11: Stratified mean CPUE of all Jonah crab collected aboard the NJDFW Ocean Trawl Survey. The survey stratifies sampling in three depth gradients, inshore (18'-30'), mid-shore (30'-60'), offshore (60'-90'). The mean CPUE was calculated as the sum of the mean weight (in kg) of Jonah crab per size class collected in each sampling area weighted by the stratum area.

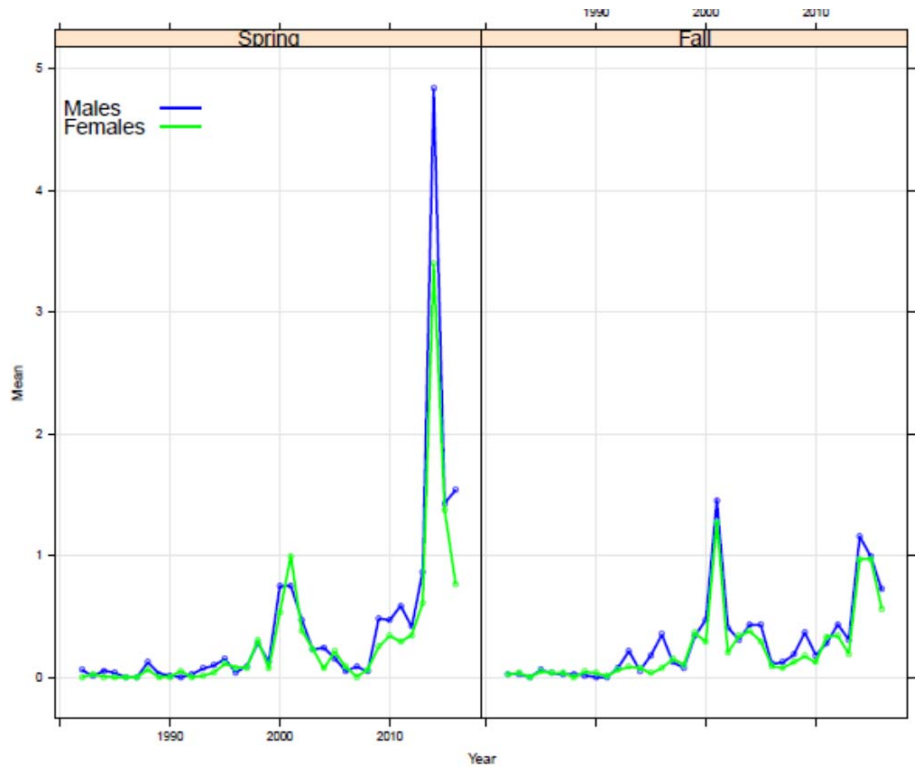


Figure 12: NMFS Jonah Crab index from the bottom trawl survey in the Gulf of Maine, through 2016.

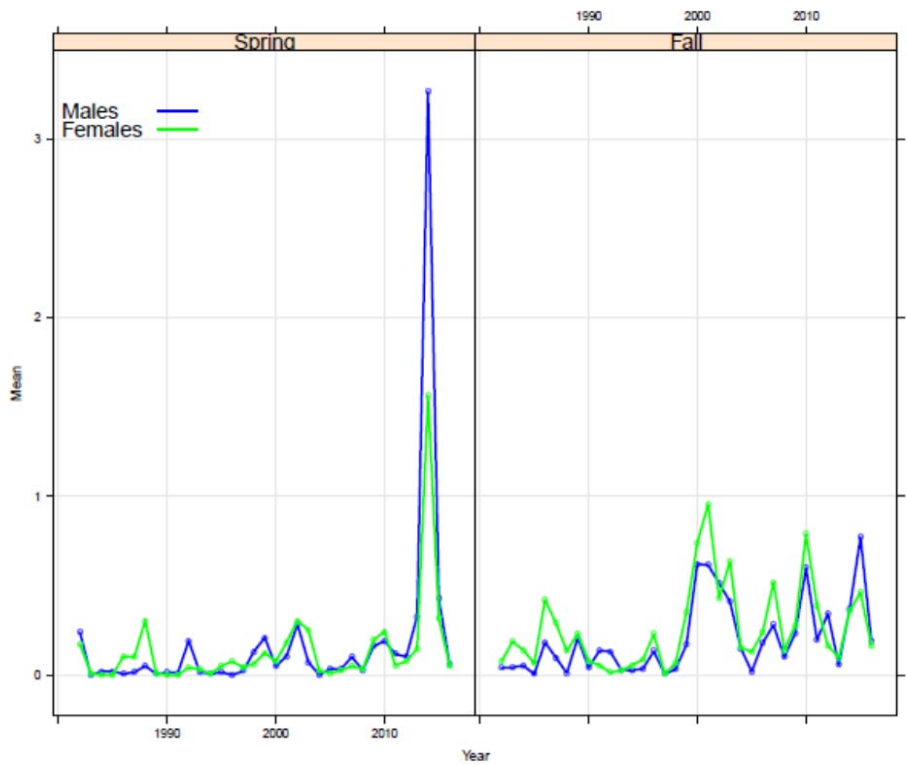


Figure 13: NMFS Jonah crab index from the bottom trawl survey in Georges Bank, through 2016.

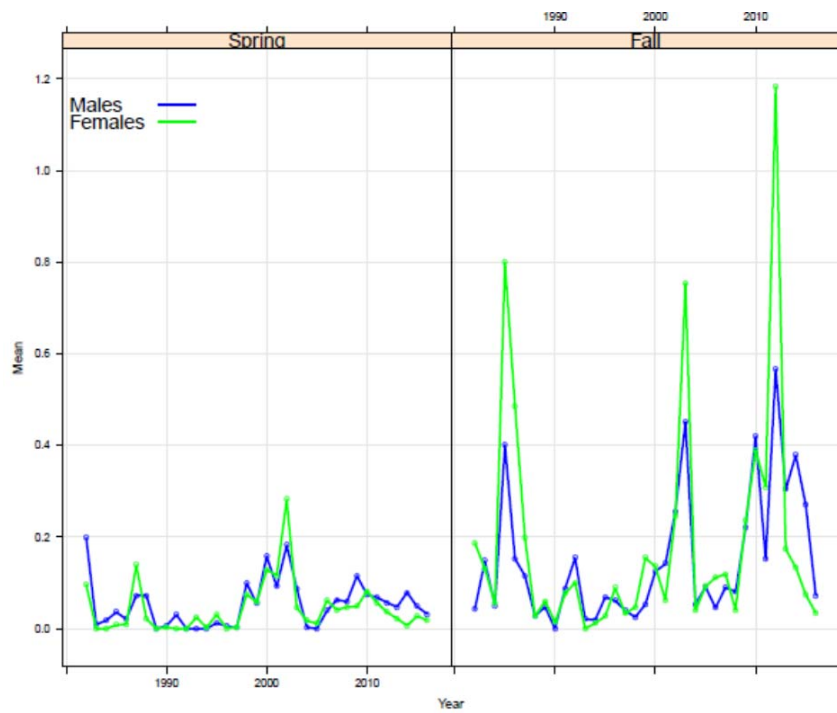


Figure 14: NMFS Jonah crab index from the bottom trawl survey in Southern New England, through 2016.



Atlantic States Marine Fisheries Commission

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MEMORANDUM

September 17, 2018

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 – Marc Palombo, a commercial trap fisherman from Massachusetts. Please review this nomination for action at the next Board meeting.

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

Enc.

cc: Megan Ware

M18-91

Jonah Crab Advisory Panel

Bolded names await Board review and approval

September 17, 2018

Maine

Chris Bates

32 Edgewood Lane

Brooksville ME 04617

cbates123@myfairpoint.net

- Awaiting confirmation from ME regarding nomination

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

Marc Palombo (comm. lobster traps)

4 Popes Meadow

Sandwich, MA 02563

Phone (home): 508.888.5714

Phone (cell): 508.648.0261

calicolob@comcast.net

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

David Spencer (comm lobster trap/offshore SNE/GB)

20 Friendship Street

Jamestown, RI 02835

Phone: 401.465.9669

FAX: 401.423.2120

Drspencer1@gmail.com

Appt Confirmed 5/4/15

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

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



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 David Pierce State: MA
(your name)

Name of Nominee: Marc Palombo

Address: 4 Popes Meadow

City, State, Zip: SANDWICH, Ma 02563

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

Phone (day): 508-648-0261 (cell) Phone (evening): 508-888-5714 (home)

FAX: _____ Email: calicoLob@comcast.net

.....
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.

Massachusetts Lobstermen's Assoc

Atlantic Offshore Lobstermen's Assoc

Gulf of Maine Lobster Foundation (Board member)

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

Lobster + CRABS (JONAH)

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

Lobster + JONAH CRABS,

multispecies

FOR COMMERCIAL FISHERMEN:

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

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

*MMA Women's Lacrosse
COACH - Head-coach*

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

FOR CHARTER/HEADBOAT CAPTAINS:

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

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.

Nominee Signature: Marc Palombo

Date: 8/2/2018

Name: Marc Palombo
(please print)

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

[Signature]
State Director

State Legislator

Governor's Appointee

Atlantic States Marine Fisheries Commission

Atlantic Herring Management Board

October 22, 2018
1:30 – 3:30 p.m.
New York, New York

Draft Agenda

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

1. Welcome/Call to Order (*P. Keliher*) 1:30 p.m.
2. Board Consent 1:30 p.m.
 - Approval of Agenda
 - Approval of Proceedings from August 2018
3. Public Comment 1:35 p.m.
4. Review 2018 Atlantic Herring Benchmark Assessment Peer Review Report (*P. Campfield*) **Final Action** 1:45 p.m.
 - Review and Consider Approval of Benchmark Stock Assessment and Peer Review Report for Management Use
5. Review and Discuss White Paper on Atlantic Herring Spawning Protections (*M. Ware*) **Possible Action** 2:15 p.m.
6. Update on 2019-2021 Fishery Specifications Process (*M. Ware*) 3:00 p.m.
7. Set 2019 Specifications for Area 1A (*M. Ware*) **Final Action** 3:05 p.m.
8. Review and Populate Atlantic Herring Advisory Panel (*T. Berger*) **Action** 3:25 p.m.
9. Other Business/Adjourn 3:30 p.m.

The meeting will be held at the Roosevelt Hotel, 45 East 45th Street & Madison Avenue, New York, NY; 212.661.9600

MEETING OVERVIEW

Atlantic Herring Management Board
Monday, October 22, 2018
1:30 – 3:30 p.m.
New York, New York

Chair: Pat Keliher (ME) Assumed Chairmanship: 02/18	Technical Committee Chair: Renee Zobel (NH)	Law Enforcement Committee: Michael Eastman (NH)
Vice Chair: Dr. David Pierce (MA)	Advisory Panel Chair: Jeff Kaelin (NJ)	Previous Board Meeting: August 7, 2018
Voting Members: ME, NH, MA, RI, CT, NY, NJ, NEFMC (8 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from August 2018

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. 2018 Benchmark Stock Assessment Peer Review Report (1:45 – 2:15 p.m.) Final Action

Background

- The 2018 Benchmark Stock Assessment was completed in June and a peer review was held on June 26-29 as a part of the SAW/SARC 65 review workshop.
- While the Board reviewed the results of the Stock Assessment at their August meeting, the Peer Review Report had not yet been released and, as a result, it was not reviewed by the Board.

Presentations

- Peer Review Report by P. Campfield (**Briefing Materials**)

Board actions for consideration at this meeting

- Accept the Stock Assessment Report and Peer Review Report for management use.

5. Atlantic Herring Spawning Protections (2:15 – 3:00 p.m.) Possible Action**Background**

- Results of the 2018 Stock Assessment indicate reduced recruitment and spawning stock biomass over the last five years.
- In response, the Board tasked staff with reviewing the current protections provided to spawning Atlantic herring, with the aim of assessing whether additional protections need to be considered.
- The white paper re-visits management alternatives selected in Amendment 3, which specify the current inshore Gulf of Maine spawning closures, and provides considerations regarding the protection of spawning aggregations in Georges Bank and Nantucket Shoals.

Presentations

- Overview of spawning white paper by M. Ware (**Briefing Materials**)

Board actions for consideration at this meeting

- Consider initiation of management action in response to white paper

6. Update on 2019-2021 Specifications Process (3:00 – 3:05 p.m.)**Background**

- 2019 marks the start of a new specification package for Atlantic herring. Given action on NEFMC's Amendment 8, it is likely that a complete specification package wouldn't be implemented until mid-2019. This is of concern since the 2019 ACL is expected to be reduced.
- The NEFMC has recommended that NOAA Fisheries implement 2019 specifications via an in-season adjustment.

Presentations

- Update on the 2019-2021 fishery specifications by M. Ware

7. Set 2019 Specifications for Area 1A (3:05-3:25 p.m.) Final Action**Background**

- Per Amendment 3, states annually set the quota specifications, including the quota period system, in Area 1A.
- For the 2018 fishing year, the Board adopted a trimester approach in which 72.8% of the Area 1A sub-ACL was available from June through September and 27.2% was allocated from October through December.

Presentations

- Overview of quota period options in Amendment 3 by M. Ware

Board actions for consideration at this meeting

- Set the season split of the Area 1A sub-ACL, quota rollovers, and sub-ACL trigger.

8. Atlantic Herring Advisory Panel Membership (3:25 – 3:30 p.m.) Action
Background <ul style="list-style-type: none">• Joseph Jurek from MA has been nominated to the Atlantic Herring Advisory Panel
Presentations <ul style="list-style-type: none">• Overview of nomination by T. Berger (Briefing Materials)
Board actions for consideration at this meeting <ul style="list-style-type: none">• Consider approval of nomination.

9. Other Business/Adjourn

Atlantic Herring Technical Committee Task List

Activity Level: Medium

Committee Overlap Score: Medium

Committee Task List

While there are no Board tasks for the TC at present, there are several annual activities in which TC members participate, both through the Commission and NEFMC

- Summer/fall collection of spawning samples per the spawning closure protocol
- Participation on NEFMC PDT and SSC (will be working to recommend specifications for the 2019-2021 fishing years)
- Annual state compliance reports are due February 1

TC Members

Renee Zobel (NHFG – Chair), Kurt Gottschall (CT DMF), Dr. Matt Cieri (ME DMR), Micah Dean (MA DMF), John Lake (RI DFW)

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
ATLANTIC HERRING SECTION**

**The Westin Crystal City
Arlington, Virginia
August 7, 2018**

**These minutes are draft and subject to approval by the Atlantic Herring Section
The Section will review the minutes during its next meeting**

TABLE OF CONTENTS

Call to Order, Chairman Patrick Keliher 1

Approval of Agenda 1

Approval of Proceedings, May 2018 1

Public Comment 1

Review and Consider Approval of the 2018 Atlantic Herring Benchmark Assessment (SAW 65) 1

 Presentation of Stock Assessment..... 2

 Peer Review Report 9

Consider Benchmark Stock Assessment and Peer Review Report for Management Use 10

Discuss Recent NEFMC Recommendation to NOAA Fisheries on the 2018 Sub-Annual Catch Limits 15

 Reconsider ASMFC 2018 Sub-Annual Catch Limits 15

Provide Recommendations to the NEFMC on 2019-2021 Fishery Specifications..... 19

Other Business 23

 Advisory Panel Nominations 24

 Consider Recommendation to Change the Herring Section to a Board and Invite the
 NEFMC to Hold One Voting Seat 24

 Discuss Spawning Protection..... 28

Adjournment..... 29

INDEX OF MOTIONS

1. **Move to approve agenda** by Consent (Page 1).
2. **Move to approve proceedings of May, 2018** by Consent (Page 1).

Please note: Due to a technical issue the first five minutes after the break shown on Page 19 was not recorded. The following is the motion made and passed during that period:
3. **Move to reconsider the 2018 Atlantic herring sub-ACLs so that they match those promulgated in season by NOAA Fisheries. Implementation of these revised sub-ACLs is contingent upon NOAA Fisheries making an in-season adjustment to the 2018 Atlantic herring sub-ACLs. The revised 2018 sub-ACLs would become effective upon notice from NOAA Fisheries that they have been implemented in federal waters. In addition, recommend that the 2018 Area 2 sub-ACL be set at 8,200 metric ton as consistent with the NEFMC recommendation.** Motion by Eric Reid; second by Raymond Kane. Motion carried.
4. **Move to approve Beth Casoni and Gerry O'Neill to the Atlantic Herring Advisory Panel** (Page 24). Motion by David Pierce; second by Eric Reid. Motion carried (Page 24).
5. **Move to recommend the Policy Board change the Herring Section to a Board and invite the NEFMC to have one voting seat. This action is conditional on NEFMC adding an ASMFC staff seat to their Herring PDT and an ASMFC seat to the Herring Committee, with the understanding that is not the same person** (Page 26). Motion by Eric Reid; second by Pat Keliher. Motion carried (Page 28).
6. **Motion to adjourn** by Consent (Page 29).

ATTENDANCE

Section Members

Pat Keliher, ME (AA)	Eric Reid, RI, proxy for Sen. Sosnowski (LA)
Doug Grout, NH (AA)	Pete Aarrestad, CT (AA)
G. Ritchie White, NH (GA)	Sen. Craig Miner, CT (LA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	John McMurray, NY, proxy for Sen. Boyle (LA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	Maureen Davidson, NY, proxy for J. Gilmore (AA)
David Pierce, MA (AA)	Tom Fote, NJ (GA)
Raymond Kane, MA (GA)	Joe Cimino, NJ, proxy for L. Herrighty (AA)
Bob Ballou, RI, proxy for J. McNamee (AA)	

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

Ex-Officio Members

Staff

Robert Beal	Megan Ware
Toni Kerns	Jessica Kuesel

Guests

Rachel Baker, NOAA	Michael Pentony, NMFS
Ellen Boler, VMRC	Bryan Plumlee, VA (GA)
Matt Cieri, ME DMR	Nick Popoff, ME DMR
Zach Greenberg, PEW Trusts	Sam Rauch, NOAA
Sarah Heil, NOAA	Abden Simmons, MEFA
Peter Himchak, Omega Protein	Melissa Smith, ME DMR
Peter Kendall, NEFMC	Darrel Young, MEFA
Aaron Kornbluth, PEW Trusts	

Please note: Due to a technical issue, the first five minutes after the break was not recorded. The motion made and passed during that period is shown in the Index of Motions

The Atlantic Herring Section of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; Tuesday, August 7, 2018, and was called to order at 10:30 o'clock a.m. by Chairman Patrick C. Keliher.

CALL TO ORDER

CHAIRMAN PATRICK C. KELIHER: We'll start the Atlantic Herring Section meeting a little bit late. We apologize; the Executive Committee ran over just a tad. I'm going to call the meeting to order. We've got a few additional items on the agenda; but before we go there, both of the other two Commissioners from the state of Maine were not able to attend today.

This is their busy time of year; both Steve Train from a lobstering perspective, and Senator Langley, because of his restaurant in Ellsworth, so I'm it. My plan is to Chair this meeting; and if we get into a situation where I have to advocate on behalf of Maine on a specific position, I will turn the meeting over to Bob, in regards to running that portion of the meeting if we have to make any motions.

Does anybody have any objections to that approach? Seeing none; thank you. You have objections to that approach, Toni? Okay. Don't confuse me. We do have some additional items on the agenda that we'll take up under other business. One is revisiting the issue regarding moving the Section and turning it into a Board. This is a result of conversations that leadership from the Council and the Commission had; and Bob can give some additional information when that portion comes up.

Because of that conversation, because we're going to deal with some of the issues related to Council work on A8, Peter Kendall, who is the Herring Committee Chair, is here in a great

spirit of cooperation. He expected to be hiding in the back of the room; but I said no, with that shirt on he needs to sit up at the front. Then we also have AP nominations. Is there any other business to be brought before the Section? Ritchie, did you want to address?

MR. G. RITCHIE WHITE: We had discussed talking about spawning issues going forward. Is this something that you would like to delay until the October meeting?

APPROVAL OF AGENDA

CHAIRMAN KELIHER: Because we're a little bit behind schedule, why don't we put it at the end of the agenda? If we get to it today we can start the conversation; and then if we don't have additional time we can finish it in October. Are there any other additional items for the Section?

APPROVAL OF PROCEEDINGS

CHAIRMAN KELIHER: Seeing none; the proceedings from the May, 2018 meeting were in your packet.

Are there any additions, deletions, corrections to those proceedings? Seeing none; I will take that as approval of the proceedings from the May, 2018 meeting.

PUBLIC COMMENT

CHAIRMAN KELIHER: We've got a few folks from the public here today. Are there any public comments on items that are not on the agenda?

REVIEW AND CONSIDER APPROVAL OF THE 2018 ATLANTIC HERRING BENCHMARK ASSESSMENT (SAW 65)

CHAIRMAN KELIHER: Seeing none; we'll go to Item Number 4, Review and Consider Approval of the 2018 Atlantic Herring Benchmark Assessment. There potentially is an action here; but because the peer review has not been completed, we are in a little bit of a quandary.

We may want to consider a motion that is conditional in its approach. But I think we'll go through the reports from both Matt Cieri, and are you doing the presentation on peer review? There will be none. The agenda is incorrect. We'll have a presentation on a stock assessment from Matt. After he presents a stock assessment report, we'll review the comments of the peer review which following the presentation there will be a time for questions and comments. Then we'll figure out what path forward will be from there. With that Matt, I'll turn it over to you.

PRESENTATION OF STOCK ASSESSMENT

DR. MATT CIERI: My name is Matt Cieri. I work for the Maine Department of Marine Resources. I'm on the Herring PDT, the Herring Technical Committee, as well as the Work Group that did the SARC this year. This presentation is for the stock assessment that we completed this past June; well this past May, and was actually peer reviewed in June.

Some of these slides have been ripped off from John Deroba; he's the primary analyst for Atlantic Herring from the Population Dynamics Center. Back in 2012, we had a little bit of a retrospective pattern associated with this stock. That tended to overestimate SSB, and underestimate F in the terminal year.

One of the ways to fix this sort of problem was to increase the natural mortality rate by about 50 percent; starting in about 1993. When we did that we noticed that it actually changed the natural mortality rates so that it sort of matched the consumption seen by the Food Habits database from the bottom trawl for National Marine Fisheries Service.

On this axis we have consumption; or the associated consumption. Year is on the Y, I mean Year is on the X, sorry. The dotted line is what happens from the model if you assume that sort of natural mortality; what that sort of translates in as far as consumption goes. The orange and black lines are the actual sort of

model consumption from the NMFS bottom trawl Food Habits database. As you can see; they pretty much line up fairly well. This is when we actually increase the natural mortality rate by about 50 percent in 1993.

We got through that assessment. It sort of helped the retrospective pattern immensely; and so we moved on. Then we went to go update the assessment in 2015 and we did exactly the same sort of run; where we broke the natural mortality and sort of increased it by about 50 percent. Afterwards it didn't seem to match the consumption quite so well. More to the point, it actually didn't really solve the retrospective pattern anymore.

We were kind of left with this whole issue of, we've got a retrospective pattern that is overestimating SSB and underestimating F relative to the terminal year. We ended up, because that was an update and not a benchmark, all we did was do a Mohn's rho correction. Basically we correct downward for SSB and upwards for F in the terminal year; to figure out stock status. This year, in 2018 we went through and we did a continuity run; which is basically we just take the last model, we put new data in it, and we run it. When we do that you'll notice a couple of things. The first is the blue line is the 2015 run. There is SSB here on the top panel. The blue line is the SSB from the 2015 run. The red line is the SSB if we simply just updated the information; right if we just simply put in new data. That black diamond there is the retrospective adjustment that we did in the 2015 assessment.

One of the first things that you'll notice is our retrospective adjustment in 2015 seemed to be fairly dead on. It actually brought that spawning stock biomass down in the final year; to what we think it is. But that there is a very large difference between just simply adding in the data and this is all due to the retrospective pattern change.

Not only does the retrospective pattern sort of change things in the terminal year. But it also changes things back further. You'll see that throughout the entire time series, or nearly the entire time series, back to almost 1989. You're actually ratcheting down spawning stock biomass. You can also see that the recruitment, the differences in recruitment between the blue line and the red line are also fairly significant.

Ratcheting down what we've seen in recruitment over the last few years as well. It was pretty clear, sorry one more slide on retrospective patterns, sorry about that. For those people who are familiar with this type of thing, we're looking at a Mohn's Rho in the terminal year of about 0.73. That is actually pretty darn high.

It was pretty clear that this active retrospective pattern was going to preclude us from simply doing a simple update. It was back to the drawing board. This is something that is not unexpected. But we ended up doing was actually taking a look at a few different types of modeling approaches.

We basically just started from scratch again; which is something that you can do in a benchmark assessment. I think it's always a good idea to at least take a look at. We took a look at three different models. We looked at ASAP, which is the model that we've used previously; and actually what is our base run for this time around.

We also looked at SAM; which is a state space model that is currently in use a lot in ICES for Baltic herring and North Sea herring. We also used SS3; which is something that's used out on the west coast quite a bit. The stock synthesis, the SS3 model that was developed was done by SMAS, and it was actually spatially explicit.

It had a lot of issues; in particular because we don't really know a lot of the migration rates back and forth between the subcomponents of Atlantic herring, and also partially because

when you catch herring in sort of these mixed areas, you really can't identify what's Georges Bank, and what is Gulf of Maine herring.

As some of you may already know, herring are sort of broken into two large subcomponents; the Gulf of Maine spawning component and the Georges Bank spawning component, and we assess them together. But they do tend to mix together during times in which they're not spawning. When they're feeding they tend to be a little bit fairly well mixed. However, they are separate spawning components. That is a very complex thing for a model to actually go through and look at; particularly when you don't have the data. The SAM model that we took a look at was actually kind of definitely, definitely cool. But the Workgroup wasn't quite as familiar with this sort of formulation. We relied almost exclusively on the ASAP model. There is an appendix and a working paper that deals with the SAM model; as well as comparisons between ASAP and the SAM model. There are some fairly significant differences.

Let's start off with fishery dependent data. Stop me if I'm boring you, hah. Fishery dependent data, one of the first things that we have actually is catch, of course. As you can see year is on the X, catch is on the Y, and we have two separate fleets in this particular model formulation. One is fixed gear; which isn't gillnets, like most people think, but is actually stop seines, weirs, and pound nets. These are fixed stationary gears used predominantly in Maine; but also in a few other places, as well as New Brunswick, Canada.

There is also the mobile gear fleet; which are purse seines and midwater trawlers, you know that you guys are more familiar with. As you can see; catches were really high back here during the ICNAF fisheries when the Russians were in the Gulf of Maine and Georges Bank before the 200 mile limit. Catches sort of declined in the late 1970s early 1980s, and then

rebounded again and been on a slight decline ever since.

The other thing that we have in fishery dependent data of course is age sampling. This is actually a very important part for an age-structured model, as you can possibly imagine. On this axis we have year, and on this axis we have age. The bubbles that you see here represent the proportion of the catch that is that age.

If you follow this sort of bubble plot, you can make out that there are some very strong year classes. There are strong year classes back here; and then more recently there is a strong year class here with the 2008 year class and the 2011 year class. What I want to show you here in particular is what you don't see.

What you're not seeing are Aged 2s and Aged 3s in the 2015-2016 range. This represents sort of a hole in the age structure of Atlantic herring; and we'll get into why in a few minutes. We also have weights at age. We've had a dramatic shift in weight at age in this population. It was much higher back here in the '70s, '80s, and almost to the early '90s. But then it dropped precipitously, I'm sorry in the mid-1980s.

Since then it has been variable; but it has stayed about the same level. The other thing that comes into this, of course for any type of modeling approach, is to look at maturity. Maturity is actually a really important component when you start trying to figure out things like spawning stock biomass. You need to know how many fish are mature; before you can figure out how much spawning stock biomass you have.

We went through and we did this again from scratch. What I want to show you is the black line here is the maturity schedule; and you can see that it's near zero for Age 1 fish, goes up to Age 2 by a little bit, is almost 50 percent mature at Age 3, and is nearly about 90 percent mature by Age 4. What you can see here again, is by

Age 4 they are nearly fully mature. However, the selectivity is measured by the model this time around, shows that they're not actually fully selected by the fishery at Age 4, in fact they're less than 50 percent selected by Age 4. In this model formulation they're not actually fully selected, they are not fully exposed to the fishing mortality until they're Age 7. They mature at Age 3 and 4; they are not fully actually exposed to the fishery until Age 7.

We also looked at some other data to round out our fishery dependent stuff. This other data includes from the observer data, the at-sea observer data from National Marine Fisheries Service, as well as the FLDRS, the fishery logbook and data recording software that is new this year. Mostly what this was doing was just trying to take a look at whether or not discarding was an issue.

For lots of years now it's been believed; and actually there is a lot of data to support that relative to Atlantic herring catch, Atlantic herring discards in the Atlantic herring fishery are fairly minimal. On to fishery independent data, we've got only a certain number of trawl surveys in which to actually take a look at.

We have the spring and the fall National Marine Fisheries Service Bottom Trawl Sampling. That is a fishery independent survey. Previously, and again this time around, we've broken them into time series. The first time series for National Marine Fisheries Service Bottom Trawl Sampling occurs prior to 1984, and then we broke it, used it as a separate survey in the model past 1984.

We did that specifically because it was a door change that made an actual real difference in the amount of Atlantic herring that they catch. In past assessments, and in 2015 and in 2012, we sort of merged that change in the NMFS Bottom Trawl Sampling from Albatross to Bigelow using a conversion factor.

This past assessment we were actually able to put the Bigelow time series as its own separate

index into the model; and that's because the calibration coefficients for Atlantic herring could be considered somewhat difficult, because it is a pelagic fish that you're catching in a bottom trawl. Now we've got for just the National Marine Fisheries Service Bottom Trawl Surveys we've got six different indices; fall and spring, prior to 1984, past 1984 to 2009, and then post 2009.

In addition we also have the summer survey, which is named the Shrimp Survey that covers a good portion of the interior Gulf of Maine, and actually samples both inshore and offshore components. Again more bubble parts. This is the time series for the Bigelow for fall. Notice that there is nothing past 2009, which is really good, because they weren't running the survey past 2009. I would be really worried if we did have data back there.

You can again see that there is some strong year classes; again starting here in the 2008 range for Age 2s, 2006s and again for 2008. What you don't see is Age 2s and 3s in the '16 and '17 timeframe. Again, even the fishery independent indices are showing that there are very few younger fish in the population.

There is actually a new survey or a new index that we put in the model this time. This is an acoustic survey; again from the bottom trawl. It's a great research platform; by the way. We can get so much data from it. In this particular index, what's used is an actual acoustic sounder onboard, and has been on board since about 1998. As it goes from place to place, as it does its bottom trawling, as it moves from station to station. It is continuously collecting acoustic information, acoustic signals from Atlantic herring. Mike Jech from National Marine Fisheries Service actually cobbled this together into an index; so that we can actually use to survey the entire Gulf of Maine.

From an analyst perspective, what this does is while there might be some difficulty catching Atlantic herring with a bottom trawl; this sort of

takes that information out of the picture. You just have to drive over them; in order to see them as a good scientific index. We found this to be actually pretty useful in this particular assessment model.

There were other indices which we considered; but we ended up not putting in this particular model. The first is the National Marine Fisheries Service Winter Bottom Trawl; or the Flatfish Survey. That is partially because it had lots of inconsistencies in its area of coverage. It's again, centered more on flatfish than Atlantic herring.

The state surveys were for Maine and New Hampshire as well as Massachusetts, are important. But they only survey the inshore spawning component; they don't actually survey the Georges Bank component, and as a result are probably not useful for a model that's based on the entire stock complex.

There is also something new this year that we tried; which was a Food Habits Index. This basically, as Jon describes it, using predators like striped bass or monkfish or skates as an actual research platform; and actually using their information in their guts from the Food Habits database, to figure out an index for Atlantic herring.

On to the parameterization, one of the first things of course that we need to talk about is natural mortality, and so as I suggested earlier in this conversation, in 2012 we used a variable M at age, which was scaled to a maximum age. See if you can think about this. In 2012 we had a variable natural mortality that was static across all years; but in 1993 onward, it was ramped up by 50 percent.

That sort of matched the consumption that was coming out of the National Marine Fisheries Service Food Habits database. In 2015, we used this same sort of variable natural mortality at age, which we call Lorenzen, because it's based on size. But we didn't do a 50 percent increase;

and that's because there wasn't really any justification.

It didn't solve the retrospective pattern, as I showed you, and it also didn't match the Food Habits database. That whole split of that 50 percent increase was actually not done in 2015. During this past assessment in 2018, we actually removed the variable natural mortality at age. We did that as a workgroup for a lot of different reasons.

One is this idea of parsimony, the idea that your simplest answer is probably going to be your best answer. More to the point, when we remove that sort of natural mortality at age, the model fit dramatically improved, or slightly improved I should say. The other thing is that when we ran side-by-side comparisons using natural mortality at age variable and static at one number, there wasn't any difference in the results. We got the same results, we got the same reference points, and we got the same pretty much everything. It was decided by the Workgroup to actually use one value for natural mortality. That value happens to be 0.35. That was the static natural mortality for all ages across all years for Atlantic herring.

When you do that you get this black line; which is the assumed consumption, if you assume that fixed rate of natural mortality. The blue line is the results from the Food Habits database; and as you can see it matches on some level. There is certainly a lot of variability; but it doesn't do quite a bad job at matching the Food Habits data that comes out of the National Marine Fisheries Service.

Note that these are all on the same scale; so they are not on separate scales. Another pretty dramatic change in this model, and I kind of alluded to it earlier, was about selectivity. Selectivity or when these fish are actually vulnerable to the fishing that's occurring within the area.

In 2012, when we went through the benchmark, we ended up with this particular sort of selectivity curve for the mobile fleet. The black line is mobile fleet; the blue line is the fixed gear. Taking a look again at sort of a reference Age 4, in 2012 Age 4 was about 50 percent selected by the fishery; meaning that when they were mature they were about 50 percent exposed or 50 percent vulnerable to the fishery.

They were fully exposed by Age 5. I'm sorry they were 70 percent exposed at Age 4, my bad. Doing this formulation, they are 50 percent exposed to the fishery here at again about Age 5, but aren't fully exposed to the fishery until Age 7. What's happening is we've shifted that selectivity curve backwards, or towards the right.

That means that herring are older when they're first and when they're completely exposed to fishing mortality in this fishery. That actually has some pretty important implications. Before we can really talk about a lot of the results, let's talk about recruitment, folks. On this axis is SSB, and on the Y axis are recruits.

This kind of looks like you went out hunting for birds. It's pretty much a shotgun, sort of blast. For those of you who are familiar with menhaden, or who are on the Menhaden Board, you've seen this sort of pattern before. It's pretty much the same issue that has arisen in menhaden. There are a couple of things to note. One is that '15, '16, '14, they're all down here; so all of the recruitment over the last few years has been pretty low.

More to the point, the difference at the same biomass between 2015 and 2008, there is a huge spread. That huge spread for the same biomass makes it almost impossible to figure out a stock recruitment relationship. There is that much variability. Thinking about it that is a huge difference to have that is a huge amount of variability to have at the same biomass over time.

The unfortunate part about all of this is the model actually produces recruitment over time. Here we are in the most terminal years; here is recruitment again, here's year, and here is our recruitment recently. As you can see from this particular graph, 2016 was the lowest recruitment on record. We've had low recruitment now or below median recruitment since about 2012. This is our estimate of recruitment. I will note that the last two years have CVs that are greater than 1. But as one of the Peer Reviewers pointed out, the CV on the last year was 2. Even if you double that number, you're still below the median.

To sort of drive this point home, this is the recruitment here. This will be your 2021 SSB. This next year will be your 2020 SSB; if you assume that they're fully mature at Age 4. This will be your 2019 SSB. Pretty much for the next specification cycle the recruitment is already there. We already have an estimate of it; and it's not particularly high, it's certainly below the median average.

As I alluded to earlier, because it's such a shotgun pattern we are unable to actually figure out a stock recruitment relationship. We're using median recruitment. This means if you look along this line, your recruitment from the model here is the same as it would be here. You get the same amount of fish for surprisingly different levels of biomass.

This of course leads us to a problem with our reference points. In 2015 our reference points were based on a Beverton Holt stock recruitment fit. We got this sort of MSY of 77,000 and F at MSY at about 0.24, an SSB at MSY of 311, and the stock status was not overfished and overfishing wasn't occurring.

During this assessment we don't really have an estimate of a stock recruitment relationship; so you can't produce MSY reference points when you don't have a stock recruitment relationship. As a result we've started using an F SPR proxy at 40 percent. This sort of proxy you guys might

know it from menhaden. It's something that we do in a very similar way,

This sort of SPR at 40 percent is something that is used on the West Coast quite often. This leads us to an MSY proxy, an MSY value of 112,000 metric tons; significantly different or significantly higher than the MSY value we had previously. The F at MSY proxy is about 0.51. There is a little bit more than double the F at MSY previously; but we should also note that F at MSY applies to fully selected fish, which in this case are no longer Aged 4s, but are now Aged 7s.

The SSBMSY proxy snow is 189,000 metric tons. This is quite a difference in biological reference points. Likewise, the biological reference points that we're currently using are no longer valid. You really can't justify them and you can't translate them. Getting into more of the results from the document, we have biomass, year, we have in the red is total biomass.

The dash line is SSB, and the green line is exploitable. As you can see, total biomass, spawning stock biomass, and exploitable biomass, all of these were high back here in the late 1960s and '70s, declined to the early 1980s, increased again in the late '80s, early '90s, has remained fairly flat until the 2000s, and then has taken somewhat of a shallow decline, and then an increase in decline in the last few year as a result of low recruitment.

The other thing to note is that in here your total biomass and your SSB have become closer and closer together. What this is saying is that most of your biomass now is SSB or mature fish; and that is that lack of recruitment that we've seen over the last few years. F sort of gives you a similar pattern to what you would expect. Over the time series where I want you to concentrate on the black line, here has been your F, which has been slowly declining here in the late '70s to the early '90s. There has been somewhat of an increase in the mid-1990s all the way up to the late 2000s, and then it has declined again.

Again, this is a standard control plot found for a lot of fisheries that you guys will see. Fishing mortality as ratio of F at MSY here, spawning stock biomass as a ratio of its reference point here, the 1-1 line is here. This line here is basically half your spawning stock biomass at MSY or your reference points.

This is your spawning stock biomass target. Here is your threshold. This is your F target. What you can see from the point estimate and the 80 percent confidence intervals is we're not overfished, and overfishing is not occurring. There is not a nonzero probability that you're not however above F at MSY; or overfishing, but it's not 50 percent.

When you use a retrospective adjustment pattern, because even this particular model in this formulation has a retrospective pattern, you get very close to your F at MSY reference point, and your spawning stock biomass comes a little bit closer to one-half BMSY. I don't want to get into the weeds; but we do have a retrospective pattern associated with this particular assessment.

The Mohn's Rho for spawning stock biomass is not particularly high; but it is there. There is a little bit of a retrospective pattern. There is a little bit of overestimating SSB and underestimating F. However, because it's within the 80 percent confidence intervals, generally there is not a correction factor applied to this.

Everyone's favorite topic, and everything everyone keeps calling me about; projections. We ran two separate scenarios for the peer review for projections for this year. One uses a bridge year; or 2018 catch of 111,000 metric tons, which is the actual ABC, and 55,000 metric tons, which is what was caught in 2017.

Generally the Workgroup didn't really think that it was likely that this fishery was going to catch 111,000 metric tons. It hasn't caught that amount for quite a while. Going into

projections we took a look at 2019 through 2021. We use F and MSY proxy; basically we projected forward if you caught F at MSY over the time series. Then we used a median recruitment; because we don't have that sort of stock recruitment relationship like you would normally put in.

However, we took out 2016 and 2017; and that's because in general those have really, really high CBs associated with them. We decided not to put them into the projections. The Working group did sort of note that these projections will likely be optimistic; if recruitment doesn't really pan out to go back to the median.

When you do this you end up with sort of two sets of projections. The top one is at 111,000 metric tons. The bottom one is at 55. This is your catch on the first line here, under each year when you apply the F at MSY. For example, in 2018 you catch 111,000 metric tons; you have a 95 percent chance of overfishing, you have a 96 percent chance of being overfished. In the following year when you apply the F at MSY value, you have a catch of 13,000 metric tons, 13.7 thousand, but you still have a high probability of being overfished and of course because you're fishing at F at MSY, overfishing is not occurring. Looking at the 55,000 metric ton, which I think is probably going to be a little bit more realistic, as well as given this fisheries performance, as well as pending actions by the Council.

At 55,000 metric tons for 2018, you'll have roughly a 70 percent chance of overfishing, and there is a 76 percent chance that you will be overfished. By 2019, when you apply the F at MSY, you get a catch of 28,900 metric tons; you have a 92 percent chance of being overfished, below one-half of BMSY.

Applying that sort of F at MSY there is still a greater than 50 percent chance that you will be overfished by 2021. That is the good news. I'm just kidding. Wow, it's a tough room tonight.

For some final sort of thoughts and Pat can stop me; because he's seen this slide before. To sort of highlight, the good thing is that you're not overfished and your overfishing is not occurring currently.

There is a limited retrospective pattern associated with this model as it's currently formulated. The model has got pretty decent diagnostics; it has good fits, there are not a lot of residual patterns. The MSY to my mind is actually more representative of the long term catch associated with this stock than previous models; it's 112,000 metric tons as opposed to 77.

You have older age at full recruitment to this fishery; which means that herring are allowed to spawn at least a couple of more times before they're fully exposed to the fishing mortality for this stock. Your F at MSY has gotten higher; and your biomass at MSY has gotten lower, so just think productivity, right.

The not so good thing about the sort of update of the assessment, or this assessment benchmark is that the recruitment has obviously been off in the last few years. It's not only just showing up as a modeling artifact, it is showing up in your catch, it's coming in your fishery dependent indices and your fishery independent indices.

This sort of lower recruitment has led to an erosion of the spawning stock biomass over the last few years; and will more than likely lead to probably being overfished in a very short amount of time. The lack of a strong stock recruitment relationship means that you're going to be relying on proxies for your estimates and for management purposes.

There is a lot of stuff that is still uncertain within this particular model; so the CVs on the recruitment in the last couple of years are greater than 1, which is pretty darn high. There is a lot of uncertainty about whether or not this retrospective pattern will come back. As we

talked about, there has been a series of you do an assessment, you have a retrospective pattern, you fix it, and then you do an update and it's back.

That's the reason why Jon put up the DeLorean up there for the Back to the Future thing, simply because we've been through this treadmill before. There is some uncertainty as to whether or not, when we go to update this model in three years, whether or not the retrospective pattern will be back. None of know; because none of us have a crystal ball. The other thing is that this use of F at MSY proxies can increase the uncertainty associated when doing things like setting OYs or in management, frankly, because we're not using F at MSY or MSY-based reference points but rather proxies.

PEER REVIEW REPORT

DR. CIERI: The peer review was conducted in June. Pat Sullivan, who is also on the SSC, was the Chair; and there were the different people included, Kathy Dichmont, Jeff Tingley, and Coby Needle. They were a good group and they gave a lot of really good suggestions. Their report is currently not out yet; as I'm sure you guys have already heard about, so I really can't speak to it.

In general they seemed fairly receptive. They gave some really good comments; and I thought that they helped and improved the model immensely. But I don't expect for them to either reject or to completely change the model from what we have in the report; but I don't know that for sure.

This is our summary. You guys have probably seen this table before. It gives one of the interesting things is it allows you to take a look at your point estimate of F at MSY; and take a look at how well we've done in the past about staying on top or under that F at MSY target in the past retrospectively.

You can also see the change in recruitment in a table form. Note that 392, is what we have in 2017. That is slightly up from 2016 of 175. But it wasn't that long ago where it was closer to 2 or even 10,000. There has been a fairly large drop in recruitment. I know everyone is always interested in the assessment and the assessment results.

A lot of people don't actually read the appendices. I read the appendices; but you know. There are a lot of appendices associated with this model. If you want more information, there is a lot of information on how we do aging. That SAM state space model that is used in ICES a lot; there is a run through with Atlantic herring.

There is also consideration of what do you do when you have different models that are giving you slightly similar results; but are off by just a little bit. That is a thing on model averaging; which I'm sure you guys have talked about a little bit in the sort of risk and uncertainty framework. There is also the two-area stock synthesis model that was done; which is also very interesting. I recommend that as a read, as well as a study free program and using predation pressure as an actual index in a model like this.

One of the cool things that we've noticed, when we went through and we did this model is we actually have documented occurrences of spring spawning in the Gulf of Maine; which is something that because the fishery hasn't been taking place, we haven't actually seen. But if you go out there in late May and in June, there are herring that are in spawning condition.

I thought that was actually kind of cool; because we haven't seen that in the Gulf of Maine in quite a while. Here are the Herring Working Group members; they include myself, Jon, Chris Legault, Deirdre, Sarah, Ashleen, and Gary Shepherd, who was Chair, and with that I think that is the last one. That's it; I'll take your questions.

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

CHAIRMAN KELIHER: Are there any questions for Matt? Ritchie White.

MR. WHITE: Would the layman's take away from this be that we're going to have to drastically cut quotas for a minimum of three years; I guess four years, and if we do not return to more normal recruitment that this is going to be a fairly long term problem.

DR. CIERI: Yes, if your levels of recruitment don't increase and if they don't go back to the median then the stock will be in a low state. You can't take fish that aren't there.

CHAIRMAN KELIHER: Dennis.

MR. DENNIS ABBOTT: Could we go to the summary sheet that was one of your last slides? The answer to my question might have been 20 slides back. Why are we getting such poor recruitment from a sizeable spawning stock biomass that I see in the third from the bottom line? What is the relationship? Is it traceable to fishing pressure? Is it traceable to environmental issues? I mean what do you feel is the driver in the sudden drop; not sudden but the continuing drop in recruitment, if that's a good question?

DR. CIERI: Yes, so the answer to your question is complex, right. I mean you've got spawning stock biomass for example, at this level, which is capable of producing near next to no recruitment or a whole lot of recruitment like you've never seen before, literally. There is no easy answer. We don't really know if there is an environmental driver, if it's simply a match or a mismatch associated with whether or not larvae are in the water column at the right time.

You know it tends to be sort of hit or miss. It has been four years in a row. I get it; for a lot of people that's concerning, and I understand. I think it is. But true to form, if you flipped a coin a hundred times there is a good chance that

you could come up with heads four times in a row, right? Some of this is random chance.

I don't think we haven't really explored the idea of an environmental covariates associated with recruitment; but it's the last four years. You'll notice that even in the last few years, we've still had pretty good recruitment. I mean this recruitment event back here in 2009 that is the third highest recruitment we've ever had in the time series. This is probably; I think when I calculated it was the sixth highest. It is hard to gauge whether or not some environmental drivers are at play here. Does that hopefully answer your question a little?

CHAIRMAN KELIHER: David Pierce.

DR. DAVID PIERCE: A lot of work went into this. You of course having a major role, so thanks to you and all of your colleagues for putting in this incredible amount of effort, appendices and otherwise. I mean this was no small chore; it was huge. A couple of questions, how old is an Age 4 sea herring? I'm sorry, how large is it; the length of an Age 4. That was a trick question.

DR. CIERI: It's usually about 23.

DR. PIERCE: About 23 centimeters.

DR. CIERI: Correct; actually a little bit larger than 23.

DR. PIERCE: Okay, I guess I'm trying to fathom why, or try to understand why Age 4 fish are not yet fully selected for the fishery; why it's gone from 4 to 7. These are purse seiners, the midwater trawlers, they don't have large mesh, and they're relatively small mesh. I mean when the fish are let's say 9 inches total length thereabouts, which is kind of around Age 3 or Age 4. They are caught by the industry; they're caught by the fishery. If they are there they are caught; so why has it shifted from 4 to 7, which is a very important conclusion that's been drawn?

DR. CIERI: This fishery, Age 4s was never fully selected. They were actually fully selected usually by Age 5s was when they were fully selected. Selectivity isn't just about gear. Selectivity is also exposure to fishing pressure in the fact that they may be in a different location than where the fishing operations are taking place; or they may be deeper, or they simply may not be in the same area that all the fish that are fully exposed to the fishery are.

There are a lot of explanations. You'll see it with menhaden as well; as we talk about that. Being able to be physically captured by the fishery is just one part of selectivity. There is also whether or not they're exposed to the fishery; being in the same place, the same time, and at the right depth.

DR. PIERCE: For whatever reason, Age 4 and Age 5 and Age 6 fish are no longer as available to the fishery as they used to be; as a part of this selectivity question. It's perplexing. Where are they? Are they all inshore so that they're not being captured by the fisheries that tend to be a little bit more offshore; although the purse seine fishery is fairly close to shore, isn't it?

I don't get that but nevertheless that is the conclusion that has been drawn. My other question is looking at the spawning stock, first a comment. Looking at the figure that shows spawning stock biomass going back over time, and reflecting on when I was involved in sea herring fishery management back in the 1970s, we had concluded that the sea herring resource had collapsed.

That led to all sorts of very low quotas for a long period of time; and it led to the decimation of the Massachusetts sea herring fishery, it just ended for all practical purposes. I see now that's we're at about that same SSB, so I'm going to conclude that we pretty much are collapsed. That may be the inappropriate word to use; but that's what was used back then.

It looks like we have a collapsed sea herring resource; based upon the SSB, and of course the future recruitment that we expect to get. The question is 2015, 2016, 2017; Age 1 recruitment was extremely low. How does one assess in a timely way; real time, the abundance of those young fish? What sampling gear, what survey was used to come up with those very low numbers of recruiting year classes Age 1?

There is no longer a fixed gear fishery like it used to be. If I recall correctly, the fixed gear fishery stop seine and weirs, they were extremely important in judging the strengths of incoming year classes, because they caught those small fish. What do we now use to get this confident conclusion that well, we've gone to hell in a hand basket, 2015, '16, and '17 Age 1 fish are pretty much not there?

DR. CIERI: Can you go to a slide that shows the SSB over time first? Yes, you're right. We are above the bottom of that curve for sure. We're not quite as a bad spot as we were back in the late 1970s. Your second question dealt with, I'm sorry?

DR. PIERCE: How did you come up with reliable estimates of Age 1 strength?

DR. CIERI: Right. You do actually have some fixed gear catches associated with this fishery. The New Brunswick weir fishery is still in operation; and so that does provide us some pretty good reliable information on year class strength, as well as the NMFS Bottom Trawl Survey does actually catch decent incoming year classes.

But as we've suggested that recruitment vector that we've seen has a fairly high CV in 2016, and even in 2015. You know those CVs are monstrous; in many cases a greater than 50 percent. I think we're reasonably certain that the year classes aren't stellar; but the actual amount themselves is highly variable. That is one of the most uncertain portions of this

model; is that incoming recruitment. Are you good?

CHAIRMAN KELIHER: Ray Kane.

MR. RAYMOND W. KANE: Thank you Matt for your presentation. Can we go back to the recruitment slide, please? Yes that one. In the last specs package in '15, looking at this recruitment slide you had an abundance in '09; it dropped off in '10, '11. It looks like it went back up in '12; and then it nose-dived '13, '14, '15, '16, and '17. How as management bodies did we come up with the specs package that we did for '16, '17, and '18; looking at this recruitment slide? Can you give me an answer?

DR. CIERI: That's how. When you guys set your specifications package in 2015, you were working off the blue line; as opposed to the red line. Now, you adjusted and we adjusted for that down to that black diamond, right. But adjusting things in the terminal year doesn't really quite capture all that a retrospective badness does; when it comes to management decisions. You can see that it drops your recruitment, right?

It also drops your SSB a few years backwards from where you do the terminal adjustment; so it's not just the terminal estimate. It's not just the important part. Your recent recruitment, your recent spawning stock biomass is all lower. You set stuff based on the blue line. The red is this year; and even that has a small, you know when we went through and we did this and we did a retrospective peel, even that has a retrospective pattern. Even that red line is an overestimate.

CHAIRMAN KELIHER: Are there any additional questions for Matt? Eric Reid.

MR. ERIC REID: Now you're using a new tool; which is your acoustic survey. Can you talk about that a little bit more? What input did that have? Was it different than your other sources of data? Mostly, how was it

conducted? Are we just going on a boat ride and keeping the sounder on? I mean that's what it looks like to me. If you want to put that graph up that would be fine.

DR. CIERI: Okay, so this is the passive echo sounder that's on the trawl survey. They take these; they go out and they do their trawl survey stations. But they move from place to place. As they move from place to place, we're passively grabbing acoustic signal. It covers a fairly large swath of area; and it's taken over time.

For this particular model, how that was done, there is a whole working paper in the Appendix that talks just about that and how that was derived. I'm not the foremost expert on that. That was Mike Jech that did the bulk of the work. However, in the document there is a figure that's called – and I don't think I have it with me – that's called, leave one out. In that figure we sequentially drop every single one of our surveys for each sequential run. We do that to see what the influences are of those particular surveys.

Every time we dropped any of these surveys, the estimate basically stayed within the confidence intervals associated with the terminal years within the timeframe. None of these surveys individually carry a lot of weight within the model. They do carry a lot of weight together; and so it doesn't really give you, dropping that acoustic survey doesn't really give you that much of a change. As I remember it, and somebody could correct me if I'm wrong.

As I remember dropping the acoustic survey slightly decreased the spawning stock biomass; and slightly increased the fishing mortality. But I would have to go back and actually pull up that figure to be certain. But that figure is in the document; and I forget which one it is, but it's basically called Drop One.

CHAIRMAN KELIHER: All set, Eric? As my staff likes to tell me, it's not complicated it's just complex. Do you want to follow up?

MR. REID: Yes. It is one of the two or all three, I'm not sure. Mr. Jech and his staff of zero, the way I understand it he is the staff in the acoustic business. He would much rather prefer multibeam sonar; so you can see what you're actually looking at. I don't know if they actually catch the fish that they ride over; to make sure they know what they're looking at.

DR. CIERI: Oh yes they do actually; that is part of it. They always do an acoustic sounding; and it's not a dedicated survey by any stretch of the imagination. But they're out and it's in the normal process of the NMFS Bottom Trawl sampling. That's exactly it; they have those estimates.

CHAIRMAN KELIHER: Doug.

MR. DOUGLAS E. GROUT: Matt, you mentioned in your last slide that you discovered some examples of spring spawning. Is this at a level that we should start considering spawning closures; or was it just a couple of examples that you had never seen before?

DR. CIERI: Actually there is a whole working paper on this in the Appendix Section of the Assessment. I think the estimate is at about 2 percent. Including or excluding doesn't really make a difference within this particular modeling framework. But there is good evidence of spawning activity happening in May; which is completely surprising.

MR. GROUT: Location where they were gotten? Is it Georges Bank?

DR. CIERI: Inshore. It's mostly inshore.

CHAIRMAN KELIHER: Before I take any additional questions from the Section, I'm going to recognize Jon Hare from Northeast Science Center.

MR. JONATHAN A. HARE: I just wanted to talk a little bit about the Acoustic Survey; since the question came up from Mr. Reid. The Northeast Fisheries Science Center used to have a dedicated Herring Acoustic Survey on the NOAA ship, Delaware. When the Delaware was retired and not replaced in the region; that dedicated acoustic survey ended.

Dr. Jech, who is an acoustic expert, then used his expertise from that dedicated survey to go in and analyze the acoustic data coming from the Bigelow; and came up with the index that was used in the assessment. He is a staff of one; but he has a lot of expertise, and has worked very hard over the past year to develop the data for use in this assessment, working closely with Jon Deroba; the assessment lead. I just wanted to provide that background; thank you.

CHAIRMAN KELIHER: Thank you Jon, I appreciate that. Does anybody have any questions or clarifications from Jon on that? Seeing none; back to the Section, any additional questions for Matt? Seeing none; as was stated, we have a peer review that has not been finalized. Matt indicated that the peer review group did have favorable comments.

I'm not sure if we're seeing any problems associated with its release; but that has yet to be known. We do have a stock assessment obviously that was just reviewed. One way to move forward on this would be to accept the stock assessment; pending the approval of the peer review so that could be used from a management perspective. Toni.

MS. TONI KERNS: I think that what we would do, unless you all want to do differently. We can give the peer review results at the October meeting; and then you could accept the assessment for management use then, or you can do a conditional approval. But that would mean you would approve it prior to hearing the results of the peer review; which I'm not sure that would be a more unusual thing.

MR. GROUT: I guess because we're accepting the peer review for use in management. The question is between now and the October meeting, is there a potential that the Herring Section could be brought together to consider some management options such as specifications?

CHAIRMAN KELIHER: Toni.

MS. KERNS: That will be a discussion that we take up next, Doug. There are several ways that we can move forward. Megan will have some information for the Section to consider. We could not do anything on the assessment for now. We could come back to a motion to approve it if you want; in some sort of conditional way based on the conversation that occurs after this, or we can just wait until October, or approve it conditionally.

CHAIRMAN KELIHER: Ritchie White.

MR. WHITE: How does making this decision affect the next agenda item?

CHAIRMAN KELIHER: Toni.

MS. KERNS: The next agenda item. Without spoiling, you know Megan is going to let you all know that there is potentially a change in how we're going to move forward in the specification process; in particular the timeline, and what the New England Council is considering, and what NOAA Fisheries will be considering.

There hasn't been a final decision; so this is still a possibility of how the timeline will change, but I think it's somewhat likely. But I'll let P.K. speak to that. There will be some questions that the Section will have to consider today. I think it is fine for you all to use this information as you consider those changes in the timeframe; and recommendations that you want to make to NOAA Fisheries, and to the New England Fishery Management Council.

The Section will have to decide whether or not they want to conditionally change 2018 specifications; or if you want to get back together and do a phone call to make some changes to specifications, because we don't have all of the information in front of us today. I think maybe the easiest thing to do is let Megan give some information, Pat, and then the Section can decide what to do with the assessment, if you're willing to do that.

CHAIRMAN KELIHER: Yes, I don't disagree.

**DISCUSS RECENT NEFMC RECOMMENDATION
TO NOAA FISHERIES ON THE 2018
SUB-ANNUAL CATCH LIMITS**

CHAIRMAN KELIHER: I think unless there is some objection from the Section; why don't we move into Agenda Item Number six. We have information from Matt; as it relates to the Peer Review now that will help potentially inform us in those discussions. Then we can make a determination if we need to make a motion in regards to the Peer Review from a conditional perspective, addressing questions and concerns, Ritchie that you brought up, as far as further management actions.

With that if there are no objections; I'll turn it over to Megan then for Item Number 6. Keep in mind that we have a lunch break on the agenda here. One good thing here is we can get through this presentation; break for lunch, be thinking about this as we have a steak sandwich, or a bowl of fruit, whatever your heart desires, and then come back to the table with clear minds on a path forward. Megan.

**RECONSIDER THE ASMFC
2018 SUB-ANNUAL CATCH LIMITS**

MS. MEGAN WARE: We're first going to talk about the 2018 sub-ACLs. Before we get started, I just want to note as many of you know that there are a lot of moving parts for herring right now. We have the assessment we just heard. We have the Council's Amendment 8. We have a potential in-season adjustment

for 2018; and then we also have 2019 through 2021 Specs. A complicating factor here is that while all of these actions are interrelated, they're happening on slightly divergent timeframes. As a result, some of the things that we'll be discussing today are contingent on other actions happening. I'm going to do my best to kind of tee up those issues; and show how they're related. But I do want to note that the Section will be talking about some things that are one or two steps down the road today.

In June the Council met and discussed preliminary results of the 2018 herring assessment; which Matt just noted indicates reduced biomass and poor recruitment over the last five years. Based on those results, it is expected that there will be severe cuts in catch, which will be implemented in 2019 through 2021.

Specifically, two of the projections that the Council focused on were two that Matt showed. The first one is the full 2018 ABC being harvested; which is the 111,000 metric tons. That would potentially result in a 2019 coastwide catch of 13,700 metric tons. Then the second one was half of that 2018 ABC; and that would result in a 2019 coastwide catch of potentially 28,900 metric tons.

Over all what these projections are suggesting is that an in-season adjustment in 2018 could reduce the severity of cuts in 2019. In light of this information, the Council passed a motion, which is on the screen here regarding the 2018 herring fishery. It is recommending that the Regional Administrator allow for in-season adjustments for the 2018 fishery; such that the 2018 fishery would be capped at 2017 catch levels, for Management Areas 1A, 1B, and 3.

Then Area 2, the 2018 would be capped at 8,200 metric tons. The reason that Area 2 is slightly different is that they had already surpassed their 2017 catch levels; so that 8,200 metric tons is intended to provide some quota for the early winter small-mesh-bottom-trawl

fishery. The table is a numeric version of that motion.

Our first column is the current 2018 sub-ACL; so for Area 1A that is just over 32,000 metric tons. The next column is what's being recommended by the Council, so again for Area 1A that is the 28,682 metric tons. The next column is the difference between that and then the final column is what is that percent of the original sub-ACL. Again, for Area 1A the recommended amount is 89 percent of our current sub-ACL.

Why is the Section talking about this? If NOAA Fisheries makes an in-season adjustment, ASMFC will have different herring sub-ACLs in place for 2018. This is because the Section passed a motion in November of 2015; approving the 2016 to 2018 herring specification package. If the Section would like to align the state and federal sub-ACLs for 2018, we will need a motion to reconsider, and that will require a two-thirds majority vote.

As I kind of preface this presentation with timing is a complicating factor here, it is important to note that NOAA Fisheries has not released action on the 2018 in-season adjustment. Unfortunately I don't have those final sub-ACL values to show to you today. Given some challenges with timing; and the fact that we don't have those 2018 values, from a staff perspective there are kind of three actions for the Section to consider today. The first would be no action; so that means the Section would maintain the current or the existing 2018 sub-ACLs. This could mean that the state and federal sub-ACLs would be different; if that in-season adjustment is implemented. The second option is to make a motion to reconsider the 2018 sub-ACLs, and make it conditional on action by NOAA Fisheries. This will insure that the state and federal sub-ACLs align; but again, we don't know those final numbers.

Then the third option is to wait for action by NOAA Fisheries; and then address a sub-ACL change via a conference call. Under this option

the Section would know what those adjustments would be; but it means that we may have to move quite quickly via a conference call after NOAA Fisheries action. I'm going to leave these three potential options up here on the slide for discussion; and we will pass it off to the Board Chair when he comes back.

CHAIRMAN KELIHER: Sorry about that sidetracked. As you can see, based on the last slide there are three potential actions for the Section to consider. Before I open it up for additional comments from the Section on a path forward, I think it would be not to put you on the spot, Mike, but maybe I could bring you up to the microphone. Mike Pentony and staff and I, along with Toni, talked yesterday. Obviously there is some difficulty in timing here. I think it would be good to get your thoughts on this, Mike, and maybe we can prod you a little bit for some information.

MR. MICHAEL PENTONY: Megan did a really good job of laying out the Council discussion in June. I might ask actually, would it be helpful to this brief discussion if you could pull up one of the slides that were in Matt's presentation that showed the projected catch and fishing mortality rates for 2018 and '19. I think it was a table that showed at the current levels and at the potentially adjusted levels.

As Megan relayed, the Council had a discussion similar to this Section in June; based on the preliminary information coming out of the assessment, and obviously was very concerned with what they were hearing. Recognizing that one possible way to mitigate significant impacts to the fishery next year – thank you that is exactly what I was looking for – to mitigate potential impacts to the fishery next year and the year after, would be to reduce catch in 2018 through an in-season action.

As that table shows you, which was presented to the Council or at least the information behind that table was available for the Council.

As Matt and Megan both described, at the 111,000 ton ABC we currently have, the projection is that next year's ABC would be on the order of 13,700 tons. But if the catch was reduced for 2018 to 55,000 tons, catch could be something on the order of 28,900 tons.

The Council had the discussion about requesting that the Agency, under our authority in the regulations, take an in-season action to adjust the 2018 specifications to constrain catch to 2017 levels. Megan showed the table; which the Council was using based on preliminary information about 2017 catch. That was updated and the information that Megan showed you reflects the final catch for 2017.

Council also had a lengthy discussion about Area 2; and the best way to address that since it would have already exceeded its 2017 catch, when you factor in the adjustments and the in-season actions. The Council passed a motion 16-0-1 requesting that the Agency take this in-season action. I just want to highlight one aspect of that motion. I'm going to reread it; even though Megan showed it to you. Upon approval of the 2018 Stock Assessment Peer Review, the RA under existing authority allowing in-season adjustments, take action to cap the 2018 harvest at 2017 catch levels, and set the Area 2 sub-ACL at 8,200 metric tons.

The first part of that is important. As you've heard, the stock assessment has not yet been approved; so we are eagerly awaiting the final results of that. Meanwhile, although we are seriously considering the Council's motion, the action is still under consideration, pending final review and release of that stock assessment.

We have not made any final decisions yet on the Council's request. But I do want to highlight two things. The in-season adjustment regulation that the Council is referring to says that the specifications may be adjusted by NMFS to achieve conservation and management objectives; after consulting with the Council, during the fishing year.

Any adjustments must be consistent with the FMP objectives and provisions. The reason I stressed that last point; any adjustment must be consistent with the FMP objectives is I want to point to the bottom table there. Under catch at 55,000 tons, you can see that the probability of overfishing is 0.69.

Generally, the golden rule is that we not set any catch levels that would have more than a 50 percent probability of resulting in overfishing. The challenge for us as we look at the Council's recommendation and weigh what to do; is we feel that we cannot set specifications or make an adjustment that would result in higher than a 50 percent probability of overfishing.

Now, what you don't have in front of you is, what is that number? Toni may have some information that she can share with you. We have been looking at some projections. You know if you did a linear run from 111,000 at a 95 percent probability of overfishing to the 55,000 ton with a 69 percent probability of overfishing, it might look very grim.

It is actually not a linear run; so it's actually not quite as bad. But what we are doing is we are looking at the Council's recommendation in light of this provision to ensure that we are preventing overfishing; looking to set an overall catch level consistent with that. Taking into account the Council's recommendation, for example that we set the Area 2 sub-ACL at 8,200 metric tons, and that we try to preserve as much as possible the catch levels in the other three areas as close to as possible their 2017 actual catch.

Then we're also looking at what that might mean for 2019. I think we'll have that discussion probably after lunch. But I realize you're probably not getting as much information as you would like from me; in terms of specifics. But hopefully, if Toni can share you with the information that she has, and I'll be happy to answer any questions.

CHAIRMAN KELIHER: Reading between the lines, and the fact that it's not a linear run, would leave me to believe that it's not as low as I was thinking it might be. But Toni, do you want to comment on that?

MS. KERNS: Recognizing that NOAA is still in their process; but that the Section probably is not as comfortable making a change to an ACL if you don't have all the information in front of you. I have some information on projections that achieve a 50 percent probability in 2018; and I can give it to the group in sort of about numbers in 2018 that that would leave a catch that is not quite, but close to 50,000 metric tons, and in 2019 somewhere in the range of 30 to 31 metric tons, thousand metric tons, sorry.

But that doesn't tell you how that catch would be distributed. For today, as Megan said before, we can either consider making a change to the 2018 sub-ACLs conditionally on what comes from the rule that NOAA is currently working on; or the Section could have a conference call following the rule coming out.

CHAIRMAN KELIHER: Before I go to Matt, Peter Kendall.

MR. PETER KENDALL: Toni, those numbers, is that with the updated 2017 landing; because we didn't have those as of the PDT last week?

MS. KERNS: I believe so. But I would have to go back to confirm that.

DR. CIERI: Just something that Deirdre and Jason reminded me that these are OFLs that we're talking about here not ABCs; and so there is that thing to keep in mind as well. Those will be reduced by Canadian catch; as well as the SSC.

CHAIRMAN KELIHER: You always bring a ray of sunshine into the conversation. All right, back to the Section. Ritchie White.

MR. WHITE: Trying to think about the process here and our role. Do I understand correctly that today we could change the quotas effective immediately? Am I correct in that or not?

MS. KERNS: It depends on what you would want to do. I think that the best thing to do is if you approve something today, it should be conditional on what comes out of NOAA Fisheries; so that would not be effective immediately, it would be effective after their rule came forward.

MR. WHITE: Right. I'm trying to work through this process. If we have that ability, so we can be more nimble and do things quicker. Can we then be an asset to the Council and the Service to put something in place that at this point it looks like they're in favor of, and then we could undo that if necessary going forward.

CHAIRMAN KELIHER: My understanding is it was for our role today, if we had all of the information, was to give advice on Area 1 and the breakdown of Area 1 and the sub-ACLs. I'm reading between the lines a little bit on what Mike said; as far as the quota by areas that the rule that will be coming out in regards to that you will be addressing those for '18 and '19.

Not for '19, okay. Just for '18, okay. On our plate today would be in the memo that Megan sent around on July 20, our role here today could be to deal with RSA. We could comment on RSA issues. We could comment on fixed-gear set aside for west of Cutler. There are probably two or three others that I'm not thinking of right off the bat. What's that? Oh that's for '19 then too. Okay, Toni, get me back on track.

MS. KERNS: I think for '18 what you're looking at is just making a possible change to the sub-ACL itself, just the numbers. Everything else would hold. For '19, separate discussion later on, we can make some recommendations to NOAA Fisheries, as well as the New England Fishery Management Council on possible

changes to a couple of factors within the document, which Megan can go through later.

Today before the Section it's just the question of do you want to do a conditional change that would be effective immediately when NOAA Fisheries comes out with their rule for the 2018 sub-ACLs, or do you want to wait, have a conference call after their rule comes out, and consider that change? Because we've already set sub-ACLs for 2018, it does require a two-thirds majority vote to make that change.

CHAIRMAN KELIHER: I'm going to go to David, and then back to Peter Kendall.

DR. PIERCE: Yes first of all, I don't think it requires a two-thirds majority vote; because this was announced beforehand. When it's announced beforehand so the public knows it is coming, it can be a majority vote. That is the way it usually works. If it's advertised it's a majority; if it's not advertised, if it comes up at a meeting then it is two-thirds majority.

Anyways, apart from that we'll be discussing what to do after lunch. Frankly, because the vast majority of the sea herring fishermen have federal permits, the heavy hitters, those who really have an impact on what's being caught. I don't really think that what we do as a group of states is going to be of much consequence; in terms of changing the numbers.

Because they're going to be affected by whatever the federal government does, 50,000 metric tons or so reduced to whatever number. Yes, it will be good to get on the same page; but in terms of the need to scramble to make a change, I don't see it since they're federal permit holders.

CHAIRMAN KELIHER: Is there any other questions or comments from the Section? Seeing none; I think why don't we break for lunch, think about a path forward, and return back at one o'clock, and start the conversation

again. Does that sound good? We're adjourned until one o'clock.

(Whereupon a recess was taken.)

PROVIDE RECOMMENDATIONS TO NEFMC ON 2019-2021 FISHERY SPECIFICATIONS

Due to technical issues the beginning of this section was not recorded; Megan Ware's presentation is in progress:

MS. WARE: As an example, Area 1A allocates 100 percent of the sub-ACL to the months of June through December. We have border transfers; so that's the amount of herring that can be taken in U.S. waters and transshipped to Canada. We have research set asides, which can be up to 3 percent of a sub-ACL; a fixed-gear set aside that is up to 500 metric tons of the Area 1A set aside for fixed gear fisheries west of Cutler. Then we have our river herring and shad catch caps; so those are limiting the amount of river herring and shad that are caught in specific regions by specific gear types. Kind of a reminder of our current specification package, this was what was put in place for 2016 through 2018.

Our ABC again is that 111,000 metric tons; and then after accounting for management uncertainty, the ACL was 104,800 metric tons. For the division of the sub-ACLs, the 2016 to 2018 Spec package, maintained the same division of the ACL between the management areas, as was used in 2013 to 2015.

This was because the ABC was not substantially different; and there was no biological need to consider modifying the distribution based on the 2015 stock assessment. The border transfer, the RSA, and the fixed-gear set aside were also all maintained at their values so that it was 4,000 metric tons, 3 percent, and the 295 metric tons.

For the river herring and shad catch caps, they did use a revised method; so specifically that 2016 to 2018 caps used two additional years of

data, and they were based on a weighted mean. In the briefing memo that was sent out as a part of briefing materials, there was a timeline that looked at the specification package for 2019 through 2021.

In that timeframe it showed that the SSC would be meeting in October; and then the Council would be taking final action on that Spec package in December. This would mean that the Final Rule would be implemented sometime in the summer of 2019. Obviously this timeline poses a few challenges; notably that the Spec package is going to be or would be implemented after January 1, 2019. This would necessitate the need for an interim rule for the start of 2019.

To address some of these challenges there is a potential for a new timeline. Under this new timeline there would be 2019 rule making and then the Spec package which would focus on 2020 through 2021. The 2019 catch values would be implemented via a rule making. It would not be subject to the Amendment 8 Control Rule.

Then 2020 through 2021 would go through the specification package. The potential timeline is up on the screen there; so that October SSC meeting would just focus on the 2019 ABC. That 2019 rule would be published in January; and then after that time the Council would focus on the 2020 to 2021 specification package, and all of those elements.

Obviously there are still some questions about the timing and the implementation of herring specs moving forward. However, given the Section is not scheduled to meet again until the end of October, and there will probably be several decisions that are made between now and then, we wanted to provide an opportunity for the Section to discuss the specification package, and provide recommendations to the Council as they move forward.

The recommendations at this point would be for potential analysis or alternatives that the Section would like to see considered or developed during that Spec process; as opposed to preferred alternatives. The briefing memo did include some questions; which I've put up on a slide here. These are hopefully intended to prompt discussion by the Section this afternoon. Some of those include; does the Section recommend the Council set aside quota for research, and if yes does the Section recommend that RSA be maintained at 3 percent, or should a range of options be considered? I think kind of underlying that question is does the expected reduction in the 2019 or 2019 through 2021 ACL impact the range of RSAs that should be considered. After that we have; does the Section recommend the Area 1A quota be set aside for fixed gear?

Similarly, if yes do we recommend it be maintained at those 295 metric tons or should a range of options be considered? Does the Section recommend the Council look at various alternatives on how to distribute the ACL between management areas; and then does the Section recommend the Council consider any other alternatives to the seasonal split of 1A quota, beside 100 percent to June through December? Again, these are just intended to prompt discussion; and we'll leave these up while you guys talk about these.

CHAIRMAN KELIHER: Great. At this time, since as I mentioned earlier I don't have any of my other state Commissioners here. At this time I'm going to have Bob take over the role as Chair to get us through this item; so I can possibly advocate on a couple of these areas. Bob.

CHAIRMAN ROBERT E. BEAL: Are there any questions for Megan on Megan's questions? Toni, Toni first and then I'll go to Ritchie.

MS. KERNS: Just to help us get along with the time and keep us focused. With the timeframe as Megan said, what the Section might want to

consider today is making recommendations to the Council for 2019 only. Not necessarily the numbers or pounds of quota, but just in these questions recommendations on RSA, fixed gear set aside, and the rationale for that recommendation.

We could ask Mike if there were any of these questions that they would not be considered changing in an in-season adjustment. I'm not sure that changing the percentage for each of the areas would be something that they could do in an in-season adjustment. But we will have time to make recommendations for 2020 and 2021 later in the process; either at our October meeting, or even potentially February. I would have to look at the timeframe. It would only be 2019 that we need to focus on today.

CHAIRMAN BEAL: Ritchie.

MR. WHITE: Megan, do we know how much revenue the RSA generates?

MS. WARE: I don't know off the top of my head. I look to see if anyone else does. But I don't know.

MR. WHITE: Does Massachusetts? Okay then, my thinking is depending on the amount that it might make sense to not continue with an RSA; at least for next year, and if the funds are not substantial. I mean 3,000 tons; I can't imagine that that generates a ton of money that we could offset that with some of the excess money that was discussed this morning that we have available.

CHAIRMAN BEAL: Doug, did you have your hand up; or is that to answer Ritchie's question?

MR. GROUT: Yes, I would suggest to the Council that we consider a range of RSA options; you know from 0 to 3 percent. I also wanted to suggest that we consider a range of fixed-gear set aside; anywhere from 0 to what it is right now, and one could be a proportional reduction in the fixed-gear set aside.

The other thing I wanted to ask is either now or for 2019, or for '20 and '21. Should we make any recommendations on options for the border transfer? This year for the first time we recommend that a border transfer not take place when consulted by National Marine Fisheries Service. Is that another thing that we should put up there on a list for consideration for 2019; as well as into the future, '20 and '21?

CHAIRMAN BEAL: That's a good point, Doug. We'll put that sort of in a parking lot and get back to that border transfer issue. Other questions, yes, David Pierce.

DR. PIERCE: Not questions. I was going to follow up on what Doug just said. I do support having a range of options for the RSA; for a number of reasons. One being that if we do away with the RSA that has a rather significant impact on our ability to sample the catch dockside; and to do all the work that is so important for us to monitor what's happening with the fishery, spawning condition and all of that the move along strategy.

With a range of options that will likely result then in a better evaluation of the consequences of reducing the RSA; which some people might want, in light of the dramatic drop in the quotas that we're expecting to have. Everyone needs to know the consequence of that dropping it to 2 percent or 1 percent or 0 percent.

What does that mean for monitoring of this fishery; since the RSA is important for that reason? Then for the fixed gear west of Cutler. Sure, I think it makes sense to do what Doug suggested; just a range of options, because I have no opinion on that at this point in time. But still, it does beg for some evaluation; different numbers, consequences to the state of Maine and all of that.

CHAIRMAN BEAL: I've got Eric and then Ray and then Pat, and then I think we'll see where we are as far as consensus on some of these points;

and if we can wrap some of them up and then get to the stickier ones after that. Eric.

MR. REID: I'm supportive of the RSA in the fishery. I can't answer Ritchie's question. But I know that the industry was buying RSA; even though they really didn't need it at the time. That was to help finance dockside monitoring. That was an important component. That was the industry demonstrating that they supported dockside monitoring; not only in theory, but financially.

But I think we need an RSA; and it goes back to my conversation this morning about the new tool in the tool box; the acoustical survey. Industry platforms are far more capable of doing effective acoustic surveys; because of the electronics they have onboard. I could see that being a reasonably ripe fruit to pick out of RSA. But if in fact acoustic survey data is going to be considered; then I think we need to be able to involve the industry, because they're the ones that have the capabilities of really doing the job, not the vessels, not to short side the vessels that the government has.

CHAIRMAN BEAL: Ray.

MR. KANE: Yes, I'm in both Eric and David's camp on the RSA; with one caveat. They caught 3,000 metric ton of mackerel; and in order to afford our dockside sampling and keep it in place. I'm hearing sentiment from the table maybe reduce RSA to 2 percent or 1 percent. But I think industry should be charged or taxed on the mackerel that was landed. I believe those numbers came from '16 or '17 in the RSA, 3,000 metric ton of mackerel were landed. In order to keep this dockside sampling, moving along and get new funding for it, I think that should be addressed.

CHAIRMAN BEAL: Pat.

MR. KELIHER: I would be supportive for a range of options. We were originally thinking, as far as the fixed gear fishery west of Cutler to

maintain a level of status quo. But I know that may be a little bit of a lift considering the reductions that we're taking. Dealing with a range of options for RSA and fixed gear I think is appropriate.

I think Doug is right. I think we just submitted a letter on border transfers to zero. I think with the expected scarcity of bait issues that we're going to be having; I would advocate maintaining zero as a border transfer at this time. You know in the RSA piece, I think Ray brings up an interesting comment; as far as trying to find the ways to ensure that we're not getting mixed catches associated with the RSA fishery.

I'm not sure how to deal with that from a language perspective; but I take your point, Ray. But I would also point out that 3 percent of the reductions and quota, 3 percent of nothing isn't very much; so a range of options up to 3 percent may not get us to where we want to be. But I think David makes a good point.

We do get a lot of additional value from a sampling perspective. I would not be opposed to maintaining even some low level. Mr. Chairman if I may. Just a question for David; because I think am I mistaken, is your sampling program in some way related to, is it funded by some relationship to RSA?

CHAIRMAN BEAL: Dr. Pierce.

DR. PIERCE: Yes it is.

CHAIRMAN BEAL: Based on everyone that has commented so far; it sounds like the Section is comfortable with RSA set aside from providing a range or recommending a range to the Council from 0 to 3 percent, and for the fixed-gear set aside 0 to the current set aside level. Then based on what Doug said and what Pat said, they were the only ones that commented on the border transfer. But based on the letter that we recently sent, does anyone have any objection to maintaining or having consistency

in saying the Section does not support any border transfer; given the scarcity of bait? I see a lot of heads nodding. We'll go with those three points as a recommendation. That moves us down I think to the third bullet and question talking about various alternatives for distributing the ACL between management areas. Comments or thoughts on that or is that not needed? Toni.

MS. KERNS: I think this is one of the issues that it would be very difficult to make an in-season adjustment to. I would turn to NOAA if that is an incorrect response.

MR. PENTONY: Just for clarification. This would be if the New England Council recommends for 2019 that rather than going through the full spec setting process, of Council spec setting process that the Council requests the agency take an in-season adjustment action to effectively revise what would otherwise rollover from 2018.

Toni is correct. The more complicated that action becomes; the more difficult it is to justify and to implement as an in-season adjustment, which tends to be reserved for very straightforward modifications like we discussed earlier for 2018, where we would simply drop the overall ABC, and drop the sub-ACLs. Does that answer the question, Toni?

CHAIRMAN BEAL: Toni.

MS. KERNS: Yes, and I believe the same goes for the last bullet as well.

CHAIRMAN BEAL: Is everyone comfortable with that guidance and not taking or making a recommendation at this time on the last two bullets? Seeing everyone is comfortable; Peter Kendall had his hand up.

MR. KENDALL: Yes, and I was just going to follow along with what Mike said. I mean the Executive Committee, the Herring Committee and the Council have not even discussed maybe

splitting out 2019 yet. Once we go through that I would imagine, I can't predict, but with everything going on with Amendment 8, and having to take final action on that in September. Like Mike just said, trying to get this streamlined for 2019. I don't expect the Council to add on a lot to that interim action as well. The quicker they can get it done the better off we'll all be.

CHAIRMAN BEAL: Ray.

MR. KANE: Question, I was on that call on the transfer to Canadian vessels. Now we have Matt Cieri sitting at the table. What age are those fish that we're not allowing that permit on for the Canadian transfer for the four vessels? I mean what is the length of those fish and what is the age of those fish that go to the canneries?

DR. CIERI: They generally prefer smaller fish. But they do have the ability to steak, so I would probably guess, given my experience back when we had canneries in Maine. Those would probably be 3s or 4s on average.

MR. KANE: Three to four year olds. Thank you.

CHAIRMAN BEAL: Any other thoughts or recommendations that the Section wants to convey to the New England Council? Not seeing any. Mr. Chairman, do you want to take over the Chair, or do you want me to keep going?

CHAIRMAN KELIHER: Okay so moving right along then and being mindful of ending around two o'clock or shortly thereafter gives us about a half an hour to deal with a couple other issues.

OTHER BUSINESS

CHAIRMAN KELIHER: One, why don't we deal with the AP issues first, Megan; AP nomination and you handle that and then we'll go revisit the conversations regarding the Section to a Board. Megan.

ADVISORY PANEL NOMINATIONS

MS. WARE: Sure. Toni had e-mailed each of the states about kind of all of their AP members in general; and we got two nominations from Massachusetts to the Herring AP; Beth Casoni, and Gerry O’Neill. I will look to Massachusetts for a motion.

DR. PIERCE: Yes, I would move that we accept as members of the Advisory Panel. Well, there it is. Move to approve Beth Casoni and Gerry O’Neill to the Atlantic Herring Advisory Panel.

CHAIRMAN KELIHER: **Do we have a second? Eric Reid. Are there any questions or comments on the motion on the Board? Seeing none; any objections. Seeing none; the motion passes without objection.** Thank you very much. Moving along, and I’m going to put you on the spot a little bit, Bob.

CONSIDER RECOMMENDATION TO CHANGE THE HERRING SECTION TO A BOARD AND INVITE THE NEFMC TO HAVE ONE VOTING SEAT

CHAIRMAN KELIHER: Based on the conversations around moving the Section to a Board, a letter was drafted and sent to the Commission; and there is ultimately a meeting between Commission leadership and Council leadership about all management areas and management species boards. But in particular toward the Atlantic Herring Section and Bob if you could recap that meeting and then we’ll.

EXECUTIVE DIRECTOR BEAL: A series of letters have gone back and forth between this Section, the Commission, and New England Council talking about voting seats and membership, and how the different bodies should relate and coordinate and communicate. One of the most recent letters from us to the Council offered a nonvoting seat on the Section; and also suggested at a meeting of the Council and Commission leadership to talk about the issue,

and how to communicate and collaborate would be a productive thing.

The Council said well, we would rather not take advantage of your offer and have a nonvoting seat at the Section; despite Peter being here. They also said, but the meeting sounds like a good idea let’s go ahead and do that. Pat Keliher, Jim Gilmore and I met with the leadership; Tom Nies, Terry Stockwell and John Quinn from the New England Council. We talked for two or three hours about communication and collaboration.

There was an agreement I think by all six of us that more communication and better flow of information helps both bodies out. It’s getting complicated given the specs; and this was before we even knew, I think about this quota issue that we’re going to be faced with. We had just heard preliminarily there was some bad news coming our way. It was a good conversation; it was productive I think. We agreed that we should probably continue to meet, the six of us, and talk about shared issues. One of the direct outcomes of that was we agreed to bring the idea back to the Section of turning the Section into a management board. If this Section is changed to a management board it would provide the opportunity for the Commission to invite the Council to have a voting sea on the Board; and it would also allow the federal services to sit at the Board and vote, should they elect to participate.

There is a little bit of a nuance there the way that the charter works is if this becomes a management board it’s up to NOAA Fisheries and U.S. Fish and Wildlife Service if they decide to participate or not. It’s their decision. As far as the Council participating, it’s up to this Section to invite New England Council to have a voting seat, and they can either accept or decline that invitation.

Pat, we talked about a lot of different things at that meeting. I don’t know if you want to chime

in on any more. But really that's the one deliverable that came back to this Section. Again, we all agreed more communication will help out these issues of shared management of sea herring are tricky; and there is a lot of overlap between jurisdictions and sort of turf issues at times.

Having the voting membership back and forth seemed to be a way to help out with some of those turf issues; and ensure the flow of information back and forth, just so both bodies knew what the other ones are doing. Obviously there is a lot of membership that overlaps; in particular state directors and some others. It's up to the group; but one option would be changing this to a board would afford some flexibility as far as membership goes.

CHAIRMAN KELIHER: We are; I think the word David used on stock status was in a collapsed situation, comparing it back to the '70s. I think the thing that has definitely resonated with me, especially over the last week after the PDT met in Gloucester last week was the fact that we are definitely in need of more communication and collaboration amongst the bodies and with the Agency.

You know we are in a very difficult time; and will be for the next three or four years, potentially longer with Atlantic herring. I think now is the time to really step up and make sure that we're all kind of rowing in the same direction; instead of arguing about who should be doing what. The last conversation we had about this, I know one of the concerning factors was on the days out side. Days out would not be impacted. This would still be Maine, New Hampshire and Massachusetts dealing with the issues of days out.

The only thing that this does is change the title; and adds a couple new voting members to what would then be a board. Just to remind everybody here. This was on the agenda for the Policy Board. It was not originally on this agenda; because it was supposed to be a Policy

Board discussion. But because of the business that we had here today, I think it is very appropriate for this Section to make a recommendation to the Policy Board, with that David Pierce.

DR. PIERCE: I would move this Section recommend to the Policy Board that the Sea Herring Section be converted to a management board with a New England Fishery Management Council member having a vote on the Board.

CHAIRMAN KELIHER: I have a motion, do we have a second, Doug Grout on the second.

ERIC REID: I know you've got some thoughts on this. Yes, I make a motion to substitute. If you want to put it up that would be great.

CHAIRMAN KELIHER: Bob, I am going to have you take it.

CHAIRMAN BEAL: All right, I turned over the keys to the original chairman prematurely. I'll go ahead and take back over the Chairmanship. Let's make sure the first motion reflects what Dr. Pierce wanted it to be. Is that correct, David what's up there now?

DR. PIERCE: It's not correct, but it's fine. I didn't use the word offer, I just said with a New England Fishery Management Council member having a vote on the Board, so just say that's what it should be. I don't think the New England Council is going to refuse the offer. I would say with a New England that's fine. That's the way I worded it.

CHAIRMAN BEAL: All right, so we're all set with that motion. Then I think Mr. Reid was indicating he has a substitute motion. Eric.

MR. REID: Somebody has it already.

CHAIRMAN BEAL: Yes Doug, do you have a question?

MR. GROUT: I guess I look at what you had suggested, what you had indicated was in the Charter, and that we can invite them. They don't have to take it. I mean it is still ultimately their decision on it. I almost thing inviting the Council to have a voting seat on the Board is a more appropriate word. But if people are okay with just giving them a seat, they still have to take it. It's still their final decision after we invite them.

CHAIRMAN BEAL: Yes, we can invite them to our party but they don't have to show up. Yes, it's their decision to accept or not. You know the other thing with that first motion. I think it should actually be move to recommend to the Policy Board to take this Action. But Toni is Eric Reid's motion in the works? Eric, are you ready?

MR. REID: I move to substitute to recommend to the Policy Board to change the Herring Section to a Board and provide one voting seat to the New England Council, if that should say invite that's fine. This action is conditional on the New England Fisheries Management Council adding an ASMFC seat to their Herring PDT and Herring Committee as well.

CHAIRMAN BEAL: Is there a second to that motion? Pat Keliher. Eric, do you want to speak to your motion to substitute?

MR. REID: Yes there has been a lot of conversation with this. I've had discussions with Council leadership; New England Council leadership about it's a give and take situation. They would like to have a voting seat on our Herring Board. Currently they already have a seat on our Technical Committee. This is just a summation of some discussions I've had with the Council; just to expedite the situation. I don't mean to shortcut David, but basically this puts it you give and you get and there you have it. That was the whole rationale behind it.

CHAIRMAN BEAL: Pat, as seconder, do you want to say anything?

MR. KELIHER: No. I don't what the maker of the original motion thinks of this. But I was just thinking if acceptable we may be able to dispense with "friendlies" instead of going back and forth.

CHAIRMAN BEAL: I'll get to the original motion folks here in a second. But Doug Grout has his hand up.

MR. GROUT: This concept I am certainly supportive of; except I'm a little puzzled by a seat on the Herring PDT. I have a member of my staff on the PDT. I believe the state of Massachusetts has a member of their staff on the PDT. Do you have a member? We already have a number of state scientists on the PDT.

I don't see the need to have a seat on their PDT in there. There was no restriction. In fact they were looking for people to be on their PDT. That is the only thing that I don't think we need to really have that in there, and I was wondering if Mr. Reid would be willing to remove that particular part of it.

CHAIRMAN BEAL: I think Pat has a comment; then I'll go to Eric.

MR. KELIHER: I think the way that we were looking at it, Doug was that Council is represented on the Commission PDT, and when Megan who usually goes to the PDT is reminded that she's not a member of the PDT and can't vote. This would allow us to have Commission staff also there; potentially as a voting member.

MR. GROUT: Then maybe if I might follow up. Maybe we should refine it to say having an ASMFC staff seat to their Herring PDT; because as I said, ASMFC already has.

CHAIRMAN BEAL: Eric, any comments?

MR. REID: Yes, if you want to change it to ASMFC staff that's fine with me. It is my understanding that this is something that is acceptable to both the Commission and the

Council. I'm with you, Doug, no problem. If you want to change it to ASMFC staff, a staffer, one seat, however you want to say it. But it would be designated as staff that's fine.

CHAIRMAN BEAL: Pat Keliher as a seconder shook his head yes, he's okay with that. Does anyone have any problems with that change? I'll go to Tom.

MR. THOMAS P. FOTE: New Jersey and New York don't have members on the PDT. I mean I'm just pointing that fact out, Doug. You pointed out the three states, but two of the members of the Section don't have members on the PDT. Maybe it would be an opportunity for one of those states if they wanted to have a member on the PDT to basically do that. There is always this conversation going back and forth. Before we vote on the final motion I would like to say a little bit more. But I'll wait until that. I just wanted to comment on that immediately.

CHAIRMAN BEAL: Peter Kendall.

MR. KENDALL: Yes, I was just going to say. I appreciate this motion. I mean as the Herring Committee Chair too, I would be fine with having someone on the Committee meeting sit on the Committee meeting that's fine, and also somebody on the PDT, whether it be staff or even another state's staff that's fine as well. Then of course it still will have to be approved by the Executive Committee and the Council at that point too. But it sounds good to me.

CHAIRMAN BEAL: Dennis, I'll get to you. I have one question for Eric. The way it's worded now, ASMFC staff seat to the Herring PDT and Herring Committee. Is it the understanding that the Herring Committee seat would also be an ASMFC staff seat; or is that just for the PDT? Does that make sense?

MR. REID: I'll get my weed whacker out and get through all this. Well, I'm assuming it would be smart to have the Herring PDT be a staffer. I'm very willing to leave a seat on the Herring

Committee open. That perhaps gives an opportunity to New York and New Jersey; should they so choose, given Mr. Fote's comments. Yes, okay fine.

CHAIRMAN BEAL: That's good. I just wanted to make sure the current Section knew what the intent of the motion was. Pat, you're okay with that.

MR. KELIHER: Yes.

CHAIRMAN BEAL: We'll need to read this into the record before we vote; because it's been changed a time or two. Dennis and then I'll go to Tom.

MR. ABBOTT: When we change from a Section to a Board that automatically includes the Services, and have the Services prior to this proposed action expressed any interest in becoming members of the Herring Section Board?

CHAIRMAN BEAL: According to the Charter, if you all decide to go from a Section to a Board and the Policy Board agrees. Then it's up to NOAA Fisheries and Fish and Wildlife Service to decide if they want to be on that. They are not obligated to sit on the management board for Herring. Mike Pentony is in the back. I don't think the Service has indicated a preference one way or another yet; on whether they would or would not sit on the management board. Toni has got her hand up though.

MS. KERNS: NOAA has sent us a letter saying they were interested in a seat on the Board. Fish and Wildlife Service has not.

CHAIRMAN BEAL: Okay, I stand corrected. They have indicated that. Tom, and then I'll come back to Eric.

MR. FOTE: The Herring Section has a real sentimental value for me; because when I first got to the Commission in 1990, it was the only place that a Governor's Appointee or a

Legislative Appointee had a vote, because you weren't a Board. The Sections were made up of a caucus vote. I used to travel with Bruce Freeman up to New England; and basically sit on every Herring Board, because I said at least I get to vote at this Board and not just sit in the audience and not even being recognized to ask a question. It's a sentimental value for me. I also realized it was the states cooperating amongst themselves without the National Marine Fisheries Service, sometimes their strong handedness in past years, way back then basically directing us.

It was us deciding how we would function and work. It seemed to work fine for all these years. Times have changed and there is a lot more cooperation. I can understand why this move, but it has a little value to me and a little tug of my heart that this was the first place I was allowed to vote when I came to the Commission.

CHAIRMAN BEAL: No one is kicking you off, Tom, good news. Eric.

MR. REID: Just some clarifying info that just came to me. New England's PDT Policy doesn't allow a PDT member to be on a Committee as well. It would not be the same person in this motion; just so we're clear on that.

EXECUTIVE DIRECTOR BEAL: That's helpful, thank you. I'm glad you thought of that.

MR. REID: I was told to think of it, just so they can hear me.

CHAIRMAN BEAL: All right, any other discussion on the substitute motion? I guess we go back to Mr. Keliher's point earlier. Are the maker and seconder of the original motion willing to sort of make that motion go away if the Board is comfortable with that so we only have to vote once? It's kind of a formality either way. **Does anyone have any objection if the original motion is withdrawn and removed from the list of motions? No one objects to that.**

We're going to remove the original motion and we're going to make the motion by Mr. Reid, seconded by Mr. Keliher into the Main Motion. It's essentially a vote. Then I think is the Section ready to vote on that motion from Mr. Reid and Mr. Keliher, which I need to read into the record since it's been modified a time or two?

Move to recommend to the Policy Board to change the Herring Section to a Board and invite the New England Fishery Management Council to have one voting seat. This action is conditional on the New England Fishery Management Council adding an ASMFC staff seat to their Herring PDT and an ASMFC seat to the Herring Committee, with the understanding that that will not be the same person.

I ad-libbed that last part, are there any objections to the motion that is on the board right now? Seeing none; it carries unanimously. We'll bring that forward to the Policy Board on Thursday morning later this week.

DISCUSS SPAWNING PROTECTION

CHAIRMAN BEAL: Ritchie, we've got about ten minutes to at least introduce the spawning issue and start the dialogue there, and see how far we can get. If you're ready it's all yours.

MR. WHITE: It should take a lot less than that. I was thinking and looking at Matt's report; and the only thing we can really affect other than quota is to ensure that there is the best spawning process that can take place. My thoughts are that we start an addendum to tighten spawning to the best extent that we can. I think there are tools in the last addendum that we could use. My suggestion is in October that that be an agenda item to discuss; starting an addendum to tighten our spawning regulations. That would be in 1A. Secondly, Matt refreshed my memory that in talking about spawning on Georges Bank the Technical Committee had talked about a

\$50,000 figure that it might take to implement a program like that.

If this soon to be Board thinks that makes sense to pursue that; then we might recommend to Executive Committee, or whoever is going to make decisions on the pot of money that we found out about this morning that possibly that could be a use of 50 odd thousand dollars.

CHAIRMAN BEAL: Any comments or questions or concerns about adding that to the October agenda? Dr. Pierce.

DR. PIERCE: I think that's an appropriate course of action; consideration of steps to deal with spawning protection on Georges Bank. We've talked about that for a long time. My fellow Commission member, Ray Kane and Sarah Peake have always pushed that. For a number of reasons we haven't gone in that direction, but we should in light of the status of the stock.

Now that we have I assume, Mike Pentony, or his representative going to be a member of the Board. We now have more formal federal representation. That should promote more discussion about what can be done relative to a spawning closure in those federal waters; and the extent to which NOAA Fisheries can be onboard and can assist with that endeavor. Yes, I think it's smart.

CHAIRMAN BEAL: Doug Grout.

MR. GROUT: Yes, I would certainly support the Addendum and this recommendation of looking back at the paper that Matt had put together about that; about how to do it, how much it was, some of the drawbacks. That was probably six years ago, I would guess, somewhere around there five. Okay, so maybe inflation hasn't gone up. Just to consider that the price might be a little bit higher now that we're a few years down the road. But still, I think that both of them are excellent ways to move forward.

CHAIRMAN BEAL: Ray.

MR. KANE: Thank you, Doug, for reminding us of inflation. But speaking with Matt this morning, I believe a lot of the spawning work is being done at the dockside now, Matt, is that the discussion we had this morning?

DR. CIERI: Yes, I'm not sure if you guys are aware but the state of Maine actually is going to start doing a fishery independent spawning survey starting this year hopefully, if we can get all of our ducks in a row, for at least the inshore Gulf of Maine. But yes, a lot of the work that I talked about earlier was portside.

Basically, going out and taking a look at samples from commercial vessels. That might be difficult; depending on where these quotas wind up, as you can possibly imagine. But we can certainly think our way through the problem; if you guys put it on the agenda, and after I send Megan this paper.

CHAIRMAN BEAL: Sounds good. Are there any other comments or thoughts? It sounds like there is an overall agreement to get that onto the agenda for October. All right we will add that.

ADJOURNMENT

CHAIRMAN BEAL: Anything else to come before the Herring Section, seeing none; that's probably the last time anyone ever says this. The Herring Section stands adjourned.

(Whereupon the meeting adjourned at 2:00 o'clock p.m. on August 7, 2018)

**Summary Report of the 65th Northeast Regional Stock Assessment Review
Committee (SARC 65)**

**Stock Assessment Review Committee (SARC) Meeting
June 26-29, 2018
Northeast Fisheries Science Center
Woods Hole, Massachusetts**

**Prepared by the Stock Assessment Review Committee
Benchmark Assessment for A. Sea Scallop and B. Herring
(SAW/SARC 65)**

July 20, 2018

SARC 65 Panel Members

**Patrick Sullivan (Chair)
Cathy Dichmont
Coby Needle
Geoff Tingley**

1. Introduction

1.1 Background

The 65th Stock Assessment Review Committee (SARC 65) met in the Stephen H. Clark Conference Room of the Northeast Fisheries Science Center, Woods Hole, MA on June 26-29 2018. The purpose of the meeting was to review the most recent benchmark assessments of A. Sea Scallop and B. Herring (see SOW, Attachment 1). The review committee included three external scientists appointed by the Center for Independent Experts (Cathy Dichmont, Coby Needle, and Geoff Tingley), and was chaired by Patrick J Sullivan, a member of the New England Fisheries Management Council Scientific and Statistical Committee.

The SARC was assisted by the NEFSC Stock Assessment Workshop (SAW) Chairman, James Weinberg. The SAW 65 Sea Scallop Working Group chaired by Burton Shank provided supporting documentation with presentations given by the lead assessment scientists Dvora Hart and Jui-Han Chang (NEFSC) on the general assessment and by Jonathon Peros (NEFMC) on Sea Scallop assessment activities in the Gulf of Maine. The SAW 65 Herring Working Group chaired by Gary Shepherd provided supporting documentation with the presentations given by the lead assessment scientist Jon Deroba. Toni Chute, Dan Hennen, Chris Legault, Brian Linton, Alicia Miller, and Tony Wood from the NEFSC served as rapporteurs. Approximately 47 people participated in the SARC 65 meeting, representing NMFS/NEFSC, the NMFS/Greater Atlantic Regional Fisheries Office (GARFO), Fisheries and Ocean Canada (DFO), NEFMC, Massachusetts DMF, Maine DMR, various academic institutions, non-governmental organizations and fisheries stakeholder organizations (see Attachment 2).

1.2 Review of Activities and SARC Process

Between one and three weeks prior to the meeting, assessment documents and supporting materials were made available to the SARC Panel via a server on the NEFSC website. On the morning of Tuesday June 26th, 2018, before the meeting, the SARC Panel met with James Weinberg and Russell Brown (NEFSC) to review and discuss the meeting agenda, reporting requirements, and meeting logistics. During the SARC meeting, background and working documents were made available electronically by Toni Chute and in print by request. The meeting opened later that morning on June 26th with welcoming remarks and comments on the agenda by James Weinberg and Patrick Sullivan. Participants and audience members introduced themselves. Following introductions, the morning session on June 26th was devoted to presentations and discussion on the Sea Scallop assessment, followed by SARC discussion with the presenters and chair of the Working Group; the discussion carried over into the afternoon. Wednesday, June 27th from 8:30am to 4:00pm was devoted to presentation and discussion of the Herring assessment. Late afternoon of June 27th was focused on Sea Scallops. On Thursday, June 28th the SARC Panel met again with assessment scientists and SAW chairs to wrap up discussions on Sea Scallop and Herring. Friday, June 29th the SARC Panel devoted time to finalizing the Assessment Summary Reports in order to address the SAW Terms of Reference for each stock and in drafting this Panel Summary Report. Chris Legault and James Weinberg were particularly helpful in assisting the SARC Panel with editing and revising the Assessment Summary Report.

The SARC 65 Panel Summary Report was completed by correspondence. This report evaluates each Term of Reference that had been addressed by the Working Groups. A draft Panel Summary Report was shared with James Weinberg (SAW Chair) at the NEFSC for fact checking before the final report was submitted. Additionally, each Panelist drafted and submitted an independent reviewer's report to the Center for Independent Experts and to the NEFSC.

The SARC Panel worked with meeting participants throughout the week to gain a better understanding of the assessment. NOAA scientists were extremely helpful in providing figures, data summaries and outputs from additional model runs during the meeting to assist the Panel in exploring residual patterns, sensitivity to model assumptions and alternative reference point estimation methods. The meeting was collegial, good-natured and informative. Both stock assessments were clearly presented and were generally well documented. The SARC appreciated the level of audience participation, which added to the value of the discussion. The terms of reference (TORs) used to guide development of the benchmark assessments were clearly worded and progressed in a logical order. The organization of the assessment texts, tables, and figures, which cross-referenced to the TORs, facilitated the assessment review and discussion. The SARC Panel felt that it was able to conduct an in-depth and thorough review.

The SARC Panel agreed that scientific and statistical analyses conducted by the Working Groups were thorough and of high quality. The assessments were effective in helping to determine the current status of both stocks. Discussed below in responses to the TORs are what the Panel viewed as the strengths and concerns of each assessment. The SARC considered the process effective in structuring a critical review of the work of the Working Groups and in identifying areas in need of additional work for future assessments.

A. Sea Scallop

1. Estimate catch from all sources including landings, discards, and incidental mortality. Describe the spatial and temporal distribution of landings, discards, and fishing effort. Characterize the uncertainty in these sources of data.
 - This TOR was fully met.
 - Noting that the majority (80%) of discards are believed to survive, discards are not included in the model directly, but as incidental mortality. This falls under what ends up being described as fishing mortality, so that the reported fishing mortality rates are the sum of the landed and incidental fishing mortalities. There is also a separate component of other forms of incidental mortality (incorporated as a flat percentage).
 - Uncertainty in these sources of data was adequately covered during the review but would have benefitted from further expansion and explanation. Confidence intervals for survey biomass estimates were fully presented at the request of the SARC. Qualitative comments on uncertainties were provided for landings and discards, including some brief discussion on the possible scale of illegal, unreported and unregulated (IUU) removals (poaching).
 - It was acknowledged that the Sea Scallops in Canadian waters immediately to the east were likely to be the same biological stock but were not included in this

assessment. It would have been helpful to have more information about this area to inform the panel on scale (spatial extent, biomass estimates from assessments or surveys if available, catch history) and the basis for stock structure assumptions.

2. Present the survey data being used in the assessment (e.g., regional indices of relative or absolute abundance, recruitment, size data, etc.). Characterize the uncertainty and any bias in these sources of data.

- This TOR was fully met.
- There were clear and detailed presentations of the various abundance surveys describing the advantages and issues with each.
- Uncertainty was well understood in most areas, and where not understood, this was made clear and the need for further work acknowledged and identified. Uncertainty of the dredge efficiency at high density levels needs further work.
- Optical survey selectivity might be changing with variations in intra- and inter-survey size-specific density. The protocol for reviewing the optical data to ensure reader variation is understood and minimized should be reconsidered to ensure that this survey is producing an internally consistent time-series and that this is fully comparable with the other survey indices.
- The dredge survey provides a key set of input data to the assessment. It appears from the fitting of the model that this survey may be overestimating local abundance. This should be investigated and, if real, corrected by, for example, restratification of the survey data and use of model-based approaches to determine local areal abundance.

3. Summarize existing data, and characterize trends if possible, and define what data should be collected from the Gulf of Maine area to describe the condition and status of that resource. If possible provide a basis for developing catch advice for this area.

- This TOR was fully met.
- Consider what data are needed to run the SAMS model in the immediate future and then prioritize the collection of the information needed through surveys and fishery monitoring. Plan to expand information collection to support other applications, including the CASA model at a later date.
- Evaluate the cost-benefits of developing research surveys and monitoring the fishery (landings and discards) relative to the net socio-economic benefits.
- Historically a number of different survey approaches have been applied. From this point, a single survey methodology should be selected and applied to create a single, informative and consistent abundance time series. Consideration of fishery-dependent data should explicitly include options for using the available VMS data to provide a usable measure of effort. Consider using an optical survey, while obtaining the required biological information from the fishery.
- An outline approach for informing management for this area was presented. For the immediate future, consider a data-limited method for informing management (such as that proposed), with further development of fishery-dependent (e.g. CPUE) and fishery-

independent (survey) derived abundance indices to inform adjustment of the ABC (up and down) in proportion to change in the most informative index.

- With limited research options available, collation and use of appropriate and informative fishery-dependent information to support assessment should be fully explored. This should include approaches to quantify metrics for catches, discards and landings (i.e. to give representative CPUE and LPUE) and also patterns of spatial density distribution.
 - Due to the range and scale of uncertainties, multi-year projections are unlikely to be sufficiently accurate at this point and therefore not useful at the moment. One year projections may still be useful.
4. Investigate the role of environmental and ecological factors in determining stock distribution and recruitment success. If possible, integrate the results into the stock assessment.
- This TOR was fully met.
 - Ecological perspectives were included in the assessment analyses. Information was presented on, for example, predators, parasites, disease, invasive organisms and unusually slow growth of Sea Scallops in the southern Nantucket Lighthouse area (SNL), but was not integrated directly into the assessment, which is probably appropriate at this point.
 - Environmental drivers of population change were considered during the assessment. These included temperature mediated spatial distribution and the short- and longer-term implications of climate change. Spatial differences in growth were also presented, including aspects of density-dependent growth.
 - The spatial aspects of the SAMS model is an acknowledgement that there are some spatial environmental differences. Regional stratification may be more reflective of differences in fishing pressure.
5. Estimate annual fishing mortality, recruitment and stock biomass for the time series, and estimate their uncertainty. Report these elements for both the combined resource and by sub-region. Include retrospective analyses (historical, and within-model) to allow a comparison with previous assessment results and previous projections.
- This TOR was fully met.
 - The forward projecting size-structured model, CASA, has been appropriately implemented for Sea Scallops. Three regional assessments were undertaken – for the Mid-Atlantic and the open and closed portions of Georges Bank. The southeast corner of Nantucket Lightship was not assessed at this time, since growth rates and potentially other life history parameters are extraordinary. The area is also not currently fished, but as the local scallops grow they will eventually become vulnerable to fishing and should in the future be included in the assessment.
 - New aspects to the benchmark assessment included how natural mortality and growth were implemented. Natural mortality was estimated by year, and by size (Georges Bank open and Mid-Atlantic), and for juveniles and adults separately (Georges Bank open and Mid-Atlantic). Growth included individual random effects on the growth rate (K) and asymptotic length at which growth is zero (L_{∞}). Given results that showed annual deviation patterns in the growth rate, growth transition matrices were

incorporated to describe low to high growth rate time blocks within the assessments. The panel appreciated the innovative approaches that were incorporated into this benchmark assessment.

- These changes were in part applied to address past underestimation of the survey indices in the model. The assessment was able to explain some increases in survey indices and subsequent substantial decreases through increased juvenile mortality (as supported by the size frequencies and indices in subsequent years) and therefore adequately fit the indices for these years.
 - However, the inclusion of variable growth and natural mortality was only partially successful in addressing this underestimation. There are periods when the model biomass estimates are below the survey observations, particularly in the Mid-Atlantic and Georges Bank Open. The main reason for this is that observation error, natural mortality, and fishing mortality can be confounded in the model. Generally, the model allows the survey indices to have elevated levels of observation error (i.e. it underestimates these due to error in the survey index). Despite this potential for large observation error within the dredge surveys (see ToR 2), in some years the correlated deviations suggest some component of mortality is missing from the model for these years. It is unclear whether this is due to underestimation of natural mortality, fishing mortality, or both.
 - The CASA model calculates annual estimates of additional mortality that cannot directly be accounted for by fishery landings. Most of this mortality is due to natural causes (principally predation and disease), but there remains a small proportion that may be due to unaccounted fishing-related mortality. For brevity, the additional mortality is included in the natural mortality calculations.
 - Generally, the panel deemed the model retrospective patterns as reasonable, although this is still an important aspect to consider for the next benchmark assessment. The most problematic patterns were observed in the Georges Bank assessment. These could be adequately explained by very noisy and conflicting survey indices, and were therefore considered by the panel to be defensible. It did highlight further issues to be resolved with the survey indices.
 - This benchmark assessment did not consider alternative assessments (e.g. age-based and space-time approaches), which the panel considered as important to include in the next benchmark assessment (and which are discussed in ToR 9).
6. State the existing stock status definitions for “overfished” and “overfishing”. Then update or redefine biological reference points (BRPs; point estimates or proxies for B_{MSY} , $B_{THRESHOLD}$, F_{MSY} and MSY) and provide estimates of their uncertainty. If analytic model-based estimates are unavailable, consider recommending alternative measurable proxies for BRPs. Comment on the scientific adequacy of existing BRPs and the “new” (i.e., updated, redefined, or alternative) BRPs.
- This TOR is fully met.
 - A second model, SYM, is applied to estimate the biological reference points and includes estimating a stock-recruitment relationship and undertaking the per recruit calculations. Uncertainty is correctly addressed within the model. The output of the CASA model (e.g. selectivity, mortality, stock biomass and recruitment estimates) is linked to the SYM model to ensure consistency. CASA is also used as a check.

- The panel notes that the stock recruitment relationship uses age-3 as an index of recruits, while the CASA assessment model treats recruitment as age-1. CASA uses all size classes in the model to adequately address juvenile mortality. Juvenile mortality, though, is hard to predict under the equilibrium conditions assumed when calculating biological reference points and there appears to be density dependent mortality. Thus, the use of age-3 recruits as an index of recruitment is supported by the panel.
 - For the first time in the scallop assessment, an index of spawning stock biomass, gonad weight, was introduced. This was proposed to be used in conjunction with stock biomass estimates based on meat weight. Although the concept behind the introduction of gonad weight to describe spawning stock biomass has merit, the implications of using this approach have not been fully investigated. The panel recommends further development of the gonad-based spawning stock biomass metrics before full implementation. These include updating the shell height to gonad weight relationships (especially for areas where these are not available or out of date e.g. the southeast Nantucket Lightship area) and evaluating the relative impact of these changes by region.
 - For the present benchmark assessment, the panel therefore recommends that both time series (gonad weight and meat weight) be reported, but that the stock biomass based on meat weights is used as the criterion for determining stock status within this 2018 assessment. We further recommend research on developing the gonad weight based spawning stock biomass index in ToR 9.
 - There is a legal requirement to base management on MSY, an approach that is not ideal for this stock. Reasons include a high degree of spatial patchiness in the resource and spatial changes to key life history parameters such as growth and mortality. These translate into increased uncertainty within the estimation of Yield per Recruit and the stock-recruitment relationship. The fishery is actually managed using an adaptive recruitment-based spatial approach, which seems to be a better framework for sustainable management.
7. Make a recommendation^a about what stock status appears to be based on the existing model (from previous peer reviewed accepted assessment) and based on a new model or model formulation developed for this peer review.
- a. Update the existing model with new data and evaluate stock status (overfished and overfishing) with respect to the existing BRP estimates.
 - b. Then use the newly proposed model and evaluate stock status with respect to “new” BRPs and their estimates (from TOR-5).
 - c. Include descriptions of stock status based on simple indicators/metrics.
- These TORs were fully met.
 - The existing model was updated with new data and information (e.g. updated shell height to weight relationships, updated growth indices, a new method approach for natural mortality, etc.)
 - A gonad-based SSB and relative reference points were developed and presented, but the panel has recommended the interim use of the meat-based reference points for this benchmark assessment. As stated in Terms of Reference 6, the method of using

gonad weight to calculate spawning stock size looks promising, but additional work is needed to fully develop the approach. The meat-based total biomass method used in previous assessments was applied to estimate biological reference points, although both versions are available in the report.

- The updated SYM model output was used to see if biomass was above overfished status and if fishing mortality was below overfishing status. A Kobe plot was provided. The panel supports the conclusion that the resource is not overfished and overfishing is not occurring.

8. Develop approaches and apply them to conduct stock projections.

- a. Provide numerical annual projections (through 2020) and the statistical distribution (i.e., probability density function) of the catch at F_{MSY} or an F_{MSY} proxy (i.e. the overfishing level, OFL) (see Appendix to the SAW TORs). Each projection should estimate and report annual probabilities of exceeding threshold BRPs for F, and probabilities of falling below threshold BRPs for biomass. Use a sensitivity analysis approach in which a range of assumptions about the most important uncertainties in the assessment are considered (e.g., terminal year abundance, variability in recruitment).
- b. Comment on which projections seem most realistic. Consider the major uncertainties in the assessment as well as sensitivity of the projections to various assumptions. Identify reasonable projection parameters (recruitment, weight-at-age, retrospective adjustments, etc.) to use when setting specifications.
- c. Describe this stock's vulnerability (see "Appendix to the SAW TORs") to becoming overfished, and how this could affect the choice of ABC.

- These TORs were fully met.
- A third model, SAMS, was used to simulate projections for spatial management. This model is more spatially discrete than CASA and SYM in order to address the needs of management. Area management plays an important role in Sea Scallop stock dynamics, with much of the biomass during some periods located in long-term and/or rotational closures. The data and required information are such that estimating dynamics and biological reference points at the same spatial scale as SAMS is not, as yet, feasible.
- Although three models are used in this assessment (the CASA model estimated historical biomass and fishing mortality rates at a regional scale; the SYM model estimated biological reference points based on CASA outputs; the SAMS model forecast future abundance, biomass, and landings at a finer spatial scale to address management needs), the structure of each model is similar and they are coherent where required. They are each used to address distinct questions for the assessment and management. The panel supports this approach, although it does suggest potential alternate future options in ToR 9.
- The panel agrees with the approach that projections developed by the PDT use the most current survey information as a starting point for SAMS projections, because the surveys are more up-to-date than the CASA output.
- Sea Scallop population dynamics in recent years have been dominated by two very large cohorts. These have been the 2012 year class on Georges Bank, primarily

located in the Nantucket Lightship Area, and the 2013 year class in the Mid-Atlantic, much of which is in the Elephant Trunk rotational area off of Delaware Bay. These very high densities of scallops have rarely been observed previously. The panel therefore notes that forecasts of the future of these large year classes are highly uncertain.

- Due to these high levels of recent biomass, as expected, both total biomass and landings projections are predicted to decline due to the reduced presence of these strong year classes.
- The panel highlights that fully-recruited fishing mortalities prior to 2005 cannot be directly compared to the SARC-65 recommended F_{MSY} estimate due to changes in fishery size-selectivity over time.
- The panel notes that there are some inconsistencies between how the law indicates the stock should be managed and what metrics are required compared to how the fishery is actually (sustainably) managed.
- The panel also concurs with the summary report that, under area management, the reported fishing mortality calculated across all areas, underestimates fishing mortality in areas where fishing occurs. Such spatial heterogeneity in fishing mortality may reduce yield compared to fishing uniformly across areas and therefore it is possible that the areas open to fishing could be depleted even if overfishing is not occurring on the whole-stock. As long-term closures have reopened, differences between whole stock and reopened area fishing mortality will be reduced while overall fishing mortality is likely to increase.

9. Review, evaluate and report on the status of the SARC and Working Group research recommendations listed in most recent SARC reviewed assessment and review panel reports. Identify new research recommendations.

- This TOR was fully met.
- Previous research recommendations were reviewed and the SAW added new ones that were prioritized at the SARC review meeting. The panel recommends that in future the SAW establish priorities for these recommendations during the SAW process.
- Where justified, redundant earlier research recommendations were removed from the list during the SARC review meeting. The panel recommends that this be an ongoing exercise for the SAW.
- In addition to the restratification of the survey, the size frequency information should also be considered for restratification. Also consider reweighting survey size frequency information by survey catch (e.g. sqrt weighting) to balance the information content of the different data sources (i.e. to account for spatial variation in survey observations).
- Pursue further the gonad-based SSB and biological reference point approaches. To support this, consider gathering more information on the shell height to gonad weight relationship for all areas.
- Gulf of Maine: start collecting key information now, use approaches in other areas and SAMS to prioritize what is important information to be collected, and identify a single survey from which to build a time series.

- Alternative assessments such as space-time models should be considered for the next assessment. These could be both for the historical time series and the forward projection models. These could ultimately bring the model framework into a single approach.

^aNOAA Fisheries has final responsibility for making the stock status determination based on best available scientific information.

B. Atlantic herring

1. Estimate catch from all sources including landings and discards. Describe the spatial and temporal distribution of landings, discards, and fishing effort. Characterize uncertainty in these sources of data. Comment on other data sources that were considered but were not included.
 - This TOR was fully met.
 - Spatio-temporal information was presented in some detail and used to describe the behavior of the fishery and possible impacts of key environmental drivers.
 - Survey catch and fleet landings-at-age were described, as were age structure and maturity-at-age.
 - Information on the quantities of discards were provided and discussed.
 - Fishery catches were presented in a spatio-temporal format for US and Canadian fleets and were also split by gear types.
 - The likely relative importance and influence of illegal or unreported catches prior to about 1977 were discussed. Impacts were not explored in the model runs.
 - Bycatch of other fish in the herring fishery represents a small proportion of the total catch. However, bycatch of some species may be sufficiently large to impact those species and should be considered more broadly. Bycatch caps that are in place for some species may achieve this to some degree.
2. Present the survey data being used in the assessment (e.g., regional indices of abundance, recruitment, state surveys, age-length data, food habits, etc.). Characterize the uncertainty and any bias in these sources of data.
 - This TOR was fully met.
 - A number of different regional surveys were fully described, some of which were of relatively short duration.
 - Selectivity and catchability were fully investigated and were used to inform the development of time series indices.

- The appropriateness of using bottom trawl surveys to monitor a semi-pelagic fishery was raised by the SARC and discussed, with most participants satisfied this was appropriate.
 - The SARC requested additional diagnostics on the ability of surveys to track year class strength and found this useful for examining year class trends and understanding model fit.
 - Uncertainty was well described for all surveys, with confidence intervals on all plots. Bias was discussed during the examination of the calibration between the different survey vessels. A break in the time series for catchability and selectivity in the model was used to address this. In addition, one other selectivity break was used to address door changes in the survey.
 - The acoustic survey associated with the demersal trawl survey was useful to have and if appropriately developed may become a key index for this assessment. Additional efforts should be made to explore the impact of the non-standard nature of the survey design (from an acoustic perspective) and to find statistical approaches to minimize bias. Development of a directed acoustic survey to address questions such as survey design and independence of the survey indices should be considered.
 - Several other indices were examined and prioritized for use. Other fishery-dependent information, such as acoustics from lobster boats, should be examined for developing additional biomass or abundance indices.
3. Estimate consumption of herring, at various life stages. Characterize the uncertainty of the consumption estimates. Address whether herring distribution has been affected by environmental changes.
- This TOR was fully met.
 - Consumption of herring by the main fish predators was documented and the information available for characterizing predation by marine mammals, birds and larger finfish such as sailfish and tuna was also discussed. It was indicated that the scale of this mammal, seabird and large fish predation was likely to be minor relative to the main fish predators.
 - The consumption of herring by tuna was further discussed, especially given the assessed stock status of herring. The panel's interpretation was that the population of tuna was likely to be small and that tuna consumption would be low compared to consumption by other predators. The herring fishery was responsible for less removals when compared to the natural predators and would likely have a low impact on food availability to tuna.
4. Estimate annual fishing mortality, recruitment and stock biomass (both total and spawning stock) for the time series, and estimate their uncertainty. Incorporate ecosystem information

from TOR-3 into the assessment model, as appropriate. Include retrospective analyses (both historical and within-model) to allow a comparison with previous assessment results and projections, and to examine model fit.

- This TOR was fully met.
- The analysis was thorough. Several models were explored, and different types of retrospective and sensitivity analyses were conducted anticipating many of the questions likely to be raised during the review process. These covered assessment sensitivity to M , calibration between survey indices, time-varying mobile fleet selectivity, “leave one out” survey tests, and the use of food-habits data as an index of abundance. The sensitivity analyses successfully explained the observed assessment scale difference from 2015.
- The principal assessment model was ASAP, a forward-iterating statistical catch-at-age model in the Fournier-Archibald family that is implemented in the NOAA Fisheries Toolbox. The assessment scientists were familiar and experienced with this model (one of the authors of the original paper was part of the SAW team), and although the assessment report was on occasion not very clear about run settings and assumptions (and the report contained no information about the model itself), the assessment scientists were able to explain clearly what had been done following questions during the SARC meeting.
- The key changes in the ASAP model used from the last assessment were in assumptions about M and selectivity, in the introduction of new index time series (including an acoustic survey series for the first time), and in some further relatively minor issues. The SARC meeting presentation stepped through these changes in a logical and clear manner, although the report text was rather more piecemeal and a little difficult to follow in places.
- Two exploratory models were also presented. The first was SAM, a state-space model that is widely used in ICES assessments for European stocks. The results from this were similar, although the assessment scientists had much less experience with this model and were consequently less confident in the outcomes. Model averaging was also attempted to combine the results of ASAP and SAM, as discussed in Appendix B3. The second was a Stock Synthesis III (SS3) model, but this remains in the early stages of development and is not yet proposed as a basis for advice.
- Consumption calculations were used to check that the approximately correct scale of natural mortality M had been used, rather than including them directly in the assessment, to avoid including excess random variation into the model. However, the estimates were based on consumption by a number of specified fish species only, and were not able to include marine mammals, seabirds, and some fish predators such as tuna: because of this, they were necessarily incomplete. In future assessments, it would be advantageous to determine whether data exist to help quantify these other consumption contributions. It may also be appropriate to consider a state-space (or similar) approach to include this information directly into the model while allowing for a smoothing of the process.

- Given the importance of natural mortality in this stock, it did seem strange that only one value of M (0.35) was used in the presentations (and that it was assumed to be both age- and time-invariant). The panel requested a sensitivity analysis to see the response of the population time-series to the M that represented the minimum negative log likelihood under the likelihood profiling exercise. A reasonable justification for the M implemented was provided, but sensitivity to this parameter is often requested during reviews so the panel suggests that this should be a standard sensitivity analysis in future assessments (unless improved age- and time-varying estimates of M can be determined).
 - A Mohn's rho adjustment was not applied during this assessment because the adjusted values were well within the 80% confidence intervals (although not for recruitment, for which the values for the years 2011-2013 were significantly overestimated). The Mohn's rho adjustment had been applied in the previous assessment, although the form the adjustment took was not explained in the report or during the meeting. However, the retrospective bias does seem to be larger than would be expected elsewhere (in Europe in particular), so that *ad hoc* adjustments to assessments are often applied (as in the previous assessments, although not in the current assessment). One hypothesis suggested for this by the panel is that European survey indices tend to come from the same vessels that are used for many years, whereas the survey vessels used for American indices tend to change more often. The assessment report goes on to suggest that the current retrospective pattern is likely to get worse as additional years are added in future assessments. This implies that more is known about the causes of the retrospective pattern than is actually the case. Retros are often caused by mismatches between different sources of data, and the panel recommends that these are explored in future analyses rather than attempting to "fix" retros by *ad hoc* adjustments to input parameters which may mask underlying problems
 - In addition, the panel recommends that the NEFSC should evaluate whether some standardization of the CI protocol is needed, as it varied between 80% and 90% at different points within the assessment report.
 - The report is lacking some key tables that would normally be found in an assessment report, such as survey indices, and F and N estimates by age and year. Without these, it is difficult for an interested reader to try and replicate the results should this be required.
 - The panel noted that the last 5 recruitment estimates were among the lowest in the time series. Although the CVs on the most recent 2 estimates are high, even the upper limit of the confidence intervals for these would be below the long-term geometric mean, and this suggests that the short-to-medium term prognosis for the stock is likely to be relatively poor.
5. State the existing stock status definitions for "overfished" and "overfishing". Then update or redefine biological reference points (BRPs; point estimates or proxies for B_{MSY} , $B_{THRESHOLD}$, F_{MSY} and MSY) and provide estimates of their uncertainty. If analytic model-based estimates are unavailable, consider recommending alternative measurable proxies for BRPs. Comment on the scientific adequacy of existing BRPs and the "new" (i.e., updated, redefined, or alternative) BRPs.
- This TOR was fully met.

- A Beverton-Holt stock-recruitment model was fitted as part of the ASAP model used in previous assessments and was used as the basis for calculation of F_{MSY} , but this model was considered to be inadequate for management in this assessment (and recruitment was estimated without constraint to an underlying stock-recruitment model). Therefore, an $F_{40\%}$ proxy was used to determine management scenarios. This is a standard proxy used in many management areas worldwide.
 - In future assessments, the panel suggests that it might be beneficial to consider alternative approaches to the estimation of reference point proxies, such as length-based methods that are increasingly used for data-limited stocks.
 - New reference points were derived because of changes in selectivity in the commercial fishery over time, as the fishery is now apparently targeting older larger fish more strongly. In addition, the overall assessment has been rescaled due to a number of explicable factors (see ToR 4), and MSY and SSB_{MSY} have changed as a result of these changes. This approach is scientifically sound.
6. Make a recommendation^a about what stock status appears to be based on the existing model (from previous peer reviewed accepted assessment) and based on a new model or model formulation developed for this peer review.
- a. Update the existing model with new data and evaluate stock status (overfished and overfishing) with respect to the existing BRP estimates.
 - b. Then use the newly proposed model and evaluate stock status with respect to “new” BRPs and their estimates (from TOR-5).
 - c. Include descriptions of stock status based on simple indicators/metrics.
 - This TOR was fully met.
 - The Beverton-Holt stock recruitment relationship was found to be inadequate to characterize future recruitment (see ToR 5), meaning that biological reference points were based on an alternative proxy ($F_{40\%}$). Therefore, this assessment’s reference points cannot be compared directly to those from past assessments.
 - New reference points were provided in a Kobe time-series phase-plane plot, following a panel request that this be generated for reference and historical context.
 - Mohn’s Rho adjustments were not applied as the protocol did not indicate that these were needed.
 - It seems likely that no immediate management action is planned because $\frac{1}{2} B_{MSY} < B < B_{MSY}$ – currently, action is only taken if $B < \frac{1}{2} B_{MSY}$. However, MSE explorations of alternative management strategies may prove to be helpful in understanding the implications of stock declines, and the panel recommends that these be considered for future benchmarks.
 - Currently the stock is not overfished and overfishing is not taking place with at least 50% probability. However, under current low recruitment patterns it is expected that the stock would continue to decline to overfished levels.
7. Develop approaches and apply them to conduct stock projections.

- a. Provide numerical annual projections (through 2021) and the statistical distribution (i.e., probability density function) of the catch at F_{MSY} or an F_{MSY} proxy (i.e. the overfishing level, OFL) (see Appendix to the SAW TORs). Each projection should estimate and report annual probabilities of exceeding threshold BRPs for F , and probabilities of falling below threshold BRPs for biomass. Use a sensitivity analysis approach in which a range of assumptions about the most important uncertainties in the assessment are considered (e.g., terminal year abundance, variability in recruitment).
 - b. Comment on which projections seem most realistic. Consider the major uncertainties in the assessment as well as sensitivity of the projections to various assumptions. Identify reasonable projection parameters (recruitment, weight-at-age, retrospective adjustments, etc.) to use when setting specifications.
 - c. Describe this stock's vulnerability (see "Appendix to the SAW TORs") to becoming overfished, and how this could affect the choice of ABC.
 - This TOR was fully met.
 - Projections based on the ASAP assessment model were provided. Stochasticity was incorporated through 1000 draws from the MCMC uncertainty estimates of the base ASAP model, based on short-term (for 2018) and long-term (for 2019-2021) means. The forecast assumptions about weights-at-age were not clearly specified in the report. The panel requested a table of projections assuming half of the long-term geometric-mean recruitment to examine a scenario that was comparable to more recent recruitment patterns.
 - The projections considered hypothesized immigration and emigration from other areas, but these explorations did not seem to significantly change model outputs and so were not included in the final version of the model.
 - The SAW reported the high uncertainty associated with recent recruitment estimates when developing projections. The assessment report states that projections assumed that future recruitment will approach the mean for the time series 1965-2015, which may be optimistic in the short term.
 - Projections were examined at the SARC review regarding alternative harvest scenarios and alternative recruitment scenarios. Lower harvest scenarios result in less pessimistic projections, and lower recruitment scenarios (which result in more pessimistic projections) seemed to better represent current stock conditions. The latter could therefore be considered to be more realistic.
8. If possible, make a recommendation about whether there is a need to modify the current stock definition for future assessments.
- This TOR was fully met.
 - The information needed to advise on changes to stock structure is inadequate to motivate management actions at this time, and consequently the report said very little about stock structure.
 - Data were presented and a Stock Synthesis III (SS3) spatial model was explored, but the analysis was inconclusive given the information available

- Aspects of stock structure are worthy of further exploration for future assessments, including genetic separation, rates of movement and distinguishing stock specific harvesting from mixed catch fisheries.
7. For any research recommendations listed in SARC and other recent peer reviewed assessment and review panel reports, review, evaluate and report on the status of those research recommendations. Identify new research recommendations.
- This TOR was fully met.
 - Previous research recommendations were reviewed, the SAW added new ones and these were prioritized at the SARC review meeting. The panel recommends that in future the SAW establish priorities for these recommendations during the SAW process.
 - The full research recommendation list was very broad, and many of the items had not been considered (or had only been partially considered) since the last assessment. The panel recommends that a list of this kind should include only those areas which are both beneficial to the assessment concerned, and achievable with the likely financial, technical and staff resources that will be available.
 - Where justified, redundant earlier research recommendations were removed from the list during the SARC review meeting. The panel recommends that this be an ongoing exercise for the SAW.
 - Aspects of stock structure are worthy of further exploration for future assessments, including genetic separation, rates of movement and distinguishing stock specific harvesting from mixed catch fisheries.
 - Stock Synthesis III (SS3) can use length information in a single stock modelling exercise, although a number of alternative length- or size-based assessment methods exist that could also be implemented if appropriate.
 - Ecological and environmental factors influencing recruitment and mortality should continue to be explored. The panel suggests that simple correlational analyses are unlikely to be successful and that the determination of true causal relationships between said factors and fish stock dynamics is required before the factors can be incorporated in management decisions.
 - Directed acoustic surveys should continue to be considered as a fruitful alternative to the current acoustic surveys which are conducted during demersal trawl surveys. The SAW commented on the desire to explore whether it would be possible to derive an absolute estimate of abundance from surveys, but the panel suggested that this may not be essential as a relative survey index can be equally informative.

^aNOAA Fisheries has final responsibility for making the stock status determination based on best available scientific information.

Bibliography

References

A - Scallops

- Chang, J-H, Shank, B. V. & D. R. Hart. 2017. A comparison of methods to estimate abundance and biomass from belt transect surveys. *Limnology and Oceanography: Methods* 15, 480–494.
- Hart, D. R. & P. J. Rago. 2006. Long-Term Dynamics of U.S. Atlantic Sea Scallop *Placopecten magellanicus* Populations. *North American Journal of Fisheries Management*, 26:2, 490-501.
- Hart, D. R. & A. S. Chute. 2009. Estimating von Bertalanffy growth parameters from growth increment data using a linear mixed-effects model, with an application to the sea scallop *Placopecten magellanicus*. *ICES Journal of Marine Science*, 66: 2165–2175.
- Hart, D. R. 2013. Quantifying the tradeoff between precaution and yield in fishery reference points. *ICES Journal of Marine Science* 70:591-603.
- Hart, D. R., Jacobson, L. D. & J. Tang. 2013. To split or not to split: Assessment of Georges Bank sea scallops in the presence of marine protected areas. *Fisheries Research* 144, 74– 83.
- Hennen, D. R. & D. R. Hart. 2012. Shell Height-To-Weight Relationships for Atlantic Sea Scallops (*Placopecten magellanicus*) in Offshore U.S. Waters. *Journal of Shellfish Research*, 31(4):1133-1144.
- Northeast Fisheries Science Center. 2014. 59th Northeast Regional Stock Assessment Workshop (59th SAW) Assessment Report. US Department of Commerce, Northeast Fisheries Science Center Reference Doc. 14-09; 782 p. Available at <http://nefsc.noaa.gov/publications/>
- Stokesbury, K. D. E., B. P. Harris, M. C. Marino & J. Nogiera. 2004. Estimation of sea scallop abundance using a video survey in off-shore U.S. waters. *Journal of Shellfish Research* 23(1):33-40.
- Scallop Survey Methodology Review Team. 2015. Summary Report of the Review of Sea Scallop Survey Methodologies and Their Integration for Stock Assessment and Fishery Management.
- Truesdell, S. B., Hart, D. R. & Y. Chen. 2016. Effects of spatial heterogeneity in growth and fishing effort on yield-per-recruit models: an application to the US Atlantic sea scallop fishery. *ICES Journal of Marine Science* 73(4), 1062–1073.
- Truesdell, S. B., D. R. Hart, & Y. Chen. 2017. Effects of unequal capture probability on stock assessment abundance and mortality estimates: an example using the US Atlantic sea scallop fishery. *Canadian Journal of Fisheries and Aquatic Sciences* 74: 1904–1917.

B - Herring

Deroba J. J. 2015. Atlantic herring operational assessment report 2015. NEFSC Ref Doc 15-16; 30 p.

Deroba, J. J. 2018. Sources of variation in stomach contents of predators of Atlantic herring in the Northwest Atlantic during 1973–2014. ICES Journal of Marine Science.
Doi: 10.1093/icesjms/fsy013

Northeast Fisheries Science Center. 2012. 54th Northeast Regional Stock Assessment Workshop (54th SAW) Assessment Report. US Department of Commerce, Northeast Fisheries Science Center Reference Doc. 12-18; 600 p. Available at <http://www.nefsc.noaa.gov/publications/>

Working Papers

Working Group, Stock Assessment Workshop (SAW 65) 2018. Stock Assessment Report for Atlantic Sea Scallop. Working Paper A1 SAW/SARC 65. June 26–29, 2018, NOAA Fisheries, Northeast Fisheries Science Center. Woods Hole, MA.

Working Group, Stock Assessment Workshop (SAW 65) 2018. Stock Assessment Report for Atlantic Herring. Working Paper B1. SAW/SARC65. July 26–29, 2018, NOAA Fisheries, Northeast Fisheries Science Center. Woods Hole, MA.

Working Group, Stock Assessment Workshop (SAW 65) 2018. Stock Assessment Summary Report for Atlantic Sea Scallop. Working Paper A2. SAW/SARC 65, June 26–29, 2018, NOAA Fisheries, Northeast Fisheries Science Center, Woods Hole, MA.

Working Group, Stock Assessment Workshop (SAW 65) 2018. Stock Assessment Summary Report for Atlantic Herring. Working Paper B2. SAW/SARC 65, June 26–29, 2018, NOAA Fisheries, Northeast Fisheries Science Center, Woods Hole, MA.

Attachment 1

Statement of Work

**National Oceanic and Atmospheric Administration (NOAA)
National Marine Fisheries Service (NMFS)
Center for Independent Experts (CIE) Program
External Independent Peer Review**

***65th Stock Assessment Workshop/Stock Assessment Review Committee (SAW/SARC)
Benchmark stock assessment for Sea scallop and Atlantic herring***

Background

The National Marine Fisheries Service (NMFS) is mandated by the Magnuson-Stevens Fishery Conservation and Management Act, Endangered Species Act, and Marine Mammal Protection Act to conserve, protect, and manage our nation's marine living resources based upon the best scientific information available (BSIA). NMFS science products, including scientific advice, are often controversial and may require timely scientific peer reviews that are strictly independent of all outside influences. A formal external process for independent expert reviews of the agency's scientific products and programs ensures their credibility. Therefore, external scientific peer reviews have been and continue to be essential to strengthening scientific quality assurance for fishery conservation and management actions.

Scientific peer review is defined as the organized review process where one or more qualified experts review scientific information to ensure quality and credibility. These expert(s) must conduct their peer review impartially, objectively, and without conflicts of interest. Each reviewer must also be independent from the development of the science, without influence from any position that the agency or constituent groups may have. Furthermore, the Office of Management and Budget (OMB), authorized by the Information Quality Act, requires all federal agencies to conduct peer reviews of highly influential and controversial science before dissemination, and that peer reviewers must be deemed qualified based on the OMB Peer Review Bulletin standards.

[http://www.cio.noaa.gov/services_programs/pdfs/OMB Peer Review Bulletin m05-03.pdf](http://www.cio.noaa.gov/services_programs/pdfs/OMB_Peer_Review_Bulletin_m05-03.pdf). Further information on the CIE program may be obtained from www.ciereviews.org.

Scope

The Northeast Regional Stock Assessment Review Committee (SARC) meeting is a formal, multiple-day meeting of stock assessment experts who serve as a panel to peer-review tabled stock assessments and models. The SARC peer review is the cornerstone of the Northeast Stock Assessment Workshop (SAW) process, which includes assessment development, and report preparation (which is done by SAW Working Groups or Atlantic States Marine Fisheries Commission (ASMFC) technical committees), assessment peer review (by the SARC), public presentations, and document publication. This review determines whether or not the scientific assessments are adequate to serve as a basis for developing fishery management advice.

Results provide the scientific basis for fisheries within the jurisdiction of NOAA's Greater Atlantic Regional Fisheries Office (GARFO).

The purpose of this meeting will be to provide an external peer review of a benchmark stock assessment for **Sea scallop and Atlantic herring**. The requirements for the peer review follow. This Statement of Work (SOW) also includes: **Appendix 1**: TORs for the stock assessment, which are the responsibility of the analysts; **Appendix 2**: a draft meeting agenda; **Appendix 3**: Individual Independent Review Report Requirements; and **Appendix 4**: SARC Summary Report Requirements.

Requirements

NMFS requires three reviewers under this contract (i.e. subject to CIE standards for reviewers) to participate in the panel review. The SARC chair, who is in addition to the three reviewers, will be provided by either the New England or Mid-Atlantic Fishery Management Council's Science and Statistical Committee; although the SARC chair will be participating in this review, the chair's participation (i.e. labor and travel) is not covered by this contract.

Each reviewer will write an individual review report in accordance with the SOW, OMB Guidelines, and the TORs below. All TORs must be addressed in each reviewer's report. No more than one of the reviewers selected for this review is permitted to have served on a SARC panel that reviewed this same species in the past. The reviewers shall have working knowledge and recent experience in the application of modern fishery stock assessment models. Expertise should include forward projecting statistical catch-at-age (SCAA) models. Reviewers should also have experience in evaluating measures of model fit, identification, uncertainty, and forecasting. Reviewers should have experience in development of Biological Reference Points (BRPs) that includes an appreciation for the varying quality and quantity of data available to support estimation of BRPs. For scallops, knowledge of sessile invertebrates, length-structured models, and spatial management would be desirable. For herring, knowledge of migratory pelagic species and SCAA models would be useful.

Tasks for Reviewers

- Review the background materials and reports prior to the review meeting
- Attend and participate in the panel review meeting
 - The meeting will consist of presentations by NOAA and other scientists, stock assessment authors and others to facilitate the review, to provide any additional information required by the reviewers, and to answer any questions from reviewers
- Reviewers shall conduct an independent peer review in accordance with the requirements specified in this SOW and TORs, in adherence with the required formatting and content guidelines; reviewers are not required to reach a consensus.
- Each reviewer shall assist the SARC Chair with contributions to the SARC Summary Report
- Deliver individual Independent Review Reports to the Government according to the specified milestone dates

- This report should explain whether each stock assessment Term of Reference of the SAW was or was not completed successfully during the SARC meeting, using the criteria specified below in the “Tasks for SARC panel.”
- If any existing Biological Reference Points (BRP) or their proxies are considered inappropriate, the Independent Report should include recommendations and justification for suitable alternatives. If such alternatives cannot be identified, then the report should indicate that the existing BRPs are the best available at this time.
- During the meeting, additional questions that were not in the Terms of Reference but that are directly related to the assessments may be raised. Comments on these questions should be included in a separate section at the end of the Independent Report produced by each reviewer.
- The Independent Report can also be used to provide greater detail than the SARC Summary Report on specific stock assessment Terms of Reference or on additional questions raised during the meeting.

Tasks for SARC panel

- During the SARC meeting, the panel is to determine whether each stock assessment Term of Reference (TOR) of the SAW was or was not completed successfully. To make this determination, panelists should consider whether the work provides a scientifically credible basis for developing fishery management advice. Criteria to consider include: whether the data were adequate and used properly, the analyses and models were carried out correctly, and the conclusions are correct/reasonable. If alternative assessment models and model assumptions are presented, evaluate their strengths and weaknesses and then recommend which, if any, scientific approach should be adopted. Where possible, the SARC chair shall identify or facilitate agreement among the reviewers for each stock assessment TOR of the SAW.
- If the panel rejects any of the current BRP or BRP proxies (for B_{MSY} and F_{MSY} and MSY), the panel should explain why those particular BRPs or proxies are not suitable, and the panel should recommend suitable alternatives. If such alternatives cannot be identified, then the panel should indicate that the existing BRPs or BRP proxies are the best available at this time.
- Each reviewer shall complete the tasks in accordance with the SOW and Schedule of Milestones and Deliverables below.

Tasks for SARC chair and reviewers combined:

Review both the Assessment Report and the draft Assessment Summary Report. The draft Assessment Summary Report is reviewed and edited to assure that it is consistent with the outcome of the peer review, particularly statements about stock status recommendations and descriptions of assessment uncertainty.

The SARC Chair, with the assistance from the reviewers, will write the SARC Summary Report. Each reviewer and the chair will discuss whether they hold similar views on each stock assessment Term of Reference and whether their opinions can be summarized into a single

conclusion for all or only for some of the Terms of Reference of the SAW. For terms where a similar view can be reached, the SARC Summary Report will contain a summary of such opinions. In cases where multiple and/or differing views exist on a given Term of Reference, the SARC Summary Report will note that there is no agreement and will specify - in a summary manner – what the different opinions are and the reason(s) for the difference in opinions.

The chair's objective during this SARC Summary Report development process will be to identify or facilitate the finding of an agreement rather than forcing the panel to reach an agreement. The chair will take the lead in editing and completing this report. The chair may express the chair's opinion on each Term of Reference of the SAW, either as part of the group opinion, or as a separate minority opinion. The SARC Summary Report will not be submitted, reviewed, or approved by the Contractor.

If any existing Biological Reference Points (BRP) or BRP proxies are considered inappropriate, the SARC Summary Report should include recommendations and justification for suitable alternatives. If such alternatives cannot be identified, then the report should indicate that the existing BRP proxies are the best available at this time.

Foreign National Security Clearance

When reviewers participate during a panel review meeting at a government facility, the NMFS Project Contact is responsible for obtaining the Foreign National Security Clearance approval for reviewers who are non-US citizens. For this reason, the reviewers shall provide requested information (e.g., first and last name, contact information, gender, birth date, passport number, country of passport, travel dates, country of citizenship, country of current residence, and home country) to the NMFS Project Contact for the purpose of their security clearance, and this information shall be submitted at least 40 days before the peer review in accordance with the NOAA Deemed Export Technology Control Program NAO 207-12 regulations available at the Deemed Exports NAO website: <http://deemedexports.noaa.gov/> and http://deemedexports.noaa.gov/compliance_access_control_procedures/noaa-foreign-national-registration-system.html. The contractor is required to use all appropriate methods to safeguard Personally Identifiable Information (PII).

Place of Performance

The place of performance shall be at the contractor's facilities, and at the Northeast Fisheries Science Center in Woods Hole, Massachusetts.

Period of Performance

The period of performance shall be from the time of award through August 17, 2018. Each reviewer's duties shall not exceed **16** days to complete all required tasks.

Schedule of Milestones and Deliverables: The contractor shall complete the tasks and deliverables in accordance with the following schedule.

No later than May 21, 2018	Contractor sends reviewer contact information to the COR, who then sends this to the NMFS Project Contact
No later than June 12, 2018	NMFS Project Contact will provide reviewers the pre-review documents
June 26-29, 2018	Each reviewer participates and conducts an independent peer review during the panel review meeting in Woods Hole, MA
June 29, 2018	SARC Chair and reviewers work at drafting reports during meeting at Woods Hole, MA, USA
July 13, 2018	Reviewers submit draft independent peer review reports to the contractor's technical team for review
July 13, 2018	Draft of SARC Summary Report, reviewed by all reviewers, due to the SARC Chair *
July 20, 2018	SARC Chair sends Final SARC Summary Report, approved by reviewers, to NMFS Project contact (i.e., SAW Chairman)
July 27, 2018	Contractor submits independent peer review reports to the COR and technical point of contact (POC)
Aug. 3, 2018	The COR and/or technical POC distributes the final reports to the NMFS Project Contact and regional Center Director

* The SARC Summary Report will not be submitted to, reviewed, or approved by the Contractor.

Applicable Performance Standards

The acceptance of the contract deliverables shall be based on three performance standards: (1) The reports shall be completed in accordance with the required formatting and content (2) The reports shall address each ToR as specified (3) The reports shall be delivered as specified in the schedule of milestones and deliverables.

Travel

All travel expenses shall be reimbursable in accordance with Federal Travel Regulations (<http://www.gsa.gov/portal/content/104790>). International travel is authorized for this contract. Travel is not to exceed \$12,000.

Restricted or Limited Use of Data

The contractors may be required to sign and adhere to a non-disclosure agreement.

NMFS Project Contact

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Appendix 1. Stock Assessment Terms of Reference for SAW/SARC-65

Final Stock Assessment Terms of Reference for SAW/SARC65 (June 26-29, 2018) (to be carried out by SAW Working Groups)

(file vers. Revised 11/26/2017-b)

A. Sea scallop

1. Estimate catch from all sources including landings, discards, and incidental mortality. Describe the spatial and temporal distribution of landings, discards, and fishing effort. Characterize the uncertainty in these sources of data.
2. a. Present the survey data being used in the assessment (e.g., regional indices of relative or absolute abundance, recruitment, size data, etc.). Characterize the uncertainty and any bias in these sources of data.
3. Summarize existing data, and characterize trends if possible, and define what data should be collected from the Gulf of Maine area to describe the condition and status of that resource. If possible provide a basis for developing catch advice for this area.
4. Investigate the role of environmental and ecological factors in determining stock distribution and recruitment success. If possible, integrate the results into the stock assessment.
5. Estimate annual fishing mortality, recruitment and stock biomass for the time series, and estimate their uncertainty. Report these elements for both the combined resource and by sub-region. Include retrospective analyses (historical, and within-model) to allow a comparison with previous assessment results and previous projections.
6. State the existing stock status definitions for “overfished” and “overfishing”. Then update or redefine biological reference points (BRPs; point estimates or proxies for B_{MSY} , $B_{THRESHOLD}$, F_{MSY} and MSY) and provide estimates of their uncertainty. If analytic model-based estimates are unavailable, consider recommending alternative measurable proxies for BRPs. Comment on the scientific adequacy of existing BRPs and the “new” (i.e., updated, redefined, or alternative) BRPs.
7. Make a recommendation^a about what stock status appears to be based on the existing model (from previous peer reviewed accepted assessment) and based on a new model or model formulation developed for this peer review.
 - a. Update the existing model with new data and evaluate stock status (overfished and overfishing) with respect to the existing BRP estimates.
 - b. Then use the newly proposed model and evaluate stock status with respect to “new” BRPs and their estimates (from TOR-5).
 - c. Include descriptions of stock status based on simple indicators/metrics.
8. Develop approaches and apply them to conduct stock projections.
 - d. Provide numerical annual projections (through 2020) and the statistical distribution (i.e., probability density function) of the catch at F_{MSY} or an F_{MSY} proxy (i.e. the overfishing level, OFL) (see Appendix to the SAW TORs). Each projection should estimate and report annual probabilities of exceeding threshold BRPs for F , and probabilities of falling below threshold BRPs for biomass. Use a sensitivity analysis approach in which a range

of assumptions about the most important uncertainties in the assessment are considered (e.g., terminal year abundance, variability in recruitment).

- e. Comment on which projections seem most realistic. Consider the major uncertainties in the assessment as well as sensitivity of the projections to various assumptions. Identify reasonable projection parameters (recruitment, weight-at-age, retrospective adjustments, etc.) to use when setting specifications.
 - f. Describe this stock's vulnerability (see "Appendix to the SAW TORs") to becoming overfished, and how this could affect the choice of ABC.
9. Review, evaluate and report on the status of the SARC and Working Group research recommendations listed in most recent SARC reviewed assessment and review panel reports. Identify new research recommendations.

^aNOAA Fisheries has final responsibility for making the stock status determination based on best available scientific information.

B. Atlantic herring

1. Estimate catch from all sources including landings and discards. Describe the spatial and temporal distribution of landings, discards, and fishing effort. Characterize uncertainty in these sources of data. Comment on other data sources that were considered but were not included.
2. Present the survey data being used in the assessment (e.g., regional indices of abundance, recruitment, state surveys, age-length data, food habits, etc.). Characterize the uncertainty and any bias in these sources of data.
3. Estimate consumption of herring, at various life stages. Characterize the uncertainty of the consumption estimates. Address whether herring distribution has been affected by environmental changes.
4. Estimate annual fishing mortality, recruitment and stock biomass (both total and spawning stock) for the time series, and estimate their uncertainty. Incorporate ecosystem information from TOR-3 into the assessment model, as appropriate. Include retrospective analyses (both historical and within-model) to allow a comparison with previous assessment results and projections, and to examine model fit.
5. State the existing stock status definitions for "overfished" and "overfishing". Then update or redefine biological reference points (BRPs; point estimates or proxies for B_{MSY} , $B_{THRESHOLD}$, F_{MSY} and MSY) and provide estimates of their uncertainty. If analytic model-based estimates are unavailable, consider recommending alternative measurable proxies for BRPs. Comment on the scientific adequacy of existing BRPs and the "new" (i.e., updated, redefined, or alternative) BRPs.
6. Make a recommendation^a about what stock status appears to be based on the existing model (from previous peer reviewed accepted assessment) and based on a new model or model formulation developed for this peer review.
 - a. Update the existing model with new data and evaluate stock status (overfished and overfishing) with respect to the existing BRP estimates.

- b. Then use the newly proposed model and evaluate stock status with respect to “new” BRPs and their estimates (from TOR-5).
 - c. Include descriptions of stock status based on simple indicators/metrics.
7. Develop approaches and apply them to conduct stock projections.
- a. Provide numerical annual projections (through 2021) and the statistical distribution (i.e., probability density function) of the catch at F_{MSY} or an F_{MSY} proxy (i.e. the overfishing level, OFL) (see Appendix to the SAW TORs). Each projection should estimate and report annual probabilities of exceeding threshold BRPs for F, and probabilities of falling below threshold BRPs for biomass. Use a sensitivity analysis approach in which a range of assumptions about the most important uncertainties in the assessment are considered (e.g., terminal year abundance, variability in recruitment).
 - b. Comment on which projections seem most realistic. Consider the major uncertainties in the assessment as well as sensitivity of the projections to various assumptions. Identify reasonable projection parameters (recruitment, weight-at-age, retrospective adjustments, etc.) to use when setting specifications.
 - c. Describe this stock’s vulnerability (see “Appendix to the SAW TORs”) to becoming overfished, and how this could affect the choice of ABC.
8. If possible, make a recommendation about whether there is a need to modify the current stock definition for future assessments.
9. For any research recommendations listed in SARC and other recent peer reviewed assessment and review panel reports, review, evaluate and report on the status of those research recommendations. Identify new research recommendations.

^aNOAA Fisheries has final responsibility for making the stock status determination based on best available scientific information.

Clarification of Terms used in the Stock Assessment Terms of Reference

Guidance to SAW WG about “Number of Models to include in the Assessment Report”:

In general, for any TOR in which one or more models are explored by the WG, give a detailed presentation of the “best” model, including inputs, outputs, diagnostics of model adequacy, and sensitivity analyses that evaluate robustness of model results to the assumptions. In less detail, describe other models that were evaluated by the WG and explain their strengths, weaknesses and results in relation to the “best” model. If selection of a “best” model is not possible, present alternative models in detail, and summarize the relative utility each model, including a comparison of results. It should be highlighted whether any models represent a minority opinion.

On “Acceptable Biological Catch” (DOC Nat. Stand. Guidelines. Fed. Reg., v. 74, no. 11, 1-16-2009):

Acceptable biological catch (ABC) is a level of a stock or stock complex’s annual catch that accounts for the scientific uncertainty in the estimate of Overfishing Limit (OFL) and any other scientific uncertainty...” (p. 3208) [In other words, $OFL \geq ABC$.]

ABC for overfished stocks. For overfished stocks and stock complexes, a rebuilding ABC must be set to reflect the annual catch that is consistent with the schedule of fishing mortality rates in the rebuilding plan. (p. 3209)

NMFS expects that in most cases ABC will be reduced from OFL to reduce the probability that overfishing might occur in a year. (p. 3180)

ABC refers to a level of “catch” that is “acceptable” given the “biological” characteristics of the stock or stock complex. As such, Optimal Yield (OY) does not equate with ABC. The specification of OY is required to consider a variety of factors, including social and economic factors, and the protection of marine ecosystems, which are not part of the ABC concept. (p. 3189)

On “Vulnerability” (DOC Natl. Stand. Guidelines. Fed. Reg., v. 74, no. 11, 1-16-2009):

“Vulnerability. A stock’s vulnerability is a combination of its productivity, which depends upon its life history characteristics, and its susceptibility to the fishery. Productivity refers to the capacity of the stock to produce Maximum Sustainable Yield (MSY) and to recover if the population is depleted, and susceptibility is the potential for the stock to be impacted by the fishery, which includes direct captures, as well as indirect impacts to the fishery (e.g., loss of habitat quality).” (p. 3205)

Participation among members of a Stock Assessment Working Group:

Anyone participating in SAW meetings that will be running or presenting results from an assessment model is expected to supply the source code, a compiled executable, an input file with the proposed configuration, and a detailed model description in advance of the model meeting. Source code for NOAA Toolbox programs is available on request. These measures allow transparency and a fair evaluation of differences that emerge between models.

Appendix 2. Review Meeting Agenda

65th Stock Assessment Workshop/Stock Assessment Review Committee (SAW/SARC) Benchmark Stock Assessment for A. Sea scallop and B. Herring

June 26-29, 2018

Stephen H. Clark Conference Room – Northeast Fisheries Science Center
Woods Hole, Massachusetts

AGENDA* (version: 6/22/2018)

TOPIC	PRESENTER(S)	RAPPORTEUR
<u>Tuesday, June 26</u>		
10 – 10:45 AM		
Welcome/Description of Review Process	James Weinberg , SAW Chair	
Introductions/Agenda	Patrick Sullivan , SARC Chair	
Conduct of Meeting		
10:45 – 12:45 PM	Assessment Presentation (A. Scallops) Dvora Hart, Jui-Han Chang, Jonathon Peros	Alicia Miller
12:45 – 1:45 PM	Lunch	
1:45 – 3:45 PM	Assessment Presentation (A. Scallops) Dvora Hart, Jui-Han Chang	Toni Chute
3:45 – 4 PM	Break	
4 – 5:45 PM	SARC Discussion w/ Presenters (A. Scallops) Patrick Sullivan , SARC Chair	Toni Chute
5:45 – 6 PM	Public Comments	

TOPIC	PRESENTER(S)	RAPPORTEUR
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Wednesday, June 27

8:30 – 10:30 AM	Assessment Presentation (B. Herring) Jon Deroba	Dan Hennen
10:30 – 10:45 AM	Break	
10:45 – 12:30 PM	Assessment Presentation (B. Herring) Jon Deroba	Dan Hennen
12:30 – 1:30 PM	Lunch	
1:30 – 3:30 PM	SARC Discussion w/presenters (B. Herring) Patrick Sullivan, SARC Chair	Brian Linton
3:30 – 3:45 PM	Public Comments	
3:45 -4 PM	Break	
4 – 6 PM	Revisit with Presenters (A. Scallops) Patrick Sullivan, SARC Chair	Brian Linton
7 PM	(Social Gathering)	

TOPIC	PRESENTER(S)	RAPPORTEUR
<u>Thursday, June 28</u>		
8:30 – 10:30	Revisit with Presenters (B. Herring) Patrick Sullivan, SARC Chair	Tony Wood
10:30 – 10:45	Break	
10:45 – 12:15	Review/Edit Assessment Summary Report (A. Scallops) Patrick Sullivan, SARC Chair	Tony Wood
12:15 – 1:15 PM	Lunch	
1:15 – 2:45 PM	(cont.) Edit Assessment Summary Report (A. Scallops) Patrick Sullivan, SARC Chair	TBD
2:45 – 3 PM	Break	
3 – 6 PM	Review/edit Assessment Summary Report (B. Herring) Patrick Sullivan, SARC Chair	TBD
<u>Friday, June 29</u>		
9:00 AM – 5:00 PM	SARC Report writing	

*All times are approximate, and may be changed at the discretion of the SARC chair. The meeting is open to the public; however, during the SARC Report Writing sessions we ask that the public refrain from engaging in discussion with the SARC.

Appendix 3. Individual Independent Peer Review Report Requirements

1. The independent peer review report shall be prefaced with an Executive Summary providing a concise summary of whether they accept or reject the work that they reviewed, with an explanation of their decision (strengths, weaknesses of the analyses, etc.).
2. The report must contain a background section, description of the individual reviewers' roles in the review activities, summary of findings for each TOR in which the weaknesses and strengths are described, and conclusions and recommendations in accordance with the TORs. The independent report shall be an independent peer review, and shall not simply repeat the contents of the SARC Summary Report.
 - a. Reviewers should describe in their own words the review activities completed during the panel review meeting, including a concise summary of whether they accept or reject the work that they reviewed, and explain their decisions (strengths, weaknesses of the analyses, etc.), conclusions, and recommendations.
 - b. Reviewers should discuss their independent views on each TOR even if these were consistent with those of other panelists, but especially where there were divergent views.
 - c. Reviewers should elaborate on any points raised in the SARC Summary Report that they believe might require further clarification.
 - d. The report may include recommendations on how to improve future assessments.
3. The report shall include the following appendices:

Appendix 1: Bibliography of materials provided for review

Appendix 2: A copy of this Statement of Work

Appendix 3: Panel membership or other pertinent information from the panel review meeting.

Appendix 4. SARC Summary Report Requirements

1. The main body of the report shall consist of an introduction prepared by the SARC chair that will include the background and a review of activities and comments on the appropriateness of the process in reaching the goals of the SARC. Following the introduction, for each assessment reviewed, the report should address whether or not each Term of Reference of the SAW Working Group was completed successfully. For each Term of Reference, the SARC Summary Report should state why that Term of Reference was or was not completed successfully.

To make this determination, the SARC chair and reviewers should consider whether or not the work provides a scientifically credible basis for developing fishery management advice. If the reviewers and SARC chair do not reach an agreement on a Term of Reference, the report should explain why. It is permissible to express majority as well as minority opinions.

The report may include recommendations on how to improve future assessments.

2. If any existing Biological Reference Points (BRPs) or BRP proxies are considered inappropriate, include recommendations and justification for alternatives. If such alternatives cannot be identified, then indicate that the existing BRPs or BRP proxies are the best available at this time.
3. The report shall also include the bibliography of all materials provided during the SAW, and relevant papers cited in the SARC Summary Report, along with a copy of the CIE Statement of Work.

The report shall also include as a separate appendix the assessment Terms of Reference used for the SAW, including any changes to the Terms of Reference or specific topics/issues directly related to the assessments and requiring Panel advice.

Attachment 2

SARC 65 ATTENDEE LIST

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MEMORANDUM

TO: Atlantic Herring Management Board
FROM: Megan Ware, FMP Coordinator
DATE: September 27, 2018
SUBJECT: Consideration of Atlantic Herring Spawning Protections

At its August 7th meeting, the Atlantic Herring Management (Board) asked staff to review the current protections provided to spawning herring. The purpose of this task was to assess whether additional spawning protections need to be considered, particularly in light of the 2018 Stock Assessment which showed declines in recruitment and spawning stock biomass over the last five years. This memo seeks to provide background on the current spawning closures in the Gulf of Maine while re-visiting the management alternatives selected in Amendment 3. Based on inquiries from Board members, the memo also outlines considerations regarding the protection of spawning aggregations in Georges Bank and Nantucket Shoals. Staff highlights that the purpose of the discussion on Georges Bank and Nantucket Shoals is to inform preliminary conversations and there is no recommendation on whether these spawning protections should be pursued.

It is important to note that the New England Fishery Management Council (NEFMC) and NOAA Fisheries are federal partners in the management of Atlantic herring. The NEFMC recently took action under Amendment 8 to establish a 12 nautical mile buffer in management areas 1A, 1B, 2 (east of 71° 51' W), and 3 which prohibits the use of mid-water trawls year-round. In addition, along the backside of the Cape, the buffer is extended by two 30 minute squares. It is likely that this buffer, if implemented by NOAA Fisheries, will impact catch in and around Nantucket Shoals, and could impact future discussions on spawning protections.

I. Overview of Herring Spawning Locations and Current ASMFC Protections in the GOM

Atlantic herring primarily spawn in the northern extent of the species range (Cape Cod to Newfoundland)¹. Within the Gulf of Maine-Georges Bank stock complex, three primary spawning locations have been identified: 1) the coast of Gulf of Maine; 2) Georges Bank; and 3) Nantucket Shoals². Each of these primary spawning areas are comprised of smaller, discrete spawning sites (e.g. Jeffreys Ledge in the Gulf of Maine). Figure 1 provides an overview of general herring spawning locations, as identified in green.

¹ Atlantic States Marine Fisheries Commission (ASMFC). 2016. Amendment 3 to the Interstate Fishery Management Plan for Atlantic Herring.

http://www.asmfc.org/uploads/file/5b2138d8AtlHerringAmendment3_revisedJune2018.pdf

² ASMFC, 2016.

Amendment 3 provides protections to spawning herring in the inshore Gulf of Maine by instituting spawning closures which prohibit directed fishing. The closure protocol uses a gonad-to-body index (GSI) to measure herring maturity in three closure areas: Eastern Maine (EM), Western Maine (WM), and Massachusetts/New Hampshire (MA/NH). Given larger herring spawn first, the GSI values are standardized to a 30 cm fish. A minimum of three samples of fresh herring, either from fishery independent or dependent sources, are used to model the relationship between GSI and date, and forecast the timing of spawning closures. If there are insufficient samples to forecast the timing of spawning, a default closure date is used. This default date is derived from median trigger dates over the last decade as well as applicable literature. The initial 4-week spawning closure can be extended two additional weeks if a sample indicates a significant number of spawning herring remain in the area.

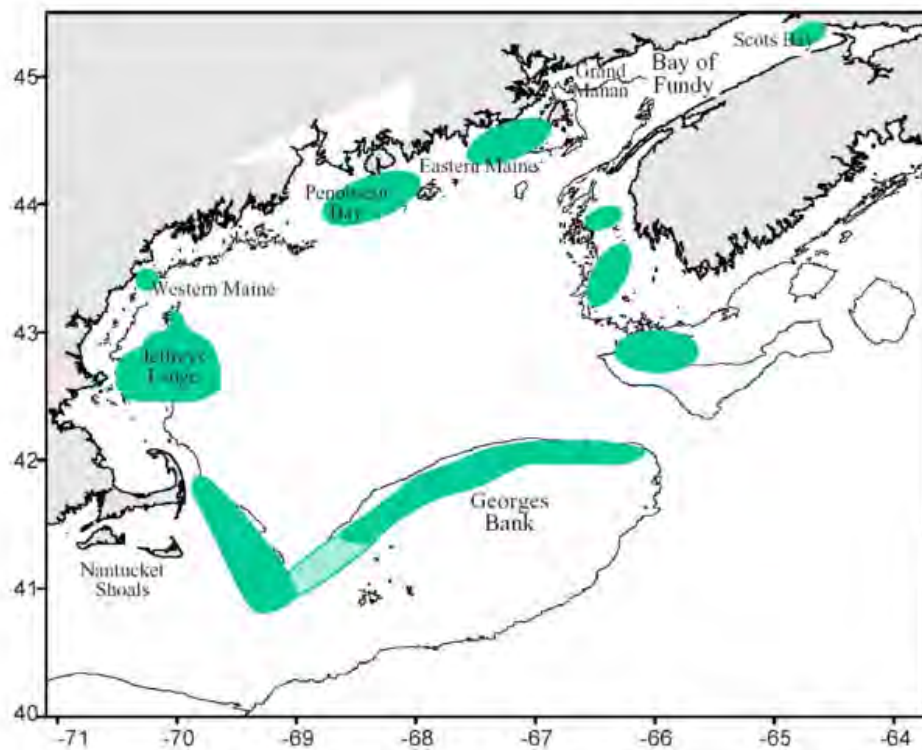


Figure 1: Overview of major Atlantic herring spawning areas, identified in green, in the Gulf of Maine and on Georges Bank. Source: Overholtz et al. 2004.

II. Assessing Spawning Protections in the Gulf of Maine

Given results of the 2018 Stock Assessment, questions have been raised regarding current spawning protections in the Gulf of Maine and whether they can be improved. One way to assess the adequacy of the current spawning protocol is to revisit the suite of management alternatives presented in Amendment 3 to determine if the options selected are still appropriate. Table 1 summarizes the management alternatives considered and selected in Amendment 3; these alternatives are described in greater detail below.

Table 1: Management alternatives included in Amendment 3 pertaining to the spawning protocol. Shaded rows represent the management alternative selected by the Board during final action.

Spawning Area Closure Monitoring System	Status quo (length based protocol)	GSI₃₀ Trigger Value	23
	Status quo with adjustments to allow for fishery independent and dependent samples		25
	GSI ₃₀ based forecast system		28
Spawning Area Boundaries	Status quo (three spawning areas)	Closure Period	Status quo (4 weeks)
	Combine WM and MA/NH		6 weeks
Re-closure Protocol	Status quo (2 weeks)		
	Status quo with greater definition		
	No re-closure protocol		

Spawning Area Closure Monitoring System

One of the principal changes approved through Amendment 3 was the adoption of the GSI₃₀ spawning protocol for Atlantic herring. Previously, the Board had used a system which monitored herring maturity within two size classes. When three consecutive samples within a week showed that either size class had exceeded its threshold, the spawning closure was implemented. The new GSI₃₀ protocol standardized observations to larger herring (30cm fish), allowing the spawning closure to be inclusive of most spawning fish. In addition, since samples are used to project the relationship between GSI and a date, the implementation of a GSI₃₀ spawning closure is not dependent on obtaining consecutive samples from the fishery within a single week.

In January 2018, the Atlantic Herring Technical Committee (TC) compared the performance of the GSI₃₀ spawning protocol to the previously used length-based system³. This review only evaluated data from the MA/NH closure given it had the greatest number of samples from 2015-2017. Overall, the TC concluded that the GSI₃₀ protocol represents a significant improvement in the protection of spawning fish as it is better able to predict inter-annual changes in the timing of spawning. Using 2015 as a case study, the TC showed that under the previous length-based protocol, the spawning closure in MA/NH was initiated nearly 2 weeks early, requiring the subsequent use of the 2 week re-closure. In contrast, if the GSI₃₀ protocol had been used, the spawning closure would have started 3 days after spawning began and likely without the need for a re-closure (Figure 2).

GSI₃₀ Trigger Value

A key component of the GSI₃₀ protocol is the value at which a spawning closure is triggered. A higher trigger value closes the fishery later and just prior to spawning while a lower trigger value provides additional protection to maturing fish by encompassing time before the

³ ASMFC. 2018. A Review of the modified Gonadal-Somatic Index (GSI) Monitoring System for Atlantic Herring Spawning Closures in US Waters.

http://www.asmf.org/uploads/file/5a95d99eHerringSpawningClosureReport_Jan2018.pdf

spawning season begins. Through Amendment 3, the Board implemented a trigger value of 25, in between the other two alternatives of 23 and 28. Rational for the trigger value of 25 was that it closes the fishery in the later stages of maturity but before spawning.

To assess the effectiveness of the current GSI_{30} trigger value, the TC, in their January 2018 memo, defined a spawning season as beginning when there is expected to be 25% spawning herring in the population. This definition was derived from re-closure protocol which defines a significant number of spawning herring to be when 25% or more mature herring have yet to spawn. The TC then compared the start of a spawning closure via the trigger value to the population reaching this 25% threshold. Overall, results showed that, from 2015 to 2017, the current GSI_{30} trigger value (25) resulted in a spawning closure that started within a few days of when the population reached 25% spawning (Figure 2). Specifically, in 2015, if the GSI_{30} protocol had been used, the current trigger value would have started the spawning closure 3 days after the population reached the 25% threshold; in 2016, the spawning closure started 5 days after the population reached the 25% threshold; and in 2017, the closure started 2 days prior to the population reaching the 25% threshold.

One of the questions for the Board to consider is whether initiating a spawning closure when approximately 25% of the population is spawning is still appropriate, given the poor condition of the stock. The TC's analysis suggest that reducing the GSI_{30} trigger value to 23 or 24 would reduce the probability of greater than 25% spawning fish in the catch. This is particularly true in years, or regions, where there are few GSI_{30} samples. However, a lower trigger value will require an earlier default date, and may require frequent re-closures, unless the closure duration is extended beyond the current four weeks.

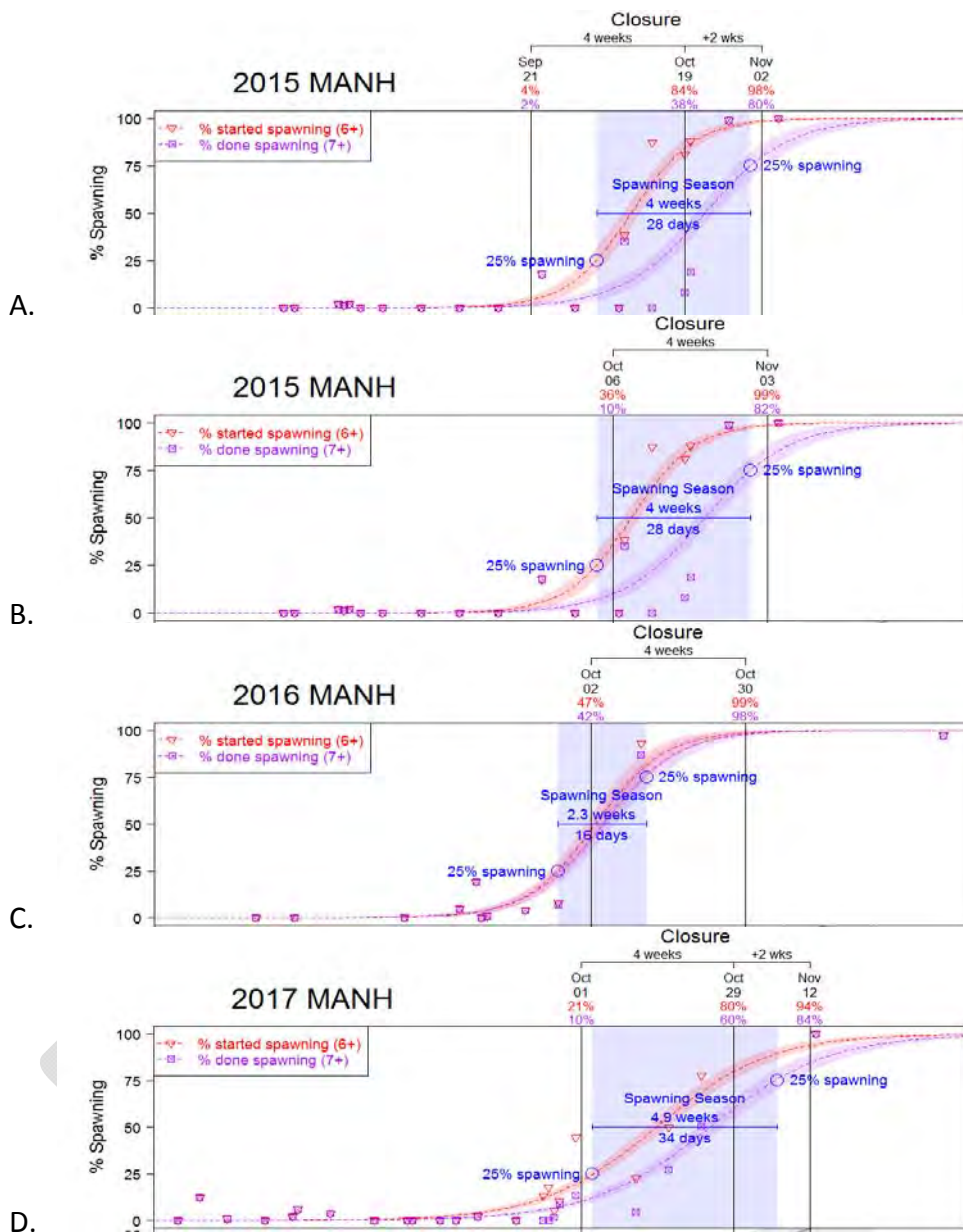


Figure 2: Estimated spawning season for the MA/NH spawning area 2015-2017. A) 2015 closure dates under the previously used length-based protocol. B) 2015 closure dates under the GSI₃₀ protocol. C) 2016 closure dates under the GSI₃₀ protocol. D) 2017 closure dates under the GSI₃₀ protocol. The spawning season is identified by the blue shaded regions while the black vertical lines represent the spawning closures enacted by management. Source: Atlantic Herring TC Memo January 2018.

Spawning Closure Period

Amendment 3 established a 4 week spawning closure with the ability to re-close a spawning area for an additional 2 weeks if a sample indicates a significant number of spawners remain. The primary rationale given by the Board for this management alternative was that this option balanced the need to protect spawning fish while minimizing negative impacts on the fishing

industry; it maximized coverage of the spawning season and access to herring quota. Other management alternatives in Amendment 3 included a 6 week closure period and no re-closure protocol.

The TC’s January 2018 review of the GSI₃₀ spawning protocol showed that, between 2015 and 2017, spawning seasons in the MA/NH area were 4 weeks, 2.3 weeks, and 4.9 weeks. The TC expressed greater confidence in the longer spawning season estimates given a significantly higher number of samples in 2015 and 2017. Again, the TC defined the onset of the spawning season by achieving 25% spawners in the fishery; if the Board wanted to define the start of the spawning season at a lower percentage, this would increase the length of the spawning season (Figure 3). Based on these results, the TC concluded that use of the 4 week initial spawning closure would likely result in frequent use of the re-closure protocol. The TC also noted that if the Board was interested in simplifying the closure protocol, increasing protection during spawning, and potentially providing greater predictability to industry, the Board could consider a longer initial closure period of five to six weeks. This would likely reduce the need for frequent 2 week re-closures.

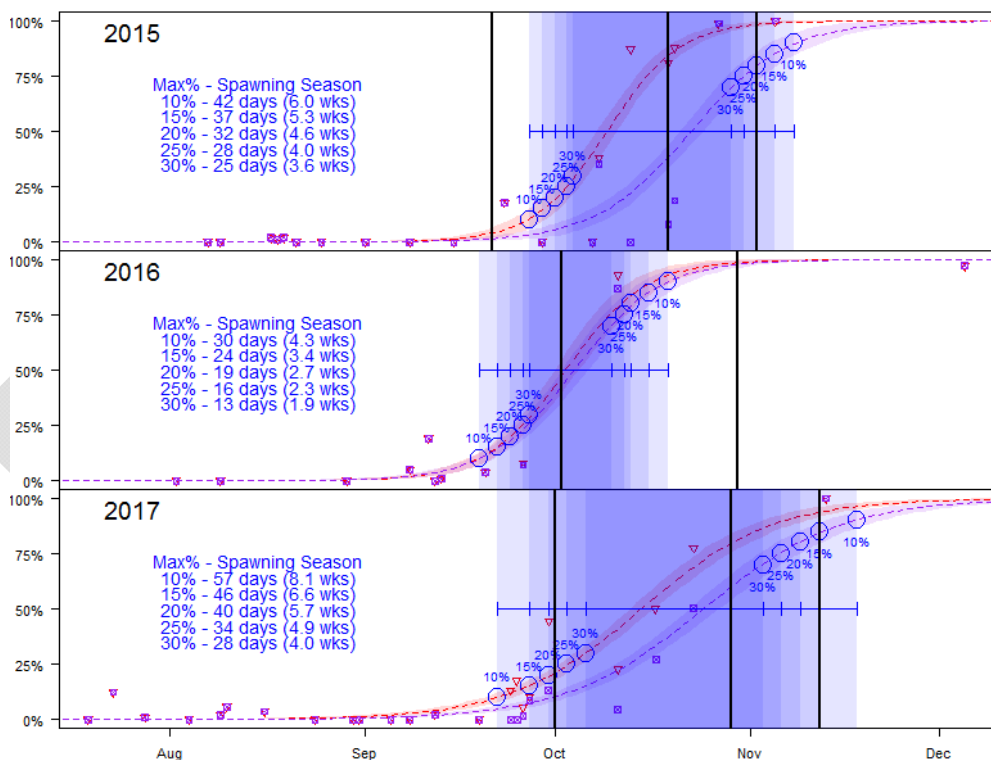


Figure 3. Effect of choice of maximum allowable % spawning in the catch on duration of the spawning season. Source: Atlantic Herring TC Memo January 2018.

Spawning Area Boundaries

Finally, Amendment 3 defined the area boundaries for the herring spawning closures. Specifically, Amendment 3 considered combining the WM and MA/NH spawning areas into a single unit given there was no significant difference in the default spawning times between the

two areas under the GSI₃₀ protocol. Combining spawning areas would also reduce the need to collect GSI samples from 3 distinct areas in the Gulf of Maine. Ultimately, the Board decided to maintain the three distinct spawning areas given concerns that a wide-spread closure could limit bait availability.

While the TC's January 2018 analysis did not evaluate the effectiveness of maintaining the three distinct closure areas, it is possible to compare the timing of spawning closures in WM and MA/NH in 2016 and 2017. Specifically, in 2016, the WM closure began on September 18th while the MA/NH closure began on October 2nd. In 2017, the WM closure began on September 26th and the MA/NH closure began on October 1st. None of these closures relied on the default date as sufficient samples were available. Thus, it does appear that over the last two years, there have been slight differences in the timing of the spawning closures between the two areas.

III. Considerations for Georges Bank and Nantucket Shoals

Given the recent declines in recruitment and spawning stock biomass, several questions have been raised regarding the need for, and ability to implement, spawning protections in Georges Bank and Nantucket Shoals. Both of these areas are recognized as major spawning areas for Atlantic herring but do not have protections specific to spawning. This section seeks to highlight some of the considerations that would need to be made if the discussion moves forward; it does not intend to provide a recommendation as to whether these spawning protections should be pursued.

The existing GSI₃₀ spawning closure system requires enough samples to inform the relationship between GSI and maturity, and annually project spawning closures. In the Gulf of Maine, the long term use of closures to protect spawning aggregations has prompted the collection of samples to meet these needs. In contrast, significantly fewer samples have been collected from Georges Bank and Nantucket Shoals. Staff from Massachusetts Department of Marine Fisheries provided a table of herring samples taken in Georges Bank and Nantucket Shoals over the last 20 years (Figure 4). Of these samples, the majority are from Georges Bank (~96%), with only 2 samples taken from Nantucket shoals.

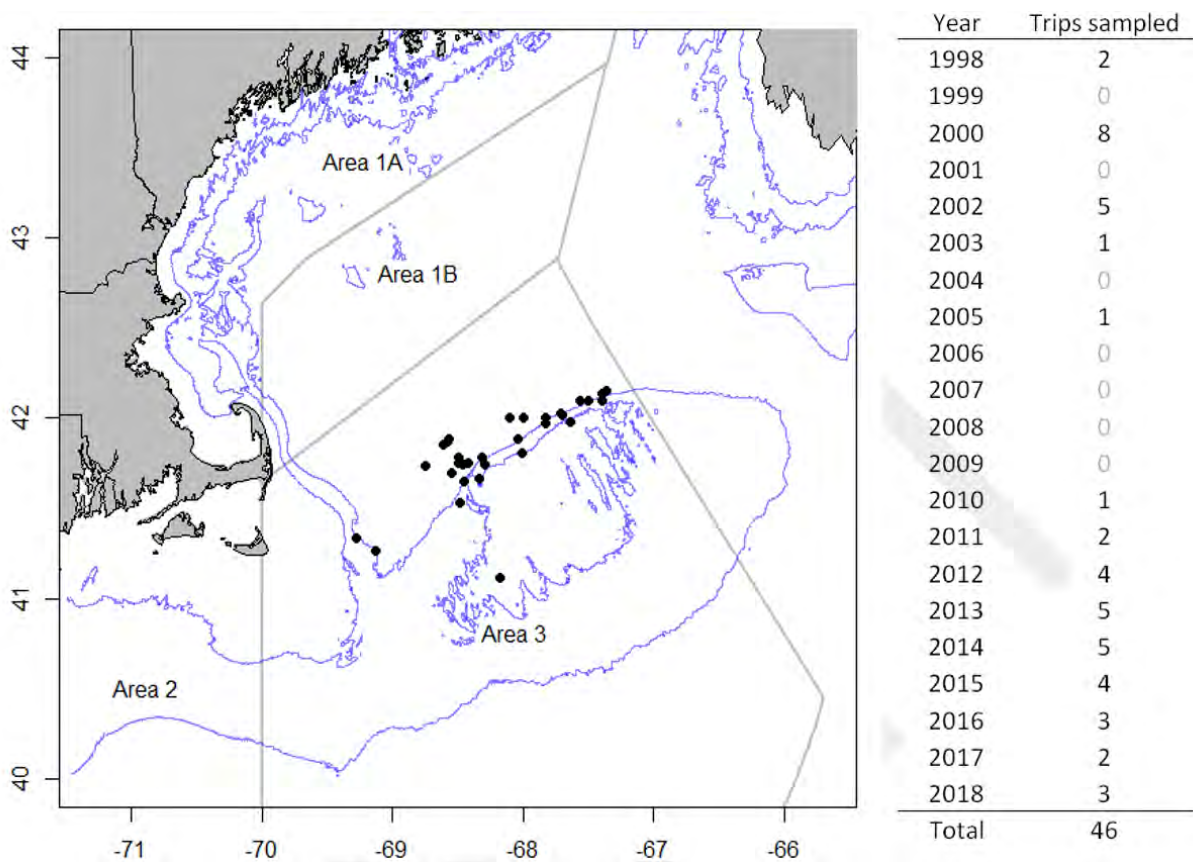


Figure 4: Number of Atlantic herring samples taken from vessels fishing in Georges Bank and Nantucket Shoals (1998-2018). Samples obtained by MA DMF.

The current low number of samples prompts considerations about extending the existing spawning closure protocol offshore. As outlined in an October 2012 memo to the Board⁴, the TC noted that while there are known spatial and seasonal spawning patterns in the Gulf of Maine, these are not as well documented in offshore regions. Recent conversations with the TC indicate it may be possible to elucidate the relationship between GSI and maturity stage for Georges Bank based on the number of samples from MA DMF; however, it is unlikely that this would be possible for Nantucket Shoals. This means that, particularly for Nantucket Shoals, another management strategy may need to be considered if the Board is interested in extended spawning protections to these regions. In addition, the ability to collect samples from all regions (Gulf of Maine, Georges Bank, Nantucket Shoals) may be impacted by results of the 2018 Stock Assessment. Specifically, since it is expected that there will be significant decreases in the 2019-2021 Atlantic herring Annual Catch Limits (ACLs), it may become increasingly difficult to obtain samples from the directed commercial fleet. The GSI₃₀ protocol for Gulf of Maine does allow samples to be collected from fishery independent and dependent sources, so there may be greater reliance on samples from outside the herring fishery.

⁴ ASMFC. 2012. Potential issues and considerations with Georges Bank/Nantucket Shoals off shore spawning area. http://www.asmfc.org/uploads/file/atIHerringTCreport_NantucketShoals_Oct2012.pdf

Another consideration, particularly for Georges Bank, is the size and location of protections provided to spawning areas. The Georges Bank spawning area (see Figure 1) is large, encompassing most of the northern edge of the Bank. Given this expansive size, spawning throughout the region may not occur at the same time. Ideally, spawning closures occur at the exact time of the spawning season in order to maximize the protection given to the population while minimizing economic impacts on the industry. In the Gulf of Maine, this is achieved by having discrete closure areas that encompass slightly different spawning times (e.g. EM versus WM). If a similar approach is considered for Georges Bank, a higher number of annual samples will be required to determine the spatial extent of specific spawning locations and their timing. In contrast, implementing a single, large spawning closure across the northern edge of Georges Bank would require fewer annual samples but would likely require a longer closure in order to protect asynchronous spawning. Potential economic impacts of this larger and longer closure may need to be considered.

Finally, while multiple spawning closures areas could provide additional protections to spawning fish, it may also have an unintended consequence of concentrating fishing effort into the remaining open regions. In particular, if spawning closures in the Gulf of Maine and Georges Bank do not occur at the same time, a closure in one area may cause industry to aggregate in the other.

IV. References

- Atlantic States Marine Fisheries Commission (ASMFC). 2016. Atlantic Herring Amendment 3. http://www.asmfc.org/uploads/file/5b2138d8AtlHerringAmendment3_revisedJune2018.pdf
- ASMFC. 2012. Potential issues and considerations with Georges Bank/Nantucket Shoals off shore spawning area. http://www.asmfc.org/uploads/file/atlherringTCreport_NantucketShoals_Oct2012.pdf
- ASMFC. 2018. A Review of the modified Gonadal-Somatic Index (GSI) Monitoring System for Atlantic Herring Spawning Closures in US Waters. http://www.asmfc.org/uploads/file/5a95d99eHerringSpawningClosureReport_Jan2018.pdf
- Overholtz, W.J., Jacobson, L.D., Melvin, G.D., Cieri, M., Power, M., Libby, D. and Clark, K. February 2004. Stock Assessment of the Gulf of Maine – Georges Bank Atlantic Herring Complex, 2003. Northeast Fisheries Science Center Reference Document 04- 06.



New England Fishery Management Council

FOR IMMEDIATE RELEASE
October 1, 2018

PRESS CONTACT: Janice Plante
(607) 592-4817, jplante@nefmc.org

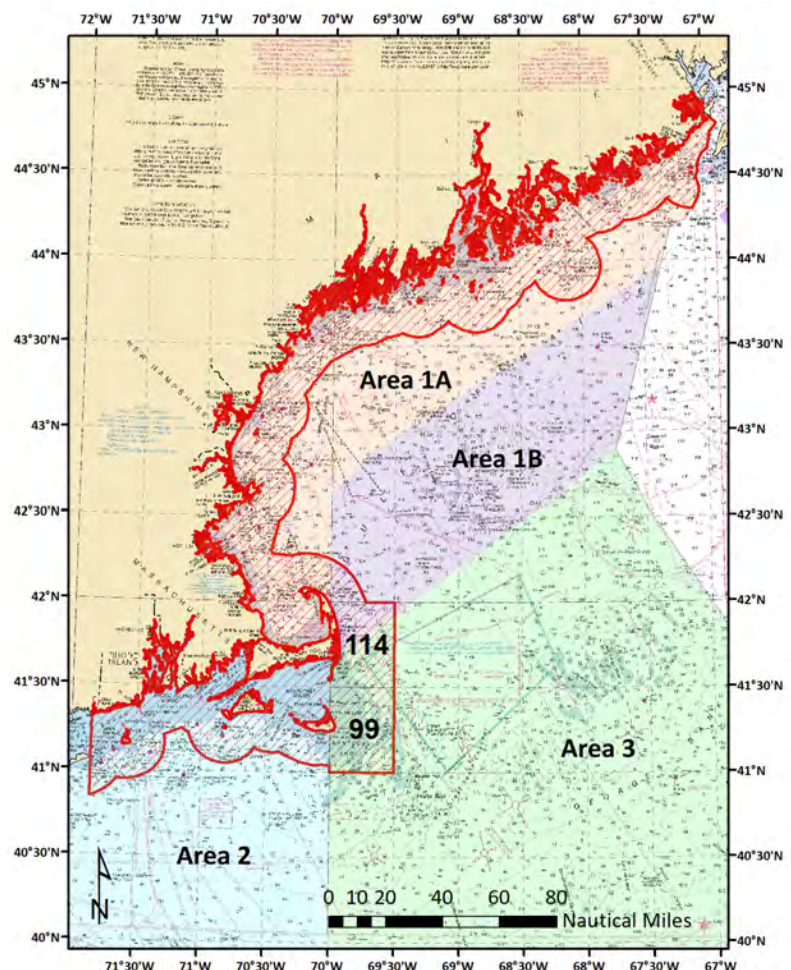
Atlantic Herring: Council Approves Amendment 8 With New ABC Control Rule, Buffer Zone; Asks NMFS to Set 2019 Specs

On September 25 during its meeting in Plymouth, MA, the New England Fishery Management Council approved Amendment 8 to the Atlantic Herring Fishery Management Plan. The Council also asked the National Marine Fisheries Service (NMFS, NOAA Fisheries) to develop an in-season action to set 2019 specifications for the herring fishery.

Amendment 8

Here are the two measures the Council approved for Amendment 8:

- **ABC Control Rule:** The acceptable biological catch (ABC) control rule is a formula that will be used to set annual catch limits. The Council considered close to a dozen alternatives that would allow different levels of fishing mortality depending on the estimated level of herring biomass in the ecosystem. In the end, the Council adopted a control rule that balances many objectives by capping overall fishing mortality at 80% of sustainable levels. Previously, fishermen were allowed to harvest up to 100% of sustainable catch levels. Under the proposed control rule, a portion of the available catch would be set aside to explicitly account for the important role of Atlantic herring as forage within the ecosystem. The new control rule also will better address uncertainty in year-to-year variation in biomass estimates. While the control rule will reduce catches in the near term, it has a lower probability of resulting in overfishing than previous methods used to set catch limits.



The 12-nautical-mile buffer zone adopted by the Council runs from the Canadian border to Connecticut and includes blocks 114 and 99 eastward of Cape Cod. If approved by NMFS, midwater trawling would be prohibited inside this zone year-round. – NEFMC graphic



New England Fishery Management Council

- **Potential Localized Depletion and User Conflicts – Buffer Zone:** The Council also considered numerous alternatives to address potential localized depletion and user conflicts in the Atlantic herring fishery. After carefully weighing all public comment and thoroughly debating the issue before a large crowd of stakeholders, the Council approved a blend of two modified alternatives, which resulted in the following. If approved by NMFS:
 - Midwater trawling would be prohibited year-round within 12 nautical miles of the territorial sea baseline from Maine to the 71° 51' W longitude line off Connecticut. The outer boundary of this “buffer zone” is the same as the territorial sea limit; and
 - Midwater trawling also would be prohibited year-round within two 30-minute squares eastward of Cape Cod, which are known as blocks 114 and 99. This second step essentially expands the width of the buffer zone to roughly 20 nautical miles east and southeast of the Cape (see map on previous page).

What’s Next?

Q: Will Amendment 8 go into place immediately?

A: No. Even though the Council has cast its final votes on Amendment 8, Council staff and the Herring Plan Development Team need to finalize the document and submit the amendment to NMFS/NOAA Fisheries for review and potential approval.

Q: When will NMFS implement the amendment?

A: NMFS first will publish a proposed rule, and the public will have another opportunity to provide comments. The agency then will review those comments, approve or disapprove the amendment, and, if approved, publish a final rule. Timing for implementation of the final rule is uncertain but is expected sometime in 2019.



The New England Council had a full house of stakeholders on hand during its deliberations in Plymouth, MA on September 25, 2018 on Amendment 8 to the Atlantic Herring Fishery Management Plan. – NEFMC photo

Amendment 8 goals

1. To stabilize the fishery at a level designed to achieve optimum yield;
2. To account for the role of Atlantic herring in the ecosystem, including its role as forage; and
3. To address potential localized depletion and potential user conflicts in the fishery, a goal that was added to Amendment 8 following the initial scoping period.

Visit the Council’s Atlantic Herring Amendment 8 [webpage](#).



New England Fishery Management Council

Stock Status and 2019 Catch Limits

Before it began discussing Amendment 8, the Council received a [presentation](#) on the results of the new [benchmark stock assessment](#) for Atlantic herring. The assessment concluded that overfishing was **not** occurring, and the stock was **not** overfished.

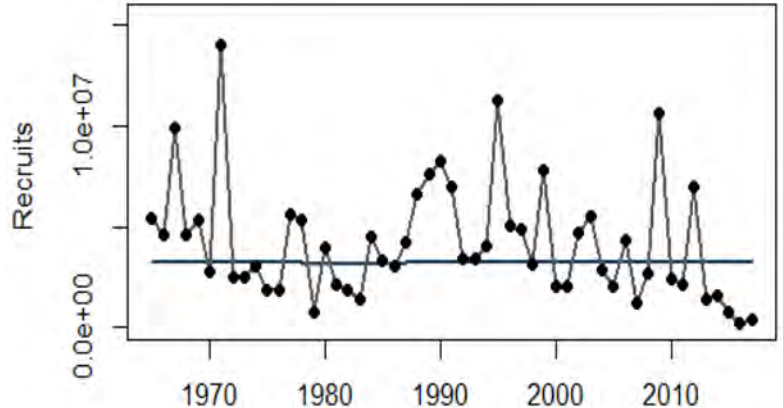
However, assessment scientists found that recruitment of age-1 fish “has been below average since 2013,” and four of the lowest recruitment estimates on record occurred in 2013, 2015, 2016, and 2017. Assessment scientists concluded, “If the recent estimates of poor recruitment are confirmed and continue into the future, projected stock status will continue to decline.”

The Council weighed this sobering information and then voted to ask NMFS to develop an in-season action to set 2019 catch limits. Although the Council is developing a new specifications package for 2019-2021, the Council recognized that NMFS may be able to act more quickly for fishing year 2019 and reduce the probability of overfishing.

Given the Council’s request, NMFS now will have the final say on how the 2019 catch limits are set. The Council asked the agency to:

- Use the most recent assessment and projections;
- Use the ABC control rule approved by the Council in Amendment 8;
- Maintain the sub-annual catch limits for herring management areas based on the same proportions as the 2016-2018 specifications package:
 - Area 1A = 28.9%
 - Area 1B = 4.3%
 - Area 2 = 27.8%
 - Area 3 = 39%
- Proportionally reduce the fixed gear set-aside for the weir fishery west of Cutler, ME, which is a very small fishery; and
- Set the border transfer to 0 mt. This provision allows U.S. vessels to transfer herring to Canadian vessels to be processed as food.

Atlantic Herring Recruitment 1975-2017



ABOVE: Recruitment of age-1 fish has been below average since 2013. For reference, the record high in the time series occurred in 1971 when the population contained an estimated 1.4 billion age-1 fish. Record lows were estimated for 2016 and 2017, when estimates were 1.7 million and 3.9 million age-1 fish respectively.

– NEFSC, SAW/SARC graphics



Atlantic Herring (*Clupea harengus*). – NOAA Fisheries graphic

For more information, contact Deirdre Boelke, the Council’s Atlantic Herring Plan Coordinator, at (978) 465-0492, ext. 105, dboelke@nefmc.org.

The Council will continue working on specifications for fishing years 2020 and 2021.



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

September 17, 2018

To: Atlantic Herring Section
From: Tina Berger, Director of Communications
RE: Advisory Panel Nomination

Please find attached a new nomination to the Atlantic Herring Advisory Panel – Joseph Jurek, a commercial otter trawl fisherman from Massachusetts. Please review this nomination for action at the next Section meeting.

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

Enc.

cc: Megan Ware

M18-90

ATLANTIC HERRING ADVISORY PANEL

Bolded names await approval by the Atlantic Herring Section Board

Bolded and italicized name denotes Advisory Panel Chair

September 17, 2018

Maine (6)

Jennie Bichrest (bait)
21 Sandy Acres Dr.
Topsham, ME 04086-5157
Phone: 207.841.1454
jennieplb@yahoo.com
Appt. Confirmed 3/26/97
Appt. Reconfirmed 10/1/01; 1/1/05; 5/10; 4/14

Glenn Robbins (comm/purse seine)
ME Seiners Assn F/V Western Sea
7 Alden Lane
Eliot, ME 03903-2102
Phone: 207.439.2079
robbins62@gmail.com
Appt. Confirmed 3/26/97
Appt. Reconfirmed 10/1/01; 1/1/05;
5/10; 4/14

Mary Beth Tooley (comm/mid-water trawl &
purse seine)
415 Turnpike Dr.
Camden, ME 04843-4437
Phone: 207.763.4176
FAX: 207.837.3537
mbtooley@live.com
Appt. Confirmed 7/14/03
Appt Reconfirmed 7/07; 4/14

John Stanley (comm inshore/stop seine, traps,
rod & reel)
789 Indian Point Road
Mt. Desert, ME 04660
Phone (cell): 207.460.2395
Phone (eve): 207.244-7409
FAX: 207.244.3089
dogwood@acadia.net
Appt Confirmed 5/4/17

Stephen B. Weiner (At-large, comm. bluefin
tuna harpoon)
12 Judson Road
Andover, MA 01810
Phone: 978.764.3637
weinersb@gmail.com

Appt. Confirmed 8/18/09

Appt. Reconfirmed 4/14

- **Has been a ME resident for past few years. MA maintained him as one of its AP members until recently**

Vacancies – Processor and at-large seat

New Hampshire (2)

Mike Anderson (comm. trawler)
10 Washington Road
Rye, NH 03870-0055
Phone: 603.436.4444
padi.anderson@gmail.com
Appt. Confirmed 8/18/09
Appt. Reconfirmed 5/14

Shawn Joyce (rec)
270 Washington Road
Rye, NH 03870
Phone: 603.548.5267
sjoycemail@comcast.net
Appt. Confirmed 10/27/14

Massachusetts (4)

Captain Patrick Paquette (rec. & for-hire)
MA Striped Bass Association
61 Maple Street
Hyannis, MA 02601
Phone: 781.771.8374
BasicPatrick@aol.com
Appt. Confirmed 2/1/10
Appt. Reconfirmed 4/14; 8/18

Joseph Jurek (comm. otter trawl)

**8 Annisquam Heights
Gloucester, MA 01930
Phone: 978.497.3652
mystiqueladyfishing@gmail.com**

Gerry O'Neil (comm. midwater
trawl/dealer/processor)
Cape Seafoods
3 State Fish Pier
Gloucester, MA 01930

ATLANTIC HERRING ADVISORY PANEL

Bolded names await approval by the Atlantic Herring Section Board

Bolded and italicized name denotes Advisory Panel Chair

September 17, 2018

Phone: 978.479.4646

gerryjr@capeseafoods.com

Appt. Confirmed 8/7/18

Beth Casoni (commercial)

Massachusetts Lobstermen's Association

96 Meetinghouse lane

Marshfield, MA 02050

Phone: 781.545.6984 ext 1

bethcasoni@lobstermen.com

Appt. Confirmed 8/7/18

Cape May, NJ 08204

Phone: 207.266.0440

Office: 609.884.7600 x213

jkaelin@lundsfish.com

Appt. Confirmed 8/18/09

Appt Reconfirmed 4/2014

Vacancy – At-large seat

Nontraditional Stakeholders (2 seats)

Rhode Island (1)

Philip Ruhle Jr (At-large, comm. trawl – multispecies)

28 Serenity Way

Peacedale, RI 02879

Phone (cell): 401.265.8862

Phone (home): 401.792.0188

FAX: 401.788.8275

pruhle@cox.net

Appt. Confirmed 11/2/09

New York (1)

Mark Phillips (comm/otter trawl)

Seafood Harvesters Association

210 Atlantic Avenue

Greenport, NY 11944-1201

FAX: 631.477.8583

Appt. Confirmed 5/30/96

Appt. Reconfirmed 9/15/00; 1/23/06; 5/10

New Jersey (3)

Greg DiDomenico (comm.)

Garden State Seafood Association

13103 Misty Glen Lane

Fairfax, VA 22033-5080

Phone: 609.898.1100

FAX: 609.898.6070

gregdi@voicenet.com

Appt. Confirmed 1/23/06

Chair – Jeff Kaelin (comm. trawl and purse seine) (5/12)

Lund's Fisheries, Inc.

997 Ocean Drive



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 David E. Pierce State: MA
(your name)

Name of Nominee: Joseph B. Jurek

Address: 8 Annisquam Herkts

City, State, Zip: Gloucester, MA 01930

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

Phone (day): 978 407 3652 Phone (evening): 978 407 3652

FAX: — Email: MystiqueHerktsFish@aol.com

FOR ALL NOMINEES:

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

- 1. Atlantic herring
- 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.

NEFS Sector II
Yankee Fishermen's Coop
Northeast Seafood Coalition

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

Groundfish
Loligo Squid
Herring
Northern Shrimp
Whiting
Bluefin Tuna

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

Scallops
Bluefin Tuna
Northern Shrimp
Groundfish
Herring / Whiting
Loligo Squid

FOR COMMERCIAL FISHERMEN:

- 1. How many years has the nominee been the commercial fishing business? 25
- 2. Is the nominee employed only in commercial fishing? yes no
- 3. What is the predominant gear type used by the nominee? Otter trawl

FOR CHARTER/HEADBOAT CAPTAINS:

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

To whom it may concern:

As a captain who has fished with a raised footrope trawl in area 1a for herring I have a different perspective than some of the larger scale herring boats. This perspective includes years of following the local biomass thru its typical spawning progression and how that effects other fisheries that I participate within. Most scientists and regulators will agree that as the conditions change within our management areas abnormality has become the new norm.
(continued next page)

Nominee Signature: _____



Date: _____

8/21/18

Name: _____

Joseph B Jura X

(please print)

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



State Director

State Legislator

Governor's Appointee

This is why herring management will become an important and difficult topic for managers to make decisions with. I am very appreciative that my perspectives will be included in these discussions. And plan to take my role seriously. At this point I am not aware of the frequency and location of the meetings but will make every effort to be diligent about attendance. I don't think anyone will dispute the fact of the importance of herring as a base for the rest of the species that live and visit the New England management area. That is why I greatly appreciate your consideration for this nomination.

Sincerely,

A stylized handwritten signature consisting of several overlapping, slanted strokes that form the letters 'J', 'B', and 'K'.

Joe Junk

Atlantic States Marine Fisheries Commission

American Eel Management Board

*October 22, 2018
3:45 - 4:45 p.m.
New York, New York*

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>M. Gary</i>) | 3:45 p.m. |
| 2. Board Consent | 3:45 p.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from August 2018 | |
| 3. Public Comment | 3:50 p.m. |
| 4. Presentation on Convention on International Trade in Endangered Species Workshop and Discuss Next Steps (<i>T. Leuteritz and L. Noguchi</i>) | 4:00 p.m. |
| Possible Action | |
| 5. Review and Populate Advisory Panel Membership (<i>T. Berger</i>) Action | 4:40 p.m. |
| 6. Other Business/Adjourn | 4:45 p.m. |

The meeting will be held at the Roosevelt Hotel, 45 East 45th Street & Madison Avenue, New York, NY; 212.661.9600

Atlantic States Marine Fisheries Commission

MEETING OVERVIEW

American Eel Management Board Meeting

October 22, 2018

3:45 – 4:45 p.m.

New York, New York

Chair: Marty Gary (PRFC) Assumed Chairmanship: 10/17	Technical Committee Chair: Jordan Zimmerman (DE)	Law Enforcement Committee Representative: Cloutier
Vice Chair: Lynn Fegley (MD)	Advisory Panel Chair: Mari-Beth DeLucia	Previous Board Meeting: August 8, 2018

Voting Members: ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, VA, NC, SC, GA, FL, D.C., PRFC, USFWS, NMFS (19 votes)

2. Board Consent:

- Approval of Agenda
- Approval of Proceedings from August 2018 Board Meeting

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-up 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 Board Chair will not allow additional public comment. 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. Presentation on Convention on International Trade in Endangered Species (CITES) Workshop and Discuss Next Steps (4:00 – 4:40 p.m.) Possible Action

Background

- CITES is a global treaty that aims to ensure international trade of plants and animals do not threaten their survival in the wild. Species protected under CITES are listed in one of three appendices. European eel is listed under CITES Appendix II, which includes species that, although not currently threatened with extinction, may become so without trade controls.
- There is the possibility the European Union may submit a proposal requesting American eel be listed under CITES Appendix II ahead next year's CITES Meeting (May 2019).
- If the Board so chooses, a possible action could be a letter stating the Board's position regarding the possible listing

Presentation

- CITES Overview, Appendix II listing, and implications by T. Leuteritz and L. Noguchi

5. American Eel Advisory Panel Membership (4:40 – 4:45 p.m.) Action
Background <ul style="list-style-type: none">• Richard Stoughton from South Carolina and Larry Voss from Virginia have been nominated to the American Eel Advisory Panel.
Presentation <ul style="list-style-type: none">• Nominations by T. Berger (Briefing Materials)
Board Actions for Consideration at this Meeting <ul style="list-style-type: none">• Approve American Eel Advisory Panel nominations

6. 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: review aquaculture proposals (if submitted)
- TC – September 1st: Annual compliance reports due

TC Members: Jordan Zimmerman (DE, TC Chair), Ellen Cosby (PRFC, Vice Chair), Lindsey Aubart (GA), Kimberly Bonvechio (FL), Bradford Chase (MA), Chris Adriance (DC), Robert Eckert (NH), Sheila Eyler (USFWS), Alex Haro (USGS), Carol Hoffman (NY), Michael Kaufmann (PA), Wilson Laney (USFWS), Todd Mathes (NC), Patrick McGee (RI), Jennifer Pyle (NJ), Troy Tuckey (VIMS), Danielle Carty (SC), Keith Whiteford (MD), Gail Wippelhauser (ME), Tim Wildman (CT), Kristen Anstead (ASMFC), Kirby Rootes-Murdy (ASMFC)

SAS Members: Greg Hinks (NJ), Bradford Chase (MA), Matt Cieri (ME), Sheila Eyler (USFWS), Laura Lee (NC), John Sweka (USFWS), Troy Tuckey (VIMS), Keith Whiteford (MD), Kristen Anstead (ASMFC), Kirby Rootes-Murdy (ASMFC)

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

**The Westin Crystal City
Arlington, Virginia
August 8, 2018**

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, Chairman Martin Gary..... 1

Approval of Agenda 1

Approval of Proceedings, February 2018 1

Public Comment 1

Update on the Illegal Glass Eel Harvest in Maine..... 1

Consider Addendum V for Final Approval..... 4

Review of Options and Public Comment Summary..... 4

Law Enforcement Committee Report 8

Technical Committee Report..... 8

Advisory Panel Report 11

Consider Final Approval of Addendum V 15

Consider Maine Aquaculture Proposal 26

Maine Proposal for 2019 Fishing Season 26

Law Enforcement Committee Report 29

Technical Committee Report..... 29

Advisory Panel Report 29

Update on the North Carolina Aquaculture Plan: 2018 Fishing Season 34

Adjournment 35

INDEX OF MOTIONS

1. **Approval of Agenda** by Consent (Page 1).
2. **Approval of Proceedings of February 2018** by Consent (Page 1).
3. **Main Motion**
Move to conditionally approve section 3.1, Option 2: Increase Maine’s Glass Eel Quota to 11,749 pounds pending the strengthening of Maine laws governing the elver fishery. Changes shall include, but not be limited to, the chain of custody of elvers from harvest to export thus ensuring the swipe card system cannot be bypassed. Maine would be required to report back to the Law Enforcement Committee which would make recommendations to the Eel Management Board at the 2019 Summer Meeting for Board consideration (Page 16). Motion by Pat Keliher; second by John Clark. Motion substituted.

Motion to Substitute
Move to substitute to accept Section 3.1, Option 1: Status Quo (Page 18). Motion by Dennis Abbott; second by Roy Miller. Motion carried (Page 21).

Main Motion as Substituted
Move to accept Section 3.1, Option 1: Status Quo. Motion carried (Page 22).
4. **Move to adopt under section 3.2, Option 1, Status Quo for Glass eel Aquaculture provisions, with the additional language presented today by the Technical Committee to redefine the measures established by Addendum IV** (Page 22). Motion by Dan McKiernan; second by Pat Keliher. Motion carried (Page 22).
5. **Move to adopt under section 3.3, Issue 1: Coastwide Cap, Option 1: Status Quo with the updated landings of 916,473 pounds, and Issue 2: Management Trigger, Option 3: 2 Years of exceeding the coastwide cap by 10%** (Page 22). Motion by John Clark; second by Dave Borden. Motion carried (Page 23).
6. **Move to adopt Sub-Option 2B Under Issue 3 (Allocation) - 1% rule for states to reduce landings: All states with landings greater than 1% will work collectively to achieve an equitable reduction to the coast wide cap. Additionally, a workgroup of states harvesting over 1% will be formed to define 'equitable reduction' and to determine how a reduction process would work if a trigger is fired** (Page 24). Motion by Lynn Fegley; second by Rob O’Reilly. Motion carried (Page 25).
7. **Move to adopt an implementation date of January 1, 2019** (Page 25). Motion by Jim Gilmore; second by Tom Fote. Motion carried (Page 26).
8. **Move to approve Addendum V for American Eels as modified today** (Page 26). Motion by Lynn Fegley; second by John Clark. Motion carried (Page 26).
9. **Move to accept the Maine Glass Eel Aquaculture Proposal for the 2019 season, to grow out eels to the yellow eel life stage** (Page 34). Motion by Pat Keliher; second by Jim Gilmore. Motion carried (Page 35).
10. **Move to adjourn** by consent (Page 36).

ATTENDANCE

Board Members

Pat Keliher, ME (AA)	Roy Miller, DE (GA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Russell Dize, MD (GA)
Cheri Patterson, NH, proxy for D. Grout (AA)	Ed O'Brien, MD, proxy for Del. Stein (LA)
G. Ritchie White, NH (GA)	Lynn Fegley, MD, proxy for D. Blazer (AA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	Steve Bowman, VA (AA)
Dan McKiernan, MA, proxy for D. Pierce (AA)	Rob O'Reilly, VA, Administrative proxy
Raymond Kane, MA (GA)	Bryan Plumlee, VA (GA)
Bob Ballou, RI, proxy for J. McNamee (AA)	Sen. Monty Mason, VA (LA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Mike Blanton, NC, proxy for Rep. Steinburg (LA)
Justin Davis, CT, proxy for P. Aarrestad (AA)	Steve Murphey, NC (AA)
Sen. Craig Miner, CT (LA)	Chris Batsavage, NC, Administrative proxy
Jim Gilmore, NY (AA)	Doug Brady, NC (GA)
Maureen Davidson, NY, Administrative proxy	Mel Bell, SC, proxy for Sen. Cromer (LA)
Emerson Hasbrouck, NY (GA)	Ross Self, SC, proxy for R. Boyles (AA)
John McMurray, NY, proxy for Sen. Boyle (LA)	Malcolm Rhodes, SC (GA)
Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)	Spud Woodward, GA (GA)
Heather Corbett, NJ, proxy for L. Herrighty (AA)	Doug Haymans, GA (AA)
Tom Fote, NJ (GA)	Krista Shipley, FL, proxy for J. McCawley (AA)
Loren Lustig, PA (GA)	Chris Wright, NMFS
Andy Shiels, PA, proxy for J. Arway (AA)	Mike Millard, USFWS
John Clark, DE, proxy for D. Saveikis (AA)	Martin Gary, PRFC
Craig Pugh, DE, proxy for Rep. Carson (LA)	

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

Ex-Officio Members

Jordan Zimmerman, Technical Committee Chair	Rene Cloutier, Law Enforcement Representative
Mari-Beth Delucia, Advisory Panel Chair	

Staff

Bob Beal	Mark Robson
Toni Kerns	Jessica Kuesel
Kirby Rootes-Murdy	Mike Schmidtke
Kristen Anstead	

Guests

Rachel Baker, NOAA	Nichola Meserve, MA DMF
Joe Cimino, NJ DEP	Derek Orner, NOAA
Pat Geer, VMRC	Jeffrey Pierce, MEFA
Deb Hahn, AFWA	Sara Rademaker, American Unagi
Jon Hare, NOAA	Jon Siemien, USFWS
Mike Luisi, MD DNR	Abden Simmons, MEFA
Chip Lynch, NOAA	Darrell Young, MEFA

The American Eel Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; Wednesday, August 8, 2018, and was called to order at 8:00 o'clock a.m. by Chairman Martin Gary.

CALL TO ORDER

CHAIRMAN MARTIN GARY: Good morning everyone. I would like to call to order the American Eel Management Board. My name is Marty Gary; I'll be your chairman for the proceedings this morning. The Vice-Chair for the American Eel Management Board is Lynn Fegley; Technical Committee Chair seated to my right is Jordy Zimmerman from Delaware.

The Advisory Chair is Mari-Beth DeLucia from Pennsylvania and the Nature Conservancy. We have two Law Enforcement Committee representatives. We have Mark Robson seated to my left, and also from Maine Rene Cloutier; and it's Major, correct, thank you Rene. Also a couple of fresh faces in our audience today, I know that the management board for menhaden yesterday was introduced, but it can't hurt to introduce a couple of our new folks around the table.

For Jim Estes of Florida, Krista Shipley is seated in the back representing Jim. Then to my left is Justin Davis; the new Connecticut Marine Director. Congratulations, Justin. Then for the Commonwealth of Virginia we have Bryan Plumlee, raise his hand and also we've got Senator Monty Mason. Welcome.

The most important introduction is our staff from ASMFC, Kristen Anstead who is our stock assessment scientist that helped us, and then Kirby Rootes-Murdy who is the species FMP coordinator for America Eel. They put in a tremendous amount of work for the meeting we have ahead of us.

Before we start last point, we have two and a half hours to get through our meeting this morning. If my math is correct we have ten presentations, and we have seven votes to get through the Addendum. I will do my best to move us.

APPROVAL OF AGENDA

CHAIRMAIN GARY: We'll start off with the approval of the agenda. Are there any modifications or additions to the agenda? Seeing none; the agenda is approved.

APPROVAL OF PROCEEDINGS

CHAIRMAIN GARY: Next is the approval of the proceedings from the February, 2018 Board meeting.

Are there any modifications to those proceedings? Seeing none; the proceedings from the February, 2018 Board meeting stand approved.

PUBLIC COMMENT

CHAIRMAIN GARY: Next is public comment for items that are not on the agenda. Kirby, did we have anybody that signed up? Nobody signed up so we'll move from there.

UPDATE ON THE ILLEGAL GLASS EEL HARVEST IN MAINE

CHAIRMAIN GARY: All right, next up is an Update on the Illegal glass eel harvest in Maine. This will be co-presented by Pat Keliher and Rene Cloutier. Pat, I'll turn it over to you.

MR. PATRICK C. KELIHER: Good morning everybody. We are going to try to give some information here on what happened in Maine this spring. But I want to make it very clear that there is still a very, very active investigation going on in regards to the eel harvest. I will not be able to get into a lot of detail.

If you ask questions I'll probably have to defer to the Major; in regards to the investigation. But we

may have to just say no comment at this time; depending on the question. This spring we started to receive some information in regards to the sale of glass eels with the use of cash. Cash has been outlawed in the state of Maine for any transactions of elvers or glass eels.

As you all know, we've got a very good swipe card system in place. There is basically real-time monitoring of individuals quotas, and it has worked fantastic for the last several years. We deal with about 23,000 individual transactions during the course of the season; with very little problems associated with it, as far as technical issues.

Bluefin Data has been a fantastic partner in this; and it's worked great. We started hearing some rumors of cash sales at the end of the 2016 season; none of it was verified. About midway through this season we started hearing some additional rumors, and then Major Cloutier came to my office and reported to me that they had done a plain clothes sale, and that plain clothes sale confirmed the use of cash to go around the swipe card system.

Upon learning of that we expanded the investigation; and after about a week and a half time, after additional consultations with the Maine Marine Patrol, I used my emergency authority to close the fishery. I closed the fishery with over 600 pounds of quota left on the table; 600 pounds at \$2,700.00 a pound was a substantial economic hit to individual fishermen, but we did so to not only protect the resource but to protect the fishery.

To date, we have summonsed three different dealers, and issued 12 different tickets. This is an ongoing investigation as I said earlier, and the focus right now remains the harvester side of the equation, trying to determine which harvesters were selling for cash. We have a good list. That list happens to be just first names; names like Julie and Bob and Al doesn't really help us out a lot. But we're continuing to drill down on that.

We have some tools available to us that are being utilized with our partnerships at the state police and with the FBI; because of potential money laundering issues associated with this. This is a fairly substantial investigation; and one that we're taking incredibly seriously and that I took seriously with my actions to use my authority to close the fishery. With that I don't know if Rene has anything, the Major has anything he wants to add, but I would happy to try to answer any questions that somebody might have.

CHAIRMAIN GARY: Questions for Pat or the Major. Ritchie.

MR. G. RITCHIE WHITE: The three dealers, how many dealers are there, and are dealers all approximately the same size as to volume they handle or is there a wide variety of their volume?

MR. KELIHER: It's a wide range as far as volume that is handled. I would say there are four dealers that are the largest that probably deal with 60 to 70 percent of the overall amount of eels that are run through the swipe card system. I think we had 16, Rene, 16 active and 4 or 5 export. We have regular dealer licenses and then if you want to export them out of state, buy from the other licensed dealers and then export them out of state you have to buy an export license for the tune of \$5,000. There are five of those I believe that were active this year.

CHAIRMAN GARY: Additional questions. Go ahead, John.

MR. JOHN CLARK: Do you have an estimate of how much weight you were looking at here; in terms of how many glass eels this was and how it compared to your overall harvest?

MR. KELIHER: I've got to be careful how I answer this because of the investigation. There was just over 600 pounds of quota left, and the information that was brought to me by Marine Patrol based on estimates of cash sales, would

have put us just at or maybe a tad bit over the quota.

CHAIRMAN GARY: Dan McKiernan.

MR. DANIEL MCKIERNAN: Pat, do you have reason to believe that there were permitted Maine fishermen involved with this, or were these non-permitted fishermen? If they were non-permitted did some of the product maybe come from out of state?

MR. KELIHER: The information we have is they were all Maine licensed fishermen, permitted fishermen. We had some information. Did we have an out-of-state case this year, Rene? We did not have any out-of-state cases this year. We had some information that some licensed fishermen, tribal fishermen, may have gone out of state to try to bring product back; but there were no summonses issued.

Just to quickly add to that. The way they do this is having a swipe card and having a license, so when they're in possession of eels they're legal; because anybody without that license that possessed them on the way to that licensed dealer would have been illegal. What we're seeing is licensed activity here; not unlicensed.

CHAIRMAN GARY: Loren Lustig.

MR. LOREN W. LUSTIG: Could you please comment about the severity of the repercussions that the law would provide, if indeed we are presented with a guilty verdict? Is it sufficient pain that it is not just viewed as the cost of doing business?

MR. KELIHER: Those are all criminal, correct Rene? If you bypass the use of the swipe card it is actually a felony in the state of Maine. It's a \$2,000.00 fine, potential jail and a one year loss of license. But in Maine it is two strikes and you're out. If you have two violations in regards to the elver fishery, you lose your license permanently. It's a fairly strict penalty. One of

the provisions that we are going to bring forward is a one strike and you're out penalty; so if anybody is caught going around the swipe card system, you would lose your license automatically for life.

CHAIRMAN GARY: Are there any additional questions? Before we move on there is one gentleman that came down from Maine who would like to speak; and I would like to provide him that opportunity. This is Representative Jeffrey Pierce, representing the Maine Elvers Association. Jeff, if you could approach the public microphone, and if you could keep your comments to about two minute that would be appreciated.

MR. JEFFREY PIERCE: Good morning. My name is Jeffrey Pierce. I am here today on behalf of the Maine Elver Fishermen's Association. As many of you know the Maine Elver Fisheries had a few problems this year. However, the swipe card system did work. Some buyers tried to evade the system; but once this misconduct was suspected, law enforcement officials were able to compare dealer inventories to the electronic system to prove illegal activity.

This illegal activity was then stopped by Maine Marine Patrol. I am here today to assure this Board that the Maine Elver Fishermen's Association is dedicated to make sure that no illegal fishing or sale is in this fishery. We are currently working with the Department of Marine Resources, DMR, and members of the Maine State Legislature to strengthen the laws for exporters and dealers alike, to be in place for the 2019 season.

The Maine Elver Fishermen and women hope this Board takes into consideration all the hard work that has been done over the last five years in Maine; to make this fishery one of the most compliant on the eastern seaboard. Going forward with Addendum V, we ask this Board would choose Option 2 for the glass eel fishery for 11,749 pound quota, and we hope that

Option 2 for the aquaculture fishery is approved. I will happily answer any questions at this time.

CHAIRMAN GARY: Thanks Jeff. Are there any questions for Jeff? All right, thank you Jeff, appreciate your comments.

CONSIDER ADDENDUM V FOR FINAL APPROVAL

CHAIRMAN GARY: Now we'll move on to our next agenda item, which is Consideration of Addendum V; which will be comprised of six motions we'll need at the end, including one to approve the document.

Before we start, there were two supplemental materials, well one supplemental material, a letter from the state of Maryland outlining the results of their voluntary actions in 2017 to reduce harvest that resulted in, I believe, a 6.9 percent reduction. Hopefully everybody has had a chance to take a look at that.

Then Mitch Feigenbaum sent an e-mail to the Board members weighing in on his thoughts on aquaculture pooling options.

REVIEW OF OPTIONS AND PUBLIC COMMENT SUMMARY

CHAIRMAN GARY: Hopefully everybody has had a chance to look at those. We're going to break down this discussion into three bullets. Kirby will start by reviewing the options and the public comment summary; that will be followed by reports from the LEC, the TC and the Advisory Panel. Kirby, I'll turn it over to you.

MR. KIRBY ROOTES-MURDY: As Marty mentioned, we have a lot to go through this morning; so I'm going to try to go through public comment as quickly as possible. In terms of my presentation outline, just a quick reminder of the status of the stock of the resource, I'll give you all information regarding preliminary 2017 landings data that we have. Then I'll go through the public comment and the management options. As you are all aware, we had a 2012 stock assessment,

benchmark assessment that found that the resource is depleted. In 2017 we went through a process of updating the trend analysis for a number of those surveys; as well as looking at the landings data. The Stock Assessment Subcommittee once again reaffirmed that the resource is considered depleted.

In terms of 2017 yellow eel landings, based on the information we have as of July of this year, the coastwide total was 851,637 pounds; which is below our current coastwide cap of 907,671. I've included most of the states on this table up here, not all states. Some that are not listed either have confidential data or their landings information is considered very preliminary and may change from this point on.

It should be noted that all these landings are preliminary; so they may change slightly between now and this time next year. All right so going over the public comments. The overview, we had 13 public hearings, about 145 attendees, and nearly all those attendees provided public comment.

In terms of written comment, received 104 total. There was one form letter that constituted the bulk of that; 87 signees on that form letter. There were nine organizational letters and seven from individuals. I'm going to go through each of these options that are in the document, and then the public comment specific to it.

For Maine's glass eel quota, as you all are aware there are two options right now. Status quo is maintaining Maine's glass eel quota at 9,688 pounds. Option 2 would increase it to 11,749 pounds; that was what their quota level was in 2014. In terms of the public comment, a majority of those who provided comment were in favor of Option 2.

It should be noted that much of those comments that were in favor of it came from the combined Maine public hearings. There were two public hearings in Maine, and for this table on the

screen right now I combined both of them together. Reasons that were cited were many; specifically in their eyes the resource is not considered depleted that the swipe card system is working well, and the removal of dams in the state has opened up habitat and improved fish passage.

I recommend that you all if you haven't read through the public hearing summaries for both public hearings that took place in the state of Maine. Most of the comments that were in favor of Option 1, status quo, came from the form letter; and they cited the stock assessment and the current total removals of eels as reasons for maintaining the current quota. I will note that for the subsequent options for the yellow eel fishery, those kinds of comments or reasons were cited for that form letter many times.

The next issue item was the proposed options for the glass eel aquaculture plan provisions; there are two options under this item. The first is to either stay status quo that would be Option 1. Option 2 is to change the provisions, as you all are aware, to allow pooling up to 600 pounds for three contiguously bordered states, as well as remove the language specific to where those glass eels are harvested from and what their contribution is to the overall stock. In terms of public comment, a majority of the comments were in favor of maintaining the status quo. In terms of the public hearing comments, most of them came from Maine's public hearing. In terms of those that were in favor of pooling, they noted for the state of Maine that it would provide more stability in the elver fishery; as well as an aquaculture facility could possibly offset some of the need for glass eel harvest.

Again, I recommend reading through the public hearing summary for that. In terms of those that were in favor of Option 1, again they cited the stock assessment current removals as being a main consideration for why the status quo provisions should stay in effect. Next I'm going to go through the yellow eel options.

Remember that there are four different issue items under the yellow eel management and subsequent options under each of them. The first one is the coastwide cap. As you are aware there were four options. The first one was to either stay at the status quo of 907,671 pounds. That is what our current cap is at.

Option 2 would set the cap at 943,808 pounds, which is the median of the 1998 to 2016 landings level. Option 3 would set the cap at the mean of 1998 to 2016 landings, which would be 951,102 pounds, and then Option 4 would set the cap at 836,969 pounds, which is about a 12 percent reduction from the time series average, 1998 to 2016.

In terms of public comment on this issue item, the majority were in favor of Option 3. As you can see, most of the comments that spoke in favor of that came from the public hearings. Reasons that were cited included that the overage in landings for 2016 relative to the coastwide cap should be seen as a sign of abundance, and that increasing the cap is warranted based on that.

This option was the highest coastwide cap option available and that the current abundance of eels in certain parts of the coast, such as the Delmarva Region, has created some problems for fishermen who use crab baits. The prevalence of eels is providing some challenges for them. The second most popular option, in terms of public comment was Option 4.

As you can see, much of that came from the form letter. Again, reasons that were cited focused on the stock assessment and the removals of eels at all their life stages. Next issue item was management triggers. There were three options under this. Option 1 was status quo. As you're aware, we have two components of the management trigger right now; either exceeding the coastwide cap by 10 percent in a given year, or exceeding it for two consecutive years regardless of the overage.

Option 2 is to move to just having that one year exceedance of 10 percent as the trigger, and Option 3 is a two year exceedance of 10 percent as a trigger option. In terms of public comment on this, the majority of comments were in favor of Option 3, the two year trigger. Reasons that were cited were that it would provide the most flexibility and leniency in terms of evaluating the coastwide cap.

The second most popular option, in terms of public comment, came from the form letter; and it was specific to Option 1, maintain the current management triggers. The reasons cited for that were that the management triggers are sufficiently monitoring the resource currently, and may be a better proxy for determining if overfishing is happening. Next issue item is allocation. Remember there are five options under this. I will try to go through these as quickly as possible. Option 1 as you're all aware, this is what the state-by-state allocations would be under Addendum IV if we went to state quotas.

Option 2 has two suboptions, and both of these would do away with having state-by-state quotas. Option 2A would create an equitable reduction scenario, where all states would have to take a reduction. Option 2B would apply a 1 percent rule, so those states that harvest less than 1 percent of the coastwide total would be held harmless, and those states harvesting above that would be responsible for the reduction.

Option 3 offered a modified set of quotas off of what was in the Addendum IV. There was specific criteria focused on landings in recent years, the last five years, and those minimally contributing states or those states that currently have 2,000 pounds would see their quota reduced. Whereas those states that have a higher harvest in recent years would see more of that quota go to them.

Option 4 had two suboptions; these were time series averages of yellow eel landings. Option 4A

would set quotas based on the last ten years from 2007 to 2016. Option 4B would set quotas based on average landings over the recent five years. Then Option 5 similarly had two suboptions.

This approach would take a weighted time series average; so 50 percent would be devoted to the full time series of 1998 to 2016, and then the other 50 percent would be to either the most recent ten years or the most recent five years. For this option, or this issue item, we received probably the most dispersed comments.

The majority was in favor of Option 5B, but as you can see there were a number of comments that were also in favor of Option 4B. In terms of reasons cited for selecting or choosing these options, almost all public comment focused on, the option either gave their state the best quota scenario, or it provided their state and others the potentially best quota option available.

The last issue item was the transfers. Option 1 would maintain that there is no ability to transfer quota if we went to a quota system after the calendar year ended, so after December 31 no transfers would be allowed. Option 2 would allow for transfers to extend up to 45 days after the season ends, so February 15. This is similar to what is in place with the black sea bass fishery management plan.

In terms of public comment, there were an overwhelming majority of people in favor of Option 2, extending the quota transfer provisions if we went to state-by-state quotas to allow up until February 15 for those to happen. Most of the reasons cited were the increased flexibility this option afforded the states, and doing the accounting and ensuring that they stayed within their quota. That wraps up the public comment that we received on this Addendum. I just have this slide up here now to show again that when we get to the Board's consideration of this draft Addendum V, this is the order we're going to go through each of these issue items, and then in

turn vote on options on them. With that I'll take any questions.

CHAIRMAN GARY: John Clark.

MR. CLARK: Not so much a question, but a comment. You had up there the cap at 907, yet that has been revised to 916, right? At the hearings you told people it was 916,000 pounds was the actual status quo.

MR. ROOTES-MURDY: No, I didn't. What the 907,671 is the status quo. We can't revise a status quo based on new landings data. If you look at the same timeframe that was used to make that coastwide cap of 907, the updated data is now showing that that would be 916,000. If the Board wanted to select a coastwide cap option that differed from these, because of the range they could select 916,000, but it's not what the new status quo is. Does that make sense?

MR. CLARK: Okay, I got it. In other words, if we vote on straight status quo here it would still be 907; but if we wanted to use the actual revised status quo, which is the actual landings, it would be the 916, got it.

CHAIRMAN GARY: Jim Gilmore.

MR. JAMES J. GILMORE: Kirby, on the slide for the 2017 harvest you said that you didn't have all the landings, and some of them were still I guess estimates. I guess you're feeling that we're going to stay under the cap, or do you have any idea if we're going to go over it or not?

MR. ROOTES-MURDY: The states that we don't have landings on this table right now are Massachusetts, South Carolina and Georgia. South Carolina and Georgia have generally very, very low harvest of yellow eels. Massachusetts in the last ten plus years has had a very low harvest as well. I can't say whether or not that any of these state landings would be significantly revised; but based on the information we have

right now, it doesn't appear that the coastwide cap would be exceeded for this year.

CHAIRMAN GARY: Further questions for Kirby? Rob O'Reilly.

MR. ROB O'REILLY: On that same theme. Kirby, can you comment on, there was a working group that met several times through conference calls, and one of the things that occurred was a revision, which I think about half the states needed to revise their landings. The reason I bring that up. Throughout the document there are certain elements of the Addendum which speak to the fact that it's a little different for American eel to gather those landings.

Although ACCSP helped an awful lot, and got us to the point where we finally all had landings that were in some cases, for about half the states I think, different from what is in Addendum IV. Nonetheless, this situation for American eel is one where in some states for example, it is not a marine waters situation. I'm just wondering if you can, I'll talk about that later too. But can you comment on the process that was gone through with the working group to finally resolve what the landings actually were?

MR. ROOTES-MURDY: As Rob mentioned there was a working group that was formed to help develop this draft Addendum, and so last year 2017 in the fall through the early part of 2018, we went through a process of asking all the states to confirm the landings information that was laid out in Addendum IV, so the previous addendum. The states went through a process of being contacted by ACCSP to validate those landings.

For a number of states, including Virginia, it was determined that there was landings data that had not been considered before because of the inland fisheries versus marine fisheries agencies. There were a few states that saw their landings changed quite a bit; for others it was not significant. We have been working to get those

updated landings into ACCSP, and so as of now we have the most up to date information we have on the yellow eel landings.

CHAIRMAN GARY: Additional questions for Kirby? Next up will be reports from the LEC, TC, and the AP. We'll start off with Mark Robson for the LEC. Mark, if you could take it over.

LAW ENFORCEMENT COMMITTEE REPORT

MR. MARK ROBSON: Good morning everybody. The Law Enforcement Committee had a teleconference on June 28. We provided written summary to you for the reading and some more details, so I'll just go over the highlights. But with regard to the Addendum, we focused our comments on two of the key issues for law enforcement questions; the first being the changing of the glass eel quota.

The Law Enforcement Committee consensus was that it had no real specific concerns regarding raising the quota or leaving it where it was that would impinge on any enforcement resources or capabilities. With regard to the aquaculture provisions, there were a lot of questions and some confusion about the proposal to have a pooled aquaculture harvest allowance of 600 pounds for multiple states.

Given the nascent character of this industry, and the fact that it's currently only two states have any kind of legal harvest at this time. However, there weren't any necessarily complicated enforcement issue that we could foresee as a result of allowing this pooled harvest among contiguous states.

There could be some enforcement problems in those states where eels are being harvested and then moved across state lines to a facility as part of the pooled quota; particularly if that state didn't have any otherwise legal harvest. At this point they didn't foresee any overwhelming problems that couldn't be addressed. I think that really addresses the two main issues with regard to the Addendum, Mr. Chairman.

TECHNICAL COMMITTEE REPORT

CHAIRMAN GARY: Questions for Mark. All right then, we will then turn the next presentation to the Chairman of the Technical Committee, Jordy Zimmerman from Delaware, to provide the TC report.

MR. JORDAN ZIMMERMAN: Hello everyone. We met back in July to discuss Addendum V and a couple other issues; among those Maine's aquaculture proposal. Generally the TC recommendations regarding draft Addendum V. We discussed the language regarding maturity in the yellow eel fishery, a statement that was in the Addendum in your meeting materials, harvest overages, aquaculture pooling across states, and the language regarding minimal contribution regarding the aquaculture plan. The first issue before us that we discussed was the following statement. American eels reach maturity at a younger age and smaller size in estuarine water than in fresh water.

The 19 year time series of landings likely represents at least two generations of estuarine yellow eels that have been exposed to the yellow eel fishery. The TC recommended finding a different citation for the first statement, as the cited work from John Clark who is a board member with us today, described landings information but did not address sex or size at maturity. I think there were some inferences made there. John, if you care to speak to those.

MR. CLARK: Yes, exactly Jordy. What I had done in the discussion, of course it's correct. I did not actually specifically address sex or size at maturity. But based on the information that I did get from the landings information about their sizes, and the ages we were seeing in the catch.

I made inferences in the discussion that the reason that we saw so few older eels in our estuarine catch is that they were maturing at those ages. That was all based on inference, and it was just because I had very little time to get

this together for the Addendum. I did not do a full literature search. I'm sure there are other papers out there that might be better at addressing this concern.

MR. ZIMMERMAN: Yes, and I think there were several TC members that understood what you were saying and agreed with it. You know I looked around a little bit and there is some research that specifically deals with this; although I did not come across anything from the Mid-Atlantic region, but we can continue to look into that.

Regarding harvest, the TC was unable to assess the impact that yellow eel harvest overages or increased Maine glass eel quota would have to the resource. The TC generally recommends no increases to landings; given the most recent stock assessment update. Regarding these overages of the cap, the TC felt that seasonal restrictions could be used to address overages; and should be viewed on a case-by-case basis to determine the reason for overages, and potentially address them with one or more jurisdictions as appropriate.

I think most of you are probably familiar with some of the actions Maryland put in place this past year; to ensure we didn't go over the cap. That is generally what I'm referring to and the TC is referring to in this statement. Pooling of harvest for aquaculture purposes, the language in Addendum V did not clearly specify that states can only contribute 200 pounds to 600 pounds of glass eel harvest.

It could potentially come from one state, the entirety, 600 pounds in its entirety. Again, we defer to the general feeling on the TC that given the stock status, any increase in landings at any life stage could negatively impact the stock. The TC also believes that the term "minimal contribution" in regards to the aquaculture plan; it's too vague.

We have difficulty evaluating that when we're asked to comment on these proposals. We crafted language to include in Addendum V in place of this afore mentioned language. I'm going to take the time to read this to you. Specifically, states in jurisdictions may develop a plan for aquaculture purposes. Under an approved aquaculture plan states and jurisdictions may harvest a maximum of 200 pounds of glass eels annually from within their waters for use in domestic aquaculture facilities. Site selection for harvest will be an important consideration for applicants and reviewers.

Suitable harvest locations will be evaluated with a preference to locations that have 1. Established or proposed glass eel monitoring. 2. Are favorable to law enforcement; and 3. Watershed characteristics that is prone to relatively high mortality rates. Watersheds known to have features such as impassable dams or limited upstream habitat, limited water quality of upstream habitat and hydropower mortality that would be expected to cause lower eel productivity, and/or higher glass eel mortality, will be preferred targets for glass eel harvest.

This is not an exclusive requirement, because there will be coastal regions with interest in the eel aquaculture where preferred watershed features do not occur, or are not easily demonstrated. In all cases the applicant should demonstrate that the above three interests were prioritized and considered.

We were given an update on the Maine Life Cycle Survey. Their location is the Cobbosseeconte Stream. Sampling gear for each life stage, with glass eels it was fykes, and they were located near the confluence with the Kennebec River, and they also monitored an eel ramp at the first dam. There are a total of three dams on this stream.

For the yellow life stage, it was a combination of baited pots and electrofishing. For the silver stage, again they employed fykes and some

DIDSON monitoring at one of the dams. Some of the results, they had good catches of glass eels in both gear types. Yellow eel catches were better in 2017. They had made some modifications from 2016 to their sampling gear to reduce escapement.

No silver eels were captured in fykes nor identified from DIDSON monitoring. Three dams on the lower portion of the stream, which I mentioned previously, appear to be limiting eel expansion and catch further upstream. Sampling is planned for 2018, but may be impacted with some in-water work throughout the Basin; namely a bridge replacement and a siphon hose associated with that at West Harbor Pond.

The TC was satisfied with Maine's effort in conducting the survey. We had one recommendation and that was increasing the number of pot sets and reducing the set time from 48 to 24 hours; to generate more useful CPUE and mark recapture data. I would like to expand on that just a little bit, because it is somewhat confusing.

Reducing soak time to generate more useful CPUE data, for those of you that aren't familiar, baited pots in the eel fishery, once the bait is gone the eels start to leave the pot. The TC thought that reducing soak time may take care of that issue and give us a little bit better data on that. With that I'll take any questions.

CHAIRMAN GARY: Thank you, Jordy for your report. Do you have any questions for Jordy? Pat Keliher.

MR. KELIHER: Jordy, thanks that was a great presentation. This is just a comment on your last slide. The recommendations for the TC on the Maine Life Cycle Study, we've accepted those recommendations and have already started to implement those this year.

CHAIRMAN GARY: I've got Rob O'Reilly and then Dan McKiernan.

MR. O'REILLY: One question is, the Technical Committee recommended no increase in landings, and we now know that the Addendum IV landings were incorrect. Was there a discussion about which set of landings that applied to? That is one question.

MR. ZIMMERMAN: We did not discuss that during the call.

MR. O'REILLY: Okay, second question if I may, Mr. Chairman. A different question is you just had information up about CPUE. Can the Technical Committee if they have data from a lot of the states, determine the difference between availability and abundance through CPUE? The reason I ask, I don't think in Virginia we have really, we're working on it.

We haven't really submitted catch per trip, catch per harvester over time, and then further you would want to look at the seasonality. Is there a way that depending on the seasonality, the months in the season that the Technical Committee would be able to tell us what is a distinction between abundance through CPUE and just availability?

The reason I'm asking is when I look through the Addendum V, it does at some point the states are going to have to figure out ways on a case-by-case basis the way it's listed in the document, to figure out what are the best methods to reduce harvest. Certainly if the Technical Committee can better in the future tell us about how to use CPUE, and Maryland seems to have gotten a leg up on this with what they did in 2017 to reduce. Then we might be able to better manage our efforts that way. Has there been any discussion about that in the Technical Committee?

MR. ZIMMERMAN: We have not. To answer your question, this is my opinion. Since we have not discussed this at the TC level, I think Maine's Life Cycle Survey represents a little bit different situation than CPUE that is calculated from the commercial fishery. We have different variables

that effect CPUE in the commercial fishery, fishing power and knowledge of the fishery, different bait types would probably be first and foremost, actually.

With this Life Cycle Survey, baited pots and conducted by fisheries biologists, bait can be standardized, soak times can be standardized. Conceivably we have less issue with the accuracy of the reporting. I think it's a start. I think the hurdle would be trying to get some kind of standardization in the commercial fishery, regarding reporting this type of information.

CHAIRMAN GARY: Dan.

MR. MCKIERNAN: In the Draft Addendum V there was two options under the glass eel for domestic aquaculture development; one is status quo and the other is pooling. But you appear to present a TC improvement over what's in Addendum IV. I guess my question is to Marty. Is it possible for us if we were to vote status quo under 3.2 that we could also adopt the new TC language? Is that the intent?

MR. GARY: That would need to be specified in the motion though, Dan. Additional questions for Jordy? John.

MR. CLARK: Thanks for the presentation, Jordy. Just a clarification on the language that was suggested by the TC for the Life Cycle Survey, you say that the harvest locations should have established or proposed glass eel monitoring. You're not talking about like the sites the states are already using for glass eel monitoring, or this would be just a site that even if they're taking glass eels from there they would have to monitor the site?

MR. ZIMMERMAN: If I recall accurately, and Kirby or Kristen, correct me if I'm wrong; as they were on the call too. I think the general thought was if there is already a monitoring site established there, maybe that would help us deduce if this 200 pounds would be impacting

the current stock, the current abundance in that particular watershed or river.

MR. CLARK: I guess follow up. In other words, a site that a state has been monitoring, if it met the other conditions you would recommend that as being a place to take the 200 pounds of glass eels for aquaculture?

MR. ZIMMERMAN: I think ideally yes, if we have some monitoring going on in that river to maybe offer ancillary information and inform this decision a little bit more; and the impacts of that decision.

CHAIRMAN GARY: Any final questions for Jordy? All right, thank you Jordy for your report.

ADVISORY PANEL REPORT

CHAIRMAN GARY: Our next report is Mari-Beth DeLucia for the American Eel Board Advisory Panel, Mari-Beth.

MS. MARI-BETH DeLUCIA: Hello. The AP met by phone on June 28, to talk about Addendum V, the Maine Aquaculture Proposal, and also to receive some updates on an international eel workshop. I'll just talk about the Draft Addendum V here until the next round. The Maine glass eel quota, one thing I probably should point out is there were only three AP members on the call.

I kind of split it out, since it was pretty easy to split out the options. Two members were in favor of Option 1, the status quo of the 9,688. There were some concerns about the poaching with the news of the illegal harvest, and also that raising the quota would go against the advice to reduce mortality on all the life stages from the 2012 stock assessment.

One AP member was in favor of Option 2, raising the quota to 11,749 pounds. They stated Maine's quick response in dealing with the illegal harvest, and that Maine has a good handle on the fishery. For glass eel for the aquacultural provisions, there was unanimous support from the AP for pooling of the aquaculture harvest allowance.

The AP suggested it would spread the impact, and that 200 pounds are just not enough for a business to operate sustainably. There were some concerns noted that frustration that Option 2 did not include states pooling to complete a new Life Cycle Survey. I think they felt that Maine has to do it and that the wording didn't suggest that the other states pooling would have to do that Life Cycle Survey. Kind of following on the Law Enforcement Committee, the enforcement to transfer across state lines was a concern and how that would be handled. For the yellow eel the coastwide cap, two members supported Option 4, the 12 percent reduction of the time series from the 1998-2016 landings.

It's in line with the previous recommendations of the TC in 2014, and in light of the 2012 stock assessment. Both AP members second choice if Number 4 wasn't chosen would be Option 1, the status quo. One AP member supported Option 3, suggesting the historical fishery averaged closer to 2 million pounds annually, and genetics research indicating a significant breeding population.

Their second choice would be Option 2, median of the 1998-2016 landings. Regarding yellow eel management triggers, all AP members supported Option 3, the two-year exceedance of the coastwide cap by 10 percent. We all felt that it would buffer fluctuations in landings and make it easier for the states to manage the fishery.

State allocations on the yellow eel, one AP member indicated the preference for Option 1, status quo, and a strong opposition if I recall to Option 2. The other two AP members, including myself, had no preference due to the complexity. It made my head hurt to read it. Regarding the yellow eel transfer. All three e-mails supported Option 2, extending the quota transfers until February 15, allowing more time for overages and get quota transfers; allowing the states more flexibility, basically. That's it, questions?

CHAIRMAN GARY: Questions for Mari-Beth? Lynn Fegley.

MS. LYNN FEGLEY: Just out of curiosity, can you elaborate on the reasons why the strong opposition to Option 2, which I believe is the no state-by-state quotas?

MS. DeLUCIA: which one was it, I'm sorry?

MS. FEGLEY: I think it was on the allocation, and it was strong opposition to Option 2, I think is what your slide says. That would have been Issue 3.

MS. DeLUCIA: It wasn't me. Do you remember, Kirby? I don't.

MR. ROOTES-MURDY: I don't recall.

MS. DeLUCIA: I don't remember a reason, just a strong opposition to it but I don't remember why.

CHAIRMAN GARY: John Clark and then Dennis Abbot.

MR. CLARK: Thank you, Mari-Beth. I was just curious. I didn't catch if you said it. The three people who were on the call, what is their relationship to the eel resource?

MS. DeLUCIA: Sure, one was Mitch Feigenbaum, and the other one was Dave Allen from Maine, and me.

CHAIRMAN GARY: Dennis.

MR. DENNIS ABBOTT: Thank you Mari-Beth for a good report. The one thing that struck me was the fact that you only had three folks, and I was wondering if Kirby or yourself could tell me how many members are there on the AP at the present time, without me looking it up.

MR. ROOTES-MURDY: Yes, I would have to look it up, but all states within the management unit,

whoever declared interest, have the ability to have an AP member, Ball Park, at least 15.

CHAIRMAN GARY: Other questions for Mari-Beth? All right, thank you Mari-Beth for your report. Before we move into consideration for final approval of draft Addendum V, I do want to give the Board members one last bite at the apple to ask questions of Kirby, Mark, Jordy or Mari-Beth.

Just realize that this is your opportunity to assimilate information, get your questions answered. Once we shift into this next part, we want to focus all of your energy toward hopefully developing some motions to address these different options. I just want to give you one last chance if you haven't gotten a question answered. Justin.

MR. JUSTIN DAVIS: This is a question for the Technical folks. You know I understand when it comes to assessment of this species we're in kind of a data limited situation; and that there has been a recommendation to reduce harvest at all life stages.

I'm wondering if there is anything from the assessment or the literature that was reviewed as part of the assessment that would give any indication of whether future population status would be more or less sensitive to harvest at different life stages. For instance, would increased harvest at the glass eel phase versus the yellow eel phase be more likely to keep the population at a depleted status, or is there just no way of knowing?

MR. ZIMMERMAN: I think I understand what you're saying, and if we're going to exert more effort in one direction or the other regarding the eels life history and life cycle. I think there are plenty of people that could argue all three stages, argue for or against. But I think not taking the easy way out here, but I think it would be really hard to determine whether you're taking young of the year, whether you're taking something like

a silver eel that may have spent you know 20 or more years in a freshwater habitat.

We don't fully understand the impacts that the eel parasite, the swim bladder parasite is having. Would we be saving all these silver eels just to not make it back to the Sargasso and spawn? I mean interesting question, but one that I wouldn't feel comfortable giving you a definitive answer on.

CHAIRMAN GARY: I have Lynn Fegley.

MS. FEGLEY: Thank you to you all, and I'm not actually sure exactly who this question is for, but I'm still trying to wrap my head around the aquaculture pooling; and the glass eel piece remains a little bit mystical to me. I wonder in the aquaculture, is it difficult to purchase those glass eels from the current glass eel harvest in Maine? Maybe it's a question for Pat. Why is it necessary, I'm just wondering what is the advantage over the pooling of states to just purchasing those eels for aquaculture from harvesters in Maine?

MR. KELIHER: Lynn, I think some of those questions will be answered during the presentation on the Maine Aquaculture Proposal. It's not difficult to purchase those eels, it's just damn expensive. That is sort of what it comes down to. I think the idea is to, with these whether pooling or buying, just dealing with one state. The idea is to be able to, I hate subsidies, but subsidize an operation to help get it off the ground and get it moving forward.

CHAIRMAN GARY: Mike.

MR. MICHAEL BLANTON: Before we jump into the Maine glass eel quota issue. I guess I have a question, a clarification question for Kirby or maybe Toni about FMP convention. It's not so much about the quota itself, but about overages. If I refer back to Pat's presentation about the situation in Maine, it sounded like they had evidence that there was an issue last year also.

I know it's not useful sometimes to talk about hypotheticals, but for clarities sake. If the investigation were to show that a significant harvest occurred in 2017, illegal harvest that resulted in an overage of their 2017 quota. I don't know, I guess I'm asking for clarification. If an overage is documented, and a large component of that overage is an illegal harvest, is a state held responsible for that or accountable for that in the next year, or are they indemnified against the penalty for illegal harvest that is well documented?

MR. ROOTES-MURDY: I'm trying to pull up right now Addendum IV, but my understanding is that the quota provisions generally are that if there is an overage it's a pound for pound payback. Where it gets a little confusing is regarding whether this is illegal harvest that's happening. We have this for a number of fisheries where if a legal harvest of say summer flounder, or say black sea bass are counted against the state's quota. We don't normally do that. But I'll maybe look to Toni if she has any other additional thoughts.

MS. TONI KERNS: We actually talked about this a little bit at Executive Committee, and it depends on the state. Some states will put illegal harvest towards their state quota, and others do not. It's something that we're going to collect information on what each state does, and then come back and have a conversation, including in that conversation NOAA.

Potentially the Fish and Wildlife Service, and particularly NOAA though for those species that are jointly managed. I would turn to Pat to ask him if the landings will be counted within the state's quota, because if it is then it would be a pound-for-pound overage. Since the '18 fishery has already occurred, then it would come out of '19s quota once we had the final information.

CHAIRMAN GARY: Pat.

MR. KELIHER: Thanks for the question, Mike. When Marine Patrol seizes any illegal eels, Marine Patrol Officers actually carry a swipe card. Because we don't know the source of those eels, and for bio-security issues if they came from out of state from waters where we don't want bad stuff brought into the state of Maine.

We actually swipe those cards and actually sell them and libel that product. Those eels are then counted towards the overall quota. The situation that we had last year, it is as I said earlier, it is an estimate and I closed the fishery. We could have gone, you know we could have gone over there is no question.

But it is not known. If the investigation leads to a point where we have direct evidence of that weight, then we would report those eels as part of the catch, even though they were around the swipe card system. If we are over, then we would deduct that overage from the following year; as the FMP states.

CHAIRMAN GARY: Tom Fote.

MR. THOMAS P. FOTE: Toni, I'm happy to hear that we're basically doing that. We've had this problem ongoing, whether it is summer flounder, whether it is striped bass or dealing with illegal catches, and where do we basically take the quota off? Most of the time we just forgive it, especially the large ones where there was one a couple a million pounds, so we really need to figure out how we're going to deal with those issues.

CHAIRMAN GARY: Additional questions. John Clark.

MR. CLARK: This is just following up on the glass eel issue. I've been thinking about that contiguous states, and I saw that I think a lot of the attendees at the hearings were fine with the idea of states pooling quota. But I know informally I've heard that it probably wouldn't be real popular.

Like for Delaware to give 200 pounds to another state, Maryland, New Jersey or whatever. I'm just curious, for example with Maine. I saw New Hampshire and Massachusetts didn't have public hearings on this. I'm just curious if those states, if they were approached about 200 pounds of glass eels going to Maine, if they would be favorable to something like that.

CHAIRMAN GARY: Cheri.

MS. CHERI PATTERSON: New Hampshire currently has rules in place that don't allow the harvest; so we would not be able to participate in that process.

CHAIRMAN GARY: Thanks, Cheri. Dan, did you want to comment on the Commonwealth, their perspective?

MR. McKIERNAN: Well, same deal. We have a \$10,000.00 fine for the possession of any elvers, so we wouldn't be able to harvest them. The question is would we do it on paper? We would have to take that back to our Commission.

CHAIRMAN GARY: Does that answer your question, John? All right, last call for questions. Ross.

MR. ROSS SELF: That pooling question sparked something, a fault, something Dan said. If three states were to pool their 200 pound aquaculture allocation, I guess the question is it expected that those 200 pounds of glass eels would come from each of those three states physically, or would one state be able to take 600 pounds from their territorial waters?

CHAIRMAN GARY: I'll turn this to Kirby.

MR. ROOTES-MURDY: Ross, as I think you're aware, the draft Addendum V leaves open the possibility that if this option were to be approved, those three states could determine how they wanted to handle that harvest. If they

wanted to have it all take place in one state they could do that. If they wanted to have it spread across each of those three states they could also do that. It would be at those state's discretion what they want to put forward in a proposal for the Board to consider for approval.

MR. SELF: Thanks, Kirby.

CHAIRMAN GARY: I would like to move on, and given the time. We've been on schedule for the most part but go ahead and wrap up and move on to the next step, which is consideration of the final approval for Draft Addendum V. Before I do that just thank you to Mark, Jordy and Mari-Beth for their hard work, and also I was remiss in providing acknowledgements.

Rob O'Reilly reminded me that there are a lot of folks on the Board that contributed their time to the workgroup that met on multiple teleconferences to put together draft Addendum V for our consideration today. My final miss today was Sarah Ferrara is here for Representative Sarah Peake; so I wanted to welcome and thank you for your attendance.

CONSIDER FINAL APPROVAL OF ADDENDUM V

CHAIRMAN GARY: We'll move on to consideration of draft Addendum V. Again, we want to focus our energy on putting together – hopefully our questions have been answered – and developing some motions related to the options specifically. The first one up will be Under Section 3.1 proposed options for Maine's glass eel quota. We've got a couple of different options there, status quo, and we had one for Maine quota Option 2 of 11,749 pounds. I look for some proposal. Pat.

MR. KELIHER: I have a motion that I sent to staff; if we can get it on the board. If I get a second I'll give that some rationale. **Move to conditionally approve Section 3.1, Option 2: Increase Maine's Glass Eel Quota to 11,749 pounds, pending the**

strengthening of Maine laws governing the elver fishery.

Changes shall include but not be limited to, the chain of custody of elvers from harvest to export, thus ensuring the swipe card system cannot be bypassed. Maine would be required to report back to the Law Enforcement Committee; which would make a recommendation to the Eel Management Board at the 2019 summer meeting for Board consideration.

CHAIRMAN GARY: Do we have a second to that motion? John Clark. Go ahead, Pat.

MR. KELIHER: There is a lot of history here. There is also a lot of new Commissioner's around the table since we've started to debate this issue. Maine has had a glass eel fishery for more than 40 years; and in fact because of the importance of this fishery locally, we ended 98 percent of our silver eel fisheries in the '90s.

Later in the '90s, we thought the gold rush had hit when the prices jumped to \$300.00 a pound for elvers. We're now at \$3,000.00 a pound for elvers. Maine responded back in the '90s by creating a limited entry system, controlling the amount of gear. In fact that resulted in 75 percent reductions of both licenses and gear.

Prices then dropped back to around \$50.00 a pound; and then the fishery went quiet. In fact people actually gave up their licenses during that timeframe. But you fast forward to 2012, Maine glass eel landings hit an all-time high of 21,610 pounds. I will be very frank here; it was probably closer to 40,000 pound, because of the cash sales associated with this fishery.

Maine spent a tremendous amount of time and energy tightening up the laws and regulations around this fishery; to ensure that the poaching problems were taken care of. Over the next two years we worked in concert with this Board. The Department of Marine Resources responded by

instituting a voluntary reduction of 35 percent from the 18,000 pounds that was landed in 2013; and established a glass eel quota of 11,749 pounds, which we're asking to go back to today.

Maine instituted individual fishing quotas. Penalties were removed from civil and moved up to criminal. The two-strike provision that I talked about earlier was put into place; and we now have the ability to permanently revoke licenses. We now have a system in place that was bypassed this year; but it is one of the strongest reporting systems for any fishery that is in place today.

With the implementation of Addendum 4, the elver quota though was cut to another 11 percent; reducing our quota down to 9,600 pounds. Since the implementation of that glass eel quota, landings have tracked very close to that quota; with the exception of one year where we had a very significant weather event in the spring, a very late winter and then significant weather events in the spring, which reduced landings down to 5,200 pounds.

Since 2014, we've been able to effectively track the individual quota with approximately 900 active harvesters each season; as well as the overall quota with greater accuracy and confidence, until some very greedy fishermen, who didn't think \$3,000.00 a pound was enough money. That has put us into the situation we're at today. Maine continues to invest heavily in this fishery. The Life Cycle Study that we have in place costs \$100,000.00 a year to operate.

We approve nearly \$60,000.00 in overtime during the spring for Marine Patrol activities; not to mention the investments in both science and policy. We also have provisions in Addendum IV in regards to habitat improvements; and the state decided not to bring anything forward on that. But I do want to make sure it's clear that tremendous work has been done on the habitat side. Since 2012, three dams have been removed; and another 20 fish passage facility

have been built or improved. The state, in cooperation with the Maine chapter of the Nature Conservancy, also has done a tremendous amount of work cataloguing and inventorying the road crossing issues that we have. TNC has catalogued 25,000 road crossings; and to date 500 of those at the bottom of the drainages, the first in line as far as passage, have been restored.

All of this work has gained five to six thousand miles of access to habitat that was previously blocked. There is also an access bond, for road crossing improvements that has been put in place by the Department of Environmental Protection. They've earmarked 5.4 million for culvert upgrades; and they've awarded 72 grants.

There is an additional several million dollars that will be put on the table today. I put all this information on the table today, Mr. Chairman, to show this Board that the state of Maine takes fish passage and the promulgation of our elver fishery very, very seriously. With that in mind I would urge members of the Board to support this motion.

CHAIRMAN GARY: I'll open it up to discussion, but before we do the way the motion is written, do I understand that the earliest this could be implemented would be spring of 2020?

MR. KELIHER: That's correct.

CHAIRMAN GARY: I'll open it up for discussion to this motion, Board members. Tom Fote.

MR. FOTE: We got into this discussion early in the '90s when New Jersey had problems with the glass eel fishery, and we're always wondering how we basically would estimate what effect it was having. We still haven't come up with a great way of producing what the effects of harvesting 40,000 pounds of glass eels in one year will be; because it will take 20 years or 15 years before those eels, we see the effects of them when they go out to reproduce.

I'm always very cynical when we cannot estimate what damage, or what we are taking out of the resource; how it's going to affect the resource 20 years from now. It has always given me great concerns; especially on the glass eel side. I'm having a problem raising any quota on glass eels; until I know what the effects will be.

Because 20 years from now I will not be sitting around this table at that age, because I'm not going to be here at 92, unlike Dave Hart who was here at 92. But I'm not doing that and I don't want to leave that consequence to somebody else. I'm still skeptical about approving any increase in the glass eel harvest; until we have a better handle of what the problems were.

CHAIRMAN GARY: Roy Miller.

MR. ROY W. MILLER: I too share Tom's concerns with the proposal. I would like to state up front that I'm impressed with the efforts that Maine has gone through to strengthen their reporting; and their monitoring of this fishery, and their efforts towards enhancing fish passage. Nonetheless, our only advice from the stock assessment scientist through two assessment cycles was that this stock remains depleted. Also, we don't know what the effect of harvest of Maine glass eels would have on the rest of the east coast glass eel relative abundance; if any effect. The TC reiterated again today, they are not able to separate out those sources of pre-spawning mortality, to tell us which life stage is the more significant one; in terms of harvest, for those general misgivings, I kind of favor status quo.

CHAIRMAN GARY: Dennis Abbott.

MR. DENNIS ABBOTT: I applaud the work that Pat Keliher has done. In fact I sent him an e-mail when he closed the fishery for what he did. I think it was a good bold move. But it also shows the fact that there are problems in Maine. We were assured that the swipe card system would

make all these problems go away; and they would be able to track things.

But with the value of the glass eel fishery being as high as it is, there is no doubt that there is going to be individuals who are going to try to beat the system; both in the state of Maine and outside of the state of Maine. You know everyone talks about the fact that there is poaching going on here and there.

I think we also know the difficulty that law enforcement officers in all states, and especially, well not especially in Maine, but in Maine what percentage of offenses do they catch the offender? You know it's always a very difficult task for them to make a case against anybody. I'm sure that the investigations were thorough; but in my mind there are surely a lot of bad actors out there that have beat the system. **In view of that I would like to substitute motion to accept Option 1, Status Quo.**

CHAIRMAN GARY: Thanks Dennis, we have a substitute motion for status quo. Is there a second to that? Roy Miller. We have discussion on the motion. I'll go to Craig Miner and then John Clark.

SENATOR CRAIG A. MINER: I had some questions that I wanted to direct to Pat. But in light of this substitute motion it wouldn't be appropriate for me, I don't think, to direct those questions. I wonder if the maker of the motion would temporarily withdraw it to allow the people that had some questions trying to reach a decision on the original motion.

MR. ABBOTT: Thank you, Senator Miner. First of all the motion that has been made and seconded no longer belongs to me; and whatever questions you have, I think the Chair could decide whether they're appropriate or not. I think the Chair would allow you the latitude probably to ask whatever questions are on your mind. I'll leave that to the Chair.

CHAIRMAN GARY: Senator, I think we can entertain your questions.

SENATOR MINER: My first question has to do with whether there would be any new revenue generated to the state of Maine. I've kind of watched what's occurred in the state of Maine over the last five or six years in this fishery; and have been impressed. I think many of us around the table, in one way or another, have not either appropriated the dollars or have chosen other obligations, unlike the state of Maine. I think the state of Maine has taken the eel fishery very seriously. With this additional expanded harvest, is it anticipated that there might be some additional revenue to the state of Maine; as a result of the additional poundage?

MR. KELIHER: Not directly. Maine has already instituted an increase in license fees. We've already put in place; I mentioned the very high price of dealer license, especially the export license. There is also a surcharge on research that is attached to the license as well; so those were all just put in place in the last four years. There are conversations about an additional license increase associated with this next set of laws that will be debated at the legislature. That would be the only new revenue to the department; based on any change that would be forthcoming.

SENATOR MINER: In terms of the illegal activity, is it anticipated that that may also include some increased penalty; certainly not for the one that has already occurred, I suspect, because I think that would be retroactive. But on a go forward basis, it almost seems like \$2,000.00 doesn't even equal a pound; based on the current structure of sales. Is it conceivable that that penalty would also increase within the timeframe between now and 2020?

MR. KELIHER: We have found that fines are not the deterrent in the state of Maine. We have revamped our penalty structure associated with license suspensions; and not fines. You get a \$2,000.00 fine at the port, somebody walks in

and says I can only afford to pay \$10.00, and they go on a payment plan. They come to see me they lose their license.

We have an administrative process that allows us to very quickly take licenses and remove people from the water. Somebody with a say a 40 pound quota that is caught and receives a one-year suspension, well 40 times 3,000 is a significant penalty; and that's the approach that we take in the state of Maine. Just to reiterate, we do plan to put a department bill in that would go to a one-strike component for this fishery. There are a lot of really good people in this fishery. But I would hate for a few of the bad people to ruin it for everybody else.

SENATOR MINER: Thank you, and thank you Mr. Chairman.

CHAIRMAN GARY: We are getting a little bit tight on time; but what we're going to do is take three more. I have John Clark, David Borden and Cheri Patterson, and I would like to call the vote.

MR. CLARK: I didn't realize I would be a dueling Delaware second here. But I supported Pat's motion because I've seen this from the beginning of the Plan; when Maine did give up their silver eel fishery to have a glass eel fishery. They've always put enforcement high on the list of everything they're doing there. They've managed it; I think as well as it can be managed.

Obviously the lure of the money in this fishery is always going to be leading to the possibility of poaching. I would also like to point out that Canada still has a 10 metric ton glass eel quota that they harvest; which is 22,000 pounds. During the whole time that the glass eel fishery in Maine has been going on, since what the '80s, Pat, and we see in our yellow eel harvest that we've had fairly steady landings for at least 20 years, 25 years. I don't see this as being a problem for the eel population.

CHAIRMAN GARY: Dave Borden.

MR. DAVID V. BORDEN: Question, Mr. Chairman. Do we have the ability to calculate the production potential for reopening these areas; and that relates both to the – I'm going to make a statement after this – but it relates to the motion and the underlying motion. With alewife populations, we can basically calculate what the production potential is if we take down a dam. Do we have that ability with alewives?

CHAIRMAN GARY: I'm going to allow Kristen to answer this.

DR. KRISTEN ANSTEAD: That was not calculated as part of the 2012 assessment; so it was not redone as part of the 2017 update. In short, I'm not sure if we could do that. We could certainly try in a next benchmark capacity. I would just add that these young-of-the-year surveys that we have, which is kind of our indication of the glass eels along the coast, have only been in operation for about 10 years now. They're just kind of coming online as far as informative data.

MR. BORDEN: I totally agree with all the comments about Maine. Pat and his staff should be applauded for all the efforts that they've exercised; particularly the enforcement branch I think is doing an excellent job up there. But the underlying problem with this, and I'm talking to both the motion and the underlying motion is I have a problem with trying to do this on a piecemeal basis. In my case I support the Dennis Abbott motion to basically maintain status quo.

I have a problem with trying to do this on a state-by-state basis. You know we're going to do Maine, and then we're going to have another state that's going to come forward. We should have an underlying policy of when we liberalize and how we liberalize; and I don't think we're there yet. The last comment I would make is I think this is still a data poor stock coastwide. I think the stock assessment needs improvements. I think we should have a fairly conservative strategy in place.

CHAIRMAN GARY: Cheri, you have the last word.

MS. PATTERSON: I just wanted to not reiterate what I've heard around the table already from Roy and across the table here. Also the TC, when the 9,000 and change pounds was considered. The TC wasn't for that amount; correct? They were for a less amount originally?

MR. ZIMMERMAN: I don't recall exactly. But generally from other discussions that I do recall that sounds probably pretty accurate.

MS. PATTERSON: Follow up, please.

CHAIRMAN GARY: Go ahead, Cheri.

MS. PATTERSON: I just wanted to indicate that while Maine has been doing a great job at monitoring their fishery that even at the 9,000 and change poundage that that was more than what was originally thought to be viable for a fishery.

CHAIRMAN GARY: All right, we're going to go ahead and call for the vote. I'll allow a couple minutes for caucus.

MR. ABBOTT: Roll call vote.

CHAIRMAN GARY: We have a request for a roll call vote. All right, we'll call for the vote. If Commissioners could take their seats please; we'll go ahead and start the roll call vote. All right, Kirby will start the roll call vote; north to south.

MR. ROOTES-MURDY: Maine.

MR. KELIHER: No.

MR. ROOTES-MURDY: New Hampshire.

MS. PATTERSON: Yes.

MR. ROOTES-MURDY: Massachusetts.

MR. MCKIERNAN: Yes.

MR. ROOTES-MURDY: Rhode Island.

MR. ERIC REID: Yes.

MR. ROOTES-MURDY: Connecticut.

SENATOR MINER: No.

MR. ROOTES-MURDY: New York.

MR. GILMORE: No.

MR. ROOTES-MURDY: New Jersey.

NEW JERSEY: Yes.

MR. ROOTES-MURDY: Pennsylvania.

MR. ANDREW SHIELDS: Yes.

MR. ROOTES-MURDY: Delaware.

MR. CLARK: No.

MR. ROOTES-MURDY: Maryland.

MS. FEGLEY: Yes.

MR. ROOTES-MURDY: District of Columbia.

MR. BRYAN KING: Yes.

MR. ROOTES-MURDY: Potomac River Fisheries Commission abstains. Virginia.

VIRGINIA: No.

MR. ROOTES-MURDY: North Carolina.

MR. CHRIS BATSAVAGE: No.

MR. ROOTES-MURDY: South Carolina.

DR. MALCOLM RHODES: Yes.

MR. ROOTES-MURDY: Georgia.

MR. DOUG HAYMANS: Yes.

MR. ROOTES-MURDY: Florida.

MS. KRISTA SHIPLEY: Yes.

MR. ROOTES-MURDY: National Marine Fisheries Service.

NATIONAL MARINE FISHERIES SERVICE: Yes.

MR. ROOTES-MURDY: U.S. Fish and Wildlife Service.

U.S. FISH AND WILDLIFE SERVICE: Yes.

MR. ROOTES-MURDY: The motion passes 7 to 6 to 1 to 0. Correction, the motion passes 12 to 6 to 1 abstention, 0 nulls.

CHAIRMAN GARY: Go ahead, Pat.

MR. KELIHER: I appreciate the comments in regards to the Technical Committee and the advice on this issue; and I certainly accept them. I do want to make sure or caution the Board that if we talk about enforcement issues in regards to a fishery to not let it move forward. Then we need to look seriously at every FMP that we have.

I'm going to use the offshore Area 3 in the lobster fishery, where there is zero enforcement. If we're going to stop fisheries from being promulgated or expanded upon because of enforcement issues, then we should shut the Area 3 lobster fishery down today. Just a word of caution when we start talking about enforcements and concerns in regards to enforcement. That is my editorial for the day.

CHAIRMAN GARY: All right, we're going to move to Section 3.2. Sorry about that. **The substitute becomes the main motion; so this is a motion to accept Section 3.1, Option 1, Status Quo. All in**

favor please raise your hands, opposed, abstentions, 1, so the motion passes 13, 5, 1 abstention, and 0 null. Now we can move to Section 3.2; proposed options of glass eel aquaculture plans. There are two options here; status quo and pooling of harvest allowance across states and jurisdictions. Is there a motion that a Board member is willing to put forward? Dan McKiernan.

MR. MCKIERNAN: Yes, I move that we adopt Option 1, Status Quo but with the additional language presented today by the Technical Committee; to redefine the parameters that were set up in Addendum IV.

CHAIRMAN GARY: Staff is putting that up. Do we have a second to that motion? Pat Keliher. Get the motion up on the board before we open discussion. Dan, does that capture your thoughts? All right we'll open this up for a discussion amongst the Board members. Is there any discussion? None, it's that straightforward. Are you ready to call for a vote? I'll read this in before we call.

Move to adopt under Section 3.2, Option 1, Status Quo for Glass eel Aquaculture provisions, with the additional language presented today by the Technical Committee to redefine the measures established by Addendum IV. Motion by Mr. McKiernan, second by Mr. Keliher, all those in favor please raise your hands; and raise them high, opposed, one abstention, PRFC. Any null votes, motion passes 18 in favor, none opposed 1 abstention.

Next up is Section 3.3, proposed options for Yellow Eel Coastwide Cap management triggers, and state-by-state allocations. In this situation, representing the Potomac River Fisheries Commission, I am a single person, and so Toni is going to get Bob; allow Bob to go ahead and run this portion so I can vote. Toni, you'll do it okay.

CHAIRMAN KERNS: Mr. Clark.

MR. CLARK: I would like to propose a motion just to get the discussion rolling. I would move to approve for Issue 1, the Yellow Eel Coastwide Cap, Option 1 the Status Quo. However, with the revised poundage which is 916,473 pounds. Then for the Issue 2, the Management Trigger. I would like to go to propose Option 3, two consecutive years of exceeding the Coastwide Cap by 10 percent. If I can get a second on that I would give my reasons.

CHAIRMAN KERNS: Seconded by Mr. Borden; and we'll give staff just a second to get it up on the screen. But John, if you would like to give your rationale while staff is doing that and then when you're done with your rationale, we'll make sure we have the right motion up on the board.

MR. CLARK: Based on what the performance of this yellow eel fishery for the past, over 20 years. I think this option adheres to what was recommended by the Technical Committee that we stick to the status quo for the actual cap; but recognizes that the status quo that was originally in the Plan was actually not the actual status quo.

I think the management triggers, having two years of over 10 percent, given the variation that we've seen in landings. This does give us the type of insurance that we wouldn't take any action to go to state-by-state quotas until we were seeing a steady increase in landings; to the point where we're surpassing a million pounds a year.

I think at that point we do have some issues to consider there. But I think this gives us a cap; with triggers that will work for our current fishery, which seems as I said to have been very steady for the past 25 years. We've seen many generations of eels come and go in that time, I think. I think we're doing okay here.

CHAIRMAN KERNS: We'll go to Justin Davis and then Tom Fote.

MR. DAVIS: I would just like to speak in support of the motion; for many of the same reasons that John laid out. I think certainly keeping status quo on the Coastwide Cap is in spirit with the discussion we've had so far today about staying conservative with this species; given the advice from the Technical folks about not wanting to increase harvest on any life stage.

I also agree that having the two-year exceedance at 10 percent provision, provides us with the greatest sort of protection over having to go to state-by-state quotas; which I think for several reasons we're not eager to take on that management program. I know for our state that would impose a sort of significant administrative burdens for a relatively small quota. I'm in support of this motion.

MR. FOTE: I look at what Maryland did this year about trying to correct part of the problem there. I think that's what we should be doing going forward; so I could support this. I also wanted to say something about the last motion. Pat, I was not in any way talking about law enforcement.

I wish I could do the yeoman's job that you do in Maine in New Jersey on a bunch of our species. It had nothing to do with me; it was just on the advice of the Technical Committee, because I think you're doing a great job. I wish we could do the same job you're doing on this. It has nothing to do with law enforcement in Maine; that was no part of my decision.

CHAIRMAN KERNS: Rob O'Reilly.

MR. O'REILLY: I do support the motion; Virginia supports the motion, and we have the actual landings; so with the help of the workgroup that was able to be accomplished, and very appreciative of the way the document characterizes the two-year trigger. I think that's very important. It doesn't mean that in the second year we won't have to work a little bit to figure out what's occurring in that second year as well. But having the first year complete, ACCSP

has told us that at least by May, there is a pretty good certainty for the last year's landings. I think this two-year trigger is really wise.

CHAIRMAN KERNS: Any additional questions or comments? Russell.

MR. RUSSELL DIZE: I've seen this work. Being a fisherman my whole life and one of my good friends is a big fisherman in Maryland, an eel fisherman. This past year he was catching a record amount of eels; but he quit and went crabbing, and I said Tommy, what are you doing? He said well, we're saving those eels. We don't want it to go against the quota; because I can go crabbing and make as much money, and we'll have those eels for later on. This shows that the eel fishermen are thinking about quota.

CHAIRMAN KERNS: Without any other comments we will go ahead and vote on this. I will read it into the record. Move to adopt under Section 3.1, Issue 1: Coastwide Cap, Option 1: Status Quo with the updated landings of 916,473 pounds, and Issue 2: Management Trigger, Option 3: 2 years of exceeding the coastwide cap by 10 percent.

Motion by Mr. Clark, seconded by Mr. Borden, do we need any time to caucus? **Seeing no heads; all in favor raise your hand, any opposed, any abstentions, and any null votes? Motion carries 17 to 2, 0 abstentions and 0 null votes.** We'll move on to Issue 3; which is State Allocation. Lynn Fegley.

MS. FEGLEY: I would like to throw a motion up to get the discussion rolling; and I would move to adopt Suboption 2B under Issue 3, and that is the 1 percent rule for states to reduce landings. All states with landings greater than 1 percent will work collectively to achieve an equitable reduction to the coastwide cap. Additionally a workgroup of states harvesting over 1 percent will be formed; to define equitable reduction, and to determine how a reduction process would work if a trigger is fired.

CHAIRMAN KERNS: Seconded by Rob O'Reilly. Lynn, would you like to speak to the motion?

MS. FEGLEY: Yes, thank you. American eels I think of all species, and in the spirit of the conversation that the Menhaden Board had yesterday, and our ability to work together. I think the administrative burden for state-by-state quotas is incredibly, it's expensive and difficult. If there's a fishery where we can make this work, I think this is the one. The state of Maryland, you know we are the big harvester.

We have a group of commercial eelers who are very progressive. This fishery means the world to them. They really are interested in figuring out a way to prevent a situation where we create winners and losers; in terms of allocation. Along with we've just adopted the two-year, 10 percent trigger.

I think that is incredibly helpful; because we'll know if we go over the harvest by 10 percent in one year, we are going to have a really good idea of what the conditions look like in the fishery; and some of the reasons why we went over 10 percent. I can say the state of Maryland will at that point work to figure out what we can do. I think that would be the time for states to get together and figure out how we would bring ourselves back down to the cap. I'm optimistic we can make this work for American eels.

CHAIRMAN KERNS: Are there any others that want to speak to the motion? Mr. Gilmore.

MR. GILMORE: I'm in support of the motion for all the reasons Lynn laid out; but on top of that I think it's a good model for a lot of things. I mean when we get into allocations and we're trying to use timeframes and different periods or whatever. We've been there so many times. I think this is a good way to start looking at management into the future. When we have overages we have equitable reductions; and when we have increases, we have equitable increases, without figuring out what happened in

1822 or whatever it was. We support the motion.

CHAIRMAN KERNS: Mr. O'Reilly and then Mr. Keliher.

MR. O'REILLY: I just want to voice our support here in Virginia; and indicate that in the document, I think it said 80 percent of the harvest is falling in the Delmarva Region. That makes things very good for management. It is a little reverse of the Scup Model; where New York to Massachusetts.

For years the commercial scup fishery worked out proposals that they could take care of the fishery and have measures that were somewhat compatible. I can't speak exactly how everything's worked out there. But in this way if there are problems, you know we have the state's ability to work together to take care of those problems. I think it's a good proposal.

CHAIRMAN KERNS: Mr. Keliher.

MR. KELIHER: I think what Lynn has put together here is, as Mr. Gilmore said; it's a great approach for dealing with several issues into the future. But I think in this case what I saw and what I witnessed as part of the Working Group. If that's any evidence of the cooperation that we would get from these states, I think this is something that will work just fine to move the issue forward.

CHAIRMAN KERNS: Are there any other comments? Seeing none; is there a need to caucus? Seeing none; raise your hand if you are in favor. Do I need to read this? I'll read it really quick.

Move to adopt Sub-Option 2B under Issue 3 (Allocation) the 1 percent rule for states to reduce landings: All states with landings greater than 1 percent will work collectively to achieve an equitable reduction to the coast wide cap.

Additionally, a workgroup of states harvesting over 1 percent will be formed to define "equitable reduction" and to determine how a reduction process would work if a trigger is fired. Motion by Ms. Fegley, and seconded by Mr. O'Reilly, all in favor raise your – do you have a quick question, Justin, clarification?

MR. DAVIS: Just a clarification. I was wondering if it should be clarified to say 1 percent of what, since you know greater than 1 percent. I take that to mean greater than 1 percent of coastwide landings?

CHAIRMAN KERNS: Yes, we can note on the record that that is 1 percent of coastwide landings; and we'll make sure that the final Addendum will state that. All in favor raise your right hand, or any hand; opposed none, abstentions, 2 abstentions, any null votes, 0, so the motion passes 17 in favor, 0 against, 2 abstentions, and 0 null votes.

Because of the option that we approved here, there are no state-by-state quotas; so therefore we would not need to take up transfers of state-by-state quota. We will need to do an implementation date for this document. If there is a suggestion, and I will note that for the document what we'll do, because the Workgroup will still have to put together a program. We'll go ahead and approve this document, or vote on approving this document today.

Then have an implementation date; and note in the document when we publish it that there will be additional information provided once the Workgroup has made a recommendation to the Board, and the Board has finalized that process. We will put that in the document when it's published to say that there will be additional information coming. For implementation, I look to the Board. Would January 1st work for all states, so the start of next year's fishery? I don't see any heads nodding no. Lynn.

MS. FEGLEY: I guess Rob and I were just having a sidebar. I wonder if it's worth implementing. I don't know if it matters when we get the final landings for 2018. That would maybe be May? Does that matter, so May 1? No, because that would be mid fishing year.

CHAIRMAN KERNS: I think that would be hard.

MS. FEGLEY: January 1 sounds good.

CHAIRMAN KERNS: If we can have a motion for something similar. Jim Gilmore.

MR. GILMORE: Move to implement to adopt an implementation date of January 1, 2019.

CHAIRMAN KERNS: Tom Fote second. Bob Ballou.

MR. BALLOU: Madam Chair, just a question, can you just quickly review the implementation steps that would be required; given the way the voting took place today?

CHAIRMAN KERNS: I'm trying to think if there has to be any individual changes in the state regulations. I don't know if any states actually have the coastwide quota in their books. I don't see any heads, so that will be a question to the states. Unless no one needs to put the quota in the books, then I don't think that you have to change anything. It's just basically an effective date then. **All in favor, or is there any objection to this implementation date? Seeing no objection the motion carries.** Now we look to have an approval of the document. Lynn.

MS. FEGLEY: I would move to approve Addendum V for American Eels.

CHAIRMAN KERNS: Mr. Clark seconds, any discussion? Seeing none; I'm going to try to see if there is any objection; otherwise we would need to do a roll call vote, since it is final action. If you need to abstain I can note that on the record. Lynn.

MS. FEGLEY: Sorry Toni, I just wonder if that should say Addendum V for American Eels as modified today.

CHAIRMAN KERNS: That will work, Lynn. Thank you. **Seeing no objection the motion carries.**

CHAIRMAN GARY: While I'm getting my bearings back, David Borden.

MR. BORDEN: I'll just make this quick comment before we totally leave this; and I want to use Maine as the example of it. Maine is doing exactly what every state around the table should be encouraged to do. They're putting the fiscal resources into the species that really need it. I personally think that what we need to do before we totally leave this. I think we need to task somebody with developing a policy and criteria to determine when and how states liberalize their eel regulations.

The policy should encourage activities and management of the species; including enforcement programs that expand the available habitat for all life stages of eels. I mean using Maine as the example in this whole exercise. I would think that if we had a policy like that that did that then it would make it much easier for us to deal with these types of issues; instead of dealing with them on a specific case basis.

CHAIRMAN GARY: Toni.

MS. KERNS: David, I think we can definitely have that workgroup. But I just want to remind the Board, and Pat alluded to this when he was talking. There are some options for states to petition the Board for additional quota; based on work that they're doing in their states, in particular for habitat changes.

While Addendum, I think it's Addendum IV that approved that methodology. There are not a lot of specifics in there; so for states to do that it might be a little bit of a heavy lift, and maybe this Workgroup could potentially help with putting in

some guidelines or guideposts for that. But I do think that Maine would be a great candidate state for that if they so wished to work through that process.

CHAIRMAN GARY: Go David.

MR. BORDEN: A quick follow up. Maine's doing it now. If we can have a policy that encourages this, let's say Maryland wants to do this, and they put the resource into it. It would just spread up and down the coast; if we had that type of policy. I agree with Toni there are existing provisions. But I think they could be clarified and put into a generic policy.

CHAIRMAN GARY: We've got some more comment that's fine. We'll go with Ritchie and then Pat.

MR. WHITE: I agree with David totally. I think what needs to happen is to expand that such that the Technical Committee then takes that into consideration; and comes back to us for the recommendation. The Technical Committee's recommendation clearly threw a lot of weight to the Board on this last decision that Maine didn't get their expansion. I think putting it in the framework such that they consider it; they say yes these extenuating circumstances are such that the Board needs to consider it.

CHAIRMAN GARY: All right, we're running low on time, Pat. But no, no, go ahead; last word for you.

MR. KELIHER: I appreciate David's comments, as well as Ritchie's. I think the concept is good. Maybe we should have this as an agenda item at the next Eel Board to talk about how the swipe might proceed.

CONSIDER MAINE AQUACULTURE PROPOSAL

CHAIRMAN GARY: It's a good idea. All right, we'll go on to our next item. Item 6 on the agenda, which is Consideration of a Maine Aquaculture

Proposal. There will be two components to this agenda item; the proposal itself, and Sara Rademaker from American Unagi, and Pat Keliher will be co-presenters for this. That will be followed by reports from the Law Enforcement Committee, Technical Committee and Advisory Panel. Sara, it's yours and welcome.

MAINE PROPOSAL FOR 2019 FISHING SEASON

MS. SARA RADEMAKER: My name is Sara Rademaker; I'm the owner of American Unagi. It's a Maine-based Aquaculture Company that has been taking Maine harvested glass eels and growing them out to market size for the domestic seafood market. We've been working on this business development over the last four years; and we're now commercializing, and we're here to request 200 pounds of aquaculture quota with the state of Maine.

I'll be going through parts of our application, and giving you a little bit of background on our company. I actually come from the aquaculture industry. I have been working with a variety of species both in the U.S. and also in Africa for the last 15 years. I came back to Maine with the intention of starting an aquaculture business; not initially with eels.

But I was looking for a species that could be grown in land-based aquaculture that ultimately had a connection to Maine. At the time, this was 2012, eels were hitting the headlines. What I saw with that species, you know we have a valuable fishery here in Maine, it's all getting exported. It's grown abroad, and we're importing more and more eels back into the U.S. each year.

To me I saw this as an opportunity for us to grow the species here. Europe has been doing it in land-based systems since the 1980s. Bring that technology to the U.S. and in that bring the value and jobs associated with that to our state. Also, we're ultimately producing a higher quality, more sustainable, ultimately traceable, accountable eel product; which just isn't the case with the stuff

being imported. I started with a handful of eels back in 2014. We went to a pilot-scale facility at the Darling Marine Center in 2015. We put the first product into the U.S. market in 2016. It's gotten great feedback. We don't use any hormones or antibiotics in the process; and the pilot-scale facility has allowed us to grow about a metric ton annually, and really test the production feasibility of this business. We've had a lot of support throughout the state from both state regulators, the Department of Ag; we've worked with USDA, Maine Sea Grant, the Maine Technology Institute, and Maine Aquaculture Innovation Center.

There is a lot of support in the state for a local aquaculture industry based on this fishery. It's really valuable to connect a seasonal fishery with year round production. With the success of the last couple years, we're now scaling that production. To go through the pieces of the application, which had been submitted, we are requesting 200 pounds for the 2019 fishing year. With Maine's fishery it is currently fished throughout the state; and we want to be able to fish those 200 pounds through several different watersheds, so that way we aren't taking those 200 pounds from a single river, but from multiple watersheds. That allows us also to work with fishermen throughout the region.

Given we already have a fishery in Maine, the state wanted us to follow for the most part all of the regulations of the current eel fishery; with a couple of exceptions that are going to be specific for our aquaculture quota. We'll follow the same timeframe of harvest, March 22 to June 7. The Aquaculture Quota will be required to be fished by already licensed harvesters.

Those will be identified ahead of the fishing season, and will be given an Aquaculture Quota Swipe Card that will be dedicated to our facility. They will be required to fish with the current gear types under Maine law, and all locations for their fishing has to adhere to any closures and limitations that are currently in the law.

The monitoring program that would be in place is going to be a swipe card system that would be specifically for the aquaculture facility. This is something that's we currently use, so our buying station has a swipe card, our transport vehicle and our facility. During the harvest season, at any given time we have accountability in the number of eels that we have on any of our premises.

This would be the same thing for the aquaculture quota. Part of the daily reporting requirements of using the swipe card system is that any time eels come into our facility, we have to identify the harvester, the pounds harvested the place where they were harvested from, and the method. All of that data comes with our facility.

This is not only important to the state and regulatory, but for our business model traceability and accountability is really what the foundation of our product is. This all becomes really important. We're also talking and put into the state to do a facility status report post this season. We hold those glass eels for one to four months in an isolated acclimating system; so we go through a weaning process, which I'll get into if we've got time.

We would be able to post season tell the Maine DMR how many eels that made it through the entire acclimation period; what size they are and the numbers, and have a lot of that data available to the state. We're completely willing to share that. We would be under the same law enforcement regulations that are currently the standards. We would be required to do daily reporting. Our harvesters, our facilities would all be open to random inspections at any time; and we would have to have exactly the number of eels that we say we have. Our facility would be held to the same penalties and loss of licensure as the current laws hold. Additionally, as the Commissioner mentioned, and he showed this here, he can shut down a fishery and remove license at any given time for violations; so we would be held accountable for that.

We are building 120 metric ton facility. It's a European engineered design. This is a system that has been successful abroad; so we don't want to reinvent the wheel. We don't use hormones or antibiotics in the process of our grow-out, and we're targeting 150 to 250 gram product. We currently had been producing live eel direct to markets, and that's been really great.

We've also looked at value added products. With the expansion of our commercial facility, we're going to expand that live market; but also going to value added production, all geared towards kind of that domestic seafood market. If I've got a little bit of time it might be helpful to just walk you really quickly through our production cycle; to help answer any questions as to what we do.

With eel aquaculture, when we get eels from the fishermen they go into a buying station; and this is standard for the eel fishery as is. But from a buying station they then go into our aquaculture facility; first going into a separate isolated system known as a glass eel system. This is a time for us to acclimate them to the production cycle; but also to go through a quarantine procedure, get them trained.

During that period we have those fish completely isolated from our production cycle. Eels, as I think some of you know, with the species they have highly variable growth rates. Some of our product comes to market in as little as six months, and some takes two years. Once they go through the acclimation period, they then go into our production facility; first going to a nursery system and then on to grow-out.

During this time we actually have up to two to three cohorts of eels. Part of that is again, because some of those eels come to market very early and some take longer. After the glass weaning, we do have a mixture of cohorts. But we have to grade and handle our eels every six to eight weeks; because of the highly variable growth.

That allows us at any given time we know exactly how much biomass is in our facility, and the number of eels. That's for our part how we manage our growth; and make sure that we have effective business. But it also allows us to be held accountable for the number of eels in our facility at any given time.

Ultimately, you know we're trying to produce a high quality product that is connected to our local fishery; and we see tremendous value in keeping the eels local. The fisheries regulations in the aquaculture industry in the U.S. have some of the strictest regulations; and ultimately we're held more accountable I think than a lot of places in the world.

The consumer's now care more about that than they did in the past. I think that the work that has been done to make our fisheries sustainable is now being recognized by the consumer base; much more than it was, even five years ago. That is really what we're working to produce a fish for, open to any questions, and thanks for the time.

CHAIRMAN GARY: Thank you, Sara that's my fourth exposure to your talk, and every time you're incredibly thorough. I certainly understood it I think the first time. Before we do that in the interest of time it might be beneficial to bundle and go through our LEC, TC and AP comments to this. But before I do that Pat, did you have anything you wanted to add?

MR. KELIHER: No, just that Sara you did a great job as always. I think just the key to remember here is Maine Marine Patrol has inspection powers. Unlike the conversations we had around the North Carolina proposal, we were able to get over those hurdles for North Carolina. Here a Marine Patrol Officer can go to any licensed facility within the state of Maine; declare a standby for inspection, and be able to look through that site, weigh eels if needed, and do whatever is needed from an enforcement standpoint.

LAW ENFORCEMENT COMMITTEE REPORT

CHAIRMAN GARY: I'll turn to the LEC and Mark for your comments.

MR. ROBSON: At the same teleconference call that I referenced earlier, we had a discussion about this specific proposal; and Ms. Rademaker was available to explain the program and answer some questions as well for the Officers on the call. We had 11 members participating in that call. We summarized our comments in that written document that I referenced earlier.

Essentially, after hearing the report and hearing members of the LEC discuss how the state of Maine has the ability to enforce; particularly through the swipe card system, the monitoring and tracking of harvest specifically for an aquaculture operation. They were comfortable that given those Maine conditions for the swipe card system that would be separate for those aquaculture harvesters; and the ability to track at the facilities and monitor and inspect those facilities.

The LEC was comfortable that this would not present an enforcement issue of any significant appearance. In addition to that and I think it's been referenced earlier. The specific penalty provisions in place in Maine, particularly where a state has the ability to suspend or revoke licenses, are a very strong deterrent.

To the extent that other states may consider similar aquaculture programs, the LEC would encourage those states to take a look at those kinds of penalty provisions; because they do have a very strong deterrent value, as was indicated earlier in some cases more than a fine or a penalty might be. That summarizes our comments.

TECHNICAL COMMITTEE REPORT

CHAIRMAN GARY: Thank you Mark. I'll turn to Jordy for the TC comments now. I'm not sure if Kirby has those or not. Okay, excellent.

MR. ZIMMERMAN: As you all just heard, Ms. Rademaker came on with the TC, provided a similar presentation, very informative. If you guys recall, of the components required for this type of endeavor we went ahead and checked all the boxes that you see on the screen; pounds requested, location, method. I think we've just heard this again. To keep it short, the TC recommended approval of this proposal. We had a couple specific requests; data on survival or mortality within the facility if you will, and after the harvest season, but also before combining with other cohorts, and some specificity which she mentioned in harvest areas, although it can generally be assumed these are the same areas of harvest as the commercial fishery. That is it. Any questions for the TC side of things on this? I would be willing to answer.

ADVISORY PANEL REPORT

CHAIRMAN GARY: Thank you, Jordy, we'll go ahead and let Mari-Beth add her comments for the AP; and then we'll open it up to all three groups along with Sara. Go ahead, Mari-Beth.

MS. DELUCIA: Sara presented to the AP as well; and all three AP members were in support of the Maine Aquaculture Proposal. They felt it was a good opportunity for the state; though not quite sure how this would happen, but in the future maybe reduce market demand and fishing mortality on glass eels. But I think that is way in the future.

CHAIRMAN GARY: Thank you, Mari-Beth. We'll open it up for questions to Sara or any of the three, the LEC, TC and the AP. We've got Dan McKiernan followed by Mike Millard. Go ahead, Dan.

MR. MCKIERNAN: There is definitely some support over here for this proposal. I'm kind of challenged by the history of this aquaculture quota concept. You know we all got a pretty big chuckle when Louis Daniel talked about bluegills eating these glass eels when they were drying up

along the shores of some farm pond or something.

We knew what kind of pressure Louis was under, and so we developed this with this nonproductive watershed language. My question to the TC is did you all assess this based on the Addendum IVs language about nonproductive watersheds, and should that be an issue?

MR. ZIMMERMAN: We revised that language as you saw earlier; so we have that in place. Maine is I think what helped with our decision making is Maine already has a Life Cycle Survey in place. That was something that North Carolina didn't have; and I don't believe has to this day. Those types of facts alleviated our concerns in that regard.

CHAIRMAN GARY: All right so let me get my order straight, I've got some hands so hold on, we'll go Tom Fote, Mike Millard, John Clark and Jim Gilmore. Go ahead, Tom.

MR. FOTE: Yes, I've just got a quick question. For one pound of glass eels, how much do you get, because I understand it's about a half a pound is what your product is, so how many half pound eels do you get out of the one pound of glass eels?

MS. RADEMAKER: For our commercial facility of 120 metric tons, we are anticipating needing 360 pounds of glass eels. That is about three pounds per metric ton.

CHAIRMAN GARY: Mike.

DR. MIKE MILLARD: Tom just approached one of my questions. I was wondering how much market product 200 pounds of glass eels produces. Sort of the follow up was my understanding was that the high price of elvers, \$2,700.00 a pound or \$3,000.00 a pound is due to the price that the product brings in Europe and Asia. Does that bring that same price here domestically, and are those kinds of dollars for a

pound of glass eels is that worth it for you for a domestic product, or will you be changing the price structure of elvers?

MS. RADEMAKER: With regards to the price structure of the pounds of glass eels, because they are coming to our fishery to fill their farms abroad. The product that's coming back to the U.S. is from those same farms. We're actually able to compete competitively with that price structure. The economics that impact farms abroad also impact us. It also works to our production; if that answers at multi levels. You're basically asking do the economics of that high price allow us to be a successful business.

DR. MILLARD: That's correct. Are you paying \$2,700.00 a pound for glass eels and making your business go domestically?

MS. RADEMAKER: I have been paying market price, so as Pat mentioned it is hefty; and it makes the next level of commercialization when I become competitive to those other buyers. That becomes one of the challenges of going to this next level. Having this quota would be hugely beneficial in getting this industry going locally.

CHAIRMAN GARY: We have John Clark, Jim Gilmore, Russell Dize, and Andy Shiels. Go ahead, John.

MR. CLARK: Sara, I'm just curious. Following up on some of the production numbers, I guess then you're going to want these 200 pounds if the farm is successful, you'll need the 200 pounds annually to make this work. Given that males grow slower and are much smaller size, do you anticipate having to do any culling? What will you do with those little ones? Are they still big enough to market?

MS. RADEMAKER: With the 200 pound of aquaculture domestic quota, it's going to be annually applied for; so we'll have the opportunity to renew. But if there are other people who come into the market, we'll have to

deal with that when it comes. With regard to the male concern that was part of the work that we've been doing the last couple years. We found the Europeans don't use hormones or antibiotics; they have a predominantly male production, and we've been able to find markets without any issue for our product.

CHAIRMAN GARY: Jim Gilmore.

MR. GILMORE: Maybe an odd question, Sara, and this is based upon a bad experience we had in New York with an aquaculture facility. You mentioned that you're using a European technology for the facility in Maine. Do you have the legal authority to use that technology, because that's what ended up closing a facility in New York?

MS. RADEMAKER: The engineering group that we've worked with has built these systems all over the world. As far as my understanding, I haven't specifically asked about that or brought that up; but I certainly will double check that thank you.

CHAIRMAN GARY: Russell Dize.

MR. DIZE: I think my question was answered, but I want to ask it again. Suppose another group wanted to start an aquaculture enterprise in Maine. What would Maine do about the 200 pounds it's allowed?

CHAIRMAN GARY: Pat, can you answer?

MR. KELIHER: Yes. This time around we did sort of an RFP to solicit interest in the 200 pounds. We made it clear to Sara and others that in future years if this passed, and say next year another farm came and said we would do the same thing on an annual basis. We will put out a request for interest. If more than one comes to the table, then we would have to talk with each individual about how we would split that particular quota.

CHAIRMAN GARY: Andy Shiels.

MR. SHIELS: This may be an obvious question, but is that 200 pounds in addition to the quota that was just determined, or is it being sub-sectioned out of the quota that was just determined by the vote a couple minutes ago?

CHAIRMAN GARY: It's an addition, I believe. Go ahead, Andy.

MR. SHIELS: Just so I'm clear then. These 200 pounds would be obtained in and among the same fishers that are working there now. The question that was asked earlier was would there be an economic advantage to the state of Maine by adding the quota. Is there an economic advantage to the state of Maine by allowing this extra 200 pounds?

In terms of taxes or revenue, and what is the permit fee for this compared to a collector and a dealer? Because we heard about the dealer is 5,000 pounds for a permit. I don't recall what a collector pays, but what's the permit that the aquaculture operation would pay for the same opportunity?

MR. KELIHER: There would be with the success of an operation, any new business operation there certainly would be tax benefits to the state of Maine, contributing to the overall health of the general fund in the state. There would be very little realized from the Department of Marine Resources. This is a land-based aquaculture facility.

It's actually now land-based aquaculture is actually regulated to the Department of Ag, Conservation and Forestry. There is no cost associated with that. There is cost associated with ensuring they are in compliance with discharge permits and things of that nature associated with the Department of Environmental Protection.

But from the standpoint of DMR, no really increase in revenue. The way this will happen is we will determine who, while working with Sara we'll determine who would be harvesting for her.

They would have a swipe card both for their individual quota associated with the commercial fishery, but a separate swipe card that we would use to track the harvest that would be going into that facility. There is no comingling of product with that individual harvester. They would sell their commercial quota and then bring the quota to Sara's facility. She is a licensed dealer through DMR, so she has the equipment. We would swipe those cards in and then we would know exactly how much weight that she has in the tank; based on those swipes.

CHAIRMAN GARY: Go ahead Andy, one more follow up.

MR. SHIELDS: This company won't be doing the collecting themselves; they will be working with a Maine registered permitted collector, is that correct?

MR. KELIHER: That's correct.

MR. SHIELDS: Okay, thank you.

CHAIRMAN GARY: We have two more and we need to wrap up. I've got the incredibly patient Doug Haymans. Doug, you get double time, because I think I messed up in the queue, and then Lynn Fegley and I would like to cut it off.

MR. HAYMANS: That's all right; because Andy was right on point where I was going. If it is additive, we just went through a lot of discussion on keeping Maine at status quo. I can't see adding additional glass eel quota, which is essentially what this is doing; if it's an aquaculture operation, which I'm supportive of aquaculture operations.

Why not buy them from the eels that are already going to aquaculture? Keep them in country rather than sending that 200 pounds international? I mean I'm supporting the plan. But I don't know that I can support adding an additional quota; which is what this is.

CHAIRMAN GARY: Lynn, you have the last word.

MS. FEGLEY: Yes, I think I am sort of in the same vein as the last few questions; and it really goes back to David Borden's point earlier. Sara, I think this is great. I commend you for really taking on an opportunity and being on the cutting edge of this form of aquaculture. I understand that building these facilities and making them work is no simple task.

But as a Board, to Dave Borden's point, we may want to consider this is a liberalization right, so we're going to have this either maybe more, this interest may grow and it may grow not only in Maine, but it may grow up and down the coast; especially if your company really takes off. I think looking forward; we really need to think about how this is going to work in the future.

CHAIRMAN GARY: We're over time now. I know we've got multiple hands coming up. Eric, you haven't said anything the whole meeting. I am going to let you have this last word. Then we're going to take it up for a vote.

MR. REID: If I understand this correctly that is a unique quota, because it is to a processor or a dealer not a fisherman. I think that's a unique quota set aside, or whatever you want to call it in Maine. Is that correct? It goes to the processor not to an individual fisherman and then the fisherman would receive the quota from a processor. Is that correct?

CHAIRMAN GARY: Pat, go ahead.

MR. KELIHER: That is correct. The Plan, the Addendum that is in place allows for states to apply for these 200 pounds in addition to the commercial quotas and harvest that has been put in place in two other jurisdictions. This is additive, but it's allowed by the Plan.

MR. REID: Okay, so basically the processor has the capability to set a price to the fishermen; that's the first thing. It doesn't necessarily have

to be a market competitive thing. At 200 pounds that's only about half of your capacity. I don't know what 120 metric tons means. I mean I know what it means, but is it a day or is it a year, is it every 20 years? But where is the additional product going to come from that is going to fill that void? Thank you, Mr. Chairman, I do appreciate it.

MS. RADEMAKER: The 120 metric tons is annual production expected out of the facility. To support that we have to annually stock about 360 pounds of glass eels; so 200 pounds of that would be this aquaculture quota. The rest would be purchased from the current quota from Maine. We would be sourcing only from Maine.

CHAIRMAN GARY: Thank you all. All right in deference to the Atlantic Sturgeon Board, we do need to move this forward. We're looking for a motion on this proposal. Pat.

MR. KELIHER: I don't know if Kirby got the language. **I would move to accept the Maine Glass Eel Aquaculture Proposal for the 2019 season, to grow out eels to the yellow eel life stage;** and if I get a second I'll clarify.

CHAIRMAN GARY: Second by Jim Gilmore.

MR. KELIHER: Just so it's clear. Under the Addendum IV, under the glass eel language, the very end of that language shows eels harvested under an approved aquaculture plan may not be sold until they reach the legal size in the jurisdiction of operation; unless otherwise specified. Our legal size is obviously we allow for glass eel harvest.

In this case we're approving the aquaculture proposal, and making it very clear that it's growing out eels to the yellow eel life stage, which would be the market size. Other than that I don't need to give any additional justification. I think Sara did a great job explaining it.

CHAIRMAN GARY: Discussion on the motion. Dennis Abbott.

MR. ABBOTT: I don't have problems with this motion; but a question might arise. Would we possibly be here next year with further glass eel proposals; and at what point does it really become a problem of harvest, where each 200 pounds of eels represents about two and a half or so percent of Maine's present glass eel allowance? It's just a concern of mine that this was just going to be another way of increasing the harvest on eels. But I do like your proposal, and it is the thing to do. It's too bad we really couldn't see all of the eels end up being used in this way domestically rather than seeing them go to China; especially with the tariff situation.

CHAIRMAN GARY: Other comments. Go ahead.

MR. CLARK: Just a clarification. Following up on what Dennis said, so each year that you want to do this in Maine you're going to have to come back to the Board and ask for the 200 pounds for the following year, Pat?

MR. KELIHER: Yes that's correct, John. These have to be presented to the Board on an annual basis.

CHAIRMAN GARY: Other discussion. Ross.

MR. SELF: I just need some clarification on how. I'm not opposed to this aquaculture allocation. But how the action we took earlier applies to this by maintaining the status quo for the aquaculture allocation. Maintain those requirements that were in place under Addendum IV that those fish for aquaculture set asides came from essentially areas that could be shown not adding to the population.

Now, if we had adopted the pooling option it suspended that requirement. But by sticking with status quo, my interpretation of this is the fish taken for aquaculture need to come from areas that can be shown not to be having

significant contribution to the population. What am I missing?

MR. ROOTES-MURDY: I think to what Ross is saying is that there is the Addendum V, which you all just voted on, and that changes the criteria slightly. I think to Ross's question whether this proposal meets that criteria, and that's really for the Board to determine or not, specifically regarding whether the glass eels are being taken from areas that are likely significantly contributing to the – well, sorry the language has been revised now and we can put that back up on the board if that is helpful for the Board to consider.

CHAIRMAN GARY: All right, are we ready to call for the vote? Is there a need for a caucus? Then we'll call. Am I hearing yes? We'll take a two minute caucus. Okay, we'll call the question if everybody could return to their chairs. I am going to vote on this so Bob and Toni, I would like to turn this over to you.

CHAIRMAN ROBERT E. BEAL: I'll just do it from my seat here. Could we put the motion back up? **All those in favor of the motion to support the Maine glass eel aquaculture proposal, please raise your right hands.** Those opposed like sign; abstentions, any null votes? We have one null vote.

The motion carries 16 in favor, no votes in opposition, no abstentions and 1 null vote. There was, oh Pennsylvania was an opposition. Sorry Loren, I didn't see your hand. The final vote count is 16 in favor, 1 in opposition, 1 abstention, and Doug did you have a null, and 1 null vote. **Let me state the final, final count for the record; 16 in favor, 1 in opposition, no abstentions and 1 null vote, the motion carries, back to you, Mr. Chairman.**

**UPDATE ON THE NORTH CAROLINA
AQUACULTURE PLAN: 2018 FISHING SEASON**

CHAIRMAN GARY: We have one last item on our agenda; it is Update on the North Carolina Aquaculture Plan. Chris, are you going to provide that and could you do so with expediency?

MR. BATSAVAGE: Yes I can thank you. This is just a quick update on the 2018 Fishing Year for the American Eel Farm Aquaculture plan in North Carolina. The American Eel Farm fished fyke nets for 5 out of 22 weeks during the open season; which is from January 1, through May 30.

The fishing occurred from the week of February 11 through the week of April 15, with all fishing effort in the bays and canals surrounding Lake Mattamuskeet, which is the mainland side of Pamlico Sound. Zero glass eels were harvested. However, there were a total of 270 glass eels and 2 elvers released during the season by the folks fishing.

The weekly glass eel catch totals ranged from 20 to 90 eels per week. As a result, 200 pounds of the glass eel quota under this plan remains. No citations were issued to the fishing operations associated with this permit; and the American eel farm indicated to staff that they will fish again next year under the current plan. With that I'm happy to answer any questions.

CHAIRMAN GARY: Questions for Chris. I'm sorry Pat, go ahead.

MR. KELIHER: Don't we have to approve the plan, Mr. Chairman? We don't. They just have to report out.

MR. GARY: Okay so that concludes all the items that are on the agenda. However, there is a CITES issue that's been brought up in the previous board discussions, and Kirby if you could help me out with that.

MR. ROOTES-MURDY: In the interest of time, it was a short presentation Mari-Beth had put together. But it might be best for this Board to consider it at the next Board meeting. It was just

an update on a Workshop that took place; and when the next CITES meeting is to take place in the summer of 2019, prior to that the Board should possibly consider providing any guidance to European countries on potential listing of American eel on Appendix II.

CHAIRMAN GARY: If there is no objection we'll go ahead and defer that to the next meeting. Is there any other business to bring before this Board? David Borden.

MR. BORDEN: Just a quick point in the spirit of Pat Keliher's suggestion to add some items to the next Board meeting. I think this whole issue how we handle it should be discussed. We need really a generic policy; as Lynn suggested that applies to everyone. I think we would all benefit from that type of discussion. I would ask that it be added to the agenda.

MR. GARY: Any other items to bring before the Board? Dennis Abbott.

MR. ABBOTT: I would just like to thank you for the fine job of running this meeting today. You did a good job, on time and keeping things moving along at a brisk pace, thanks.

ADJOURNMENT

CHAIRMAN GARY: Well thank you, I'm still vertical, I think. With that we'll consider this meeting adjourned. Thank you all.

(Whereupon the meeting adjourned at 10:40 o'clock a.m. on August 8, 2018)



Convention on International Trade in Endangered Species

What is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)?

In the early 1960s, international discussion began focusing on the rate at which the world's wild animals and plants were being threatened by unregulated international trade.

CITES entered into force in 1975, and became the only global treaty to ensure that international trade in plants and animals does not threaten their survival in the wild. It provides a framework for cooperation and collaboration among nations to prevent decline in wild populations of animals and plants. Currently 180 countries, including the United States, implement CITES.

Who is involved?

A Secretariat, located in Geneva, Switzerland, administers the treaty. Permanent committees (Standing, Animals, and Plants Committees) provide technical and scientific support to member countries (called Parties). Each Party designates Management and Scientific Authorities to process permits, make legal and scientific findings, and monitor trade.

The Conference of the Parties (CoP) meets approximately every three years to review CITES implementation and assess the status of species in trade. Through the adoption of resolutions and species proposals, the CoP develops practical solutions to complex wildlife trade problems.

Non-governmental organizations, representing conservation, animal welfare, trade, zoological, botanical, and scientific interests, participate as non-voting observers at CoPs and Animals, Plants, and Standing Committee meetings.



The elephant-shaped CITES logo was first used at CoP3 in 1981. The original version, a simple black and white design, has since evolved to include species protected by CITES.

How are species protected?

Cacti, iguanas, and parrots represent some of the approximately 35,000 species protected by CITES. Species protected under CITES are listed in one of three appendices.

- Appendix I includes species threatened with extinction and provides the greatest level of protection, including restrictions on commercial trade.

Examples include gorillas, sea turtles, most lady slipper orchids, and giant pandas.

- Appendix II includes species that, although currently not threatened with extinction, may become so without trade controls. It also includes species that resemble other listed species and need to be regulated in order to effectively control the trade in those other listed species. Most CITES species are listed in this appendix, including American ginseng, paddlefish, lions, American alligators, mahogany, and many corals.
- Appendix III includes species for which a range country has asked other Parties to help in controlling international trade. Examples include map turtles, walrus and Cape stag beetles.

How does CITES monitor trade?

The backbone of CITES is the permit system that facilitates international cooperation in conservation and trade monitoring. Permits are issued only if a country's Management and Scientific Authorities determine that trade is legal and does not threaten the species' survival in the wild.

The use of standardized permit forms allows inspection officials at ports of export and import to quickly verify that CITES specimens are properly documented. They also facilitate the collection of species-specific trade data, which are used in the creation of annual reports. These data are used to determine trends in trade and ensure that trade in wildlife is sustainable.

This trade monitoring has created a substantial body of information on the management and use of CITES species worldwide.



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*Hyacinth Macaw,
CITES Appendix I*



Southern White Rhinoceros, CITES Appendices I & II

What has CITES achieved and where is it going?

Over the last several decades, CITES has helped ensure global conservation of species. As online markets and other technological advances make it possible to sell and ship wildlife anywhere in the world and as issues of wildlife use grow ever more complex, CITES provides tools to effectively conserve the world's diverse natural resources.

Increased commitment by Parties to effectively implement the treaty has helped control global over-exploitation of wildlife and improved legislation at the national level to enforce CITES. Increased regional communication among Parties has also improved conservation of wildlife across political borders.



Autumn lady's tresses orchid, CITES Appendix II

The Parties have adopted a 12-year strategic vision to guide CITES through 2020. The plan sets the following goals:

- Ensure compliance with and implementation and enforcement of the Convention.
- Secure the necessary financial resources and means for the operation and implementation of the Convention.
- Contribute to significantly reducing the rate of biodiversity loss and to achieving relevant globally-agreed goals and targets by ensuring that CITES and other multilateral instruments and processes are coherent and mutually supportive.

What can I do to help?

CITES, like most laws and treaties, needs the cooperation and support of the public. Everyone, from individuals to businesses, has a role to play in making the treaty effective by:

- Becoming aware of what wildlife and wildlife products are protected, and obtaining required permits.
- Understanding how unsustainable wildlife trade impacts wild populations.

- Educating others on the importance of conserving the animals and plants that comprise the diverse life of this planet.
- Reporting violations of CITES and other federal wildlife laws.



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African spurred tortoise, CITES Appendix II

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Understanding CITES

CITES Appendix II Supports Sustainable Use

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) entered into force in 1975. It is the only global treaty to ensure that international trade in plants and animals does not threaten the survival of the species. It provides a framework for cooperation and collaboration among nations to prevent decline in wild populations of animals and plants. Currently 176 countries (called Parties), including the United States, implement CITES.

The CITES Appendices

Cacti, iguanas, and parrots represent some of the approximately 35,000 species protected by CITES. Species protected under CITES are listed in one of three appendices.

- Appendix I includes species threatened with extinction and provides the greatest level of protection, including restrictions on commercial trade. Examples include gorillas, sea turtles, most lady slipper orchids, and giant pandas.
- Appendix II includes species that, although currently not threatened with

extinction, may become so without trade controls. It also includes species that resemble other listed species and need to be regulated in order to effectively control the trade in those other listed species. Most CITES species are listed in this appendix, including American ginseng, paddlefish, lions, American alligators or mahogany.

- Appendix III includes species for which a range country has asked other Parties to help in controlling international trade. Examples include the walrus and alligator snapping turtle.

CITES Appendix II is:

- **NOT** a list of species in which international trade is prohibited. CITES Appendix-II species may be traded internationally if accompanied by appropriate permits.
- **NOT** a list of endangered species. CITES helps support natural resource management programs in range countries to prevent endangerment.
- **NOT** a ban or boycott of trade. CITES helps regulate and monitor trade for species vulnerable to overuse, and implements measures to attain sustainable harvest and legal trade.

Exporting a CITES Appendix-II Species

CITES is implemented through an international permitting system. Each Party designates Management and Scientific Authorities to process permits, make legal and scientific findings, and monitor trade.

In the United States, the U.S. Fish and Wildlife Service is home to these two offices. Exporters must obtain a CITES permit from their national CITES Management Authority for each shipment that contains CITES-listed specimens. Export permits for Appendix-II specimens can be issued only when the following findings are made:



Frank Kohn/USFWS

Barrel Cactus, CITES Appendix II

- A scientific finding of non-detriment: The Scientific Authority must be able to find that the export of an Appendix-II specimen is not detrimental to the survival of the species in the wild. The non-detriment finding is key to the long-term sustainability of the species. Depending on the species and activity, the Scientific Authority will either make a programmatic finding for a year or longer or a finding on a case-by-case basis. If the Scientific Authority is unable to make a positive finding, permits will not be issued for the export.
- A finding that specimens were acquired legally: Evidence must be provided to show that specimens were not obtained in violation of any state, federal, or other jurisdictional law.

Live animal and plant shipments. All shipments of live animals and plants must be prepared to minimize risk of injury, damage to health, or cruel treatment. In



North American River Otter, CITES Appendix II

the case of air transport, animals must be shipped in accordance with International



Venus Flytrap, CITES Appendix II

Air Transport Association (IATA) Live Animals Regulations.

Look-alike species. Sometimes species are listed in Appendix II to enable effective regulation of other listed species. Usually, this type of listing is necessary when species, or their parts or products, resemble other listed species and could cause identification difficulties. Look-alike species are monitored to ensure that they are not adversely affected by trade. Examples include the American black bear and river otter.

Captive Breeding and Artificial Propagation. CITES is concerned with the

survival of species in the wild. Captive breeding of animals and artificial propagation of plants can affect the survival of the species in the wild. But, specimens produced in captivity or under controlled conditions are typically lower risk to the survival of the species than specimens collected from the wild. As such, it is usually easier for CITES authorities to make the necessary findings for animals produced in captivity and plants propagated under controlled conditions.

Potential Benefits of Appendix-II Export Controls to Commercial Interests:

Longstanding international cooperation is the basis of CITES' effectiveness. The support of businesses, consumers, and the general public is vital to balancing conservation and trade needs within countries. Listing a species in Appendix II can produce the following benefits:

- Validation (through CITES permits) that the specimen has come from legal and sustainable sources, and has met international standards;
- Assurance that trade practices follow principles of sustainability;
- Uniform responsibility to address illegal trade, since all countries must meet the same CITES permitting con-

ditions and enforce CITES provisions;

- Increased public awareness of the important role CITES plays to conserve animals and plants, and a broader body of information on which to base consumer decisions;



Green Iguana, CITES Appendix II

- Assurance of long-term species sustainability through control of trade, and consumer confidence that species are being used in ways that are not harmful to their role within the ecosystem.

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CITES Permits and Certificates

What is CITES and how does it apply to me?

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) protects many species of animals and plants to ensure that commercial demand does not threaten their survival in the wild. It regulates trade in listed species and hybrids, including parts and products, through a system of permits. The Division of Management Authority processes applications for CITES permits for the United States. Under CITES, a species is listed at one of three levels of protection, which have different permit requirements.



Grey Parrot, CITES Appendix II

- Appendix I includes species presently threatened with extinction that are or may be affected by trade. CITES directs its most stringent controls at activities involving these species.
- Appendix II includes species that are not presently threatened with extinction but may become so if not

regulated.

- Appendix III includes species listed by a range country to obtain international cooperation in controlling trade.

What CITES documents are required?

■ Import

The import of Appendix-I specimens requires both import and export permits. An import permit may be granted when the purpose of the import will not be detrimental to the species' survival, is not primarily commercial, and the importer is suitably equipped to house and care for live animals and plants.

No import permit is required for Appendix-II or -III specimens, or for specimens that qualify for other certificates (see below).

■ Export

The export of Appendix-I and -II specimens requires an export permit. Such a permit may be granted when the export will not be detrimental to the species' survival and specimens were legally acquired.

For Appendix-III species originating from the country that listed it, an export permit is required. An export permit may be granted when the Management Authority determines that the specimens were not obtained in contravention of that country's laws for the protection of animals and plants.

■ Re-export

A re-export certificate is required for the export of CITES-listed specimens that were previously imported, including items subsequently converted to manufactured goods. A certificate may be issued when evidence of legal import has been provided. If you were the original importer of the wildlife or plant, you

need to provide a copy of the canceled CITES permit that accompanied the shipment into the United States and, for animal specimens, the cleared Declaration for Importation (Form 3-177) for that shipment. If you were not the importer, you must provide copies of the importer's documents, as well as documents that show you purchased the wildlife or plant from the original importer, or a record of sequential transactions.



Hawksbill Turtle, CITES Appendix I

USFWS

■ Introduction from the Sea

An introduction from the sea certificate is required for the import of Appendix-I or -II specimens taken on the high seas outside of any country's jurisdiction.

■ Pre-Convention Certificate

If a specimen was obtained prior to the CITES listing date of that species—collected from the wild or held in captivity—it may be granted a pre-Convention certificate that will allow for the specimen to be exported. For Appendix-I specimens, no CITES import permit is required.

■ Bred-in-captivity Certificate or Certificate for Artificially Propagated Plants

If a species meets the criteria for bred-in-captivity or artificially propagated as outlined in CITES resolutions, the exporting country may issue

an exemption certificate (bred-in-captivity facts sheet is available). For Appendix-I specimens, no CITES import permit is required.

shipment must remain under Customs bond. Check with other countries involved in the shipment to meet their requirements.

■ **Scientific Exchange Certificate:**

Scientific institutions are eligible for this certificate, which authorizes import and export of museum and herbarium specimens. Such specimens must be shipped as non-commercial loans, donations, or exchanges among scientific institutions registered with CITES.

■ **Certificate of Origin:**

For Appendix-III specimens that originated from a country other than the listing country, a certificate of origin is needed to export the specimen. A certificate can be issued if the specimen was legally obtained within the exporting country.

What about shipping live animals and plants?

Permits for the shipment of CITES-listed live animals or plants may be issued only when the applicant demonstrates that the specimen will be humanely shipped. Live animal shipments must meet the International Air Transport Association (IATA) Live Animals Regulations or the CITES guidelines for transport. In addition, the import of live mammals and birds must meet the humane shipment regulations in 50 CFR Part 14.

What exceptions are there to permit requirements?

■ **In-transit Shipments:**

Under CITES, a shipment transiting a country must be accompanied by a CITES permit from the exporting country to its final destination. The

■ **Shipments within the United States:**

CITES imposes no controls on shipments between States or U.S.



territories, including the District of Columbia, Guam, Commonwealth of Puerto Rico, Commonwealth of the Northern Mariana Islands, U.S. Virgin Islands, and American Samoa.

■ **Personal or Household Effects:**

The United States recognizes the CITES personal and household effects exemption for wildlife and plants, or their parts and products, when the import or export is part of a household move or accompanying the owner and intended for personal use (does not include specimens mailed or shipped separately). This applies only under the following conditions:

■ Appendix-II and -III specimens may be imported and exported without CITES documents, provided the foreign country does not require a CITES permit.

■ Appendix-I specimens may be exported by a U.S. resident without CITES documents, provided the foreign country does not require a CITES permit. Appendix-I specimens acquired abroad by individuals outside their country of usual residence may not be imported into the United States without CITES permits.

What foreign documentation might I need from a country that is not a member of CITES?

If you are importing CITES-listed wildlife or plants, or their parts and products, from a country that is not a Party (member) to CITES, you must obtain documents that contain all the information normally required by CITES.

How do I apply for a CITES permit or certificate?

1. Complete a standard application form (3-200) and submit it with a processing fee to the Division of Management Authority. Allow at least 60 days for review.
2. Contact your State wildlife or plant conservation agency and the CITES Management Authority of the foreign importing or exporting country to determine any additional requirements. (Visit the CITES Secretariat's website at www.cites.org.)
3. Some CITES-listed species are also protected by other U.S. laws with more stringent permit requirements, i.e., Endangered Species Act, Marine Mammal Protection Act, and Wild Bird Conservation Act.

**U.S. Fish & Wildlife Service
International Affairs
4401 N. Fairfax Drive, Room 212
Arlington, VA 22203
703/358-2104 or 800/358-2104
e-mail: managementauthority@fws.gov
<http://www.fws.gov/international>**

December 2012

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State Fish and Wildlife Agencies of the United States: **WHY AND HOW WE ENGAGE IN CITES**

The fish and wildlife agencies in the 50 states of the United States (U.S.) and their supporting regional and national organizations (Association of Fish and Wildlife Agencies and the Associations of Midwest, Northeast, Southeastern, and Western Fish and Wildlife Agencies) have participated in CITES since its inception. State fish and wildlife agencies share wildlife management responsibility with the federal government including the U.S. Fish and Wildlife Service (USFWS) who implements CITES in the U.S.

There are abundant wildlife populations in the U.S. and the opportunity to freely hunt, fish or enjoy them is largely due to the North American Model of Wildlife Conservation (Model). It is one of the world's most successful system of policies and laws to sustain fish and wildlife and their habitats through sound science and active management. The Model through law decreed that wildlife belongs to the people, not government, corporations, or individuals. It further directs how this natural resource is to be used and managed under sustainable guidelines for the betterment of wildlife and people.

Wildlife is considered to be held and managed by a state for the benefit of its citizens. Each state fish and wildlife agency enacts and enforces laws relating to migratory wildlife while they are within the borders of the state and also manages resident non-migratory wildlife such as deer, bobcats, and local fish. In many instances, conservation of wildlife involves cooperation/collaboration between state and federal wildlife agencies and non-governmental organizations.

State fish and wildlife agencies have a long and proud history of wildlife conservation. They employ dedicated professional fish and wildlife biologists, researchers, land managers, law enforcement, and education personnel. State fish and wildlife agencies collectively manage thousands of native species and hundreds of millions of acres of land and waters as fish and wildlife habitat that provides wildlife-related recreational opportunities for their citizens.

WHY?

State fish and wildlife agencies weigh in on CITES implementation because it impacts species they are responsible for managing. They collaborate with USFWS to provide input on species status, management, and international trade to help ensure that actions taken through CITES support the conservation of wildlife in the U.S.

STATE FISH AND WILDLIFE AGENCIES

50,000 employees

11,000 biologists

8,400 law enforcement personnel

190,000 volunteers

\$5.6 Billion USD (aggregated budget)

Total acreage managed — 465 million acres (188 million hectares) of land and 168 million acres (68 thousand hectares) of water (an area four times the size of Botswana or France.)

STATE FISH AND WILDLIFE AGENCIES PARTICIPATE IN ALL ASPECTS OF CITES.

Rather than participating independently in CITES, state fish and wildlife agencies opted to be represented by a five person team. Each of the four regional associations have a representative. The International Relations Director of the Association of Fish and Wildlife Agencies is the fifth representative. Although they represent state governments across the U.S., the five organization representatives participate in CITES meetings as national and international non-governmental organizations and, at times, as a member of the U.S. delegation to the Standing Committee and the Conference of the Parties. Both participation and representation at CITES forums and collaboration with the USFWS are critical roles for the state fish and wildlife agencies. International trade in U.S. native species and implementation of CITES for species listed in the Appendices can impact the state fish and wildlife agencies ability to manage and conserve species. Being on the front lines of conservation, the state fish and wildlife agencies need to ensure that as many management and policy tools are available to them as possible. CITES can be one of those tools.



CONSERVATION IMPLEMENTATION

NORTH AMERICAN WATERFOWL CONSERVATION

More than a quarter century ago, waterfowl populations in North America languished at historic lows. Signed in 1986 by the United States and Canada and in 1994 by Mexico, the North American Waterfowl Management Plan (Plan) was the foundational document to restore waterfowl populations. Although international in scope, its success depends on regional partnerships called migratory bird joint ventures, comprising federal, state, provincial, tribal, and local governments; businesses; conservation organizations; and individuals. The Plan Committee consists of members, from all three countries. Of the six U.S. members four are state fish and wildlife agency personnel. State fish and wildlife agencies also participate in the migratory bird joint ventures, implement habitat restoration, and help develop waterfowl harvest regulations. Accompanying the Plan is the North American Wetlands Conservation Act (NAWCA). Financial support from NAWCA helps to restore and protect wetland habitat. Since 1986, state fish and wildlife agencies have contributed over \$73 million of non-federal matching monies to NAWCA projects in Canada.

RIVER OTTER (*LONTRA CANADENSIS*) CONSERVATION AND MANAGEMENT

River otter populations experienced severe declines by 1900. Today river otter populations in the U.S. are expanding throughout their range through a combination of improvements in regulated trapping, wetland restoration, and reintroduction by state fish and wildlife agencies. State fish and wildlife

agencies that allow harvest regulate it to ensure it is sustainable. Regulations vary but restrict harvest season length, restrict harvest method, establish harvest quotas, and require reporting. State fish and wildlife agencies also monitor river otter populations and adjust harvest programs to incorporate new science. State fish and wildlife agencies have successfully provided opportunities for harvest while ensuring the long-term sustainability of the species and improving wetlands and other aquatic habitats.

ENDANGERED SPECIES RESTORATION

Restoring viable, self-sustaining populations of endangered species is successfully being done by many state fish and wildlife agencies in collaboration with other partners. Since 2007, the state agency in Ohio has collaborated to relocate and ultimately delist the federal and state endangered Northern Riffleshell (*Epioblasma torulosa rangiana*). Within the last 30 years, the species had slowly declined in Ohio. Because the few remaining mussels were thriving they attempted a reintroduction of mussels from the state of Pennsylvania where the species is still abundant. The project involves the Ohio Division of Wildlife, Pennsylvania Fish and Boat Commission, USFWS, The Ohio State University, Columbus Zoo and Aquarium, and Columbus and Franklin County Metropolitan Park District, among others. From 2008-2014, 15,000 mussels were collected by fisheries biologist from the Allegheny River in Pennsylvania and taken to the Big Darby Creek in central Ohio. To monitor the success of the translocation, 12,000 mussels were fitted with Passive Integrated Transponders. This is the largest relocation of an endangered species ever undertaken in Ohio.

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA



Thirtieth meeting of the Animals Committee
Geneva (Switzerland), 16-21 July 2018

EELS

Membership (as decided by the Committee)

- Co-Chairs: the representative of Europe (Mr. Fleming) and the alternate representative of Asia (Mr. Ishii);
- Parties: Australia, Belgium, Canada, China, Czech Republic, European Union, France, Indonesia, Italy, Japan, Netherlands, Portugal, Republic of Korea, Spain, Thailand, Turkey, United States of America and Viet Nam; and
- IGOs and NGOs: Convention on Migratory Species (CMS), UNEP-WCMC, Food and Agriculture Organization (FAO), IUCN, SEAFDEC, Association of Northeast Fish and Wildlife Agencies, Global Guardian Trust, Humane Society International, Japan Wildlife Conservation Society, SSN, Sustainable Eel Group, TRAFFIC, Vulcan/Paul G. Allen Philanthropies, Wildlife Conservation Society, World Wildlife Fund and Zoological Society of London.

Mandate

Taking into account the discussions in plenary, any additional information coming from range States and any updates provided by the intersessional working group of the Animals Committee on eels, the in-session working group shall:

- a) review the studies presented in Annexes 1 and 2 of document AC30 Doc. 18.1;
- b) consider the outcome of the regional workshops presented in Annex 3 of documents AC30 Doc. 18.1, AC30 Doc. 18.2 and AC30 Doc. 18.3, as well as information contained in relevant information documents;
- c) review the information in document AC30 Doc. 12.2, Annexes 1 and 2, concerning the Review of Significant Trade in *Anguilla anguilla* from Algeria, Morocco and Tunisia, and provide advice on the recommendations that should be drafted under the Review of Significant Trade for these range States should they be categorised as “action is needed”;
- d) consider the available information on trade in *Anguilla anguilla* from Turkey to determine if it should be included in Stage 2 of the Review of Significant Trade as an exceptional case;
- e) draft recommendations on the implementation of the CITES listing of European eel (*A. anguilla*) for reporting to the 18th meeting of the Conference of the Parties;
- f) draft recommendations to ensure the sustainable trade in other *Anguilla* species for reporting to the 18th meeting of the Conference of the Parties; and

- g) draft recommendations for reporting on the illegal trade in European eel to the 70th meeting of the Standing Committee (SC70).

Recommendations

Noting that a more complete working group report is available, and can be used to form the basis of the Animals Committee report to the 18th meeting of the Conference of the Parties (CoP18) under Decision 17.188, the working group makes the following recommendations.

Under item c) of the mandate

The group agreed that Algeria, Morocco and Tunisia should be placed in the 'action is needed' category. Provisional recommendations were drafted and sent to the working group on the Review of Significant Trade.

Under item d) of the mandate

The group did not support the inclusion of Turkey in the Review of Significant Trade at this stage; however, it noted that this could be reviewed by the Animals Committee at its 31st meeting (AC31).

Under item e) of the mandate

On reporting trade in European eels

The group **recommends** the descriptions for specimen codes in the *Guidelines for the Preparation and Submission of CITES Annual Reports* (January 2017) be amended as follows:

1. The description for FIG and the definition for LIV should be amended as follows (new text in bold, deleted text in strikethrough).
 - i) Amend description for FIG (fingerlings) to read: '**live** juvenile fish ~~of one or two years of age~~ for the aquarium trade, **aquaculture**, hatcheries, **consumption** or for release operations, **including live European eels (*Anguilla anguilla*) up to 12cm length**'.
 - ii) Amend definition for LIV (live specimens) to read: 'live animals and plants, **excluding live fingerling fish – see FIG**'.
 - iii) For eels, both specimen types should be reported in kilos (kg) rather than in numbers. The explanatory text should be amended accordingly as shown in (4) below.
2. The code for meat (MEA) should be used in preference for trade in eels for human consumption and that such trade should be reported in kilos (indeed reporting in kilos is more important than the code used).
3. The explanatory text should be amended to indicate that fillets of fish should be reported under the code for meat MEA and the code for bodies BOD should be amended to remove reference to processed fish, as follows (new text in bold, deleted text in strikethrough):

BOD – substantially whole dead animals, including ~~fresh or processed~~ **entire** fish, stuffed turtles, preserved butterflies, reptiles in alcohol, whole stuffed hunting trophies, etc.
4. Under section 3 of *Guidelines for the Preparation and Submission of CITES Annual Reports* (January 2017), 'Specific instructions', insert the following text:

'For European eel (*Anguilla anguilla*), it is essential that live eels of <12cm length (and which may be referred to as glass eels or elvers) in trade are distinguished from other live specimens by reporting them as fingerlings (FIG); other live specimens should be reported as LIV. It is also desirable that the code for meat (MEA) should be used for trade in eels destined for human consumption. In all cases, Parties should report trade in live specimens (LIV), live fingerlings (FIG) and meat (MEA) of European eel by weight and not as number of specimens. The net weight of live specimens should be recorded and not the combined weight of eels and the water in which they are transported.'

On source codes

It was considered desirable to be able to distinguish specimens raised in aquaculture from direct wild harvest of European eels potentially through the use of source code R (ranching). However, the making of non-detriment findings and consideration of ranching as a source code for European eel may require further consideration post-CoP18. In the meantime, this issue should be referred to the Standing Committee's intersessional working group on captive-bred and ranched specimens for their consideration and guidance. This issue may make a useful case study for the workshop referred to under Agenda item 10.1 (AC30 Doc. 10.1 / PC24 Doc. 10.1) on *Non detriment findings*.

On customs codes

The group agreed that having better harmonisation of customs codes for trade in all *Anguilla* species would be desirable to enable patterns of trade to be understood and, for European eel, to enable comparison of customs and CITES trade data. However, the group noted that discussions on customs codes needed engagement with the World Customs Organisation and that the issue of customs codes is, perhaps, more appropriate for the Standing Committee. This issue should, therefore, be referred to the Standing Committee for their consideration.

On trade in, and non-detriment findings for, European eel

Decision 18.AA

Directed to range States for European eel (Anguilla Anguilla)

Parties are encouraged to:

- a) share and publish any non-detriment finding studies on European eel they have undertaken, seek peer review where appropriate, collaborate and share information with other Parties regarding such studies and their outcome, especially where they share catchments or water bodies;
- b) develop and/or implement adaptive eel management plans, or regularly review and revise these, at national or sub-national (or catchment) level, with defined and time-bound goals, and enhance collaboration within countries between authorities and other stakeholders with responsibilities for eel management, and between countries where water bodies or catchments are shared;
- c) share information on stock assessments, harvests, the results of monitoring and other relevant data with the Joint EIFAAC/ICES/GFCM Working Group on Eels ([WGEEL](#)) so that a full and complete picture of the state of the stock can be established;
- d) develop measures or implement more effectively existing measures to improve the traceability of eels in trade;
- e) provide the Secretariat with information on any measures they have in place to restrict the trade in live 'glass' or fingerling eels; and
- f) report on progress or provide information to the Secretariat in time for consideration at the 31st or 32nd meeting of the Animals Committee.

Decision 18.BB

Directed to the Animals Committee

The Animals Committee shall consider, at its 31st and 32nd meetings, any reports by Parties with respect to the making of non-detriment findings for trade in European eel with respect to Decisions 18.AA and provide advice and guidance.

The Animals Committee requests the Secretariat to:

- a) clarify, through a Notification, information from Parties which are range states of European eel (*Anguilla anguilla*) on any restrictions they have in place to limit or prohibit the export of live 'glass' or fingerling eels; and

- b) inform all Parties, through a Notification, of any restrictions by range States of European eel (*Anguilla anguilla*) on the export of live 'glass' or fingerling eels.

Under item f) of the mandate

On trade in non-CITES *Anguilla* spp

Decision 18.CC

Directed to range States of non-CITES *Anguilla* spp in international trade (particularly *A. rostrata*, *A. japonica*, *A. marmorata* and *A. bicolor*)

Parties are encouraged to:

- a) implement conservation and management measures and related legislation to ensure the sustainability of harvests and international trade in *Anguilla* spp. and make these widely available;
- b) collaborate and cooperate with other range States on shared stocks of *Anguilla* spp. to develop shared objectives for these stocks and their management, improve the understanding of the biology of the species, conduct joint programmes of work and share knowledge and experience;
- c) establish monitoring programmes and develop abundance indices;
- d) improve the reporting and traceability of *Anguilla* spp. in trade;
- e) develop and/or implement adaptive eel management plans at national or sub-national (or catchment) level and enhance collaboration within countries between authorities and other stakeholders with responsibilities for eel management; and
- f) report progress on these measures to the Animals Committee at its 32nd meeting.

Decision 18.DD

Directed to Secretariat

The Secretariat shall invite Parties, through a Notification, to report on their progress in implementing Decision 18.CC and prepare a summary report with draft recommendations in time for submission to the 32nd meeting of the Animals Committee.

The Secretariat shall invite Parties, through a Notification, to submit information regarding current levels of, or emerging trends in, their demand for specimens of *Anguilla* spp. in trade and, subject to the availability of resources, commission a study to consider levels of demand from consumer States, especially for live eels for aquaculture, and sources of supply, identify any disparities between these and make recommendations for the more effective future management of harvests and trade.

Decision 18.EE

Directed to the Animals Committee

The Animals Committee shall, at its 32nd meeting, consider the progress reports provided by Parties and the report by the Secretariat with respect to Decisions 18.CC and 18.DD and make any recommendations to the 19th meeting of the Conference of the Parties.

Decision 18.FF

Directed to donor Parties and other relevant organizations

Donor Parties and other relevant organizations, including the Food and Agriculture Organization of the United Nations (FAO) and others, are invited and encouraged to provide support to, and build capacity for, *Anguilla* range states for the purpose of implementing Decisions 18.AA to 18.EE.



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

MEMORANDUM

September 17, 2018

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

Please find attached two new nominations to the American Eel Advisory Panel – Richard Stoughton, a commercial fyke net fisherman from South Carolina and Lawrence Voss, a commercial pot fishermen from Delaware. Please review these nominations 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: Kirby Rootes-Murdy

M18-89

AMERICAN EEL ADVISORY PANEL

Bolded names await approval by the American Eel Management Board

Bolded and italicized name denotes Advisory Panel Chair

October 3, 2018

Maine

David Allen (rec)
22 Allen Lane
Washington, ME 04574
Phone: (207)845-2704
maineeagle@pivot.net
Appt Confirmed 11/10/04
Appt Reconfirmed 11/07

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

Sam Veach (comm.)
Route, 49
P.O. Box 536
Tuckahoe, NJ 08250-0536
Phone (day): (609) 425-0807
Phone (eve): (609) 628-4538
SBVeach@aol.com

Appt Confirmed 2/20/13

Pennsylvania

John Pedrick (rec)
936 Langstroth Lane
Bensalem, PA 19020-5763
Phone (Day): (215)633-6777
Phone (cell): (215)817-3929
jjpedrick@verizon.net
Appt Confirmed 8/9/12

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

Delaware

Lawrence Voss (comm./pot)
3215 Big Oak Road
Smyrna, DE 19977
Phone: (302)359-0951
shrlivss@aol.com

Maryland

Robert H. Evans (comm./pot)
5527 Muddy Creek Road
Churchton, MD 20733
Phone (Day): 443/336-3000
Phone (eve): 410/956-3327
Appt. Confirmed 5/10/05
Appt Reconfirmed 5/10

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

AMERICAN EEL ADVISORY PANEL

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

October 3, 2018

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

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

***Vacancy – comm/pot, fyke
& gillnet***

North Carolina

2 Vacancies – comm/pot & dealer

South Carolina

Richard Stoughton (comm/fyke net)
1933 Culver Avenue
Charleston, SC 29407
Phone: 843.729.5203
captrichard@live.com

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



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: Richard Stoughton

Address: 1933 Culver Ave

City, State, Zip: Charleston, SC 29407

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

Phone (day): 843-729-5203 Phone (evening): Same

FAX: _____ Email: _____

.....
FOR ALL NOMINEES:

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

- 1. American Eel AP
- 2. _____
- 3. _____
- 4. _____

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

yes _____ no X

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

yes _____ no X

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

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

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

FOR COMMERCIAL FISHERMEN:

- 1. How many years has the nominee been the commercial fishing business? 10 years
- 2. Is the nominee employed only in commercial fishing? yes no _____
- 3. What is the predominant gear type used by the nominee? Elver fyke net
- 4. What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)? inshore

FOR CHARTER/HEADBOAT CAPTAINS:

- 1. How long has the nominee been employed in the charter/headboat business? 10 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? 10 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? 10 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.

Nominee works full time as a Charter Boat Captain

FOR SEAFOOD PROCESSORS & DEALERS:

1. How long has the nominee been employed in the business of seafood processing/dealing? 10 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? 10 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? 10 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:

Name: _____
(please print)

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

State Director

State Legislator

Governor's Appointee

Richard Stoughton has participated in SC's elver fishery for the last 10+ years. He is very interested and always engaged in the innerworkings of the fishery, he attends all public meetings (ASMFC or SCDNR), and participates using positive and beneficial dialogue, suggesting ideas to make the fishery better. He applied for and received a scientific collection permit with the purpose of finding a more efficient sorting tool that could be adopted by the SC elver fishery to help allow more glass eel harvest, but still meet the pigmented eel compliance tolerance. For these reasons and many others, Richard is nominated to the American Eel Advisory Board.



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: John Clark State: Delaware
(your name)

Name of Nominee: Lawrence H. Voss

Address: 3215 Big Oak Road

City, State, Zip: Smyrna, DE 19977

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

Phone (day): 302-359-0951 Phone (evening): same

FAX: _____ Email: shrlyvss@aol.com

.....
FOR ALL NOMINEES:

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

- 1. American Eel
- 2. Horseshoe Crab
- 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?

American Eel

Striped Bass

Horseshoe Crab

Atlantic Menhaden

Blue Crab

American Oyster

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

In addition to the above:

Weakfish

White Perch

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 X no _____

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

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

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.

Nominee Signature: Lawrence H. Voss

Date: 9/25/18

Name: Lawrence H. Voss
(please print)

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

[Signature]
State Director

[Signature]
State Legislator

[Signature]
Governor's Appointee

Atlantic States Marine Fisheries Commission

Business Session

October 23, 2018; 10:15 – 11:15 a.m.

October 25, 2018; 11:00 – 11:15 a.m.

New York, New York

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.

October 23

1. Welcome/Call to Order (*J. Gilmore*) 10:15 a.m.
2. Committee Consent 10:15 a.m.
 - Approval of Agenda
 - Approval of Proceedings from October and November 2017
3. Public Comment 10:15 a.m.
4. Review and Consider Approval of 2019 Action Plan (*R. Beal*) **Action** 10:20 a.m.
5. Elect Chair and Vice-Chair (*R. Beal*) **Action** 11:00 a.m.
6. Recess 11:15 a.m.

October 25

1. Reconvene 11:00 a.m.
2. Consider Noncompliance Findings (If Necessary) **Final Action** 11:00 a.m.
3. Other Business/Adjourn 11:15 a.m.

The meeting will be held at the Roosevelt Hotel, 45 East 45th Street & Madison Avenue, New York, NY; 212.661.9600

Vision: Sustainably Managing Atlantic Coastal Fisheries

Draft Proceedings of the Business Session October 2017

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
BUSINESS SESSION**

**The Marriott Norfolk Waterside
Norfolk, Virginia
October 17, 2017**

These minutes are draft and subject to approval by the Business Session
The Board will review the minutes during its next meeting

TABLE OF CONTENTS

October 18, 2017

Call to Order, Chairman Douglas E. Grout..... 1

Approval of Agenda 3

Approval of Proceedings, August 2017 3

Public Comment..... 3

Review and Consider Approval of the 2018 Action Plan 3

Election of Commission Chair and Vice-Chair 12

Recess..... 14

October 19, 2017

Call to Order, Chairman James L. Gilmore 15

Consider Final Approval of Northern Shrimp and Tautog Amendments 15

Report from the Resolutions Committee..... 16

Adjournment 17

INDEX OF MOTIONS

1. **Approval of Agenda** by consent (Page 1).
2. **Move to approve the 2018 Action Plan on behalf of the Administrative Oversight Committee** (Page 12). Motion by Jim Gilmore. Motion approved by consent (Page 12).
3. **Move the Commission approve Amendment 3 to the Northern Shrimp Interstate Fishery Management Plan** (Page 15). Motion by Doug Grout; second by Eric Reid. Motion is approved by unanimous consent (Page 15).
4. **Move the Commission send a letter to NOAA Fisheries and the New England Fishery Management Council regarding the requirements for size-sorting grates in Amendment 3 to the Northern Shrimp Fishery Management Plan** (Page 15). Motion by Doug Grout; second by John Clark. Motion carries by unanimous consent (Page 15).
5. **On behalf of the Tautog Management Board, move the Commission approve Amendment 1 to the Tautog Interstate Fishery Management Plan** (Page 15). Motion by Doug Grout; second by John Clark. Motion carries by unanimous consent (Page 15).
6. **Move to Adjourn** by consent (Page 17).

ATTENDANCE

Board Members

Pat Keliher, ME (AA)	John Clark, DE, proxy for D. Saveikis (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
Doug Grout, NH (AA)	David Blazer, MD (AA)
Ritchie White, NH (GA)	Rachel Dean, MD (GA)
Raymond Kane, MA (GA)	Ed O'Brien, MD, proxy for Del. Stein (LA)
David Pierce, MA (AA)	John Bull, VA (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Rob O'Reilly, VA, Administrative proxy
Jason McNamee, RI, proxy for J. Coit (AA)	Chris Batsavage, NC, proxy for B. Davis (AA)
David Borden, RI (GA)	David Bush, NC, proxy for Rep. Steinburg (LA)
Mark Alexander, CT (AA)	Robert Boyles, SC (AA)
James Gilmore, NY (AA)	Malcolm Rhodes, SC (GA)
Russ Allen, NJ, proxy for L. Herrighty (AA)	Spud Woodward, GA (AA)
Tom Fote, NJ (GA)	Pat Geer, GA, proxy for Rep. Nimmer (LA)
Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)	Jim Estes, FL, proxy for J. McCawley (AA)
Andy Shiels, PA, proxy for J. Arway (AA)	Sherry White, USFWS
Roy Miller, DE (GA)	Lindsay Fullenkamp, NMFS

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

Ex-Officio Members

Staff

Bob Beal	Mark Robson
Toni Kerns	

Guests

Heather Corbett, NJ DFW	Jack McGovern, NMFS
Dan Crear, VIMS	Brandon Muffley, MAFMC
Michelle Duval, NC DMF	Derek Orner, NOAA
Lynn Fegley, MD DNR	Chris Wright, NMFS
Ryan Jiorle, VMRC	

The Business Session of the Atlantic States Marine Fisheries Commission convened in the Hampton Roads Ballroom V of the Marriott Waterside Hotel, Norfolk, Virginia, October 18, 2017, and was called to order at 1:25 o'clock p.m. by Chairman Douglas E. Grout.

CALL TO ORDER

CHAIRMAN DOUGLAS E. GROUT: Good afternoon everybody, welcome to the Business Session; if you all could take your seat. Before we get into the agenda, John Bullard, the GARFO Regional Administrator, who as you know is retiring shortly; and this may be his last meeting, would like to say a few things to the Commission. John, I'll turn it over to you.

MR. JOHN K. BULLARD: Thank you very much, Mr. Chair, I just have one page here. Hello all you all. Bless your heart. Five years ago I attended this meeting to introduce myself; so at this meeting it's time to say goodbye. The ASMFC has made incredible progress; thanks to Commissioner John Bull just in the last year.

You have found ways to introduce heat into the rooms in which we meet, and so people can make motions without having to wear gloves to do so. I've learned an awful lot. I think the first meeting I learned at high volume from Dr. Daniel about the shortcomings on our sturgeon policy; still don't have an eardrum.

But we have as we learned this morning, made an awful lot of progress in sturgeon, and progress in a lot of other areas as well. I really do value a lot of lessons that I've learned from attendance at these meetings. You all have made some very tough decisions around these tables. There was one; I think it was in Baltimore on menhaden.

But those tough decisions are necessary to rebuild fisheries. You've done that. Not just with menhaden. From my vantage point in the audience, I can listen to the debate and I can

see the looks around the table. I can see how you hold yourselves accountable, how you help each other resist the pressures that you have all felt at one time or another.

I see how you support each other to do what is right. It's a very valuable lesson for me and for all of us. I've enjoyed our partnership in this effort, working with you on tough issues like for example southern New England lobster with my grade school schoolmate David Borden, who lives across the river from me as we try to transition that industry from lobster to Jonah crab.

That's just one example of the partnership that we have with you. I've seen this partnership, this very important partnership get very sorely tested with summer flounder. My remarks in the Boston Globe several months ago got me in hot water with my bosses, so I don't think I should comment any more on that. You can go read it if you want. But Chairman Grout's comments last night at dinner, I think your remarks Mr. Chairman were right on the money. I'm glad you have a meeting set up with Secretary Ross. I fervently hope that this is a one-time occurrence, and everyone here will work to make that breakdown a singular exception. Because we face many challenges that will require our wonderful, decentralized system of managing fisheries work, we have a lot of challenges.

You all know them as well or better than I do. There are still issues with summer flounder, black sea bass, and other fisheries. There is the issue of climate change, which you have helped educate us, and the regional fishery management councils on. It's causing havoc in so many ways. The issue of allocations has to be faced.

The issue of forage fish has been mentioned here. Just this morning Bob Beal mentioned competing ocean uses. There are of course others. This partnership that we have is very

important. There are some “thank-you’s” that I want to offer, Mr. Chairman. It could take all day and I don’t want to.

But I do want to mention in particular on state directors. It was at a meeting we had with state directors out in San Diego that Paul Diodati, who was deservedly honored at lunch, said to leadership at NOAA Fisheries that we aren’t partners with state directors, state directors are our allies. That is a very good use of that term.

I’ve certainly felt that we are in the trenches with state directors. I’ve felt that and I’ve enjoyed the relationships that I’ve had with the state directors confronting problems in my region. As I’ve done that with each and every one of you, I’ve developed profound respect and become friends, maybe possible exception Commissioner Martin, bless his heart.

But in all seriousness, Russ, come on. I can’t start laughing now, Russ. The respect I have for you is so high for the jobs you do, the difficult jobs you do. Secondly, the staff at ASMFC, Bob, Toni and all of the team under ASMFC, wow, it’s every time it seems that we have a problem at NOAA Fisheries, where we need something done.

You know I pick up the phone and call Bob. You know if it’s distribution of disaster assistance; if it’s reimbursement for at-sea monitoring, if it’s help with fishery dependent data visioning with the partnership that we both have with ACCSP and Mike and his team. The professionalism, the dedication, the expertise, the passion, you know they’re an extension of our team.

It’s so wonderful to work with, you know this Mr. Chairman, but I want to tell you we know it too. It’s just a great team to work with, the staff here. Lastly, I want to say our team here at NOAA that I have the honor of working with. I was going to serve two years at NOAA Fisheries. If I were a carton of milk, I would be something you would stay very far away from,

well past my expiration date. But I’ve stayed because my staff is so fantastic.

The two Mikes, Mike Petney, Mike Ruccio, I’m going to leave people out but Peter Burns, Ali, Chip, Kelly, Lindsay, Lynn, Derrick, others who have been at this microphone. You’ve gotten to know them well, and I’m sorry that I’ve left some out. But there have been so many who’ve shown you their dedication and their passion for this job; their expertise, their knowledge. I never cease to be amazed. I go home every night my brain hurts just trying to keep up with them. I can’t possibly do that. But it is an honor for me to work alongside them. When I look up above me, at people like Sam Rauch, and the leaders there, I feel lucky to work for them. I think you’re in good hands as I look around the administration at our political leadership. Chris Oliver, you know we’ve drawn the long straw in a lot of people. Chris Oliver knows fisheries for decades and decades in both the Gulf of Mexico and in Alaska.

Admiral Gallaudet, who just started work this week, is going to be very, very good at NOAA. I think you’ll take the measure of Secretary Ross when you meet with him. But I think he’s a numbers guy, and we’re a numbers agency. I think he’s strong. I think we’ve got a strong team. I think we can hold our end of the partnership up.

With that Mr. Chairman, I do hope occasionally I’ll run into you all again. It’s been a real pleasure and an honor to work with you. We have such an important mission. I come from a seaport, New Bedford. I know the stakes and the difficulty, and the importance of our work; and I wish you the best as you carry on that most important mission. Thank you very much, Mr. Chair.

CHAIRMAN GROUT: Thank you very much, John. (Applause) John, I just want to recognize you and thank you for all that you have done to promote and support the partnership that we

have between the Commission and GARFO. I've seen many, many things that you've done over the years that you have supported our work, you've supported our communication, you've supported our co-management, and you have been an ally as we have tried to be an ally in your work. Thank you very much, John and good luck in your retirement. (Applause)

APPROVAL OF AGENDA

CHAIRMAN GROUT: Okay, we now have an agenda before you. Are there any changes to the Business Agenda? Seeing none; are there any objections to approving the agenda? It is approved by unanimous consent.

APPROVAL OF PROCEEDINGS

CHAIRMAN GROUT: We also have proceedings from our May meeting. Are there any changes or edits to that May meeting minutes? Seeing none; is there any objection to approving the minutes? They are approved by unanimous consent.

PUBLIC COMMENT

CHAIRMAN GROUT: We also have an opportunity here for public comment for things that are not on the agenda. Is there anybody in the public or the audience that would like to speak on things not on the agenda?

REVIEW AND CONSIDER APPROVAL OF THE 2018 ACTION PLAN

CHAIRMAN GROUT: Seeing none; we'll move into Review and Consider Approval of the 2018 Action Plan. Bob.

EXECUTIVE DIRECTOR ROBERT E. BEAL: Just all the staff up here we'll go through the individual sections. But a lot of times we present a budget associated with this action plan, and we don't have that together this year. But we have done the rough analysis, and it looks like we can afford everything that's in here. That is the good news.

The bad news is, if you want to add things in here, we probably need to do some horse trading and swap some things out. As the staff is running through it, if there are significant financial expenditures that need to be added, we're going to need to think about that a little bit how we can cover those expenses. With that I think Toni can go through Goal 1, if that's okay, Mr. Chairman.

CHAIRMAN GROUT: Sounds good, Toni.

MS. TONI KERNS: What I'm going to do is go through the bolded actions, and I think that's what all of us up here will be doing today. These are new items that we're going to be taking on. Other work is stuff that we have either started or is something that is consistent from year to year within the plan. I'll go to Goal 1, which is our ISFMP goal, and starting with American eel. We'll consider a management response to the 2017 assessment findings, which the Board heard earlier this week, and look to do a management document on allocations and quotas specific to the yellow and glass eel fisheries.

We'll also have the Technical Committee or some folks from the Technical Committee, not the full, evaluate the monitoring efforts to identify gaps and the value of existing surveys for assessment and management use. The American Lobster Board will finalize and implement Addendum XXVI; which is looking to improve harvester reporting and biological data collection in state and federal waters.

This will also apply to the Jonah crab fishery as well. We'll look at Addendum XXVII, which considers standardization of the management measures in the Gulf of Maine and Georges Bank stock, and develop a strategy for management of the southern New England stock that considers the record low abundance of the stock, and preserves a function of a portion of the fishery, acknowledging the

effects of climate change on the lobster resource.

The TC will initiate the 2020 benchmark stock assessment. While it's not in this document for Atlantic herring, we did task the TC to look into the efficacy of all of the management goals and objectives of the spawning closures, using the GSI forecasting system. For Atlantic menhaden, we will be initiating the 2019 benchmark stock assessment. For Atlantic sturgeon, we will monitor the state and federal activities in response to the Endangered Species Act listing of the Atlantic sturgeon, including the five-year-review status, which we heard about this morning.

In bluefish, we'll be collaborating with the Mid-Atlantic Council to initiate the development of an amendment that would address allocation in the bluefish fishery, as well as collaborate with the Council and the Science Center to complete an operational stock assessment pending the availability of the new MRIP program estimates, and then consider a management response to the assessment findings in conjunction with the Council.

For coastal sharks, we'll monitor the stock assessment results for sandbar and mako sharks, and provide a Technical Committee recommendation to those assessments, and then do a management response if we need some complementary management actions with HMS. Under shad and river herring, we'll be initiating the 2019 American shad benchmark stock assessment; and we'll be monitoring the activities of the ESA review of river herring.

We'll also review and update the American shad habitat plans as required by Amendment 3. For both Atlantic croaker and spot, we will be conducting the analysis to explore and potentially update the traffic-light analysis, which includes additional indices or age-

composition information as a possibility for inclusion.

Cobia, we will implement the cobia FMP and work with the South Atlantic Fishery Management Council, as well as NOAA Fisheries, to ensure complementary regulations between state and federal waters, if the Board approves a cobia FMP this week. We'll also collaborate with the SEDAR to conduct a stock identification workshop, in preparation for the 2019 benchmark stock assessment, which we will also initiate. For scup we will collaborate with NOAA Fisheries and the Science Center to finalize the 2018 operational assessment pending the availability of updated MRIP information, and then consider a management response as necessary. The same for black sea bass, and we will also, if made a priority by the Mid-Atlantic Council (and this will be discussed at the December meeting), collaborate with the Council to initiate a black sea bass amendment that would consider management of the entire fishery. Then for weakfish, I have a correction. It should say initiate the development of the 2019 stock assessment update.

We're going to do an update this year, but due to the MRIP data coming out in either the late summer or fall of this year, and because that assessment has such a reliance on recreational CPUE, we thought it best that we wait and get that information first and then do the update. For winter flounder, the Board will review the 2018 GARM stock assessment results for inshore winter flounder, and consider management response in coordination with the New England Fishery Management Council, as well as GARFO.

Then scrolling down into Section 1.2, we'll collaborate with NOAA Fisheries and the Secretary of Commerce, to ensure transparency and the integrity of the Atlantic Coastal Fishery Cooperative Management Act as provisions are preserved, including seeking opportunities to collaborate with NOAA Fisheries as it conducts

the ESA status reviews for sturgeon and river herring.

We will also take the next steps in response to the Commission's climate change white paper to address fisheries impacted by climate change; and we'll be discussing that later this week at the Policy Board. We will also work with NOAA leadership to better understand the impacts to state management programs; given the movement towards increased recreational flexibility.

We'll be seeking ways to address the concerns of the recreational community with regards to Commission managed and jointly managed species. As a part of this the Commission will assist in conducting and participate in the NOAA Fisheries 2018 National Recreational Summit. We will also respond to the new MRIP estimates as needed across all of our Commission managed species; and I will pass it off to Pat for Goal 2, Science. I'll take questions first.

CHAIRMAN GROUT: Pat.

MR. PATRICK C. KELIHER: Toni, you made note of the herring issue from a budgetary perspective. If there was a need for an addendum are we going to be okay?

EXECUTIVE DIRECTOR BEAL: Pat, if it's only three hearings up in your neck of the woods that's not a real great expense; one trip up, a couple nights in a hotel. We can probably accommodate that no problem.

CHAIRMAN GROUT: Are there any other questions for Toni on Goal 1? Seeing none; Pat.

MR. PAT CAMPFIELD: Goal 2 covers the fisheries science research and stock assessment activities of the Commission. New activities include a collection of more spot age data; as well as pursuing improved sturgeon bycatch monitoring in state waters. Those were both

research recommendations that came out of stock assessments completed this year.

In terms of the overall stock assessment workload, it looks pretty heavy for 2018; including benchmark assessments for sea herring, horseshoe crab, northern shrimp, striped bass, and summer flounder as well as initiating a benchmark assessment for American shad. We will also conduct assessment updates for spiny dogfish, and initiate an update for weakfish. Tied to a few of those benchmarks, the Commission will organize and conduct peer reviews for the horseshoe crab, northern shrimp, and possibly the striped bass stock assessment.

We need to figure out if that's going to be an ASMFC or SARC review. Another new task is to develop a long term vision for scientific initiatives within the Commission's next five-year-strategic plan; and that is a task that will be spearheaded by the Management and Science Committee, and the Assessment Science Committee.

Moving down to Task 2.18, consult with the Assessment Science Committee on a red drum stock assessment guidance, and develop a road map for improving data collection and future assessment for the South Atlantic Board. Also, monitor the progress of cobia research projects, and contribute to the Stock ID workshop in preparation for that assessment in 2019.

We've also added a task to partner more closely with the U.S. geological survey; to identify shared priorities and opportunities for enhanced scientific support to the Commission. Much of the activities under NEMAP and SEAMAP are the same. Under fish aging activities, it's not bolded in this copy, but we will hold an aging workshop for American eel in 2018.

Under the Committee on Economics and Social Sciences, they will continue their work to

develop new ACCSP socioeconomic data standards, and that's already underway. We have also added a task to track progress and distribute information on Citizen Science initiatives, including through the South Atlantic Council, Gulf of Maine Research Institute, and other entities. Finally, under the Commission's Stock Assessment Training Program, we will hold trainings both at the introductory level and advanced stock assessment training in 2018.

CHAIRMAN GROUT: Are there any questions for Pat on Goal 2? David, thank you.

DR. DAVID PIERCE: Just a clarification on Task 2.3.4, track the progress and distribute information on Citizen Science Initiatives through those different groups. What is the thinking regarding these specific initiatives? Citizen Science Initiatives are something new that we're going to entertain? Explain a little bit as to why this task is in it if you would.

MR. CAMPFIELD: A couple of examples include, with GMRI they have a Snap a striper program, which is something that we've highlighted in Fisheries Focus. It's simply not for the Commission to initiate these fairly local programs, but to be a centralized place to understand what's going on up and down the coast, and explore their utility, either for technical processes, or to advise fishery management.

CHAIRMAN GROUT: John.

MR. JOHN CLARK: Pat, could you just expound a little bit on what the ACCSP Socioeconomic Data Standards are, and how those will be used in the upcoming addendums and amendments?

MR. CAMPFIELD: For starters, the program, and Mike feel free to jump in, but ACCSP has a very short list of standards that they developed way back in the late '90s, and although it continues to be a program priority, there are some socioeconomic data that have come into ACCSP,

but it's not at the same level as the catch and effort bycatch data. In order to promote more socioeconomic data coming in from the states and federal partners, we need to develop standards, and that's something that Shanna Madsen as our SESS Coordinator has worked with ACCSP to get that ball rolling this year. We hope to finish it this year; and part of the objective is to provide that baseline information to fishery management plans on different socioeconomic indicators. That's part of the longer goal.

CHAIRMAN GROUT: Are there any other questions on Goal 2; Goal 3, Toni?

MS. KERNS: Goal 3 is our promoting compliance within our fishery management plans, so Goal 3 looks at Activities of our Law Enforcement Committee, and there are fewer bolded tasks here, but still lots of great work going on from the Law Enforcement Committee, especially in response to any items that will come out of management boards.

But they will be evaluating the effectiveness of the commercial tagging programs and systems, and user compliance in particular with tautog. We won't initiate that tagging program until 2019, but we'll still be working with Law Enforcement to make sure that the program that we put together does not have any enforcement loopholes. I'll be reviewing and providing input on enforcement issues associated with the American eel or any other aquaculture programs and proposals; and that is it.

CHAIRMAN GROUT: Questions on the Goal 3. Seeing none; Goal 4, Fish Habitat.

MS. KERNS: I'm going to tag team this with Pat. He'll cover the ACFHP portions of the habitat goal and I will do the Commission's Habitat Program. Habitat is actually currently meeting right now, and they will be publishing a Habitat

Management Series. They are still determining what that topic will be.

We will fill this in once they have made that decision later today. We will also be developing outreach materials on the benefits of habitat to fish productivity, for nontechnical audiences; and this is geared at stakeholders, the media, and the general public to be handed out at tradeshows and such. I'll pass it over to Pat.

MR. CAMPFIELD: Quickly on the Atlantic Coastal Fish Habitat Partnership, just a few new activities. One to update their website, the second very large task, to conduct habitat mapping projects both in the Southeast and Northeast Regions. Finally, to take their species habitat matrix, this was currently in a journal publication format, and moved that to an online searchable format.

MS. KERNS: Then we'll be also identifying important fish habitats for Commission managed species, including information on a 2018 Habitat Management Series document that's called Important Fish Habitats. This is sort of taking all of what we currently call habitat areas of concern, HAPCs, in which the Habitat Committee is developing new language to address that topic, as directed by the Policy Board. Then we're going to put all of those, whatever the new term is, into one document for easy reference. That is all.

CHAIRMAN GROUT: Are there any questions on Goal 4? Seeing none; Goal 5, is that you, Tina?

MS. TINA BERGER: Goal 5 addresses our stakeholder and public support for the Commission and specifically our outreach initiatives. You'll see much of the content remains from last year as ongoing activities. New to this year is a focus on collaborating with NOAA Fisheries MRIP staff and communicating improvements and changes to the MRIP.

We will be publishing our 2017 Annual Report, continue to work with the science staff on

preparing and distributing assessment overviews and focal species for next year are herring, striped bass, horseshoe crab, northern shrimp, and summer flounder. We're going to explore this year doing some quarterly, topic driven webinars, to engage and inform the public about our current activities.

We'll focus each quarterly webinar in a different aspect of Commission programs for management, science, habitat, and data collection. I'll be working with the Commission staff to further improve our messaging and communication skills with media; as well as strengthening our ability to provide a written content that is accessible for nontechnical audiences. We will be updating our website early in the year to just improve functionality, and include new content on ACCSP, cobia, as well as a Fisheries Management 101 Page, and that's it for outreach.

CHAIRMAN GROUT: Questions on Goal 5? Loren.

MR. LOREN W. LUSTIG: Thank you very much for the information just relayed to us about how we relate to the public; and how we can help them to understand more, ideally, what we are actually doing and why we're doing it. I was especially interested in the consideration regarding webinars.

I participated in some of those in Pennsylvania, with the Pennsylvania Game Commission, and other agencies. I'm wondering if there is an opportunity here for us to reach out to high school or college science like classes, so that they can get a grasp on our role in changing environment.

For example, there is a program in Maryland called Grasses in Classes, where kids get involved in the production and planting of submerged aquatic vegetation. There is a program in Pennsylvania that encourages science students to raise trout; and release

them in our streams. Is there anything that we can do that would be similar to those two programs?

MR. BERGER: We do make an effort to go to various graduate and undergraduate programs and talk about the Commission and fisheries management in general. We have also increased our outreach to sportfishing clubs. In terms of reaching out to high school or science classes, specifically in terms of hands on stuff, we have not. But we could certainly talk about it at the staff level, and see where we could involve ourselves in those activities to a greater extent.

CHAIRMAN GROUT: Other questions on this goal? David.

MR. DAVID E. BUSH, JR.: This relates to Goal 5, but may also be like 3.11 or 12. It has to do with specifically cohiba in this particular instance. But you're getting a lot more stakeholders that are doing their homework. They're hitting the books. They've trying to understand what's going on. Some of them may or may not be able to join the different committees and panels, and feel like you know they've done their homework and might have a different opinion. I know we can't chase every rabbit down every hole. But in instances where they've put substantial effort forth to do some research and would like some return answers on why or why not information may or may not be included. I think a good way to maybe strengthen that support, you know where we're going back home to our constituents or our stakeholders and they're like, well I sent it in and I didn't hear anything back.

It's now in public record and it may or may not go away. Is there a mechanism in which we could possibly, at least somewhat address what they're sending in, and make that visible to the folks around the table as well? A lot of the things that they've brought forward you may or may not have merit, and I wouldn't know that.

It would be probably a technical committee of some sort, or science committee that would be looking at it and seeing that okay this applies, this doesn't and here is why. But again, I'm just looking if there is a mechanism in place already that I'm not aware of that would help to answer those questions, and maybe put some of the ideas to rest that they have or say that they have merit and include them.

EXECUTIVE DIRECTOR BEAL: David, if we get specifically asked something from a member of the public, you know we try to respond to that. I think it's almost a volume issue that we wrestle with in that we have tens of thousands or at least 10,000 comments on menhaden already. I don't know where Megan is; she's probably summarizing menhaden comments. But during public comment periods, I don't think we have the sort of bandwidth to respond to all the different things that come in, and those different comments.

But the sort of one-off letters that we get that asks us for specific actions or brings forward specific information. We try to respond to those as well as we can. The Technical folks don't necessarily have time to run each of those letters by a technical committee and those sorts of things. But we can definitely make as much of an effort as possible to respond to those letters; just we can't keep up with everything.

CHAIRMAN GROUT: Toni.

MS. KERNS: In addition to that David, for assessments we do put an open call out to the public on providing data or working papers, and those do get addressed by the Committee, whether or not they get included and why they do or do not get included. That is another process, especially where a response will come back for someone that's done a lot of research and done their homework.

CHAIRMAN GROUT: Further questions on this goal? Goal 6, is that you, Bob?

EXECUTIVE DIRECTOR BEAL: I'll give it a shot. Goal 6 is the Legislative work that we do, Capitol Hill work that Deke and I handle with the assistance of many of your folks. A lot of it is ongoing activities that we do every year with reaching out to the Hill and then creating those relationships.

But there are a few specific new tasks this year, the first of which is Gulf of Maine lobster. There is some budget language in there, and some report language that does include some funds for Gulf of Maine lobster; look at some of the impacts and environmental changes. We've worked with Pat Keliher on that. We'll engage the Commissioners in the formulation of the Commission positions on legislative policies, including the Magnuson-Stevens Act Reauthorization documents. There are a few versions out there right now on the House side. If there is a need, we can reach out to you all and then just solidify an ASMFC position if there is one. It's probably a little bit scattered up and down the coast.

Moving on to Task 6.4.3, the next suite of new tasks are reacting and responding to the Atlantic Coastal Act Provisions, and ensuring that transparency is maintained, and then the policy and funding issues. Obviously we communicate the funding priorities for the states, and it goes on to develop relationships with the Secretary of Commerce and Assistant Administrator for NOAA Fisheries.

Meeting with the Secretary to talk Atlantic Coastal Act, which we're doing next week, and also talking again about the priorities for the Commission and the funding, including horseshoe crab survey that we've been able to fund the last couple of years, so that's good news. The bad news is it's not permanently part of the budget, so we have to go out there and make sure the dollars are available every year for the Horseshoe Crab Survey. Those are the highlights of our Capital Hill outreach

activities. I can answer any questions if there are any, Mr. Chairman.

CHAIRMAN GROUT: Malcolm.

DR. MALCOLM RHODES: Just one question. The Delaware Bay, is that specifically the Virginia Tech Survey?

EXECUTIVE DIRECTOR BEAL: Yes.

CHAIRMAN GROUT: Tom Fote.

MR. THOMAS P. FOTE: It was always helpful when I went to a Congressional office to have as much information as I could; and the last year I was able and I went through and actually even state legislators. When Southwick's did the breakdown of recreational fishing by numbers, and every Congressional District, which they did in every state, it was very helpful to walk in with that economic breakdown.

I wish I had it for the commercial fishery, because it would have been really important, especially in New Jersey. But when you find out you've got 66,000 anglers in your district, even though you're in the middle of a state that's not even near the water, and made a big point. The old books we used to put together with all the fishery plans in it, the information on the species and things like that always made a nice presentation to give into the office with those types of sheets.

It would be nice if we had the same thing on the commercial side as we have on the recreational, because those numbers mean money to the Congressional Districts, but we also use it for the state legislature, because they know which congressional district they're in, they can see the breakdown of money to do that. That would be helpful also.

EXECUTIVE DIRECTOR BEAL: Tom, we can pull those together for you, you know any specific meetings you have let us know. We can pull

some information together. Deke and I usually bring sort of the state level economic impact data with us when we go up to the Hill; you know talking recreational impact, commercial impact. A number of jobs on the commercial side, a number of trips on the recreational side, those sorts of things, we haven't broken it down to individual districts. We usually have been talking at the state level. But we can break it down further if it's available.

CHAIRMAN GROUT: Follow up, Tom?

MR. FOTE: Yes, it's already broken down. Southwick's put that all together, so they have it all over for all the states up and down the coast. I can get you that information if you need it.

EXECUTIVE DIRECTOR BEAL: Great, thank you.

CHAIRMAN GROUT: Dave Pierce.

DR. PIERCE: Task 6.3.5, Engage Commissioners in the formulation of the Commission's position on federal legislative policy, including pending MSA Reauthorization legislation. When might that engagement occur? I mean there are some bills out there now being considered. Maybe we'll get something this time around.

There certainly is one notable suggestion regarding how to deal with recreational fisheries. The New England Council, maybe the other Council is taking a position on MRIP and how effective it is for monitoring recreational fisheries catch. I just suggest that our leadership needs to decide when we should weigh in on that particular legislation.

I suggest in particular when we should weigh in on that aspect of possible changes in the Magnuson Act, specific to how we manage recreational fisheries, because let's face it, when it comes to how they're managed, it really falls into the lap of ASMFC. The council's tend to be rather broad brushed. What should

be done in federal waters, and it's really what happens in state waters for the most part.

This has great implications. This particular legislation, this particular bill on recreational fisheries, potentially has some rather significant implications for how we do our business. Again, when the leadership, you feel it's necessary to weigh in, please take the initiative to have us do so.

EXECUTIVE DIRECTOR BEAL: Yes, I think we're getting close to that point, David. Like I said there are a few house versions that are swirling around right now. In talking with some of the staffers on the House side, it sounds like they're going to try to merge those different drafts into a single draft. I think once you get to that point it is probably a good opportunity for the Commission to chime in on what's there, so we can reach out to you once we see that.

CHAIRMAN GROUT: Are there any other questions on this goal? Seeing none; who is going to do finance? Okay, Bob.

EXECUTIVE DIRECTOR BEAL: Goal 7 is the Finance and Administration of the Commission. Most of these are things that we do every year. Not to say it's not a lot of work, it is a lot of work. But they are just the care and feeding to keep this whole business going. There are a couple new tasks buried in here. We're going to focus training for new staff on how to use some of our electronic tools, such as new data bases and software packages and other things that we have at the Commission, to make sure everybody is up to speed on those. We're looking at software packages to help digitize some of our accounting procedures and billing processes, and contracts database to track all the details of the multiple contracts.

As we have more and more of these cooperative agreements with NOAA Fisheries, we end up with more and more projects and tracking all those is getting more and more

cumbersome each year. We're going to develop a database to make that much more efficient. We're going to do a training workshop for staff on meeting facilitation to help enhance committee productivity and performance.

We're considering engaging an outside consultant to work on staff culture, and looking at better ways to do performance reviews and feedback to staff throughout the year. We do once a year performance reviews right now, and a lot of businesses and agencies are getting away from that and doing different ways to evaluate performance.

We're going to look into that and see if there is a better way to do that for the Commission, and then at the very end 7.6 is a new strategic plan. Our current plan goes through the end of next calendar year, so during next calendar year we need to develop the next five-year plan. It would be 2019 to 2023.

The Executive Committee talked about this briefly this morning, and the course that they are suggesting that you take is have a couple hours at the February meeting to have all the Commissioners brainstorm on where we are with our current strategic plan. Do we need to just trash what we have and start all over and blow the things up; or is it just some minor course corrections and tweaks that we need?

I think the major tasks that we've already talked about so far are fundamental to what we do, fish management, fish science outreach and Congressional outreach, habitat, Law Enforcement, et cetera. I think those pieces of the strategic plan are set, but what other things do the Commissioners want to change and we'll explore that in a workshop in February, and then based on the outcome of that workshop, we'll decide what the course is for the remainder of the year for the strategic plan. That's Goal 7, Mr. Chairman.

CHAIRMAN GROUT: Jim Gilmore.

MR. JAMES J. GILMORE: Robert Boyles had a good suggestion this morning for our meeting efficiency, and maybe bringing our parliamentarian back in to give us some education. Is that going to be on the budget for 2018, or are we going to have to kick that down the road until 2019?

EXECUTIVE DIRECTOR BEAL: We can probably afford to bring Colette in for a half day or something. A refresher for Commissioners on meeting efficiency, I guess is what you guys were looking for this morning. We can probably do that. Some of this budget is a little bit uncertain. We don't know exactly what we're going to get from Congress, and we're going to have some rollover dollars from this year to next. The one thing I should have said at the outset about the budget is we adjusted the overhead rate for the Atlantic Coastal Act. We actually reduced the overhead taken out by the Commission. Our ability to afford to conduct all these activities does relate back to the fact that we reduced overhead and we had a few more dollars available for programmatic activities than we have in the past. Everything keeps getting more expensive, but we've been able to keep it going so far.

CHAIRMAN GROUT: Are there any other questions on Goal 7? Okay we'll move to Goal 8, Mike.

MR. MIKE CAHALL: Here I am. Good afternoon.

The ACCSP Action Plan is actually based on the ACCSP Strategic Plan. Coincidentally it expires at the same time that the Commission's plan does, and I believe our intention is to integrate the plans together as part of the upcoming strategic planning process.

Thus, this plan is slightly different in its depth than the Commission's plan was. But essentially it's a status quo plan. There aren't

any significant new efforts, in the sense that we're going to go out and discover something new or build something new. However, I want to bring just a couple of things to your attention.

In terms of our data warehousing, we're going to continue to improve on our data query interface, which you all will see shortly, and try to bring in additional, especially biological datasets. The Coordinating Council approved an additional FTE for us that should help to facilitate that process.

We're going to continue to work with our program partners to keep our standards current. As we've worked with them to bring in additional data, especially in the trip reporting arena, we've had to make some adjustments to the data standards, specifically to our coding schemes, to be able to better identify gears and those kinds of things.

We also will be working really hard. I think the single biggest focus of the program probably for the next year is going to be implementing for-hire reporting. We are working with the Mid-Atlantic and the South Atlantic Councils to complete modifications to our trip tool, in order to be able to accommodate their requirements.

As most of you are aware, the new reporting requirements for Mid-Atlantic go into effect in March of next year. Our expectation is that sometime after that the reporting requirements for the South Atlantic will go into effect. They are still very much involved in a planning process there, so we really don't have an effective date. Nonetheless, my expectation is that our system will be used to do the majority of the data collection in for-hire fisheries.

We'll be working to make sure that we're ready; that we have adequate infrastructure and information systems resources, and that our help desk is stood up and managed so that other systems can be adequately supported.

Beyond that ACCSP is going to continue pretty much status quo. We're about to give you a presentation that will give you a great deal more information about exactly what we're up to.

CHAIRMAN GROUT: Thank you, Mike, any questions on Goal 8? Okay seeing none; I'm going to turn it over to our AOC Chair, to bring forward a motion that we made regarding the Action Plan.

MR. GILMORE: I would like to move that we approve the 2018 Action Plan.

CHAIRMAN GROUT: **It does not need a second, because it's a Committee motion. Is there any discussion on the motion? Seeing none; is there any objection to approving the motion? The motion is approved by unanimous consent.**

ELECTION OF COMMISSION CHAIR AND VICE-CHAIR

CHAIRMAN GROUT: Thank you very much to all of you for putting that together; and now I'm going to turn over the business session to our Executive Director, Bob Beal to conduct our elections.

EXECUTIVE DIRECTOR BEAL: There is a little extra something in Doug's voice there turning over to a new election for a new Chair and Vice-Chair. The way we'll conduct the elections is, in a moment I'll call on Roy Miller, who's the Chair of the Nominating Committee to give the report from the Nominating Committee.

But just as a refresher, we will hand out ballots based on Roy's report, and it's on the ballot there is the individual that Roy is going to bring forward as nominee for Chair and for Vice-Chair, two separate ballots. There is a space for write-ins. That's part of the procedure that the Commission agreed on a number of years ago that we always have the opportunity for

members of the Commission to write in other candidates or other nominees if they so choose.

One vote per state, so each state will get a ballot. Please write your state's name and either the write-in vote or check the box for the individual that is being nominated by the Nominating Committee. With that Mr. Miller, would you provide the Nominating Committee report?

MR. ROY W. MILLER: It would be my pleasure. **On behalf of the Nominating Committee, which consisted of Robert Boyles, David Borden and myself.** I should note that both Robert and David are distinguished past Commission Chairs, so I feel we had an able-bodied committee. We polled the Commission members in our three respective regions, **and we have a name to recommend to you for Chairman of the Commission, and that is Jim Gilmore of New York.**

EXECUTIVE DIRECTOR BEAL: Great thank you. Toni is passing out the ballots now for voting for; this is just for the Chairmanship. Toni collated them, so this is throwing her off. Just hand them both out. Let's hand them both out and we'll make it through. Make sure you fill out the Chairman one for the Chair, and the Vice-Chair for the Vice-Chair.

Pat is going to come around and follow Toni around and pick up the votes for Chairman at this time, and then Roy will count the ballots. If you're ready, he'll move along. Has everyone turned in the ballots for Chairman? Florida is absent. Mr. Miller, do you mind reporting the vote?

MR. MILLER: It would be my pleasure. The vote was 14 in favor of Jim Gilmore. (Applause)

EXECUTIVE DIRECTOR BEAL: Congratulations, Jim. Roy, are you willing to provide the nominating report for Vice Chair?

MR. MILLER: I am. Once again it is my pleasure to recommend for your nomination Pat Keliher of Maine as Vice-Chair.

EXECUTIVE DIRECTOR BEAL: Thank you, Roy so same drill. You've got your ballots, please fill those out and hand them. Toni is collecting them and we'll have Roy count those up. Mr. Miller, can you present the results of the vote, please?

MR. MILLER: **We are, and I'm happy to report it is 14 to 0 for Pat Keliher.** Congratulations, Pat. (Applause)

EXECUTIVE DIRECTOR BEAL: Thank you and I look forward to working with both of you. It's not too early to start sucking up to the new bosses, so. Tom, one more and I'll get to you in a second. Doug, do you mind coming back up for a moment? On behalf of all the Commissioners and all the staff, Doug, we've got a crystal clock to thank you for your two years of leadership, actually four years if you include the Vice-Chair.

I personally loved working with you. You were always available, always provided great advice. We needed a lot of advice over the last couple years. Doug, I just want to thank you on behalf of everybody here for your two years of service. Thank you. (Applause)

CHAIRMAN GROUT: All I want to say is I want to thank all of you for our support that you provided for Jim and I over these past two years. It has been a difficult couple of years, but we've moved through it and we are, I believe firmly that we are stronger for this, and will continue to move forward under the great leadership of Jim Gilmore. Thank you.

EXECUTIVE DIRECTOR BEAL: Tom Fote, do you have a comment?

MR. FOTE: Yes, I found the procedure a little strange, and I would just like an explanation.

Usually when the Nominating Committee gives their recommendation, and then we basically accept the recommendation. Then we say is there any nominations from the floor. Now there is never any nomination from the floor, but I think procedurally that is the way I'm used to going through the years going on.

It just seems very strange the way we did it this time. Maybe just being me, but that's the way I've seen every election go in every other board and it's been previously the way it was done here. Nobody is going to volunteer from the floor, nobody ever does. But it should have been a format and usually the Treasurer casts the ballot.

The other thing that concerns me, and I looked and we've got three people from the north, and usually we used to alternate, trying north, south. I don't know the reason behind. Maybe I missed the meeting of the Executive Committee where you discussed this. I'm just curious what was going on. Maybe the other Commissioners that weren't at the Executive Committee have to know the reasons what's going on with this. I haven't been reached out to, and I think some of us haven't been reached out to find out what's going on.

EXECUTIVE DIRECTOR BEAL: Procedurally, this is the procedure that the Commission agreed to in 2009, so do the ballots, and have the write-in opportunity. The north/south rotation, I don't know if other folks will want to comment on it. But in the same procedures it's noted that the goal is to rotate north/south/mid, and we try to keep that as available as possible. But when the Nominating Committee talked to all the Commissioners up and down the coast, it appeared the best candidates were the ones that they brought forward this time. Dr. Rhodes.

DR. RHODES: Tom, to that point. The same, we've had that discussion, but we almost feel like there are three areas, and so we feel like

there is New England, Mid-Atlantic and South Atlantic, and we do have a Mid-Atlantic and a New England representative right now, so we've got two of the three areas, which is just the way it's going to work out. I think administratively with the Commissioners in the south. But we still feel like being from the south we don't feel like we are underrepresented, and that's speaking for myself, but I think it's a sentiment across the Board.

EXECUTIVE DIRECTOR BEAL: The other thing, Tom, is the Executive Committee did talk about elections this morning and the nominating process a little bit, as well as sort of who's eligible to become Vice-Chair and Chair of the Commission? Is it proxies, permanent proxies, ongoing proxies, just actual Commissioners, who is it? The Executive Committee is going to open up that process and look at the election. Stay tuned for that.

MR. FOTE: Yes, I mean the last time we had a Governors Appointee as a Vice-Chair was Bonnie Brown, and that's got to be 15 or 20 years ago. There are 45 Commissioners also.

RECESS

EXECUTIVE DIRECTOR BEAL: That's a fair point. Is there anything else before the Business Session? All right seeing none the Business Session will be in recess until later tomorrow morning. I forget the time, eleven o'clock or so. We stand in recess right now.

(Whereupon the meeting recessed at 2:32 o'clock p.m. on October 18, 2017)

**ATLANTIC STATES MARINE FISHERIES
COMMISSION
BUSINESS SESSION**

Marriott Hotel Norfolk, Virginia

**OCTOBER 19, 2017
THURSDAY SESSION**

The Business Session of the Atlantic States Marine Fisheries Commission reconvened in the Hampton Roads Ballroom V of the Marriott Waterside Hotel, Norfolk, Virginia, October 19, 2017, and was called to order at 11:56 o'clock a.m. by Chairman James J. Gilmore.

CALL TO ORDER

CHAIRMAN JAMES J. GILMORE: Okay we're going to move right along, I'm going to invoke my George Lapointe and see if we can do this very quickly.

**CONSIDER FINAL APPROVAL OF NORTHERN
SHRIMP AND TAUTOG AMENDMENTS**

CHAIRMAN GILMORE: **We've got a couple of final approvals on amendments that were discussed and approved this week by the boards.** The first one is for northern shrimp, and the next one is for tautog. Do we have a motion for northern shrimp? Doug.

MR. DOUGLAS E. GROUT: **As soon as the motions are up on the board, I will make it for the Shrimp Section. The first motion is to move the Commission approve Amendment 3 to the Northern Shrimp Interstate Fishery Management Plan.**

CHAIRMAN GILMORE: Okay, we have a motion by Doug Grout, is there a second to that motion? Eric Reid seconds the motion. Is there any discussion on the motion? **Is there any objection to the motion? Seeing none; the motion is approved by unanimous consent.**

MR. GROUT: Then I have a second motion that they will bring up, and this will need a second. **My motion is to move the Commission send a letter to NOAA Fisheries and the New England Fisheries Management Council regarding the requirement for size-sorting grates in Amendment 3 to the Northern Shrimp Fishery Management Plan, and if I get a second I'll provide some justification.**

CHAIRMAN GILMORE: Do we have a second for that motion? John Clark. Okay Doug, the floor is yours.

MR. GROUT: The justification is that in our Amendment 3 we have additional size selection grates that are not currently in the groundfish plan. The northern shrimp fishery is allowed to occur under a groundfish plan exemption, which allows for a Nordmore Grate that helps get rid of bycatch of groundfish, get rid of it eliminate bycatch of groundfish species.

We're proposing new designs that could be used that would not only get rid of the bycatch of groundfish species, but also reduce the amount of juvenile shrimp that are caught in the shrimp net. That's going to take a change by NOAA Fisheries and the Council to their groundfish management plan to allow those.

CHAIRMAN GILMORE: **Any questions on that or discussion on that motion? Seeing none; is there any objection to this motion? Seeing none; we will adopt that by unanimous consent.** Okay now we need a motion on the tautog amendment. Adam Nowalsky.

MR. ADAM NOWALSKY: **Prepared to make that motion on behalf of the Board, so we should not need a second. On behalf of the Tautog Management Board, move the Commission approve Amendment 1 to the Tautog Interstate Fishery Management Plan.**

CHAIRMAN GILMORE: Is there any discussion on this motion? **Is there any objection to this**

motion? Seeing none; we will adopt that by unanimous consent.

REPORT FROM THE RESOLUTIONS COMMITTEE

CHAIRMAN GILMORE: Okay moving right along, the next action item we have is from the Resolutions Committee, and we're going to have a report from Jay McNamee. Jay.

MR. JASON McNAMEE: Good afternoon everyone. We've developed a resolution for you to consider. But first I would like to thank the Resolution Committee. This resolution was a team effort between me, Pat Geer, Representative Sarah Peake, Tina helped us edit, and gave us some good comments.

We also had a special guest contribution from Dennis Abbott, who gave us some great language to include. We tried to capture some of the spirit and funny anecdotes from this past week, and we also wanted to make sure someone who is not able to be with us this week knows that we were thinking of her. With that I would like to offer a resolution for your consideration.

CHAIRMAN GILMORE: Please proceed.

MR. McNAMEE: Whereas the Atlantic States Marine Fisheries Commission celebrated its 76th Annual Meeting in beautiful downtown Norfolk, Virginia, which provided a wonderful setting for the Commissioners, Law Enforcement Officers, Commission staff, and Habitat Scientists to deliberate and discuss fisheries issues of mutual concern.

And whereas the opening plenary session was honored to have guest speaker, Dr. Roger Mann of the Virginia Institute of Marine Science, present a talk titled Fishery Management and Moving Baselines; a stark, eye-opening look at climate change and its role in fisheries management, which reminded Commissioners and guests of the dynamic, exciting, and

challenging field that we have all chosen as our life's work, and that this field will be a work in progress for years to come, leading some of our colleagues to immediately leave the session to either phone their retirement boards or therapists.

And whereas Commissioners, staff and guests were warmly welcomed at the Virginia Aquarium and Marine Science Center reception; and treated to numerous local seafood dishes from the Chesapeake Bay, while being serenaded by whale songs and the relaxing visions of the live exhibits.

And whereas Jeff Beal received the Melissa Laser Award for his work and dedication to Florida's habitat restoration efforts, and whereas Commissioner and host, John Bull, took several opportunities at the podium to make comparisons of the Commonwealth to other states, bless his heart.

And whereas the Annual Dinner was held at the Half Moon Center, offering spectacular views of the Elizabeth River at sunset, while Commissioners and guests drank, ate and were merry to the wonderful sounds of a steel drum band, and whereas the 27th Annual David Hart Award recognized Paul Diodati, retired Director of the Massachusetts Division of Marine Fisheries, for his long commitment to the Commission and his many accomplishments in the field of fisheries management both in Massachusetts and all along the Atlantic Coast.

And whereas 25 brave souls battled the ocean elements 15 miles off Virginia Beach on Sunday, to participate in the 26th Annual Laura Leach Fishing Tournament, guided by the able staff at VMRC and our host and sponsor Rudy Tours, Commissioners, staff and guest dropped their lines but held their lunches to retrieve a myriad of species such as black sea bass, triggerfish, summer flounder, at least one monster toadfish, and even a conger eel.

And whereas, speaking of our friend and colleague Laura Leach, who for the first time in 36 years was unable to attend the meeting, and whose absence was both duly noted and deeply felt by all participants. And whereas, her efforts along with her team at ASMFC, who picked up the ball and ran with it when their friend and colleague needed it most, contributed to another wonderful and successful meeting week.

Now, therefore be it resolved that the Atlantic States Marine Fisheries Commission expresses its deep appreciation to the Virginia Commissioners, John Bull, Catherine Davenport, Senator Richard Stewart, their proxies, Kyle Schick, Joe Cimino, and Rob O'Reilly to the VMRC and Commission staff for their outstanding support and assistance in making the 76th Annual Meeting a great success, in that we the Commissioners wish Laura a continued successful recovery and we look forward to greeting her with a big hug when we meet again in Arlington, Virginia during the 2018 winter meeting.

CHAIRMAN GILMORE: Thank you, Jay, very well said, and on behalf without objection I'll take that and a round of applause for our host. I've already asked John if he will help us plan next year when New York hosts, since he is such a great guy and very entertaining; so you did a wonderful job. I believe that's our last, unless there is other business before. Malcolm Rhodes.

DR. RHODES: I just had one quick question. We're having a South Atlantic Board after lunch today, or after this meeting. We'll probably be bringing forward an amendment for cobia. Since the Business Session will not meet, is there any way to address that prior to the winter meeting?

CHAIRMAN GILMORE: Toni has an answer for you, Malcolm.

MS. KERNS: Well luck would have it, the Atlantic Menhaden Board will be meeting in November, and it's a coastwide Board with this full group of folks, so we can convene into a Business Session after that amendment goes through, fingers crossed, and both the menhaden amendment as well as the cobia amendment can be considered there.

DR. RHODES: Thank you.

ADJOURNMENT

CHAIRMAN GILMORE: Any other thing to come up before the Business Session? Seeing none; a motion to adjourn, by everyone. Thank you.

(Whereupon the meeting adjourned at 12:07 o'clock p.m. on October 19, 2017)

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
BUSINESS SESSION**

**BWI Airport Marriott
November 14, 2017**

TABLE OF CONTENTS

Call to Order, Chairman James J. Gilmore 1

Approval of Agenda 1

Public Comment 1

Consider Final Approval of Atlantic Menhaden Amendment 3 1

Adjournment 3

INDEX OF MOTIONS

1. **Approval of Agenda** by consent (Page 1).
2. **On behalf of the Menhaden Board, move the Commission approve Amendment 3 to the Atlantic Menhaden Interstate Fishery Management Plan as amended today.** (Page 1). Motion by Bob Ballou. Motion carried (Page 2).
3. **On behalf of the South Atlantic Board, move the Commission approve the Cobia Interstate Fishery Management Plan** (Page 2). Motion by Mr. Estes. Motion carried (Page 3).
4. **Move to Adjourn** by consent (Page 3).

ATTENDANCE

Board Members

Pat Keliher, ME (AA)	Andy Shiels, PA, proxy for J. Arway (AA)
Steve Train, ME (GA)	John Clark, DE, proxy for D. Saveikis (AA)
Cheri Patterson, NH, proxy for D. Grout (AA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
G. Ritchie White, NH (GA)	Roy Miller, DE (GA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Rachel Dean, MD (GA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	Dave Blazer, MD (AA)
Raymond Kane, MA (GA)	Allison Colden, MD, proxy for Del. Stein (LA)
Nichola Meserve, MA, proxy for D. Pierce (AA)	Rob O'Reilly, VA, proxy for J. Bull (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Cathy Davenport, VA (GA)
Robert Ballou, RI, proxy for J. Coit (AA)	Michelle Duval, NC, proxy for B. Davis (AA)
David Borden, RI (GA)	David Bush, NC, proxy for Rep. Steinburg (LA)
Colleen Giannini, CT, proxy for M. Alexander (AA)	W. Douglas Brady, NC (GA)
Sen. Craig Miner, CT (LA)	Malcolm Rhodes, SC (GA)
Jim Gilmore, NY (AA)	Robert Boyles, Jr., SC (AA)
Emerson Hasbrouck, NY (GA)	Spud Woodward, GA (AA)
John McMurray, NY, proxy for Sen. Boyle (LA)	Jim Estes, FL, proxy for J. McCawley (AA)
Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)	Martin Gary, PRFC
Tom Fote, NJ (GA)	Derek Orner, NMFS
Russ Allen, NJ, proxy for L. Herrightly (AA)	Mike Millard, USFWS
Loren Lustig, PA (GA)	

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

Ex-Officio Members

Jason McNamee, Technical Committee Chair	Jeff Kaelin, Advisory Panel Chair
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Staff

Bob Beal	Shanna Madsen
Toni Kerns	Megan Ware
Katie Drew	Max Appelman

Guests

Fred Akers, Newtonville, NJ	Kathryn Bush, CBF
Julie Akers, Newtonville, NJ	Kim Cable, CBF
Lew Armistead, Hollywood, MD	Benson Chiles, Chiles Consulting
Dana Austin, CBF	Robt Crockett, Richmond, VA
Amiele Barakey, CBF	Colin Crozier, CBF
Blair Blanchette, CBF	Jeff Deem, VMRC
John Bello, VA SSA	Monty Deihl, Omega Protein
F.L. Benson, Lanexa, VA	Katherine Denel, PEW Trusts
Sarah Boynton, CBF	Mark Driscoll, Richmond, VA

Draft Proceedings of the Business Session November 2017

Butch Eason, Chesapeake, VA
A.J. Erskine, Lottsburg, VA
Lynn Fegley, MD DNR
Christine Fletcher, PEW
Manley Fuller, FL Wildlife Fed
Shaun Gehan, Omega Protein
Rebecca Gagnon, Norfolk, VA
Joseph Gordon, PEW
Ken Hastings, Mason Springs
Marin Hawk, MSC
D. Heinemann, Marine Mammal
Peter Himchak, Omega Protein
Ken Hinman, Wild Oceans
Rich Hittenger, RI Saltwater Anglers
Richard Holewinski, CCA MD
Jerry Hughes, Chesapeake, VA
Jason Hoffman, *Undercurrent News*
Deane Horowitz, CBEC
John Jaackst, Severn, MD
Chris Johnson, CBF
Robert Jones, VSSA
Ron Ketter, Easton, MD
Robert Kersey, MD NRP
Jimmy Kellum, Kellum Maritime
Howard King, Queenstown, MD
Aaron Kornbluth, PEW
Ben Landry, Omega Protein
George Lapointe, Omega Protein, ME
Ken Lewis, CCA ME
Ed Liccione, CCA MD
Bill Lucey, LI Soundkeeper

Paul Erdman, Menhaden Defenders
Rudy Lukavovic, CBEC
Janet Mackey, Easton, MD
William Martin, CCA MD
John Matson, Hampton, VA
Drew Minkiewicz, KDW
David Mussina, Mystic River W
Thomas Miller, FORVA
Chris Moore, CBF
Henry Neville, Ashland, VA
Christiana Perry CBEC
Ken Pinkard, UFCW Local 400
Jamie Pollack, PEW NY
Drew Robinson, CBF
Elizabeth Ronson, CBF
Robert Ruck, Sr., CCA MD
Jim Seagraves, Portsmouth, VA
David Sikorski, CCA
Jonathan Stone, Save the Bay, RI
Thomas Strachle, Westminster, MD
Stan Sutliff, Hampton Roads, VA
Cameron Taggart, PEW
Jeff Taylor, Mayforth Group
Jack Travelstead, CCA
Donna Waddell, UFCW Local 400
Marvin Wells, Dundale, MD
Mike Wills, VA Beach, VA
Michael Wissel, CCA MD
Liz Worsham, Heathville, VA
Tom Zolper, CBF

The Business Session of the Atlantic States Marine Fisheries Commission convened in BWI Airport Marriott, Linthicum Heights, Maryland, Tuesday, November 14, 2017, and was called to order around 3:00 o'clock p.m. by Chairman James J. Gilmore.

CALL TO ORDER

CHAIRMAN JAMES J. GILMORE: Don't anyone leave. We're going to do this in twelve minutes; and it's actually quicker now, because Dennis Abbott stole all my fun for thanking Bob. But I would just like to add my voice to that. I think Bob did a terrific job. There are YouTube videos on how to run ASMFC meetings now that feature Bob. If you want to see them, he's done a great job, so thanks, Bob.

Okay, Business Session, we have a few items. Before, just to add a couple of words very quickly. I think we made sausage once again. The last couple of days everybody got something, everybody lost something. I think that is pretty much our process. We have probably a long way to go; and some people last night I know at the bar, felt that they didn't get what they wanted.

Trust me, from the Commission, from the leadership on down, we are very committed to getting ecosystem-based reference points and moving this forward. That is not going to be a ten-year process if anybody thinks that. We will work hard at making this the first plan that has ecosystem-based management.

APPROVAL OF AGENDA

CHAIRMAN GILMORE: That being said, we'll first go for the approval of the agenda. We only have a couple items on here. Are there any changes to the agenda? Seeing none; we'll adopt those by consensus.

PUBLIC COMMENT

CHAIRMAN GILMORE: Secondly; Public Comment, wow the public is stampeding out of the room. I didn't get any sign ups, and unless there are any hands up.

Nope, no public comment so let's go to first, something you may remember.

CONSIDER THE FINAL APPROVAL OF THE ATLANTIC MENHADEN AMENDMENT 3

CHAIRMAN GILMORE: Consider the final approval of the Atlantic Menhaden Amendment Final Action. I'm assuming we're going to have to do a roll call vote on this, since it's a final action? Oh, sorry, and that motion has to be made on behalf of the Chairman of the Board.

MR. BOB BALLOU: On behalf of the Menhaden Board; I move to recommend to the Commission the approval of Amendment 3 to the Menhaden Interstate Fishery Management Plan as amended today.

CHAIRMAN GILMORE: I don't believe a second is required; because that was made on behalf of the Board. Is there any discussion on the motion? Seeing none; I believe we're going to have to do a roll call vote on this. Let's just go from Maine on south.

EXECUTIVE DIRECTOR ROBERT E. BEAL: I will call the roll. Maine.

MR. PATRICK C. KELIHER: Yes.

EXECUTIVE DIRECTOR BEAL: New Hampshire.

MS. CHERI PATTERSON: Yes.

EXECUTIVE DIRECTOR BEAL: Massachusetts.

MS. NICHOLA MESERVE: Yes.

EXECUTIVE DIRECTOR BEAL: Rhode Island.

MR. ERIC REID: Yes.

EXECUTIVE DIRECTOR BEAL: Connecticut.

MS. COLLEEN GIANINI: Yes.

EXECUTIVE DIRECTOR BEAL: New York.

MR. EMERSON C. HASBROUCK: Yes.

EXECUTIVE DIRECTOR BEAL: New Jersey.

MR. RUSS ALLEN: Yes.

EXECUTIVE DIRECTOR BEAL: Pennsylvania.

MR. ANDY SHIELS: Yes.

EXECUTIVE DIRECTOR BEAL: Delaware.

MR. JOHN CLARK: Yes.

EXECUTIVE DIRECTOR BEAL: Maryland.

MR. DAVID BLAZER: Yes.

EXECUTIVE DIRECTOR BEAL: Virginia.

MR. KYLE SCHICK: No.

EXECUTIVE DIRECTOR BEAL: North Carolina.

DR. MICHELLE DUVAL: Yes.

EXECUTIVE DIRECTOR BEAL: South Carolina.

MR. ROBERT H. BOYLES, JR.: Yes.

EXECUTIVE DIRECTOR BEAL: Georgia.

MR. A.G. "SPUD" WOODWARD: Yes.

EXECUTIVE DIRECTOR BEAL: Florida.

MR. JIM ESTES: Yes.

CHAIRMAN GILMORE: **Motion passes; 14 in favor, 1 opposition.** Our next order of business is to **consider final approval of the Cobia Fishery Management Plan**; and it's a final action also. Jim Estes, I believe is Chairman. Jim, if you could give us a motion.

MR. JIM ESTES: Would you like to hear the long story, Mr. Chairman, or would you like me to just read the motion?

CHAIRMAN GILMORE: I think reading the motion would be the pleasure of the Board at this point; but I'll take objections if someone wants to hear the long story.

MR. ESTES: On behalf of the South Atlantic Board; I move the Commission approve the Cobia Interstate Fishery Management Plan.

CHAIRMAN GILMORE: Okay, we're going to do a roll call. First off is there any discussion on the motion? Seeing none; we'll have to take a roll call vote on this, so Bob take it away. We'll go from the south to the north.

EXECUTIVE DIRECTOR BEAL: The interested states to the less interested states, maybe? Florida.

MR. ESTES: Yes.

EXECUTIVE DIRECTOR BEAL: Georgia.

MR. WOODWARD: Yes.

EXECUTIVE DIRECTOR BEAL: South Carolina.

MR. BOYLES: Yes.

EXECUTIVE DIRECTOR BEAL: North Carolina.

DR. DUVAL: Yes.

EXECUTIVE DIRECTOR BEAL: Virginia.

MR. SCHICK: Yes.

EXECUTIVE DIRECTOR BEAL: Maryland.

MR. BLAZER: Yes.

EXECUTIVE DIRECTOR BEAL: Delaware.

MR. CLARK: Yes.

EXECUTIVE DIRECTOR BEAL: Pennsylvania.

MR. ANDY SHIELS: Yes.

EXECUTIVE DIRECTOR BEAL: New Jersey.

MR. ALLEN: Yes.

EXECUTIVE DIRECTOR BEAL: New York.

MR. HASBROUCK: Yes.

EXECUTIVE DIRECTOR BEAL: Connecticut.

MS. GIANINI: Yes.

EXECUTIVE DIRECTOR BEAL: Rhode Island.

MR. REID: Yes.

EXECUTIVE DIRECTOR BEAL: Massachusetts.

MS. MESERVE: Yes.

EXECUTIVE DIRECTOR BEAL: New Hampshire.

MR. ABBOTT: Yes.

EXECUTIVE DIRECTOR BEAL: And Maine.

MR. KELIHER: Assuming this includes our allocation; yes.

CHAIRMAN GILMORE: It's unanimous, including Colleen wants to know what a cobia is from the look on her face. Thank you all for that. **That motion is approved unanimously.**

ADJOURNMENT

CHAIRMAN GILMORE: Is there any other business to come before the Business Session? Seeing none; we are adjourned, and you are dismissed to go home early. It's only 3:13: Thank you everyone, we'll see you in February.

(Whereupon the meeting recessed at 3:13 on November 14, 2017.)

Draft Proceedings of the Business Session October 2017

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
BUSINESS SESSION**

**The Marriott Norfolk Waterside
Norfolk, Virginia
October 17, 2017**

These minutes are draft and subject to approval by the Business Session
The Board will review the minutes during its next meeting

TABLE OF CONTENTS

October 18, 2017

Call to Order, Chairman Douglas E. Grout..... 1

Approval of Agenda 3

Approval of Proceedings, August 2017 3

Public Comment..... 3

Review and Consider Approval of the 2018 Action Plan 3

Election of Commission Chair and Vice-Chair 12

Recess..... 14

October 19, 2017

Call to Order, Chairman James L. Gilmore 15

Consider Final Approval of Northern Shrimp and Tautog Amendments 15

Report from the Resolutions Committee..... 16

Adjournment 17

INDEX OF MOTIONS

1. **Approval of Agenda** by consent (Page 1).
2. **Move to approve the 2018 Action Plan on behalf of the Administrative Oversight Committee** (Page 12). Motion by Jim Gilmore. Motion approved by consent (Page 12).
3. **Move the Commission approve Amendment 3 to the Northern Shrimp Interstate Fishery Management Plan** (Page 15). Motion by Doug Grout; second by Eric Reid. Motion is approved by unanimous consent (Page 15).
4. **Move the Commission send a letter to NOAA Fisheries and the New England Fishery Management Council regarding the requirements for size-sorting grates in Amendment 3 to the Northern Shrimp Fishery Management Plan** (Page 15). Motion by Doug Grout; second by John Clark. Motion carries by unanimous consent (Page 15).
5. **On behalf of the Tautog Management Board, move the Commission approve Amendment 1 to the Tautog Interstate Fishery Management Plan** (Page 15). Motion by Doug Grout; second by John Clark. Motion carries by unanimous consent (Page 15).
6. **Move to Adjourn** by consent (Page 17).

ATTENDANCE

Board Members

Pat Keliher, ME (AA)	John Clark, DE, proxy for D. Saveikis (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
Doug Grout, NH (AA)	David Blazer, MD (AA)
Ritchie White, NH (GA)	Rachel Dean, MD (GA)
Raymond Kane, MA (GA)	Ed O'Brien, MD, proxy for Del. Stein (LA)
David Pierce, MA (AA)	John Bull, VA (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Rob O'Reilly, VA, Administrative proxy
Jason McNamee, RI, proxy for J. Coit (AA)	Chris Batsavage, NC, proxy for B. Davis (AA)
David Borden, RI (GA)	David Bush, NC, proxy for Rep. Steinburg (LA)
Mark Alexander, CT (AA)	Robert Boyles, SC (AA)
James Gilmore, NY (AA)	Malcolm Rhodes, SC (GA)
Russ Allen, NJ, proxy for L. Herrighty (AA)	Spud Woodward, GA (AA)
Tom Fote, NJ (GA)	Pat Geer, GA, proxy for Rep. Nimmer (LA)
Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)	Jim Estes, FL, proxy for J. McCawley (AA)
Andy Shiels, PA, proxy for J. Arway (AA)	Sherry White, USFWS
Roy Miller, DE (GA)	Lindsay Fullenkamp, NMFS

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

Ex-Officio Members

Staff

Bob Beal	Mark Robson
Toni Kerns	

Guests

Heather Corbett, NJ DFW	Jack McGovern, NMFS
Dan Crear, VIMS	Brandon Muffley, MAFMC
Michelle Duval, NC DMF	Derek Orner, NOAA
Lynn Fegley, MD DNR	Chris Wright, NMFS
Ryan Jiorle, VMRC	

The Business Session of the Atlantic States Marine Fisheries Commission convened in the Hampton Roads Ballroom V of the Marriott Waterside Hotel, Norfolk, Virginia, October 18, 2017, and was called to order at 1:25 o'clock p.m. by Chairman Douglas E. Grout.

CALL TO ORDER

CHAIRMAN DOUGLAS E. GROUT: Good afternoon everybody, welcome to the Business Session; if you all could take your seat. Before we get into the agenda, John Bullard, the GARFO Regional Administrator, who as you know is retiring shortly; and this may be his last meeting, would like to say a few things to the Commission. John, I'll turn it over to you.

MR. JOHN K. BULLARD: Thank you very much, Mr. Chair, I just have one page here. Hello all you all. Bless your heart. Five years ago I attended this meeting to introduce myself; so at this meeting it's time to say goodbye. The ASMFC has made incredible progress; thanks to Commissioner John Bull just in the last year.

You have found ways to introduce heat into the rooms in which we meet, and so people can make motions without having to wear gloves to do so. I've learned an awful lot. I think the first meeting I learned at high volume from Dr. Daniel about the shortcomings on our sturgeon policy; still don't have an eardrum.

But we have as we learned this morning, made an awful lot of progress in sturgeon, and progress in a lot of other areas as well. I really do value a lot of lessons that I've learned from attendance at these meetings. You all have made some very tough decisions around these tables. There was one; I think it was in Baltimore on menhaden.

But those tough decisions are necessary to rebuild fisheries. You've done that. Not just with menhaden. From my vantage point in the audience, I can listen to the debate and I can

see the looks around the table. I can see how you hold yourselves accountable, how you help each other resist the pressures that you have all felt at one time or another.

I see how you support each other to do what is right. It's a very valuable lesson for me and for all of us. I've enjoyed our partnership in this effort, working with you on tough issues like for example southern New England lobster with my grade school schoolmate David Borden, who lives across the river from me as we try to transition that industry from lobster to Jonah crab.

That's just one example of the partnership that we have with you. I've seen this partnership, this very important partnership get very sorely tested with summer flounder. My remarks in the Boston Globe several months ago got me in hot water with my bosses, so I don't think I should comment any more on that. You can go read it if you want. But Chairman Grout's comments last night at dinner, I think your remarks Mr. Chairman were right on the money. I'm glad you have a meeting set up with Secretary Ross. I fervently hope that this is a one-time occurrence, and everyone here will work to make that breakdown a singular exception. Because we face many challenges that will require our wonderful, decentralized system of managing fisheries work, we have a lot of challenges.

You all know them as well or better than I do. There are still issues with summer flounder, black sea bass, and other fisheries. There is the issue of climate change, which you have helped educate us, and the regional fishery management councils on. It's causing havoc in so many ways. The issue of allocations has to be faced.

The issue of forage fish has been mentioned here. Just this morning Bob Beal mentioned competing ocean uses. There are of course others. This partnership that we have is very

important. There are some “thank-you’s” that I want to offer, Mr. Chairman. It could take all day and I don’t want to.

But I do want to mention in particular on state directors. It was at a meeting we had with state directors out in San Diego that Paul Diodati, who was deservedly honored at lunch, said to leadership at NOAA Fisheries that we aren’t partners with state directors, state directors are our allies. That is a very good use of that term.

I’ve certainly felt that we are in the trenches with state directors. I’ve felt that and I’ve enjoyed the relationships that I’ve had with the state directors confronting problems in my region. As I’ve done that with each and every one of you, I’ve developed profound respect and become friends, maybe possible exception Commissioner Martin, bless his heart.

But in all seriousness, Russ, come on. I can’t start laughing now, Russ. The respect I have for you is so high for the jobs you do, the difficult jobs you do. Secondly, the staff at ASMFC, Bob, Toni and all of the team under ASMFC, wow, it’s every time it seems that we have a problem at NOAA Fisheries, where we need something done.

You know I pick up the phone and call Bob. You know if it’s distribution of disaster assistance; if it’s reimbursement for at-sea monitoring, if it’s help with fishery dependent data visioning with the partnership that we both have with ACCSP and Mike and his team. The professionalism, the dedication, the expertise, the passion, you know they’re an extension of our team.

It’s so wonderful to work with, you know this Mr. Chairman, but I want to tell you we know it too. It’s just a great team to work with, the staff here. Lastly, I want to say our team here at NOAA that I have the honor of working with. I was going to serve two years at NOAA Fisheries. If I were a carton of milk, I would be something you would stay very far away from,

well past my expiration date. But I’ve stayed because my staff is so fantastic.

The two Mikes, Mike Petney, Mike Ruccio, I’m going to leave people out but Peter Burns, Ali, Chip, Kelly, Lindsay, Lynn, Derrick, others who have been at this microphone. You’ve gotten to know them well, and I’m sorry that I’ve left some out. But there have been so many who’ve shown you their dedication and their passion for this job; their expertise, their knowledge. I never cease to be amazed. I go home every night my brain hurts just trying to keep up with them. I can’t possibly do that. But it is an honor for me to work alongside them. When I look up above me, at people like Sam Rauch, and the leaders there, I feel lucky to work for them. I think you’re in good hands as I look around the administration at our political leadership. Chris Oliver, you know we’ve drawn the long straw in a lot of people. Chris Oliver knows fisheries for decades and decades in both the Gulf of Mexico and in Alaska.

Admiral Gallaudet, who just started work this week, is going to be very, very good at NOAA. I think you’ll take the measure of Secretary Ross when you meet with him. But I think he’s a numbers guy, and we’re a numbers agency. I think he’s strong. I think we’ve got a strong team. I think we can hold our end of the partnership up.

With that Mr. Chairman, I do hope occasionally I’ll run into you all again. It’s been a real pleasure and an honor to work with you. We have such an important mission. I come from a seaport, New Bedford. I know the stakes and the difficulty, and the importance of our work; and I wish you the best as you carry on that most important mission. Thank you very much, Mr. Chair.

CHAIRMAN GROUT: Thank you very much, John. (Applause) John, I just want to recognize you and thank you for all that you have done to promote and support the partnership that we

have between the Commission and GARFO. I've seen many, many things that you've done over the years that you have supported our work, you've supported our communication, you've supported our co-management, and you have been an ally as we have tried to be an ally in your work. Thank you very much, John and good luck in your retirement. (Applause)

APPROVAL OF AGENDA

CHAIRMAN GROUT: Okay, we now have an agenda before you. Are there any changes to the Business Agenda? Seeing none; are there any objections to approving the agenda? It is approved by unanimous consent.

APPROVAL OF PROCEEDINGS

CHAIRMAN GROUT: We also have proceedings from our May meeting. Are there any changes or edits to that May meeting minutes? Seeing none; is there any objection to approving the minutes? They are approved by unanimous consent.

PUBLIC COMMENT

CHAIRMAN GROUT: We also have an opportunity here for public comment for things that are not on the agenda. Is there anybody in the public or the audience that would like to speak on things not on the agenda?

REVIEW AND CONSIDER APPROVAL OF THE 2018 ACTION PLAN

CHAIRMAN GROUT: Seeing none; we'll move into Review and Consider Approval of the 2018 Action Plan. Bob.

EXECUTIVE DIRECTOR ROBERT E. BEAL: Just all the staff up here we'll go through the individual sections. But a lot of times we present a budget associated with this action plan, and we don't have that together this year. But we have done the rough analysis, and it looks like we can afford everything that's in here. That is the good news.

The bad news is, if you want to add things in here, we probably need to do some horse trading and swap some things out. As the staff is running through it, if there are significant financial expenditures that need to be added, we're going to need to think about that a little bit how we can cover those expenses. With that I think Toni can go through Goal 1, if that's okay, Mr. Chairman.

CHAIRMAN GROUT: Sounds good, Toni.

MS. TONI KERNS: What I'm going to do is go through the bolded actions, and I think that's what all of us up here will be doing today. These are new items that we're going to be taking on. Other work is stuff that we have either started or is something that is consistent from year to year within the plan. I'll go to Goal 1, which is our ISFMP goal, and starting with American eel. We'll consider a management response to the 2017 assessment findings, which the Board heard earlier this week, and look to do a management document on allocations and quotas specific to the yellow and glass eel fisheries.

We'll also have the Technical Committee or some folks from the Technical Committee, not the full, evaluate the monitoring efforts to identify gaps and the value of existing surveys for assessment and management use. The American Lobster Board will finalize and implement Addendum XXVI; which is looking to improve harvester reporting and biological data collection in state and federal waters.

This will also apply to the Jonah crab fishery as well. We'll look at Addendum XXVII, which considers standardization of the management measures in the Gulf of Maine and Georges Bank stock, and develop a strategy for management of the southern New England stock that considers the record low abundance of the stock, and preserves a function of a portion of the fishery, acknowledging the

effects of climate change on the lobster resource.

The TC will initiate the 2020 benchmark stock assessment. While it's not in this document for Atlantic herring, we did task the TC to look into the efficacy of all of the management goals and objectives of the spawning closures, using the GSI forecasting system. For Atlantic menhaden, we will be initiating the 2019 benchmark stock assessment. For Atlantic sturgeon, we will monitor the state and federal activities in response to the Endangered Species Act listing of the Atlantic sturgeon, including the five-year-review status, which we heard about this morning.

In bluefish, we'll be collaborating with the Mid-Atlantic Council to initiate the development of an amendment that would address allocation in the bluefish fishery, as well as collaborate with the Council and the Science Center to complete an operational stock assessment pending the availability of the new MRIP program estimates, and then consider a management response to the assessment findings in conjunction with the Council.

For coastal sharks, we'll monitor the stock assessment results for sandbar and mako sharks, and provide a Technical Committee recommendation to those assessments, and then do a management response if we need some complementary management actions with HMS. Under shad and river herring, we'll be initiating the 2019 American shad benchmark stock assessment; and we'll be monitoring the activities of the ESA review of river herring.

We'll also review and update the American shad habitat plans as required by Amendment 3. For both Atlantic croaker and spot, we will be conducting the analysis to explore and potentially update the traffic-light analysis, which includes additional indices or age-

composition information as a possibility for inclusion.

Cobia, we will implement the cobia FMP and work with the South Atlantic Fishery Management Council, as well as NOAA Fisheries, to ensure complementary regulations between state and federal waters, if the Board approves a cobia FMP this week. We'll also collaborate with the SEDAR to conduct a stock identification workshop, in preparation for the 2019 benchmark stock assessment, which we will also initiate. For scup we will collaborate with NOAA Fisheries and the Science Center to finalize the 2018 operational assessment pending the availability of updated MRIP information, and then consider a management response as necessary. The same for black sea bass, and we will also, if made a priority by the Mid-Atlantic Council (and this will be discussed at the December meeting), collaborate with the Council to initiate a black sea bass amendment that would consider management of the entire fishery. Then for weakfish, I have a correction. It should say initiate the development of the 2019 stock assessment update.

We're going to do an update this year, but due to the MRIP data coming out in either the late summer or fall of this year, and because that assessment has such a reliance on recreational CPUE, we thought it best that we wait and get that information first and then do the update. For winter flounder, the Board will review the 2018 GARM stock assessment results for inshore winter flounder, and consider management response in coordination with the New England Fishery Management Council, as well as GARFO.

Then scrolling down into Section 1.2, we'll collaborate with NOAA Fisheries and the Secretary of Commerce, to ensure transparency and the integrity of the Atlantic Coastal Fishery Cooperative Management Act as provisions are preserved, including seeking opportunities to collaborate with NOAA Fisheries as it conducts

the ESA status reviews for sturgeon and river herring.

We will also take the next steps in response to the Commission's climate change white paper to address fisheries impacted by climate change; and we'll be discussing that later this week at the Policy Board. We will also work with NOAA leadership to better understand the impacts to state management programs; given the movement towards increased recreational flexibility.

We'll be seeking ways to address the concerns of the recreational community with regards to Commission managed and jointly managed species. As a part of this the Commission will assist in conducting and participate in the NOAA Fisheries 2018 National Recreational Summit. We will also respond to the new MRIP estimates as needed across all of our Commission managed species; and I will pass it off to Pat for Goal 2, Science. I'll take questions first.

CHAIRMAN GROUT: Pat.

MR. PATRICK C. KELIHER: Toni, you made note of the herring issue from a budgetary perspective. If there was a need for an addendum are we going to be okay?

EXECUTIVE DIRECTOR BEAL: Pat, if it's only three hearings up in your neck of the woods that's not a real great expense; one trip up, a couple nights in a hotel. We can probably accommodate that no problem.

CHAIRMAN GROUT: Are there any other questions for Toni on Goal 1? Seeing none; Pat.

MR. PAT CAMPFIELD: Goal 2 covers the fisheries science research and stock assessment activities of the Commission. New activities include a collection of more spot age data; as well as pursuing improved sturgeon bycatch monitoring in state waters. Those were both

research recommendations that came out of stock assessments completed this year.

In terms of the overall stock assessment workload, it looks pretty heavy for 2018; including benchmark assessments for sea herring, horseshoe crab, northern shrimp, striped bass, and summer flounder as well as initiating a benchmark assessment for American shad. We will also conduct assessment updates for spiny dogfish, and initiate an update for weakfish. Tied to a few of those benchmarks, the Commission will organize and conduct peer reviews for the horseshoe crab, northern shrimp, and possibly the striped bass stock assessment.

We need to figure out if that's going to be an ASMFC or SARC review. Another new task is to develop a long term vision for scientific initiatives within the Commission's next five-year-strategic plan; and that is a task that will be spearheaded by the Management and Science Committee, and the Assessment Science Committee.

Moving down to Task 2.18, consult with the Assessment Science Committee on a red drum stock assessment guidance, and develop a road map for improving data collection and future assessment for the South Atlantic Board. Also, monitor the progress of cobia research projects, and contribute to the Stock ID workshop in preparation for that assessment in 2019.

We've also added a task to partner more closely with the U.S. geological survey; to identify shared priorities and opportunities for enhanced scientific support to the Commission. Much of the activities under NEMAP and SEAMAP are the same. Under fish aging activities, it's not bolded in this copy, but we will hold an aging workshop for American eel in 2018.

Under the Committee on Economics and Social Sciences, they will continue their work to

develop new ACCSP socioeconomic data standards, and that's already underway. We have also added a task to track progress and distribute information on Citizen Science initiatives, including through the South Atlantic Council, Gulf of Maine Research Institute, and other entities. Finally, under the Commission's Stock Assessment Training Program, we will hold trainings both at the introductory level and advanced stock assessment training in 2018.

CHAIRMAN GROUT: Are there any questions for Pat on Goal 2? David, thank you.

DR. DAVID PIERCE: Just a clarification on Task 2.3.4, track the progress and distribute information on Citizen Science Initiatives through those different groups. What is the thinking regarding these specific initiatives? Citizen Science Initiatives are something new that we're going to entertain? Explain a little bit as to why this task is in it if you would.

MR. CAMPFIELD: A couple of examples include, with GMRI they have a Snap a striper program, which is something that we've highlighted in Fisheries Focus. It's simply not for the Commission to initiate these fairly local programs, but to be a centralized place to understand what's going on up and down the coast, and explore their utility, either for technical processes, or to advise fishery management.

CHAIRMAN GROUT: John.

MR. JOHN CLARK: Pat, could you just expound a little bit on what the ACCSP Socioeconomic Data Standards are, and how those will be used in the upcoming addendums and amendments?

MR. CAMPFIELD: For starters, the program, and Mike feel free to jump in, but ACCSP has a very short list of standards that they developed way back in the late '90s, and although it continues to be a program priority, there are some socioeconomic data that have come into ACCSP,

but it's not at the same level as the catch and effort bycatch data. In order to promote more socioeconomic data coming in from the states and federal partners, we need to develop standards, and that's something that Shanna Madsen as our SESS Coordinator has worked with ACCSP to get that ball rolling this year. We hope to finish it this year; and part of the objective is to provide that baseline information to fishery management plans on different socioeconomic indicators. That's part of the longer goal.

CHAIRMAN GROUT: Are there any other questions on Goal 2; Goal 3, Toni?

MS. KERNS: Goal 3 is our promoting compliance within our fishery management plans, so Goal 3 looks at Activities of our Law Enforcement Committee, and there are fewer bolded tasks here, but still lots of great work going on from the Law Enforcement Committee, especially in response to any items that will come out of management boards.

But they will be evaluating the effectiveness of the commercial tagging programs and systems, and user compliance in particular with tautog. We won't initiate that tagging program until 2019, but we'll still be working with Law Enforcement to make sure that the program that we put together does not have any enforcement loopholes. I'll be reviewing and providing input on enforcement issues associated with the American eel or any other aquaculture programs and proposals; and that is it.

CHAIRMAN GROUT: Questions on the Goal 3. Seeing none; Goal 4, Fish Habitat.

MS. KERNS: I'm going to tag team this with Pat. He'll cover the ACFHP portions of the habitat goal and I will do the Commission's Habitat Program. Habitat is actually currently meeting right now, and they will be publishing a Habitat

Management Series. They are still determining what that topic will be.

We will fill this in once they have made that decision later today. We will also be developing outreach materials on the benefits of habitat to fish productivity, for nontechnical audiences; and this is geared at stakeholders, the media, and the general public to be handed out at tradeshows and such. I'll pass it over to Pat.

MR. CAMPFIELD: Quickly on the Atlantic Coastal Fish Habitat Partnership, just a few new activities. One to update their website, the second very large task, to conduct habitat mapping projects both in the Southeast and Northeast Regions. Finally, to take their species habitat matrix, this was currently in a journal publication format, and moved that to an online searchable format.

MS. KERNS: Then we'll be also identifying important fish habitats for Commission managed species, including information on a 2018 Habitat Management Series document that's called Important Fish Habitats. This is sort of taking all of what we currently call habitat areas of concern, HAPCs, in which the Habitat Committee is developing new language to address that topic, as directed by the Policy Board. Then we're going to put all of those, whatever the new term is, into one document for easy reference. That is all.

CHAIRMAN GROUT: Are there any questions on Goal 4? Seeing none; Goal 5, is that you, Tina?

MS. TINA BERGER: Goal 5 addresses our stakeholder and public support for the Commission and specifically our outreach initiatives. You'll see much of the content remains from last year as ongoing activities. New to this year is a focus on collaborating with NOAA Fisheries MRIP staff and communicating improvements and changes to the MRIP.

We will be publishing our 2017 Annual Report, continue to work with the science staff on

preparing and distributing assessment overviews and focal species for next year are herring, striped bass, horseshoe crab, northern shrimp, and summer flounder. We're going to explore this year doing some quarterly, topic driven webinars, to engage and inform the public about our current activities.

We'll focus each quarterly webinar in a different aspect of Commission programs for management, science, habitat, and data collection. I'll be working with the Commission staff to further improve our messaging and communication skills with media; as well as strengthening our ability to provide a written content that is accessible for nontechnical audiences. We will be updating our website early in the year to just improve functionality, and include new content on ACCSP, cobia, as well as a Fisheries Management 101 Page, and that's it for outreach.

CHAIRMAN GROUT: Questions on Goal 5? Loren.

MR. LOREN W. LUSTIG: Thank you very much for the information just relayed to us about how we relate to the public; and how we can help them to understand more, ideally, what we are actually doing and why we're doing it. I was especially interested in the consideration regarding webinars.

I participated in some of those in Pennsylvania, with the Pennsylvania Game Commission, and other agencies. I'm wondering if there is an opportunity here for us to reach out to high school or college science like classes, so that they can get a grasp on our role in changing environment.

For example, there is a program in Maryland called Grasses in Classes, where kids get involved in the production and planting of submerged aquatic vegetation. There is a program in Pennsylvania that encourages science students to raise trout; and release

them in our streams. Is there anything that we can do that would be similar to those two programs?

MR. BERGER: We do make an effort to go to various graduate and undergraduate programs and talk about the Commission and fisheries management in general. We have also increased our outreach to sportfishing clubs. In terms of reaching out to high school or science classes, specifically in terms of hands on stuff, we have not. But we could certainly talk about it at the staff level, and see where we could involve ourselves in those activities to a greater extent.

CHAIRMAN GROUT: Other questions on this goal? David.

MR. DAVID E. BUSH, JR.: This relates to Goal 5, but may also be like 3.11 or 12. It has to do with specifically cohiba in this particular instance. But you're getting a lot more stakeholders that are doing their homework. They're hitting the books. They've trying to understand what's going on. Some of them may or may not be able to join the different committees and panels, and feel like you know they've done their homework and might have a different opinion. I know we can't chase every rabbit down every hole. But in instances where they've put substantial effort forth to do some research and would like some return answers on why or why not information may or may not be included. I think a good way to maybe strengthen that support, you know where we're going back home to our constituents or our stakeholders and they're like, well I sent it in and I didn't hear anything back.

It's now in public record and it may or may not go away. Is there a mechanism in which we could possibly, at least somewhat address what they're sending in, and make that visible to the folks around the table as well? A lot of the things that they've brought forward you may or may not have merit, and I wouldn't know that.

It would be probably a technical committee of some sort, or science committee that would be looking at it and seeing that okay this applies, this doesn't and here is why. But again, I'm just looking if there is a mechanism in place already that I'm not aware of that would help to answer those questions, and maybe put some of the ideas to rest that they have or say that they have merit and include them.

EXECUTIVE DIRECTOR BEAL: David, if we get specifically asked something from a member of the public, you know we try to respond to that. I think it's almost a volume issue that we wrestle with in that we have tens of thousands or at least 10,000 comments on menhaden already. I don't know where Megan is; she's probably summarizing menhaden comments. But during public comment periods, I don't think we have the sort of bandwidth to respond to all the different things that come in, and those different comments.

But the sort of one-off letters that we get that asks us for specific actions or brings forward specific information. We try to respond to those as well as we can. The Technical folks don't necessarily have time to run each of those letters by a technical committee and those sorts of things. But we can definitely make as much of an effort as possible to respond to those letters; just we can't keep up with everything.

CHAIRMAN GROUT: Toni.

MS. KERNS: In addition to that David, for assessments we do put an open call out to the public on providing data or working papers, and those do get addressed by the Committee, whether or not they get included and why they do or do not get included. That is another process, especially where a response will come back for someone that's done a lot of research and done their homework.

CHAIRMAN GROUT: Further questions on this goal? Goal 6, is that you, Bob?

EXECUTIVE DIRECTOR BEAL: I'll give it a shot. Goal 6 is the Legislative work that we do, Capitol Hill work that Deke and I handle with the assistance of many of your folks. A lot of it is ongoing activities that we do every year with reaching out to the Hill and then creating those relationships.

But there are a few specific new tasks this year, the first of which is Gulf of Maine lobster. There is some budget language in there, and some report language that does include some funds for Gulf of Maine lobster; look at some of the impacts and environmental changes. We've worked with Pat Keliher on that. We'll engage the Commissioners in the formulation of the Commission positions on legislative policies, including the Magnuson-Stevens Act Reauthorization documents. There are a few versions out there right now on the House side. If there is a need, we can reach out to you all and then just solidify an ASMFC position if there is one. It's probably a little bit scattered up and down the coast.

Moving on to Task 6.4.3, the next suite of new tasks are reacting and responding to the Atlantic Coastal Act Provisions, and ensuring that transparency is maintained, and then the policy and funding issues. Obviously we communicate the funding priorities for the states, and it goes on to develop relationships with the Secretary of Commerce and Assistant Administrator for NOAA Fisheries.

Meeting with the Secretary to talk Atlantic Coastal Act, which we're doing next week, and also talking again about the priorities for the Commission and the funding, including horseshoe crab survey that we've been able to fund the last couple of years, so that's good news. The bad news is it's not permanently part of the budget, so we have to go out there and make sure the dollars are available every year for the Horseshoe Crab Survey. Those are the highlights of our Capital Hill outreach

activities. I can answer any questions if there are any, Mr. Chairman.

CHAIRMAN GROUT: Malcolm.

DR. MALCOLM RHODES: Just one question. The Delaware Bay, is that specifically the Virginia Tech Survey?

EXECUTIVE DIRECTOR BEAL: Yes.

CHAIRMAN GROUT: Tom Fote.

MR. THOMAS P. FOTE: It was always helpful when I went to a Congressional office to have as much information as I could; and the last year I was able and I went through and actually even state legislators. When Southwick's did the breakdown of recreational fishing by numbers, and every Congressional District, which they did in every state, it was very helpful to walk in with that economic breakdown.

I wish I had it for the commercial fishery, because it would have been really important, especially in New Jersey. But when you find out you've got 66,000 anglers in your district, even though you're in the middle of a state that's not even near the water, and made a big point. The old books we used to put together with all the fishery plans in it, the information on the species and things like that always made a nice presentation to give into the office with those types of sheets.

It would be nice if we had the same thing on the commercial side as we have on the recreational, because those numbers mean money to the Congressional Districts, but we also use it for the state legislature, because they know which congressional district they're in, they can see the breakdown of money to do that. That would be helpful also.

EXECUTIVE DIRECTOR BEAL: Tom, we can pull those together for you, you know any specific meetings you have let us know. We can pull

some information together. Deke and I usually bring sort of the state level economic impact data with us when we go up to the Hill; you know talking recreational impact, commercial impact. A number of jobs on the commercial side, a number of trips on the recreational side, those sorts of things, we haven't broken it down to individual districts. We usually have been talking at the state level. But we can break it down further if it's available.

CHAIRMAN GROUT: Follow up, Tom?

MR. FOTE: Yes, it's already broken down. Southwick's put that all together, so they have it all over for all the states up and down the coast. I can get you that information if you need it.

EXECUTIVE DIRECTOR BEAL: Great, thank you.

CHAIRMAN GROUT: Dave Pierce.

DR. PIERCE: Task 6.3.5, Engage Commissioners in the formulation of the Commission's position on federal legislative policy, including pending MSA Reauthorization legislation. When might that engagement occur? I mean there are some bills out there now being considered. Maybe we'll get something this time around.

There certainly is one notable suggestion regarding how to deal with recreational fisheries. The New England Council, maybe the other Council is taking a position on MRIP and how effective it is for monitoring recreational fisheries catch. I just suggest that our leadership needs to decide when we should weigh in on that particular legislation.

I suggest in particular when we should weigh in on that aspect of possible changes in the Magnuson Act, specific to how we manage recreational fisheries, because let's face it, when it comes to how they're managed, it really falls into the lap of ASMFC. The council's tend to be rather broad brushed. What should

be done in federal waters, and it's really what happens in state waters for the most part.

This has great implications. This particular legislation, this particular bill on recreational fisheries, potentially has some rather significant implications for how we do our business. Again, when the leadership, you feel it's necessary to weigh in, please take the initiative to have us do so.

EXECUTIVE DIRECTOR BEAL: Yes, I think we're getting close to that point, David. Like I said there are a few house versions that are swirling around right now. In talking with some of the staffers on the House side, it sounds like they're going to try to merge those different drafts into a single draft. I think once you get to that point it is probably a good opportunity for the Commission to chime in on what's there, so we can reach out to you once we see that.

CHAIRMAN GROUT: Are there any other questions on this goal? Seeing none; who is going to do finance? Okay, Bob.

EXECUTIVE DIRECTOR BEAL: Goal 7 is the Finance and Administration of the Commission. Most of these are things that we do every year. Not to say it's not a lot of work, it is a lot of work. But they are just the care and feeding to keep this whole business going. There are a couple new tasks buried in here. We're going to focus training for new staff on how to use some of our electronic tools, such as new data bases and software packages and other things that we have at the Commission, to make sure everybody is up to speed on those. We're looking at software packages to help digitize some of our accounting procedures and billing processes, and contracts database to track all the details of the multiple contracts.

As we have more and more of these cooperative agreements with NOAA Fisheries, we end up with more and more projects and tracking all those is getting more and more

cumbersome each year. We're going to develop a database to make that much more efficient. We're going to do a training workshop for staff on meeting facilitation to help enhance committee productivity and performance.

We're considering engaging an outside consultant to work on staff culture, and looking at better ways to do performance reviews and feedback to staff throughout the year. We do once a year performance reviews right now, and a lot of businesses and agencies are getting away from that and doing different ways to evaluate performance.

We're going to look into that and see if there is a better way to do that for the Commission, and then at the very end 7.6 is a new strategic plan. Our current plan goes through the end of next calendar year, so during next calendar year we need to develop the next five-year plan. It would be 2019 to 2023.

The Executive Committee talked about this briefly this morning, and the course that they are suggesting that you take is have a couple hours at the February meeting to have all the Commissioners brainstorm on where we are with our current strategic plan. Do we need to just trash what we have and start all over and blow the things up; or is it just some minor course corrections and tweaks that we need?

I think the major tasks that we've already talked about so far are fundamental to what we do, fish management, fish science outreach and Congressional outreach, habitat, Law Enforcement, et cetera. I think those pieces of the strategic plan are set, but what other things do the Commissioners want to change and we'll explore that in a workshop in February, and then based on the outcome of that workshop, we'll decide what the course is for the remainder of the year for the strategic plan. That's Goal 7, Mr. Chairman.

CHAIRMAN GROUT: Jim Gilmore.

MR. JAMES J. GILMORE: Robert Boyles had a good suggestion this morning for our meeting efficiency, and maybe bringing our parliamentarian back in to give us some education. Is that going to be on the budget for 2018, or are we going to have to kick that down the road until 2019?

EXECUTIVE DIRECTOR BEAL: We can probably afford to bring Colette in for a half day or something. A refresher for Commissioners on meeting efficiency, I guess is what you guys were looking for this morning. We can probably do that. Some of this budget is a little bit uncertain. We don't know exactly what we're going to get from Congress, and we're going to have some rollover dollars from this year to next. The one thing I should have said at the outset about the budget is we adjusted the overhead rate for the Atlantic Coastal Act. We actually reduced the overhead taken out by the Commission. Our ability to afford to conduct all these activities does relate back to the fact that we reduced overhead and we had a few more dollars available for programmatic activities than we have in the past. Everything keeps getting more expensive, but we've been able to keep it going so far.

CHAIRMAN GROUT: Are there any other questions on Goal 7? Okay we'll move to Goal 8, Mike.

MR. MIKE CAHALL: Here I am. Good afternoon.

The ACCSP Action Plan is actually based on the ACCSP Strategic Plan. Coincidentally it expires at the same time that the Commission's plan does, and I believe our intention is to integrate the plans together as part of the upcoming strategic planning process.

Thus, this plan is slightly different in its depth than the Commission's plan was. But essentially it's a status quo plan. There aren't

any significant new efforts, in the sense that we're going to go out and discover something new or build something new. However, I want to bring just a couple of things to your attention.

In terms of our data warehousing, we're going to continue to improve on our data query interface, which you all will see shortly, and try to bring in additional, especially biological datasets. The Coordinating Council approved an additional FTE for us that should help to facilitate that process.

We're going to continue to work with our program partners to keep our standards current. As we've worked with them to bring in additional data, especially in the trip reporting arena, we've had to make some adjustments to the data standards, specifically to our coding schemes, to be able to better identify gears and those kinds of things.

We also will be working really hard. I think the single biggest focus of the program probably for the next year is going to be implementing for-hire reporting. We are working with the Mid-Atlantic and the South Atlantic Councils to complete modifications to our trip tool, in order to be able to accommodate their requirements.

As most of you are aware, the new reporting requirements for Mid-Atlantic go into effect in March of next year. Our expectation is that sometime after that the reporting requirements for the South Atlantic will go into effect. They are still very much involved in a planning process there, so we really don't have an effective date. Nonetheless, my expectation is that our system will be used to do the majority of the data collection in for-hire fisheries.

We'll be working to make sure that we're ready; that we have adequate infrastructure and information systems resources, and that our help desk is stood up and managed so that other systems can be adequately supported.

Beyond that ACCSP is going to continue pretty much status quo. We're about to give you a presentation that will give you a great deal more information about exactly what we're up to.

CHAIRMAN GROUT: Thank you, Mike, any questions on Goal 8? Okay seeing none; I'm going to turn it over to our AOC Chair, to bring forward a motion that we made regarding the Action Plan.

MR. GILMORE: I would like to move that we approve the 2018 Action Plan.

CHAIRMAN GROUT: **It does not need a second, because it's a Committee motion. Is there any discussion on the motion? Seeing none; is there any objection to approving the motion? The motion is approved by unanimous consent.**

ELECTION OF COMMISSION CHAIR AND VICE-CHAIR

CHAIRMAN GROUT: Thank you very much to all of you for putting that together; and now I'm going to turn over the business session to our Executive Director, Bob Beal to conduct our elections.

EXECUTIVE DIRECTOR BEAL: There is a little extra something in Doug's voice there turning over to a new election for a new Chair and Vice-Chair. The way we'll conduct the elections is, in a moment I'll call on Roy Miller, who's the Chair of the Nominating Committee to give the report from the Nominating Committee.

But just as a refresher, we will hand out ballots based on Roy's report, and it's on the ballot there is the individual that Roy is going to bring forward as nominee for Chair and for Vice-Chair, two separate ballots. There is a space for write-ins. That's part of the procedure that the Commission agreed on a number of years ago that we always have the opportunity for

members of the Commission to write in other candidates or other nominees if they so choose.

One vote per state, so each state will get a ballot. Please write your state's name and either the write-in vote or check the box for the individual that is being nominated by the Nominating Committee. With that Mr. Miller, would you provide the Nominating Committee report?

MR. ROY W. MILLER: It would be my pleasure. **On behalf of the Nominating Committee, which consisted of Robert Boyles, David Borden and myself.** I should note that both Robert and David are distinguished past Commission Chairs, so I feel we had an able-bodied committee. We polled the Commission members in our three respective regions, **and we have a name to recommend to you for Chairman of the Commission, and that is Jim Gilmore of New York.**

EXECUTIVE DIRECTOR BEAL: Great thank you. Toni is passing out the ballots now for voting for; this is just for the Chairmanship. Toni collated them, so this is throwing her off. Just hand them both out. Let's hand them both out and we'll make it through. Make sure you fill out the Chairman one for the Chair, and the Vice-Chair for the Vice-Chair.

Pat is going to come around and follow Toni around and pick up the votes for Chairman at this time, and then Roy will count the ballots. If you're ready, he'll move along. Has everyone turned in the ballots for Chairman? Florida is absent. Mr. Miller, do you mind reporting the vote?

MR. MILLER: It would be my pleasure. The vote was 14 in favor of Jim Gilmore. (Applause)

EXECUTIVE DIRECTOR BEAL: Congratulations, Jim. Roy, are you willing to provide the nominating report for Vice Chair?

MR. MILLER: I am. Once again it is my pleasure to recommend for your nomination Pat Keliher of Maine as Vice-Chair.

EXECUTIVE DIRECTOR BEAL: Thank you, Roy so same drill. You've got your ballots, please fill those out and hand them. Toni is collecting them and we'll have Roy count those up. Mr. Miller, can you present the results of the vote, please?

MR. MILLER: **We are, and I'm happy to report it is 14 to 0 for Pat Keliher.** Congratulations, Pat. (Applause)

EXECUTIVE DIRECTOR BEAL: Thank you and I look forward to working with both of you. It's not too early to start sucking up to the new bosses, so. Tom, one more and I'll get to you in a second. Doug, do you mind coming back up for a moment? On behalf of all the Commissioners and all the staff, Doug, we've got a crystal clock to thank you for your two years of leadership, actually four years if you include the Vice-Chair.

I personally loved working with you. You were always available, always provided great advice. We needed a lot of advice over the last couple years. Doug, I just want to thank you on behalf of everybody here for your two years of service. Thank you. (Applause)

CHAIRMAN GROUT: All I want to say is I want to thank all of you for our support that you provided for Jim and I over these past two years. It has been a difficult couple of years, but we've moved through it and we are, I believe firmly that we are stronger for this, and will continue to move forward under the great leadership of Jim Gilmore. Thank you.

EXECUTIVE DIRECTOR BEAL: Tom Fote, do you have a comment?

MR. FOTE: Yes, I found the procedure a little strange, and I would just like an explanation.

Usually when the Nominating Committee gives their recommendation, and then we basically accept the recommendation. Then we say is there any nominations from the floor. Now there is never any nomination from the floor, but I think procedurally that is the way I'm used to going through the years going on.

It just seems very strange the way we did it this time. Maybe just being me, but that's the way I've seen every election go in every other board and it's been previously the way it was done here. Nobody is going to volunteer from the floor, nobody ever does. But it should have been a format and usually the Treasurer casts the ballot.

The other thing that concerns me, and I looked and we've got three people from the north, and usually we used to alternate, trying north, south. I don't know the reason behind. Maybe I missed the meeting of the Executive Committee where you discussed this. I'm just curious what was going on. Maybe the other Commissioners that weren't at the Executive Committee have to know the reasons what's going on with this. I haven't been reached out to, and I think some of us haven't been reached out to find out what's going on.

EXECUTIVE DIRECTOR BEAL: Procedurally, this is the procedure that the Commission agreed to in 2009, so do the ballots, and have the write-in opportunity. The north/south rotation, I don't know if other folks will want to comment on it. But in the same procedures it's noted that the goal is to rotate north/south/mid, and we try to keep that as available as possible. But when the Nominating Committee talked to all the Commissioners up and down the coast, it appeared the best candidates were the ones that they brought forward this time. Dr. Rhodes.

DR. RHODES: Tom, to that point. The same, we've had that discussion, but we almost feel like there are three areas, and so we feel like

there is New England, Mid-Atlantic and South Atlantic, and we do have a Mid-Atlantic and a New England representative right now, so we've got two of the three areas, which is just the way it's going to work out. I think administratively with the Commissioners in the south. But we still feel like being from the south we don't feel like we are underrepresented, and that's speaking for myself, but I think it's a sentiment across the Board.

EXECUTIVE DIRECTOR BEAL: The other thing, Tom, is the Executive Committee did talk about elections this morning and the nominating process a little bit, as well as sort of who's eligible to become Vice-Chair and Chair of the Commission? Is it proxies, permanent proxies, ongoing proxies, just actual Commissioners, who is it? The Executive Committee is going to open up that process and look at the election. Stay tuned for that.

MR. FOTE: Yes, I mean the last time we had a Governors Appointee as a Vice-Chair was Bonnie Brown, and that's got to be 15 or 20 years ago. There are 45 Commissioners also.

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EXECUTIVE DIRECTOR BEAL: That's a fair point. Is there anything else before the Business Session? All right seeing none the Business Session will be in recess until later tomorrow morning. I forget the time, eleven o'clock or so. We stand in recess right now.

(Whereupon the meeting recessed at 2:32 o'clock p.m. on October 18, 2017)

**ATLANTIC STATES MARINE FISHERIES
COMMISSION
BUSINESS SESSION**

Marriott Hotel Norfolk, Virginia

**OCTOBER 19, 2017
THURSDAY SESSION**

The Business Session of the Atlantic States Marine Fisheries Commission reconvened in the Hampton Roads Ballroom V of the Marriott Waterside Hotel, Norfolk, Virginia, October 19, 2017, and was called to order at 11:56 o'clock a.m. by Chairman James J. Gilmore.

CALL TO ORDER

CHAIRMAN JAMES J. GILMORE: Okay we're going to move right along, I'm going to invoke my George Lapointe and see if we can do this very quickly.

CONSIDER FINAL APPROVAL OF NORTHERN SHRIMP AND TAUTOG AMENDMENTS

CHAIRMAN GILMORE: **We've got a couple of final approvals on amendments that were discussed and approved this week by the boards.** The first one is for northern shrimp, and the next one is for tautog. Do we have a motion for northern shrimp? Doug.

MR. DOUGLAS E. GROUT: **As soon as the motions are up on the board, I will make it for the Shrimp Section. The first motion is to move the Commission approve Amendment 3 to the Northern Shrimp Interstate Fishery Management Plan.**

CHAIRMAN GILMORE: Okay, we have a motion by Doug Grout, is there a second to that motion? Eric Reid seconds the motion. Is there any discussion on the motion? **Is there any objection to the motion? Seeing none; the motion is approved by unanimous consent.**

MR. GROUT: Then I have a second motion that they will bring up, and this will need a second. **My motion is to move the Commission send a letter to NOAA Fisheries and the New England Fisheries Management Council regarding the requirement for size-sorting grates in Amendment 3 to the Northern Shrimp Fishery Management Plan, and if I get a second I'll provide some justification.**

CHAIRMAN GILMORE: Do we have a second for that motion? John Clark. Okay Doug, the floor is yours.

MR. GROUT: The justification is that in our Amendment 3 we have additional size selection grates that are not currently in the groundfish plan. The northern shrimp fishery is allowed to occur under a groundfish plan exemption, which allows for a Nordmore Grate that helps get rid of bycatch of groundfish, get rid of it eliminate bycatch of groundfish species.

We're proposing new designs that could be used that would not only get rid of the bycatch of groundfish species, but also reduce the amount of juvenile shrimp that are caught in the shrimp net. That's going to take a change by NOAA Fisheries and the Council to their groundfish management plan to allow those.

CHAIRMAN GILMORE: **Any questions on that or discussion on that motion? Seeing none; is there any objection to this motion? Seeing none; we will adopt that by unanimous consent.** Okay now we need a motion on the tautog amendment. Adam Nowalsky.

MR. ADAM NOWALSKY: **Prepared to make that motion on behalf of the Board, so we should not need a second. On behalf of the Tautog Management Board, move the Commission approve Amendment 1 to the Tautog Interstate Fishery Management Plan.**

CHAIRMAN GILMORE: Is there any discussion on this motion? **Is there any objection to this**

motion? Seeing none; we will adopt that by unanimous consent.

REPORT FROM THE RESOLUTIONS COMMITTEE

CHAIRMAN GILMORE: Okay moving right along, the next action item we have is from the Resolutions Committee, and we're going to have a report from Jay McNamee. Jay.

MR. JASON McNAMEE: Good afternoon everyone. We've developed a resolution for you to consider. But first I would like to thank the Resolution Committee. This resolution was a team effort between me, Pat Geer, Representative Sarah Peake, Tina helped us edit, and gave us some good comments.

We also had a special guest contribution from Dennis Abbott, who gave us some great language to include. We tried to capture some of the spirit and funny anecdotes from this past week, and we also wanted to make sure someone who is not able to be with us this week knows that we were thinking of her. With that I would like to offer a resolution for your consideration.

CHAIRMAN GILMORE: Please proceed.

MR. McNAMEE: Whereas the Atlantic States Marine Fisheries Commission celebrated its 76th Annual Meeting in beautiful downtown Norfolk, Virginia, which provided a wonderful setting for the Commissioners, Law Enforcement Officers, Commission staff, and Habitat Scientists to deliberate and discuss fisheries issues of mutual concern.

And whereas the opening plenary session was honored to have guest speaker, Dr. Roger Mann of the Virginia Institute of Marine Science, present a talk titled Fishery Management and Moving Baselines; a stark, eye-opening look at climate change and its role in fisheries management, which reminded Commissioners and guests of the dynamic, exciting, and

challenging field that we have all chosen as our life's work, and that this field will be a work in progress for years to come, leading some of our colleagues to immediately leave the session to either phone their retirement boards or therapists.

And whereas Commissioners, staff and guests were warmly welcomed at the Virginia Aquarium and Marine Science Center reception; and treated to numerous local seafood dishes from the Chesapeake Bay, while being serenaded by whale songs and the relaxing visions of the live exhibits.

And whereas Jeff Beal received the Melissa Laser Award for his work and dedication to Florida's habitat restoration efforts, and whereas Commissioner and host, John Bull, took several opportunities at the podium to make comparisons of the Commonwealth to other states, bless his heart.

And whereas the Annual Dinner was held at the Half Moon Center, offering spectacular views of the Elizabeth River at sunset, while Commissioners and guests drank, ate and were merry to the wonderful sounds of a steel drum band, and whereas the 27th Annual David Hart Award recognized Paul Diodati, retired Director of the Massachusetts Division of Marine Fisheries, for his long commitment to the Commission and his many accomplishments in the field of fisheries management both in Massachusetts and all along the Atlantic Coast.

And whereas 25 brave souls battled the ocean elements 15 miles off Virginia Beach on Sunday, to participate in the 26th Annual Laura Leach Fishing Tournament, guided by the able staff at VMRC and our host and sponsor Rudy Tours, Commissioners, staff and guest dropped their lines but held their lunches to retrieve a myriad of species such as black sea bass, triggerfish, summer flounder, at least one monster toadfish, and even a conger eel.

And whereas, speaking of our friend and colleague Laura Leach, who for the first time in 36 years was unable to attend the meeting, and whose absence was both duly noted and deeply felt by all participants. And whereas, her efforts along with her team at ASMFC, who picked up the ball and ran with it when their friend and colleague needed it most, contributed to another wonderful and successful meeting week.

Now, therefore be it resolved that the Atlantic States Marine Fisheries Commission expresses its deep appreciation to the Virginia Commissioners, John Bull, Catherine Davenport, Senator Richard Stewart, their proxies, Kyle Schick, Joe Cimino, and Rob O'Reilly to the VMRC and Commission staff for their outstanding support and assistance in making the 76th Annual Meeting a great success, in that we the Commissioners wish Laura a continued successful recovery and we look forward to greeting her with a big hug when we meet again in Arlington, Virginia during the 2018 winter meeting.

CHAIRMAN GILMORE: Thank you, Jay, very well said, and on behalf without objection I'll take that and a round of applause for our host. I've already asked John if he will help us plan next year when New York hosts, since he is such a great guy and very entertaining; so you did a wonderful job. I believe that's our last, unless there is other business before. Malcolm Rhodes.

DR. RHODES: I just had one quick question. We're having a South Atlantic Board after lunch today, or after this meeting. We'll probably be bringing forward an amendment for cobia. Since the Business Session will not meet, is there any way to address that prior to the winter meeting?

CHAIRMAN GILMORE: Toni has an answer for you, Malcolm.

MS. KERNS: Well luck would have it, the Atlantic Menhaden Board will be meeting in November, and it's a coastwide Board with this full group of folks, so we can convene into a Business Session after that amendment goes through, fingers crossed, and both the menhaden amendment as well as the cobia amendment can be considered there.

DR. RHODES: Thank you.

ADJOURNMENT

CHAIRMAN GILMORE: Any other thing to come up before the Business Session? Seeing none; a motion to adjourn, by everyone. Thank you.

(Whereupon the meeting adjourned at 12:07 o'clock p.m. on October 19, 2017)

Atlantic States Marine Fisheries Commission

Coastal Sharks Management Board

*October 23, 2018
11:30 a.m. - 12:30 p.m.
New York, New York*

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>R. Miller</i>) | 11:30 a.m. |
| 2. Board Consent | 11:30 a.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from August 2018 | |
| 3. Public Comment | 11:35 a.m. |
| 4. Consider Addendum V for Final Approval Final Action | 11:45 a.m. |
| • Review Options and Public Comment Summary (<i>K. Rootes-Murdy</i>) | |
| • Advisory Panel Report (<i>K. Rootes-Murdy</i>) | |
| 5. Set 2019 Specifications (<i>K. Rootes-Murdy</i>) Final Action | 12:10 p.m. |
| 6. Other Business/Adjourn | 12:30 p.m. |

The meeting will be held at the Roosevelt Hotel, 45 East 45th Street & Madison Avenue, New York, NY; 212.661.9600

MEETING OVERVIEW

Coastal Sharks Management Board Meeting

October 8, 2018

11:30 – 12:30 p.m.

New York, New York

Chair: Roy Miller (DE) Assumed Chairmanship: 5/2017	Vice Chair: Chris Batsavage	Law Enforcement Committee Representative: Greg Garner
Coastal Shark Technical Committee Chair: Bryan Frazier (SC)	Coastal Shark Advisory Panel Chair: VACANT	Previous Board Meeting: August 8, 2018
Voting Members: MA, RI, CT, NY, NJ, DE, MD, VA, NC, SC, GA, FL, NMFS (13 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from August 2018

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 V for Final Approval (11:45 a.m.-12:10 p.m.) Final Action

Background

- In May, the Board moved to initiate a draft addendum to allow more flexibility to implement measures for all shark species.
- In August, the Board approved the draft addendum for public comment. **(Briefing Materials)**
- Public comment period was open from the end of August through October 1. No public comments were provided.
- The Advisory Panel met on October 11 to review the draft addendum. **(Supplemental Materials)**

Presentations

- Review of Management options and Advisory Panel Report by K. Rootes-Murdy

Board Actions for Consideration at this Meeting

- Select Management options
- Approve final document

5. Set 2019 Specifications (12:10-12:30 p.m.) Final Action**Background**

- Similar to the 2017 and 2018 fishing season NOAA Fisheries is proposing a January 1 open date for all shark management group. Also proposed is an initial 25 shark possession limit for large coastal and hammerhead management groups with the possibility of in season adjustments. **(Briefing Materials)**

Presentations

- NOAA Fisheries Proposed Rule for 2019 Specifications by K. Rootes-Murdy

6. Other Business/Adjourn

Coastal Sharks

Activity level: Low

Committee Overlap Score: low (some overlap with South Atlantic Board species and spiny dogfish)

Committee Task List

- TC – August 1st: Annual compliance reports due

TC Members: Bryan Frazier (SC, TC Chair), Carolyn Belcher (GA), Brent Winner (FL), Greg Skomal (MA), Chris Scott (NY), Lisa Hollensead (NC), Eric Schneider (RI), Greg Hinks (NJ), Jack Musick (VIMS), Angel Willey (MD, Vice Chair), Matt Gates (CT), Karyl Brewster-Geisz (NOAA), Michael Frisk (NY), Enric Cortes (NOAA), Scott Newlin (DE), Julie Neer (SAFMC), Kirby Rootes-Murdy (ASMFC)

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
COASTAL SHARKS MANAGEMENT BOARD**

The Westin Crystal City
Arlington, Virginia
August 8, 2018

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

TABLE OF CONTENTS

Call to Order, Chairman Roy Miller1

Approval of Proceedings, May 2018 1

Approval of Agenda.....1

Public Comment1

Consider Draft Addendum V for Public Comment1

Update on NOAA Fisheries Highly Migratory Species Draft Amendment 117

Discuss Best Practices for Safe Handling and Release of Coastal Sharks from Shore Sites11

Adjournment18

INDEX OF MOTIONS

1. **Approval of agenda** by consent (Page 1).
2. **Approval of proceedings of May 2018** by consent (Page 1).
3. **Main Motion**
Move to approve Draft Addendum V for public comment as presented today (Page 5). Motion by Justin Davis; second by Emerson Hasbrouck. Motion to Amend.
4. **Motion to Amend**
Move to amend to include the regional commercial quotas, possession limits, and season start dates under Option 3 (Page 5). Motion by Mike Armstrong; second by Maureen Davidson. Motion carried (Page 6).

Main Motion as Amended
Move to approve Draft Addendum V for public comment as presented today and to include the regional commercial quotas, possession limits, and season start dates under Option 3. Motion carried 6).
5. **Motion to adjourn** by consent (Page 17).

ATTENDANCE

Board Members

Sarah Ferrara, MA, proxy for Rep. Peake (LA)
Mike Armstrong, MA, proxy for D. Pierce (AA)
Bob Ballou, RI, proxy for J. McNamee (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)
Justin Davis, CT, proxy for P. Aarrestad (AA)
Maureen Davidson, NY, proxy for J. Gilmore (AA)
Emerson Hasbrouck, NY (GA)
Heather Corbett, NJ, proxy for L. Herrighty (AA)
Craig Pugh, DE, proxy for Rep. Carson (LA)
John Clark, DE, proxy for D. Saveikis (GA)
Roy Miller, DE (GA)
Dave Blazer, MD (AA)
Russell Dize, MD (GA)
Bryan Plumlee, VA (GA)

Lewis Gillingham, VA, proxy for S. Bowman (AA)
Sen. Monty Mason, VA (LA)
Chris Batsavage, NC, proxy for S. Murphey (AA)
Doug Brady, NC (GA)
Michael Blanton, NC, proxy for Rep. Steinburg (LA)
Robert Boyles, Jr., SC (AA)
Malcolm Rhodes, SC (GA)
Mel Bell, SC, proxy for Sen. Cromer (LA)
Doug Haymans, GA (AA)
Spud Woodward, GA (AA)
Krista Shipley, FL, proxy for J. McCawley (AA)
Karyl Brewster-Geisz, NMFS HMS
Mike Millard, USFWS

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

Ex-Officio Members

Staff

Robert Beal
Toni Kerns
Kirby Rootes-Murdy

Jessica Kuesel
Katie Drew

Guests

Rachel Baker, NOAA
Chante Davis, NOAA
Jeff Deem, VMRC
Guy DuBeck, NOAA
Clifford, Hutt, NOAA
Desmond Kahn, Newark, DE

Aaron Kornbluth, PEW
Arnold Leo, Town of E. Hampton, NY
Mike Luisi, MD DNR
Mike Ruccio, NOAA
Stan Sutliff, VSSA

The Coastal Sharks Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; Wednesday, August 8, 2018, and was called to order at 1:00 o'clock p.m. by Chairman Roy Miller.

CALL TO ORDER

CHAIRMAN ROY W. MILLER: Welcome to the Coastal Shark Board. My name is Roy Miller; I'm serving as your Chair. I'm from Delaware; a Governor's Appointee. Today with us up front we have representing the Commission; Kirby Rootes-Murdy. We also have Karyl Brewster-Geisz from NOAA Fisheries.

APPROVAL OF PROCEEDINGS

CHAIRMAN MILLER: Looking at your agenda for this afternoon's meeting, the first item is approval of the agenda for the previous meeting. Are there any changes or additions to those proceedings from the May, 2018 Shark Board meeting? Seeing none; I assume they are approved as provided to you.

APPROVAL OF AGENDA

CHAIRMAN MILLER: Are there any changes to today's agenda or additions? Seeing none; we'll assume it is approved.

PUBLIC COMMENT

CHAIRMAN MILLER: Kirby, I gather there were no names on public comment. We'll provide an additional opportunity for public comment when we look at the Draft Item 4.

CONSIDER DRAFT ADDENDUM V FOR PUBLIC COMMENT

CHAIRMAN MILLER: Without further ado, why don't we move into Item 4; Consider Draft Addendum V for Public Comment. For that draft Addendum description, I'm going to turn it over to Kirby.

MR. KIRBY ROOTES-MURDY: We have draft Addendum V for Board review today. In my presentation I have an overview of what the draft Addendum proposes. I'm going to walk through the structure of the document; statement of the problem, background, and go through the brief management options we have. Then I'll take any questions you might have. As an overview, the Board was presented the results of the shortfin shark stock assessment in May, 2018; as well as the Emergency Rule Measures that NOAA implemented.

The Board at that point decided not to implement Emergency Rule Measures; and instead initiated an addendum, to provide flexibility in implementing measures for all species within the coastal sharks FMP moving forward. Specific to this draft Addendum, the statement of the problem reads that the FMP, the fishery management plan for coastal sharks currently only allows for commercial quotas, commercial possession limits, and season dates to be adjusted annually through specification.

All other commercial and recreational measures can only be adjusted through either an addendum, and those items that can be adjusted through an addendum are listed in the adaptive management section 4.5 of the FMP, or through emergency action. We went through what emergency action constitutes at our previous meeting; and the criteria for it. As you're aware, that is rigorous criteria; and the recent stock assessment for shortfin makos found that the resource is overfished and experiencing overfishing. The Board found that this didn't quite meet the criteria in state waters; because of where shortfin makos generally are caught and their life history regarding open ocean portions of their life.

The Board chose instead to initiate an addendum to allow flexibility in making changes short of an emergency action. Just a little bit more background on the FMP, as you probably are aware it was adopted back in 2008; and it

facilitates complementary management in state waters to those measures set by NOAA's Highly Migratory Species Division for federal waters, as well as for federal Highly Migratory Species permit holders.

The species that are managed under the coastal sharks FMP, there are eight different complexes. There is the prohibited list, research, small coastal, non-sandbar, large coastal, pelagic, and smooth dogfish. The Board does not actively set quotas; but instead annually follows NOAA Fisheries in setting specifications for the commercial fishery, by adopting the same quota, possession limit, and season openings and closures.

This includes in-season changes to the possession limit; as you probably all are aware, we recently sent out a notice about that. I'm going to go through the management options now. The Option 1, status quo would not change anything in our FMP. We would still annually have the Board be able to set commercial quotas, possession limits and season dates through specification.

To change any other commercial or recreational measures would require an addendum or emergency action. Option 2 in the Management Option Section, offers to adjust the following measures through annual specification. The Plan Development Team identified these as likely measures that the Board may want to adjust annually; based on characteristics of the fishery.

They include recreational size limits, recreational possession limits, recreational seasons, as well as area closures for both recreational and commercial fisheries, gear specifications for both recreational and commercial fisheries, and effort controls for both recreational and commercial. These changes to the measures would be made once a year; and those changes could be made through a motion.

It is important to understand that under this option there would not be a requirement for a public hearing or public comment; beyond what is offered at that Board meeting. Option 3 offers a more liberal version of it; where measures could be adjusted on an ad hoc basis as needed. Those same recreational and commercial measures that aren't currently allowed to be changed through specifications; that I just mentioned for Option 2, would apply here as well.

But these changes could be made throughout the year. Again, these changes could be made through Board motion. This would not require a public hearing or public comment. It is important to note that when looking at the Option 2; I failed to mention. If there was an interest to change those specifications after that initial part of the year, it would require a two-thirds majority vote as all changes of specifications require. With that I'll take any questions on the draft Addendum at this point.

CHAIRMAN MILLER: Eric.

MR. ERIC REID: I have a question. I don't know if it's here; but I'm going to ask it anyway. It's about the requirements; the conditions for obtaining a permit. I've had this conversation before about the requirements for dealers to attend classes; in order to renew their shark ID certificate, in order to obtain a permit.

It is really kind of a pain in the neck. If you're a fishermen you can get your renewal online; or your permit online. If you're a dealer, you have to physically go to a class every three years. Is that something that we can talk about just by talking about it; or is it something that has to be started through a process like this?

MR. ROOTES-MURDY: Eric, I just want to clarify. Are you talking about federal dealers?

MR. REID: Yes. The condition to have a federal shark permit, which includes buying things like

smooth dogfish, not just pelagic sharks, requires you to have a certificate saying you want to a shark ID workshop. There are several caveats on who can attend and how you can attend. But in my case personally, I've been through three classes.

Now my permit, I can't renew my permit because I don't have an updated certificate. My certificate expired in March. The closest workshop to get that permit back, there was one in Venice, Louisiana, I think there was one down in the Carolinas somewhere. But I've been through three classes; and there are other people like me that have done the same thing.

It just seems a little bit overkill that after three workshops I have to go to Venice, Louisiana to buy sharks that are worth about 40 cents a pound. I mean the economics don't work out; but legally I would like to be able to do it. I would like to be able to do it online. It just seems kind of unfair that the dealer has to attend a class in person; and a fisherman can do it online. I'm looking for some relief to that condition of that permit.

MR. ROOTES-MURDY: Thank you for that question, Eric. This Addendum only focuses on state waters management and state permitted individuals. Karyl could probably speak to a little bit more the requirements for federal dealers.

CHAIRMAN MILLER: Karyl, go ahead.

MS. KARYL BREWSTER-GEISZ: Yes, I think you asked the question before. We are looking at ways of improving and streamlining, not only the shark dealer workshop that is required to be in person, but also the handling and release workshop that is required by the commercial fishermen to be taken every three years as well.

We're looking at ways of streamlining it; improving it. But also potentially moving it online for people such as yourself, who have taken it in person in the past. We're looking at that; but that's still a little ways away on how we

do that. If you have suggestions, I would definitely love to speak to you offline about that.

CHAIRMAN MILLER: Any other questions? Justin.

DR. JUSTIN DAVIS: I've got a question about Option 2 versus Option 3 with respect to opportunity for public hearing. I'm sort of new to this; so I apologize if this is a stupid question. With Option 2, when all measures are adjusted through annual specifications. Does that require a public hearing process or not? Essentially, neither of these Options 2 or 3 would require public hearings on actions. Although under Option 3, could the Board choose to provide opportunity for public hearings?

MR. ROOTES-MURDY: If the Board wanted to they could. I think one of the challenges is that because these two Options 2 and 3 offers for the Board to be able to change these measures through Board action at a meeting like this. Timing it up to allow for public hearing beforehand would be very challenging. If anything that would maybe create a situation where you table a motion until after you had a public hearing. But I think that introduces some more complexity into what these options are currently configured as.

CHAIRMAN MILLER: Toni.

MS. TONI KERNS: Just to clarify. This doesn't require you all to use Board action; it just gives you the opportunity to do so. You can do an addendum for any measure that the Board desires to do so. States also can hold their own information sessions with their state permit holders. You'll likely know prior to the meeting if something is going to be coming up; so you would be able to do that before coming to the Commission.

CHAIRMAN MILLER: Mike Luisi.

MR. MICHAEL LUISI: As a follow up to Justin's question. I kind of assumed that we would use this process; perhaps more in a compliment to actions taken by the federal government, where we were following up on regulations that had changed through the HMS, rather than stepping out and making modifications let's say to recreational size limits on coastal sharks, without there being something else that has happened that has caused us to react.

I think if we were going to step outside of actions taken at the federal level, then we certainly could, as was just mentioned by Toni, we could take that up as an addendum rather than through specifications. That's how I was understanding this addendum; and if I'm wrong, please let me know.

CHAIRMAN MILLER: Mike that's my understanding as well. I think since Adam is here, he was the original maker of the motion at the last meeting. Was that your intent as well, Adam, when you made that motion?

MR. ADAM NOWALSKY: The main goal was we were talking about something that was very species specific at the time. The goal was to make sure that it was across all species. Now, having had the opportunity, and I appreciate the Chairman's latitude as well as staff, and having given me the opportunity to take a look at some of this in development prior to getting to it today. I think there was some crossover here; in terms of what these options would do. But the main goal was to make it give us flexibility as a body; so we would not have to go through an addendum process every time the states needed to put measures in place that were complementary to the federal waters measures. That was the goal. Whichever of these options the Board is most comfortable with; achieving that or some modification or hybrid approach of it. That was my intent with the motion at the last Board meeting.

CHAIRMAN MILLER: Mike, does that satisfy your concern? Are there any other questions at this point in time? I see a hand, Bryan.

MR. J. BRYAN PLUMLEE: I guess my question goes partially to your response; in that there was a vote to take action, and one of the options is not to take action. Is the first option really an option? In other words, if we've already passed a motion to initiate a process that option is to basically take not steps. I'm just a little confused by that.

CHAIRMAN MILLER: The first option is the standard status quo option. In other words, the first option would be to make no changes to our present procedure. Mike.

DR. MICHAEL ARMSTRONG: If I'm reading this right. Currently we have the ability for the commercial quota, and possession and size annual specification. That would be consistent with Option 2 would bring everything under that umbrella. But Option 3 would then make these options different than the commercial; because it would be ad hoc, and then the commercial would still remain once a year. Was that the intent? Like why wouldn't you put the three commercial ones under this one too; and make everything ad hoc? Does that make sense what I'm saying?

MR. ROOTES-MURDY: Yes, it makes sense. That idea was not really discussed by the Plan Development Team. Right now it would be separate; where you would still have the specifications, where commercial quota, size limit, season adjustments would be set once a year, and then these would be set ad hocly.

DR. ARMSTRONG: Is there a reason that makes more sense to possibly go two different paths for the recreational primarily and the commercial?

MR. ROOTES-MURDY: I think for something like the quota that might be problematic; if you're constantly having the ability to change, or if the

Board chose to change the quota throughout the year. We do have, as I pointed out, season adjustments to the possession limit. We send out notices when those possession limits fluctuate throughout the year.

Then if the quota is met then we send out a notice about the season being changed. I think the question is whether those current specifications need to be adjusted more regularly than they already are capable of being adjusted. Does that make sense?

CHAIRMAN MILLER: Are there any other questions? We'll take comments on the draft Addendum now. If anyone has comments, seeing no hands; would anyone feel inclined to make a motion with regard to the draft Addendum? Justin Davis.

DR. DAVIS: I'll move that the Board approve Option 3.

MR. ROOTES-MURDY: Justin, this is a document that is for Board review to go out for public comment.

DR. DAVIS: Okay, sorry. I'll make a motion to approve the draft Addendum and send it out.

MR. ROOTES-MURDY: To approve the draft Addendum for public comment.

DR. DAVIS: That's what I meant, thanks, Kirby.

CHAIRMAN MILLER: Is there a second to that motion; Emerson. Mike Armstrong.

DR. ARMSTRONG: I would like to move to amend this by adding language that would move the commercial quota possession limit and; was it length, under Option 3 also.

CHAIRMAN MILLER: As soon as we get that up there I'll ask if there is a second. Does that capture it, Mike? Is there a second to that

motion? Mr. Lawrence or Maureen, I'm sorry. Tom, you have a comment or question?

MR. THOMAS P. FOTE: Wouldn't it be more appropriate to move that to the commercial and leave that as a second option between the commercial; Option 1 and Option 2, instead of putting it in here?

MR. ROOTES-MURDY: I'm going to ask for a follow up, Tom; if you can clarify a little bit more. Then maybe Toni has another point.

MR. FOTE: Well, you already have an option for the commercial fishery. Maybe there should be a second option; an A and B to choose the A or the B, the way to do it. I'm just asking; because we're sticking this in a different place than the commercial.

MS. KERNS: Tom, under Option 2, the commercial regulations that Mike is amending right now are already imbedded in Option 2. You can already do that through the Option 2 method. What Mike was pointing out was saying that why would you have one process for the commercial measures; and then have a whole different process for everything else and that it should be consistent for both sides. If you end up in the end choosing Option 3; you would want to be able to take action in the same way for all of the measures. This is just allowing that to happen.

MR. FOTE: Okay.

CHAIRMAN MILLER: Thank you, Toni, any other comments? Mike.

MR. LUISI: If I may ask a question of Kirby. Would it be the intent that for Option 2, I mean I think we do shark specs on the commercial side every year at a certain point in time? Would it be the intent that we make all of the same, the recreational measures and the commercial measures would all happen at the same time every year. For Option 2 that list that was

provided, that would fall in with what we do on an annual basis at that same time we do commercial. The way I see it is we have Option 1, which is no action. Option 2 is we take care of everything all at once; every year at the same time or Option 3, which is you take all the measures and you can do them, anytime you want throughout the entire year, depending on actions as they are complimentary to federal measures.

MR. ROOTES-MURDY: Yes that is correct, Mike. For Option 2, it is important to know that right now our current specification process is that NOAA puts out a proposed rule, you know in the fall. Then this Board normally considers those proposed specifications at our annual meeting; but many times don't finalize those specifications until after a final rule has been released by NOAA Fisheries.

For most years what happens is we then send out an e-mail vote to the states to sign off on those specifications that are outlined in the final rule. I will point out that unless the recreational measures, the measures that are listed under Option 2, in addition to these annual specification items currently in place. Unless those are changed, we would just be adding another set of items to, I guess have the Board sign off on, or we could make it so that the Board just, unless they decide to add it in to be adjusted. Then those normal specifications stand as they are.

CHAIRMAN MILLER: Are there any other comments? Bob.

MR. ROBERT BALLOU: I'm sure this is confusion on my part; not anyone else's. When I look at the draft document before us, I see six bullets under Option 2 and six under Option 3, and they look identical to me. The motion seems to be suggesting that Option 3 should be configured in the same way as Option 2. But I'm not seeing those specific items under Option 2. I'm sure I'm

missing something here; but it looks odd to me, so maybe some clarification.

MR. ROOTES-MURDY: My read of the motion to amend is that it is making all of these options under Option 3, including those that are set annually through specifications also able to be adjusted throughout the year. Whereas, Option 2 makes everything line up with the annual specification timeline. Option 3 now as amended, would take our normal annual specifications, and add them in as things that could be adjusted ad hoc throughout the year. Does that make sense?

MR. BALLOU: I think so; so when these are all inferred via the reference under Option 2 that it is through the specification process, and already allowed. Even though they are not listed as specific bullet items, okay I now understand. Thank you.

CHAIRMAN MILLER: Are there any other comments? Mike.

DR. ARMSTRONG: Just to make sure it's clear. There are two options. All the management measures either are ad hoc or they're set in annual. That is my intent, so that we don't start dividing the management options two different ways to deal with it.

CHAIRMAN MILLER: That's my understanding as well. Thank you for that clarification. Are there any other comments or suggestions at this time? We don't have to do a roll call. **I'll just ask if there is any opposition to the motion. Seeing none; the motion is approved. The motion is approved unanimously.** I should ask were there any abstentions or null votes; no.

Since this was amended, all right I'll read the motion. Move to approve draft Addendum V for public comment as presented today; and to include the regional commercial quotas, possession limits, and season start dates under Option 3. Is there any objection to the finalized

motion? Any abstentions, any nulls? Seeing none; the motion is approved.

**UPDATE ON NOAA FISHERIES HIGHLY
MIGRATORY SPECIES DRAFT AMENDMENT 11**

CHAIRMAN MILLER: I guess we can move on to the next agenda item; and that is an update on NOAA Fisheries Highly Migratory Species Draft Amendment 11, and we'll call on Karyl Brewster Geisz again.

MS. BREWSTER-GEISZ: I presented our scoping document in the May meeting. At this point we now have a proposed rule out; and a draft Environmental Impact Statement. If anybody wants a hard copy, we can get you one in the mail later. I'm sure you don't want to have more in your suitcase.

I'll be talking about what we are proposing; the purpose of Amendment 11 is to address overfishing and rebuild shortfin mako sharks. As I think all of you know, we've been managing shortfin mako sharks as part of the pelagic shark complex since 1993. In the past ten years or so, ICCAT, the International Commission for the Conservation of Atlantic Tunas, which I'm just going to say as ICCAT from now on, has done a number of stock assessments.

The last stock assessment was done last summer in 2017. Found that the stock is overfished with overfishing occurring. Recent catches across all countries are between 3600 and 4700 metric tons per year. Catches need to be reduced. Catches from all countries need to be reduced below 1,000 metric tons to end overfishing. That is about a 72 to 79 percent reduction in catches.

Based on the stock assessment, at its November meeting ICCAT recommended a measure that is aimed to maximize live releases. Now if you remember, ICCAT recommendations are the parlance for a binding measure. It's something the United States must implement as necessary under the Atlantic Tunas Convention Act. In

maximizing live releases, there are a number of different options countries can take.

The two that apply to the U.S. there is one for retention that allows dead shortfin makos to be retained by vessels; as long as there is an observer onboard, or electronic monitoring, which is also video cameras to verify that the shark was dead. Live or dead shortfin makos could be kept under certain minimum sizes; and they recommended two minimum sizes, one for males 180 centimeters, which is approximately 71 inches fork length, or females 210 centimeters, which is approximately 83 inches fork length.

ICCAT is looking at its current upcoming November meeting to see if these measures are effective; and then in 2019, they are going to be looking at it as a whole, along with establishing a rebuilding plan. When I was presenting our Scoping Document to you there were four topics; commercial, recreational, monitoring, and rebuilding. We're still looking at those four topics; and I'm going to go through the alternatives for each topic. The first alternative under every topic is the status quo, and the no action alternative. These are the alternatives to implement the measures that are not currently under the Emergency Rule. This is going back under the commercial alternatives; just allowing people to keep shortfin mako if they have a shark permit. Alternatives A2, A3, and A5 are all very similar.

They would all allow retention of shortfin mako sharks by people with a shark limited access permit; only if the shark is dead at haul back under certain conditions. Under Alternative A2 that condition is having a functional electronic monitoring system onboard the vessel. This is what is currently in place; or similar to what is currently in place under the Emergency Rule.

The difference here is what we are proposing in this case is that anyone could obtain an electronic monitoring system. While our pelagic

longline vessels are required to have it; somebody with a bottom longline, who wanted to land shortfin makos, could obtain an electronic monitoring system and land under this alternative.

It's pretty unlikely you would catch a shortfin mako with bottom longline. But it's an option for people. Alternative A2 is our preferred measure. Under Alternative A3, they could keep a dead shortfin mako shark if they agreed to allow the Agency to use electronic monitoring. The difference here is under Amendment 7 we implemented electronic monitoring for all pelagic longline vessels for bluefin tuna.

A lot of people during the comment period were concerned that we were increasing the scope of electronic monitoring; and wanted to opt out. If they were to opt out, they would not be allowed to keep any shortfin mako. Alternative A5 is the same. You could keep a dead shortfin mako; as long as there is an observer onboard.

Observer coverage varies among the different gear types. For pelagic longline gear, which is mainly what you're going to be landing shortfin mako with, it is about 9 to 18 percent, depending upon the area. We looked at two other options for commercial. Alternative A4 is allowing the retention of live or dead shortfin mako sharks; as long as it meets the minimum size of 83 inches fork length, and there is either a functional electronic monitoring system or an observer onboard to verify that length.

There are two things to clarify here is 83 inches fork length. That is a straight line measurement, it is not curved. It is from the tip of the snout to the curve of the tail, the fork of the tail. The reason you would need both an electronic monitoring or an observer onboard for the commercial minimum size, is commercial fishermen are allowed to remove the head from the fish.

Without that head you can't do the measurement. But they need to remove the head in order to make sure the meat quality is high enough quality to be sold. Then there is Alternative A6, which is prohibiting the retention of all shortfin makos; alive or dead. That is it on the commercial alternatives.

Recreational, we have a number of alternatives just like with commercial that are similar to each other. Alternatives B2 through B5 all increase the minimum size length from 54 inches fork length to a number of different options. Alternative B2 is a straight read of the ICCAT recommendation; so that's 71 inches for males, 83 inches for females. Alternative B3 is what we have in place now for the Emergency Rule; and that is 83 inches fork length. Again that is straight line measurement; it is not a curved measurement. Alternative B4 increases the female minimum size to 108 inches; that is the size where 50 percent of the females are mature.

Alternative B5 increases the minimum size of females to 120 inches fork length. That would allow for record breaking females to be landed; but there would be very few of them. Alternative B6 has a number of sub-alternatives. This is something we heard a lot through the public comment period on scoping; where people wanted the opportunity to land them during tournament season.

Anything outside of the season listed in that first column, the size limit would be 120 inches for both males and females. For example, Alternative B6A the season would be May through October. If you were to land a mako in November, it would need to be above 120 inches. If you landed it in July, it could be 71 inches if it was a male, or 83 inches if it were a female.

Then the seasons change and the size limits change. Alternative B6E establishes a process for setting what that season or size would be; based on what's happening in the water, so

more real time. This was specific for commenters who really wanted to get in on the tournament season. Alternative B7 is another suggestion we had during comment period; and that was establishing a slot limit for retention of male and females.

We felt that would confuse the issue; because now you would have potentially a minimum and maximum size for males, and a separate minimum and maximum for females, and it just adds to a lot of the confusion. Alternative B8 would be to establish a landings tag program. This would be somebody comes and gets our HMS angling permit with the shark endorsement; and we give them as an example two mako landing tags.

They would only be allowed to land a shortfin mako if it met the minimum size; and they still had one of their two landings tag in order to put on the mako. Alternative B9 is another preferred alternative. If you remember in Amendment 5B for dusky sharks, we require circle hooks anywhere south of Chatham, Massachusetts; that was the northernmost range of dusky sharks. Shortfin mako sharks can be found above that.

Under Alternative B9, we are preferring requiring the use of circle hooks throughout the recreational fisheries, so even above the Chatham, Massachusetts line. Alternative B10 is prohibiting the landing; catch and release only. That is it for the recreational. Moving on to monitoring alternatives, we looked at three of them. We are preferring no action. As a clarification why we are preferring this, we are going to be using our current regulations to select shark tournaments for reporting.

We do not currently do that; we only select billfish and swordfish tournaments. Under Alternative C2, we would be requiring commercial fishermen to use their vessel monitoring systems or VMS to report shortfin makos. We felt like we already have enough

from them; in terms of the logbooks, the observers, the dealer reports that we did not need the vessel monitoring system reporting as well. Similarly, under Alternative C3, we would be requiring mandatory reporting of all recreational vessels. We feel like we have pretty good numbers coming in from mainly from the LPS large pelagic survey for shortfin mako sharks, and we didn't need to extend that to mandatory reporting. Under the rebuilding alternatives we looked at several of them.

Under Alternative D2, we would be moving unilaterally without ICCAT to establish a rebuilding plan; because the United States only has about 11 percent of all the catches, we did not feel that was the appropriate move. Instead we are preferring Alternative D3, which is establishing an international rebuilding plan.

Alternative D4, we would be removing shortfin mako sharks from the pelagic shark group; and creating its own quota. If ICCAT does that similarly Alternative D5 would be implementing some sort of area management; if ICCAT does that. ICAT is supposed to be looking at both of these options in 2019.

D6 is an alternative we were requested to look at during the public comment period for scoping. That is establishing bycatch caps in all fisheries that interact with shortfin mako sharks. The large majority of shortfin mako sharks are caught in HMS fisheries; either the recreational fishery or our pelagic longline fishery.

We did not feel at this point that we needed to establish bycatch caps for other fisheries. Timeline, the comment period ends October 1. We have a lot of public hearings, and meetings with the Councils between now and then. We are hoping to have this effective in spring of 2019. Right now we have emergency measures in place; they expire at the end of August.

I expect they will be extended; and when they are extended they will end in spring, and we

want this in place before then. Just a quick recap; because I know I went through a lot of alternatives. There is the commercial measure that we are proposing that requires dead at haul back; as long as there is electronic monitoring in place.

There are two recreational measures; one is 83 inches straight line fork length, the other is circle hooks throughout. Then the other preferred measure is for the rebuilding option; and that is an international rebuilding plan. I'm happy to take comments, questions here and then this slide provides other information if you want to submit comments elsewhere.

CHAIRMAN MILLER: Comments or questions for Karyl on draft Amendment 11. Adam Nowalsky.

MR. NOWALSKY: What is the level of consultation that occurred with ICCAT; in the development of these measures, to be comfortable that ICCAT will find them acceptable towards achieving the rebuilding plan that they're going to implement next year, or is there a probability/possibility of us being back here again at this time, because ICCAT did not find the proposed measures to be acceptable?

MS. BREWSTER-GEISZ: Are you asking what would happen in November if ICCAT looks at what all the countries have done; and determines that not enough has been done, or too much has been done?

MR. NOWALSKY: Correct.

MS. BREWSTER-GEISZ: At that time the Agency would still not have come out with a Final Rule; and we would have to regroup and decide what we were going to do, whether it would be implementing different options than we have preferred at this point, or restarting the rulemaking process.

CHAIRMAN MILLER: Okay Adam? Are there any other questions, Mike Luisi?

MR. LUISI: Karyl, I'm curious as to the decision to select under the monitoring section under Alternative C; the decision to select C1, which would be no additional monitoring outside of what's already in place for commercial and recreational fishing. I guess my question comes down to how the LPS Survey works.

In that I was always under the impression that LPS kind of functions like in MRIP, where there is an estimate that's developed based on interviews that take place after fishing happens. In thinking about the objective here, which is to reduce the take of shortfin makos by increasing minimum sizes, I think what we're going to see and what we've already seen. I know in my state we have a catch card program; and we're seeing very few makos being landed.

I think you're going to get to the point where mako landings are going to almost become some type of a rare event; or a more rare event than what they currently are. The typical pattern on rare event species is that the estimates that come forth as a result of the survey become more and more variable, less and less accurate and precise.

I would have thought that given that very few shortfin makos under the intention of the plan would be landed; that there would be some action to require more data as those fish are being brought in. I'm just curious as to kind of what you guys tossed around, as far as the tradeoff between collecting more information and having, I guess less accurate and less reliable estimates based on fewer landings.

MS. BREWSTER-GEISZ: LPS is very similar to the MRIP. You are right that it does ask after the fact. The difference with LPS is we have our HMS permit holders; so the LPS actually targets the permit holders, goes to those ports where our permit holders go, so the – I don't know how to say it – the base that you're starting with is a little bit more exact. We know who are going as

opposed to MRIP, where it could be anybody. There is that.

There is also the fact that when it comes to sharks, even though we are trying to maximize live release, minimize mortality. Mako shark is the shark species a lot of the pelagic anglers are going for. Yes, some people won't want to go fishing for them anymore; but I think a large majority of people still want to go out and catch the mako sharks. We're expecting some reduction in effort. We've seen that already. We've had reports of some tournaments being canceled as a result of the size limit. But I don't think we're expecting overall effort to go down that dramatically.

CHAIRMAN MILLER: Tom Fote.

MR. FOTE: Dealing with a number of species over the years that have fallen to that category, you know by the time fluke gets down to three fish, people stop going fishing for them. When you go out and catch makos and you can't bring one in the tournament that's why the tournaments are starting to basically cease to exist.

Once that ceases to exist, a lot of those shark fishermen, because that is one of the reasons they always like to fish was the tournaments and everything basically put in there. You're going to see a drop in anglers; and I think it's going to be more dramatic than you're thinking.

CHAIRMAN MILLER: Any other comments, questions? Seeing none; thank you, Karyl.

**DISCUSS BEST PRACTICES FOR SAFE HANDLING
AND RELEASE OF COASTAL SHARKS FROM
SHORE SITES**

CHAIRMAN MILLER: I guess we'll move on to the next agenda item; which is Discuss Best Practices for Safe Handling and Release of Coastal Sharks from Shore Sites, Karyl.

MS. BREWSTER-GEISZ: Thank you and thank you for all your comments and thoughts on Amendment 11. Best practices from shore-based shark fishing. This is not only shark fishing from the beach, but also from piers. Those of you who have been around the table know that since we published Amendment 5B, I've been coming almost every meeting asking for states to consider developing, coordinating with us to come up with best practices for release of sharks, particularly dusky sharks from the shore.

We already have them from the boat; but we really would like your help in developing them from shore. This spring and summer has really seen an increase in at least the use of social media; to advertise anglers who are fishing from the beach. Almost every week there is a new reporter reaching out to those of us in my shop about; hey I see this Facebook post, this Twitter post of some guy who has caught this huge shark, pulled it up on the beach.

Sometimes they're placing a tag; because they have tags from our Apex Predators Program, which is a citizen science program, where anglers oftentimes from boats place tags in the sharks. This has been going on for decades. Some of these anglers that are pulling the sharks on the beach are part of that program.

It comes across that they are employers of NOAA; that they know what they're doing that they are doing all the right things by pulling the shark up onto dry sand, sitting on them, taking pictures. Not all of them are like that but a good number of them are definitely showing some improper handling techniques.

We have had a lot of confusion. We've had meetings with different states about this; and what the message is we're trying to send. I come again; hoping to entice you into helping us develop some best practices. I took advantage of the PDT meetings about Addendum V to work with the PDT; in coming up with some options. One of the options we thought about was signs

on beaches. Some states already have these. For those states that don't have them, we have the – we meaning NOAA Fisheries – has the ability to help you if you needed to buy the signs. We thought that these signs could be good to be posted on beaches, piers, any place where shark fishermen or people who are fishing who might catch sharks could be, and that this sign could refer anglers to a website with some of those best practices.

What I have next is a mock-up of the language that could go onto the sign. This is not what the final sign would look like. We would make it look much prettier; with shark pictures and all of that. The text needs to be very brief; because if you're walking along the beach and you want to go out fishing, like all these anglers do. The last thing they want to do is spend 15, 20 minutes reading a sign about how to go shark fishing. They're just not going to do that.

This is the draft text of what we're thinking of; which is "releasing sharks be fast." Then spelling out what we mean by fast; focusing on a quick release, keeping the shark in the water off the dry sand, using the appropriate tackle, preferably circle hooks. Cutting the line as close to the hook as possible; being safe, so having a partner, minimizing the handling of the shark, and then tagging smart.

If you have a stressed shark, putting a tag on it is not going to help us get any information. Then critically letting them know that tagging and releasing sharks does not exempt you from any local, federal/state enforcement actions. If you are pulling up a prohibited species, and doing a whole bunch of stuff to it, you may have an enforcement action against you.

Then going in, our message that we've been trying to get across; if you don't know let it go. A lot of these shark species are hard to identify. You should not keep it unless you know what it is. Then having the link to our web page or some other web page, we were thinking having a QR

code, so somebody could just scan it and automatically go to the page.

Again, this is just the text. We're trying to be brief. Comments to make it briefer would be great. If somebody wants to add something, my understanding is that means something else needs to go away, to keep this as short as possible. On the web page we've already been working in the PDT to come up with a little bit more detail. But we definitely would want more comments on it; and really more detailed information.

Never drag a shark on the dry sand or lift its head up for a photo; and explaining why that is, how it hurts the shark. Other subjects we could cover would be including information on prohibited species; some of the regulations, so state along with federal regulations, what kind of tackle to use, other tips on handling, hook removal, and safety. This is all the ideas we came up with; and I'm happy to take questions, comments, suggestions.

CHAIRMAN MILLER: Mel.

MR. MEL BELL: Karyl, a couple of things you said struck a nerve a little bit; because we've had some of the same issues that you were talking about with folks calling up and reporting activities. I know it's not the same group; but the Apex Predator folks, I guess that do the tagging, or give the tags out to fishermen. They are it seems to me, a natural source; if you want to in your tee, if you want to teach or communicate a proper tagging and handling practices. They need to take some responsibility in that. It reminds me a little bit, we've had recreational tagging going on in South Carolina marine species going back to the '80s. At one time we just gave tags to anybody. But then we evolved the program to a point where if you wanted to participate in that program and get tags, you had to go through a level of training and be certified, if you will, to do that; in handling practices, proper tagging practices, all of that stuff.

We became the natural conduit for information going to fishermen; about best practices related to trying to increase survivability of post release, and including application of tags. South Carolina is a state in which you cannot tag a saltwater fish without the DNRs permission. We've tried to convey that to the Apex Predator folks; just to say look, if you've got folks that are going to be doing this in South Carolina, you need to make sure they need to be aware that they need a permit from the DNR to do that.

We're fine with supporting a program; like you said it's been going on for decades, great. But that's a way to really reach out and touch folks; in terms of communicating best practices, I think. It's in your, not you necessarily, but it's in the control of the National Marine Fisheries Service.

MS. BREWSTER-GEISZ: Thank you for that. I'm sorry; I apologize if I may be a little upset there. That was not my intent.

MR. BELL: Not at all. I see where you're coming from and all, but that is something that you guys kind of have in control there; in terms of communicating, I think.

MS. BREWSTER-GEISZ: Right. We definitely send them, all the anglers that request the tags; we send them a lot of information. My understanding is the people in charge of the program do talk with them and talk through it. I have heard before that South Carolina requires the permits; other states require other things as well.

It's walking that fine line. We're not trying to stop anglers from going out shark fishing. But we also recognize states have different regulations; and that's why we are trying to find some cooperative way of working with everybody for it, and for the placement of tags. The program gets people from everywhere. As I said; most of the tags are placed on the boat. There are some from the shore.

Of course, just because somebody mainly comes out of Connecticut doesn't mean they're not going to take their summer vacation down in South Carolina; and not realize that they need a permit or a tag in order to tag. Anything we can do to help clarify those regulations. I will definitely ask the people who run the program about whether or not it's possible to certify people; and how we would go about doing that. Thank you for that suggestion.

CHAIRMAN MILLER: Other questions, Emerson.

MR. EMERSON C. HASBROUCK: Thank you, Karyl for your presentation. I like your Fast Campaign; so there's the quick and the dead I guess. You may have mentioned this, and I might have missed it. But if somebody is shore-based fishing for sharks, do they need an HMS permit? That is part one of the questions, or part A of one question.

MS. BREWSTER-GEISZ: No. Our permits are issued to the boat; so if you're on the shore you do not need an HMS permit.

MR. HASBROUCK: Then there is no issue of possession; because my follow along question was going to be when do they actually possess the fish? But I guess that doesn't matter.

MS. BREWSTER-GEISZ: Not from a federal standpoint. The states might have different thoughts on that.

CHAIRMAN MILLER: Yes, state regulations vary in that regard. John Clark.

MR. JOHN CLARK: I was just looking at that sign you had up before; and we have a director who really likes signs, so we've got a lot of them up. We have pictures of people disregarding the signs. That just looked to me like a lot of text on that sign that is not going to be read. I know in Delaware and other states too, a lot of the shore-based fishing for sharks is done by people who are driving on the beach. I don't know where

you would put that sign where it would really get the attention of people who are driving.

CHAIRMAN MILLER: Did you want to respond to that Karyl? No.

MS. BREWSTER-GEISZ: No, thank you.

CHAIRMAN MILLER: Chris Batsavage.

MR. CHRIS BATSAVAGE: I like the idea of the signs in general. We've put signs out on fishing piers to help people release turtles in the safest way possible; and also to report those interactions, and get them to the sea turtle hospital, for instance. Something to tell people how to release sharks safely is a good idea. But there are certainly some logistical challenges; as John just mentioned.

An obvious one with shark fishing on the beach is a lot of it happens at night. Just the sign being visible is going to be a challenge in many cases; as opposed to the piers that are lighted, or in many cases people fishing during the day will be able to see the signs conspicuously. I'm not sure how to overcome that challenge; without spending a lot of money on lighted signs. Then they might just become an easier target for people who don't like signs.

CHAIRMAN MILLER: Thank you for those comments, Chris. Krista.

MS. KRISTA SHIPLEY: Florida is really engaged on this issue; and it is certainly a really important issue to us. We're actually doing public workshops on shore-based shark fishing. We posted one last night even. We're doing ten around the state; and really getting public feedback on how they want to see that fishery managed in the future. Some of the options we're looking at are a state shore-based shark fishing permit that could have an educational component; like the HMS permit does for vessels. We're definitely looking at things like that. We also already have, over the past couple

of years we've developed what we call Shark Smart Fishing Guidelines; really focusing on shore-based shark fishing, but also looking at vessel and pier-based fishing. We worked in conjunction with fishermen; law enforcement, NGOs certainly our staff, our legal department.

Really talking to everyone we could to really get the best kind of best practices we could get together. Those are on our website. We've got fliers out about them. We distribute them far and wide. We would really like to stay engaged on this with you. Certainly we probably have some really good stuff in there about things like gear; and stuff like that that would be good resources.

CHAIRMAN MILLER: Any other comments? Seeing none; I have one Karyl. It wasn't clear to me whether there would be a charge to the states for these signs. Do you know approximately what that would be?

MS. BREWSTER-GEISZ: We were looking at it more if the state can't afford to put up the signs we would help pay for whatever signs. From our initial look, it doesn't look like each individual sign costs all that much. One of the logistical challenges some of the PDT members pointed out; was the fact that local regulations might limit where you can put the signs, and how many you can put up. But that is something I think the state would have to figure out; and not necessarily us.

CHAIRMAN MILLER: Is it your preference that if the state elects to erect the signs they use the signs provided by NOAA Fisheries; rather than do their own or you have no opinion in that regard?

MS. BREWSTER-GEISZ: No, I think all we really want is some sort of consistent language and agreement on how to do it; and yes, Florida is a great example, has some wonderful stuff on their web page that we grabbed. We also worked a lot with New York and Maryland, and one of the Gulf States has some great

information as well. That is what I remember off the top of my head; so there is some great information out there already, but not all states appear to have it or use similar language.

CHAIRMAN MILLER: We appreciate the feedback we've received thus far. Does anyone have any further feedback for Karyl; with regard to signage and/or suggestions? Lewis Gillingham.

MR. LEWIS GILLINGHAM: Karyl, I think that state you were talking about is Texas; because I visited their website, and they've got a good bit of information there.

MS. BREWSTER-GEISZ: Yes, thank you for that. I am interested in hearing if this group wants to keep doing this; and what the next steps could be, if this is what they would like.

CHAIRMAN MILLER: Does anyone have a suggestion in this regard; concerning next steps? Krista.

MS. SHIPLEY: I don't know that I necessarily have a suggestion for next steps. But I would like to echo some of the concerns I've heard around about signs in particular. Also in Florida it's primarily a night time fishery; also the amount of coastline we have and the amount of beach accesses that we have that would certainly be a difficult task for us to really get them in all the locations that they are needed, so just more thinking into the signs and kind of echoing some of those earlier concerns.

CHAIRMAN MILLER: Tom Fote.

MR. FOTE: I'm thinking the same problem with Florida, because we fish in the Bays, we fish on the surf; and a lot of these fishing parties are going out now shark fishing on them. I think a more appropriate place would be in tackle stores; where they go to buy their tackle to put in there.

You put posters up on that; or you ask to put it on web pages. You basically want to do a video; and show them the proper way of doing it, and put it on the blogs, the local blogs and put a connection, a link to that. But putting signs on the end of the street, you know people just steal them. I mean you'll find them in people's basements; by their bars or whatever, or they'll just use them for target practice, one or the other. Signs don't work.

We used to put them up in Newark Bay; when I basically talked to the Commissioner of the DEP to ban the taking of crabs in Newark Bay. We used to put it up in nine different languages. As fast as we put them down is as fast as they would steal them; because this way they didn't see the sign, they could do whatever they wanted.

CHAIRMAN MILLER: I think your point is well taken, Tom. Signs in tackle shops are generally well received by the owners; because it keeps clients engaged when they come into their establishment. I think that's a useful suggestion. You're right, signs have a way of disappearing otherwise, or being vandalized or damaged. Comment, Chris?

MR. BATSAVAGE: I think what we're trying to get at is to get this information out the best way possible; so people handle the sharks properly, get them back in the water in the safest manner for the shark and for them. I'm interested in hearing more about what Florida has. I may talk to you offline, Krista, as far as some of the efforts that you've done; because that might be the route, if we want to advance this further.

That might be the route we want to go; is look at what another state like Florida has done. It obviously has done a lot. Instead of reinventing the wheel, and coming up with similar but different language, as far as safe handling practices, because that does get confusing. I know it does on sea turtles; where depending on what agency and what coast you're on, you get different advice on proper handling and the

release of sea turtles. I don't think we want to have that same situation with coastal sharks.

CHAIRMAN MILLER: Maureen.

MS. MAUREEN DAVIDSON: In dealing with the anglers who are given tags by NOAA; so that they can catch sharks and tag them, especially those that are shore-based. As part of dealing with them and responding to their questions, can you suggest that they contact perhaps their states Marine Resource Division or Department?

The first time I found out that people were tagging sharks on the shore is because I read it on Facebook; and it was one of the guys who dragged a shark up, he took his picture, and he says he's tagging for NOAA. We were like, he's handling prohibited species. He's dragging them up on the beach. New York, we don't know about that.

We might ask that the people who are tagging, I'm just suggesting we might ask that they come up and talk to us or fill out some paperwork; so that we could recognize them as someone who could handle prohibited species, and they're working with NOAA, as opposed to someone who is just kind of doing it freely on a state shoreline. They have the NOAA tags; but they don't have anything else from the state to say it is okay for them to handle these sharks.

CHAIRMAN MILLER: It's a good point, Maureen. John Clark.

MR. CLARK: That was very interesting, Maureen, because we've had similar instances where just recently we had some guy that actually asked me to get a scientific collecting permit. He told me he was a contractor for NOAA Fisheries; because he was doing the shark tagging, which made me a little suspicious.

I thought it might be this, and I talked to our enforcement agents. He was like a local lunkhead that had already been busted several

times for pulling sharks up on the beach. Yet he was able to get these tags; so maybe you need to screen some of these guys better.

CHAIRMAN MILLER: We're debating where to go with this particular item. Of course Karyl is looking for feedback; not only with the specific wording on the sign, but which states want signs. It would be up to the states as to where they're placed; the most effective place. Whether it is shoreline access areas, piers, tackle shops or whatever. That probably should be left up to the state jurisdictions involved; because they know their local fisheries and fisheries infrastructure best. Karyl.

MS. BREWSTER-GEISZ: Yes, and we certainly don't want to push signs. I'm hearing a lot of logistical issues with signs. If people don't want signs then we don't have to go with that. We've gotten pretty adept at doing postcards. We even have a dusky shark sticker; so we could do a sticker with the Be Fast, and more information.

We also have the one page more detailed information that we had pulled together on the PDT that we could send out to everybody to review. What I am hearing from the group is it's a good idea; and it would be good to have consistent language. But I'm not hearing a lot on what that consistent language necessarily should be. Would it help to see the more detailed web page?

CHAIRMAN MILLER: John.

MR. CLARK: Karyl, do you have like a Smartphone Application that would have this; in addition, I mean like a shark ID type of guide, and you could put some of this information right in there? I think a lot of people also would need help in knowing what type of shark they're even catching a lot of times. It might be real useful to have something like that.

MS. BREWSTER-GEISZ: Yes, we don't have that. We have the shortfin mako application, which I

think does not work right now; if I remember correctly, because there have been so many updates it's hard to keep up. But there are sharks in a lot of the applications that people use up and down the coast; and I cannot remember the name of the application that is used the most frequently. But we could provide information in that.

CHAIRMAN MILLER: Mike Luisi.

MR. LUISI: If you're asking for a suggestion; I may suggest that maybe through Kirby that Karyl and Kirby work to get information out to the states. We're all so different in how we operate; and we're all going to be of such difference of opinion here. I think it might be best to solicit for that input individually through the states.

Allow us to go back and talk with staff, and figure out what best suggestions we might make given this issue. Then perhaps there would be a follow up; based on the feedback that the states provide to NOAA on this issue, a follow up at a future meeting, to see if we can all maybe get on the same page.

CHAIRMAN MILLER: I think that's a good suggestion, Mike. In the meantime Karyl, I hesitate to make an assignment. But if you could make the draft signage available to everyone on the Board; they in turn could solicit suggestions from staff, and get back to you. Perhaps at a future meeting we can finalize, at least help you finalize the wording on the signs.

Then it would be up to the states to distribute these signs in the most effective manner that they see fit. I think John Clark's suggestion for electronic access to this information via Smartphones is a really good suggestion as well. Is there anything further on this topic? Maureen.

MS. DAVIDSON: Hi Karyl, I think you met with Kim McKown and Chris Scott in New York; concerning the taking of sharks from the

shoreline, and best handling practices. I just wanted to ask, because I wasn't there, what are the thoughts about the fact that in New York if you're fishing for sharks from the shore you're targeting prohibited sharks? Should we just go and prohibit all shark fishing from shore? What are your thoughts on that?

MS. BREWSTER-GEISZ: Yes we had a discussion about that. We didn't conclude necessarily that it was needed to prohibit shark fishing from shore. From a NOAA Fisheries standpoint that is certainly not our aim; to stop fishing. But we do understand New York's issue; where if you are fishing from shore, you are most likely catching only prohibited shark species, which is an issue.

We talked about ways of how would you define shark fishing in such a way that you wouldn't be stopping other non-shark fishing, and the difficulties there? Also, how would the Apex Predator's Program folk know that somebody was shore-based fishing in New York; and is there a way to do that? We didn't come to any great conclusions. Both of us walked away with more things to think about and do than any real answers on that. But I think it is an issue that more than just New York has; in terms of the targeting and fishing for prohibited species from shore.

CHAIRMAN MILLER: Thank you Karyl and Maureen. Tom, I'll call on you, but we do need to wrap this up pretty quickly.

MR. FOTE: The guys when they're fishing for sharks on the beach have reels that are completely oversized for what they're doing. The leaders have hooks on them with cable or heavy wire on it. It's a whole different ballgame from when you're fishing for bluefish or striped bass; because they'll just chomp through the wire.

Pretty much the gear for the guys that are actually directing for a fishery at night with sharks; are using bigger reels, different tackle

altogether, because they realize they're pulling in big fish, and they're also designed for sharks. They basically have either wire cable or stronger metal leaders.

CHAIRMAN MILLER: All right thank you, Tom. I'm probably going to request that we cut off discussion at this point; in order to stay pretty much on time. I do want to suggest under other business that the staff send out a notice to the states if they request a public hearing on the draft Addendum V.

They will be hearing from staff in that regard to determine whether the state wants a public hearing.

ADJOURNMENT

CHAIRMAN MILLER: Is there any further business before this Shark Board? Seeing no hands; I'll take it that is an indication that we're ready for adjournment. If so thank you; and this meeting is adjourned.

(Whereupon the meeting adjourned at 2:20 o'clock p.m. on August 8, 2018)

Draft Addendum for Board Review

Atlantic States Marine Fisheries Commission

**DRAFT ADDENDUM V TO THE INTERSTATE FISHERY
MANAGEMENT PLAN FOR ATLANTIC COASTAL SHARKS FOR
BOARD REVIEW**



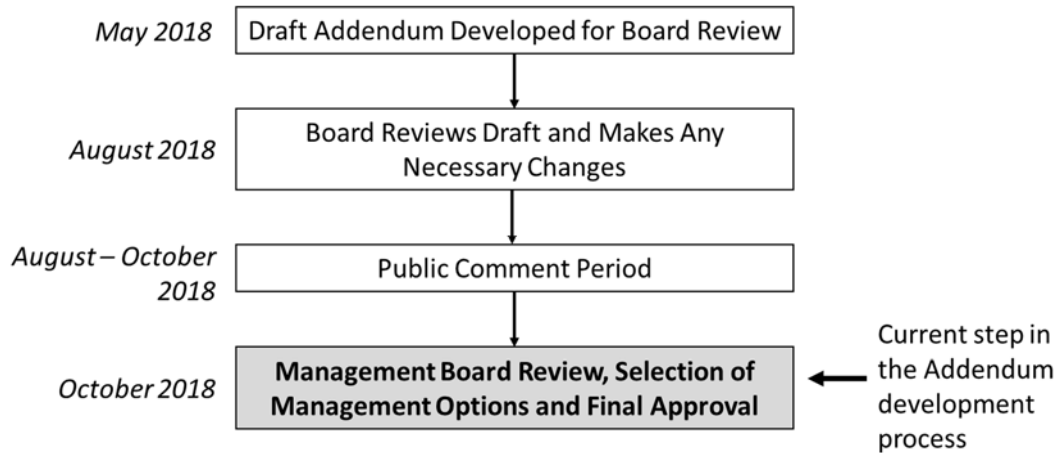
Vision: Sustainably Managing Atlantic Coastal Fisheries

October 2018

Draft Addendum for Board Review

Public Comment Process and Proposed Timeline

In May 2018, the Atlantic States Marine Fisheries Commission's (Commission) Coastal Sharks Management Board initiated the development of an addendum to the Interstate Fishery Management Plan (FMP) to streamline the process of states implementing complementary measures to federal shark regulations whenever possible. This Draft Addendum presents background on the Commission's management of coastal sharks, the addendum process and timeline, and a statement of the problem.



Draft Addendum for Board Review

Table of Contents

1.0 Introduction3

2.0 Overview.....3

2.1 Statement of Problem3

2.2 Background4

3.0 Proposed Management Program5

4.0 Implementation6

References.....6

Draft Addendum for Board Review

1.0 Introduction

Atlantic shark fisheries from Maine through the east coast of Florida are currently managed through complementary fishery management plans by the Commission and NOAA Fisheries Highly Migratory Species (HMS) Management Division. The Commission coordinates management of Atlantic sharks in state waters (0-3 miles) via the 2008 Atlantic Coastal Sharks Interstate Fishery Management Plan (FMP) and Addenda I-IV. Management authority in the exclusive economic zone (3-200 miles from shore) lies with NOAA Fisheries via the 2006 Consolidated Atlantic HMS FMP and associated Amendments.

The Commission's Coastal Shark Management Board (Board) approved the following motion on May 1, 2018:

Move to initiate an addendum to give the Board the flexibility to implement measures for all species within the Coastal Sharks FMP through Board action.

This Draft Addendum proposes options to allow the Board to streamline the process of state implementation of federal shark regulations so that complementary measures are seamlessly and concurrently implemented at the state and federal level whenever possible.

2.0 Overview

2.1 Statement of Problem

The Commission's Coastal Sharks FMP currently allows for commercial quotas, possession limits, and season dates to be set annually through Board approved specifications. All other changes to commercial or recreational management can only be accomplished through an addendum or emergency action, as outlined in the Adaptive Management Section (4.5) of the FMP (ASMFC 2008). While addenda can be completed in a relatively short period of time (less than 6 months), the timing of the addenda and state implementation can result in inconsistencies between state and federal shark regulations, particularly when NOAA adopts changes through interim emergency rules. Inconsistencies can create confusion for anglers and commercial fishermen, present challenges for law enforcement, and most importantly, undermine the conservation of the resource, particularly when more restrictive measures have been implemented in federal waters based on changes in stock conditions. At times, the states can take up to a year to implement changes while at other times, states never implement any changes.

The only option for the Board to respond quicker than an addendum is through an emergency action, as outlined in the ISFMP Charter. However, there are rigorous criteria that define an emergency action, which are often not met. For example, NOAA Fisheries recently implemented an increase in the recreational size limit for shortfin mako sharks based on new assessment information. While this is an important conservation

Draft Addendum for Board Review

measure, it does not constitute an emergency action in state waters since the conservation of shortfin mako sharks is not substantially at risk by unanticipated changes in the ecosystem, the stock, or the fishery due to catch in state waters. After deciding not to modify shortfin mako regulations in state waters at the Board Meeting in May 2018, the Board chose to initiate this addendum to allow more flexibility in responding to changes in stock status for shortfin mako and all other shark species under the FMP moving forward.

2.2 Background

The Commission's Coastal Sharks FMP, adopted in 2008, manages coastal sharks as eight different complexes: prohibited, research, non-blacknose small coastal sharks (SCS), blacknose, aggregate large coastal sharks (LCS), hammerhead, pelagic, and smooth dogfish. Over the past 9 years, the FMP has been adapted 4 times through addenda. These addenda have been adopted to match regulatory changes made by NOAA HMS for federal waters and HMS permit holders.

To develop commercial management specifications annually, NOAA Fisheries considers recent year's landings data, stock assessment information, international agreements, and input from the HMS Advisory Panel and the public. As part of the Consolidated HMS FMP, NOAA Fisheries can set commercial quotas, possession limits, and season start dates by shark management group. NOAA Fisheries monitors the regional commercial quotas throughout the year and makes adjustments to the season length and possession limit to ensure the quotas are not exceeded.

Generally, NOAA Fisheries will identify commercial specifications (i.e., quota adjustments, season start dates, and starting possession limits) in a proposed rule for HMS permit holders and federal waters in the fall, with the final rule released in November or December. At this time, NOAA Fisheries does not change recreational measures such as possession or size limits on an annual basis. Rather, as changes to the status of stock for shark species become available, NOAA Fisheries implements changes to both commercial and recreational measures in the regulations (e.g., baseline quota, size limits, baseline possession limits, etc.) to address these stock status changes through a proposed and final rulemaking. Additionally, in rare instances, NOAA Fisheries can implement interim emergency rule measures to respond to the new stock status or other emergencies. For all federal rulemakings, NOAA Fisheries provides at least one opportunity for public comment, although interim emergency rules may be implemented before public comment is considered.

Generally, the Commission follows NOAA Fisheries in setting specifications for the commercial fishery by adopting the same commercial quotas, possession limits, and season start dates by shark management groups. Annually, the Commission reviews the specifications as indicated in the proposed rule in October or early November, but often waits to finalize state waters specifications until after NOAA Fisheries publishes a final rule for federal waters. Some states move to implement changes in their measures for

Draft Addendum for Board Review

state waters and state permit holders once the final rule is published; others begin the process in the early part of the following year. As part of the Commission's complementary FMP, the Commission follows NOAA Fisheries for in-season changes to the possession limit. A previously noted, recreational management measures currently cannot be adjusted annually through specifications and require an addendum to modify the FMP.

3.0 Proposed Management Program

The proposed options below consider different approaches to how the Board can adjust coastal shark regulations as well as different timing on when this action can occur.

Option 1: Status Quo

If this option is selected, there would be no change to the current management program. Changes to any of the items listed in the Adaptive Management Section of the FMP could only be adjusted through an addendum or emergency action. Both an addendum and emergency action include opportunities for public comment.

Option 2: Adjust All Needed Measures through Annual Specifications (Modifies Section 4.3.7 of the FMP)

The FMP currently allows the Board to set commercial quotas, possession limits and seasons through annual specifications.

Under this option, the Board would have the authority to annually change the following additional management measures during the fall specifications meeting via Board action:

- Recreational size limits
- Recreational possession limits
- Recreational seasons
- Area closures (both recreational and commercial)
- Gear specifications (both recreational and commercial)
- Effort controls (both recreational and commercial)

Prior to setting specifications, the Board may seek input from the Coastal Sharks Technical Committee (TC) and Advisory Panel (AP) on how management measures should be adjusted as part of the annual specifications process, including a review of any new landings and stock assessment information.

Through a motion, the Board can then adopt these regulatory changes. It is important to note that regulatory changes through a specifications process does not require a public hearing or designated public comment period; however, members of the public are welcome to submit comments to the Board ahead of or during the specifications meeting for consideration. The approval of this option does not preclude the Board from using the addendum process.

Draft Addendum for Board Review

Under this option, the Board also can make in-season adjustments to the above measures through a two-thirds vote of the Board as required under the Commission's voting procedures for modifying annual specifications.

Option 3: Adjust Measures on an Ad Hoc Basis as Needed

Under this option, in the event that new scientific information or management changes for federal waters and HMS permit holder becomes available, the Board will consider adjusting the following management measures via Board action on an as needed basis:

- Recreational size limits
- Recreational possession limits
- Recreational seasons
- Area closures (both recreational and commercial)
- Gear specifications (both recreational and commercial)
- Effort controls (both recreational and commercial)
- Commercial quotas
- Commercial possession limits
- Commercial seasons

In these circumstances, the Board may seek input from the Coastal Sharks TC and AP on how management measures should be adjusted at any point throughout the fishing season. Through a motion, the Board can then adopt these regulatory changes.

It is important to note that regulatory changes under this option would not require public hearings or a designated public comment period; however, members of the public are welcome to submit comments to the Board ahead of or during the meeting to consider adjusting these measures. The approval of this option does not preclude the board from using the addendum process.

4.0 Implementation

TBD

References

Atlantic States Marine Fisheries Commission (ASMFC). 2008. Interstate Fishery Management Plan for Coastal Sharks.

We plan to hold a public meeting to receive oral comments on this notice of inquiry and will announce the date, time, and location in a separate document published in the **Federal Register**. If you signed up for docket email alerts mentioned in the paragraph above, you will receive an email notice when the public meeting notice is published and placed in the docket.

Dated: September 4, 2018.

N.C. Witt,

Commander, U.S. Coast Guard, Captain of the Port Savannah.

[FR Doc. 2018-19661 Filed 9-10-18; 8:45 am]

BILLING CODE 9110-04-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 635

[Docket No. 180517486-8772-01]

RIN 0648-XG263

Atlantic Highly Migratory Species; 2019 Atlantic Shark Commercial Fishing Year

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Proposed rule; request for comments.

SUMMARY: This proposed rule would establish quotas, opening dates, and retention limits for the 2019 fishing year for the Atlantic commercial shark fisheries. Quotas would be adjusted as required or allowable based on any over- and/or underharvests experienced during the 2018 fishing year. In addition, NMFS proposes opening dates and commercial retention limits based on adaptive management measures to provide, to the extent practicable, fishing opportunities for commercial shark fishermen in all regions and areas. The proposed measures could affect fishing opportunities for commercial shark fishermen in the northwestern Atlantic Ocean, including the Gulf of Mexico and Caribbean Sea.

DATES: Written comments must be received by October 11, 2018.

ADDRESSES: You may submit comments on this document, identified by NOAA-NMFS-2018-0097, by any of the following methods:

- *Electronic Submission:* Submit all electronic public comments via the Federal e-Rulemaking Portal. Go to www.regulations.gov/#!docketDetail;

D=NOAA-NMFS-2018-0097, click the “Comment Now!” icon, complete the required fields, and enter or attach your comments.

- *Mail:* Submit written comments to Brad McHale, NMFS/SF1, 1315 East-West Highway, National Marine Fisheries Service, SSMC3, Silver Spring, MD 20910.

Instructions: Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NMFS. All comments received are a part of the public record and will generally be posted for public viewing on www.regulations.gov without change. All personal identifying information (e.g., name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments (enter “N/A” in the required fields if you wish to remain anonymous).

Copies of this proposed rule and supporting documents are available from the HMS Management Division website at <https://www.fisheries.noaa.gov/topic/atlantic-highly-migratory-species> or by contacting Lauren Latchford or Chanté Davis by phone at (301) 427-8503.

FOR FURTHER INFORMATION CONTACT: Karyl Brewster-Geisz, Lauren Latchford, or Chanté Davis at (301) 427-8503.

SUPPLEMENTARY INFORMATION:

Background

The Atlantic commercial shark fisheries are managed under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). The 2006 Consolidated Atlantic Highly Migratory Species (HMS) Fishery Management Plan (FMP) and its amendments are implemented by regulations at 50 CFR part 635. For the Atlantic commercial shark fisheries, the 2006 Consolidated HMS FMP and its amendments established commercial shark retention limits, commercial quotas for species and management groups, and accounting measures for under- and overharvests for the shark fisheries. The FMP also includes adaptive management measures, such as flexible opening dates for the fishing year and inseason adjustments to shark trip limits, which provide management flexibility in furtherance of equitable fishing opportunities, to the extent practicable, for commercial shark fishermen in all regions and areas.

2019 Proposed Quotas

This proposed rule would adjust the quota levels for the different shark stocks and management groups for the 2019 Atlantic commercial shark fishing year based on over- and underharvests that occurred during the 2018 fishing year, consistent with existing regulations at 50 CFR 635.27(b). Over- and underharvests are accounted for in the same region, sub-region, and/or fishery in which they occurred the following year, except that large overharvests may be spread over a number of subsequent fishing years up to a maximum of five years. Shark stocks that are overfished, have overfishing occurring, or have an unknown status, as well as management groups that contain one or more stocks that are overfished, have overfishing occurring, or have an unknown stock status, will not have underharvest carried over in the following year. Stocks or management groups that are not overfished and have no overfishing occurring may have any underharvest carried over in the following year, up to 50 percent of the base quota.

Based on harvests to date, and after considering catch rates and landings from previous years, NMFS proposes to adjust the 2019 quotas for some management groups as shown in Table 1. In the final rule, NMFS will adjust the quotas as needed based on dealer reports received by mid-October 2018. Thus, all of the 2019 proposed quotas for the respective stocks and management groups will be subject to further adjustment after NMFS considers the dealer reports through mid-October. All dealer reports that are received after the October date will be used to adjust 2020 quotas, as appropriate.

While the sub-quota for the western Gulf of Mexico aggregated large coastal shark (LCS) was exceeded this year, based on current landings in the eastern Gulf of Mexico for that management group and based on catch rates from previous years from the eastern Gulf of Mexico, NMFS does not believe the overall regional Gulf of Mexico aggregated LCS quota will be exceeded. Thus, NMFS proposes the base line quotas for the eastern and western Gulf of Mexico sub-regions. If catch rates in the eastern Gulf of Mexico increase, it is possible that in the final rule NMFS would need to reduce the western Gulf of Mexico sub-regional aggregated LCS quota to account for that sub-region’s overharvest.

Because the Gulf of Mexico blacktip shark management group and smoothhound shark management groups

in the Gulf of Mexico and Atlantic regions have been determined not to be overfished, and to have no overfishing occurring, available underharvest (up to 50 percent of the base quota) from the 2018 fishing year for these management groups may be applied to the respective 2019 quotas. NMFS proposes to account for any underharvest of Gulf of Mexico blacktip sharks by dividing underharvest between the eastern and western Gulf of Mexico sub-regional quotas based on the sub-regional quota split percentage implemented in

Amendment 6 to the 2006 Consolidated Atlantic Highly Migratory Species (HMS) Fishery Management Plan (FMP).

For the sandbar shark, aggregated large coastal shark (LCS), hammerhead shark, non-blacknose small coastal shark (SCS), blacknose shark, blue shark, porbeagle shark, and pelagic shark (other than porbeagle or blue sharks) management groups, the 2018 underharvests cannot be carried over to the 2019 fishing year because those stocks or management groups have been determined to be overfished, overfished with overfishing occurring, or have an

unknown status. Furthermore, with the exception of the sub-regional western Gulf of Mexico overharvest of the aggregated LCS quota described above, there were no overharvests to account for in these management groups. Thus, NMFS proposes that quotas for these management groups be equal to the annual base quota without adjustment.

The proposed 2019 quotas by species and management group are summarized in Table 1; the description of the calculations for each stock and management group can be found below.

TABLE 1—2019 PROPOSED QUOTAS AND OPENING DATES FOR THE ATLANTIC SHARK MANAGEMENT GROUPS
 [All quotas and landings are dressed weight (dw), in metric tons (mt), unless specified otherwise. Table includes landings data as of July 13, 2018; final quotas are subject to change based on landings as of October 2018. 1 mt = 2,204.6 lb.]

Region or sub-region	Management group	2018 Annual quota (A)	Preliminary 2018 landings (B) ¹	Adjustments ² (C)	2019 base Annual quota (D)	2019 proposed annual quota (D + C)
Western Gulf of Mexico.	Blacktip Sharks	347.2 mt dw 765,392 lb dw	330.2 mt dw 727,992 lb dw	34.6 mt dw ³ 76,401 lb dw	231.0 mt dw 510,261 lb dw	265.6 mt dw 586,662.2 lb dw
	Aggregated Large Coastal Sharks	72 mt dw 158,724 lb dw	92.2 mt dw 203,400 lb dw		72.0 mt dw 158,724 lb dw	72.0 mt dw 158,724 lb dw
	Hammerhead Sharks	11.9 mt dw 26,301 lb dw	11.0 mt dw 24,292 lb dw		11.9 mt dw 26,301 lb dw	11.9 mt dw 26,301 lb dw
Eastern Gulf of Mexico.	Blacktip Sharks	37.7 mt dw 83,158 lb dw	16.3 mt dw 35,856 lb dw	3.8 mt dw ³ 8,301 lb dw	25.1 mt dw 55,439 lb dw	28.9 mt dw 63,740 lb dw
	Aggregated Large Coastal Sharks	85.5 mt dw 188,593 lb dw	37.5 mt dw 82,751 lb dw		85.5 mt dw 188,593 lb dw	85.5 mt dw 188,593 lb dw
	Hammerhead Sharks	13.4 mt dw 29,421 lb dw	6.2 mt dw 13,696 lb dw		13.4 mt dw 29,421 lb dw	13.4 mt dw 29,421 lb dw
Gulf of Mexico	Non-Blacknose Small Coastal Sharks	112.6 mt dw 248,215 lb dw	27.5 mt dw 60,731 lb dw		112.6 mt dw 248,215 lb dw	112.6 mt dw 248,215 lb dw
	Smoothhound Sharks	504.6 mt dw 1,112,441 lb dw	0 mt dw 0 lb dw	168.2 mt dw 370,814 lb dw	336.4 mt dw 741,627 lb dw	504.6 mt dw 1,112,441 lb dw
Atlantic	Aggregated Large Coastal Sharks	168.9 mt dw 372,552 lb dw	45.9 mt dw 101,245 lb dw		168.9 mt dw 372,552 lb dw	168.9 mt dw 372,552 lb dw
	Hammerhead Sharks	27.1 mt dw 59,736 lb dw	4.9 mt dw 10,777 lb dw		27.1 mt dw 59,736 lb dw	27.1 mt dw 59,736 lb dw
	Non-Blacknose Small Coastal Sharks	264.1 mt dw 582,333 lb dw	55.1 mt dw 121,385 lb dw		264.1 mt dw 582,333 lb dw	264.1 mt dw 582,333 lb dw
	Blacknose Sharks (South of 34° N lat. only)	17.2 mt dw (37,921 lb dw)	3.4 mt dw 7,501 lb dw		17.2 mt dw 37,921 lb dw	17.2 mt dw 37,921 lb dw
	Smoothhound Sharks	1802.6 mt dw 3,971,587 lb dw	261.4 mt dw 576,181 lb dw	600.85 mt dw 1,324,634 lb dw	1201.7 mt dw 2,649,268 lb dw	1802.55 mt dw 3,973,902 lb dw
	No regional quotas.	Non-Sandbar LCS Research	50.0 mt dw 110,230 lb dw	11.2 mt dw 24,799 lb dw		50.0 mt dw 110,230 lb dw
Sandbar Shark Research		90.7 mt dw 199,943 lb dw	31.0 mt dw 68,443 lb dw		90.7 mt dw 199,943 lb dw	90.7 mt dw 199,943 lb dw
Blue Sharks		273.0 mt dw 601,856 lb dw	<13.6 mt dw (<30,000 lb dw)		273.0 mt dw 601,856 lb dw	273.0 mt dw 601,856 lb dw
Porbeagle Sharks		1.7 mt dw 3,748 lb dw	0 mt dw 0 lb dw		1.7 mt dw 3,748 lb dw	1.7 mt dw 3,748 lb dw
Pelagic Sharks Other Than Porbeagle or Blue sharks.		488.0 mt dw 1,075,856 lb dw	38.1 mt dw 83,896 lb dw		488.0 mt dw 1,075,856 lb dw	488.0 mt dw 1,075,856 lb dw

¹ Landings are from January 1, 2018, through July 13, 2018, and are subject to change.

² Underharvest adjustments can only be applied to stocks or management groups that are not overfished and have no overfishing occurring. Also, the underharvest adjustments cannot exceed 50 percent of the base quota.

³ This proposed rule would increase the overall Gulf of Mexico blacktip shark quota due to an overall underharvest of 38.4 mt dw (84,702 lb dw) in 2018. The overall quota would be split based on percentages that are allocated to each sub-region, as explained in the text.

1. Proposed 2019 Quotas for the Gulf of Mexico Region Shark Management Groups

The 2019 proposed commercial quota for blacktip sharks in the western Gulf of Mexico sub-region is 265.6 mt dw (586,662 lb dw) and the eastern Gulf of Mexico sub-region is 28.9 mt dw (63,740 lb dw; Table 1). As of July 13, 2018, preliminary reported landings for

blacktip sharks in the western Gulf of Mexico sub-region were at 95 percent (330.2 mt dw) of their 2018 quota levels (347.2 mt dw), while the blacktip sharks in the eastern Gulf of Mexico sub-region were at 43 percent (16.3 mt dw) of their 2018 quota levels (37.7 mt dw). Reported landings have not exceeded the 2018 quota to date, and the western Gulf of Mexico sub-region fishery was

closed on March 13, 2018 (83 FR 10802). Gulf of Mexico blacktip sharks have not been declared to be overfished, to have overfishing occurring, or to have an unknown status. Pursuant to § 635.27(b)(2)(ii), underharvests for blacktip sharks within the Gulf of Mexico region therefore could be applied to the 2019 quotas up to 50 percent of the base quota. Additionally,

any underharvest would be divided between the two sub-regions, based on the percentages that are allocated to each sub-region, which are set forth in § 635.27(b)(1)(ii)(C). To date, the overall Gulf of Mexico blacktip shark management group is underharvested by 38.4 mt dw (84,702 lb dw). Accordingly, the western Gulf of Mexico blacktip shark quota would be increased by 34.6 mt dw or 90.2 percent of the underharvest, while the eastern Gulf of Mexico blacktip shark sub-regional quota would be increased by 3.8 mt dw, or 9.8 percent of the underharvest (Table 1). Thus, the proposed western sub-regional Gulf of Mexico blacktip shark commercial quota is 265.6 mt dw (586,662 lb dw), and the proposed eastern sub-regional Gulf of Mexico blacktip shark commercial quota is 28.9 mt dw (63,740 lb dw).

The 2019 proposed commercial quota for aggregated LCS in the western Gulf of Mexico sub-region is 72.0 mt dw (158,724 lb dw), and the eastern Gulf of Mexico sub-region is 85.5 mt dw (188,593 lb dw; Table 1). As of July 13, 2018, preliminary reported landings for aggregated LCS in the western Gulf of Mexico sub-region were at 128 percent (92.2 mt dw) of their 2018 quota levels (72.0 mt dw), while the aggregated LCS in the eastern Gulf of Mexico sub-region were at 44 percent (37.5 mt dw) of their 2018 quota levels (85.5 mt dw). Reported landings have not exceeded the overall Gulf of Mexico regional 2018 quota to date, and the western aggregated LCS sub-region fishery was closed on March 13, 2018 (83 FR 10802). Given the unknown status of some of the shark species within the Gulf of Mexico aggregated LCS management group, underharvests cannot be carried over pursuant to § 635.27(b)(2)(ii). Therefore, based on both preliminary estimates and catch rates from previous years, and consistent with the current regulations at § 635.27(b)(2), NMFS proposes that the 2019 quotas for aggregated LCS in the western Gulf of Mexico and eastern Gulf of Mexico sub-regions be equal to their annual base quotas without adjustment, because the overall regional quota has not been overharvested and because underharvests cannot be carried over due to stock status.

The 2019 proposed commercial quotas for hammerhead sharks in the western Gulf of Mexico sub-region and eastern Gulf of Mexico sub-region are 11.9 mt dw (26,301 lb dw) and 13.4 mt dw (29,421 lb dw), respectively (Table 1). As of July 13, 2018, preliminary reported landings for hammerhead sharks in the western Gulf of Mexico sub-region were at 92 percent (11.0 mt

dw) of their 2018 quota levels (11.9 mt dw), while landings of hammerhead sharks in the eastern Gulf of Mexico sub-region were at 47 percent (6.2 mt dw) of their 2018 quota levels (13.4 mt dw). Reported landings from both Gulf of Mexico and Atlantic regions have not exceeded the 2018 overall hammerhead quota to date, and the western hammerhead shark Gulf of Mexico sub-region fishery was closed on March 13, 2018 (83 FR 10802). Given the overfished status of the scalloped hammerhead shark, the hammerhead shark quota cannot be adjusted for any underharvests. Therefore, based on both preliminary estimates and catch rates from previous years, the fact that the 2018 overall hammerhead shark quota has not been overharvested to date, and consistent with the current regulations at § 635.27(b)(2)(ii), NMFS proposes that the 2019 quotas for hammerhead sharks in the western Gulf of Mexico and eastern Gulf of Mexico sub-regions be equal to their annual base quotas without adjustment.

The 2019 proposed commercial quota for non-blacknose SCS in the Gulf of Mexico region is 112.6 mt dw (248,215 lb dw). As of July 13, 2018, preliminary reported landings of non-blacknose SCS were at 24 percent (27.5 mt dw) of their 2018 quota level (112.6 mt dw) in the Gulf of Mexico region. Reported landings have not exceeded the 2018 quota to date. Given the unknown status of bonnethead sharks within the Gulf of Mexico non-blacknose SCS management group, underharvests cannot be carried forward pursuant to § 635.27(b)(2)(ii). Therefore, based on both preliminary estimates and catch rates from previous years, and consistent with the current regulations at § 635.27(b)(2), NMFS proposes that the 2019 quota for non-blacknose SCS in the Gulf of Mexico region be equal to the annual base quota without adjustment, because there have not been any overharvests and because underharvests cannot be carried over due to stock status.

The 2019 proposed commercial quota for smoothhound sharks in the Gulf of Mexico region is 504.6 mt dw (1,112,441 lb dw). As of July 13, 2018, there are no preliminary reported landings of smoothhound sharks in the Gulf of Mexico region. Gulf of Mexico smoothhound sharks have not been declared to be overfished, to have overfishing occurring, or to have an unknown status. Pursuant to § 635.27(b)(2)(ii), underharvests for smoothhound sharks within the Gulf of Mexico region therefore could be applied to the 2019 quotas up to 50 percent of the base quota. Accordingly, NMFS proposes to increase the 2019

Gulf of Mexico smoothhound shark quota to adjust for anticipated underharvests in 2018 as allowed. The proposed 2019 adjusted base annual quota for Gulf of Mexico smoothhound sharks is 504.6 mt dw (336.4 mt dw annual base quota + 168.2 mt dw 2018 underharvest = 504.6 mt dw 2019 adjusted annual quota).

2. Proposed 2019 Quotas for the Atlantic Region Shark Management Groups

The 2019 proposed commercial quota for aggregated LCS in the Atlantic region is 168.9 mt dw (372,552 lb dw). As of July 13, 2018, the aggregated LCS fishery in the Atlantic region is still open and preliminary landings indicate that only 27 percent of the quota, or 45.9 mt dw, has been harvested. Given the unknown status of some of the shark species within the Atlantic aggregated LCS management group, underharvests cannot be carried over pursuant to § 635.27(b)(2)(ii). Therefore, based on both preliminary estimates and catch rates from previous years, and consistent with current regulations at § 635.27(b)(2), NMFS proposes that the 2018 quota for aggregated LCS in the Atlantic region be equal to the annual base quota without adjustment, because there have not been any overharvests and underharvests cannot be carried over due to stock status.

The 2019 proposed commercial quota for hammerhead sharks in the Atlantic region is 27.1 mt dw (59,736 lb dw). Currently, the hammerhead shark fishery in the Atlantic region is still open and preliminary landings as of July 13, 2018, indicate that only 18 percent of the Atlantic regional quota, or 4.9 mt dw, has been harvested. Reported landings from both Gulf of Mexico and Atlantic regions have not exceeded the 2018 overall hammerhead quota to date. Given the overfished status of hammerhead sharks, underharvests cannot be carried forward pursuant to § 635.27(b)(2)(ii). Therefore, based on both preliminary estimates and catch rates from previous years, and consistent with the current regulations at § 635.27(b)(2), NMFS proposes that the 2019 quota for hammerhead sharks in the Atlantic region be equal to the annual base quota without adjustment, because the overall hammerhead shark quota has not been overharvested, and because underharvests cannot be carried over due to stock status.

The 2019 proposed commercial quota for non-blacknose SCS in the Atlantic region is 264.1 mt dw (582,333 lb dw). As of July 13, 2018, preliminary reported landings of non-blacknose SCS were at 21 percent (55.1 mt dw) of their

2018 quota level in the Atlantic region. Reported landings have not exceeded the 2018 quota to date. Given the unknown status of bonnethead sharks within the Atlantic non-blacknose SCS management group, underharvests cannot be carried forward pursuant to § 635.27(b)(2)(ii). Therefore, based on preliminary estimates of catch rates from previous years, and consistent with the current regulations at § 635.27(b)(2), NMFS proposes that the 2019 quota for non-blacknose SCS in the Atlantic region be equal to the annual base quota without adjustment, because there have not been any overharvests, and because underharvests cannot be carried over due to stock status.

The 2019 proposed commercial quota for blacknose sharks in the Atlantic region is 17.2 mt dw (37,921 lb dw). This quota is available in the Atlantic region only for those vessels operating south of 34° N. latitude. North of 34° N. latitude, retention, landing, or sale of blacknose sharks is prohibited. As of July 13, 2018, preliminary reported landings of blacknose sharks were at 20 percent (3.4 mt dw) of their 2018 quota levels in the Atlantic region. Reported landings have not exceeded the 2018 quota to date. Pursuant to § 635.27(b)(2), because blacknose sharks have been declared to be overfished with overfishing occurring in the Atlantic region, NMFS could not carry forward the remaining underharvest. Therefore, NMFS proposes that the 2019 Atlantic blacknose shark quota be equal to the annual base quota without adjustment.

The 2019 proposed commercial quota for smoothhound sharks in the Atlantic region is 1,802.6 mt dw (3,973,902 lb dw). As of July 13, 2018, preliminary reported landings of smoothhound sharks were at 14 percent (261.4 mt dw) of their 2018 quota levels in the Atlantic region. Atlantic smoothhound sharks have not been declared to be overfished, to have overfishing occurring, or to have an unknown status. Pursuant to § 635.27(b)(2)(ii), underharvests for smoothhound sharks within the Atlantic region therefore could be applied to the 2019 quotas up to 50 percent of the base quota. Accordingly, NMFS proposes to increase the 2019 Atlantic smoothhound shark quota to adjust for anticipated underharvests in 2018 as allowed. The proposed 2019 adjusted base annual quota for Atlantic smoothhound sharks is 1,802.6 mt dw (1,201.7 mt dw annual base quota + 600.9 mt dw 2018 underharvest = 1,802.6 mt dw 2019 adjusted annual quota).

3. Proposed 2019 Quotas for Shark Management Groups With No Regional Quotas

The 2019 proposed commercial quotas within the shark research fishery are 50 mt dw (110,230 lb dw) for research LCS and 90 mt dw (199,943 lb dw) for sandbar sharks. Within the shark research fishery, as of July 13, 2018, preliminary reported landings of research LCS were at 22 percent (11.2 mt dw) of their 2018 quota levels, and sandbar shark reported landings were at 34 percent (31.0 mt dw) of their 2018 quota levels. Reported landings have not exceeded the 2018 quotas to date. Under § 635.27(b)(2)(ii), because sandbar sharks and scalloped hammerhead sharks within the research LCS management group have been determined to be either overfished or overfished with overfishing occurring, underharvests for these management groups cannot be carried forward to the 2019 quotas. Therefore, based on preliminary estimates, and consistent with the current regulations at § 635.27(b)(2), NMFS proposes that the 2019 quota in the shark research fishery be equal to the annual base quota without adjustment because there have not been any overharvests, and because underharvests cannot be carried over due to stock status.

The 2019 proposed commercial quotas for blue sharks, porbeagle sharks, and pelagic sharks (other than porbeagle or blue sharks) are 273.0 mt dw (601,856 lb dw), 1.7 mt dw (3,748 lb dw), and 488.0 mt dw (1,075,856 lb dw), respectively. As of July 13, 2018, preliminary reported landings of blue sharks were at less than 5 percent (less than 13.6 mt dw) of their 2018 quota level (273.0 mt dw), there are no preliminary reported landings of porbeagle sharks, and landings of pelagic sharks (other than porbeagle and blue sharks) were at 8 percent (38.1 mt dw) of their 2018 quota level (488.0 mt dw). Given that these pelagic species are overfished, have overfishing occurring, or have an unknown status, underharvests cannot be carried forward pursuant to § 635.27(b)(2)(ii). Therefore, based on preliminary estimates and consistent with the current regulations at § 635.27(b)(2), NMFS proposes that the 2019 quotas for blue sharks, porbeagle sharks, and pelagic sharks (other than porbeagle and blue sharks) be equal to their annual base quotas without adjustment, because there have not been any overharvests and because underharvests cannot be carried over due to stock status.

4. Proposed Opening Dates and Retention Limits for the 2019 Atlantic Commercial Shark Fishing Year

For each fishery, NMFS considered the seven "Opening Commercial Fishing Season Criteria" listed at § 635.27(b)(3). The Criteria includes factors such as the available annual quotas for the current fishing season, estimated season length and average weekly catch rates from previous years, length of the season and fishery participation in past years, impacts to accomplishing objectives of the 2006 Consolidated Atlantic HMS FMP and its amendments, temporal variation in behavior or biology of target species (e.g., seasonal distribution or abundance), impact of catch rates in one region on another, and effects of delayed openings.

NMFS applied the Opening Commercial Fishing Season Criteria by examining the over- and underharvests of the different management groups in the 2018 fishing year to determine the likely effects of the proposed commercial quotas for 2019 on shark stocks and fishermen across regional and sub-regional fishing areas. NMFS also examined the potential season length and previous catch rates to ensure, to the extent practicable, that equitable fishing opportunities be provided to fishermen in all areas. Lastly, NMFS examined the seasonal variation of the different species/management groups and the effects on fishing opportunities.

NMFS also considered the six "Inseason trip limit adjustment criteria" listed at § 635.24(a)(8) for directed shark limited access permit holders intending to land LCS other than sandbar sharks. Those criteria are: the amount of remaining shark quota in the relevant area or region, to date, based on dealer reports; the catch rates of the relevant shark species/complexes, to date, based on dealer reports; estimated date of fishery closure based on when the landings are projected to reach 80-percent of the available overall, regional, and/or sub-regional quota, if the fishery's landings are not projected to reach 100 percent of the applicable quota before the end of the season, or when the season of a quota-linked management group is closed; effects of the adjustment on accomplishing the objectives of the 2006 Consolidated Atlantic HMS FMP and its amendments; variations in seasonal distribution, abundance, or migratory patterns of the relevant shark species based on scientific and fishery-based knowledge; and/or effects of catch rates in one part of a region precluding vessels in another part of that region from having a

reasonable opportunity to harvest a portion of the relevant quota.

After considering all these criteria, NMFS is proposing to open the 2019 Atlantic commercial shark fishing season for all shark management groups in the northwestern Atlantic Ocean, including the Gulf of Mexico and the Caribbean Sea, on or about January 1, 2019, after the publication of the final

rule for this action (Table 2). NMFS is also proposing to start the 2019 commercial shark fishing season with the commercial retention limit of 36 LCS other than sandbar sharks per vessel per trip in both the eastern and western Gulf of Mexico sub-regions, and a commercial retention limit of 25 LCS other than sandbar sharks per vessel per

trip in the Atlantic region (Table 2). NMFS will consider public comments received during the current year and catch rates from this year. Any retention limits that are proposed could change as a result of public comments as well as catch rates and landings information based on updated data available when drafting the final rule.

TABLE 2—QUOTA LINKAGES, SEASON OPENING DATES, AND COMMERCIAL RETENTION LIMIT BY REGIONAL OR SUB-REGIONAL SHARK MANAGEMENT GROUP

Region or sub-region	Management group	Quota linkages	Season opening dates	Commercial retention limits for directed shark limited access permit holders (inseason adjustments are possible)
Western Gulf of Mexico.	Blacktip Sharks	Not Linked	January 1, 2019 ..	36 LCS other than sandbar sharks per vessel per trip.
	Aggregated Large Coastal Sharks Hammerhead Sharks	Linked		
Eastern Gulf of Mexico.	Blacktip Sharks	Not Linked	January 1, 2019 ..	36 LCS other than sandbar sharks per vessel per trip. NMFS anticipates an inseason increase to 50 large coastal sharks other than sandbar sharks per vessel per trip around April 1, 2019.
	Aggregated Large Coastal Sharks Hammerhead Sharks	Linked		
Gulf of Mexico	Non-Blacknose Small Coastal Sharks ..	Not Linked	January 1, 2019 ..	N/A.
Atlantic	Smoothhound Sharks	Not Linked	January 1, 2019 ..	N/A.
	Aggregated Large Coastal Sharks	Linked	January 1, 2019 ..	25 LCS other than sandbar sharks per vessel per trip. If quota is landed quickly (e.g., if approximately 20 percent of quota is caught at the beginning of the year), NMFS anticipates an inseason reduction (e.g., to 3 or fewer LCS other than sandbar sharks per vessel per trip), then an inseason increase to 36 LCS other than sandbar sharks per vessel per trip around July 15, 2019.
	Non-Blacknose Small Coastal Sharks ..	Linked (South of 34° N lat. only).	January 1, 2019 ..	N/A.
	Blacknose Sharks (South of 34° N lat. only).	8 Blacknose sharks per vessel per trip (applies to directed and incidental permit holders).
No regional quotas	Smoothhound Sharks	Not Linked	January 1, 2019 ..	N/A.
	Non-Sandbar LCS Research	Linked	January 1, 2019 ..	N/A.
	Sandbar Shark Research
	Blue Sharks	Not Linked	January 1, 2019 ..	N/A.
	Porbeagle Sharks Pelagic Sharks Other Than Porbeagle or Blue.

In the Gulf of Mexico region, NMFS proposes opening the fishing season on or about January 1, 2019, for the aggregated LCS, blacktip sharks, and hammerhead shark management groups with the commercial retention limits of 36 LCS other than sandbar sharks per vessel per trip for directed shark permit holders in the eastern and western sub-region. This opening date and retention limit combination would provide, to the extent practicable, equitable opportunities across the fisheries management sub-regions. This opening date takes into account all the season opening criteria listed in § 635.27(b)(3), and particularly the criteria that NMFS consider the length of the season for the

different species and/or management group in the previous years (§ 635.27(b)(3)(ii) and (iii)) and whether fishermen were able to participate in the fishery in those years (§ 635.27(b)(3)(v)). The proposed commercial retention limits take into account the criteria listed in § 635.24(a)(8), and particularly the criterion that NMFS consider the catch rates of the relevant shark species/complexes based on dealer reports to date (§ 635.24(a)(8)(ii)). NMFS may also adjust the retention limit in the Gulf of Mexico region throughout the season to ensure fishermen in all parts of the region have an opportunity to harvest aggregated LCS, blacktip sharks, and hammerhead sharks (see the criteria

listed at § 635.27(b)(3)(v) and § 635.24(a)(8)(ii), (v), and (vi)). In 2018, the aggregated LCS, hammerhead, and blacktip shark management groups in the western Gulf of Mexico sub-region were closed on March 13, 2018 (82 FR 20447). As such, in 2019, NMFS is proposing a reduction in the commercial trip limit for these management groups in order to ensure the management group is open until at least April 2019, which is when the State of Louisiana closes state waters to shark fishing and when that State has previously asked that NMFS close Federal shark fisheries to match state regulations (see the criteria listed at § 635.27(b)(3)(vii) and

§ 635.24(a)(8)(iii)). In the eastern Gulf of Mexico, NMFS is proposing a lower trip limit to ensure fishermen in both Gulf of Mexico sub-regions have an opportunity to harvest aggregated LCS, blacktip sharks, and hammerhead sharks and to reduce any confusion or inequities caused by establishing different catch limits for each sub-region. When the western Gulf of Mexico sub-region closes, which is expected to occur around April 1, 2019, NMFS may increase the eastern Gulf of Mexico sub-region retention limit, potentially up to 50 or 55 sharks per trip. Modifying the retention limit on an inseason basis in this manner is similar to what NMFS has done successfully in recent years in the Atlantic region. NMFS expects such changes in retention limit to allow fishermen in the eastern Gulf of Mexico the opportunity to fully land the available quotas.

In the Atlantic region, NMFS proposes opening the aggregated LCS and hammerhead shark management groups on or about January 1, 2019. This opening date is the same date that these management groups opened in 2018. As described below, this opening date also takes into account all the criteria listed in § 635.27(b)(3), and particularly the criterion that NMFS consider the effects of catch rates in one part of a region precluding vessels in another part of that region from having a reasonable opportunity to harvest a portion of the different species and/or management quotas (§ 635.27(b)(3)(v)). The 2018 data indicates that an opening date of January 1, coupled with inseason adjustments to the retention limit, provided a reasonable opportunity for fishermen in every part of each region to harvest a portion of the available quotas (§ 635.27(b)(3)(i)) while accounting for variations in seasonal distribution of the different species in the management groups (§ 635.27(b)(3)(iv)). In 2018, when the aggregated LCS quota was harvested too quickly, NMFS reduced the retention limit to three sharks per trip (May 10, 2018; 83 FR 17765) to allow fishermen in the North Atlantic an opportunity to fish later in the year when sharks are available in the North Atlantic area (see the criteria at § 635.24(a)(3)(i), (ii), (v), and (vi)). NMFS then increased the retention limit to 36 sharks per trip on July 18, 2018 (83 FR 33870), to increase fishing opportunities for all fishermen across the Atlantic region. Because the quotas we propose for 2019 are the same as the quotas in 2018, NMFS expects that the season lengths and therefore the participation of various fishermen throughout the region, would be similar

in 2019 (§ 635.27(b)(3)(ii) and (iii)). Based on the recent performance of the fishery, the January 1 opening date appears to meet the objectives of the 2006 Consolidated Atlantic HMS FMP and its amendments (§ 635.27(b)(3)(vi)). Therefore, changing the opening date in the fishery seems unnecessary.

In addition, for the aggregated LCS and hammerhead shark management groups in the Atlantic region, NMFS proposes opening the fishing year with the commercial retention limit for directed shark limited access permit holders of 25 LCS other than sandbar sharks per vessel per trip. This retention limit should allow fishermen to harvest some of the 2019 quota at the beginning of the year when sharks are more prevalent in the South Atlantic area (see the criteria at § 635.24(a)(3)(i), (ii), (v), and (vi)). As was done in 2018, if it appears that the quota is being harvested too quickly (*i.e.*, about 20 percent) to allow directed fishermen throughout the entire region an opportunity to fish and ensure enough quota remains until later in the year, NMFS would reduce the commercial retention limits to incidental levels (3 LCS other than sandbar sharks per vessel per trip) or another level calculated to reduce the harvest of LCS taking into account § 635.27(b)(3) and the inseason trip limit adjustment criteria listed in § 635.24(a)(8). If the quota continues to be harvested quickly, NMFS could reduce the retention limit to 0 LCS other than sandbar sharks per vessel per trip to ensure enough quota remains until later in the year. If either situation occurs, NMFS would publish in the **Federal Register** notification of any inseason adjustments of the retention limit to an appropriate limit of sharks per trip. In 2018, NMFS reduced the retention limit to 3 LCS other than sandbar sharks on May 10, 2018 (83 FR 21744) when the aggregated LCS landings reached approximately 20 percent of the aggregated LCS quota, and did not need to reduce it further.

Also, as was done in 2018, NMFS will consider increasing the commercial retention limits per trip at a later date if necessary to provide fishermen in the northern portion of the Atlantic region an opportunity to retain aggregated LCS and hammerhead sharks after considering the appropriate inseason adjustment criteria. Similarly, at some point later in the year (*e.g.*, July 15), potentially equivalent to how the 2018 fishing season operated, NMFS may consider increasing the retention limit to 36 LCS other than sandbar sharks per vessel per trip or another amount, as deemed appropriate, after considering the inseason trip limit adjustment

criteria. If the quota is being harvested too quickly or too slowly, NMFS could adjust the retention limit appropriately to ensure the fishery remains open most of the rest of the year. Since the fishery is still open with a majority of the quota available, NMFS will monitor the rest of the fishing year and could make changes to the proposed 2019 opening date if necessary to ensure equitable fishing opportunities.

All of the shark management groups would remain open until December 31, 2019, or until NMFS determines that the landings for any shark management group have reached, or are projected to reach, 80-percent of the available overall, regional, and/or sub-regional quota, if the fishery's landings are not projected to reach 100 percent of the applicable quota before the end of the season, or when the quota-linked management group is closed. If NMFS determines that a non-linked shark species or management group must be closed, then, consistent with § 635.28(b)(2) for non-linked quotas (*e.g.*, eastern Gulf of Mexico blacktip, western Gulf of Mexico blacktip, Gulf of Mexico non-blacknose SCS, pelagic sharks, or the Atlantic or Gulf of Mexico smoothhound sharks), NMFS will publish in the **Federal Register** a notice of closure for that shark species, shark management group, region, and/or sub-region that will be effective no fewer than four days from the date of filing (83 FR 31677). For the blacktip shark management group, regulations at § 635.28(b)(5)(i) through (v) authorize NMFS to close the management group before landings reach, or are expected to reach, 80-percent of the available overall, regional, and/or sub-regional quota, after considering the following criteria and other relevant factors: Season length based on available sub-regional quota and average sub-regional catch rates; variability in regional and/or sub-regional seasonal distribution, abundance, and migratory patterns; effects on accomplishing the objectives of the 2006 Consolidated Atlantic HMS FMP and its amendments; amount of remaining shark quotas in the relevant sub-region; and regional and/or sub-regional catch rates of the relevant shark species or management groups. From the effective date and time of the closure until NMFS announces, via the publication of a notice in the **Federal Register**, that additional quota is available and the season is reopened, the fisheries for the shark species or management group are closed, even across fishing years.

If NMFS determines that a linked shark species or management group must be closed, then, consistent with

§ 635.28(b)(3) for linked quotas and the Final Rule to Revise Atlantic Highly Migratory Species Shark Fishery Closure Regulations (83 FR 31677), NMFS will publish in the **Federal Register** a notice of closure for all of the species and/or management groups in a linked group that will be effective no fewer than four days from date of filing. From the effective date and time of the closure until NMFS announces, via the publication of a notice in the **Federal Register**, that additional quota is available and the season is reopened, the fisheries for all linked species and/or management groups are closed, even across fishing years. The linked quotas of the species and/or management groups are Atlantic hammerhead sharks and Atlantic aggregated LCS; eastern Gulf of Mexico hammerhead sharks and eastern Gulf of Mexico aggregated LCS; western Gulf of Mexico hammerhead sharks and western Gulf of Mexico aggregated LCS; and Atlantic blacknose and Atlantic non-blacknose SCS south of 34° N. latitude.

Request for Comments

Comments on this proposed rule may be submitted via www.regulations.gov or by mail. NMFS solicits comments on this proposed rule by October 11, 2018 (see **DATES** and **ADDRESSES**).

Classification

The NMFS Assistant Administrator has determined that the proposed rule is consistent with the 2006 Consolidated Atlantic HMS FMP and its amendments, the Magnuson-Stevens Act, and other applicable law, subject to further consideration after public comment.

These proposed specifications are exempt from review under Executive Order 12866.

NMFS determined that the final rules to implement Amendment 2 to the 2006 Consolidated Atlantic HMS FMP (June 24, 2008, 73 FR 35778; corrected on July 15, 2008, 73 FR 40658), Amendment 5a to the 2006 Consolidated Atlantic HMS FMP (78 FR 40318; July 3, 2013), Amendment 6 to the 2006 Consolidated Atlantic HMS FMP (80 FR 50073; August 18, 2015), and Amendment 9 to the 2006 Consolidated Atlantic HMS FMP (80 FR 73128; November 24, 2015) are consistent to the maximum extent practicable with the enforceable policies of the approved coastal management program of coastal states on the Atlantic including the Gulf of Mexico and the Caribbean Sea as required under the Coastal Zone Management Act. Pursuant to 15 CFR 930.41(a), NMFS provided the Coastal Zone Management Program of each coastal state a 60-day period to review the consistency determination

and to advise the Agency of their concurrence. NMFS received concurrence with the consistency determinations from several states and inferred consistency from those states that did not respond within the 60-day time period. This proposed action to establish opening dates and adjust quotas for the 2019 fishing year for the Atlantic commercial shark fisheries does not change the framework previously consulted upon; therefore, no additional consultation is required.

An initial regulatory flexibility analysis (IRFA) was prepared, as required by section 603 of the Regulatory Flexibility Act (RFA). The IRFA describes the economic impact this proposed rule, if adopted, would have on small entities. The IRFA analysis follows.

Section 603(b)(1) of the RFA requires agencies to explain the purpose of the rule. This rule, consistent with the Magnuson-Stevens Act and the 2006 Consolidated Atlantic HMS FMP and its amendments, is being proposed to establish the 2019 commercial shark fishing quotas, retention limits, and fishing seasons. Without this rule, the commercial shark fisheries would close on December 31, 2018, and would not open until another action was taken. This proposed rule would be implemented according to the regulations implementing the 2006 Consolidated Atlantic HMS FMP and its amendments. Thus, NMFS expects few, if any, economic impacts to fishermen other than those already analyzed in the 2006 Consolidated Atlantic HMS FMP and its amendments, based on the quota adjustments.

Section 603(b)(2) of the RFA requires agencies to explain the rule's objectives. The objectives of this rule are to: Adjust the baseline quotas for all shark management groups based on any over- and/or underharvests from the previous fishing year(s); establish the opening dates of the various management groups; and establish the retention limits for the blacktip shark, aggregated large coastal shark, and hammerhead shark management groups in order to provide, to the extent practicable, equitable opportunities across the fishing management regions and/or sub-regions while also considering the ecological needs of the different shark species.

Section 603(b)(3) of the RFA requires agencies to provide an estimate of the number of small entities to which the rule would apply. The Small Business Administration (SBA) has established size criteria for all major industry sectors in the United States, including fish harvesters. Provision is made under

SBA's regulations for an agency to develop its own industry-specific size standards after consultation with Advocacy and an opportunity for public comment (see 13 CFR 121.903(c)). Under this provision, NMFS may establish size standards that differ from those established by the SBA Office of Size Standards, but only for use by NMFS and only for the purpose of conducting an analysis of economic effects in fulfillment of the agency's obligations under the RFA. To utilize this provision, NMFS must publish such size standards in the **Federal Register**, which NMFS did on December 29, 2015 (80 FR 81194). In this final rule effective on July 1, 2016, NMFS established a small business size standard of \$11 million in annual gross receipts for all businesses in the commercial fishing industry (NAICS 11411) for RFA compliance purposes. NMFS considers all HMS permit holders to be small entities because they had average annual receipts of less than \$11 million for commercial fishing.

As of October 2017, the proposed rule would apply to the approximately 221 directed commercial shark permit holders, 269 incidental commercial shark permit holders, 154 smoothhound shark permit holders, and 113 commercial shark dealers. Not all permit holders are active in the fishery in any given year. Active directed commercial shark permit holders are defined as those with valid permits that landed one shark based on HMS electronic dealer reports. Of the 490 directed and incidental commercial shark permit holders, only 28 permit holders landed sharks in the Gulf of Mexico region and only 78 landed sharks in the Atlantic region. Of the 154 smoothhound shark permit holders, only 26 permit holders landed smoothhound sharks in the Atlantic region and none landed smoothhound sharks in the Gulf of Mexico region. NMFS has determined that the proposed rule would not likely affect any small governmental jurisdictions.

This proposed rule does not contain any new reporting, recordkeeping, or other compliance requirements (5 U.S.C. 603(b)(4)). Similarly, this proposed rule would not conflict, duplicate, or overlap with other relevant Federal rules (5 U.S.C. 603(b)(5)). Fishermen, dealers, and managers in these fisheries must comply with a number of international agreements as domestically implemented, domestic laws, and FMPs. These include, but are not limited to, the Magnuson-Stevens Act, the Atlantic Tunas Convention Act, the High Seas Fishing Compliance Act, the Marine Mammal Protection Act, the Endangered

Species Act, the National Environmental Policy Act, the Paperwork Reduction Act, and the Coastal Zone Management Act.

Section 603(c) of the RFA requires each IRFA to contain a description of any significant alternatives to the proposed rule which would accomplish the stated objectives of applicable statutes and minimize any significant economic impact of the proposed rule on small entities. Additionally, the RFA (5 U.S.C. 603(c)(1)–(4)) lists four general categories of significant alternatives that would assist an agency in the development of significant alternatives. These categories of alternatives are: (1) Establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) use of performance rather than design standards; and, (4) exemptions from coverage of the rule for small entities. In order to meet the objectives of this proposed rule, consistent with the Magnuson-Stevens Act, NMFS cannot exempt small entities or change the reporting requirements only for small entities because all the entities affected are considered small entities; therefore, there are no alternatives discussed that fall under the first, second, and fourth

categories described above. NMFS does not know of any performance or design standards that would satisfy the aforementioned objectives of this rulemaking while, concurrently, complying with the Magnuson-Stevens Act; therefore, there are no alternatives considered under the third category.

This rulemaking does not establish management measures to be implemented, but rather implements previously adopted and analyzed measures with adjustments, as specified in the 2006 Consolidated Atlantic HMS FMP and its amendments and the Environmental Assessment (EA) that accompanied the 2011 shark quota specifications rule (75 FR 76302; December 8, 2010). Thus, NMFS proposes to adjust quotas established and analyzed in the 2006 Consolidated Atlantic HMS FMP and its amendments by subtracting the underharvest or adding the overharvest as allowable. Thus, NMFS has limited flexibility to modify the quotas in this rule, the impacts of which were analyzed in previous regulatory flexibility analyses.

Based on the 2017 ex-vessel price (Table 3), fully harvesting the unadjusted 2019 Atlantic shark commercial baseline quotas could result in total fleet revenues of \$7,184,943. For the Gulf of Mexico blacktip shark management group, NMFS is proposing to increase the baseline sub-regional quotas due to the underharvests in 2018.

The increase for the western Gulf of Mexico blacktip shark management group could result in a \$79,243 gain in total revenues for fishermen in that sub-region, while the increase for the eastern Gulf of Mexico blacktip shark management group could result in a \$9,781 gain in total revenues for fishermen in that sub-region. For the Gulf of Mexico and Atlantic smoothhound shark management groups, NMFS is proposing to increase the baseline quotas due to the underharvest in 2018. This would cause a potential gain in revenue of \$581,718 for the fleet in the Gulf of Mexico region and a potential gain in revenue of \$1,323,867 for the fleet in the Atlantic region.

All of these changes in gross revenues are similar to the changes in gross revenues analyzed in the 2006 Consolidated Atlantic HMS FMP and its amendments. The final regulatory flexibility analyses for those amendments concluded that the economic impacts on these small entities are expected to be minimal. In the 2006 Consolidated Atlantic HMS FMP and its amendments and the EA for the 2011 shark quota specifications rule, NMFS stated it would be conducting annual rulemakings and considering the potential economic impacts of adjusting the quotas for under- and overharvests at that time.

TABLE 3—AVERAGE EX-VESSEL PRICES PER LB DW FOR EACH SHARK MANAGEMENT GROUP, 2017

Region	Species	Average ex-vessel meat price	Average ex-vessel fin price
Western Gulf of Mexico	Blacktip Shark	\$0.51	\$11.03
	Aggregated LCS	0.51	12.51
	Hammerhead Shark	0.67	11.67
Eastern Gulf of Mexico	Blacktip Shark	0.62	8.22
	Aggregated LCS	0.43	13.00
	Hammerhead Shark	0.55	12.80
Gulf of Mexico	Non-Blacknose SCS	0.38	8.68
	Smoothhound Shark	1.50	1.91
Atlantic	Aggregated LCS	0.95	11.47
	Hammerhead Shark	0.41	13.91
	Non-Blacknose SCS	0.96	7.33
	Blacknose Shark	1.05	7.33
No Region	Smoothhound Shark	0.70	1.63
	Shark Research Fishery (Aggregated LCS)	0.80	12.40
	Shark Research Fishery (Sandbar only)	0.50	12.40
	Blue shark	1.40	11.44
	Porbeagle shark*	1.54	2.82
	Other Pelagic sharks	1.52	2.82

* Used other pelagic shark ex-vessel prices for porbeagle sharks ex-vessel prices since there currently are no landings of porbeagle sharks.

For this rule, NMFS also reviewed the criteria at § 635.27(b)(3) to determine when opening each fishery would provide equitable opportunities for fishermen, to the extent practicable, while also considering the ecological

needs of the different species. The opening dates of the fishing season(s) could vary depending upon the available annual quota, catch rates, and number of fishing participants during the year. For the 2019 fishing year,

NMFS is proposing to open all of the shark management groups on the effective date of the final rule for this action (expected to be on or about January 1). The direct and indirect economic impacts would be neutral on

a short- and long-term basis because NMFS is not proposing to change the opening dates of these fisheries from the status quo.

Authority 16 U.S.C. 971 *et seq.*; 16 U.S.C. 1801 *et seq.*

Dated: September 5, 2018.

Samuel D. Rauch, III,
*Deputy Assistant Administrator for
Regulatory Programs, National Marine
Fisheries Service.*

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Atlantic States Marine Fisheries Commission

Spiny Dogfish Management Board

October 23, 2018
1:30 - 2:30 p.m.
New York, New York

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.

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| 1. Welcome/Call to Order (<i>R. O'Reilly</i>) | 1:30 p.m. |
| 2. Board Consent | 1:30 p.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from October 2017 | |
| 3. Public Comment | 1:35 p.m. |
| 4. Review 2018 Stock Assessment Update (<i>J. Didden</i>) | 1:45 p.m. |
| 5. Discuss Adjustments to Federal Commercial Trip Limit (<i>K. Rootes-Murdy</i>) | 2:00 p.m. |
| 6. Review and Set 2019-2021 Specifications Final Action | 2:10 p.m. |
| • Review Mid-Atlantic Fishery Management Council's Recommended 2019-2021 Specifications (<i>K. Rootes-Murdy</i>) | |
| • Set 2019-2021 Specifications (<i>R. O'Reilly</i>) | |
| 7. Review and Populate Advisory Panel Membership (<i>T. Berger</i>) Action | 2:20 p.m. |
| 8. Elect Vice-Chair Action | 2:25 p.m. |
| 9. Other Business/Adjourn | 2:30 p.m. |

The meeting will be held at the Roosevelt Hotel, 45 East 45th Street & Madison Avenue, New York, NY; 212.661.9600

MEETING OVERVIEW

Spiny Dogfish Management Board
October 23, 2018
1:30 – 2:30 p.m.
New York, New York

Chair: Rob O’Reilly (VA) Assumed Chairmanship: 10/17	Vice Chair: VACANT	Law Enforcement Committee Representative: Moran
Spiny Dogfish Technical Committee Chair: Scott Newlin	Spiny Dogfish Advisory Panel Chair: VACANT	Previous Board Meeting: October 16, 2017
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 2017

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

4. Review 2018 Stock Assessment Update (1:45 – 2:00 p.m.)
Background <ul style="list-style-type: none"> • An update of the 2006 benchmark stock assessment was completed in September. The assessment update includes several methods of data smoothing to address recent missing or variable annual NEFSC survey information. A three year averaging approach was applied to generate swept area biomass estimate. Based on the results, the stock is not overfished and overfishing is not occurring (Briefing Materials)
Presentations <ul style="list-style-type: none"> • Review 2018 Stock Assessment Update by J. Didden

5. Discuss Adjustments to Federal Commercial Trip Limit (2:00 – 2:10 p.m.)

Background

- In September, a request was made for the Board to consider eliminating the commercial federal trip limit. **(Briefing Materials)**
- In October, the Mid-Atlantic Council voted to maintain the federal trip limit at 6,000 pounds for 2019-2021 and consider adding an action to change the federal trip limit as part of the Council's 2019 priorities

Presentations

- Discuss Adjustments to Federal Commercial Trip Limit by K. Rootes-Murdy

6. Review and Set 2019-2021 Specifications (2:20 – 2:25 p.m.) Final Action

Background

- In October, based on the advice of the Mid-Atlantic Council's Scientific and Statistical Committee, Advisory Panel, and Spiny Dogfish Committee, the Council voted to set the 2019 commercial quota at 20.5 million pounds, a 46% reduction from the current quota of 38.2 million pounds. **(Briefing Materials)**

Presentations

- Review MAFMC Recommended 2019-2012 Specifications by K. Rootes-Murdy

Board Actions for Consideration at this Meeting

- Set the 2019-2021 Spiny Dogfish Specifications

7. Spiny Dogfish Advisory Panel Membership (2:20 – 2:25 p.m.) Action

Background

- Thomas Lyons from New Hampshire, Doug Feeney and John Whiteside from Massachusetts, and Scott McDonald from Virginia have been nominated to the Spiny Dogfish Advisory Panel.

Presentations

- Nominations by T. Berger **(Briefing Materials)**

Board Actions for Consideration at this Meeting

- Approve Spiny Dogfish Advisory Panel nominations

8. Elect Vice Chair

9. Other Business/Adjourn

Spiny Dogfish

Activity level: Low

Committee Overlap Score: low (some overlaps with Coastal Sharks)

Committee Task List

- TC – July 1st: Annual compliance reports due

TC Members: Scott Newlin (DE, TC Chair), Tobey Curtis (NOAA), Jason Didden (MAFMC), Lewis Gillingham (VA), Greg Skomal (MA), Mike Frisk (NY), Lisa Hollensead (NC), Eric Schneider (RI), Greg Hinks (NJ), Angel Willey (MD), Matt Gates (CT), Kathy Sosobee (NOAA), Michael Frisk (NY), Kirby Rootes-Murdy (ASMFC)

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

**The Marriott Norfolk Waterside
Norfolk, Virginia
October 16, 2017**

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, Chairman David V. Borden 1

Approval of Agenda 1

Approval of Proceedings, October 2016 1

Public Comment 1

Review and Set Specifications for 2018 and 2019 1

 Review Mid-Atlantic Council Action 1

Fishery Management Plan Review and State Compliance 4

 Plan Review Team Report 6

Other Business 6

Adjournment 8

INDEX OF MOTIONS

1. **Approval of agenda by consent** (Page 1).
2. **Approval of proceedings of October 2016 by consent** (Page 1).
3. **Move to adopt the 2018 commercial quota of 38,195,822 pounds, which is consistent with the commercial quota recommended by the Mid-Atlantic Fishery Management Council to NOAA Fisheries, and a 6,000 pound trip limit for the northern region** (Page 4). Motion by Eric Reid; second by Emerson Hasbrouck. Motion carried (Page 4).
4. **The Board recommends Commission support a spiny dogfish update and benchmark stock assessment at the NRCC** (Page 4). Motion by David Pierce; second by Rob O'Reilly. Motion carried (Page 4).
5. **Move to approve the 2017 FMP Review, state compliance and *de minimis* status requests from New York and Delaware** (Page 6). Motion by Doug Grout; second by John Clark. Motion carried (Page 6).
6. **Motion to adjourn** by consent (Page 8).

ATTENDANCE

Board Members

Sen. Brian Langley, ME (LA)	Tom Baum, NJ, proxy for L. Herrighty (AA)
Doug Grout, NH (AA)	Tom Fote, NJ (GA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	John Clark, DE, proxy for D. Saveikis (AA)
G. Ritchie White, NH (GA)	Roy Miller, DE (GA)
Rep. Sarah Peake, MA (LA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
David Pierce, MA (AA)	Rachel Dean, MD (GA)
Raymond Kane, MA (GA)	Ed O'Brien, MD, proxy for Del. Stein (LA)
Jason McNamee, RI, proxy for J. Coit (AA)	Mike Luisi, MD, proxy for D. Blazer (AA)
David Borden, RI (GA)	Rob O'Reilly, VA, proxy for J. Bull (AA)
Eric Reid, RI, proxy for S. Sosnowski (LA)	Cathy Davenport, VA (GA)
Colleen Giannini, CT, proxy for M. Alexander (AA)	Kyle Schick, VA, proxy for R. Stuart (LA)
Sen. Phil Boyle, NY (LA)	Chris Batsavage, NC, proxy for B. Davis (AA)
Emerson Hasbrouck, NY (GA)	David Bush, NC, proxy for Rep. Steinburg (LA)
Jim Gilmore, NY (AA)	Sherry White, USFWS
Adam Nowalsky, NJ, proxy for Asm. R. Andrzejczak (LA)	Peter Burns, NMFS

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

Ex-Officio Members

Robert Beal
Toni Kerns

Max Appelman

Guests

The Spiny Dogfish Management Board of the Atlantic States Marine Fisheries Commission convened in the Hampton Roads Ballroom V of the Marriott Waterside Hotel, Norfolk, Virginia, October 16, 2017, and was called to order at 3:04 o'clock p.m. by Chairman David V. Borden.

CALL TO ORDER

CHAIRMAN DAVID V. BORDEN: My name is David Borden; I'm the Chair of the Dogfish Board, and welcome to the meeting.

APPROVAL OF AGENDA

CHAIRMAN BORDEN: We have an agenda that has been distributed. Are there any changes, additions, deletions to the agenda? No hands up; anyone in the audience with comments on the agenda?

No hands up. Okay so we'll take the items in the order that they appear.

APPROVAL OF PROCEEDINGS

CHAIRMAN BORDEN: We have the proceedings of the last meeting. They are available; any comments on those? No comments; the proceedings stand approved.

PUBLIC COMMENT

CHAIRMAN BORDEN: Public comments, we afford the public the opportunity to comment on issues not on the agenda.

Does anyone in the public, no one signed up I would point out, but is there anyone in attendance here who would like to address the Board? No hands up.

REVIEW AND SET SPECIFICATIONS FOR 2018 AND 2019

CHAIRMAN BORDEN: The next issue is the Review and Set Specifications for 2018 and '19. The first thing we're going to do is review the Mid-Atlantic Council action. Max.

REVIEW MID-ATLANTIC COUNCIL ACTION

MR. MAX APPELMAN: I'm going to give a very brief bit of background; touch on to the AP Fishery Performance Report. We'll move into the data update, and then wrap up with recommendations of the SSC, the Monitoring Committee, and the Mid-Atlantic Council. If you listened in to the Council meeting last week, or participated in any level with the SSC or the Monitoring Committee, you'll realize this presentation is somewhat familiar.

Just a reminder, spiny dogfish is a jointly managed species. The interstate FMP is complementary to the joint Mid-Atlantic and New England Council management plan. Currently in federal waters, they're in the third year of a three-year-specification cycle. It goes from May 1, 2016 to April 30, 2019.

The ASMFC Management Board had gone one year at a time with these specifications; so today we'll be considering specs for the 2018 fishing season, which is May 1, 2018 to April 30, 2019. This is a look at the current federal three-year-specifications package; 2016 to 2018. It starts with your OFL and ABCs up at the top there, and you work your way down to the commercial quota.

You'll notice that there is a slight dip in the commercial quota through the course of these specifications; not by much, roughly a million pounds each year. The 2018 federal quota is 38.2 million pounds. The federal trip limit is set at 6,000 pounds. Moving on to the AP Performance Report, first off it is very similar to the last few years. It's pretty clear the market issues, market and demand issues are the big ticket items there. Domestic and foreign markets appear to be shifting away from shark products, and industry continues to look for new markets, new opportunities. This year in particular, Council staff has received a handful of phone calls from industry members seeking marketing help.

Those individuals have been directed to marketing assistant opportunities that exist; some state and other federal programs, Sea Grant being a good example of that. The AP has also discussed this year that processors are having a significant impact on price. To summarize that discussion very briefly, it seems that a lot of the processors bought a lot of dogfish product early in the season.

They held onto that product hoping that the price would go up; and that never really happened. As a result the price remained relatively low; which effectively reduced the amount of landings coming in. Another note from the AP Performance Report was discussion about the trip limit. There continues to be very differing opinions amongst Advisory Panel members.

Some feel that a substantial increase would stimulate other markets or fishing opportunities. Others are happy at the 6,000 pound limit, and fear that large increases would flood the market, flood processors. Then still some even favored slightly reduced trip limits. It seems that in the end, if any changes to the trip limits are considered, a small change would be sort of a compromise there.

Lastly, the Advisory Panel expressed a sense that the survey and assessment information that they've been seeing doesn't really reflect what they're seeing out on the water. There was a strong desire for a new benchmark assessment. I will note that this was echoed by the Monitoring Committee and partially by the SSC as well.

Moving on to the data update, this is a look at landings relative to the quota through time. You can see at the early part of the time series landings increasing steadily; along with the quota, up until about 2011, where they start to diverge. The quota continued to increase, and landings remained pretty flat.

It seems to be general understanding that this trend is due to market conditions; not so much

abundance or availability. Taking another look at landings, this is the rate of landings through time, so this is a screenshot from the GARFO quota monitoring page; this was taken just last week. I think it goes through the end of September.

The orange line here is the previous year, so May 1, 2016 through April of 2017, and then blue would be the current fishing year, May 1, 2017 and ending at the end of September. You can see they tracked pretty well; up until early August, at which point the landings rate seemed to drop off relative to last year. This is what I was mentioning earlier; the talk about the processors starting to affect the price of dogfish, and thus you can see landings starting to drop off with low prices.

This is a couple figures from the data update as well. This is a heat map; looking at where landings are coming from. This is based on matched dealer and VTR data; so it's only a portion of landings. But it gives us some insight as to whether or not there are any substantial changes in where dogfish landings are coming from in the most recent past. This is the first half of the year; January through June, the left hand figure is 2011 to 2013, compared to 2014 through 2016 on the right. The take home here is that not much has changed between those two periods of time. The hot spots are in the same relative areas off of Maryland it looks like there, up in the New York Bight, off of Jersey, southern Long Island, and then a couple hot spots off of Rhode Island and then Massachusetts.

This is the same figures. Now we're just looking at July through December. Again, 2011 to 2013 on the left, 2014 to 2016 on the right, and the same take-home message really, no substantial changes in where these landings are coming from during those two time periods. This is a look at the swept area biomass of mature females from the Spring Bottom Trawl Survey through time.

I'm going to direct you to the 2017 value, the last value there. It is pretty low; it's actually the lowest in the time series. That is concerning, but there are a few caveats to keep in mind here. First off is that this is a raw data value. It is not an output of an assessment model; which incorporates other information when estimating spawning stock biomass.

Then secondly, after reviewing this same information, the SSC and the Monitoring Committee appear to be under the understanding that this is more likely a change in availability rather than abundance; particularly given the life history of spiny dogfish, not really lending itself to rapid changes in biomass from one year to the next, and when we also consider the moderate amount of catches that have been coming in, in recent years.

To add to this what they are alluding to, this is a figure from the data update. It's showing long term density of survey catch relative to more recent, so the gray in both of these figures are the long term density of survey catches. Then the yellow and red on the left is 2016, and on the right is 2017. The takeaway from here is if you look at 2017, if you look off of Georges Bank you don't see any of that yellow and red, and you see a lot of it in 2016.

This seems to be a year-specific-availability issue. This is also seen in this anomaly, it was also seen in the NEMAP spring 2017 data as well. Lowest point in the time series, but the SSC and Monitoring Committee really want to see more investigation before jumping to any conclusions with that terminal year estimate.

It is my understanding that there is some preliminary work being done by the SSC; to look at some index standardization techniques that incorporate environmental data as well, some other habitat covariates to shed some light onto whether this survey really does track the availability or is it a good abundance index?

After reviewing that information, the data update, the AP report, the SSC recommended no changes to the 2018 specifications. They further requested an assessment update this time next year to inform the next round of specifications. The Monitoring Committee similarly recommended no changes to the 2018 specs, further stating that a benchmark would be very helpful in the near future.

Just last week the Mid-Atlantic Council heard the same information that I just presented, and similarly recommended no changes. They further supported the SSC and Monitoring Committee's request regarding the urgency of an assessment update and a benchmark assessment in the near future. The 2018 specs as of now in federal waters we'll be looking for a motion to approve specs. For state waters, our 38.2 million pounds, a little shy of 38.2 million pounds, and this is the state-specific and regional-specific breakdown. I'm going to leave this slide up on the screen. I'll take any questions, thank you, Mr. Chair.

CHAIRMAN BORDEN: Questions for Max? Are there any questions? Rob.

MR. ROB O'REILLY: Thank you, Max. I guess the information was flowing pretty freely there at the Council. Back when Dr. Pierce made a recommendation on how to sort of smooth over the problem that the survey had in 2015, I think it was. It ended up they used the Kalman Filter, do you happen to know if that is still the approach that they're using? I guess I'm asking, because you had a slide up there that indicated that the benchmark was preferred. But I think what was said ultimately was probably it may be an update. Can you confirm either of those points?

MR. APPELMAN: Yes, so the Kalman Filter was used. The last update was in 2015, and then the early 2016 the Science Center used that Kalman Filter with the newest year of data. That has not been used since the 2016 data point. There is talk, to the best of my knowledge there is talk of an assessment

update next year, but nothing is set in stone. Then further down the road there is communications with NRCC to get a benchmark on the 2019 schedule, I believe.

CHAIRMAN BORDEN: Rob.

MR. O'REILLY: I wanted to ask too. There were suggestions on a male-only fishery with the idea that the male dogfish will segregate, not completely, but they will segregate from the female dogfish. This has been sort of an ongoing situation for a couple of years at least. I think there was a paper.

I haven't looked at it yet. We got it Thursday. But I do remember Toby Curtis from National Marine Fisheries Service had provided information that yes, there was a possibility for that. But my understanding is that would have to go through the same, like a benchmark for that to be something to look forward to. I don't think that was explicitly stated last week, but maybe you know more about that Max.

MR. APPELMAN: My two cents is that the impacts of what a male-only fishery would be to the whole population would require deep investigation during a benchmark. But I haven't heard much coming. I think there are split opinions amongst the industry itself about whether a male-only fishery would benefit the market or anything of that nature. But as far as biologically speaking, biomass related, I think yes. We need to go through a benchmark for that.

CHAIRMAN BORDEN: Is there anyone else? No hands up. Are there any questions from anyone in the audience? If not, no hands up. Okay so we'll move on to the specifications. You basically heard what the Mid-Atlantic Council and the Mid-Atlantic SSC did. Would someone care to make a motion on this issue? Eric.

MR. ERIC REID: I would make a motion to move to adopt the 2018 quota of 38,195,822 pounds, which is consistent with the commercial quota recommended by the Mid-

Atlantic Fisheries Management Council to NOAA Fisheries, and a 6,000 pound trip limit for the northern region.

CHAIRMAN BORDEN: Do we have a second? Seconded by Emerson, discussion, any discussion? No discussion. **This normally requires a roll call vote, but if there is no objection we can do it by unanimous consent. Are there any objections? There are no objections; the motion stands approved without objection.** Okay so we're into the Fishery Management Plan Review.

DR. DAVID PIERCE: Mr. Chairman, David.

CHAIRMAN BORDEN: Dr. Pierce.

DR. PIERCE: Yes we did hear a summary of what the Mid-Atlantic Council did at the last meeting regarding the update and the benchmark assessment. Would you be looking for a motion that would provide our support for similar action?

CHAIRMAN BORDEN: I think that would be helpful. If you would like to do that make a motion.

DR. PIERCE: I'll do that. I'll make a motion that the Board supports the SSC and Mid-Atlantic Council request for a dogfish assessment update, and then a benchmark assessment.

CHAIRMAN BORDEN: Is there a second? Seconded by Rob, is there any discussion on the motion? **No hands up, any objections? The motion stands approved without objection.**

FISHERY MANAGEMENT PLAN REVIEW AND STATE COMPLIANCE

CHAIRMAN BORDEN: Move on to the Fishery Management Plan Review. Toni.

MS. TONI KERNS: I guess you would really make a recommendation to the Policy Board to do this. But I'm not sure we fully need, I mean we

can do a motion which tells the Policy Board that that is how you would like the timing, or this Board would like the timing for the stock assessment process to go.

It's also something that Bob, Pat and I can also reiterate at the NRCC; because this isn't just a Commission decision on when these assessments get done, it is a group decision that we make with the NRCC, we would bring that to them. It makes it a little bit different than our normal process. Normally anything for the assessment process would go to the Policy Board, but we aren't the final say on when this will be, since it's a group effort.

CHAIRMAN BORDEN: Toni is your suggestion we just add in that the Board recommend at the Policy Board? Is that the recommendation? Let me rephrase that. What are you recommending specifically?

MS. KERNS: Just recommend that Commission leadership support a spiny dogfish benchmark stock assessment at the NRCC. I think timing would be helpful of when you want this to be on the schedule.

CHAIRMAN BORDEN: Question then to Dr. Pierce and Rob. Your thoughts, is this change acceptable, David?

DR. PIERCE: My motion was to recommend that we support the SSC and Mid-Atlantic Council request for an assessment update, and then a benchmark assessment, so not just the benchmark assessment. That's my preference. But at least an update, because the last update I believe was in 2015, I think you said, so at least an update. The Northeast Fisheries Science Center is hard pressed to do stock assessment benchmarks, so at the minimum the update and then let's make sure they understand that we really would like that benchmark assessment ASAP.

Now if this is formality, the Board recommends Commission support. I'm not sure if this is the language that Toni was suggesting. Well this is

mine, except it's missing the update. The Board recommends the Commission support a spiny dogfish assessment update, and then a benchmark stock assessment. That was my motion, Mr. Chairman, so it's not reflected on the screen.

MS. KERNS: We want an update this coming year is what you're telling me.

CHAIRMAN BORDEN: We already approved the motion, the original motion. Unless we get the concurrence of the maker of the motion or the seconder on perfection, I'm reluctant to; I don't think we can change it, Rob, any comments?

MR. O'REILLY: Just that anything that can be done to ensure that that is followed. I think it was very tentative as to whether there would be a benchmark, and then the feeling was no, it's going to be an update. I think anyone who can push this forward so that the update is followed by the benchmark. I think that's really the point here.

CHAIRMAN BORDEN: Mike.

MR. MICHAEL LUISI: I'll speak as the Chair of the Mid-Atlantic Council. The NRCC meets on November 15, and that's when based on our meeting last week I'll be taking to the NRCC for our Council, the interest in doing an update. The update, in my opinion it's needed, because we need to get the next three-year specifications set.

I don't see there being a problem at all in the update. It's when that benchmark gets schedule. Those larger benchmark type updates or assessments are preplanned for the next few years. From the Council's perspective I'm going to go in and ask to have that put on the schedule as soon as possible; so it would be helpful to have the Commission thinking the same way.

PLAN REVIEW TEAM REPORT

CHAIRMAN BORDEN: All right, does anyone else want to propose anything on this? Then we're going to move on with the report, Plan Review Team report. Max.

MR. APPELMAN: This is a 2017 FMP Review for Spiny Dogfish. A lot of the information in this report was included in the previous presentation. To keep this short, I'll just be focusing on the compliance component. All the other stock status and fishery status information you can find in the report itself; it was provided in your meeting materials.

Just very briefly, the latest stock status information as we now know comes from the 2015 stock assessment update; which was updated again in 2016 using that Kalman Filter. That is what gives us our latest stock status information. Based on that in 2015, spiny dogfish is not overfished and overfishing is not occurring.

SSB is estimated at just over 168,000 metric tons, which is above the target. Fishing mortality estimated at 0.21, which is below the target. Moving on to the commercial quota and landings, so again the fishing season for this reporting period is May 1, 2016 to April 30, 2017. The base quota during that season was just over 40 million pounds, 40.4 million pounds. After accounting for eligible rollovers from the previous season, the effective quota was closer to 42.9 million pounds.

The trip limit for the northern region was set at 5,000 pounds; this increased to 6,000 pounds on August 15, following the notification of the federal trip limit increase. Commercial landings were just shy of 25 million pounds; which is actually a 13 percent increase relative to 2015. Dead discards also increased, as you would expect with an increase in landings.

Recreational landings increased as well; 161,000 pounds landed, and 1.4 million estimated dead discards. Combined this is a 1.5

fold increase relative to 2015, but when we look at the proportion to the total it's really a small number, especially when we think about the quota, so no red flags there.

State compliance and *de minimis*, the Review Team reviewed all the state compliance reports. In 2016 all regions and states harvested within their quotas, and all states implemented regulations consistent with the requirements of the management plan. Additionally, under the spiny dog FMP, a state may be granted *de minimis* upon request if its landings are less than 1 percent of the coastwide landings. New York and Delaware both requested *de minimis* and met those requirements for 2017. That concludes the FMP Review. I'll take any questions.

CHAIRMAN BORDEN: **All right, questions on the report, are there any questions? Is there any objection to approving the report as submitted? No objections; the report stands approved.** The last item is Other Business. Does anybody have anything to raise? Can't do it without unanimous consent?

MS. KERNS: I just need to see the motion on the board really quick, just so the Board knows that that was the motion. All right, does someone care to make this motion; Doug, and then John? Doug.

MR. DOUGLAS E. GROUT: **Move to approve the 2017 FMP Review, State Compliance and *de minimis* status requests from New York and Delaware.**

CHAIRMAN BORDEN: **Seconded by John Clark; discussion on the motion. Any objections to the motion, the motion stands approved without objection.**

OTHER BUSINESS

CHAIRMAN BORDEN: We're on to Other Business. Does anyone have anything under other business? I have one item; it will only take like one minute. I talked Rob O'Reilly

assumes the Chairmanship of the Committee, and that will start at the next meeting.

One thing that I've been a little bit uncomfortable with about the proceedings of the Board, kind of over the last two years is we have a tendency to not discuss dogfish all year, and then come to this meeting and basically listen to the AP report, which usually comes from the Mid-Atlantic Council.

Whatever input we get from our individual state representatives. But we really don't get into a discussion of the pros and cons of different strategies that we might use to alter the dogfish regulations. My suggestion is rather than just keep repeating this, and I think Rob agrees with this. He can speak to it if he does not. It would be beneficial to add dogfish to the winter meeting, and then have each of the states basically go out between now and then, talk to your own industry. Ask them what works, what doesn't work, what we might change and so forth? Then carry on maybe on an hour discussion at the winter meeting; to see whether or not there are some common ideas that we might foster along during the period between now and a year from now.

Just so everyone is clear, a lot of the suggestions have been made about issues like trip limit being higher. Some people have suggested the trip limit ought to be lower. Having multiple trip limits. There are area-specific needs. In other words, if you look at the needs of a Chatham dog fisherman, they might be very different than the needs of a Virginia fisherman or a Maine fisherman, because of the transportation cost to get to the processing facilities.

We talked about marketing issues, product quality issues, and we can go back. We can have the staff go back and look at what the AP has said over the years, and kind of summarize those comments and circulate those if that would help. Let me just ask, is there any objection to doing that?

Does anyone around the table object to it? If you don't object to it then what we'll do is we'll send out a memo, and basically kind of summarize that in a memo. Then we'll put it on the agenda, and there will be a discussion. There won't be any proposed action. This is just for discussion purposes. Toni.

MS. KERNS: No objection, David, just if the winter meeting ends up being quite full, it's only a three-day meeting right now. If we hold off for that meeting until May, we would still have the ability to make recommendations for the SSC and the Monitoring Committee to explore any recommendations that would come out of the Board. Would it be okay if the timing were either the winter or the spring meeting?

CHAIRMAN BORDEN: Chairman elect, is that agreeable to the Chairman elect?

MR. O'REILLY: I don't know how much interest there would be, Mr. Chair. But it would be good to have a working group in advance of the May meeting to just have, even if it's a phone conversation that we could have with several who would be interested; because what you outlined are the types of events and issues and problems that I've listened to over the last several years.

I do think that we can probably avail ourselves of more of that information to make decisions. I'm hoping there would be a workgroup that would get together in the wintertime, and maybe even get here early before the meeting starts and flesh out some of this information.

CHAIRMAN BORDEN: Is there any objections to Rob's suggestion? If not the next Chairman of the Dogfish Committee is going to convene a working group to develop this. We look forward to your actions on this, Rob. Is there any other business to come before the Board? Yes. David Pierce.

DR. PIERCE: Well, on that particular initiative. Mr. Chairman, I certainly don't object to it. However, we do get a lot of input from the

spiny dogfish industry in Massachusetts before we come to this meeting; to get a better understanding as to what is going on, what's happening, what's going right, what's not going right. Frankly, I've been doing this now for quite a few years, and every year it seems to be the same thing in terms of what's missing, such as price. The dogfish are there in large numbers, but price is just not there so catch is down.

I'm not exactly sure what the working group is going to come up with. We've heard these discussions about increasing the limits or weekly limits. It's nothing new there. If a working group is going to be established to delve deeper into how to improve dogfish management that's okay.

I just wish that there were more processors for dogfish in other states and that the price would be reasonable. Otherwise, if those things don't change more processors and a better price, I think we're going to see the same situation year in and year out regarding spiny dogfish that is landings much lower than they could be or should be. I guess we'll be part of that working group, Mr. Chairman when it's set up.

ADJOURNMENT

CHAIRMAN BORDEN: Thanks David. Is there any other business to come before the Board? If not, meeting adjourned.

(Whereupon the meeting adjourned at 3:38 o'clock p.m. on October 16, 2017)

Update on the Status of Spiny Dogfish in 2018 and Projected Harvests at the Fmsy Proxy and Pstar of 40%

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Scientific and Statistical Committee
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Executive Summary

The purpose of this report is to summarize the most recent information on the status of spiny dogfish (*Squalus acanthias*) in 2018. Information on the NEFSC spring bottom trawl survey trends and total removals are provided along with an analysis of estimated stock size, fishing mortality rates, and projections of stock size under varying fishing mortality rates. Four implementations of the stochastic estimator were evaluated and the two that were adjusted for the Kalman smoother were rejected because they gave unrealistic estimates. Including 2017 in the starting conditions was chosen because there is no a priori reason (i.e. late or partial survey) to omit the survey index in the three-year average. The recommended spiny dogfish population status is therefore not overfished and overfishing is not occurring based on stochastic estimates for 2016-2018, not Kalman adjusted. The SSB estimate is 106.8 kt compared to an SSB_{threshold} of 79.6 kt while the fishing mortality estimate is 0.202 compared to an Fmsy proxy of 0.2439.

US commercial landings decreased by 9% from 12,097 in 2016 to 10,949 mt in 2017. Canadian landings were <50 mt per year for 2016 and 2017. The recreational, Canadian and foreign fleets in 2017 collectively accounted for only 130 mt. Total landings since 2011 have averaged 10,125 mt.

Total discards in 2017 of 7,508 mt were the lowest in the time series. Total dead discards in 2017 of 3,247 mt were the lowest since 2000 and the second lowest value in the time series. The ratio of dead discards to landings over the last three years has been about 0.33, suggesting a general improvement in the utilization of the spiny dogfish resource (ie. landings/catch).

Overall survey abundance, measured as a 3 yr moving average of NEFSC spring bottom trawl survey indices increased 26% between 2017 and 2018 (Table 7). The 2017 survey abundance index may have been anomalously low since all size groups and sexes decreased by average of 63%. Such decreases are unlikely in a population subject to relatively low fishing mortality and exhibiting relatively slow growth and recruitment, irrespective of fishing intensity. The 3-yr average of the mature female swept area biomass estimates was 112 kt in 2017 and decreased to 102 kt in 2018 because the 2018 value, although higher than 2017, replaced the higher 2015 value in the three-year average.

The female SSB estimates for 2018 range from 77.2 kt with 2017, Kalman adjusted, included and 181.1 without 2017, Kalman adjusted. Both values without the Kalman adjustment are above the SSB_{threshold}. The application of the Kalman filter including 2017 followed the 2017 index down and was probably not realistic. The application of the Kalman without 2017 ignores the 2017 data point and results in a smoother trend. However,

the biomass estimates from this may be overly optimistic. Estimated fishing mortality rates in 2017 for females ranged from 0.124 without 2017, Kalman adjusted, and 0.302 with 2017, Kalman adjusted.

This report examines harvest scenarios using 4 starting conditions and two control rules. The first set of projections, using the 4 starting conditions, is based on fishing mortality rates at the F_{msy} proxy (0.2439) while the second set is based on iterative application of the Pstar control rule. The Pstar method assumes that the OFL is lognormally distributed with a CV of 100%. The probability of exceeding the target F is set at 40% when the stock is above B_{msy} and declines linearly as the ratio of current SSB to target SSB declines. Median projected catches for 2019 to 2022 increase under all scenarios and the female SSB is expected to increase under all scenarios during this period.

Background

This report draws heavily on the results of the last peer-reviewed stock assessment vetted at SARC 43 in 2006, assessment model described in Rago and Sosebee (2009), and a revision of the biological reference points for spiny dogfish described in Rago and Sosebee (2010). The revised biomass reference points were peer-reviewed by the Transboundary Resource Assessment Committee in April 2010. The revised biological reference points required an update of the size and sex-based selectivity estimates of the fishery. Previous biomass reference points for spiny dogfish were based on a Ricker stock-recruitment model derived from Northeast Fishery Science Center trawl survey data. SSB_{max} , the biomass that results in the maximum projected recruitment, was the proxy for B_{MSY} . The revised biomass reference point incorporated additional information on the average size of the recruits as an important explanatory variable. A hierarchical AIC-based model building approach was used to identify the best model. Comparisons of maximum likelihood and robust nonlinear least squares regression models suggested that the robust estimator had the lowest AIC and highest precision for the estimate of SSB_{max} .

The revised target reference point, expressed in terms of average weight (kg)/tow of female spiny dogfish greater than 80 cm, is estimated as 30.343 kg/tow. Conversion of this metric to swept area biomass depends on the average swept area per tow, i.e., the trawl footprint. Using a value for the footprint based on gear mensuration suggested that a footprint of 0.0119 nm² is more appropriate. The swept area biomass target (SSB_{max}) corresponding to this footprint is 159,288 mt. Applying the convention defined in the current control rule in the Spiny Dogfish Fishery Management Plan, the threshold biomass is one half of the target or 79,644 mt. Based on this biomass reference point and using the trawl footprint of 0.0119 nm², the US spiny dogfish resource was rebuilt in 2008 when the swept area female spawning stock biomass was 194,616 mt.

The fishing mortality rate of 0.2439 was estimated using the projection model and finding the fishing mortality that results in the SSB_{max} described above at equilibrium (Rago 2011). These analyses and results were reviewed and approved on August 19, 2011 by the SSC.

Commercial Data

This document summarizes the most recent catch data through 2017. Landings data include landings from US and distant water commercial fisheries, and US recreational landings. Discard information includes discards from US commercial fisheries and US recreational fisheries. Estimates of dead discards are obtained by multiplying the total discards, estimated by the SBRM approach, by the gear-specific discard mortality rates.

Recreational landings and discards were obtained from the Marine Recreational Information Program (MRIP) <http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/index>. These recreational

catches were not updated with the new MRIP numbers. Canadian and distant water landings were obtained from the Northwest Atlantic Fisheries Organization (NAFO) catch statistics database (<https://www.nafo.int/Data/STATLANT>) for both spiny dogfish and unclassified dogfishes for NAFO Subareas 2-4.

US commercial landings in 2017 decreased 9% from 12,231 mt in 2016 to 11,079 mt in 2017 (Table 1, Fig. 1). Recreational landings and distant water fleet landings were negligible, totaling only 49 mt. Canadian landings have been less than 100 tons since 2011.

The precision of the recreational landings (catch types A and B1) in 2017 was relatively poor with Proportional Standard Errors of 28.9 and 52.2% respectively, although better than in 2016 (67.3 and 73.4%) (Table 2). The precision of the discarded dogfish estimates (B2) was much better at 16.6%.

The primary sources of commercial discards are otter trawls (5,451 mt; CV=7.6%) and sink gill nets (881 mt; CV=13.6%). Discards of spiny dogfish by scallop dredges (75 mt; CV=12.0%) and long lines (185 mt; CV=26.6%) are less important (Table 3). Additional estimates of precision of discard estimates by gear and sex may be found in Appendix 1.

Total discards in 2017 of 7,508 mt were 28% less than the 10,437 in 2016 (Table 4, Fig. 2). Similar patterns were observed for dead discards. The ratio of dead discards to landings of 29% in 2017 was the lowest value since 2000. The ratios of total discards to landings and total dead discards to landings exhibit a generally declining trend since 2004 (Fig. 3). The patterns suggest a continuing trend of improved utilization of the spiny dogfish resource. The total catch estimate in 2017 of 14,326 mt (Table 4) was about 62% of the 2017 ABC of 23,045 mt.

Biological samples collected by port agents are used to estimate the size and sex composition of the spiny dogfish landings (Table 5). Overall landings are dominated by females, a trend that has persisted since the US EEZ fishery began (Fig. 4). Most fishing takes place near shore where females are more abundant (Appendix 2).

The fraction of male dogfish in the landings decreased in 2017 to about 4%. This is more in line with the percentage in the previous decade of 4 to 9%, compared to the 18% of 2015. The average weights of male dogfish landed in 2017 were similar to recent averages compared to the average weight in 2015 while the female average weight declined to a value similar to 2015.

About 4.2 million spiny dogfish were landed in 2017. This was a decrease of about 9% in total numbers landed (Table 5). This was the same decrease observed in the total weight of landings.

The sex ratios of discarded fish are dominated by females, but represent only 60% of total discards by weight in 2017 (Table 6, Fig. 4). This difference, compared to landings, is likely due to the much higher rate of discarding of male fish. On a numerical basis, about 79% of the female dogfish caught in 2017 were landed (Tables 5 and 6). In contrast, only about 23% of male dogfish caught were landed.

Survey Data

The Northeast Fisheries Science Center (NEFSC) bottom trawl survey was completed on time in 2017 and 2018 but delayed in 2016 while all of the core survey strata were completed. In contrast, mechanical problems on the *Draft Working Paper for Predissemination Peer Review Only*

FSV Bigelow in 2014 not only delayed the NEFSC spring bottom trawl survey but also resulted in the loss of critical survey strata in the Mid-Atlantic region. The potential effects of the delay in survey timing in 2016 on the abundance indices are unknown.

Survey estimates of relative abundance were converted to Albatross-equivalent estimates using the methods described in Miller et al. (2010).

Female spawning stock biomass estimates, using a three-point moving average, exceeded the female spawning stock biomass target (159,288 mt; Rago and Sosebee 2015) from 2009 to 2015. The biomass estimates increased in 2016. Swept area abundance estimates for both male and female spiny dogfish decreased in 2017 compared to 2016 (Table 7, Fig. 5). The female SSB estimate for 2017 of 24.4 kt was the lowest in the time series. However, all size and sex classes decreased, which likely indicates a year specific availability. The spatial distribution for 2017 is very different than 2016 with almost no dogfish caught on Georges Bank (Appendix 3). The distribution in 2018 is similar to that of 2017, however, the total catch was higher (Table 7). The 3-yr average of the mature female swept area biomass estimates was 112 kt in 2017 and decreased to 102 kt in 2018 because the 2018 value, although higher than the 2017 value, replaced the higher 2015 value in the three-year average.

Pup production (Fig. 6) in 2017 was below both the long term mean and median values but increased to near the median value in 2018. The ratio of mature males to mature females increased five-fold (Fig. 7) in 2017 but decreased to values similar to that of 2013 in 2018. The increase in 2017 may have been a year specific effect. The mean length of mature females has been relatively stable since 2011 above the average of 1997-2003 when recruitment was low (Fig. 8). The mean length of pups (Fig. 9) in 2017 and 2018 was above the long term mean and median values and well above the average of 1997-2003 when recruitment was low.

Stochastic Estimates of Biomass and Fishing Mortality

The simple arithmetic average of stock size does not incorporate sampling variations in the underlying survey data or uncertainty in the size of the footprint of the average trawl tow. A stochastic estimator of spawning stock biomass and fishing mortality for female dogfish was described in SARC 43. Computational details on this estimator may be found in Rago and Sosebee (2009). The stochastic estimator incorporates uncertainty in the sampling observation (ie. the variance of the relative abundance index) of a 3 yr average and variation in the survey footprint (Appendix 1). Additionally, the Kalman filter was applied to smooth the survey biomass estimates as described in Rago (2015) and accepted by the SSC in 2015. Two different filters were applied for the 2016-2018 estimate. The Kalman was run with the 2017 survey index included and without the 2017 survey index (Figure 10). When the 2017 survey index was included, the smoother followed the low value for 2017 (adjustment of 0.72). Without the 2017 value included, the trend was much smoother and appeared more realistic for a long-lived species like spiny dogfish (adjustment of 1.22).

The estimator for fishing mortality is based on the ratio of total catch and swept area biomass. Ostensibly this assumes that the trawl is 100% efficient in capturing dogfish between the wings. Alternatively, it implies that the trawl is about 50% efficient in capturing dogfish between the doors. Dogfish in schools are known to herd between trawl doors. An external mass balance model was first applied at SARC 43 and was updated in Rago and Sosebee (2009). The mass balance model supported the biomass estimates based on simple swept area concepts. However, it is acknowledged that this is a source of uncertainty in the assessment and subject to change at a future benchmark assessment. Importantly, information provided by Sagarese et al. (2014, 2015) will be helpful for refining estimates of relative abundance and incorporating covariates that may elucidate the

role of environmental fluctuations on abundance estimates. The fishing mortality estimates incorporate uncertainty in the biomass as well as landings and discards. Variance estimates of discards by gear type and sex are computed for trawls, gillnets and recreational catch (Appendix 1).

The female SSB estimates for 2018 range from 77.2 kt with 2017, Kalman adjusted, included and 181.1 without 2017, Kalman adjusted (Tables 8a and 8b). Both values without the Kalman adjustment are above the $SSB_{\text{threshold}}$. The application of the Kalman filter including 2017 followed the 2017 index down and was probably not realistic. The application of the Kalman without 2017 ignores the 2017 data point and results in a smoother trend. However, the biomass estimates from this may be overly optimistic. The variability of the biomass estimates for 2015-2017 (2016-2018 as terminal year of average) have decreased from 2015 to 2017 (Fig. 11a). If 2017 is not included, the variability is increased for both 2016 and 2017 (Fig. 11b). The application of the Kalman for 2017 increases the variability more both including and excluding 2017 (Fig. 11c). Comparison of female spawning stock biomass estimates for the raw data, 3 yr average and stochastic estimators (Fig. 12) show how the observation error in the surveys tends to smooth the inter-annual changes compared to the simple 3 point moving average, particularly if 2017 is omitted from the estimate. Three of the four estimates are above the $SSB_{\text{threshold}}$ value of 79.644 kt. The application of the Kalman with 2017 is just below the $SSB_{\text{threshold}}$.

Inclusion of the 2017 biomass estimate increased the variability in both the stochastic biomass estimate and the stochastic estimate of F in both 2016 and 2017 (Fig. 13). Estimated fishing mortality rates in 2017 for females ranged from 0.124 without 2017, Kalman adjusted, and 0.302 with 2017, Kalman adjusted (Table 9). Three of the four estimates are below the F_{msy} proxy of 0.2439. The application of the Kalman including 2017 is above the F_{msy} proxy.

In the mid 1990's F on fully recruited spiny dogfish was about 2 to 3 times greater than contemporary rates and a greater fraction of the mature female population was vulnerable to fishing mortality (Fig. 14). The reduced rate of fishing mortality and shift in selectivity led to major reductions in the overall force of mortality on the population. Fishing mortality rates on male dogfish are negligible (<0.01).

Harvest Scenarios

Stock projections are based on a stochastic model that incorporates uncertainty in initial population size. Uncertainty in population size is derived by consideration of sampling variability of a 3 year average abundance, and uncertainty in the average area swept per tow. The effects of harvest policies are estimated using length-based sex-specific projection model that has been used for catch and status projections since 2003. (See Rago and Sosebee, 2009 for a summary and example. Other examples in NEFSC 2003, and 2006).

In addition to specifying target fishing mortality rates and/or quotas, it is necessary to specify a number of key assumptions about future fisheries. The key assumptions include:

- All life history parameters, especially those related to reproduction are effectively constant
- Selectivity patterns in the fishery remain the same over time.
- Discard patterns and proportions of total catch remain constant over time
- Recent recruitment trends will continue and that the low recruitment period from earlier will not return
- The relationship between male and female fishing mortality rates scales directly with the magnitude of female fishing mortality. When F_s are increased to the F_{msy} proxy (0.2439) it is assumed that the F on males would increase proportionally.

Commercial landings in 2018 were prorated to the commercial landings for the same time period (as of August 7) in 2017 which gave an estimate of 4,506 mt. Recreational landings were assumed to be the same as in 2017 (80 mt) and added to the commercial. If the ratio of landings to discards was assumed to be the same as in 2017, this would give a catch of 5,955 mt. This value seemed a bit low and gives an estimate of discards of less than 2000 mt, so the assumption was made that discards were the same magnitude as in 2017 (3,247). This gave a total catch of 7,833 mt for 2018.

Starting conditions were based on the three-year average length frequencies using the same four assumptions regarding 2017 described in the stochastic estimates section. The implications of these assumption are illustrated in Table 10, which demonstrates that there is less than a 25% chance that the fishing mortality rate would exceed the Fmsy proxy in 2018 with a less than 1% for three of the options (all except inclusion of 2017, Kalman adjusted). However there is between <1% and about 70% chance that the population would exceed the Bmsy proxy of 159 kt, depending on the starting conditions. If 2017 is included, there is about a 10% chance that the SSB in 2018 will be below the SSBthreshold if the Kalman is not used and a >50% chance if the Kalman adjustment is made. Starting with values including 2017 but not adjusted for the Kalman gives less than 1% chance of exceeding the Bmsy proxy. The scenario planning horizon was 20 years (2018-2037). The longer term projections should be viewed as informative of potential trends, but the absolute values are less reliable. Longer term trends are useful for comparing the likely state of the resource after a sustained harvest period.

F-based scenarios with $F = F_{msy} \text{ proxy} = 0.2439$ were used to create sampling distributions of catch (Fig. 15a-d top left), total landings (Fig. 15a-d top right), female SSB (Fig. 15 a-d bottom left) and fraction of the SSB target (Fig. 15a-d bottom right) for the four starting conditions. The mean fishing mortalities, catches, landings, discards, female SSB and probabilities of being below the target and threshold SSB and over the fishing mortality threshold and target are given in Tables 11a-d. The percentiles of the total catch, landings, discards and female SSB for 2019-2022 are given in Tables 12a-d.

The ABC projections based on the application of the Pstar risk strategy were run for each of the starting conditions described above. The Fmsy proxy was used to estimate the OFL in year $t=2019$ by assuming that the catch in 2018 was 7,833 mt. A Pstar value was estimated based on the SSC's control rule for typical stocks, adjusted for the relative fraction of the population biomass to Bmsy. The OFL was assumed to be distributed lognormally with a 100% CV. The resulting ABC was substituted back into the projection model as a quota, and the OFL for the next year was computed. The OFL was then used to derive a new ABC and the process was repeated. The same assumptions about 2018 fishery were used to initialize these projections. Details on the iterative estimation of ABCs using the OFLs estimated from the iterative procedure are summarized in the text tables below.

Starting with 2016-2018 survey, no Kalman adjustment

Year	OFL(F)	B/Bmsy	Pstar	ABC			frac Male	frac Fem
				Total	Males	Females		
2018				7,833	964	6,869	0.1231	0.8769
2019	21,549	0.7059	0.2693	12,914	1,589	11,325		
2020	23,309	0.7159	0.2737	14,126	1,739	12,387		
2021	25,077	0.7656	0.2958	16,043	1,975	14,068		
2022	26,777	0.9498	0.3777	20,660	2,543	18,117		

Starting with 2016 and 2018 survey, no Kalman adjustment

Year	OFL(F)	B/Bmsy	Pstar	ABC			frac Male	frac Fem
				Total	Males	Females		
2018				7,833	964	6,869	0.1231	0.8769
2019	26,933	0.9717	0.3874	21,226	2,613	18,614		
2020	28,366	0.9481	0.3769	21,850	2,689	19,160		
2021	29,741	0.9718	0.3875	23,441	2,885	20,556		
2022	30,989	1.1284	0.4000	25,096	3,089	22,007		

Starting with 2016-2018 survey, Kalman adjustment

Year	OFL(F)	B/Bmsy	Pstar	ABC			frac Male	frac Fem
				Total	Males	Females		
2018				7,833	964	6,869	0.1231	0.8769
2019	16,405	0.4995	0.1775	7,596	935	6,661		
2020	17,833	0.5157	0.1847	8,448	1,040	7,408		
2021	19,290	0.5609	0.2049	9,711	1,195	8,516		
2022	20,725	0.7060	0.2694	12,423	1,529	10,894		

Starting with 2016 and 2018 survey, Kalman adjustment

Year	OFL(F)	B/Bmsy	Pstar	ABC			frac Male	frac Fem
				Total	Males	Females		
2018				7,833	964	6,869	0.1231	0.8769
2019	33,609	1.2093	0.4000	27,218	3,350	23,868		
2020	35,283	1.1748	0.4000	28,573	3,517	25,057		
2021	36,805	1.1957	0.4000	29,806	3,668	26,138		
2022	38,230	1.3834	0.4000	30,960	3,810	27,149		

The ABC values in the text tables vary both from the means in Table 13 and the medians in Table 14 because they are the values input into the projections while the outputs include some variance around them. Figures 15 and 16 illustrate the expected increases in uncertainty over time. The expectations for SSB (bottom panels) are particularly instructive for selection of harvest policies. In the short term, under the Fmsy scenarios, the SSB will be stable through 2021, increase through 2024 followed by a decline. The last four columns of Tables 11 and 13 include important information for the comparison of alternative harvest scenarios. Estimates of the probability of falling below the target and below the threshold biomass targets can be used to evaluate the risk of initiating a rebuilding program in future years or other management measures. The last two columns provide estimates of the probabilities of F exceeding the overfishing limit and the target F. These considerations are

relevant only for quota based policies. Decrease in stock size may occur from 2024 to 2031 but current runs suggest the stock, once it has increased, has a low probability of declining below the threshold biomass.

The Pstar harvest based policy is evaluated in Tables 13 and 14. Median projected catches for 2019 to 2022 increase under all scenarios (Table 14). The female SSB is expected to increase by 2022 under all scenarios during this period.

A summary of the pertinent statistics for the eight projection is given in Table 15.

Conclusions

The SSC accepted the use of the Kalman for smoothing the survey data for input into the projections in 2015. With the update of the assessment, it is clear that the application of the Kalman has had some unexpected consequences, both positive and negative. If 2017 is included, the status of dogfish becomes overfished, because there is a large adjustment factor. Excluding 2017 and adjusting suggests the stock is above SSBtarget. These two scenarios should be eliminated from consideration. In addition, omitting 2017 does not seem to be justified, given the distribution in 2018 seems to be very similar (Appendix 3). Therefore, the set of projections that should be recommended are those with 2017 and not Kalman adjusted.

Sources of Uncertainty

1. The long term dynamics of spiny dogfish are an important guide for structuring harvest scenarios. The current size structure and sex ratio of the population have important implications for stock dynamics over the next decade. However, it should also be noted that long-term forecasts are inherently uncertain. The history of this resource during periods of high exploitation is informative about the magnitudes of likely fishing mortality rates. Changes in average size in both the surveys and landings suggest that the magnitude of population biomass from the swept area computations is approximately correct.
2. Scientific advice on catch levels for spiny dogfish needs to be carefully crafted. A longer term perspective is necessary to ensure that the transient effects of the current population size and sex structure are considered over a period of several decades. At the same time, such longer term projections become increasingly uncertain and are driven by the assumptions used to model the stock dynamics. It is imprudent to look at short term changes in harvest levels without considering the longer-term implications.
3. Recent changes in survey-based abundance suggest that changes in availability play an important role in abundance indices. As the male population is largely unexploited, it may offer additional insights into changes in availability to the survey since inter-annual changes in the male component of the stock should be less variable. The sharp decrease in survey abundance in 2017 may represent decreased availability to the survey area or concentrations of the resource in smaller offshore strata. Such changes in resource allocation are, in theory, not expected to alter abundance indices. However, even slight changes in catchability among strata and high sampling variability could lead to very high or low abundance estimates in a given year. Publications by Sagarese et al. (2014) are relevant to the issues of changing distributions.

4. Changes in discard patterns could become extremely important. In 2017, discard mortality presently constitutes 77% of fishing mortality by number on male dogfish and 23% by number on females. The male population is at or near historic highs, but its low marketability and offshore distribution reduce the chances of male dogfish contributing significantly to future landings. All of the projections described herein assume that there will not be major increases in male dogfish landings. While the sex ratio of mature male to mature female dogfish declined through 2007, it appears to be increasing slightly since then and is higher than expected (Fig. 6). A targeted fishery to land male dogfish would not be detrimental to the population in the short run but the consequences for changes in selectivity for co-occurring female populations should be evaluated.
5. The landings in 2018 overall are assumed to be much lower than 2017 with the same magnitude of discards. If this changes with more landings or more discards occurring during the rest of the year, the projections will be overly optimistic.

Other important source of uncertainty include

- a. Potential changes in fishery selectivity. Large increases in catches could induce changes in the overall selectivity pattern in the fishery.
- b. Implications of changing selectivity on estimation of biological reference points
- c. Potential inconsistency between the life history based estimates of fishing mortality rates and the biomass reference points derived from the Ricker stock recruitment curve.
- d. Total discard estimates AND estimated mortality of discarded dogfish.

References

- Miller TJ, Das C, Politis PJ, Miller AS, Lucey SM, Legault CM, Brown RW, Rago PJ. 2010. Estimation of Albatross IV to Henry B. Bigelow calibration factors. Northeast Fish Sci Cent Ref Doc. 10-05; 233 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026. <http://www.nefsc.noaa.gov/publications/crd/crd1005/>
- Rago, PJ 2011. Estimation of an Fmsy proxy reference point for spiny dogfish. Report to the MAFMC SSC, August 10, 2011. 30 p.
- Rago, PJ. 2015. Evaluation of alternative smoothing options for spiny dogfish abundance indices. Report to MAFMC SSC. November 22, 2015. 28 p.
- Rago, PJ and KA Sosebee. 2009 The Agony of Recovery: Scientific Challenges of Spiny Dogfish Recovery Programs. pp 343-372. *In* V. F. Gallucci, G. A. McFarlane and G. G. Bargman eds. Biology and Management of Dogfish Sharks. American Fisheries Society, Bethesda Maryland.
- Rago PJ and KA Sosebee. 2010. Biological Reference Points for Spiny Dogfish . Northeast Fish Sci Cent Ref Doc. 10-06; 52 p. <http://www.nefsc.noaa.gov/publications/crd/crd1006/>
- Rago PJ and KA Sosebee. 2010. Update on the status of spiny dogfish in 2010 and initial evaluation of alternative harvest strategies. Report to MAFMC SSC September 20, 2010. 35 p.

Draft Working Paper for Predissemination Peer Review Only

- Rago PJ and KA Sosebee. 2015. Update on the Status of Spiny Dogfish in 2015 and Projected Harvests at the Fmsy Proxy and Pstar of 40%. Report to MAFMC SSC August 26, 2015. 65 p.
- Rago, PJ, KA Sosebee, JKT Brodziak, SA Murawski, and ED Anderson. 1998. Implications of recent increases in catches on the dynamics of Northwest Atlantic spiny dogfish (*Squalus acanthias*). Fisheries Research 39:165–181.
- Sagarese,SR, Frisk, MG, Cerrato, RM, Sosebee, KA, Musick, JA, Rago, PJ, and Trenkel, V. 2014. Application of generalized additive models to examine ontogenetic and seasonal distributions of spiny dogfish (*Squalus acanthias*) in the Northeast (US) shelf large marine ecosystem. Can. J. Fish. Aquat. Sci. 71:847-877.
- Sagarese,SR, Frisk, MG, Cerrato, RM, Sosebee, KA, Musick, JA, andRago, PJ. 2015. Spatiotemporal overlap of spiny dogfish (*Squalus acanthias*) and commercial fisheries in the northeast U.S. shelf large marine ecosystem. Fish. Bull . 113:101-120.

Table 1. Total spiny dogfish landings (mt, live) in NAFO Areas 2 to 6, 1962-2017.

Year	United States		Canada	Distant Water Fleets	Total Landings
	Commercial	Recreational			
1962	235		0	0	235
1963	610		0	1	611
1964	730		0	16	746
1965	488		9	198	695
1966	578		39	9,389	10,006
1967	278		0	2,436	2,714
1968	158		0	4,404	4,562
1969	113		0	9,190	9,303
1970	106		19	5,640	5,765
1971	73		4	11,566	11,643
1972	69		3	23,991	24,063
1973	89		20	18,793	18,902
1974	127		36	24,513	24,676
1975	147		1	22,523	22,671
1976	550		3	16,788	17,341
1977	931		1	7,199	8,131
1978	828		84	622	1,534
1979	4,753		1,331	187	6,271
1980	4,085		660	599	5,344
1981	6,865	1,493	564	974	9,896
1982	5,411	70	389	364	6,234
1983	4,897	67		464	5,428
1984	4,450	91	2	391	4,935
1985	4,028	89	13	1,012	5,142
1986	2,748	182	20	368	3,318
1987	2,703	306	281	139	3,429
1988	3,105	359	1	647	4,112
1989	4,492	418	167	256	5,333
1990	14,731	179	1,309	393	16,611
1991	13,177	131	307	234	13,848
1992	16,858	215	868	67	18,008
1993	20,643	120	1,435	27	22,225
1994	18,798	155	1,820	2	20,774
1995	22,578	68	956	14	23,615
1996	27,136	25	431	236	27,827
1997	18,351	66	446	214	19,078
1998	20,628	39	1,055	607	22,329
1999	14,855	53	2,091	554	17,552
2000	9,257	5	2,741	402	12,405
2001	2,294	28	3,820	677	6,819
2002	2,199	205	3,584	474	6,462
2003	1,170	40	1,302	643	3,155
2004	982	105	2,362	330	3,778
2005	1,147	45	2,270	330	3,792
2006	2,249	94	2,439	10	4,792
2007	3,503	84	2,384	31	6,002
2008	4,108	214	1,572	131	6,025
2009	5,377	34	113	82	5,606
2010	5,440	21	6	127	5,594
2011	9,480	32	124	143	9,779
2012	10,660	19	65	137	10,881
2013	7,312	37	NA	61	7,410
2014	10,651	31	54	31	10,767
2015	8,663	39	1	23	8,726
2016	12,097	73	37	24	12,231
2017	10,949	81	49	0	11,079

Table 2. Summary of spiny dogfish landings and discards based on Marine Recreational Information Program estimates. As in previous assessments, the average weight of landed and discarded spiny dogfish is assumed to be 2.5 kg. Discard mortality is assumed to be 20%. The revised MRIP estimator was used for 2004 to 2016. Differences between MRFSS and MRIP were considered minor relative to total catch (ie Commercial landings and discards); no adjustments were made to historical recreational data.

Year	Catch in Numbers								Numbers		Weight		
	Observed Harvest (A)	PSE	Reported Harvest (B1)	PSE	Released Alive (B2)	PSE	Total Catch A+B1+B2	PSE	Total Landings A+B1 (number)	Discards B2 (number)	Landings (A+B1) (mt)	Discards (B2) (mt)	Dead Discards (mt)
1981	5,943	49.1	591,300	52.1	118,440	31.3	715,683	43.4	597,243	118,440	1493	296	59
1982	12,460	38.6	15,712	45.5	139,730	21.4	167,902	18.5	28,172	139,730	70	349	70
1983	13,154	36.3	13,675	34.1	215,973	23.7	242,803	21.2	26,829	215,973	67	540	108
1984	9,606	48.1	26,918	45.1	169,574	35.1	206,099	29.6	36,524	169,574	91	424	85
1985	5,495	47.7	30,172	38.3	385,745	41.8	421,412	38.4	35,667	385,745	89	964	193
1986	11,598	26.5	61,688	22.8	474,930	17.7	548,216	15.6	73,286	474,930	183	1187	237
1987	14,286	44.0	108,171	28.9	422,387	21.6	544,844	17.8	122,457	422,387	306	1056	211
1988	46,068	30.6	98,002	19.8	350,410	24.4	494,480	18.0	144,070	350,410	360	876	175
1989	63,031	40.6	104,511	34.4	539,731	17.2	707,273	14.5	167,542	539,731	419	1349	270
1990	22,364	26.1	49,045	28.6	468,085	14.6	539,494	13.0	71,409	468,085	179	1170	234
1991	30,459	21.9	21,884	22.7	539,883	13.5	592,227	12.4	52,343	539,883	131	1350	270
1992	46,753	22.8	50,483	23.1	407,485	10.6	504,721	9.1	97,236	407,485	243	1019	204
1993	23,350	21.6	24,535	30.8	444,077	15.5	491,963	14.1	47,885	444,077	120	1110	222
1994	17,714	34.0	44,230	35.6	387,274	15.2	449,218	13.6	61,944	387,274	155	968	194
1995	15,447	31.2	11,583	37.2	261,465	11.5	288,496	10.7	27,030	261,465	68	654	131
1996	8,500	29.8	1,843	48.4	131,672	12.7	142,015	11.9	10,343	131,672	26	329	66
1997	21,017	24.4	5,582	54.9	337,431	12.1	364,030	11.3	26,599	337,431	66	844	169
1998	14,831	28.7	9,445	78.2	243,988	13.2	268,264	12.4	24,276	243,988	61	610	122
1999	11,995	52.5	9,710	68.2	214,974	11.5	236,679	11.1	21,705	214,974	54	537	107
2000	1,773	46.6	271	89.5	276,258	16.3	278,302	16.2	2,044	276,258	5	691	138
2001	7,771	39.7	3,459	44.6	842,583	9.1	853,812	9.0	11,230	842,583	28	2106	421
2002	2,281	32.3	79,691	43.8	669,469	10.6	751,440	10.5	81,972	669,469	205	1674	335
2003	8,314	36.2	7,560	33.9	1,199,490	8.0	1,215,364	7.9	15,874	1,199,490	40	2999	600
2004	19,328	44.7	28,761	38.9	1,315,796	14.1	1,363,885	13.6	48,089	1,315,796	120	3289	658
2005	6,894	33.5	7,230	37.9	1,339,412	19.9	1,353,536	19.7	14,124	1,339,412	35	3349	670
2006	7,592	40.1	24,221	65.7	1,420,564	11.6	1,452,377	11.4	31,813	1,420,564	80	3551	710
2007	2,134	44.2	32,352	67.3	1,557,079	12.7	1,591,565	12.5	34,486	1,557,079	86	3893	779
2008	10,930	35.3	34,701	38.0	1,078,307	12.6	1,123,938	12.2	45,631	1,078,307	114	2696	539
2009	6,155	40.3	10,929	31.9	1,031,866	13	1,048,951	12.8	17,084	1,031,866	43	2580	516

Table 2. Cont.

Year	Catch in Numbers								Numbers		Weight		
	Observed Harvest (A)	PSE	Reported Harvest (B1)	PSE	Released Alive (B2)	PSE	Total Catch A+B1+B2	PSE	Total Landings A+B1 (number)	Discards B2 (number)	Landings (A+B1) (mt)	Discards (B2) (mt)	Dead Discards (mt)
2010	2,270	34.4	4,158	60.3	790,412	20.7	796,840	20.6	6,428	790,412	16	1976	395
2011	5,742	42.6	7,063	48.6	924,891	14.8	937,696	14.6	12,805	924,891	32	2312	462
2012	3,413	65.7	4,103	63.6	549,820	18	557,336	17.7	7,516	549,820	19	1375	275
2013	7,381	48.1	7,294	56.9	1,061,125	11.9	1,075,800	11.8	14,675	1,061,125	37	2653	531
2014	2,200	40.2	10,470	28.5	1,900,700	52.4	1,913,370	52.0	12,670	1,900,700	32	4752	950
2015	10,130	63.5	5,629	55.3	488,943	16.3	504,701	15.9	15,758	488,943	39	1222	244
2016	11,135	67.3	18,123	73.4	1,250,842	17.3	1,280,100	17.0	29,258	1,250,842	73	3127	625
2017	7,185	28.9	25,250	52.2	366,533	16.6	398,968	15.6	32,435	366,533	81	916	183

Table 3. Estimated total discards of spiny dogfish (mt) from commercial and recreational US fisheries, 1981-2016. The values for otter trawl and gill net from 1981-1989 are hindcast estimates (see SARC 43).

							Assumed Discard Mortality Rate					
							0.50	0.30	0.75	0.10	0.20	
Total Discards (mt)							Dead Discards					
Year	Otter Trawl	Sink Gill Net	Scallop Dredge	Line gear	Recreational	Total	Otter Trawl	Sink Gill Net	Scallop Dredge	Line gear	Recreational	Total Dead
1981	36,360	5,360	na	na	296	42,016	18,180	1,608	na	na	59	19,847
1982	42,910	4,454	na	na	349	47,713	21,455	1,336	na	na	70	22,861
1983	42,188	4,042	na	na	540	46,770	21,094	1,213	na	na	108	22,415
1984	39,625	4,918	na	na	424	44,967	19,813	1,475	na	na	85	21,373
1985	33,354	4,539	na	na	964	38,857	16,677	1,362	na	na	193	18,232
1986	31,745	4,883	na	na	1,187	37,815	15,873	1,465	na	na	237	17,575
1987	29,050	4,864	na	na	1,056	34,970	14,525	1,459	na	na	211	16,195
1988	28,951	5,132	na	na	876	34,959	14,476	1,540	na	na	175	16,190
1989	28,286	5,360	na	na	1,344	34,990	14,143	1,608	na	na	269	16,020
1990	34,242	6,062	na	na	1,170	41,474	17,121	1,819	na	na	234	19,174
1991	19,322	11,030	32	97	1,350	31,831	9,661	3,309	24	10	270	13,274
1992	32,617	5,953	827	650	1,019	41,066	16,309	1,786	620	65	204	18,983
1993	17,284	9,814	209	44	1,110	28,461	8,642	2,944	157	4	222	11,969
1994	13,908	2,887	723	na	968	18,486	6,954	866	542	na	194	8,556
1995	16,997	6,731	378	na	654	24,760	8,499	2,019	284	na	131	10,932
1996	9,402	3,890	121	na	329	13,742	4,701	1,167	91	na	66	6,025
1997	6,704	2,326	198	na	837	10,065	3,352	698	149	na	167	4,366
1998	5,268	1,965	120	na	610	7,963	2,634	590	90	na	122	3,435
1999	7,685	2,005	41	na	532	10,263	3,843	602	31	na	106	4,581
2000	2,728	4,684	14	na	685	8,111	1,364	1,405	11	na	137	2,917
2001	4,919	7,204	30	na	2,099	14,252	2,460	2,161	23	na	420	5,063
2002	5,540	4,997	58	4,015	1,673	16,283	2,770	1,499	44	402	335	5,049
2003	3,853	5,413	103	2	2,987	12,358	1,927	1,624	77	0	597	4,225
2004	8,299	4,031	53	497	3,490	16,370	4,150	1,209	40	50	698	6,146
2005	7,515	3,338	15	1,175	3,509	15,552	3,758	1,001	11	118	702	5,589
2006	7,773	3,369	14	131	3,840	15,126	3,886	1,011	10	13	768	5,688
2007	8,115	5,133	61	73	4,300	17,681	4,058	1,540	45	7	860	6,510
2008	5,604	4,864	237	260	3,115	14,080	2,802	1,459	178	26	623	5,088
2009	7,010	4,874	364	835	2,869	15,952	3,505	1,462	273	84	574	5,897
2010	5,564	2,385	196	509	1,930	10,584	2,782	716	147	51	386	4,081

Table 3 cont.

							Assumed Discard Mortality Rate					
							0.50	0.30	0.75	0.10	0.20	
Total Discards (mt)							Dead Discards					
Year	Otter Trawl	Sink Gill Net	Scallop Dredge	Line gear	Recreational	Total	Otter Trawl	Sink Gill Net	Scallop Dredge	Line gear	Recreational	Total Dead
2011	6,540	2,831	226	356	2,312	12,264	3,270	849	170	36	462	4,787
2012	6,687	2,959	432	172	1,375	11,626	3,344	888	324	17	275	4,848
2013	6,897	3,107	127	37	2,653	12,820	3,448	932	95	4	531	5,010
2014	8,070	2,388	108	17	4,752	15,335	4,035	716	81	2	950	5,785
2015	5,096	1,655	41	19	1,222	8,033	2,548	496	31	2	244	3,322
2016	5,084	1,941	120	165	3127	10,437	2,542	582	90	17	625	3,856
2017	5451	881	75	185	916	7,508	2,726	264	56	19	183	3,247

Table 4. Total landings, discards and total catch for spiny dogfish, 1989-2017.

Year	Total Discard (mt)	Total Dead Discards (mt)	Total Landings (mt)	Dead Discard/ Landings	Total Discard / Landings	Total Catch (mt)
1989	34,990	16,020	5,333	3.00	6.56	21,353
1990	41,474	19,174	16,611	1.15	2.50	35,785
1991	31,831	13,274	13,848	0.96	2.30	27,122
1992	41,066	18,983	18,008	1.05	2.28	36,991
1993	28,461	11,969	22,225	0.54	1.28	34,194
1994	18,486	8,556	20,774	0.41	0.89	29,330
1995	24,760	10,932	23,615	0.46	1.05	34,547
1996	13,742	6,025	27,827	0.22	0.49	33,852
1997	10,065	4,366	19,078	0.23	0.53	23,443
1998	7,963	3,435	22,329	0.15	0.36	25,764
1999	10,263	4,581	17,552	0.26	0.58	22,134
2000	8,111	2,917	12,405	0.24	0.65	15,321
2001	14,252	5,063	6,819	0.74	2.09	11,882
2002	16,283	5,049	6,462	0.78	2.52	11,510
2003	12,358	4,225	3,155	1.34	3.92	7,380
2004	16,370	6,146	3,778	1.63	4.33	9,925
2005	15,552	5,589	3,792	1.47	4.10	9,382
2006	15,126	5,688	4,792	1.19	3.16	10,480
2007	17,681	6,510	6,002	1.08	2.95	12,512
2008	14,080	5,088	6,025	0.84	2.34	11,113
2009	15,952	5,897	5,606	1.05	2.85	11,503
2010	10,584	4,081	5,594	0.73	1.89	9,675
2011	12,264	4,787	9,779	0.49	1.25	14,566
2012	11,626	4,848	10,881	0.45	1.07	15,729
2013	12,820	5,010	7,410	0.68	1.73	12,420
2014	15,335	5,785	10,767	0.54	1.42	16,552
2015	8,033	3,322	8,726	0.38	0.92	12,048
2016	10,437	3,856	12,231	0.32	0.85	16,087
2017	7,508	3,247	11,079	0.29	0.68	14,326

Table 5. Summary of estimated landings of US, Canadian and foreign fisheries by sex, 1982-2017. US recreational landings included. Estimated total weights based on sum of estimated weights from sampled length frequency distributions from port samples. Estimated weights computed for female as $W = \exp(-15.025) \cdot L^{3.606935}$ and males as $W = \exp(-13.002) \cdot L^{3.097787}$ with weight in kg and length in cm. "Samples" = number of measured dogfish.

Year	NMFS Biological Samples from Ports							Prorated Landings by Sex					
	Total Samples Males	Est Total Wt (kg) Males	Average Wt (kg) Males	Total Samples Females	Est Total Wt (kg) Females	Average Wt (kg) Females	Fraction Females by Weight	Total Landings (mt)	Est Landings (mt) of Males	Est Landings (mt) of Females	Number of Males Landed (000)	Number of Females Landed (000)	Total Numbers Landed (000)
1982	24	52.0	2.167	680	3015.7	4.435	0.9830	6,234	106	6,128	49	1,382	1,431
1983				610	2513.9	4.121	1.0000	5,428	0	5,428		1,317	1,317
1984	9	15.8	1.760	1,499	6626.0	4.420	0.9976	4,935	12	4,923	7	1,114	1,120
1985	21	35.2	1.678	1,657	6799.2	4.103	0.9948	5,142	27	5,116	16	1,247	1,263
1986	64	104.1	1.626	1,165	4669.0	4.008	0.9782	3,318	72	3,246	44	810	854
1987	31	52.7	1.700	2,000	7550.1	3.775	0.9931	3,429	24	3,406	14	902	916
1988	7	14.8	2.114	1,764	7560.7	4.286	0.9980	4,112	8	4,104	4	957	961
1989	35	67.5	1.927	1,375	5528.0	4.020	0.9879	5,333	64	5,269	33	1,311	1,344
1990	19	33.7	1.772	2,230	8916.6	3.998	0.9962	16,611	63	16,549	35	4,139	4,174
1991	161	379.2	2.356	1,518	5923.9	3.902	0.9398	13,848	833	13,015	354	3,335	3,689
1992	12	22.3	1.861	3,187	12180.6	3.822	0.9982	18,008	33	17,975	18	4,703	4,721
1993	42	78.4	1.866	2,773	9927.5	3.580	0.9922	22,225	174	22,051	93	6,159	6,253
1994	47	86.6	1.843	2,092	6639.9	3.174	0.9871	20,774	267	20,507	145	6,461	6,606
1995	25	38.9	1.555	2,266	6676.6	2.946	0.9942	23,615	137	23,479	88	7,969	8,056
1996	569	886.7	1.558	1,662	4397.6	2.646	0.8322	27,827	4,669	23,158	2,996	8,752	11,749
1997	303	449.1	1.482	382	780.9	2.044	0.6349	19,078	6,966	12,112	4,700	5,925	10,625
1998	68	85.4	1.257	683	1434.5	2.100	0.9438	22,329	1,255	21,073	999	10,034	11,033
1999	93	130.3	1.401	311	625.5	2.011	0.8276	17,552	3,026	14,527	2,160	7,223	9,382
2000	345	473.1	1.371	1,921	3921.2	2.041	0.8923	12,405	1,335	11,069	974	5,423	6,397
2001	12	17.1	1.422	215	456.5	2.123	0.9640	6,819	246	6,573	173	3,096	3,269
2002	1	1.3	1.279	278	752.5	2.707	0.9983	6,462	11	6,451	9	2,383	2,392
2003	34	48.3	1.421	966	2338.4	2.421	0.9798	3,155	64	3,091	45	1,277	1,322
2004	15	23.9	1.593	1,180	3296.9	2.794	0.9928	3,778	27	3,751	17	1,343	1,360
2005	745	1018.7	1.367	2,065	5196.0	2.516	0.8361	3,792	622	3,171	455	1,260	1,715
2006	646	924.4	1.431	4,211	10382.9	2.466	0.9182	4,792	392	4,400	274	1,785	2,058
2007	507	720.7	1.421	2,865	7514.8	2.623	0.9125	6,002	525	5,477	370	2,088	2,458
2008	236	342.0	1.449	2,925	7973.8	2.726	0.9589	6,025	248	5,777	171	2,119	2,290
2009	472	696.6	1.476	3,378	9161.6	2.712	0.9293	5,606	396	5,210	268	1,921	2,189
2010	821	1213.4	1.478	4,963	14217.4	2.865	0.9214	5,594	440	5,154	298	1,799	2,097
2011	868	1109.9	1.279	4,800	12786.8	2.664	0.9201	9,779	781	8,998	611	3,378	3,989
2012	213	371.8	1.746	3,763	10727.9	2.851	0.9665	10,881	365	10,516	209	3,689	3,898
2013	450	736.7	1.637	5,441	16258.3	2.988	0.9567	7,410	321	7,089	196	2,372	2,569
2014	546	830.6	1.521	4,505	13198.1	2.930	0.9408	10,715	634	10,081	417	3,441	3,858
2015	1164	1705.9	1.466	2,943	7782.9	2.645	0.8202	8,726	1,569	7,157	1,070	2,706	3,777
2016	628	971.9	1.548	4,792	13192.7	2.753	0.9314	12,231	839	11,392	542	4,138	4,680
2017	398	609.9	1.532	5,178	13930.7	2.690	0.9581	11,079	465	10,614	303	3,945	4,249
<i>formula</i>	<i>A</i>	<i>B</i>	<i>C=B/A</i>	<i>D</i>	<i>E</i>	<i>F=E/D</i>	<i>G=E/(E+B)</i>	<i>H</i>	<i>I=(1-G)*H</i>	<i>J=G*H</i>	<i>K=I/C</i>	<i>L=J/F</i>	<i>M=K+L</i>

Table 6. Summary of estimated discards of combined US fleets by sex, 1991-2017. Estimated total weights based on summation of estimated weights from sampled length frequency distributions. Estimated weights computed from length-weight regressions. Female $W = \exp(-15.025)L^3.606935$. Male $W = \exp(-13.002)L^3.097787$ with weight in kg and length in cm. "Samples" = number of measured dogfish that were discarded. 2010 estimates based on fishing year rather than calendar year.

Year	NMFS Biological Samples from Observers							Prorated Discards by Sex					
	Total Samples Males	Est Total Wt (kg) Males	Average Wt (kg) Males	Total Samples Females	Est Total Wt (kg) Females	Average Wt (kg) Females	Fraction Females by Weight	Total Dead Discards (mt)	Est Landings (mt) of Males	Est Discards (mt) of Females	Number of Males Discarded (000)	Number of Females Discarded (000)	Total Numbers Discarded (000)
1991	376	463	1.231	894	2,350	2.628	0.8355	13,274	2,184	11,090	1,775	4,219	5,994
1992	449	504	1.123	632	1,090	1.724	0.6836	18,983	6,007	12,976	5,347	7,526	12,873
1993	57	62	1.087	130	414	3.184	0.8697	11,969	1,559	10,410	1,434	3,270	4,704
1994	207	207	1.001	747	1,397	1.870	0.8708	8,556	1,105	7,451	1,104	3,985	5,090
1995	2,191	2,342	1.069	2,384	3,064	1.285	0.5668	10,932	4,735	6,197	4,431	4,821	9,251
1996	1,643	1,833	1.115	1,370	2,013	1.469	0.5234	6,025	2,871	3,153	2,574	2,147	4,721
1997	1,359	1,391	1.024	1,427	2,070	1.451	0.5980	4,366	1,755	2,611	1,714	1,800	3,514
1998	1,289	1,320	1.024	1,463	1,939	1.326	0.5951	3,435	1,391	2,044	1,359	1,542	2,901
1999	447	440	0.984	870	1,808	2.078	0.8044	4,581	896	3,685	911	1,773	2,684
2000	423	568	1.343	1,498	3,207	2.141	0.8495	2,917	439	2,478	327	1,157	1,484
2001	650	842	1.295	2,987	7,377	2.470	0.8976	5,063	518	4,545	400	1,840	2,241
2002	1,293	1,819	1.407	5,880	13,899	2.364	0.8843	5,049	584	4,464	415	1,889	2,304
2003	4,711	5,367	1.139	12,826	27,210	2.121	0.8353	4,225	696	3,529	611	1,664	2,275
2004	10,878	14,480	1.331	28,583	64,771	2.266	0.8173	6,146	1,123	5,023	844	2,217	3,060
2005	7,470	9,450	1.265	13,024	28,593	2.195	0.7516	5,589	1,388	4,201	1,098	1,914	3,011
2006	4,512	5,449	1.208	7,041	14,559	2.068	0.7277	5,688	1,549	4,139	1,283	2,002	3,284
2007	3,955	5,183	1.310	9,830	24,621	2.505	0.8261	6,510	1,132	5,378	864	2,147	3,011
2008	3,096	3,969	1.282	6,140	14,857	2.420	0.7892	5,088	1,073	4,015	837	1,659	2,496
2009	1,719	2,088	1.215	3,083	6,849	2.221	0.7664	5,897	1,378	4,519	1,134	2,034	3,169
2010	1,634	2,190	1.340	2,086	4,994	2.394	0.6952	4,081	1,244	2,837	928	1,185	2,113
2011	2,286	2,920	1.278	2,428	5,864	2.415	0.6675	4,787	1,591	3,196	1,246	1,323	2,569
2012	734	1,010	1.376	1,384	3,302	2.386	0.7660	4,848	1,136	3,712	825	1,556	2,381
2013	448	381	0.850	701	1,210	1.725	0.7610	5,010	1,200	3,810	1,411	2,208	3,620
2014	743	786	1.058	784	1,428	1.822	0.6450	5,785	2,054	3,731	1,941	2,048	3,989
2015	750	938	1.251	559	1,050	1.878	0.5280	3,322	1,568	1,754	1,253	934	2,187
2016	384	469	1.222	314	611	1.945	0.5655	3,856	1,676	2,181	1,371	1,121	2,492
2017	1,271	1,653	1.301	1535	2481	1.616	0.6001	3,247	1,299	1,949	998	1,206	2,204
<i>formula</i>	<i>A</i>	<i>B</i>	<i>C=B/A</i>	<i>D</i>	<i>E</i>	<i>F=E/D</i>	<i>G=E/(E+B)</i>	<i>H</i>	<i>I=(1-G)*H</i>	<i>J=G*H</i>	<i>K=I/C</i>	<i>L=J/F</i>	<i>M=K+L</i>

Table 7. Biomass estimates for spiny dogfish (thousands of metric tons) based on area swept by NEFSC bottom trawl during spring surveys, 1968-2018. Estimate for 2014 not included as survey coverage was incomplete. Estimate for 2017 is included but may not be representative of the population.

	Lengths \geq 80 cm			Lengths 36 to 79 cm			Length \leq 35 cm			All Lengths	3-pt Average Female SSB
	Females	Males	Total	Females	Males	Total	Females	Males	Total		
1968			41.4			110.4			1.52	153.3	
1969			27.4			69.3			0.66	97.3	
1970			36.7			33.0			3.19	72.9	
1971			103.8			27.6			2.76	134.2	
1972			126.6			145.9			1.55	274.1	
1973			178.7			165.3			2.58	346.5	
1974			221.9			179.6			2.66	404.1	
1975			105.1			125.0			3.97	234.0	
1976			96.3			120.8			1.20	218.3	
1977			77.3			68.0			0.53	145.9	
1978			87.4			131.2			1.24	219.8	
1979			52.3			18.6			1.82	72.7	
1980	104.7	15.3	168.1	16.8	72.2	123.5	0.32	0.39	0.84	292.4	
1981	266.5	24.4	293.8	25.5	75.1	100.6	2.14	2.80	5.06	399.5	
1982	454.0	34.6	488.6	61.6	143.3	204.9	0.48	0.69	1.17	694.6	275.1
1983	77.7	30.1	107.8	36.7	98.5	135.3	3.09	3.95	7.03	250.1	266.1
1984	115.6	27.5	143.1	33.4	88.0	121.4	0.14	0.21	0.35	264.9	215.8
1985	317.0	125.5	442.6	102.5	502.5	605.0	4.01	5.10	9.10	1056.7	170.1
1986	191.3	3.5	194.8	51.9	29.6	81.5	0.84	1.11	1.96	278.2	208.0
1987	219.1	90.5	309.6	61.5	171.7	233.1	2.46	4.76	7.22	550.0	242.5
1988	433.1	26.2	459.4	93.3	153.6	247.0	0.89	1.09	1.98	708.4	281.2
1989	162.1	40.5	202.6	100.4	158.2	258.6	1.14	1.54	2.68	463.9	271.5
1990	400.3	70.7	471.0	163.5	303.1	466.6	0.68	1.03	1.71	939.3	331.8
1991	220.4	30.0	250.3	108.4	186.3	294.7	0.98	1.43	2.41	547.4	260.9
1992	280.5	41.9	322.4	179.9	231.9	411.8	0.73	1.00	1.73	735.9	300.4
1993	234.6	27.8	262.5	104.1	198.5	302.6	0.55	0.65	1.21	566.3	245.2
1994	105.3	37.1	142.4	108.3	254.2	362.5	4.28	5.54	9.82	514.8	206.8
1995	102.4	29.5	131.9	154.0	174.5	328.5	0.25	0.35	0.59	460.9	147.5
1996	196.5	33.4	229.9	201.7	334.8	536.4	0.98	1.14	2.12	768.5	134.7
1997	83.7	17.5	101.2	205.2	209.1	414.3	0.05	0.05	0.10	515.5	127.5
1998	26.7	22.9	49.7	69.0	236.4	305.4	0.05	0.08	0.13	355.2	102.3
1999	62.7	20.4	83.1	140.8	256.4	397.2	0.02	0.03	0.05	480.4	57.7
2000	85.8	11.7	97.5	91.5	166.2	257.7	0.07	0.09	0.16	355.4	58.4
2001	56.7	16.7	73.4	71.4	160.5	231.9	0.04	0.03	0.07	305.4	68.4
2002	75.2	19.0	94.2	131.5	246.3	377.8	0.06	0.06	0.12	472.1	72.5
2003	64.5	22.5	87.1	125.5	256.3	381.8	0.13	0.14	0.27	469.1	65.5
2004	40.4	10.0	50.3	46.9	126.2	173.1	0.66	0.91	1.56	225.0	60.0
2005	55.8	30.8	86.6	59.8	294.7	354.5	0.28	0.42	0.69	441.9	53.6
2006	253.4	29.0	282.5	141.6	406.5	548.1	0.10	0.17	0.27	830.8	116.6
2007	158.0	18.9	176.9	73.6	227.6	301.1	0.23	0.32	0.56	478.6	155.8
2008	241.7	29.6	271.4	91.2	293.7	385.0	0.47	0.59	1.05	657.4	217.7

Table 7. cont.

	Lengths >= 80 cm			Lengths 36 to 79 cm			Length <= 35 cm			All Lengths	3-pt Average Female SSB
	Females	Males	Total	Females	Males	Total	Females	Males	Total		
2009	148.3	21.9	170.2	54.9	326.1	381.0	2.95	3.76	6.71	557.9	182.7
2010	160.6	18.3	178.8	64.0	287.3	351.3	1.15	1.44	2.59	532.7	183.5
2011	213.9	26.7	240.6	60.0	408.6	468.6	0.99	2.48	3.47	712.6	174.2
2012	350.0	44.7	394.7	94.5	617.7	712.2	4.03	5.02	9.05	1116.0	241.0
2013	143.8	56.5	200.3	131.5	439.0	570.4	5.19	6.40	11.59	782.3	235.9
2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	123.9	22.1	145.9	40.0	276.8	316.8	1.06	1.33	2.39	465.1	135.5
2016	184.9	29.5	214.4	119.9	429.4	549.3	1.30	1.81	3.11	766.8	155.1
2017	24.4	12.7	37.1	92.5	284.8	377.3	0.23	0.31	0.53	414.9	111.6
2018	97.7	23.7	121.4	134.4	306.3	440.6	0.72	0.77	1.51	563.6	102.3

Notes: Total equals sum of males and females plus unsexed dogfish. Data for dogfish prior to 1980 are currently not available by sex. Data have been adjusted to AL IV equivalents using weight specific HB Bigelow calibration coefficients. Average SSB for 2015 is 2013 and 2015 only. Average for 2016 is 2015 and 2016 only. Averages for 2017 and 2018 are as years prior to 2014.

Table 8a. Summary of mean swept area biomass estimates (mt) based on stochastic population estimator, 1991-2018, including 2017. Swept area estimates not available for 2014. Exploitable biomasses are based on year-specific selectivity functions based on 3 year moving averages. Female spawning stock biomass is based on sum of female spiny dogfish above 80 cm TL. The target spawning stock biomass is 30.343 kg/tow or 159,288 mt (using the 0.0119 nm² trawl footprint). The threshold spawning stock biomass is 79,644 mt.

Terminal Year	Mid Year	Total Exploitable Biomass	Exploitable Female Biomass	Exploitable Male Biomass	Tot Biomass	Female Spawning Stock Biomass
1991	1990	570,113	339,405	230,208	582,274	234,229
1992	1991	532,641	278,419	253,722	664,850	269,624
1993	1992	379,501	169,227	209,773	553,731	220,002
1994	1993	322,345	93,716	228,128	544,415	186,132
1995	1994	261,387	55,102	205,785	460,932	133,264
1996	1995	329,048	77,600	250,948	519,920	120,664
1997	1996	316,075	81,413	234,162	520,782	114,091
1998	1997	319,828	69,005	250,323	489,233	91,458
1999	1998	185,468	77,142	107,825	406,287	51,821
2000	1999	167,483	66,023	100,960	358,185	52,562
2001	2000	286,458	96,233	189,725	343,602	61,552
2002	2001	291,695	107,026	184,169	337,686	64,844
2003	2002	278,283	63,794	213,989	371,200	58,376
2004	2003	241,697	39,745	201,452	347,176	53,625
2005	2004	237,536	17,432	219,604	338,170	47,719
2006	2005	327,077	54,587	271,991	453,881	106,180
2007	2006	233,662	90,651	142,511	524,205	141,351
2008	2007	423,273	123,742	299,031	586,413	194,616
2009	2008	361,040	89,151	271,390	505,116	163,256
2010	2009	377,034	87,984	288,549	521,494	164,066
2011	2010	410,490	88,702	321,288	557,059	169,415
2012	2011	518,504	111,692	406,311	688,632	215,744
2013	2012	567,696	110,296	456,899	766,064	211,372
2014	2013	NA	NA	NA	NA	NA
2015	2014	473,278	75,061	397,717	648,989	138,997
2016	2015	510,532	86,116	423,916	699,189	156,788
2017	2016	431,608	66,573	364,535	573,096	116,876
2018	2017	440,460	64,724	375,236	606,273	106,753

Table 8b. Summary of mean swept area biomass estimates (mt) based on stochastic population estimator, 2017-2018, omitting 2017 from the three-year average. Exploitable biomasses are based on year-specific selectivity functions based on 3 year moving averages. Female spawning stock biomass is based on sum of female spiny dogfish above 80 cm TL. The target spawning stock biomass is 30.343 kg/tow or 159,288 mt (using the 0.0119 nm² trawl footprint). The threshold spawning stock biomass is 79,644 mt. An alternative estimate for 2018 is also provided using the Kalman smoother with and without 2017.

Terminal Year	Mid Year	Total Exploitable Biomass	Exploitable Female Biomass	Exploitable Male Biomass	Tot Biomass	Female Spawning Stock Biomass
2017	2016	480,650	87,697	392,453	641,132	160,351
2018	2017	495,102	86,134	408,468	692,428	146,738
2018Kalman with 2017	2017	319,082	46,764	271,817	439,236	77,220
2018 Kalman without 2017	2017	610,671	106,362	503,809	854,068	181,115

Table 9a. Summary of stochastic fishing mortality rates expressed as the mean of full F on the exploitable biomass of female and male spiny dogfish, 1990-2017. Estimates for 2013 are not available. Year represents the year of the catch (landings plus dead discards). Estimates for 2016 are based on survey biomass from 2015 - 2017. Estimates for 2017 are based on biomass estimates from 2016- 2018. Sampling distribution of F estimates for females are given in Figure 11a,b. Fthreshold for females is 0.2439.

Year	F1: Female Catch on exploitable female biomass	F2: Male Catch on exploitable male biomass
1990	0.088	0.044
1991	0.082	0.026
1992	0.177	0.040
1993	0.327	0.021
1994	0.465	0.018
1995	0.418	0.014
1996	0.355	0.031
1997	0.234	0.038
1998	0.306	0.025
1999	0.289	0.043
2000	0.152	0.007
2001	0.109	0.005
2002	0.165	0.003
2003	0.168	0.004
2004	0.474	0.008
2005	0.128	0.007
2006	0.088	0.012
2007	0.090	0.005
2008	0.110	0.004
2009	0.113	0.006
2010	0.093	0.005
2011	0.114	0.006
2012	0.149	0.003
2013	NA	NA
2014	0.214	0.007
2015	0.126	0.007
2016	0.211	0.007
2017	0.202	0.004

Table 9b. Summary of stochastic fishing mortality rates expressed as the mean of full F on the exploitable biomass of female and male spiny dogfish, 2016-2017. Year represents the year of the catch (landings plus dead discards). Estimates for 2017 are based on biomass estimates from 2016 and 2018. An alternative estimate for 2017 is also provided using the Kalman smoother with and without 2017. Sampling distribution of F estimates for females are given in Figure 11a,b. Fthreshold for females is 0.2439.

Year	F1: Female Catch on exploitable female biomass	F2: Male Catch on exploitable male biomass
2016	0.160	0.006
2017	0.152	0.004
2017 Kalman with 2017	0.302	0.007
2017 Kalman without 2017	0.124	0.003

Table 10a. Projected percentiles of fishing mortality rate on females, total catch, landings, discards, female spawning stock and exploitable biomass in 2018. Catches in 2018 were estimated based on year to date commercial landings through August 7, 2018 prorated to the end of the year plus 2017 recreational catches and 2017 discards=7,833 mt. The starting conditions were based on the three-year average length frequencies, not adjusted for the Kalman and including 2017. Discard rates were estimated using the rate calculated for 2018.

2018						
Percentile	F	Catch (mt)	Landings (mt)	Discards (mt)	Female SSB (mt)	Exploitable Female Biomass (mt)
1	0.237	7,899	4,897	3,003	59,221	31,808
2	0.225	7,900	4,897	3,003	62,165	33,389
3	0.216	7,883	4,885	2,998	64,633	34,714
4	0.208	7,880	4,883	2,997	66,774	35,865
5	0.203	7,884	4,886	2,998	68,677	36,887
10	0.182	7,881	4,884	2,997	76,076	40,860
15	0.170	7,893	4,892	3,001	81,600	43,827
20	0.160	7,884	4,886	2,998	86,181	46,288
25	0.153	7,885	4,887	2,999	90,203	48,448
30	0.147	7,898	4,896	3,002	93,865	50,415
35	0.141	7,872	4,878	2,995	97,289	52,254
40	0.137	7,888	4,889	2,999	100,556	54,009
45	0.132	7,883	4,885	2,998	103,728	55,712
50	0.129	7,899	4,896	3,003	106,854	57,391
55	0.125	7,903	4,899	3,004	109,980	59,070
60	0.121	7,899	4,896	3,003	113,152	60,774
65	0.118	7,889	4,889	3,000	116,419	62,529
70	0.114	7,876	4,880	2,996	119,843	64,368
80	0.107	7,902	4,899	3,004	127,527	68,495
95	0.094	7,904	4,900	3,004	145,031	77,896
96	0.093	7,888	4,888	2,999	146,934	78,918
97	0.091	7,880	4,883	2,997	149,075	80,068
98	0.090	7,883	4,885	2,998	151,543	81,394
99	0.088	7,904	4,900	3,004	154,487	82,975

Table 10b. Projected percentiles of fishing mortality rate on females, total catch, landings, discards, female spawning stock and exploitable biomass in 2018. Catches in 2018 were estimated based on year to date commercial landings through August 7, 2018 prorated to the end of the year plus 2017 recreational catches and 2017 discards=7,833 mt. The starting conditions were based on the three-year average length frequencies, not adjusted for the Kalman and not including 2017. Discard rates were estimated using the rate calculated for 2018.

2018						
Percentile	F	Catch (mt)	Landings (mt)	Discards (mt)	Female SSB (mt)	Exploitable Female Biomass (mt)
1	0.173	7,966	4,895	3,071	82,536	42,891
2	0.165	7,972	4,899	3,072	86,501	44,951
3	0.159	7,960	4,891	3,069	89,825	46,679
4	0.154	7,959	4,890	3,068	92,709	48,178
5	0.150	7,985	4,909	3,077	95,272	49,510
10	0.135	7,982	4,906	3,076	105,237	54,688
15	0.126	7,963	4,893	3,070	112,678	58,555
20	0.119	7,968	4,897	3,071	118,849	61,762
25	0.114	7,979	4,904	3,075	124,266	64,577
30	0.110	7,982	4,907	3,076	129,198	67,140
35	0.106	7,995	4,915	3,080	133,810	69,536
40	0.102	7,980	4,905	3,075	138,210	71,823
45	0.099	7,994	4,915	3,079	142,482	74,043
50	0.096	7,992	4,913	3,079	146,693	76,231
55	0.093	7,979	4,904	3,075	150,904	78,420
60	0.091	7,956	4,888	3,068	155,176	80,639
65	0.088	7,982	4,906	3,076	159,576	82,926
70	0.085	7,950	4,884	3,066	164,188	85,323
80	0.080	7,952	4,886	3,066	174,537	90,701
95	0.071	7,968	4,897	3,071	198,113	102,953
96	0.070	7,986	4,909	3,077	200,677	104,285
97	0.069	7,941	4,878	3,063	203,561	105,784
98	0.068	7,979	4,905	3,075	206,885	107,511
99	0.066	7,962	4,893	3,069	210,850	109,572

Table 10c. Projected percentiles of fishing mortality rate on females, total catch, landings, discards, female spawning stock and exploitable biomass in 2018. Catches in 2018 were estimated based on year to date commercial landings through August 7, 2018 prorated to the end of the year plus 2017 recreational catches and 2017 discards=7,833 mt. The starting conditions were based on the three-year average length frequencies, adjusted for the Kalman and including 2017. Discard rates were estimated using the rate calculated for 2018.

2018						
Percentile	F	Catch (mt)	Landings (mt)	Discards (mt)	Female SSB (mt)	Exploitable Female Biomass (mt)
1	0.762	7,768	4,875	2,892	20,292	10,899
2	0.634	7,765	4,873	2,891	23,820	12,794
3	0.556	7,762	4,871	2,890	26,778	14,382
4	0.502	7,764	4,873	2,891	29,345	15,761
5	0.463	7,765	4,874	2,892	31,625	16,986
10	0.354	7,769	4,877	2,893	40,493	21,749
15	0.301	7,771	4,878	2,893	47,114	25,305
20	0.268	7,759	4,869	2,890	52,605	28,254
25	0.244	7,763	4,872	2,891	57,425	30,843
30	0.226	7,758	4,869	2,889	61,814	33,201
35	0.211	7,758	4,869	2,889	65,918	35,405
40	0.199	7,754	4,866	2,888	69,834	37,508
45	0.189	7,769	4,876	2,893	73,635	39,549
50	0.179	7,766	4,875	2,892	77,382	41,562
55	0.170	7,757	4,868	2,889	81,129	43,574
60	0.163	7,780	4,884	2,896	84,930	45,616
65	0.155	7,752	4,865	2,887	88,846	47,719
70	0.148	7,773	4,879	2,894	92,950	49,923
80	0.134	7,764	4,873	2,891	102,159	54,870
95	0.111	7,763	4,872	2,891	123,139	66,138
96	0.109	7,755	4,866	2,888	125,419	67,363
97	0.107	7,757	4,868	2,889	127,986	68,741
98	0.104	7,773	4,880	2,894	130,944	70,330
99	0.102	7,765	4,873	2,891	134,472	72,225

Table 10d. Projected percentiles of fishing mortality rate on females, total catch, landings, discards, female spawning stock and exploitable biomass in 2018. Catches in 2018 were estimated based on year to date commercial landings through August 7, 2018 prorated to the end of the year plus 2017 recreational catches and 2017 discards=7,833 mt. The starting conditions were based on the three-year average length frequencies, adjusted for the Kalman and not including 2017. Discard rates were estimated using the rate calculated for 2018.

2018						
Percentile	F	Catch (mt)	Landings (mt)	Discards (mt)	Female SSB (mt)	Exploitable Female Biomass (mt)
1	0.148	7,738	4,873	2,865	96,549	50,173
2	0.140	7,724	4,864	2,861	101,764	52,883
3	0.134	7,727	4,865	2,862	106,136	55,155
4	0.129	7,745	4,878	2,867	109,930	57,127
5	0.125	7,721	4,861	2,860	113,301	58,879
10	0.112	7,725	4,864	2,861	126,407	65,690
15	0.104	7,734	4,871	2,864	136,194	70,775
20	0.098	7,741	4,875	2,866	144,310	74,993
25	0.093	7,709	4,853	2,856	151,435	78,695
30	0.089	7,726	4,864	2,861	157,922	82,067
35	0.086	7,759	4,887	2,871	163,987	85,219
40	0.082	7,704	4,849	2,854	169,775	88,226
45	0.080	7,745	4,878	2,867	175,394	91,146
50	0.077	7,707	4,852	2,855	180,932	94,024
55	0.075	7,719	4,860	2,859	186,470	96,902
60	0.073	7,722	4,862	2,860	192,089	99,822
65	0.071	7,719	4,860	2,859	197,876	102,830
70	0.069	7,713	4,856	2,857	203,942	105,981
80	0.064	7,708	4,852	2,856	217,554	113,055
95	0.056	7,713	4,856	2,857	248,563	129,169
96	0.055	7,716	4,858	2,858	251,934	130,921
97	0.055	7,729	4,867	2,862	255,728	132,893
98	0.054	7,754	4,884	2,870	260,100	135,165
99	0.052	7,703	4,849	2,854	265,314	137,875

Table 11a. Summary of stochastic projections of F, SSB, catch (=OFL), landings and discards by sex, and comparisons with biomass reference points for spiny dogfish under a constant F harvest strategy equal to the target $F=F_{msy}$ proxy = 0.2439 for 2019 to 2037. Table entries are means of predicted values. Catches in 2018 are assumed to be Year-to-date adjusted landings plus recreational catches and commercial discards from 2017 =7,833 mt. Starting conditions were based on the three-year average length frequencies, not adjusted for the Kalman and including 2017. Discard rates were estimated using the rate calculated for 2018.

Year	Average											Probability			
	F on females	F on males	SSB (mt)	Total Catch (mt)	Total Landings (mt)	Female Landings (mt)	Male Landings (mt)	Total Discards (mt)	Female Discards (mt)	Male Discards (mt)	SSB(t)/SSB _{target}	SSB< SSB _{target}	SSB< SSB _{thresh}	F>=F _{thresh}	F>=F _{target}
2018	0.1352851	0.00193	106,957	7,890	4,890	4,758	132	3,000	2,111	889	0.671	1.000	0.130	0.004	0.096
2019	0.2439	0.01258	112,444	21,549	11,202	10,350	852	10,346	4,592	5,755	0.706	0.968	0.112	1.000	1.000
2020	0.2439	0.01258	110,571	22,808	12,167	11,336	831	10,641	5,029	5,612	0.694	0.978	0.122	1.000	1.000
2021	0.2439	0.01258	114,638	23,990	13,097	12,291	806	10,894	5,452	5,441	0.720	0.958	0.098	1.000	1.000
2022	0.2439	0.01258	139,534	25,098	13,983	13,205	779	11,114	5,858	5,256	0.876	0.722	0.022	1.000	1.000
2023	0.2439	0.01258	184,810	25,904	14,666	13,916	750	11,238	6,174	5,064	1.160	0.282	0.000	1.000	1.000
2024	0.2439	0.01258	192,264	26,229	15,019	14,298	721	11,209	6,343	4,866	1.207	0.234	0.000	1.000	1.000
2025	0.2439	0.01258	178,219	26,135	15,087	14,397	690	11,048	6,387	4,661	1.119	0.328	0.000	1.000	1.000
2026	0.2439	0.01258	159,756	25,516	14,792	14,132	660	10,724	6,269	4,454	1.003	0.496	0.000	1.000	1.000
2027	0.2439	0.01258	145,325	24,700	14,347	13,714	632	10,353	6,084	4,269	0.912	0.658	0.010	1.000	1.000
2028	0.2439	0.01258	138,346	23,940	13,921	13,312	609	10,018	5,906	4,113	0.869	0.740	0.020	1.000	1.000
2029	0.2439	0.01258	133,626	23,297	13,564	12,975	589	9,734	5,756	3,978	0.839	0.794	0.030	1.000	1.000
2030	0.2439	0.01258	129,294	22,734	13,254	12,684	571	9,480	5,627	3,853	0.812	0.840	0.040	1.000	1.000
2031	0.2439	0.01258	125,521	22,269	13,012	12,459	552	9,257	5,527	3,730	0.788	0.876	0.050	1.000	1.000
2032	0.2439	0.01258	124,769	22,039	12,931	12,396	535	9,108	5,499	3,609	0.783	0.882	0.054	1.000	1.000
2033	0.2439	0.01258	129,928	22,060	13,020	12,503	517	9,040	5,547	3,493	0.816	0.830	0.040	1.000	1.000
2034	0.2439	0.01258	138,014	22,256	13,227	12,726	501	9,029	5,646	3,384	0.866	0.742	0.022	1.000	1.000
2035	0.2439	0.01258	145,547	22,520	13,476	12,990	486	9,044	5,763	3,282	0.914	0.654	0.012	1.000	1.000
2036	0.2439	0.01258	150,304	22,744	13,692	13,220	472	9,052	5,865	3,187	0.944	0.600	0.006	1.000	1.000
2037	0.2439	0.01258	152,214	22,869	13,834	13,375	459	9,035	5,933	3,102	0.956	0.578	0.004	1.000	1.000
Average	0.2385	0.01205	140,604	22,827	13,159	12,552	607	9,668	5,568	4,100	0.883	0.708	0.039	0.950	0.955

September 6, 2018

Dr. Christopher M. Moore
Executive Director
Mid-Atlantic Fishery Management Council
800 North State Street, Suite 201
Dover, Delaware 19901

Mr. Robert O'Reilly
ASMFC Spiny Dogfish Management Board Chair
Virginia Marine Resources Commission
2600 Washington Ave, 3rd Floor
Newport News, Virginia 23607

Dear Chris and Rob,

I recently listened to the Mid-Atlantic Fishery Management Council's Spiny Dogfish Advisory Panel (AP) deliberations and would like to offer a few conceptual thoughts and a request for your consideration. For the past 6 years the spiny dogfish commercial quota has been substantially underutilized, and some AP members have expressed continuing concerns that the federal trip limit constrains their ability to catch the quota, as well as supply enough product to attract buyers and develop new markets (e.g. bait market). This is a problem. My request is that the Atlantic State Marine Fisheries Commission's Spiny Dogfish Management Board and the Council's Monitoring Committee (MC) discuss the concept of eliminating the federal dogfish trip limit. In addition, I request the Commission discuss the development of a program that would replace the federal trip limit. There are a few reasons for this request and I offer comments on a few aspects of the current problem.

One difficulty we confront under the existing system is that the States have different views on the 'right' commercial trip limit for their respective jurisdictions, and the current 'one size fits all' federal trip limit has proven limiting for many states leading to a substantial under-harvesting of the coastwide quota. Equally problematic, there are significant discards- from 2014-2016, 44% of removals (combined commercial landings and discards) were commercial discards, with a portion of these discards likely attributed to the federal trip limit. Eliminating the federal trip limit would allow the States more flexibility to tailor their regulations to meet the individual needs of their respective constituents. This concept is used in the summer flounder and black seas bass fishery, where federal moratorium permit holders and state permitted individuals are restricted to their state's commercial trip limit, and I can envision such a concept working well with the spiny dogfish fishery, if structured properly.

This issue is further complicated by the seasonal and regional distribution of the resource. Spiny dogfish are found in state waters for part of the year and then in federal waters at other times of the year, largely in response to changes in water temperature. While states in the Mid-Atlantic region (New York through North Carolina) have the flexibility to tailor their state trip limits to meet their individual needs, that flexibility ends when the resource moves into

Dr. Moore and Mr. O'Reilly

September 6, 2018

Page 2

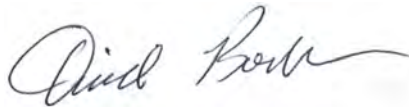
federal waters. This make little sense since the southern states operate under state allocations, and must close their fishery when they've met their allocation, thus the federal trip limit acts as a further deterrent, preventing many from achieving their state allocation. By comparison, the New England states of Maine through Connecticut operate under a regional quota, so a different approach would be needed in that area. As always the devil is in the details which would need to be developed.

I acknowledge that if the federal trip limit is removed, a process would need to be developed to determine how and when states modify their regulations and the extent of any changes. I also understand that aside from the Board and MC review of this concept, this proposal may require an adjustment to the federal FMP; if so, there may be the need for a similar action by the Commission. Notwithstanding those points, I think it would be useful to have both groups initiate a discussion on this concept, discuss the pros and cons of the strategy and offer suggestions on other approaches that may address some of the problems noted during the AP discussion.

In summary, I am requesting the Board and MC initiate a discussion of the concept of removing the federal trip limit, allow the Mid-Atlantic states of New York through North Carolina to develop state-specific trip limits or other strategies to achieve their commercial quotas, and the states of Maine through Connecticut to develop trip limits or other alternatives to collectively achieve their regional quota and reduce discards.

Thank you for your consideration of this concept, and if you have any further questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "David Borden".

David Borden
RI Commissioner, ASMFC

cc: ASMFC Spiny Dogfish Board



Mid-Atlantic Fishery Management Council
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Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: September 25, 2018
To: Council
From: Jason Didden
Subject: Spiny Dogfish Committee Meeting Summary

The Spiny Dogfish Committee (Committee) met on September 21, 2018 to consider making recommendations to the Councils on spiny dogfish specifications for the 2019-2021 fishing years.

Committee members in attendance: Stew Michels (Chair), Melanie Griffin (for David Pierce), Dewey Hemilright, Joe Cimino, Ward Slacum, Rob O'Reilly, Terry Stockwell, Rick Bellavance, Chris Batsavage, Mike Ruccio (for Mike Pentony), and Michael Luisi (ex-officio).

Others in attendance: Jason Didden, Fiona Hogan, Pete Burns, Kirby Rootes-Murdy, Cynthia Hanson, James Fletcher, and June Lewis.

Jason Didden, the Mid-Atlantic Fishery Management Council's spiny dogfish staff lead provided an overview of the recent spiny dogfish assessment update, the Scientific and Statistical Committee's recommendations, and the Monitoring Committee's recommendations.

The Committee discussed several aspects of spiny dogfish management including the specifications and trip limits. Discussion of trip limits centered around what the appropriate regulatory vehicle would be for considering changes to the federal trip limit. NMFS and Council staff communicated that a framework or amendment appeared most appropriate for making substantial changes to trip limits beyond simple and moderate increases or decreases.

The Committee also discussed the question of availability versus abundance regarding the NMFS trawl survey and how these issues may impact stock status and catch limits. Public comments on the call reinforced this concern. Council staff noted that there are a number of recent and ongoing studies that consider the issue of dogfish availability for the fishery and/or survey, and those studies will be considered and likely incorporated into the next benchmark assessment, currently scheduled for 2021.

Based on a public comment, there was also discussion of whether the Council should support an Exempted Fishing Permit (EFP) that would allow a fishery for male dogfish. No motions were made, and the Council could decide to provide support for such a project once details were available, or the Council could allow such a fishery through the normal Council processes. Staff

note: the possibility of a male fishery/quota was investigated in a recent master’s degree project and could also be considered during the upcoming benchmark.

The motions made by the Committee included:

1. I move that the Committee recommend the ABCs and other specifications associated with the staff/SSC/Monitoring Committee recommendation:

Specifications	Basis	2019 (pounds)	2019 (mt)	2020 (pounds)	2020 (mt)	2021 (pounds)	2021 (mt)
OFL (from SSC)	Projected Catch at Fmsy	0	0	na	na	na	na
ABC (from SSC)	Council Risk Policy	28,470,497	12,914	31,142,499	14,126	35,368,761	16,043
Canadian Landings	= 2017 estimate	108,027	49	108,027	49	108,027	49
Domestic ABC	= ABC – Canadian Landings	28,362,470	12,865	31,034,473	14,077	35,260,734	15,994
ACL	= Domestic ABC	28,362,470	12,865	31,034,473	14,077	35,260,734	15,994
Mgmt Uncert Buffer	Ave pct overage since 2011	0	0	0	0	0	0
ACT	= ACL - mgmt uncert buffer	28,362,470	12,865	31,034,473	14,077	35,260,734	15,994
U.S. Discards	=3 year average 15-16-17	7,661,064	3,475	7,661,064	3,475	7,661,064	3,475
TAL	ACT – Discards	20,701,406	9,390	23,373,409	10,602	27,599,671	12,519
U.S. Rec Landings	= 2017 estimate	178,574	81	178,574	81	178,574	81
Comm Quota	TAL – Rec Landings	20,522,832	9,309	23,194,835	10,521	27,421,096	12,438

O’Reilly/Hemilright, 8/1/0

2. I move that the Committee recommend to the Council that an action be considered as soon as possible regarding trip limits that includes removing the federal trip limit (no changes to the federal trip limit of 6,000 pounds would be made via this specification action). Hemilright/Batsavage, 9-0-0

[Staff note: the intent of this motion was to recommend that the Council consider a separate, future action (framework or amendment) to consider changes to the federal trip limit that were deemed to be outside of the scope of the annual specifications process.]

3. I move that the Committee recommend for the Council to recommend to the NMFS Science Center that a proactive approach for the planned spiny dogfish assessment be taken, similar to the butterflyfish/mackerel assessments. Hemilright/O’Reilly, no objections



Mid-Atlantic Fishery Management Council

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Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: 17 September 2018
To: Michael P. Luisi, Chairman, MAFMC
From: John Boreman, Ph.D., Chair, MAFMC Scientific and Statistical Committee
Subject: Report of the September 2018 SSC Meeting

The SSC met in Baltimore on the 11th of September 2018. The main objectives of the meeting were to develop new ABC specifications for Spiny Dogfish and, at the request of the Council, revisit the SSC’s ABC recommendations for *Illex* squid for the 2019 and 2020 fishing years (Attachment 1). The agenda also included a discussion of progress being made by the NRCC in developing an assessment scheduling protocol for the GARFO region; however, there was not enough time to address this topic due to the extended amount of discussion (and debate) on Spiny Dogfish and *Illex*.

A total of 14 SSC members were in attendance (Attachment 2), which constituted a quorum. Also attending, in addition to yourself, were MAFMC staff and Council members, NEFSC staff (via webinar), ASMFC staff, and representatives from the fishing industry. Documents referenced in the report can be accessed via the SSC’s meeting website (<http://www.mafmc.org/council-events/2018/september-2018-ssc-meeting>).

Spiny Dogfish

Jason Didden (MAFMC staff) briefed the SSC on the updated assessment prepared by the Northeast Fisheries Science Center (NEFSC) and the latest fishery performance report. Since SSC member Paul Rago is listed as a co-author of the updated assessment, he recused himself from any discussion related to the SSC’s OFL and ABC recommendations other than answering questions and helping to identify sources of scientific uncertainty and research needs. Yan Jiao, as the SSC lead for Spiny Dogfish, led the SSC’s discussion and development of OFL and ABC recommendations.

The SSC spent a considerable amount of time debating two issues raised in the updated assessment: (1) whether the Kalman filter method should still be applied to the time series of stock biomass estimates or return to the pre-2014 approved method of using a three-year running average; and (2) whether or not to include the low 2017 biomass estimate in the time series.

These issues were eventually resolved by the SSC as noted in the following responses to the Council's terms of reference (in *italics*).

For Spiny Dogfish, the SSC will provide a written report that identifies the following for the 2019 - 2021 fishing years:

- 1) *The level of uncertainty that the SSC deems most appropriate for the information content of the most recent stock assessment, based on criteria listed in the Omnibus Amendment.*

The SSC determined that the level of uncertainty of OFL in the assessment update requires an SSC-specified coefficient of variation (CV).

- 2) *If possible, the level of catch (in weight) associated with the overfishing limit (OFL) based on the maximum fishing mortality rate threshold or, if appropriate, an OFL proxy.*

Development of the OFL for Spiny Dogfish is based on an index-based estimate of biomass multiplied by an estimate of F_{msy} from a stochastic model. Thus, the indices of biomass and how they are calculated are important to the OFL values calculated.

Data from the NEFSC spring survey in 2014 are not used because of missing survey coverage. This necessitated an approach in 2015 to estimate the biomass index value for 2014.

In 2015, the SSC was asked to provide a three-year ABC specification. The SSC accepted application of the Kalman filter to the dogfish time series to overcome a data gap in the time series for 2014. The Kalman filter was chosen as the approach to filling the gap because it had improved performance over other approaches (the Council *ad hoc* approach and a three-year average) since it uses observation error from the survey data, and that it does not allow the estimates to increase rapidly, although they may decline rapidly.

The SSC discussed extensively the justification for returning to the approved SAW/SARC 43 method (pre-2014) or maintaining the Kalman filter. The SSC determined that the extent to which the observation error uncertainty from the NEFSC spring survey provides a reliable indicator of biomass or an index of availability of dogfish is unknown. Thus, the SSC determined that, because the initial reason for adopting the Kalman filter approach is no longer needed and there was insufficient time to fully evaluate alternative approaches, it was appropriate to return to the three-year average approach.

Data from the NEFSC spring survey in 2017 indicates a low biomass of large females in that year. After extensive discussion, the SSC determined that there is no reason not to use the 2017 survey value in calculations. The SSC heard that concerns remain over the reliability of this index value from stakeholders.

Accordingly, the F_{msy} proxy for Spiny Dogfish is 0.2439, which is calculated from a projection model for which the finite rate of population increase is equal to 1.0. The updated NEFSC assessment recommends an OFL of **21,549 mt (47.5 million pounds)** for 2019,

which is also recommended by Council staff. Future OFLs assume that ABC-level catches are achieved.

- 3) *The level of catch (in weight) and the probability of overfishing associated with the acceptable biological catch (ABC) for the stock, the number of fishing years for which the ABC specification applies and, if possible, interim metrics that can be examined to determine if multi-year specifications need reconsideration prior to their expiration.*

The SSC made the determination of the CV of the OFL by considering the nine factors identified in the recently proposed OFL CV framework. The SSCs evaluation of each criterion was as follows:

1. Data quality (moderate uncertainty): For Spiny Dogfish the NEFSC spring survey is a low accuracy synoptic survey; however, catch and discard data are of high quality and have been thoroughly evaluated.
2. Model identification process (moderate – high uncertainty): The assessment uses a single model within which many parameter sensitivities have been explored. The application of the three-year smoothing and the Kalman filter produced divergent results.
3. Retrospective adjustment (high uncertainty): No retrospective analysis was applied.
4. Comparison with empirical scale (NA): The OFL is based on an empirical estimate of population biomass and a stochastic estimate of F_{msy} ; a full model-based estimate is lacking.
5. Ecosystem factors accounted (high uncertainty): No formal accounting was made in the assessment for environmental factors; however, there are possible environmental effects on availability of dogfish to the survey that were discussed extensively, but cannot be included in the current assessment approach.
6. Trend in recruitment (moderate uncertainty): The consequence of the female size structure was included in the stochastic resampling of empirical data in the projection model, and the consequences of this were included in the model output.
7. Prediction error (high uncertainty): No estimate of prediction error was available.
8. Assessment accuracy under different fishing pressures (moderate uncertainty): There has been historical variation in fishing pressure that provides moderate contrast in survey indices.
9. MSE Simulations (NA): No MSE simulations have been performed for Spiny Dogfish.

Collectively, the attributes of the Spiny Dogfish assessment update suggest a moderate degree of uncertainty in the results. The SSC notes ongoing concern over the timing and completeness of the survey and potential issues for variable and possibly temporally correlated patterns in availability of dogfish to the survey. This has important consequences for our understanding of stock biomass and therefore management reference points.

Based on these criteria, the SSC calculated the ABCs based on a lognormally-distributed OFL with a CV of 100%. The SSC applied the Council's risk policy for a typical life history

and an estimated B_{201x}/B_{msy} ratio < 1 for all three years. Using these parameters, the P^* values and the associated ABCs are as follows:

Year	P*	ABC (mt)
2019	0.269	12,914
2020	0.274	14,126
2021	0.296	16,043

The SSC will examine Spiny Dogfish discard rates, survey abundance trends (size composition, sex ratio, and pup size), average size and sex in commercial landings, agreement between observed and predicted catch and survey forecasts, changes in Canadian landings, and the spatial distributions of catch and survey abundances each year of the specification to determine if the multiyear ABC recommendations should be maintained.

4) *The most significant sources of scientific uncertainty associated with determination of OFL and ABC.*

The SSC concurs with the list of sources of scientific uncertainty provided in the 2018 Spiny Dogfish Assessment Update, which are:

- Large changes in interannual abundance are most likely driven by poorly understood changes in availability rather than true changes in abundance or the short-term effects of fishing activity. Even small changes in resource availability in the small offshore strata could have large implications for abundance estimates. Further studies on the effects of environmental factors are recommended.
- The long-term dynamics of Spiny Dogfish are an important guide for structuring harvest scenarios given their life history; current size structure has important implications for informing harvest strategies.
- The size- and sex-specific selectivity of the fishery landings and discards may change with market conditions and availability. Changes in selectivity have important implications for the definition of exploitable biomass, the estimation of fishing mortality rates, and biological reference points for fishing mortality.
- Uncertainty in the estimated survival of discarded dogfish is not currently incorporated in the assessment.
- Uncertainty in the biomass and pup abundance estimates may alter the biomass reference points derived from the Ricker stock recruitment curve.

In addition, the SSC notes:

- The disagreement for recent year estimates among different analysis methods is unresolved. This is a substantial source of uncertainty as it affects the status of the stock with respect to management reference points.
- The current assessment method does not include other surveys (e.g., NEAMAP) in the region.

- 5) *Ecosystem considerations accounted for in the stock assessment, and any additional ecosystem considerations that the SSC considered in selecting the ABC, including the basis for those additional considerations.*

No specific, additional ecosystem information was provided to the SSC for consideration in forming its ABC recommendations. However, there are possible environmental effects on availability of dogfish to the survey that were discussed extensively, but cannot be included in the current assessment approach.

- 6) *Prioritized research or monitoring recommendations that would reduce the scientific uncertainty in the ABC recommendation and/or improve the assessment level.*
1. Revise the assessment model to investigate the effects of stock structure, distribution, sex ratio, and size of pups on birth rate and first year survival of pups.
 2. Explore model-based methods to derive survey indices for Spiny Dogfish.
 3. Consider development of a state-space assessment model.
 4. Continue large scale (international) tagging programs, including conventional external tags, data storage tags, and satellite pop-up tags, to help clarify movement patterns and migration rates.
 5. Investigate the distribution of Spiny Dogfish beyond the depth range of current NEFSC trawl surveys, possibly by using experimental research or supplemental surveys.
 6. Continue aging studies for Spiny Dogfish age structures (e.g., fins, spines) obtained from all sampling programs (include additional age validation and age structure exchanges), and conduct an aging workshop for Spiny Dogfish, encouraging participation by NEFSC, Canada DFO, other interested state agencies, academia, and other international investigators with an interest in dogfish aging (US and Canada Pacific Coast, ICES).
 7. Evaluate ecosystem effects on Spiny Dogfish acting through changes in dogfish vital rates.

- 7) *The materials considered in reaching its recommendations.*

- Staff Memo: 2019-2021 Spiny Dogfish ABCs
- Spiny Dogfish AP Fishery Performance Report
- AP Fishery Information Document
- 2018 Spiny Dogfish Stock Assessment Update
- Report of the 2015 SSC meeting
- NEAMAP survey indices

- 8) *A certification that the recommendations provided by the SSC represent the best scientific information available.*

To the best of the SSC's knowledge, these recommendations are based on the best available scientific information.

2018 Spiny Dogfish Advisory Panel (AP) Fishery Performance Report (FPR)

The Spiny Dogfish Advisory Panel (AP) (<http://www.mafmc.org/advisory-panels/>) met August 27, 2018 to develop the Fishery Performance Report (FPR) below. The meeting was conducted via internet webinar and facilitated by Jason Didden, the Mid-Atlantic Fishery Management Council's Dogfish Fishery Management Plan (FMP) coordinator. The advisors who participated were:

Bonnie Brady, Kevin Wark, Dewayne Fox, James Fletcher, Tim O'Brien, John Whiteside, Doug Zemeckis, June Lewis, Scott Curatolo-Wagemann, Scott MacDonald, Sonja Fordham, and Ted Platz

Additional participants included:

Emerson Hasbrouck, David Borden, Stew Michels, Fiona Hogan, Wendy Gabriel, Cynthia Hanson, Amanda Cousart, and Kirby Rootes-Murdy

The fishery performance report's primary purpose is to contextualize catch histories for the Scientific and Statistical Committee (SSC) related to determining Acceptable Biological Catches (ABCs). The goal is to allow comparing and contrasting of the most recent year's conditions and fishery characteristics with previous years. First an overview of recent fishery data was provided by Jason Didden, and then trigger questions were posed to the AP to generate discussion. The trigger questions were:

- *What factors have influenced recent catch?
 - Markets/economy? – Environment?
 - Fishery regulations? – Other factors?
- *Are the current fishery regulations appropriate? How could they be improved?
 - Gear regulations and exemptions? -Trip Limits? -Others?
- *Where should the Council and Commission focus their research priorities?
- *What else is important for the Council and Commission to know?
- *Are there any recent major changes in this fishery?

The input from the AP begins on the following page. The information in this FPR does not represent a consensus, but rather a summary of the perspectives and ideas that were raised at the meeting.

Note: Scott MacDonald noted that the state landings data for Virginia in the fishery information document appears to be too high. Staff is investigating.

General

- Quality is critical for maintaining price and the existing market.
- The regional differences in the fishery mean that any changes (e.g. trip limits) have the potential to differentially impact different areas.
- Flooding processors with lots of spiny dogfish will harm the market and large trips may have difficulty maintaining high product quality. The fishery seems stable but there was a price drop in August 2017 for some harvesters. See what happens with recent higher trip limits and rules allowing dual-targeting of monkfish and dogfish.
- Try to sustain the fishery and keep things stable overall – there's not that much interest given the prices.
- A contrary, minority perspective was also voiced: Developing new markets (Asia/Africa, pet food) will require lower, not higher prices, and manipulating price (by limiting catch & trip limit) to address small boat concerns hinders the possibility of greater overseas markets. If the fish are there open it up and let the price be what it becomes.
- The trip limit means only the small scale operations can profitably participate.
- Need to understand male fish biomass – the data coming from the Bigelow is not useful for understanding the true size of this stock.
- There's interest in better understanding the NAFO process and role of NAFO as it relates to spiny dogfish.

Factors Influencing Catch

- Markets are crucial to getting prices high enough to stimulate fishing activity. Low catches relative to the quota in recent years are due to low prices/effort. There are relatively few boats willing to go out for dogfish at current prices, but a small price increase could change that.
- Market issues discourage new and/or previous processors, which limits vessel opportunities.
- Dogfish prices don't seem to follow traditional supply and demand – there appears to be an external constraint on prices that you don't see with other fish...Markets are weak.
- This fishery needs help from other institutions (Council, NOAA, etc.) on building the market.
- Abundance does not currently drive catches; boats have no problem obtaining their trip limits.
- General sentiment about sharks and shark fins have hurt the market and created barriers to shipping (about 19 container lines have adopted internal policies to not carry any shark products and there are bans in several states). There is interest in purchasing spiny dogfish internationally but ENGO opposition as well, despite MSC certification and the sustainability of the U.S. East Coast spiny dogfish fishery.
- European markets are shifting away from sharks, limiting US dogfish exports to Europe.
 - o The Shark Alliance did not promote European boycotts of US spiny dogfish/other legally caught sharks (though other entities have sought to do this).
 - o Europe seems to have the U.S. figured out in terms of pricing
 - o Traditional European demand may be declining due to changing tastes.

- There may be some spiny dogfish landings in Europe in the future related to retention rules, which may impact demand for imports.
- Virginia landings were down this year primarily due to weather – was hard for boats to get out to fish from December 2017-April 2018 (primary Virginia season) and the low prices don't stimulate interest in fishing in poor weather.
- Rhode Island: Key is price and how close you can catch them given small profit margins – Cape Cod guys don't have to travel as far.
- Shoaling issues with Oregon Inlet prohibit large-scale landings in North Carolina.

Input on Regulations

- Some advisors would like to see a slow and steady approach that does not create large changes in catches and/or prices. Raising trip limits may collapse prices if additional markets are not developed. Uncertainty about future trip limits is negatively affecting capital investment in vessels and gear.
- An occasional higher trip limit for trawlers (some per month or quarter) around 20,000-40,000 pounds could help develop new markets and provide opportunity for different vessels... Would like to change the situation from where trawlers have to always avoid dogfish to getting where they can target them.
 - A double limit once a week was raised as an alternative possibility
 - Regarding different kinds of trip limits, consider enforcement/monitoring issues.
 - In the past some in Massachusetts have been interested in a seasonal (October through December) trip limit increase that would not hurt smaller boats in the summer or crash the market.
 - There was concern that such adjustments could substantially hurt more southern ports, and more details would be needed to evaluate the regional impacts. Virginia would be negatively impacted by changes in December trip limits
- At least one advisor is interested in allowances to harvest male dogfish in excess of the typical trip limit and possibly a separate quota (which is currently made up of mostly female dogfish). An advisor noted that males can be targeted currently. STAFF NOTES: A male only fishery would need an Amendment and/or benchmark assessment but recent research suggests it may be feasible. A benchmark assessment is scheduled for 2021.
- It would be useful to have a NE permit covering smooth dogfish to reduce regulatory burdens. The current process causes unnecessary frustration.
- The 165 foot processor limit prevents fishery development and/or exploration of a beyond-the-EEZ (200 nm) fishery. There are transfer-at-sea provisions for other sharks that discourage transfers-at-sea.
- The web of federal, state, and international rules (on fishing and sales) discourage entry into the processing sector generally. The Council processes, and favoring of small boats and a few processors, have exacerbated and perpetuate these issues. A variety of factors are restricting development of the fishery in southern areas, including state regulations in Virginia and North Carolina.
- The current regulations, especially trip limits, eliminate the possibility of developing an industrial market (fertilizer or pet food applications). Is it possible there could there be a declaration for fertilizer/larger scale applications where those products did not flood the

food market. VMS could be used for monitoring. There is general concern by some that large-scale landings could negatively impact the fresh market. The use of dogfish in a larger scale operation may impact fresh market indirectly and it was noted that gurry plants already exist.

Research Priority Ideas

- Develop new domestic (human and/or animal food) and/or non-European markets.
- Encourage a mid-Atlantic and/or southern processor.
- Separation of spiny and smooth dogfish in NOAA trade database (buyers in particular may want to know) and ground-truthing of this database by NOAA Fisheries/Council, etc. Staff note: NOAA cannot separate spiny and smooth dogfish – this is a code by another international trade agency – a petition could be made but may not be successful given the relatively low value of dogfish.
- Research/track export trends. <https://www.st.nmfs.noaa.gov/commercial-fisheries/foreign-trade/applications/trade-by-product>
- Investigate ways to increase the quality of meat (i.e. how can it be processed on deck, etc.), which in turn would increase the price of the product. If we can get the price higher this would have a snow ball effect on the market.
- The new benchmark assessment planned for fall 2021 should consider:
 - o Exploration of how spiny dogfish recovered so much faster than predicted.
 - o Increased engagement with fishermen as part of scientific research.
 - o The population of male dogfish and availability of dogfish to the relevant surveys generally. Low 2017 datapoint was not reflective of what AP members see on the water – the bottom survey is most likely missing most dogfish.
 - o Obtaining reproductive and other biological information across the range of the species before the next assessment.
 - o How to prioritize the biological information that needs updating before the next assessment.
- Investigate dogfish as a source of squalamine.

Other Issues Raised

- Consider having NAFO manage the fishery outside the EEZ for a male-only fishery.
- Concern was previously voiced that sufficient notice be given prior to ASMFC consideration of trip limit changes.
- The environmental impact of high dogfish populations on other species is not known/considered.
- Tariffs create disadvantages for US fishermen.
- A name change for spiny dogfish (“chipfish” has been suggested in addition to “cape shark”) could help the market, and could allow access to a prison protein market (<http://www.wsj.com/articles/SB122290720439096481>).
 - o Other advisers noted that “Cape Shark” is an approved market name (http://www.accessdata.fda.gov/scripts/fdcc/?set=seafoodlist&id=Squalus_acanthias&sort=SLSN&order=ASC&startrow=1&type=basic&search=dogfish)

An Economic Analysis of Spiny Dogfish: Historical Trends, Future Markets, and Implications for Management Action

Prepared for:

Massachusetts Division of Marine Fisheries and its Seafood Marketing Program
Steering Committee

Prepared by:

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Executive Summary

This analysis examines the history of global trade in spiny dogfish over the last 20 years to show changes in buyers and sellers, changes in price, the differences between key countries, and the differences between the frozen and fresh markets. To ground truth this data and expand upon the underlying market dynamics, we also present interviews of key dogfish stakeholders (processors and fishermen) to better understand determinants of price, constraints in the local supply chain (transportation, processing and harvesting), recommendations and advice for management, and directions for future work and market development.

Over the last 20 years, the US has become the major supplier of spiny dogfish to the EU; this includes both fresh and frozen supply, which are two separate markets. The US accounts over 90% of the global supply of dogfish, and the European Union represents over 90% of the global demand. The total exports of frozen dogfish have increased significantly since 2010, but total exports of fresh dogfish have been trending down since 2010, and now only represent about 25 percent of total sales (in 2001 fresh dogfish represented ~50% of total sales). Currently, the fresh dogfish market is supported primarily by two countries—France and Italy.

Prices of both fresh and frozen dogfish exports have been trending up over the last decade, with the price of fresh dogfish rising to an all time high in 2014-2016. Higher prices encourage more supply, but over supply of frozen dogfish in both 2011 and 2016 resulted in about 40% market correction 2012 and 2017. The ex-vessel price has remained relatively flat over the last 20 years, and has averaged around 18 -20 cents per lbs. Although spiny dogfish quota has significantly increased in recent years, according to interviewees, it is not the right time to increase trip limits. The net effect of increasing trip limits before new markets are created would be a dedicated effort by off-loaders and processors to slow fishing activity by telling boats they are not accepting fish on certain days, or significantly lowering ex-vessel price. The size of the market is currently constrained by the local processing capacity and the total maximum global demand, which was estimated at approximately 20 million lbs (whole fish).

Other changes to regulation, such as male only harvest for draggers were discussed, but would require significant upfront costs, management changes, and the development of entirely new markets to funnel supply. Regarding new markets, both fishermen and processor mentioned the interest in exploring government markets, such as prison systems or the military as potential outlets. Overall, there was more confidence that new markets would materialize here in the United States (as opposed to globally), given all the work that has been done marketing, promoting, and developing new value-added products with dogfish over the years. There might also be potential to improve existing fresh fish markets by changing to a weekly vessel limit over the course of the fresh fish season (Sept 1-April 30). This would allow vessels to increase harvests to coincide with the days that fresh fish is sold (Mondays and Fridays), and avoid days in the middle of the week when processors can't sell it, and instead, freeze it. It could also save operating and transportation costs for the vessel and off-loader if boats could catch more fish on fewer days.

INTRODUCTION:

This analysis is intended to inform the Massachusetts Division of Marine Fisheries and its Seafood Marketing Program Steering Committee about market trends and limitations affecting spiny dogfish fisheries. This information may be useful to DMF in its contributions to spiny dogfish management at the federal and interstate level. The Mid-Atlantic Council's Spiny Dogfish Advisory Panel (AP) annually addresses issues pertaining to overall quotas and daily trip limits.

This analysis concerns global market dynamics of Spiny dogfish over the last 20 years with focus on current markets and limitations. Specifically, we examine trends in export price and quantity (per lbs.) of both fresh and frozen dogfish products over time, discuss the relationship and differences between countries, evaluate the potential to recover lost markets or create new ones, and explain how management changes and changes in consumer preferences have impacted global trends. We use this information to draw conclusions about the maximum sustainable size of the global dogfish (export) market, and to make recommendations for future growth.

In addition to this analysis, we also interviewed key fishermen and processors of dogfish in New England² to better understand important questions raised by the Dogfish AP and the MAFMC over the last few years³, and to update the characterization of fishing communities involved in the spiny dogfish fishery. We were particularly interested in factors that influence prices and catch rates; the relationship between different regions (e.g. the seasonality of catch); the potential benefits and costs of proposed regulations (e.g. changes in trip limits, or male only harvest); the flow of product within the domestic supply chain (from vessel to truck to processor); the constraints and costs of processing; ways to increase domestic consumption and improve value added activities; and ideas for different research or management changes.

ANALYSIS OF GLOBAL CATCH AND TRADE IN SPINY DOGFISH

The main catches of spiny dogfish have historically been in the Northeast Atlantic and the Northwest Atlantic. Between 1950 and 1972, catch from the Northeast Atlantic (Norway, France, UK, Iceland) accounted for between 97 and 100% of the global reported catch (with a peak of 50,000 mt in 1972). Since that time the region's share has dramatically declined, especially over the last 20 years. By 2005, catch from that stock accounted for only 39% of the global catch, and by 2010 it accounted for just 7% of the global catch. Decades of overfishing in the Northeast Atlantic had reduced the spiny dogfish biomass by 95%⁴, and eventually in 2011, the EU Council followed the advice of the EU Commission and ended fishing completely for dogfish in the Northeast Atlantic (Council Regulation 57/11)⁵.

² Interviewees Included: Fishermen Doug Feeney; Fishermen; Fishermen Jamie Hayward; Processor Red's Best; Primary Processor Marder Trawling Inc.; Primary Processor Seatrade International; Secondary Processor Highliner.

³ 2017 Spiny Dogfish Advisory Panel (AP) Fishery Performance Report (FPR)
<https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/59a6eb60893fc02cee00ad2c/1504111457029/2017-Dogfish-FPR.pdf>

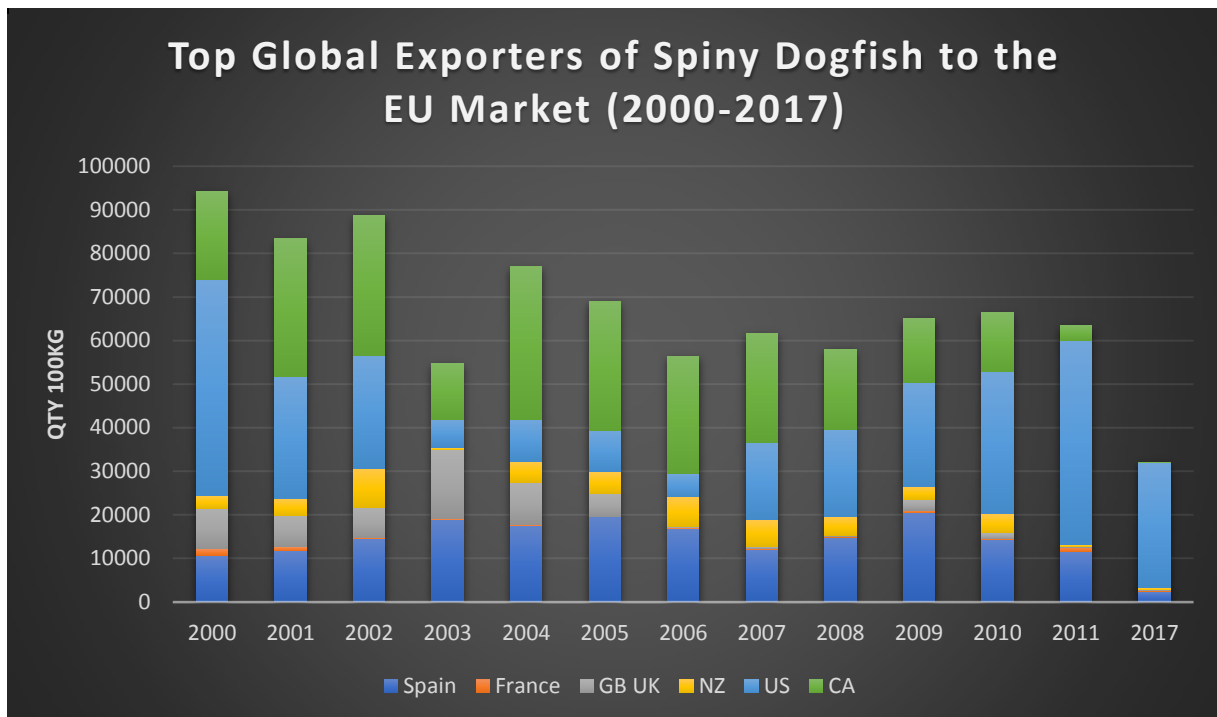
⁴ Lack, Mary 2006. CONSERVATION OF SPINY DOGFISH SQUALUS ACANTHIAS: A ROLE FOR CITES?

https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/FINAL_Spiny_Dogfish_ImplementationRepDez06.pdf

⁵ Dell'Appa, A., J. Johnson, D. Kimmel., R. Rulifson. 2013. The international trade and fishery management of spiny dogfish: A social network analysis. *Journal of Ocean and Coastal Management*. (80)
https://www.researchgate.net/publication/267896648_International_Trade_in_Spiny_Dogfish_A_Network_Analysis_for_the_Fishery_Management

However, 95% of the global consumer market for spiny dogfish is in the EU. So, the decline of the European stocks meant opportunity for other regions to fill that void. In the 1990's, the United States stepped up to the plate, and rapidly expanded its domestic fishery. However, it didn't take long for the Northwest Atlantic stock of Spiny Dogfish to also become overfished. With the decline of more traditional groundfish resources in the late 80s and early 90s, the directed fishing for dogfish resulted in a nearly ten-fold increase in landings from 1987-2001. This led to a 75% decline in female spawning stock biomass, which prompted the Mid-Atlantic and New England Fishery Management Councils (Councils) to develop a fisheries management plan (FMP) for the species. With the FMP in place by 2002 (which included total allowable catch and strict trip limits), total US catch (and export) of Spiny Dogfish declined by 75% from 2000-2003.

Figure 1. Top Global Exporters of Spiny Dogfish (2000-2017)



(<http://epp.eurostat.ec.europa.eu/newxtweb/>)

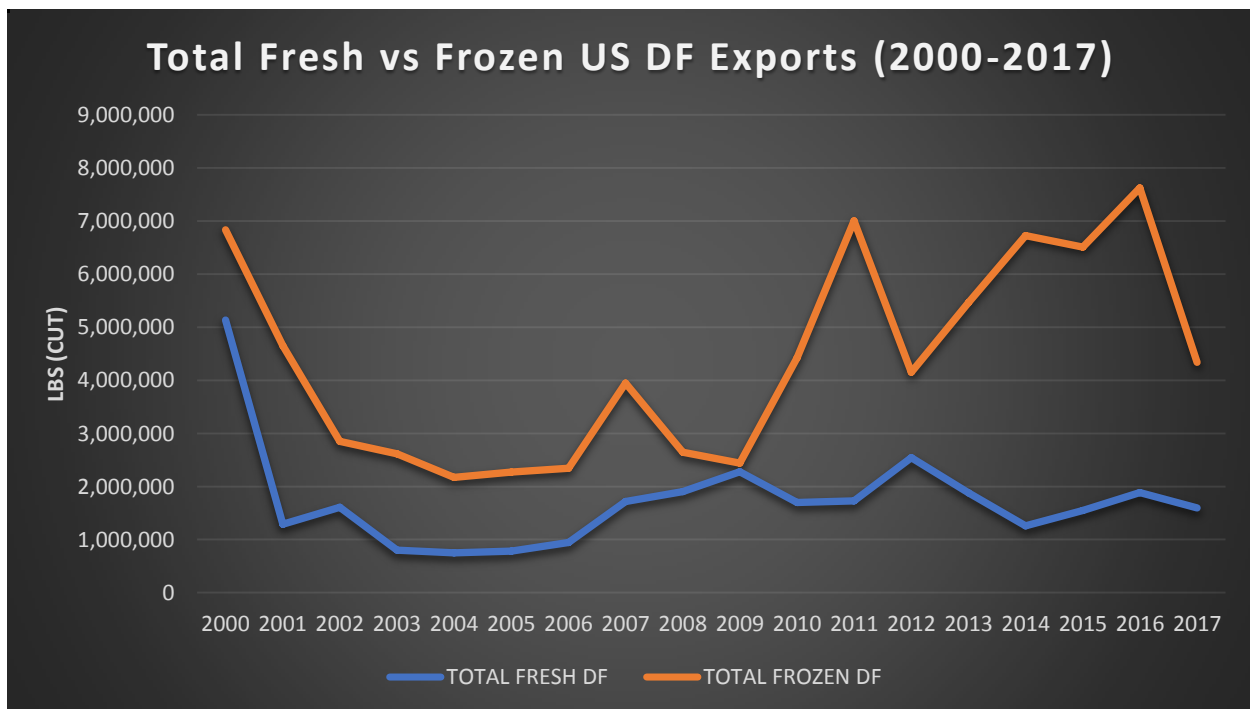
As **Figure 1** shows, between 2000-2002, the United States and Canada accounted for about 75% of all global exports to the EU. However, in 2003 when the FMP was put in place, US exports dropped by about 75% for the next five years, which once again provided opportunities for other countries to develop their fisheries. New countries increased their importance as exporters; particularly Canada and New Zealand. Also, amongst the EU27 countries, Spain became a central importer and exporter toward other west European countries (e.g. Portugal, Italy, France, and Greece) and several east European countries (e.g. Czech Republic, Poland, Bulgaria, and Slovenia). By 2010, the Northwest Atlantic spiny dogfish stock had fully recovered, and the United States regained control of most of the EU market. By 2017, the United States accounted for more than 90% of total global exports to the EU.

Market

Spiny dogfish product is known to be traded as fresh and frozen meat, including fillets; as tails; in smoked form; as fins; and as several by-products including cartilage and livers (or liver oil), hides, teeth and jaws. The 'back' represents the main body of the fish accounting for 28-30% of the total live body weight. Backs are exported for ultimate sale as fillets and steaks and for use in the fish and chips trade. 'Belly flaps' are produced during the dressing of the fish and are individually skinned and washed prior to freezing. The belly flap accounts for an additional 7% of the live weight (Personal Communication).

In the USA, the belly flaps are cut out, the fins removed, and the body is skinned leaving a white carcass or 'back' which is generally exported to Europe, particularly: France, Germany, Belgium, the UK, and Italy. Belly flaps are exported solely to Germany where they are smoked and used to prepare 'Schillerlocken'. Fins are frozen and exported to primarily to Thailand, where they are re-processed and re-distributed into the broader Asian market.

Figure 2. Total Fresh and Frozen US Spiny Dogfish Exports (2000-2017)



https://www.st.nmfs.noaa.gov/pls/webpls/FT_HELP_SPECIES

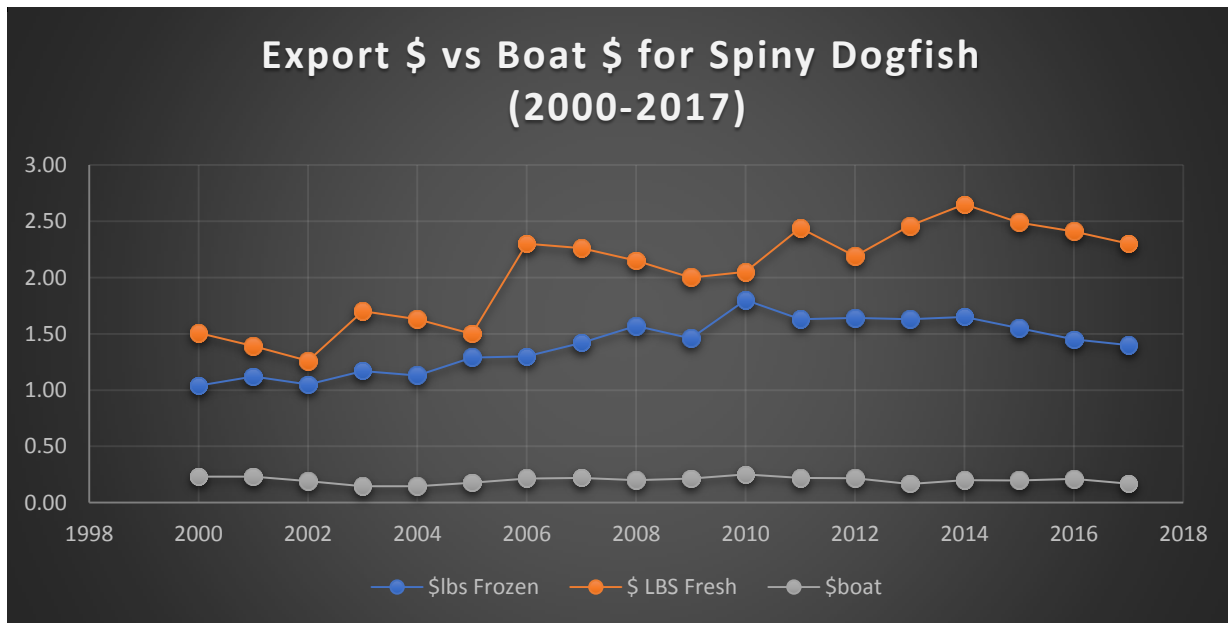
Figure 2 shows the relationship between the fresh and frozen spiny dogfish market over the last 17 years and illustrates the long-term trends in supply. As noted, US exports dropped considerably between 2000 and 2002 after the implementation of the FMP, and both frozen and fresh exports remained low until 2009. Up until this point, there also seemed to be a strong positive relationship between fresh and frozen supply, as they followed very similar trend lines. After 2009, the paths diverge considerably, and we start to see a significant increase in frozen dogfish exports. By 2016, the frozen exports were at their highest point in the last 20 years.

Meanwhile, fresh product showed a slight decline over this same period, and on average represented just 25% of the total dogfish export market (prior to 2009, the fresh market represented 50% or more of the total dogfish export each year). In 2012, we see a sharp decline in the fresh dogfish exports, which coincides with the EU concerns at that time about elevated PCB levels. However, this only seemed to impact the fresh market, as the frozen market increased sharply from 2012 all the way up until 2016, when it also crashed.

In the decade prior to 2016, the average export price (the price consumers are willing to pay) for frozen and fresh dogfish were both trending upwards. Over that same time, the total exports of frozen dogfish also increased sharply to take advantage of the higher price points (demand). Then, in 2016, the trip limit for dogfish increased to 6,000 lbs. per day, and according to processors and fishermen interviewed for this study, the domestic inventory became flooded with product (much of it ended up frozen), and the market crashed.

The quantity of US frozen dogfish exports fell by almost 40% from 2016 to 2017, and the export price of both fresh and frozen dogfish also declined. Together, the total US exports in 2016 was roughly 9.5 million lbs. of cut weight (at roughly 32% yield, this equates to about 28 million lbs. of whole dogfish quota). The consensus of both processors and fishermen interviewed for this analysis is that (for now) the global market for spiny dogfish can't support much more than 18-22 million lbs. of total catch (between 6-7 million lbs. of cut weight—backs, bellies and fins).

Figure 3. Export \$ for Fresh and Frozen Dogfish (2000-2017)

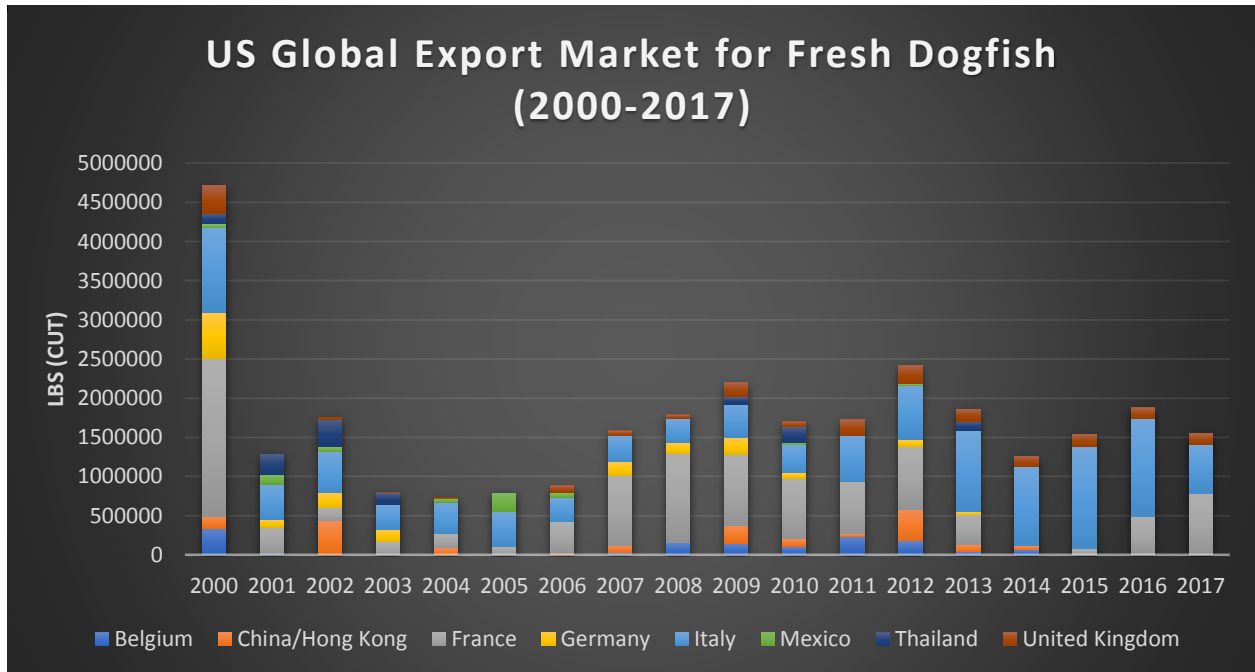


<http://epp.eurostat.ec.europa.eu/newxtweb/>; https://www.st.nmfs.noaa.gov/pls/webpls/FT_HELP.SPECIES

According to **Figure 3**, the average export price for both fresh and frozen dogfish has been trending up over the last 20 years. Two separate markets exist for fresh and frozen product, and the graph shows that on average, since 2010, the price for fresh dogfish is increasing and is about 40% higher than that of frozen dogfish. But, even as the fresh price has been increasing, the total exports of fresh dogfish have

fallen over this time. We would expect that higher prices would lead to increase production of fresh dogfish, but total exports (of fresh) have been trending down over the last 10 years even as prices have been trending up. Given the increases in quota and trip limits over the last ten years, it doesn't seem likely that significant constraints exist on the harvest of fresh dogfish. What's more likely is that the number of countries importing fresh dogfish has dropped. Countries who continue to buy fresh dogfish might be paying a little more for it, but by themselves, they can't make up for the loss of sales to other fresh dogfish markets.

Figure 4. US Global Export Market for Fresh Dogfish (2000-2017)



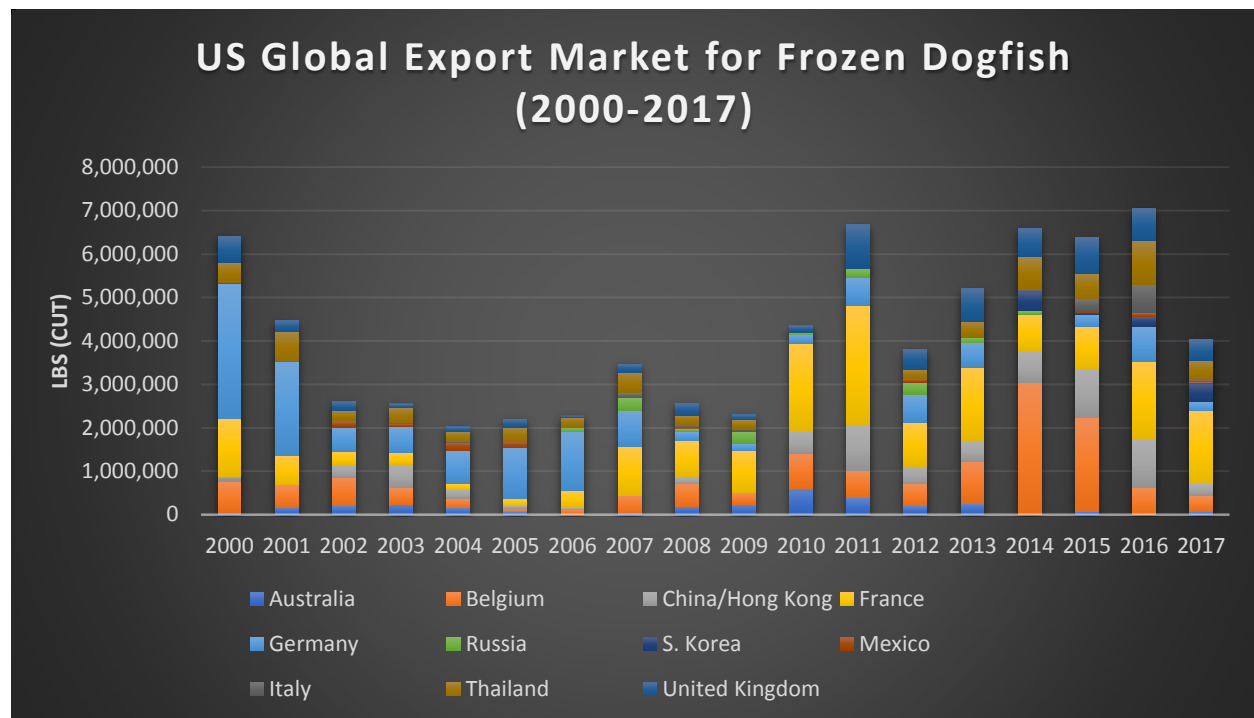
https://www.st.nmfs.noaa.gov/pls/webpls/FT_HELP.SPECIES

Figure 4 shows the change in the total US export market for fresh dogfish over the last 17 years. In 2000, prior to the implementation of the FMP, the fresh market for dogfish was about twice as high as it has been since then. In addition, in 2000, eight different countries purchased significant amounts of fresh dogfish. Exports slowed considerably between 2003-2008 while the fishery was rebuilding, but between 2009-2013, exports began to increase along with the diversity of the fresh fish market. However, ever since 2013, the diversity of the fresh dogfish market declined dramatically, and is now supported almost entirely by two countries: France and Italy (and to a much lesser extent, the UK).

It is unclear why the diversity of global buyers fell off so sharply, but again, the timing does coincide with the EU concerns about PCB in dogfish. In 2014 and 2015, France stopped purchasing fresh dogfish almost completely, and it was basically just Italy who supported the entire fresh market until 2016 when France came back in. In addition, over the last five years, there has been a concerted campaign led by EU politicians and environmental non-governmental organizations (ENGOS) to stop the sale and consumption of all shark species—including spiny dogfish. This appears to have had an impact of consumer preferences, and according to processors interviewed for this analysis, in countries like France, they stopped selling it in retail fish markets all together (to avoid labeling it as shark). The

primary markets that exist now for fresh are the prepared food markets, like restaurants, where species labeling is not as predominant.

Figure 5. US Global Export Market for Frozen Dogfish



https://www.st.nmfs.noaa.gov/pls/webpls/FT_HELP.SPECIES

The global market dynamics for frozen dogfish (**Figure 5**) tell a much different story than the markets for fresh dogfish. Most notably, the global export of frozen dogfish product has dramatically increased since 2010. There is also a much greater diversity of countries who purchase frozen product than fresh product; although, not all countries consistently buy it from year to year.

Prior to 2008, Germany was the largest global buyer of frozen product (this included both backs and belly flaps). But since 2008, it appears that Germany no longer purchases backs, and only purchases a small amount of belly flaps to prepare ‘Schillerlocken’. Other countries, like Russia, Mexico and China will purchase frozen dogfish for a few years in a row, and then stop all together.

Nowadays, the most consistent countries purchasing frozen dogfish are once again France and Italy. Belgium has also been a consistent buyer over the years, as has Australia, who purchases 2-300,000 lbs. of backs per year. And as discussed earlier, the (frozen) shark fin market is predominantly dominated by Thailand, although exports are also sent to Hong Kong for re-processing and distribution throughout Asia.

In 2017, the market for frozen dogfish crashed by roughly 40%, but it doesn’t appear this is a result of entire markets disappearing. Instead, the same diversity of countries bought frozen dogfish in 2017 as in 2016—the difference is that each country just purchased less. This puts frozen dogfish in a better

position to recover than fresh dogfish because at least the markets still exist. According to the processors interviewed for this analysis, once you lose the market, it is almost impossible to get back. This seems to be the case for now for the fresh market.

Summary of Global Trade Analysis

The Europeans developed a robust domestic market for spiny dogfish more than 80 years ago and sustained local demand primarily with local catch from Norway, Iceland, and the UK all the way up until the 1990s when the Northeast Atlantic stock began to decline. To meet EU demand, the northwest Atlantic stock was also severely depleted during the 1990s, but thanks to the world's first fishery management plan (FMP) for spiny dogfish developed by the NEFMC and MAFMC (and implemented in 2001) the stock was saved from collapse. Eventually, the FMP led to a massive rebuild of the northwest Atlantic stock, which positioned the United States to become the primary supplier of both fresh and frozen dogfish products to the EU and the rest of the world.

There are two primary dogfish products—fresh and frozen, which are characterized by significantly different prices, and a different mix of buyers. Over the last 10 years, the export price of both fresh and frozen dogfish has been increasing; however, only the frozen supply has significantly increased over this time frame. Frozen supply continued to increase until 2016, when the market significantly crashed due to oversupply—at this time, total exports equated to roughly 28 million lbs. of whole fish supply (quota). The combination of increased trip limits and new processors entering the market contributed to the oversupply.

Although fresh dogfish prices have been increasing over the last 10 years, the total supply of fresh product has been trending downward, and the number of global buyers has significantly declined. The entire fresh market is now mostly supported by two countries—France and Italy. It is unclear why the diversity of the fresh dogfish market has declined so dramatically, but it might be related to changes in consumer tastes and preferences—and to the overall shark conservation movement.

Still, historical data shows that alternative fresh markets have existed over the years in places like Latin America, China, and Belgium—which might present future opportunities for re-development. Based on the data, it is apparent that the fresh and frozen markets are entirely different; so, it could be possible to develop new fresh markets and increase the supply into those markets without negatively impacting the price or dynamics of the frozen markets. However, increasing the supply of frozen appears to be much more sensitive. In 2011 and in 2016, the total US exports of spiny dogfish exceeded 26 million lbs (whole weight), and both times the following year, the market crashed by roughly 40% (see Figure 3). Based on these analysis and interviews with processors and fishermen, until new markets are developed, the maximum sustainable size of the US export market is roughly 18-22 million lbs (whole weight) per year.

RESULTS OF INTERVIEW QUESTIONS

To better understand the market dynamics of spiny dogfish, especially as it relates to changes in management, we interviewed the four major processors (and exporters) of spiny dogfish in the United States—Marder Trawling, Seatrade, Highliner, and Red's Best. We also received feedback on our interview questions from key industry participants Doug Feeney and Jamie Hayward, who spoke with us at length. To inform the management process, we developed a set of questions based primarily on comments and inquiries raised by the Dogfish AP in the 2016-2017 Dogfish Performance Reports. We also conducted an extensive literature review to derive additional questions and to validate answers of interviewees. To protect the confidentiality of interviewees, answers are grouped together under each question.

Questions for Processors and Fishermen

1. What are the biggest determinants of ex-vessel price for dogfish?

Ex-vessel price is primarily determined by the domestic processing capacity, the amount of inventory in the freezer, and the global demand of the European market. Prices are set by the processor to smooth landings over the course of the year so that daily processing capacity is not exceeded, and some scarcity remains in total inventory. Given the lack of global buyers, if buyers determine that freezer capacity is full, they will low ball export prices, and if processors hold out for a better price, they are at risk of losing the market altogether as buyers will readily substitute away from dogfish for another low value fish. This dynamic trickles back to the fishing vessel, and processors will continue to lower prices to the boat (off-loader) to slow fishing to clean out excess inventory.

As the number of processors increase, the risk of low ex-vessel prices also increases. For example, two years ago, there were four major processors, and a global market that could support ~20 million lbs. However, with an increase in daily trip limit to 6,000 lbs, the fishery landed about 28 million lbs., and inventory for all four major processors were exceeded. The global buyers had significant leverage in this situation, prices fell, and vessels were shut down by the off loaders in the major ports in New Hampshire, Massachusetts, Rhode Island, New Jersey, and Virginia. In 2018, the number of major processors has dropped back down from four to two, which has constrained total inventory and the daily processing capacity. This leaves some excess demand from global buyers, which should have a positive impact on prices and allows vessels to continue to fish.

2. What is the seasonality of dogfish landings across regions (fishing communities)?

The dogfish fishery is a seasonal fishery, which follows the migration of the larger female schools of fish from New England to Virginia. Starting in June, the dogfish begin to show up in waters of New England, and fishermen begin fishing for it heavily in July through October. By November, the schools have moved south to Rhode Island and make it to New Jersey by December. From there, they continue to migrate south to Virginia in January and February, and by March and April they have begun to migrate north again and can be found off the coast of New Jersey again. Eventually, they make their way back up north in May through June and the cycle repeats.

3. What is the relationship/difference between the fresh and frozen dogfish markets?

As shown in the trade data analysis, the fresh and frozen markets are completely different markets with significantly different price points. On average, the export price of frozen product has been roughly \$1.50 per lbs, and the export price of fresh product has been around \$2.25. At these prices, processors only make any real money from the fresh product. However, the fresh market doesn't exist until Sept 1, and then lasts throughout the winter months until April.

Most of the dogfish caught by New Hampshire and Massachusetts vessels occurs over the summer, especially during the months of July and August, where fishermen can declare out of the ground fish fishery and declare into the exempted dogfish fishery (where they can target dogfish without having to be on a sector trip). Almost all this dogfish is frozen.

Developing a summer fresh dogfish market would be hard, for a few reasons. First, European demand drops significantly for all fish in the summertime, and most Europeans tend to take the entire month of August off (including the European buyers). Second, it would require an extra investment by the vessel to carry more ice for the dogfish, which is hard to justify at the very low ex-vessel price. Finally, dogfish are highly perishable, even when packed for shipment, marginal increases in temperature that can occur during transport (like waiting on the Tarmac at the airport) significantly impact the quality of the dogfish product. Each year, processors expect a certain loss from spoiled dogfish, even during the fall/winter months.

Although some of the fresh market is supplied by Massachusetts and New Hampshire vessels in September and October, most of the fresh fish market is supplied by mid-Atlantic vessels from Rhode Island to Virginia. Even though processors make significantly more money from fresh dogfish than frozen dogfish, the ex-vessel price to the vessel/off-loader doesn't change—in fact, northern vessels on average make more money per lbs. than southern vessels (fresh fish vessels) because the increased transportation cost to ship the fish from the mid-Atlantic region to New England comes off the top of the price per lbs. processors pay off-loaders.

On average, this year, northern vessels are making 18-22 cents per lbs., and southern vessels are making 14-16 cents per lbs. Processors pay around 32 cents per lbs to the off-loader. In the mid-Atlantic, 12 cents per lbs comes off the top for transportation, 5-6 cents per lbs goes to the offloader, and the remaining 14-16 cents per lbs goes to the vessel. In New England, the proximity to processors reduces transportation costs, and results in less money coming off the top and higher prices to the vessels.

Processors can't pay differentially more for fresh fish than frozen fish because it is uncertain ahead of time how much of the fresh catch can be sold into the fresh market, and if it can't be sold into the fresh market, if it will be frozen and added to the frozen inventory. The frozen market is based on pennies and there is no guarantee that these pennies will be positive, so processors rely on profits from the fresh market to make money. Because the fresh and frozen products are intermingled at the processor level, the prices paid to the vessel are based an average of the revenue from both fresh and frozen products.

4. Would you support an increase in the daily trip limit for dogfish?

The consensus amongst all processors and fishermen interviewed was that an increase in the daily trip limit would not result in more money to the boat. Because capacity to process dogfish is constrained (120k per day), and over supply of frozen inventory can quickly lead to low-ball prices from global buyers, the net effect of increasing trip limits at this time would be a dedicated effort by off-loaders and processors to slow fishing activity by telling boats they are not accepting fish on certain days. According to all processors interviewed for this analysis, the dogfish markets are slowly recovering this year, but an increase in trip limits at this time could seriously jeopardize the progress being made to bring the markets back.

5. Would you support a 'male only' winter harvest by draggers?

In general, both processors and fishermen had concerns about the viability and market effects of a directed male dogfish fishery over the winter. In the end, both agreed that the only way this would work is if an entirely new market was developed first—where the smaller (lower dragger quality) males could be sold. None of the processors currently accept dragger dogfish due to the lower quality, and because the males are significantly smaller, the processing costs for males would be significantly higher. One processor mentioned that if a new market could be found to accept the males, the only way it would work from a processing standpoint is by developing an automatic cutting machine. However, utilizing such a machine for small males would destroy the belly flaps, and reduce the overall price of the dogfish product. Therefore, the price paid to the boat would be significantly less (12-14 cents per lbs.), and any new market that was created would have to be large enough, so it became a pure volume fishery. In this way, draggers could target as much fish as they could each trip (no trip limits) and make more money the more fish they caught. From an ecosystem perspective, this idea was interesting just to get the dogfish out of the ocean. But there are significant upfront costs, potential market risks, and regulatory changes that would need to occur to make this a viable option.

6. What are the chances that new markets for dogfish can be developed, or old markets re-developed?

The consensus among both processors and fishermen matched what the US export data showed, that the European markets for dogfish have changed significantly over the past 10 years, especially for the fresh market, and due to changing consumer tastes and preferences (and negative 'shark' PR), these fresh markets will be difficult to recapture—many fish markets and grocery stores in Europe won't display 'shark' products anymore. For the frozen market, there is a greater diversity of buyers and the potential for continued growth (see **Figure 2**). This might be because it is more versatile and can be used for more (behind the scenes) prepared products.

As the data shows, significant attempts have been made over the years to develop new markets in places like China, Russia, and Latin America—but these markets have not been sustainable. For example, both fishermen and processors interviewed have made large efforts in China, in particular. However, everyone came to the same conclusion—although the Chinese eat a lot fish, they still seem to not really like the dogfish product. Efforts are continuing in some of these places, and there is optimism that global markets could still materialize under the right conditions (and with continued exposure to the product, or to new value-added products). Part of the evolution could come about when the older generation of global buyers give way to a younger generation of buyers who have less experience with dogfish and are willing to learn more about it and take chances on this MSC certified product.

Still, everyone interviewed agreed that the highest likelihood of new markets is right here in the United States. Significant efforts have been made over the last ten years to increase awareness and change tastes and preferences for dogfish. For example, local universities are now purchasing a few hundred thousand lbs. per year, CSF programs (like New Hampshire Community Seafood) are offering dogfish as part of the rotation of fish to both consumer and restaurants, and multiple grants have been awarded to groups (especially on the Cape) to develop new value-added products with dogfish.

According to fishermen and processors interviewed, turning dogfish into value-added products could have the most significant impact on developing new long-term sustainable markets. Fishermen on the Cape have done the most work developing these markets, and over the last 10 years have received multiple federal grants for these purposes. The newly formed, Chatham Harvester Group is working with processors via 2-million-dollar grant from the USDA to develop multiple products, including: a fish burger, fish sticks, and fish nuggets. There is optimism that these products could form the basis of entirely new markets and increase prices that could trickle back to the boat.

In addition to value added products, all processors and fishermen also mentioned the potential for working directly with the prison system or the Defense Department to establish long-term contracts for dogfish purchases. Even though these avenues seem like logical options to explore, no one interviewed is aware of any work being done to develop these markets. It would probably take the efforts of a dedicated lobbyist, or marketing professional working full time (along with financial support, like another grant project).

7. Do you have any ideas for management changes that could improve the dogfish markets?

Most interviewees thought that there was no need to change any management regulations at this time. However, one respondent suggested an option that might make sense for the southern boats and the fresh market. Currently, processors send trucks down south to pick up fish three times a week— Monday, Wednesday and Friday. They do so because the daily trip limit forces fishermen to fish all week long to maximize landings. However, processors can only take product for the fresh market on Monday's and Fridays. This means that almost all fish that gets shipped up on Wednesday is put directly into the frozen inventory, which could lead to over-capacity in the freezer, overall lower prices and risk of market collapse. However, according to the processors interviewed if they had more fresh product on Mondays and Fridays, they could almost certainly sell it. The existing trip limits constrain boats from catching significantly more on Mondays and Fridays, but if there was a way to modify trip limits – either through regulation or informally dealer-imposed differential daily limits that might be accommodated through a flexible weekly limit regulation – on those days, fishermen and processors might be able to make more money.

One option for doing this is to go to a seasonal weekly trip limit during the fall-winter period (October-April) when catches are more variable due to weather and the Mid-Atlantic ports see most of the landings. This would allow fishermen to focus their efforts to load up the trucks on Monday and Friday and would likely allow them to save a trip or two in the middle of the week (saving fuel costs and other operating expenses). For processors, they save money only having to send a truck two days a week. And by receiving more fresh fish on Mondays and Fridays, they could more consistently fill orders, and potentially grow new markets for fresh fish. Because processors make more money selling fresh fish, profits should increase. And less 'winter harvest' dogfish going into the frozen inventory helps to keep frozen fish prices stable, and potentially increase, due to increase scarcity.

KEY OUTCOMES AND NEXT STEPS

- The global market for spiny dogfish is still the EU, with frozen dogfish representing 75 percent of all sales. Frozen dogfish also has a greater diversity of global buyers than fresh dogfish, and total exports have been increasing over the last 10 years—as opposed to exports of fresh dogfish, which has been trending down over the last 10 years.
- The total size of the global market for spiny dogfish is estimated at around 20 million lbs. (whole fish); and it appears that if exports increase significantly past this breaking point, the frozen market crashes (as it did in 2012 and 2017).
- The cost of processing dogfish is very expensive and requires specialized cutters. This constrains daily processing capacity to roughly 120,000 lbs per day for the major processors. If new markets were developed, it might be worth exploring the use of automatic cutting machines to reduce costs and increase capacity.
- Given the constraints of global demand and processing costs, an increase in trip limits at this time will likely lead to lower prices to the boat and time off the water.
- The biggest opportunities for new markets are likely here in the United States through prepared foods, or continued expansion to the ‘local’ food markets; especially schools, hospitals and CSFs.
- Management changes to allow a ‘male only’ harvest for draggers over the winter season would require significant upfront investment to develop new markets, testing of new methods of cutting (automated), and would necessitate significant flexibility in daily catch limits.
- The ‘fresh’ dogfish season doesn’t really start until October (when the temperature outside drops) and runs through April; and most fresh dogfish is supplied by Mid-Atlantic vessels. Anything that doesn’t sell into the ‘fresh’ market during this period is frozen and adds to the frozen inventory accumulated over the summer.
- There might be opportunity to increase sales to the fresh market without negatively impacting the frozen market by moving to a seasonal ‘weekly’ vessel limit. By coordinating with processors, fishermen might be able to prioritize harvest (land more) for Mondays and Fridays to coincide with the days of the week that processors sell fresh dogfish.

Next Steps

- Explore the potential for developing new government and institutional markets, like military and prisons.
- Explore the potential size and scope of new value-added markets, and determine key questions:
 - Who is developing these markets (e.g. Highliner, US Foods, Reds Best, Chatham Harvesters Group)?
 - Would higher prices for value added products trickle down to the fishermen?
 - Would new value-added markets significantly increase the amount of potential harvest?
 - Would management regulations need to change to accommodate?
- Explore the historical use/future development of automatic cutting machines, and determine benefits and costs, including the potential to reduce processing costs and increase capacity to meet future value-added markets.
- Explore the benefits and costs of new fish handling and sorting techniques on the vessel, including: pre-processing and icing and bleeding. Compare shelf life and product characteristics (smell, taste, look) of pre-processed/pre-bled product to traditional product that has not been pre-processed.

REFERENCES

- Appleman, M., P. Burns, T. Moore, G. Skomal, (2017) 2017 Review of the Atlantic States Marine Fisheries Commission (ASMFC) Fishery Management Plan for Spiny Dogfish.
http://www.asmfc.org/uploads/file/59f0eaa1SpinyDogfishFMPReview_2017.pdf
- Atlantic States Marine Fisheries Commission (ASMFC), 2008 Atlantic States Marine Fisheries Commission (ASMFC) Species profile: spiny dogfish stock rebuilding hinges on robust spawning stock Excerpted from ASMFC Fisheries Focus, 17:4 (2008), pp. 1-6
- Atlantic States Marine Fisheries Commission (ASMFC), 2009 Atlantic States Marine Fisheries Commission (ASMFC) Interstate Fishery Management Plan for Spiny Dogfish (2009) <http://www.asmfc.org/uploads/file/spinyDogfishFMP.pdf>
- Costa-Pierce, B.A., (2017) Optimum Utilization of Spiny Dogfish, *Squalus acanthias*, through Industry Partnerships and Product Development and Marketing. Saltonstall-Kennedy Grant Program (FINAL REPORT). rich.maney@noaa.gov
- Dell’Appa, A., J. Johnson, D. Kimmel., R. Rulifson. 2013. The international trade and fishery management of spiny dogfish: A social network analysis. *Journal of Ocean and Coastal Management*. (80)
https://www.researchgate.net/publication/267896648_International_Trade_in_Spiny_Dogfish_A_Network_Analysis_for_the_Fishery_Management
- IUCN, 2006. The International Union for Conservation of Nature. In: *Squalus Acanthias*. The IUCN Red List of Threatened Species. <http://www.iucnredlist.org/apps/redlist/details/39326/0> (November 2012)
- Lack, Mary 2006. CONSERVATION OF SPINY DOGFISH *SQUALUS ACANTHIAS*: A ROLE FOR CITES? TRAFFIK INTERNATIONAL https://www.wwf.de/fileadmin/fm-wwf/PublikationenPDF/FINAL_Spiny_Dogfish_ImplementationRepDez06.pdf
- MAFMC, 2016. Fishery Performance Report.
<https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/58a5f666d482e90918c44ce2/1487271527557/2016+Spiny+Dogfish+FPR.pdf>
- MAFMC, 2017. Fishery Performance Report.
<https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/58a5f666d482e90918c44ce2/1487271527557/2016+Spiny+Dogfish+FPR.pdf>
- Perkins, F. 1982. Virginia’s Winter Shark Fishery: A promising Alternative. *Marine Resource Bulletin*, College of William and Mary, Virginia Institute of Marine Science, Vol XIII (4)
<http://www.vims.edu/GreyLit/SeaGrant/vmrb14-1.pdf>

St. Gelais, A.T., Costa-Pierce, B.A., (2015) Mercury concentrations in Northwest Atlantic winter-caught, male spiny dogfish (*Squalus acanthias*): A geographic mercury compari..., Marine Pollution Bulletin (2015), <http://dx.doi.org/10.1016/j.marpolbul.2015.12.009>

TRAFFIC, 2010. CITES CoP15 Prop 18 Analysis. In: Inclusion of Spiny Dogfish *Squalus Acanthias* in Appendix II. Proponent: Sweden, on behalf of the European Community's Member States acting in the interest of the European Community. <http://www.traffic.org/cites-cop-papers> (April 2013)

Wallace, S.S., McFarlane, G.A., Campana, S.E., King, J.R., 2009. Status of spiny dogfish in Atlantic and Pacific Canada. In: Gallucci, V.F., McFarlane, G.A., Bargmann, G.G.(Eds.), *Biology and Management of Dogfish Sharks*. American Fisheries Society, Bethesda, Maryland, pp. 313e33



Atlantic States Marine Fisheries Commission

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MEMORANDUM

September 17, 2018

To: Spiny Dogfish Management Board
From: Tina Berger, Director of Communications
RE: Advisory Panel Nominations

Please find attached four new nominations to the Spiny Dogfish Advisory Panel – Thomas Lyons, a commercial gillnetter from New Hampshire; Doug Feeney, a commercial hook & line/gillnetter from Massachusetts; John Whiteside a commercial industry attorney from Massachusetts; and Scott MacDonald, a processor from Virginia. Please review these nominations 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: Kirby Rootes-Murdy

M18-94

SPINY DOGFISH ADVISORY PANEL

Bolded names await approval by the Spiny Dogfish Management Board

September 17, 2018

New Hampshire

Thomas Lyons (comm. gillnet)
653 Exeter Road
Hampton, NH 03842
Phone: 603.427.3428
tomrlyons@hotmail.com

Massachusetts

Doug Feeney (comm. hook & line/gillnet)
47 Barn Hill Road
Chatham, MA 02633
Phone: 774.994.0593
dougfeeney@comcast.net

**John F. Whiteside Jr. (attorney who represents
4 seafood associations, seafood processors,
and ancillary businesses to the fishing and
seafood industries from Maine to Virginia)**
678 State Road
Dartmouth, MA 02747
Phone (day): 508.991.333
Phone (eve): 508.246.2828
John@JWhiteside.com

Rhode Island

Francis W. Blount Jr. (charterboat)
390 Bridgetown Road
Saunderstown, RI 02883
Phone (day): (401)783-4988
Phone (eve): (401)789-2374
FAX: (401) 782-8520
Email: francesflt@aol.com
Appt. Confirmed 2/20/06
Appt Reconfirmed 5/10

James B. Webber (rec)
5 St. Andrews Way
Barrington, RI 02806
Phone: (401)524-7652
Email: jerry02806@yahoo.com
Appt. Confirmed 2/20/06
Appt Reconfirmed 5/10
Confirmed participation 4/2014

New York

Merry Camhi (conservation)
National Audubon Society
100 W. Main St.
West Islip, NY 11730-2323
Appt. Confirmed 1/31/01
Appt. Confirmed 1/2/06
Appt Reconfirmed 5/10
Incorrect phone number

New Jersey

Marty Buzas (comm./longline & gillnet)
558 Shunpike Road
Cape May Courthouse, NJ 08210
Phone (day): (609)827-2626
Phone (eve): (609)465-5776
Email: MBEileenB@yahoo.com
Appt Confirmed 8/3/10
Confirmed participation 4/2014

Virginia

William Reid (comm gillnet)
4950 Cypress Point Cir Apt. 203
Virginia Beach, VA 23455-6868
Appt. Confirmed 1/31/01
Appt. Confirmed 1/2/06
Appt Reconfirmed 5/10
Incorrect phone number

Scott MacDonald (processor)
4401 Monmouth Castle Road
Virginia Beach, VA 23455
Phone: 757.287.3534
smacdonald7@cox.net

North Carolina

Chris Hickman (comm gillnet)
PO Box 476
Hatteras, NC 27943
Phone: 919/986-2217
bouttimefishing@yahoo.com
Appt. Confirmed 8/21/00
Appt. Confirmed 1/2/06
Appt Reconfirmed 5/10; 4/14; 8; 18

SPINY DOGFISH ADVISORY PANEL

Bolded names await approval by the Spiny Dogfish Management Board

September 17, 2018

Vacancy – commercial

Nontraditional Stakeholder

Sonja Fordham
Shark Advocates International
c/o The Ocean Foundation
1990 M Street, NW
Suite 250
Washington, DC 20036 Phone: 202-436-1468
Email: sonja@sharkadvocates.org
Appt. Confirmed 5/19/06
Confirmed participation 4/2014



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: Douglas Grout State: NH
(your name)

Name of Nominee: Thomas Lyons

Address: 653 Exeter Road (Winter: ↓)

City, State, Zip: Hampton, NH 03842 (Winter: 3651 10th St. NE St. Petersburg Fl. 33704)

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

Phone (day): 603-427-3428 Phone (evening): 603-427-3428

FAX: _____ Email: tomrlyons@hotmail.com

FOR ALL NOMINEES:

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

- 1. Spiny Dogfish
- 2. _____
- 3. _____
- 4. _____

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

yes _____ no X

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

yes X no _____

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

NH Commercial Fishing Assc.

NH Community Seafood

Yankee Fishermens Coop

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

Dogfish

lobster,redfish,etc.

Groundfish-Cod,poll,hadd,

hake,whiting,flounders,monks,

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

lobster

dogfish

cod,pollack,hake,flounders,

whiting,monk,halibut,bluefish

Tuna, bluefin

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? 25 years

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

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

4. What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)? Gulf of Maine, Jeffreys ledge, Have fished inshore early in season and generally end up outside coastal waters later in season.

FOR CHARTER/HEADBOAT CAPTAINS:

1. How long has the nominee been employed in the charter/headboat business? 25 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?
²⁵ _____ 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 x _____

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: Thomas Lyons

Date: Aug 17, 2018

Name: Thomas Lyons
(please print)

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

Doergel Grant
State Director

DEG for Dennis Abbott
State Legislator

DEG for G. Ritchie White
Governor's Appointee



ATLANTIC STATES MARINE FISHERIES COMMISSION

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Form submitted by David Pierce State: MA
(your name)

Name of Nominee: Doug Feeney

Address: 47 Baen Hill Rd

City, State, Zip: CHATHAM MA 02633

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

Phone (day): 774.994.0593

Phone (evening): same

FAX: 508.348.1119

Email: dougfeeney@comcast.net

FOR ALL NOMINEES:

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

- 1. spiny dogfish
- 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.

Chatham Harvestors Coop - President
Aunt Lydia's Cove - Chairman (Oversees Chatham Fish Pier)

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

Spiny Dogfish
Winter Skates
Mackerel

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

Same as above, plus:
All groundfish
Bluefin Tuna

FOR COMMERCIAL FISHERMEN:

- How many years has the nominee been the commercial fishing business? 24
- Is the nominee employed only in commercial fishing? yes no
- What is the predominant gear type used by the nominee? Hook & Line, Gillnet

FOR CHARTER/HEADBOAT CAPTAINS:

- How long has the nominee been employed in the charter/headboat business? _____
- 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): _____
- 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:

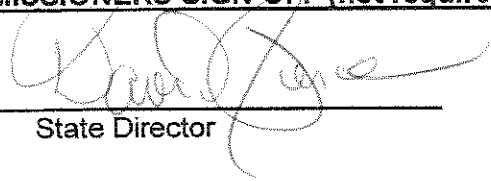
In the space provided below, please provide the Commission with any additional information which you feel would assist us in making choosing new Advisors. You may use as many pages as needed.

Nominee Signature: 

Date: 8/10/2018

Name: Douglas Feeney
(please print)

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


State Director

State Legislator

Governor's Appointee



ATLANTIC STATES MARINE FISHERIES COMMISSION

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Form submitted by David Pierce State: MA
(your name)

Name of Nominee: John F. Whiteside, Jr.

Address: 678 State Road

City, State, Zip: Dartmouth, MA 02747

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

Phone (day): 508-991-3333 Phone (evening): 508-246-2828

FAX: _____ Email: John@JWhiteside.com

.....
FOR ALL NOMINEES:

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

1. spiny dogfish
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.

Sustainable Fisheries Association

American Scallop Association

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

Striped bass (recreational)

Black sea bass (recreational)

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

Striped bass (recreational)

Black sea bass (recreational)

FOR COMMERCIAL FISHERMEN:

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

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

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

FOR CHARTER/HEADBOAT CAPTAINS:

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

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.

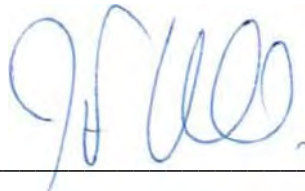
FOR ALL NOMINEES:

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've been involved in the spiny dogfish fishery for more than 10 years as I represent the Sustainable Fisheries Association, whose members are seafood processors engaged in the spiny dogfish fishery. During that time, I have also represented several fishing associations before the 9th Circuit Court of Appeals and the US Supreme Court on issues that negatively impact the spiny dogfish fishery.

Recently I became an advisor to the spiny dogfish committee of the MAFMC. I'm also an advisor to the skate committee to the NEFMC.

I am fully engaged in the regulatory process concerning the spiny dogfish fishery as well as ancillary issues that materially affect the fishery including: US-China tariffs; EU trade barriers; the shipping container ban on shark products; and third-party sustainability certification (MSC).

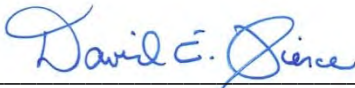


Nominee Signature: _____


Date: 7-24-2018

Name: John F. Whiteside, Jr.
(please print)

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



State Director



State Legislator



Governor's Appointee



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: Robert O'Reilly State: Virginia
(your name)

Name of Nominee: Scott W MacDonald

Address: 4401 Monmouth Castle Rd

City, State, Zip: VA Beach VA 23455

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

Phone (day): (757) 287-3534

Phone (evening): (757) 287-3534

FAX: (757) 363-3028

Email: smacdonald7@cox.net

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 X

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

yes _____ no X

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

_____	_____
_____	_____
_____	_____

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

_____	_____
_____	_____
_____	_____

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

_____	_____
_____	_____
_____	_____

FOR COMMERCIAL FISHERMEN:

- How many years has the nominee been the commercial fishing business? _____ years
- Is the nominee employed only in commercial fishing? yes _____ no _____
- What is the predominant gear type used by the nominee? _____
- What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)? _____

FOR CHARTER/HEADBOAT CAPTAINS:

- How long has the nominee been employed in the charter/headboat business? _____ years
- 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): _____

- 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?
_____ 35 _____ years
- 2. Is the nominee employed only in the business of seafood processing/dealing?
yes X 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? _____ 42 _____ 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.

- Member of FMAC - Finfish Management Advisory Committee of Virginia Marine Resources Commission (VMRC)
- Selected to serve as An advisor to the Mid-Atlantic Fishery Management Council for the Spring Dogfish Advisory Panel.

Nominee Signature: Scott W. MacDonald

Date: 9/14/18

Name: Scott W MacDonald
(please print)

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

Robert J. O'Reilly proxy for Steven Browner
State Director

Senator Monty Mason
State Legislator

Brian Padgett (Consent by email to R.O'Reilly)
Governor's Appointee

Consent by email to R.O'Reilly

Atlantic States Marine Fisheries Commission

Atlantic Striped Bass Management Board

*October 23, 2018
2:45 – 4:00 p.m.
New York, New York*

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>M. Armstrong</i>) | 2:45 p.m. |
| 2. Board Consent | 2:45 p.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from August 2018 | |
| 3. Public Comment | 2:50 p.m. |
| 4. Review Advanced Notice of Proposed Rulemaking Regarding Lifting the Ban on Atlantic Striped Bass Fishing in the Federal Block Island Sound Transit Zone (<i>D. Orner</i>) Possible Action | 3:00 p.m. |
| 5. Update on North Carolina Cooperative Winter Tagging Program (<i>M. Appelman</i>) | 3:45 p.m. |
| 6. 2018 Benchmark Stock Assessment Progress Update (<i>K. Drew</i>) | 3:50 p.m. |
| 7. Review and Populate Advisory Panel Membership (<i>T. Berger</i>) Action | 4:00 p.m. |
| 8. Other Business/Adjourn | 4:00 p.m. |

The meeting will be held at the Roosevelt Hotel, 45 East 45th Street & Madison Avenue, New York, NY; 212.661.9600

Vision: Sustainably Managing Atlantic Coastal Fisheries

MEETING OVERVIEW
Atlantic Striped Bass Management Board Meeting

October 23, 2018
2:45 – 4:00 p.m.
New York, New York

Chair: Mike Armstrong (MA) Assumed Chairmanship: 02/18	Technical Committee Chair: Nicole Lengyel (RI)	Law Enforcement Committee Rep: Kurt Blanchard (RI)
Vice Chair: David Borden (RI)	Advisory Panel Chair: Louis Bassano (NJ)	Previous Board Meeting: August 8, 2018
Voting Members: ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, DC, PRFC, VA, NC, NMFS, USFWS (16 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from August 2018

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

4. Review Advanced Notice of Proposed Rulemaking Regarding Lifting the Ban on Atlantic Striped Bass Fishing in the Federal Block Island Sound Transit Zone (3:00-3:45 p.m.) Possible Action
<p>Background</p> <ul style="list-style-type: none"> • NOAA released an Advanced Notice of Proposed Rulemaking (ANPR) (Briefing Materials) to provide background information and make the public aware of a proposal to remove the current prohibition on recreational striped bass fishing in the Block Island Transit Zone. NMFS is not proposing to allow commercial striped bass fishing in the Transit Zone, consistent with E.O. 13449 which prohibits the sale of striped bass caught in the EEZ. • The ANPR is in response to the FY18 Omnibus Appropriations Act which included the provision directing “NOAA, in consultation with the Atlantic States Marine Fisheries Commission, to consider lifting the ban on striped bass fishing in the Federal Block Island Transit Zone.” NMFS communicated the intent to issue an ANPR to the ASMFC at its August 2018 meeting. • NMFS requests the submission of comments related to the potential regulatory revisions described in this ANPR, as well as additional ideas to improve management of striped bass in the Block Island Transit Zone.

Board Actions for Consideration

- Consider providing comment on the ANPR

5. Update on North Carolina Cooperative Winter Tagging Program (3:45-3:50 p.m.)**Background**

- The Principal Partners of the North Carolina Cooperative Winter Tagging Program (formerly known as the Cooperative Winter Tagging Cruise) request the ASMFC Executive Committee consider designating a portion of the FY18 plus-up funding to fund the 2019 tagging efforts. The amount needed is \$17,000-25,000 depending on the number of trips contracted (**Executive Committee, Briefing Materials**).
- The NC Division of Marine Fisheries (NCDMF) intends to decrease its participation in the 2019 Cooperative Winter Tagging Cruise, including cessation of funding the charter contract which provides the vessel platform for the hook-and-line tagging operations.
- NCDMF has funded and implemented this hook-and-line tagging program since 2013 to continue the time series of tag-recapture data of mixed-stock migratory striped bass on its overwintering grounds off North Carolina and Virginia after the trawl portion of the program was terminated.
- Tag-recapture data from this program are used to estimate survival and exploitation rates for stock assessment, and may become even more important down the road as the SAS continues to explore the explicit incorporation of tagging information into the primary assessment model. Data from this survey also provide valuable information on habitat use as well as stock composition, individual growth rates and other life history parameters.

6. 2018 Benchmark Stock Assessment Progress Update (3:50-4:00 p.m.)**Background**

- A benchmark stock assessment is currently underway and schedule for peer review in November 2018 at the 66th SAW/SARC.

Presentations

- Benchmark Stock Assessment Progress Update by K. Drew

7. Review and Populate Advisory Panel Membership (4:00 p.m.) Action**Background**

- Steven Smith, a recreational angler from Delaware, was nominated to the Striped Bass Advisory Panel (**Briefing Materials**).

Presentations

- Consider approving the AP nomination.

8. Other Business/Adjourn

Atlantic Striped Bass

Activity level: High

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

Committee Task List

- SAS/TSC – All Year: benchmark stock assessment
 - Oct. 31, 2018: Assessment Report due to external peer-review panel
 - Nov. 27-30, 2018: Peer review (SAW/SARC 66)
- TC – June 15th: Annual compliance reports due
- 2019: various taskings relating to management response to 2018 benchmark

TC Members: Nicole Lengyel (RI, TC Chair), Kevin Sullivan (NH, Vice Chair), Alex Aspinwall (VA), Alexei Sharov (MD), Carol Hoffman (NY), Charlton Godwin (NC), Ellen Cosby (PRFC), Gail Wippelhauser (ME), Gary Nelson (MA), Heather Corbett (NJ), Jeremy McCargo (NC), Kurt Gottschall (CT), Luke Lyon (DC), Michael Kaufmann (PA), Peter Schuhmann (UNCW), Winnie Ryan, Gary Shepherd (NMFS), Steve Minkinen (USFWS), Wilson Laney (USFWS), Katie Drew (ASMFC), Max Appelman (ASMFC)

SAS Members: Gary Nelson (MA), Alexei Sharov (MD), Hank Liao (ODU), Justin Davis (CT), Michael Celestino (NJ, Chair), John Sweka (USFWS), Gary Shepherd (NMFS), Katie Drew (ASMFC), Max Appelman (ASMFC)

Tagging Subcommittee (TSC) Members: Stuart Welsh (WVU, Chair), Heather Corbett (NJ, Vice Chair), Angela Giuliano (MD), Beth Versak (MD), Chris Bonzak (VIMS), Edward Hale (DE), Gary Nelson (MA), Ian Park (DE), Jessica Best (NY), Carol Hoffman (NY), Gary Shepherd (NMFS), Josh Newhard (USFWS), Wilson Laney (USFWS), Katie Drew (ASMFC), Max Appelman (ASMFC)

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
ATLANTIC STRIPED BASS MANAGEMENT**

The Westin Crystal City
Arlington, Virginia
August 8, 2018

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

TABLE OF CONTENTS

Call to Order, Chairman Michael Armstrong 1

Approval of Agenda 1

Approval of Proceedings, May 2018 1

Public Comment..... 1

Consider Approval of the 2018 Fishery Management Plan Review and State Compliance Reports..... 1

2018 Benchmark Stock Assessment Progress Update..... 8

Elect Vice-Chair 9

Other Business 10

 FY18 Omnibus Appropriations Bill for NOAA Fisheries 10

Adjournment..... 15

INDEX OF MOTIONS

1. **Approval of agenda** by consent (Page 1).
2. **Approval of proceedings of May 2018** by consent (Page 1).
3. **Move to approve the 2018 FMP Review and state compliance reports for Atlantic Striped Bass** (Page 9). Motion by Tom Fote; second by Raymond Kane. Motion carried (Page 9).
4. **Move to elect David Borden as Vice-Chair of the Atlantic Striped Bass Management Board** (Page 10). Motion by Doug Grout; second by Tom Fote. Motion carried (Page 11).
5. **Move to adjourn** by consent (Page 16).

ATTENDANCE

Board Members

Patrick Keliher, ME (AA)	Loren Lustig, PA (GA)
G. Ritchie White, NH (GA)	Andy Shiels, PA, proxy for J. Arway (AA)
Doug Grout, NH (AA)	John Clark, DE, proxy for D. Saveikis (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Roy Miller, DE (GA)
Raymond Kane, MA (GA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
Mike Armstrong, MA, Chair	Ed O'Brien, MD, proxy for Del. Stein (LA)
Sara Ferrara, MA, proxy for Rep. Peake (LA)	Russell Dize, MD (GA)
David Borden, RI (GA)	Mike Luisi, MD, proxy for D. Blazer (AA)
Bob Ballou, RI, proxy for J. McNamee (AA)	Bryan Plumlee, VA (GA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Sen. Monty Mason, VA (LA)
Matt Gates, CT, proxy for P. Aarrestad (AA)	Rob O'Reilly, VA, proxy for S. Bowman (AA)
Sen. Craig Miner, CT (LA)	Steve Murphey, NC (AA)
Maureen Davidson, NY, proxy for J. Gilmore (AA)	Chris Batsavage, NC, Administrative proxy
Emerson Hasbrouck, NY (GA)	Doug Brady, NC (GA)
John McMurray, NY, proxy for Sen. Boyle (LA)	Michael Blanton, NC, proxy for Rep. Steinburg (LA)
Tom Fote, NJ (GA)	Dan Ryan, DC, proxy for B. King
Heather Corbett, NJ, proxy for L. Herrighty (AA)	Martin Gary, PRFC
Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)	Derek Orner, NMFS
	Mike Millard, USFWS

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

Ex-Officio Members

Staff

Robert Beal
Toni Kerns
Katie Drew

Max Appelman
Jessica Kuesel

Guests

Rachel Baker, NOAA
Joe Cimino, NJ DEP
Desmond Kahn, Newark, DE
Arnold Leo, Town of E. Hampton, NY

Chip Lynch, NOAA
Nick Popoff, ME DMR
Jack Travelstead, CCA
Sherry White, USFWS

The Atlantic Striped Bass Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; Wednesday, August 8, 2018, and was called to order at 4:45 o'clock p.m. by Chairman Michael Armstrong.

CALL TO ORDER

CHAIRMAN MICHAEL ARMSTRONG: Welcome everyone. I'm Mike Armstrong; Chairman of the Striped Bass Board. I would like to call this meeting to order.

APPROVAL OF AGENDA

CHAIRMAN ARMSTRONG: First order of business is we have the agenda. Does anyone have changes to the agenda?

MR. DEREK ORNER: Just wondering if I can add an item under Other Business?

CHAIRMAN ARMSTRONG: Please do.

MR. ORNER: It's just to talk about some actions in the EEZ again; with regard to the Block Island Transit Zone.

APPROVAL OF PROCEEDINGS

CHAIRMAN ARMSTRONG: It shall be, thank you. Okay you've all seen the proceedings; any changes noted? Seeing none; proceedings from last meeting are approved.

PUBLIC COMMENT

CHAIRMAN ARMSTRONG: Do we have any public comment on issues not facing the Board today? Dr. Kahn.

DR. DESMOND KAHN: I just wanted to comment on an issue that has been outstanding for a while to this Board. That is the status of the Delaware River spawning stock of striped bass; and the status of whether the Delaware estuary is or is not a producer area.

Back in 1998, I'm not sure how many people are aware of this, the Commission officially

declared that the Delaware River spawning stock of striped bass had been restored. That was based on a technical report that myself, Roy Miller, and another person wrote. Now, it's also worth noting that the current commercial landing scheme for the states in the Commission was based originally on the landings in the 1970s.

In the 1970s the Delaware River stock was just barely a remnant. A recent paper written mainly by members of the Massachusetts DMF, estimated that the Delaware River spawning component of the aggregation of striped bass off the Massachusetts coast in the summer, was comprised between 15 and 20 percent of the total of that aggregation.

A very significant contribution to the total coastal assemblage comes from the Delaware River. But in the 1970s that really didn't exist; until the Federal Clean Water Act came into play, and anoxia in the Delaware River spawning grounds was cleaned up. What this means is that since the 1970s there is an additional maybe 15 to 20 percent of the total stock has been added to it by the restoration of the Delaware River spawning stock. Yet the Commission at this point, the Striped Bass Management Board, is not allocating that portion of the stock as a producer area.

Now, this is a science-based organization; and I would like to suggest that it's overdo for the Management Board to give that due to the states in the Delaware River Watershed; Pennsylvania, Delaware and New Jersey, as a producer area. I would like to encourage the Management Board to move in that direction.

CHAIRMAN ARMSTRONG: Thank you Des. I think my name is on that paper.

CONSIDER APPROVAL OF THE 2018 FISHERY MANAGEMENT PLAN REVIEW AND STATE COMPLIANCE REPORTS

CHAIRMAN ARMSTRONG: Next item is an action item to Consider Approval of the Plan Review and State Compliance Reports.

MR. MAX APPELMAN: I will be presenting the 2018 FMP Review covering the 2017 fishing year. This is an overview of my presentation. It is basically the various sections of the Review Report. I'll spend a couple minutes on each of these items, first with status of the stock. So our latest stock status information comes from the 2016 stock assessment update which found the coastwide stock to be not overfished, and overfishing not occurring.

We're all aware that the 2018 Benchmark is approaching completion. It is scheduled for peer review at SAW 66 at the end of November. That Benchmark will include data through 2017; as well as the new MRIP estimates. This table is showing you the terminal year estimates from the 2016 update; relative to the reference points.

We should be pretty familiar with this figure by now. This is showing SSB over time. The take home is that we've been on this declining trajectory since about 2003; and in 2015 SSB is estimated just above the threshold. Moving to fishing mortality, again this figure is showing that F rate over time. A little bit more variable in the later years, but in 2015 it was estimated below the threshold and below the target.

Status of the Management Plan; Amendment 6, and Addenda I through IV set the monitoring and regulatory programs for Atlantic Striped Bass. Addendum IV really sets the regulatory program; and 2017 was the third year under those regulations. We remember in early 2017 the Board initiated an addendum to consider relaxing those regulations; but then decided not to move forward with the addendum, and to wait until the new benchmark results came online before it considered changing any of those regulations.

Moving to status of the fishery, this is a look at total removals in 2017, and that change relative to 2016, to 2015, and to 2013; which has become sort of our proxy for the base period of Addendum IV. A couple of things to keep in mind here, so I am talking about total removal, so that is both the commercial and recreational

sector's harvests and discards. We're also using the pre-calibrated MRIP estimates in this exercise. Until the management program reflects the new numbers we'll continue to use those pre-calibrated MRIP estimates; the old estimates. Also the 2017 commercial discards estimate was not available at the time of this report due to ongoing assessment efforts. The Plan Review Team used the previous 10 year average for this exercise. In 2017 total removals, in terms of number of fish, was estimated at 3.33 million fish; which is lower than 2016, but higher than 2015, and roughly a 21 percent reduction from 2013 levels. The numbers that you see in Addendum IV are 20.5 percent for the Bay, 25 percent for the coast. We're on par with that. In terms of total harvest, 1.7 million fish and 2017 was the lowest annual estimate under Addendum IV.

Total discards a bit opposite, has actually continued to increase each year. Also, the recreational sector harvested 65 percent of total harvest by number of fish, 72 percent by weight. Focusing on the commercial sector, you can see that landings have been relatively constant under the Addendum IV quota system; right at 4.8 million pounds; I'm showing you with that red box at the end there.

In 2017, roughly 57 percent of commercial harvest came from within the Chesapeake Bay; an additional 31 percent came from Massachusetts and New York. Focusing on the recreational sector, this is a figure of total catch broken down into its components; so in the blue we have harvest, and then the red and the green make up your releases, where the red is the proportion of releases assumed to die.

The take home here is that total catch estimates have been increasing since 2012. I know the 2016 and 2017 bars look pretty similar; but 2017 is slightly higher than 2016. We've been continuing that upward trajectory. Zooming in, now just looking at harvest from the recreational sector; and we see a slightly different picture here. In general we've been declining since the peak around; I think it's 2006 from this figure. You can see some years have

been better than others. Keep in mind the 2015, 2016, and 2017 occurred under those harvest reductions through Addendum IV; so certainly playing a factor there. In 2017, roughly 50 percent of harvest came from Maryland. Massachusetts, New York, New Jersey and Virginia accounted for an additional 40 percent, and 56 percent of total recreational harvest came from within the Chesapeake Bay.

If total catch is going up and harvest is going down that must mean that the number of fish caught and released is going up; and that's what I'm showing you with this figure. Again, each column is our total releases; and then the red would be the proportion of those releases assumed to die, so dead discards, and then the line at the top of the figure that is the proportion of total catch that is released. Similar take home as the total catch estimate, increasing since 2012.

But what I wanted to point out is that the Chesapeake Bay has been experiencing something very different than that along the coast, regarding releases. From about 2012 to 2016, releases in the Bay have been on a steady increase; and along the coast it's been pretty constant. However, in 2017 we saw a shift; and in the Bay releases actually decreased by roughly 35 percent. Whereas, along the coast we saw an increase of 38 percent in releases; which is sort of in line with what we know about the 2011 year class moving its way out of its natal bays and estuaries, and becoming increasingly available to those coastal fisheries.

Moving to commercial quota monitoring, this is a table of the coastal commercial quota. In 2017 the coastal quota was not exceeded; but there was one state-specific overage, Massachusetts a little over 22,000 pounds, which is deducted from its 2018 quota. You can see those final 2018 quotas listed there on the right side of the table. For the Chesapeake Bay quota; similarly was not exceeded in 2017. Additionally, there were no jurisdiction-specific overages, and again you can see these tables in the report as well.

Regarding juvenile abundance indices, there is a management trigger in the plan tied to the juvenile abundance indices. Each year the Review Team reviews indices from six different surveys, and if any of those surveys indices fall below its respective Q1 threshold for three consecutive years, then appropriate action is recommended to the Board.

For the 2018 review the Review Team evaluated the 2015, 2016, and 2017 values; and no management action is triggered. This is a look at those six different time series; and this figure is a lot easier to see in the report. But I wanted to make note that the 2017 values in all series are above the Q1 threshold, its respective threshold. We're in the clear for the next two years at least. Furthermore, most of them are actually near the average for the respective time series; particularly the Maryland and Virginia Bay indices are around average in 2017, and it looks like New Jersey and New York.

Addendum III is in regards to the Commercial Harvest Tagging Program; where all states with commercial fisheries are required to implement such a program, and to submit an annual monitoring report no less than 60 days prior to the start of its commercial season. Following review, the PRT determined that all states had implemented a commercial tagging program consistent with those requirements. There is a table in the report summarizing each states tagging program; and you're encouraged to look at that for details on each program.

Regarding overall compliance in 2017, following review the Review Team determined that all states had implemented regulatory and monitoring programs consistent with the requirements of the FMP.

However, the PRT noted two inconsistencies with 2018 state measures. The first being Maine; current regulations under the Department of Inland Fisheries and Wildlife are inconsistent with the FMP. For completeness, Maine DMRs regulations are in line with the FMP. It is my understanding that Maine is in the process of fixing this inconsistency. If there

are any questions regarding that I would defer those to Maine.

The second issue is regarding the conservation equivalency measures that Maryland implemented for its 2018 summer/fall fishery in the Chesapeake Bay; essentially reducing the minimum size limit to 19 inches, and requiring the use of a circle hook while chumming or live lining. The inconsistency noted was in regards to the language implemented by Maryland being slightly different than the motion that was passed by the Board at its February meeting.

The regulations implemented by Maryland do allow the use of J hooks with processed bait; as long as you're not live lining or chumming. However, the Board motion reads; non-offset circle hooks required when fishing with bait, non-artificial lures. Just making note of those two inconsistencies.

That wraps up my presentation, I'll take any questions.

CHAIRMAN ARMSTRONG: Ritchie.

MR. G. RITCHIE WHITE: I would just be curious if Maryland, if there is a definition of processed bait.

MR. APPELMAN: I would defer that to Maryland.

CHAIRMAN ARMSTRONG: Let's hold on the specific state problems, and just ask questions about the remaining things. Then we'll ask each of the states to give a brief statement. To that point I have Rob O'Reilly then John.

MR. O'REILLY: I think this might be a state problem; but it's different. It's a question for Max; and my question is I understand the Bay Fleet, you know the three fleets that the recent assessment how they treated all the information. But I want to remind the Board that with the onset of Addendum IV, the Chesapeake Bay quota was eliminated.

This included recreational and commercial fisheries. Commercial fisheries go on just fine; they're at a lower level, and that is the 20.5 percent reduction in the Bay. I contend there have been differential impacts resulting from Addendum IV; within the Bay that didn't exist before from 1997 until 2014, when the Chesapeake Bay quota was in process.

I would ask if it is possible at some later date to take a look at the recreational fishery in the Bay; by jurisdiction, and compare it to what has ensued under Addendum IV starting in 2015. I would be happy to do that work and in coordination with you, Max, or you may want to look at that I don't know. But I think it's important as we go forward through the next upcoming assessment; and as we go past Addendum IV, for the Board to really take a look at what has gone on in the Bay.

You know to just indicate the Bay in your summary is fine. But really there has been a pronounced effect from Addendum IV; and I would like to explore that a little bit. I'll talk to Max later on; but I did want the Board to hear my concerns, and they are the same concerns that I've had at several meetings about the disruption of the Bay quota.

CHAIRMAN ARMSTRONG: John McMurray.

MR. JOHN G. McMURRAY: I have questions for Pat and Mike; but I'll hold off on those at your request. But if I could, I would like to ask Max a couple of questions about his presentation; particularly about the 2016 and 2017 catch increase, but a harvest decrease. You mentioned that indicates an increase in releases. But I'm wondering what that's indicative of. Is that because of the constraining measures put in place with Addendum IV; or is it because there are smaller sublegal fish entering the fishery? Do you have any thoughts on that?

MR. APPELMAN: My immediate thought is it's a little bit of both. I would say harvest is probably directly related to your regulations; whereas total catch is probably related to abundance

and things like that; number of fish out there. If you're throwing back fish it is undersized maybe; or you've already hit your limit, and there is a lot available to you so you continue to catch them. Whereas, your harvest is impacted by what your bag limits are and things like that.

MR. McMURRAY: Follow up. I'm thinking about it in the context of the anecdotal reports of a lot of smaller fish being around. They're not 2011s, 2011s are legal now if I am understanding correctly. I guess I would just like to know where those fish are coming from. It seems to be pretty consistent across the coast; this abundance of small fish. Anyway, I know you don't have the answer to that question. But I'm just putting it out there as something to consider and think about moving forward.

CHAIRMAN ARMSTRONG: Emerson, do you still have a question?

MR. EMERSON C. HASBROUCK: I'm going to hold my question until the next agenda item; when we have the update to the stock assessment.

CHAIRMAN ARMSTRONG: Okay. At this point I would like to give the two states with the inconsistencies a chance for a brief statement. Do you want to go first, John?

MR. JOHN CLARK: I just had a question that was actually going to be similar to what John asked. But just to follow up on what he was saying. As far as the recreational discards, I agree with John that they're not 2011 year class. We're seeing a lot of small striped bass.

MR. APPELMAN: I just want to make one additional comment that based on the stock assessment update, the 2014 year class actually showed to be about equal in size, as an output of the model, equal in size to the 2011 year class. Now maybe they are starting to show up in the catch data; but that could be a factor.

CHAIRMAN ARMSTRONG: Pat, do you want to talk briefly about what happened?

MR. PATRICK KELIHER: I would love to talk briefly about what happened, Mr. Chairman. My sister agency at the Cabinet Level, the Department of Inland Fisheries and Wildlife, in an attempt to streamline their fishing regulations and remove one line that said striped bass, one fish at 28 inches, removed that and instead in their regulations put striped bass, see Maine Department of Marine Resources at www.state.maine.dmr and referenced our regulations.

Our regulations stop at the head of tide. There are roughly 30 river miles where striped bass can be targeted. Not a lot of fishing up in those areas right now; because the water is very warm, and the bass move back out of the systems. Those bass will move back up in there later in September and October.

The good news is, Mr. Chairman that they have decided to move at the speed of light; as we say of state government, and they will have new regulations in place sometime in September or early October. But again, we're talking about 30 river miles. Just in reference, the coast of Maine is almost 5,000 miles long when you stretch it out.

CHAIRMAN ALEXANDER: Does the Board have any questions, comments? It sounds like a problem that will resolve itself fairly quickly.

MR. KELIHER: Now that this has been on the record, everybody in the state of Maine now knows this is a problem, where they didn't know it before.

CHAIRMAN ARMSTRONG: That's the Saco River. Okay then I think we can move on; Mike could you give us a few words?

MR. MICHAEL LUISI: Absolutely, Mr. Chairman. I've been cold all day until about five minutes ago; the seats warming up a little bit.

With all seriousness, I think this Board as everyone knows here, approved a conservation equivalency program for the State of Maryland to go back for their 2018 summer/fall fishery; to

implement a circle hook requirement.

That circle hook requirement, along with a drop in the minimum size by one inch, was an effort to reduce the amount of dead discards that we had in the Bay. The state of Maryland very much appreciates this Board's support of that action. I'll tell you after we got home, after February, and after the ticker tape parade and all the other things that happened in the state.

The rubber hit the road, as far as us making and promulgating those regulations in time to have them effective before May 16, which was when the summer/fall fishery began. Throughout the course of the year prior to that presentation and that proposal, we had been working very diligently with recreational stakeholders throughout the state; both charterboat and private anglers, to come up with a plan to address the concern about dead discards that was being seen on the Bay.

It wasn't until we proposed those rules and reached out to the greater audience that we started to get concerns. You know this proposal started to get arms and legs to it. What we realized was that we were affecting through what we proposed, and I'll just be straight out with it. We proposed the use of circle hooks for all bait purposes; and a minimum J hook size of one-half inch between the shank and the point, if you're going to use bait.

I know that's what we discussed. It was part of our proposal. It was part of the discussion at the Board. But when we got home and proposed that to stakeholders and fishermen in Maryland, we got tremendous feedback regarding the affect that regulation was going to have on what we considered our fringe fisheries; things like cat fishing, things like fishing for cobia or black drum or other species that we were affecting fishermen that fished for other species, by implementing these regulations on the J hook requirement.

Tackle shops reached out in mass concern that they had enormous amounts of inventory on their shelves that they were no longer going to

be able to get rid of; because a J hook greater than one-half inch was not going to be able to be sold in the state of Maryland, because people were going to need to use bait. It boiled into what we consider just unforeseen consequences to the actions that we wanted to take. Before long, our agency pulled that proposal. We decided to pull back on the proposal, to reconsider how we could move forward; because we were fearful that the politics behind it were going to eliminate the idea of a circle hook altogether. When we weighed the action, between coming back to the table with a new proposal that just required circle hooks for chumming and live lining, versus having the J hook requirement, we felt that the conservation effort in implementing a circle hook requirement for what we considered to be the striped bass fleet.

We talked about it before. Anyone fishing for striped bass, or let's say 95 percent of the people fishing for striped bass during this time of the year; when you're chumming or live lining. That's what you're doing; you're chumming and live lining. You're not fishing with a solitary piece of bait for striped bass.

Now there may be a few; but the tradeoff was such that we ultimately decided in order to get this action through, and in order to get it through in time for the May 16 start date that we needed to pull back on that J hook requirement for this season. We were effective in that and the regulations were actually promulgated; and are now in effect.

They were moved forward through the committee that reviews our regulations in an emergency fashion; which was the first time since the Hogan Administration that a rule that did not have to deal with human health was moved forward in an emergency style, in order to have those rules in effect before the season. That's what happened.

I will say that we are working very diligently to prepare for this Board a report in February; highlighting the enforcement and the outreach in education work that we've been doing, to get

a sense as to how successful the circle hook program has been. I can tell you that we believe that the program is very effective.

Even though we don't have the J hook requirement, we've had saturation patrols from our Natural Resources Police. A report recently indicated that over the course of two saturation patrols, there were over 40 vessels that were boarded. The first 20 vessels there were 115 fishermen; I would assume probably very similar with the second 20 vessels, 115 fishermen, and there was between 95 and 100 percent compliance on the circle hook requirement in that chumming and live lining fleet.

We're happy with how the program has been going. We realize that we did deviate slightly from what we discussed at the Board. But the Agency felt that the tradeoff was too great to have that program eliminated; due to that small detail that we discussed at the Board. I'll leave it at that and I can answer any other questions, Mr. Chairman, if anyone has any.

CHAIRMAN ARMSTRONG: One quick question. You also eliminated treble hooks, is that correct?

MR. LUISI: That is absolutely correct. The regulation specifically eliminates the use of treble hooks with bait in Maryland.

CHAIRMAN ARMSTRONG: Any questions, comments from the Board? Pat.

MR. KELIHER: Thanks for deflecting the hot seat, Mike. Just from an enforcement standpoint, if circle hooks are going to be required for one fishery and not another, is there enough spatial separation between the fisheries so you can determine who's targeting striped bass and who's targeting the other species, so it's enforceable?

MR. LUISI: Yes. There is some slight overlap when you get to the most northern parts of the Bay; but for the most part those fisheries, they are occurring in different places. It's very

obvious where the striped bass fleet is fishing; because you could walk from boat to boat on a given Saturday. The cat fishermen are a different beast.

CHAIRMAN ARMSTRONG: John.

MR. McMURRAY: Maybe this is a question for Ed, rather than you, Mike. But has there been any feedback from the charter/party fleet in particular on the effectiveness; and whether or not they're working to reduce discards, and also whether or not they're at all problematic to the fleet, as far as anglers learning how to use them correctly?

MR. ED O'BRIEN: The charter fleet, the northern charter fleet that has been chumming constantly; this has been more of an adjustment for. But we have found that a lot of our captains have been using circle hooks anyway. When I say a lot, I mean more than I expected, probably 25 percent were using them anyway.

We identified these captains; and energized them to speak their piece relative to what they've experienced. Basically of course, they have had less discards. Now, we keep talking about circle hooks; and I think precedence is being set. I think that other states may dwell on the success we are seeing and may want to consider it too.

Now, what gets underestimated is the effect on conservation that this 19 inch fish has. For charterboats it means hey, you go home earlier; or if you don't you've got to go home, pick up another party, or the party wants to go home. At least you've got some fish. The 19 inch fish has been very successful; not that people get their limits in it, but something goes in the box.

Speaking from a charterboat standpoint; these are people that we have really tried to get back, who have endured this catch and release forever. Now catch and release is a situation unto itself. There is a lot of mortality to it; when people keep fishing, in order to catch that 20 inch fish. The 19 inch fish, when that first

one goes in the box, when it does that is really a morale booster to everybody.

People don't need to catch their limit; they need to have something to take home. If you have six people and you just catch three fish, everybody's got a fillet. That 19 inch fish has been extremely successful from a mortality standpoint, from a conservation standpoint. Thank you for asking the question.

CHAIRMAN ARMSTRONG: Are there any other comments? Seeing none; **I think what I would like to do now is get a motion on the Board to approve the Plan Review**, and then we can bring any other issues into that rather than just staying on the current issue. Would anyone like to make a motion? Yes.

MR. THOMAS P. FOTE: **So moved.**

CHAIRMAN ARMSTRONG: **Move to approve the 2018 FMP Review for the Atlantic striped bass. Motion by Tom Fote, do we have a second, Ray Kane. Discussion, seeing none; are there any objections to us passing this? Seeing none; it passes unanimously.** Item 5, Katie you're up; talking about the benchmark stock assessment that's coming up.

2018 BENCHMARK STOCK ASSESSMENT PROGRESS UPDATE

DR. KATIE DREW: Just to give you guys an update. We have received the calibrated MRIP data for the entire time series for striped bass; and that includes both the catch numbers, so total catch in terms of both harvest and release, which are available on the MRIP website now. But it also includes the new calibrated length frequencies; which are not available on the MRIP website, but have been provided to us through a custom data request. All of that information has been received.

We received it as soon as those numbers were available; and they've been processed into the catch-at-age. We're able to move from runs with simulated data to test the new model into runs with the actual completed new data; so

that we can be prepared for our Assessment Workshop, which is going to be September 11 through the 14th, here in Arlington. We'll be able to review the model runs and make some final determinations on stock status and reference points at that workshop, in preparation to have the assessment report completed for our end of November peer review through the SARC process. I'll be happy to take any questions on that.

CHAIRMAN ARMSTRONG: John.

MR. CLARK: Just trying to remember from yesterday. What was the difference between the new one and the previous? I think it was pretty large, wasn't it for striped bass?

DR. DREW: It was. By the end of the time series for the coast, it was about three times larger than it had been in the past.

CHAIRMAN ARMSTRONG: Emerson.

MR. HASBROUCK: Using the calibrated data then, does that change the calculated spawning stock biomass? That is Part A of the question.

DR. DREW: Yes, so I don't have any numbers to tell you right now; but it absolutely will affect the estimates of abundance and spawning stock biomass that come out of the model, for both the time series and for the reference points.

MR. HASBROUCK: That's what I thought. My follow up question, you partially addressed it. How does that affect our targets? I mean the target and the threshold. If the spawning stock biomass has changed, are the threshold and the target changing along with it, or do we need to go through a process to change those?

DR. DREW: Excellent question. If you remember the Board provided us with some guidance last time; saying basically we're not satisfied with our current definitions of the reference point, and we would like to look at some other options. The stock assessment will be looking at some other options. Obviously the historical target and threshold, based on

that 1995 level will change most likely with the new assessment; given the new numbers.

That kind of historical definition will change; and will need to be reevaluated. But we're also looking at some alternative definitions that will provide different numbers to the Board; and so when you receive the assessment in February, you will also be considering changes to those reference points, either based on the new numbers that come out and the same definition, or a completely new definition.

CHAIRMAN ARMSTRONG: Go ahead, Emerson.

MR. HASBROUCK: Yes, I'm sorry last question on that. With the calibrated numbers, the biomass scales up; and then the reference points scale along with that, because we're using the calibrated data, so that the whatever it was, 1995 number is the new calibrated number, so that goes up as well?

DR. DREW: Right. It's obviously they're not going to scale perfectly. Recreational catch increased by whatever it was in '95, it's not going to move that reference point up by the same amount. But it will change that reference point; in terms of the 1995 value will no longer be what it is on paper right now, it will be something different.

CHAIRMAN ARMSTRONG: Marty.

MR. MARTY GARY: Katie, I was wondering if I could bundle two questions. One is terminal year likely to be 2017, and also could you comment at all about the status of Chesapeake Bay specific reference points?

DR. DREW: Yes, the terminal year will be 2017. That is the amount of data that we have through then. It's complete and it's in our possession now. We're still considering the Chesapeake Bay reference points; and that's still something that we're working on with the rest of the assessment, so kind of how do we define the Chesapeake Bay reference points, and how do we define that in terms of the larger, overall reference points as well. It's still

definitely on the table; and it's a work in progress.

CHAIRMAN ARMSTRONG: Steve.

MR. STEVE MURPHY: Yes, Katie, how does the assessment take into account the movement of the nearshore striped bass off North Carolina? I mean we really no longer have an ocean fishery for them. They're well offshore. But ostensibly they're moving into the population that's being managed here.

DR. DREW: We generally consider those fish that are available to North Carolina during the winter months, or that have been historically available to North Carolina during the winter months, as being part of the larger coastal population that is moving. I think the North Carolina catch on those has dropped off; and is potentially an indication of kind of either inappropriate or unavailable habitat, because of temperature, or a contraction in the stock size.

We're still looking to North Carolina for those coastal data, and that's folded in. But they are considered part of the larger system; and whatever is happening sort of in North Carolina's inland waters is completely separate from what our assessment is handling. They're not really considered North Carolina fish; but they're part of the assessment.

CHAIRMAN ARMSTRONG: Are there any more questions for Katie? Seeing none; I would urge you if you haven't looked at your new calibrated MRIP numbers for striped bass for your state, you should. It's pretty eye opening.

ELECT VICE-CHAIR

CHAIRMAN ARMSTRONG: Next item of business, ah elect a Vice-Chair. I would entertain a motion for a nomination. Doug.

MR. DOUGLAS E. GROUT: I would like to nominate David Borden to be Vice-Chair of the Striped Bass Board.

CHAIRMAN ARMSTRONG: Do we have a second? Tom Fote. Are there any objections to

David Borden's nomination? I did see he wasn't here earlier; I was going to amend the motion that he took over after this meeting if he wasn't here. **Seeing no objections; congratulations, David, to the warm up circle.**

OTHER BUSINESS

CHAIRMAN ARMSTRONG: That brings us to other business. Derek.

FY18 OMNIBUS APPROPRIATIONS BILL FOR NOAA FISHERIES

MR. DEREK ORNER: Always great going late in the afternoon on a long day. I just wanted to bring to the attention of the Board. We have a couple directives that came out of the FY 18 Omnibus Appropriations Bill for NOAA Fisheries. I brought them up at the last meeting in regards to aquaculture; and just wanted to bring it up again here and have kind of a short discussion.

Just to read them in, the first one was recognizing that the Commission is completing a new stock assessment for Atlantic striped bass. After this assessment is complete, the Secretary of Commerce is directed to use this assessment to review the federal moratorium on Atlantic striped bass. That was something like I said I brought up at the last meeting; in regards to aquaculture, and had some discussion.

The second provision is that NOAA, in consultation with the Commission, is directed to consider lifting the ban on striped bass fishing in the federal waters around the Block Island Transit Zone. I'm glad to hear that we've continued with some of the discussions on aquaculture, Monday and Tuesday of this week.

We just heard from Katie on the progress of the assessment; look forward with working with the Board as that comes to conclusion, and kind of reviewing the federal moratorium along the entire coast. In the meantime I'm interested in some initial feedback; and getting some feedback as well from the public on the second provision that was to lift the moratorium around Block Island's Transit Zone. It's the

intent of NOAA Fishery now to issue an advanced notice of proposed rulemaking; to solicit public input on these changes, and maybe put something out in the coming months. That would be to remove the prohibition on striped bass fishing in the Block Island Transit Zone. This will provide a benefit to anglers in the fishing industry; by improving the coordination in that area.

I don't know if there is any input; feedback from the Board, kind of initial reactions. We'll be soliciting public input like you said; probably in the next maybe two to three months, and then look forward to working with the Commission in that process. Thank you.

CHAIRMAN ARMSTRONG: Any questions for Derek? Robert.

EXECUTIVE DIRECTOR ROBERT E. BEAL: A process question, Derek. The language from the Omnibus Budget for the second item, the Block Island Transit Zone said in consultation with ASMFC. I guess maybe I have two questions; one, how do you interpret that? The other is if there is an advanced notice of rule-making coming out; and there is a public comment period, do you think you would be able to have the public comment period span our annual meeting so that this Board can get back together at the annual meeting, and see what's in the advanced notice, and comment as a group at our annual meeting?

MR. ORNER: To quickly respond to kind of the coordination piece, is it is kind of starting now. You know bringing it up at the Board. We will be putting an ANPR out for public comment. I don't know the exact timing. But I believe the intent is to have that open during the process around the annual meeting.

CHAIRMAN ARMSTRONG: Okay, I think that would be a critical point; because we want to meet again on this. John.

MR. McMURRAY: Presumably there will be a public comment document, correct?

MR. ORNER: Correct.

Chris Oliver.

MR. McMURRAY: If that's the case, would there be some analysis on what sort of impact this would have on SSB and F rates?

CHAIRMAN ARMSTRONG: Okay, Bob Ballou.

MR. ORNER: I don't have an exact answer for you; as this is going out for public input on the announcement itself. I think the actual scope of the actual ANPR itself later on would get into that.

MR. ROBERT BALLOU: Derek, I think I heard you say you were looking for initial feedback. I'll provide that from a Rhode Island perspective; very controversial issue. Proceed with extreme caution. How's that for feedback? It really is a hot button issue.

CHAIRMAN ARMSTRONG: Anymore questions for Derek?

You're really stirring the hornets' nest. Not you. Congress stirred the hornets' nest by imposing this upon the Agency. I think you know that. But just be ready for considerable pushback on both sides of the issue. It's a very controversial issue; as I'm sure you're well aware. There's your feedback.

MR. HASBROUCK: Thank you Derek, for the information. I'm wondering if you would be able to send out a notice to this Board when that information is posted; and where people can comment.

CHAIRMAN ARMSTRONG: Not to state the obvious. But just for the record, it really is critical that this Board is part of the discussion the whole way through. Anymore questions for Derek? All right, Roy; you had a comment?

MR. ORNER: We'll definitely do that and make sure the Commission gets, and we can make sure the Board receives it as well.

CHAIRMAN ARMSTRONG: Andy.

MR. ROY W. MILLER: A quick comment. I would like to circle back for just a second for some clarification regarding Agenda Item 4; Approval of the Management Plan and State Compliance Reports. By accepting the Management Plan and State Compliance Reports, is it a safe assumption that Maryland's present circle hook requirement will continue on for the subsequent fishing years until changed? What I'm getting at is will that serve as a model for other states to emulate; or is Maryland going to readjust when they have additional opportunities to adopt the original language that they suggested a while ago?

MR. ANDREW SHIELS: Derek, just a question. If this would go through, or this information is gathered, who would be the decider as to whether or not this is enacted?

MR. ORNER: We would have, NOAA Fisheries would have the, I guess ultimate say for what regulations are in the EEZ; but doing it in consultation with the Commission, so we'll take whatever public comment come in, plus the conversations at the Board into consideration.

CHAIRMAN ARMSTRONG: That's a good question; and Mike has his hand up, so I'll let him answer that.

MR. SHIELS: Quick follow up. What is the last line of decision making? Who would it be in NOAA Fisheries or who would make the call on this one?

MR. ORNER: NOAA Fisheries.

MR. LUISI: The regulations that we've implemented, Roy, have a two-year sunset provision on them. Right now I think, and I'll speak for what I know now. The plan is to stay the course for two years. I would assume that there is going to be management action that is

MR. SHIELS: Is that a person? Who in NOAA Fisheries? Who are we talking about?

MR. ORNER: In NOAA Fisheries it would be

going to come from the result of the benchmark assessment.

I can only assume that it might change things for the future; but after two years it is going to be our obligation to review the program, and determine whether or not we're accomplishing what we set out to accomplish. If not, we may be more restrictive in that we would implement the J hook requirement; or modify it in some other way. But for now I can't tell you anything more than what we would do after 2020.

CHAIRMAN ARMSTRONG: We will see a report in February about the result of this, correct?

MR. LUISI: Yes that was the commitment that we made; it's a report regarding enforcement, education and outreach et cetera. We are not doing any type of evaluation currently with the resources that we have to determine the effectiveness of a circle hook. We're basing the effectiveness of the circle hook on the previous work that's been done; to indicate that deep hooking mortality is reduced through the use of those hooks. But yes, a report will be coming forward to this Board in February.

CHAIRMAN ARMSTRONG: Dennis, oh Doug.

MR. GROUT: My recollection, and correct me if I'm wrong. I thought the motion the Board approved was for a period of one year; and that we would review it in February, and determine whether we were going to approve it for any future years, if you could clarify that. I was pretty sure that there was going to be a report provided by the state of Maryland on the effectiveness of this in reducing mortality and that this was only for one year. I think we need to have that clarified. I thought that was what the motion originally said.

CHAIRMAN ARMSTRONG: That would be an important point, Doug. That must be in the minutes somewhere, right?

MR. APPELMAN: I'm working to pull it up.

CHAIRMAN ARMSTRONG: That being said, we

have another slight problem. This motion was not quite complete. The full motion should say; Move to approve the FMP Review and State Compliance Reports. That needs to be part of it. How do we perfect that Toni?

MS. TONI KERNS: If there is no objection to adding "and State Compliance Reports," then we can just add it in.

CHAIRMAN ARMSTRONG: Ritchie.

MR. WHITE: I would like to hear the answer to the issue of the February report and what's attached to that before there is any change in that motion.

CHAIRMAN ARMSTRONG: Okay. Mike.

MR. LUISI: We went forward with a two-year provision; in the event that after the report that the Board agrees or sees the program that we've implemented as being a success. If the Board were to decide to not allow Maryland to use a circle hook with a smaller size limit, we would reverse the regulation in due time. We had to go through, like I mentioned before we had to do an emergency regulation, which is almost unheard of under this administration to get these rules enacted in time for the season.

We didn't want to go through that again next year after February; if the Board was approving of our program. We decided to put a two-year sunset on there for our own internal review; if the Board is accepting of our program for the next two years. This Board ultimately has the say as to whether or not Maryland continues with the circle hook requirement.

Therefore, if that decision that was made in February of 2018 was reversed, and we were asked to go back to the drawing board; go back and allow for treble hooks, and go back and allow for the use of J hooks with chumming and live lining. If that is the Board's wish, then we would have to go back and reverse our rules. But for now it's in place for two years.

CHAIRMAN ARMSTRONG: Go ahead, Max.

MR. APPELMAN: We just looked up the motion. What Mike is saying is sort of in line with what the motion reads. It doesn't put a sunset provision on the regulations that are in; just that you will bring a report, Maryland will bring a report to the Board in February, at which time the Board can make its judgment on revisiting that conservation equivalency measure.

EXECUTIVE DIRECTOR BEAL: I could read the motion if you would like; but it's a pretty long motion. Maybe I'll try to paraphrase it. The first sentence of the motion just says; Move to approve Option B in Maryland's Conservation Equivalency Proposal, and then it describes what regulations Maryland was going to implement.

Then the second sentence of the motion said, Additionally Maryland will collect enforcement, compliance, and other relevant information during 2018, and will report back to the Board with a Conservation Equivalency Effectiveness Review in February of 2019. It does not include any reference to a single year or it's a 2018 only program or anything along those lines. I don't have the full minutes in front of me; and I don't know if the record has any part of the discussion or not. But we can pull that up right here and review those during the meeting.

CHAIRMAN ARMSTRONG: We do get a crack at looking at it in February. I don't know if that provides some level of comfort. Go ahead, Ritchie.

MR. WHITE: Question, so if we approve the FMP for 2018, we're going to be in 2019, so this has no effect on any changes that might be required in February.

MR. APPELMAN: This FMP Review, the Compliance Reports relating to this FMP Review cover the 2017 fishing season; and any changes to 2018 regulations.

MR. WHITE: Right, so again if there were a decision to create changes for 2019, then we would have the ability to do that in February.

Anything we do to this motion isn't going to affect that.

MR. APPELMAN: Correct.

CHAIRMAN ARMSTRONG: Yes.

MR. SHIELS: I found the preamble part to that from the archives and it says, the part that leads into the motion, the description says the Board approved Option B for Maryland's proposal for implementation in 2018; with the understanding that Maryland would include circle hook specifications in its regulations. Then it goes down and includes the information from the motion that says; this information will be provided in February, 2019. It seems like at least in the summary it's pretty clear it was for 2018. It doesn't say beyond that in the summary.

CHAIRMAN ARMSTRONG: Yes so it's clear there is no sunset to the regulation; except internally within the state; any other comments? Eric.

MR. ERIC REID: I'm trying to decide whether there is a comment or not. I mean I don't know what's in the water in the Chesapeake Bay. But yesterday we talked about the other side of Chesapeake Bay with the legislature and menhaden. Now Maryland really only enacted a portion of what they said they were going to for 2018.

Is that correct; because you had a problem with the J hook issue? You were going to make bigger J hooks and you were going to do circle hooks; but you only enacted the circle hook portion of what you proposed to get 19 inches. Is that right?

CHAIRMAN ARMSTRONG: Mike.

MR. LUISI: Eric, it was our intent to capture the greatest audience that we could in our rulemaking; for people who intended to stripe bass fish. When we approached our enforcement agency and asked them if we could promulgate rules on targeting, or if we could make rules specific for people stripe bass

fishing on intent to stripe bass fish, they told us no.

Here we have this pool of people who we want to effect. When we put forth the rules that we first put forth, we started to affect the fringe fisheries unintentionally. Therefore, when we looked again at the pool, we said it's probably better to capture 95 percent of that pool than none of them.

When you say we only did half of what we said. We actually captured the audience that we wanted in those regulations; and didn't affect those fringe fisheries, but we lost a very small percentage of those people who may use a piece of bait with a J hook to catch a striped bass. But we were willing to deal with that tradeoff; in order to effectively handle that very large pool of striped bass fishermen that we couldn't implement regulations on intent for, if that's clear.

CHAIRMAN ARMSTRONG: Ritchie.

MR. WHITE: As I recall, I was the one that asked for the February report. I still stand by that. We're giving them a chance. They didn't implement the regulations exactly as we requested; but they've gone a long ways. We have the ability to make changes in February, so I support letting them give their report. Let's see what's happened there. Let's see what they have to say. We can decide if we don't think things are going as they thought they would; we can make a change in February.

CHAIRMAN ARMSTRONG: Okay, any more comments? **Seeing none; is there any objection to approving the State Compliance Report to this motion that was passed? Seeing none; it is now passed with the amended language.** Should I read that? **The new approved motion is; to approve the 2018 FMP Review and State Compliance Reports for Atlantic Striped Bass, original motion by Mr. Fote, second by Mr. Kane. Passed unanimously, passed the second time unanimously.** I think we're out of business; any other business before this Board? Tom.

MR. FOTE: It seems I always get caught in a controversy; even when I make a simple motion. But anyway, I took what Desmond said to heart. I've been asking for that same review; basically the producing area status of the Delaware River and the Hudson River, and what the contribution is to the overall coastal stocks.

I've been hammering that for about the last ten years since we got put out as no longer producing areas by just the writing of a pen; while Bruce Freeman and I left a meeting. I still want that to be on the agenda. I would like it on the agenda for the next Striped Bass Board of where we're going forward with that; because we've been talking about it, yet nothing ever gets done.

MR. APPELMAN: Tom, I'm sorry. Were you also suggesting that maybe that would happen when the results of the benchmark came out?

MR. FOTE: Yes, I think you're working on the benchmark. I just needed a report on what's going on with that; because we've been talking about that for years. It was accidentally removed as a producing area status of the Hudson River and the Delaware River under Amendment 5, I think it was. It was done when New Jersey left the room.

We've been complaining about it ever since. We should know what effects the Delaware River and the Hudson are to the coastal migratory stock, because we don't manage it that way. We manage strictly as the Chesapeake Bay; because that's the way it's been written ever since. We should really know; because some years the studies in Massachusetts, thinking about 30 percent or 40 percent of the coastal migratory stock is from the Hudson and the Delaware combined, if I heard the studies right.

MR. APPELMAN: I think that a task like that would pretty cumbersome; and the Stock Assessment and Technical Committees are pretty involved with the benchmark right now. Once that information comes available, which

we'll add to that type of analysis or evaluation, we could definitely consider doing something like that at that time.

ADJOURNMENT

CHAIRMAN ARMSTRONG: Tom, we'll circle back to that after the assessment. That being said, no more business we are adjourned. Thank you.

(Whereupon the meeting adjourned at 5:55 o'clock p.m. on August 8, 2018)

once on any calendar day, which is defined as the 24-hr period beginning at 0001 hours and ending at 2400 hours.

(ii) *Entire commercial fishery.* During a closure of the directed commercial Atlantic mackerel fishery pursuant to § 648.24(b)(1)(i), when 100 percent of the DAH is harvested, vessels issued an open or limited access Atlantic mackerel permit may not take and retain, possess, or land more than 5,000 lb (2.26 mt) of Atlantic mackerel per trip at any time, and may only land Atlantic mackerel once on any calendar day, which is defined as the 24-hr period beginning at 0001 hours and ending at 2400 hours.

* * * * *

[FR Doc. 2018-21616 Filed 10-3-18; 8:45 am]

BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 697

[Docket No. 180709616-8616-01]

RIN 0648-B107

Fisheries of the United States; Regulations for Striped Bass Fishing in the Block Island Transit Zone

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Advance notice of proposed rulemaking; request for comments.

SUMMARY: NMFS issues this advance notice of proposed rulemaking (ANPR) to provide background information and make the public aware of a proposal to remove the current prohibition on recreational Atlantic striped bass fishing in the Block Island Transit Zone (Transit Zone) within the Federal exclusive economic zone (EEZ). The ANPR is in response to the 2018 Omnibus Appropriations Act which included the provision directing NOAA, in consultation with the Atlantic States Marine Fisheries Commission, to consider lifting the ban on striped bass fishing in the Federal Block Island Transit Zone. NMFS communicated the intent to issue this ANPR at the Atlantic States Marine Fisheries Commission's August 2018 public meeting. By this action, NMFS is soliciting public comment on options presented to regulate fishing for striped bass in the Transit Zone. In addition, comments on other options to improve management of Atlantic striped bass in the Transit Zone are welcomed and encouraged.

DATES: Written comments regarding the issues in this ANPR must be received by 5 p.m., local time, on November 19, 2018.

ADDRESSES: You may submit comments on this document, identified by NOAA-NMFS-2018-0106, by any of the following methods:

- *Electronic Submission:* Submit all electronic public comments via the Federal e-Rulemaking Portal. Go to www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2018-0106, click the "Comment Now!" icon, complete the required fields, and enter or attach your comments.
- *Mail:* Submit written comments to Kelly Denit, Division Chief, Office of Sustainable Fisheries, 1315 East-West Highway, SSMC3, Silver Spring, MD 20910.
- *Fax:* 301-713-1193; Attn: Kelly Denit.

Instructions: Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NMFS. All comments received are a part of the public record and will generally be posted for public viewing on www.regulations.gov without change. All personal identifying information (e.g., name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments (enter "N/A" in the required fields if you wish to remain anonymous).

FOR FURTHER INFORMATION CONTACT: Kelly Denit, Division Chief, Office of Sustainable Fisheries, National Marine Fisheries Service, 301-427-8517.

SUPPLEMENTARY INFORMATION:

Background

Atlantic striped bass occur predominately within 12 nautical miles from shore, an area which includes both waters (0-3 miles from shore) under state jurisdiction, as well as portions of the Exclusive Economic Zone (3-200 miles from shore) under Federal jurisdiction. Management responsibility for Atlantic striped bass resides primarily with the coastal states, and interstate management occurs through the Atlantic State Marine Fisheries Commission's (Commission) Interstate Fisheries Management Plan for the Atlantic Striped Bass (ISFMP), first adopted in 1981. In 1995, the Commission declared the Atlantic striped bass population fully restored and implemented Amendment 5 to the ISFMP to perpetuate the stock so as to allow a commercial and recreational

harvest consistent with the long-term maintenance of the striped bass stock. The latest stock assessment update completed in 2016 determined that the Atlantic striped bass stock is not overfished or experiencing overfishing.

NMFS promulgates regulations in Federal waters that are compatible with the Commission's ISFMP. The Atlantic Striped Bass Conservation Act (Pub. L. 100-589, 16 U.S.C. 5151, *et seq.*) sets forth the basis for Federal striped bass regulatory authority. Under the act, Federal Atlantic striped bass regulations must comply with the following: (1) Be consistent with the national standards in Section 301 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1851); (2) be compatible with the fishery management plan for managing Atlantic striped bass and each Federal moratorium in effect on fishing for Atlantic striped bass within the coastal waters of a coastal state; (3) ensure the effectiveness of State regulations on fishing for Atlantic striped bass within the coastal waters of a coastal state; and (4) be sufficient to assure the long-term conservation of Atlantic striped bass populations. Further, in developing the regulations, the Secretary is to consult with the Commission, the appropriate Regional Fishery Management Councils (Councils), and each affected Federal, state, and local government entity.

Existing Federal regulations prohibit recreational and commercial fishing for Atlantic striped bass in the EEZ. The regulations do, however, allow fishers to transport Atlantic striped bass caught in adjoining state fisheries while transiting the Block Island Transit Zone (Transit Zone; 50 CFR 697.7). The Transit Zone is defined in NMFS regulations as the area of Federal waters within Block Island Sound, located between areas south of Montauk Point, New York, and Point Judith, Rhode Island. The Transit Zone area is unique because it is a small area of Federal waters (Block Island Sound) substantially bounded by state waters (Long Island, New York on one side, Block Island, Rhode Island on another, and the mainland of Connecticut and Rhode Island on a third side).

NMFS is considering revising current regulations to authorize recreational fishing in the Block Island Transit Zone. This would allow recreational fishermen to harvest, retain, and transport striped bass within the Block Island Transit Zone. The ANPR is in response to the 2018 Omnibus Appropriations Act (Pub. L. 115-141) which included the provision directing "NOAA, in consultation with the Atlantic States Marine Fisheries

Commission, to consider lifting the ban on striped bass fishing in the Federal Block Island Transit Zone.” NMFS communicated the intent to issue this ANPR to the Atlantic States Marine Fisheries Commission at the August 2018 meeting. NMFS is not proposing to allow commercial striped bass fishing in the Transit Zone, consistent with Executive Order 13449 (October 24, 2007; 72 FR 60531), “Protection of Striped Bass and Red Drum Fish

Populations,” which declared it the policy of the United States to prohibit the sale of striped bass caught in the EEZ.

Public Comments

To help determine the scope of issues to be addressed and to identify significant issues related to this action, NMFS is requesting public comments on this ANPR. The public is encouraged to submit comments related to the potential regulatory revisions described

in this ANPR, as well as additional ideas to improve management of striped bass in the Block Island Transit Zone.

Authority: 16 U.S.C. 1827a.

Dated: September 28, 2018.

Samuel D. Rauch, III,

*Deputy Assistant Administrator for
Regulatory Programs, National Marine
Fisheries Service.*

[FR Doc. 2018-21613 Filed 10-3-18; 8:45 am]

BILLING CODE 3510-22-P



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

October 3, 2018

To: Atlantic Striped Bass Management Board

From: Tina Berger, Director of Communications

RE: Advisory Panel Nomination

Please find attached a new nomination to the Atlantic Striped Bass Advisory Panel – Steven Smith, a recreational angler from Delaware. 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: Max Appelman

M18-104

ATLANTIC STRIPED BASS ADVISORY PANEL

Bolded names await approval by the Atlantic Striped Bass Management Board

October 3, 2018

Maine

Vice-Chair - David Pecci (rec)
144 Whiskeag Road
Bath, ME 04530
Phone (o): (207) 442-8581
Phone (c): (207) 841-1444
FAX: (207) 442-8581
dave@obsessioncharters.com
Appt. Confirmed 5/23/02
Appt Reconfirmed 5/10

Rodney "Chip" Gray (rec)
C/O Harraseeket Inn
162 Main Street
Freeport, ME 04032
Phone (o): (207) 865-9377
Phone (c): (207) 329-3126
FAX: (207) 865-1684
cgray76386@aol.com
Appt Confirmed 2/4/08

New Hampshire

Peter Whelan (rec)
100 Gates Street
Portsmouth, NH 03801
Phone (o): (603) 205-5318
Phone (h): (603) 427-0401
pawhelan@comcast.net
Appt. Confirmed 2/24/03
Appt Reconfirmed 5/10

Massachusetts

Douglas M. Amorello (comm. rod & reel)
68 Standish Street
Pembroke, MA 02359
Cell: (774)766-8781
sashamysportfishing@gmail.com
Appt. Confirmed 3/23/11
Appt. Reconfirmed 8/18

Patrick Paquette (rec/for-hire/comm)
61 Maple Street
Hyannis, MA 02601
Phone: (781)771.8374
Email: basicpatrick@aol.com
Appt. Confirmed 8/16

Rhode Island

J. Edwin Cook (rec)
106 Briarbrook Drive
North Kingstown, RI 02852
Phone: (401) 885-0679
edcookcharters@cox.net
Appt. Confirmed 2/22/06
Appt Reconfirmed 5/10

Vacancy (rec)

Connecticut

Fred Frillici (rec)
5 Random Road
Fairfield, CT 06825
Phone (o): (203) 371-4237
Phone (c): (203) 767-1952
FAX: (203) 373-0906
fvfrillici@snet.net
Appt. Confirmed: 2/4/98
Appt. Reconfirmed 9/15/02

Kyle Douton (rec/tackle shop owner)
5 Rockwell Street
Niantic, CT 06357
Phone (day): (860)739-7419
Phone (eve): (860)739-8899
FAX: (860)739-9208
kyle@jbtackle.com
Appt. Confirmed 5/13/14

New York

Arnold Leo (com)
Hampton 130 Gerard Street
East Hampton, NY 11937
Phone: (631) 324-7178
FAX: (631) 907-4011
agleo@sover.net
Appt. Confirmed 4/21/94
Appt. Reconfirmed 9/15/98; 9/15/02 and 5/10

John G. McMurray (charter/conservation)
2887 Alfred Court
Oceanside, NY 11572
Phone: (718)791-2094
FAX: (212)362-4831
john@nycflyfishing.com

ATLANTIC STRIPED BASS ADVISORY PANEL

Bolded names await approval by the Atlantic Striped Bass Management Board

October 3, 2018

Appt. Confirmed 8/15/07

New Jersey

C. Louis Bassano, Chair

1725 West Central Avenue

Ortley Beach, New Jersey 08751

Phone (c): (908) 241-4852

FAX: (908) 241-6628

lbassano@comcast.net

Appt. Confirmed 10/15/01

Appt. Reconfirmed 2/9/06; 5/17/10; 4/14/14

Capt. Al Ristori (charterboat)

1552 Osprey Court

Manasquan Park, NJ 08736

Phone: (732) 223-5729

FAX: (732) 528-1056

cristori@aol.com

Appt. Confirmed 10/17/94

Appt. Reconfirmed 9/15/98; 9/15/02; 2/9/06;

5/17/10

Pennsylvania

John Pedrick (rec)

936 Langstroth Lane

Bensalem, PA 19020

Phone: (215) 633-6777

jjpedrick@verizon.net

Appt Confirmed 3/23/11

Delaware

Leonard Voss, Jr. (com)

2854 Big Oak Road

Smyrna, DE 19977

Phone: (302) 653-7999

Appt. Confirmed 4/21/94

Appt. Reconfirmed 7/27/99; 7/03 and 7/07

Steven Smith (rec)

59 Burnham Lane

Dover, DE 19901

Phone (day): (302)744-9140

Phone (eve): (302)674-5186

smithbait@verizon.net

Maryland

Vacancy – for-hire

David Sikorski (rec)

4637 Willowgrove Drive

Ellicott City, MD 21042

Phone: (443) 621-9186

FAX: (410) 772-5805

Dauidsikorski@mac.com

Appt Confirmed 3/23/11

Virginia

Kelly Place (comm; reappted chair 10/2010)

213 Waller Mill Road

Williamsburg, VA 23185

Phone (h): (757) 220-8801

Phone (c): (757) 897-1009

FAX: (757) 259-9669

kelltron@aol.com

Appt. Confirmed 5/23/02

Appt Reconfirmed 5/06 and 5/10

William Edward Hall Jr. (rec)

PO Box 235

26367 Shoremain Drive

Bloxom, VA 23308

Phone (day): (757)854-1519

Phone (eve): (757)894-0416

FAX: (757)854-0698

esangler@verizon.net

Appt. Confirmed 5/13/14

North Carolina

Riley W. Williams (com)

336 Selwin Road

Belvidere, NC 27919

Phone: (252) 312-8457

Appt. Confirmed 11/10/04

Appt Reconfirmed 11/08; 8/18

Vacancy (rec)

District of Columbia

Joe Fletcher (rec)

1445 Pathfinder Lane

McLean, VA 22101

Phone: (703) 356-9106

Email: jmfletcher@verizon.net

Appt. Confirmed 10/30/95

ATLANTIC STRIPED BASS ADVISORY PANEL

Bolded names await approval by the Atlantic Striped Bass Management Board

October 3, 2018

Appt. Reconfirmed 9/15/99; 9/03 and 9/07

Potomac Fisheries River Comm.

Kyle J. Schick (marina owner, seafood
restaurateur, rec/com)

901 Irving Avenue

PO Box 400

Colonial Beach, VA 22443

Phone (o): (804) 224-7230

Phone (c): (804) 761-1729

FAX: (804) 224-7232

Email: kyle@cbycmarina.com

Appt. Confirmed 8/15/07



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: John Clark State: Delaware
(your name)

Name of Nominee: STEVEN R. SMITH SR

Address: 59 Burkham Lane

City, State, Zip: DOVER, DE 19901

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

Phone (day): 302-744-9140

Phone (evening): 302-674-5186

^{Call}
~~FAX:~~ 302-222-5457

Email: SmitAbait@verizon.net

.....
FOR ALL NOMINEES:

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

- 1. Striped Bass
- 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?

<u>Striped Bass</u>	<u>Flounder</u>
<u>Blue Fish</u>	<u>White Perch</u>
<u>Sea Bass</u>	<u>Tuna</u>
<u>Blue claw crabs</u>	<u>Black Drum</u>

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

<u>Red Drum</u>	<u>Speckled Trout</u>
<u>Snook</u>	_____
<u>Sheepshead</u>	_____

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? 40 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.

owner Boat & Tackle Shop

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.

Nominee Signature: Steve R. Smith Sr

Date: 9-27-18

Name: STEVEN R. SMITH SR
(please print)

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

[Signature]

State Director

[Signature]

State Legislator

[Signature]
Governor's Appointee

Tina Berger

From: Jeff Clabault <jeffcccc@gmail.com>
Sent: Thursday, October 04, 2018 11:50 AM
To: info
Subject: Striped Bass

Hello- I own and operate Forestdale Bait and Tackle in Cape Cod, MA. I am not sure how closely you guys follow our commercial bass fishing here but the quota is at a virtual standstill, despite a third day of fishing added each week. The lack of big fish is mirrored on the recreational side with only small bass being caught and only a very occasional larger one...and I mean one. (All summer, if you were fishing Nantucket Sound or Buzzards Bay you were more likely to catch a king mackerel than a keeper sized bass! In the fabled Striper Coast area, no less!) Something needs to be done to protect the few breeding sized fish that are left...before it is too late. Thanks. J. Clabault

Atlantic States Marine Fisheries Commission

Weakfish Management Board

*October 24, 2018
10:15 – 11:00 a.m.
New York, New York*

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>R. O'Reilly</i>) | 10:15 a.m. |
| 2. Board Consent | 10:15 a.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from February 2018 | |
| 3. Public Comment | 10:20 a.m. |
| 4. Technical Committee Report on Commercial Discards (<i>K. Drew and M. Schmidtke</i>) | 10:30 a.m. |
| 5. Consider Approval of 2018 Fishery Management Plan Review and State Compliance Reports (<i>M. Schmidtke</i>) Action | 10:45 a.m. |
| 6. Review and Populate Advisory Panel Membership (<i>T. Berger</i>) Action | 10:50 a.m. |
| 7. Elect Vice-Chair Action | 10:55 a.m. |
| 8. Other Business/Adjourn | 11:00 a.m. |

The meeting will be held at the Roosevelt Hotel, 45 East 45th Street & Madison Avenue, New York, NY; 212.661.9600

MEETING OVERVIEW

Weakfish Management Board Meeting

Wednesday, October 24, 2018

10:15 a.m. – 11:00 a.m.

New York, New York

Chair: Rob O'Reilly (VA) Assumed Chairmanship: 2/18	Technical Committee Chair: Erin Levesque (SC)	Law Enforcement Committee Representative: Steve Anthony (NC)
Vice Chair: Vacant	Advisory Panel Chair: Billy Farmer (NC)	Previous Board Meeting: February 7, 2018
Voting Members: MA, RI, CT, NY, NJ, DE, MD, PRFC, VA, NC, SC, GA, FL, NMFS, USFWS (15 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from February 7, 2018

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. Technical Committee (TC) Report on Commercial Discards (10:30 – 10:45 a.m.)

Background

- In February 2018, the Board tasked the TC with the following motion:
“Move to task the Technical Committee to review weakfish discard data from the Northeast Federal Observer Program and from vessel trip reports (VTRs), analyze landings data to see if the occurrences of commercial trips approaching the 100-lb trip limit have increased, and to characterize the fisheries with substantial weakfish discards to see if different trip limits could be implemented to turn discards into landings and/or if fishing modifications could be made to minimize discards.”
Motion by C. Batsavage, second by J. Clark.
- The TC met several times via conference call and submitted a report detailing data and analyses used to form a recommendation on whether the Board should consider further action (**Briefing Materials**).

Presentations

- M. Schmidtke and K. Drew will present TC report and recommendations.

5. Consider 2017 FMP Reviews and State Compliance Reports (10:45 – 10:50 a.m.) Action

Background

- State Compliance Reports are due on September 1. The Plan Review Team (PRT) reviewed each state report and compiled the annual FMP Review. Massachusetts, Connecticut, and Florida have applied for *de minimis* (**Supplemental Materials**).

Presentations

- Overview of the FMP Review by M. Schmidtke.

Board actions for consideration at this meeting

- Accept 2017 FMP Review and State Compliance Reports.
- Approve *de minimis* requests for MA, CT, and FL.

6. Review and Populate Advisory Panel (AP) Membership (10:50 – 10:55 a.m.)

Background

- North Carolina submitted a nomination for Dr. Jeffrey Buckel to be appointed to the Weakfish AP as a representative for the recreational fishery (**Briefing Materials**).

Board actions for consideration at this meeting

- Approve the nomination to appoint Dr. Jeffrey Buckel to the Weakfish AP.

7. Elect Vice Chair (10:55 a.m. – 11:00 a.m.) Action

8. Other Business/Adjourn

Weakfish Board

Activity level: Low

Committee Overlap Score: High (American Eel TC, Atlantic Croaker TC, Cobia TC, Horseshoe Crab SAS & TC, Menhaden TC, Shad and River Herring TC, Striped Bass TC & SAS, Tautog TC)

Committee Task List

- Technical Committee – Fall: Complete analyses of catch and discards to determine whether commercially discarded weakfish numbers have increased – **Completed**
- Technical Committee – Fall/Winter: Review new MRIP estimates and discuss potential assessment update
- Technical Committee – September 1: Compliance Reports Due

TC Members: Erin Levesque (SC, Chair), Katie Drew (ASMFC), Michael Schmidtke (ASMFC), Tiffany Vidal (MA), Christopher Parkins (RI), Paul Nunnenkamp (NY), Linda Barry (NJ), Michael Greco (DE), Harry Rickabaugh (MD), Ellen Cosby (PRFC), Sydney Alhale (VA), Lee Paramore (NC), B.J. Hilton (GA), Dustin Addis (FL), Wilson Laney (USFWS)

SAS Members: Katie Drew (ASMFC), Michael Schmidtke (ASMFC), Linda Barry (NJ), Ed Hale (DE), Angela Giuliano (MD), Yan Jiao (Virginia Tech), Laura Lee (NC), Erin Levesque (SC)

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

**The Westin Crystal City
Arlington, Virginia
February 7, 2018**

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

TABLE OF CONTENTS

Call to Order, Chairman Rob O'Reilly	1
Approval of Agenda	1
Approval of Proceedings, May 2016	1
Public Comment	1
2017 Plan Review and State Compliance Reports.....	1
Consider Use of Fishery-independent Samples in Fulfilling Biological Sampling Requirements of the FMP	4
Discuss Recent Changes in Discards in North Carolina	7
Adjournment.....	10

INDEX OF MOTIONS

1. **Motion to approve agenda** by Consent (Page 1).
2. **Motion to approve proceedings of May 2016** by Consent (Page 1).
3. **Move to accept the 2017 FMP Review and state compliance reports for weakfish, and approve de minimis requests for Massachusetts, Connecticut, Georgia and Florida** (Page 4). Motion by John Clark; second by Emerson Hasbrouck. Motion carried (Page 4).
4. **Move to task the Technical Committee to review weakfish discard data from the Northeast Federal Observer Program and from vessel trip reports; analyze landings data to see if the occurrences of commercial trips approaching the 100 pound trip limit have increased, and to characterize the fisheries with substantial weakfish discard, to see if different trip limits could be implemented to turn discards into landings and/or if fishing modifications could be made to minimize discards** (Page 9). Motion by Chris Batsavage; second by John Clark. Motion carried (Page 10).
5. **Motion to adjourn by Consent** (Page 10).

ATTENDANCE

Board Members

David Pierce, MA (AA)	Rachel Dean, MD (GA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	Rob O'Reilly, VA, Chair
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	John Bull, VA (AA)
Jason McNamee, RI (AA)	Cathy Davenport, VA (GA)
David Borden, RI (GA)	Doug Brady, NC (GA)
Mark Alexander, CT (AA)	Steve Murphy, NC (AA)
Emerson Hasbrouck, NY (GA)	Chris Batsavage, NC, Administrative proxy
Jim Gilmore, NY (AA)	David Bush, NC, proxy for Rep. Steinburg (LA)
Jeff Brust, NJ, proxy for L. Herrighty (AA)	Ross Self, SC, proxy for Sen. Cromer (LA)
Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)	Robert Boyles, SC (LA)
Craig Pugh, DE, proxy for Rep. Carson (LA)	Spud Woodward, GA (GA)
John Clark, DE, proxy for D. Saveikis (AA)	Doug Haymans, GA (AA)
Roy Miller, DE (GA)	Pat Geer, GA, proxy for Rep. Burns (LA)
Ed O'Brien, MD, proxy for Del. Stein (LA)	Jim Estes, FL, proxy for J. McCawley (AA)
Lynn Fegley, MD, proxy for D. Blazer (AA)	Martin Gary, PRFC
	Sherry White, USFWS

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

Ex-Officio Members

Staff

Bob Beal	Mike Schmidtke
Toni Kerns	Kirby Rootes-Murdy
Katie Drew	Jessica Kuesel

Guests

Joe Cimino, VMRC	Chip Lynch, NOAA
Allison Colden, CBF	Wilson Laney, USFWS
Jeff Deem, VMRC	Steve Poland, NC DMF
Matt Gates, CT DEEP	Gray Rodding, DC
Zak Greenberg, PEW	Jack Travelstead, CCA
Aaron Kornbluth, PEW	Ritchie White, NH GA
Arnold Leo, East Hampton, NY	

The Weakfish Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; Wednesday, February 7, 2018, and was called to order at 11:30 o'clock a.m. by Chairman Rob O'Reilly.

CALL TO ORDER

CHAIRMAN ROB O'REILLY: All right here we go. It is time and this is a fairly short time period for Weakfish. My name is Rob O'Reilly; I'm with the Virginia Marine Resources Commission, and I'm the Board Chair. Also, Mike Schmidtke is up here with me. Mike is the ASMFC Plan Coordinator for weakfish and Katie Drew is here as well with ASMFC; and I'm just going to label her as a stock assessment extraordinaire person, okay?

APPROVAL OF AGENDA

CHAIRMAN O'REILLY: A couple things to do, we have to approve the agenda. Does everyone have the agenda in front of you? Do you have any changes, any comments on the agenda? Seeing none; the agenda is approved.

APPROVAL OF PROCEEDINGS

CHAIRMAN O'REILLY: We'll next turn to the proceedings from the last time the Weakfish Management Board met, which was May of 2016; that was a little while ago.

Are there any comments or changes on those proceedings? What I would encourage you, if you haven't had the time to read those proceedings all the way through is they are sort of a benchmark approach for where we're going to go forward. You have Jeff Brust, you have him going over the stock assessment; and in addition you've got the peer review that is talked about in here.

Although it's been since May of 2016, this will be part of what we go forward with weakfish. I

think you're going to see as we go forward that it's not going to be such a lull in activity for weakfish; as you'll see a little bit later in the agenda. We thank Pat Campfield for going over the peer review in here. I think these are really a good document.

PUBLIC COMMENT

CHAIRMAN O'REILLY: Next we're going to have public comment. I don't have anyone who signed up; I don't think. But if there is anyone who would like to have a public comment at this time, please come forward.

2017 PLAN REVIEW AND STATE COMPLIANCE REPORTS

CHAIRMAN O'REILLY: Seeing none; I'm going to turn to Mike Schmidtke. He's going to provide information on the 2017 Plan Review and State Compliance Reports.

DR. MIKE SCHMIDTKE: Today we'll be going over the 2017 FMP review for weakfish. First we'll start off looking at the landings status. This graph shows recreational harvest in black and commercial harvest in gray. Total coastwide landings in 2016 were 247,000 pounds, which is a 19,000 pound decrease from 2015.

The commercial fishery at 171,000 pounds accounted for about 70 percent of the total 2016 landings; an increase by about 33,000 pounds from 2015. North Carolina at 47 percent and Virginia at 23 percent landed the largest share of the 2016 commercial landings. Here we see recreational harvest in blue and releases in red. As you can see in the mid-1990s, oh and I apologize for that axis, as you can see in the mid-1990s when Amendments 1 through 3 were implemented, releases have typically been about double the number of fish harvested. Although with declining harvest in recent years, releases have outnumbered recreational landings about tenfold or more.

In 2016, recreational landings were 76,000 pounds or 66,000 fish. This represents a 38 percent decline in poundage and 39 percent decline in numbers from 2015. North Carolina had the largest portion of recreational harvest at 51 percent by numbers and 46 percent by weight, followed by Virginia.

An estimated 975,000 weakfish were released by the recreational fishery; which was a 12 percent decrease in number of releases, but a 3 percent increase in percentage of the recreational catch that was released. Addendum I to Amendment 4 requires the collection of otoliths and lengths to characterize the fishery.

The number of samples required is based on the magnitude of each state's fisheries, so that six fish lengths are collected for each metric ton of weakfish landed commercially, and three fish ages are collected for each metric ton of total weakfish landed. All states met the biological sampling requirements in 2016, except for Rhode Island and New York.

Rhode Island specifically mentioned in their compliance report that they had difficulty attaining weakfish samples in 2016. They collected an adequate number of lengths; but collected six ages less than their required nine. New York collected an adequate number of ages, but five lengths less than their required 66.

Issues in sample collection have not been uncommon recently; due at least in some part to the declining landings in this fishery. The Plan Review Team recommends that there is no reason to believe that a good faith effort to fulfill these requirements was not put forth by these states. So given the small margin by which they were short of their requirements, the Plan Review Team would recommend that the Board still find them within compliance of these requirements.

There is some ambiguity in the language of Addendum I, in regards to sample source. The Plan Review Team recommends that the Board provide guidance on whether states should be allowed to supplement current sample collections to fulfill their sample requirements with fishery independent samples. We'll get into that really in the next agenda item. Due to recent difficulties in acquiring these samples, yes we'll just touch on that in the next agenda item.

In 2010 the recreational and commercial management measures in Addendum IV replaced those in Addendum II. However, the Plan Review Team continues to evaluate the former management triggers as they provide some perspective on the landings. The PRT does maintain its recommendation that the Board update these triggers to be reflective of the most recent stock assessment. But looking at the triggers as they stand right now, the commercial management measures are to be reevaluated if coastwide commercial landings exceed 80 percent of the mean landings from 2000 through 2004, or 3 million pounds. This trigger was not met; but commercial and recreational management measures are to be reevaluated if any single state's landings exceed its five year maximum by more than 25 percent in any single year. This did occur for Connecticut and Delaware, and the Board can discuss whether this is cause for a management action. The five year mean includes 2015, which was the second lowest year for Delaware, and the fifth lowest year for Connecticut, in terms of total landings since 1981. There is some of that to be accounted for within this trigger, and how high this high year supposedly is.

Here is a review of kind of all the different stages of management. Right now we're currently under Amendment 4, with associated addenda. The most recent stock assessment was in 2016, and Rob alluded to that in previous comments. The stock is currently depleted, but overfishing is not occurring. Fishing mortality is

stable and modest with a high amount of natural mortality from 2011 to 2014.

There was a low level of total mortality; and this corresponded to a small increase in spawning stock biomass. As of right now the next assessment is in 2019; which is an assessment update. The Plan Review Team found that all states are in compliance with Amendment 4, and the associated addenda. De minimis was requested by Florida, Georgia, Connecticut and Massachusetts. All of these states except for Connecticut qualify for de minimis.

Connecticut's landings are 1.46 percent of the coastwide total; and to qualify for de minimis you would need to be 1 percent or lower. We spoke with a representative from Connecticut, and discussed within the Plan Review Team that because of the small percentage that Connecticut would be over that the PRT doesn't see any issue with allowing Connecticut to maintain de minimis status if they would have difficulty in fulfilling the biological sampling requirements should they be non-de minimis.

In summary, the PRT recommends the Board approve the 2017 weakfish FMP review, state compliance reports and de minimis status for Florida, Georgia, Connecticut, and Massachusetts. Additionally, the PRT recommends that the Board clarify the use of fishery independent samples in fulfilling biological sampling requirements of Addendum I to Amendment 4. At this point I can pause and take any questions on the FMP review.

CHAIRMAN O'REILLY: Are there any questions for Mike; yes, Chris Batsavage?

MR. CHRIS BATSAVAGE: Mike, on Page 4 of the FMP Review under the recreational fishery section. It's listed the mean weights of weakfish in the recreational fishery by state. The bottom, it's kind of the next to the last paragraph before going into the next section on that page. It looks like for the state of New York

for mean weight it's 0.17. I was wondering if that was a typo; considering that's a pretty small average weight and size fish.

CHAIRMAN O'REILLY: We're checking.

DR. SCHMIDTKE: Can you say the page number again, Chris that you were looking at?

MR. BATSAVAGE: Yes, it's Page 4 and it's in the recreational fishery section. It is two paragraphs ahead of Section 4, which is status of assessment advice. Just above that Section 4 you'll see, the second to last paragraph.

DR. SCHMIDTKE: I would have to double check the data file for that. I can look into that.

CHAIRMAN O'REILLY: Does anyone else have a question? Mark Alexander.

MR. MARK ALEXANDER: Not a question but a comment if that's okay.

CHAIRMAN O'REILLY: Absolutely.

MR. ALEXANDER: I just wanted to thank the PRT for acknowledging that it's appropriate to extend Connecticut the de minimis status; even though our total landings exceeded the threshold for being considered de minimis. I think in this case, I don't know if the PRT looked into this, but I had staff examine our recreational harvest estimate for 2016 to see why it was so large.

In Table 4 on Page 15, if you look at that. Connecticut since 2004 has either had a 0 harvest estimate or no harvest estimate between 2004 and 2015. In 2016 the estimate was 3,120 pounds. I had Greg Wojcik look into that to see what went into that estimate; and it is based on two intercepts, one was aboard a party charterboat, where one fish was caught. That was expanded to 88 fish.

The other is a shore based B-1 observation in which the individual identified the fillets in his cooler as being weakfish. He had caught three, which is admittedly over the limit, two over the limit. But that particular observation was expanded to 3,032 fish. I just wanted to put that on the record. Again, I appreciate the PRT's recommendation that Connecticut be considered de minimis.

CHAIRMAN O'REILLY: Can you corroborate how long Connecticut has had de minimis status?

MR. ALEXANDER: No I cannot.

CHAIRMAN O'REILLY: Roy Miller.

MR. ROY W. MILLER: Mike, in looking at the tables like in Table 2. It is obvious that commercial landings have been below 200,000 pounds; which I consider a trivial amount, considering the history of this species for the past three years. Does the Plan Review Team know what those landings come from? Is it directed landings or bycatch landings? Do you have any idea?

DR. SCHMIDTKE: I believe most of the commercial landings are bycatch landings at this point; because of the trip limit.

MR. MILLER: If I could just follow that up. If indeed they are bycatch landings, would any of those fisheries give us some inkling what may be happening to these one plus weakfish? The reason I bring this up is every year we seem to get a decent amount of juvenile production in Delaware Bay; and yet year after year after year very little of that comes back as a fishable resource, particularly for the recreational and commercial fisheries.

The big question that the public asks us is, well what happens to these fish? Are there any indications from these bycatch fisheries that they may be having an impact on what comes

back as a catchable resource later on in its life cycle?

CHAIRMAN O'REILLY: Further questions or comments, okay to my left, hello Jay. Jay McNamee.

MR. JASON McNAMEE: First I have a quick question and that is are we on bullet two yet or am I jumping the gun on that?

DR. SCHMIDTKE: I think that's the next agenda item.

MR. McNAMEE: I'll wait then, thank you.

CHAIRMAN O'REILLY: Any further questions or comments, John Clark.

MR. JOHN CLARK: I was just going to say Rob, are you ready for a motion to accept the Plan Review?

CHAIRMAN O'REILLY: Yes.

MR. CLARK: In that case I will move that we, oh now it's off the board. Oh there it is that's the motion I want to make. I will do so. **Move to accept the 2017 FMP Review and state compliance reports for weakfish, and approve de minimis requests for Massachusetts, Connecticut, Georgia and Florida.**

CHAIRMAN O'REILLY: **Emerson Hasbrouck has a second. Is there any discussion on the motion; any objection to the motion? Seeing none; the motion passes.**

CONSIDER USE OF FISHERY-INDEPENDENT SAMPLES IN FULFILLING BIOLOGICAL SAMPLING REQUIREMENTS OF THE FMP

CHAIRMAN O'REILLY: Now we'll go back to Mike and consider the use of fishery independent samples.

DR. SCHMIDTKE: Over the past few years there has been some difficulty; and it's not really

specific to any one particular state. There are several states that have had difficulties in fulfilling the biological sampling requirements of Addendum I to Amendment 4. Looking at the actual language that is in Addendum I, there are a couple places where there are questions about interpretation, at least from the PRT's perspective, that we would like some Board clarification on as we evaluate the samples that are submitted each year to fulfill the requirements. The first portion from Addendum I includes the statement: "The weakfish stock assessment requires biological data collected from samples of recreational and commercial catch" as the motivator for these sampling requirements.

After listing out the non de minimis requirements within that section of wording, there is the statement: Samples may come from the commercial and/or recreational fishery; as long as they come from the same general area inshore versus offshore that those fisheries are prosecuted in. There is no statement within the Addendum that says fishery independent samples may not be used; but there is no statement that says overtly that they may be used. We were just looking for some Board clarification on that.

CHAIRMAN O'REILLY: Jay McNamee.

MR. McNAMEE: I guess, and I'm not sure maybe it's a question for Katie. Where are the lengths and ages being used? I mean are these samples supposed to give you the information for the selectivity part of the assessment for the fishery dependent information? I guess if that – you're nodding. I take that as affirmative; and then it gets; I don't know how valuable fishery independent information would be.

Then maybe it's better than nothing, but I guess I'm not sure that is true. Then the other aspect of it is, I'm thinking about in Rhode Island. I think it was Roy who mentioned it before. We get tons of young of the year, so we could fill

the requirement in spades; but I don't know how valuable that information would be to get lots of information on zeros and nothing on the rest of the age structure. I guess those are kind of questions/comments. You can grab and take it wherever you want, I guess.

CHAIRMAN O'REILLY: I do have a couple comments. I talked to Mike before the meeting about this issue. There have been problems with states for various reasons; whether it was budgetary, whether it was being able to have people who would go out and get the samples. But ever since the Addendum went in place, it seemed like every year when Weakfish was meeting more frequently, there were some states that couldn't make the targets.

That is going to happen. That is going to continue to happen. I've always been more interested in a regional approach; knowing very well from the past that you really can't swap out some of the northern samples for the southern samples, and vice versa. I mean there can be four different age groups on a certain size; depending on whether that fish is collected in the southern or northern area.

If you go to independent samples, then what should the criteria be that you have for collection? We have data from the states; even though they are not complete. If they didn't do something in the year where they made the target, at least we know the size ranges that have been collected before.

You would want the independent samples to somewhat match what would have been collected from the dependent samples, and you would want the time of collection to somewhat match the time of the dependent fishery. That may be a starting point. I would like to hear what others have to say about that.

Of course you get into situations where some of the independent samples, there is going to be a voidance for example for some of the larger

weakfish. But we haven't been seeing a whole lot of large weakfish, so that may not be a problem now. That may be something down the road. We need a starting point and it would be good to get a little bit of feedback on this issue now; because it's going to be a problem that persists for various reasons. Katie.

DR. KATIE DREW: I think the TC was not asked officially to weigh in on this; so this isn't an official TC opinion. But I think the other thing to consider, certainly the point about fishery independent samplings having a different length distribution is a concern that the TC would have. I think we would accept ages from the fishery independent samples; as long as they line up with roughly the size range that is covering the fishery as well. But I think we would have concerns about accepting lengths from the fishery independent survey in place of lengths for the commercial or recreational issue.

CHAIRMAN O'REILLY: I guess what I was thinking more was an augmentation, not a swapping. We wouldn't want to see a state just say well, no more fishery dependent sampling. We can get it this way. I think one of the criteria should be that we know what states have produced in recent years; even under a situation where the stock is not robust. We would want that to continue and get augmentation through fishery independent. Would that be a better suggestion?

DR. DREW: Yes. However we word it, and I'm not saying states are going to take this to slack off immediately on all of their commercial and recreational sampling if we allow this. But I think for sure the emphasis should be on sort of supplementing existing commercial and recreational sampling programs, rather than replacing it purely with fishery independent data. The fishery independent lengths are not really useful to characterize the commercial and recreational size; but the ages could be.

CHAIRMAN O'REILLY: Last question for you if I may; and then we'll have some others too. Is this something that can be talked about in the Technical Committee; come up with some criteria, you know a straw man essentially of this?

DR. DREW: For sure. If you would like sort of formal guidance on what would be an acceptable supplementation, I think the TC could come up with that easily.

CHAIRMAN O'REILLY: Emerson Hasbrouck.

MR. EMERSON C. HASBROUCK: In order to make some comment on samples coming from, or not coming from the fishery. I want to circle back to the issue that Jason raised. I'm going to ask a direct question; because I didn't hear it answered. Is the model that we use for the weakfish assessment the ASAP model? Are these samples being used to determine catch at age?

DR. DREW: Well, yes it is a statistical-catch-at-age model. It's not ASAP. We actually have a very fancy Bayesian model that can estimate natural mortality in addition to fishing mortality. But it does use a catch-at-age framework. The length frequency from the commercial and from the recreational landings is really what we use to determine that catch at age.

We do that by applying an age-length key. The length frequency needs to represent the lengths of what is actually caught. But then to convert that into ages we use a key that often comes from fishery independent as well as fishery dependent age samples; which are why we would say that it's more important to maintain the length information from the commercial and recreational side.

The ages, as long as they sort of cover that same length range and that you're not getting for the age-length key that is entirely young of

year. As long as that age-length key has samples that can cover the length are into the commercial and recreational side, then it doesn't matter where those age samples come from.

CHAIRMAN O'REILLY: Emerson.

MR. HASBROUCK: Follow up then. If that's the case then I would have to agree that we really don't want to get length frequency samples from fishery independent surveys.

CHAIRMAN O'REILLY: Is that an absolute? I just need to know. I just spent a little bit of time talking about augmentation and sort of just plugging holes that were in the sampling. Given Emerson's comment what would you say?

DR. DREW: I would say yes lengths from fishery independent samples are useful only to characterize the length distribution of that fishery independent sample. Certainly we would not want to completely give up our fishery independent lengths; but they have no utility. Lengths alone have no utility for the commercial or recreational; to characterize the commercial or recreational catch. The ages I think are where you could supplement that information.

If you can only get age samples from your fishery independent survey, which may be the case, because you have to sacrifice the fish or you have to damage the fish and you can't get that from the commercial or the recreational side. Then you can certainly supplement the ages with fishery independent; again as long as they're covering that similar size range. But you would not want to supplement the length frequency of the commercial or recreational catch with fishery independent information.

CHAIRMAN O'REILLY: Okay thank you, it took me three times, but I give. Everyone should know that we may continue to have these sampling gaps a little bit, but the scientific

advice is stick to the ages from the independent surveys, not the lengths, and continue to try your best to do some sampling.

There are a lot of demands, we understand that. The other part is, which I'll try and work on in advance of the next meeting on how we might regionalize some of the dependent sampling, you know some nearest neighbor approaches, which has always been something that could have happened. We'll talk about that next time we meet as well, so thank you very much.

DISCUSS RECENT CHANGES IN DISCARDS IN NORTH CAROLINA

CHAIRMAN O'REILLY: We're on time; except we did have an added issue, so Chris Batsavage has an issue. What you're going to find after Chris is done is it's not an issue that is just occurring in North Carolina, but Chris is the one who brought this to the attention of ASMFC, and so Chris I would like you to just sort of outline the situation and give some basics. Then we'll have a discussion; and this is something that is going to carry forward until the next meeting, absolutely.

MR. BATSAVAGE: We've received reports of weakfish catches substantially exceeding the 100 pound trip limit in the ocean gillnet fishery targeting Atlantic croaker in 20 to 30 fathoms of water roughly, plus or minus, offshore of Oregon Inlet for the second year in a row. It may have been going on for a little longer than that.

The discard amounts that have been reported to us by fishermen, you know when the fish are there are in the 500 to 1,000 pound range. But these discard events are pretty sporadic. There are times when the fishermen will go out targeting croaker and will hardly see any weakfish at all. Then they'll go out another time and they'll encounter quite a few weakfish while targeting Atlantic croaker. From talking to the fishermen, the weakfish are mixed in

with the croaker, so it's not like simply going one place and finding them all the time.

The weakfish they are encountering are in the 14 to 16 inch range. That size range is really corresponding to the mesh sizes currently used in the croaker fishery off of Oregon Inlet, which right now ranges in the 3.25, the 3.5 inch stretch mesh range. The gillnet fishery for croaker off Oregon Inlet typically ranges from mid to late November to around mid to late March. From kind of looking back at reports we've received from fishermen, it looks like the discards have been occurring in December and January for the most part. But again, it's been pretty sporadic. We haven't heard of any other reports of increased weakfish discards in other fisheries, at least in our state. But it's possible that it is occurring elsewhere along the coast; especially if the population is starting to show an increase in abundance.

I wanted to bring this to the Board's attention; and see if the Board thinks it's appropriate to task the Technical Committee to review any available data on discards, landings trends and gear characteristics of the fisheries that are encountering weakfish beyond the 100 pound trip limit. That is pretty much it in a nutshell. I'll be happy to answer any questions. Whenever you think it's appropriate, Mr. Chairman I have a motion to offer.

CHAIRMAN O'REILLY: I do have some questions; others may as well. I talked to one of your fishermen a couple years ago when this started. My understanding, you mentioned that it's out 30 fathoms or so. Is that what you indicated? Essentially that was a move out compared to some of the more traditional fishing areas. Was that a change in fishing area at all?

MR. BATSAVAGE: Yes thanks. It is. The croaker fishery up until recently was typically in much shallower water. Instead of measuring the water depth in fathoms it was more in the 40 to

60 foot range, kind of straddling the three mile boundary. But it has recently moved out into much deeper water. According to the reports from the fishermen, the weakfish have too. When we had a targeted weakfish gillnet fishery, before the bycatch trip limit, that fishery also existed usually in shallower water than what we're currently seeing.

CHAIRMAN O'REILLY: I probably should have said your fishermen talked to me; because that's absolutely the way it happened. When Chris brought this information forward and we started talking. I checked around and the same situation is occurring in Virginia; but much different in that it is really only out to about a mile offshore, in spring and fall, definitely occurring.

We looked to our data and there is probably off the top of my head a third of the trips are 100 pounds. It tells us that if 100 pounds exactly is being taken, yes we've got discard. We followed up with one of our main fish buyers, and he indicated yes there have been discards. The harvesters hadn't wanted to really make an issue of it. They are not required to report the discards; they're required to report the harvest.

All in all, this is a situation that involves more than North Carolina. I don't know about the other states; but I'm hoping when Chris puts up his motion that we all understand the Technical Committee should look at all the commercial states to see exactly what the performance of this bycatch time. We also do have a directed time period as well; it's not all during the year. But the bycatch is an especially important time period. Any other questions for Chris, okay I think I saw Lynn Fegley first.

MS. LYNN FEGLEY: My question for both Virginia and North Carolina. Is this a gillnet specific issue, or is this also happening in your trawl fishery, if you have trawl fisheries?

MR. BATSAVAGE: We've received specific reports from the gillnet fishery. I've heard some reports of trawlers encountering large amounts of weakfish; but haven't really been able to verify those and where those are occurring. The fishery for croaker off of North Carolina has changed a bit over the years; where it is still both a trawl and gillnet fishery with trawl landings leading the way. But due to various changes in the fishery and shoaling of Oregon Inlet, it's largely a gillnet fishery. Trawls don't play a big a role currently.

CHAIRMAN O'REILLY: In Virginia, Lynn it's primarily gillnets, but it's also occurring in the pound net. We don't have a trawl fishery in state waters, but it is occurring in the pound net. On the one hand that's a good sign that we're seeing fish. But on the other hand we need to really look at this. John Clark, did you have your hand up?

MR. CLARK: Yes thank you, Mr. Chair. Chris, I just wonder if you could give a few more details. I know you said they were discarding typically 500 to 1,000 pounds a trip. Do you have an idea how many trips that is, and approximately how far offshore are they setting these nets?

MR. BATSAVAGE: Not sure on the number of trips from talking to the fishermen who brought this up. There are fewer boats in the croaker gillnet fishery than there were 10 to 15 years ago. As far as distance from shore, 20 to 30 fathoms, I can't remember off the top of my head. But it's definitely out in federal waters and with water depths in that range. Weakfish typically aren't in real good shape when caught in a gillnet for an hour or so and then brought up from those depths. We're most likely looking at 100 percent discard mortality.

CHAIRMAN O'REILLY: Are there any other questions? Chris, is your motion available?

MR. BATSAVAGE: Yes. If you're ready, Mr. Chairman, **I would like to move to task the Technical Committee to review weakfish discard data from the Northeast Federal Observer Program and from vessel trip reports; analyze landings data to see if the occurrences of commercial trips approaching the 100 pound trip limit have increased, and to characterize the fisheries with substantial weakfish discard, to see if different trip limits could be implemented to turn discards into landings and/or if fishing modifications could be made to minimize discards.**

CHAIRMAN O'REILLY: John Clark second. May I ask the maker of the motion, is the intention to look at when you say analyze landings data, are you including all the states that have the commercial fishery?

MR. BATSAVAGE: Yes, Mr. Chairman that is my intent, to look at states beyond just Virginia, North Carolina where we've received reports about this.

CHAIRMAN O'REILLY: Discussion on the motion? Jeff Brust.

MR. JEFF BRUST: Chris, I'm just wondering, I know North Carolina does have some observer programs, is there any North Carolina specific or perhaps Virginia specific data that could also be used to look at this? I guess if this is for all states, is there any state observer data that could be used for this?

MR. BATSAVAGE: We have observer program data for our estuarine gillnet fisheries. We took a quick look at it just internally. It doesn't look like there is much of a signal there; but that is certainly information we can provide to the Technical Committee, to make sure that no stone goes unturned. Since we don't have an observer program out in the ocean waters of North Carolina, we would have to rely on the Federal Observer program for any information for the croaker fishery, for instance.

CHAIRMAN O'REILLY: Okay I'm looking around. I don't see any other hands. I would ask if there is any objection to the motion, and does everyone understand that what we're trying to do here is there has been a definite lull in activity surrounding weakfish. But we do now have a peer reviewed accepted stock assessment.

We also have a situation where at least it should be our responsibility to make sure that we now start to give weakfish a little more attention, since it seems to be giving the fishermen a little bit more attention. That is my take on what we're going to try and do. Jay McNamee.

MR. McNAMEE: No objection. We're looking for the Technical Committee here to make some comments on potential management programs. Chris has offered different trip limits. I'm wondering if implicit, and that would be something like an aggregate limit, where they could accumulate over a week or something like that. Is it kind of open or is it stick with the traditional approach of just add 50 pounds or something to that effect? That is my question.

MR. BATSAVAGE: I haven't really thought of it; as far as whether a daily trip limit or aggregate trip limit. I think personally I would leave that open for the Technical Committee to look at when they, I guess characterize the fisheries. Some are going to operate a little different than others along the coast. I think it's good to identify what we want the TC to look at. But I don't want to box them in too much. I think that would be fine to explore any options available that could potentially turn discards into landings without increasing targeting, until we see a new assessment.

CHAIRMAN O'REILLY: Robert Boyles.

MR. ROBERT H. BOYLES, JR.: Not to this but just around the table. Our state's efforts to look at the genetic, the stock structure makeup of

weakfish, we've been certainly very interested in seeing if there is any stock differentiation, particularly in the South Atlantic. Given that samples are very, very hard to come by, I just encourage our sister states, particularly from the Mid-Atlantic. If you've got some genetic samples we're looking for them. Thank you.

CHAIRMAN O'REILLY: Robert, do you take fish as such, samples as such, or are you looking for already sampled for genetics?

MR. BOYLES: We would probably take fish as such; but certainly if you've got genetic fin clips, we would be interested in that as well.

CHAIRMAN O'REILLY: For Jay, go ahead. Then I have a comment for you too.

MR. McNAMEE: Maybe we're thinking the same thing. I'm not inclined to monkey with the motion, and I'm hoping that the discourse that we had provides enough guidance to the Technical Committee. They can see it in the minutes.

CHAIRMAN O'REILLY: I guess the last couple of weeks this has been a priority in Virginia; and we started to pull data from different aspects, whether aggregated or daily fishery season, directed, bycatch. We're starting to look at all that. Definitely once we submit information collectively to the Technical Committee, then we would look for some type of direction that way too. I think Chris has the right idea to start out.

Once again I'll say we have a motion on the board. Are there any objections to that motion; since we've had some discussion and comments? I don't see any objections. The motion is approved.

ADJOURNMENT

CHAIRMAN O'REILLY: And, if there is some other business, please let us know now, any

other business? Seeing none; we are adjourned. Thank you very much.

(Whereupon the meeting adjourned at 12:15 o'clock p.m. on February 7, 2018)



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

Weakfish Technical Committee Report on Board Task to Evaluate Commercial Discard Data and Trips Meeting or Exceeding the 100 lb Trip Limit

October 3, 2018

Weakfish Technical Committee: Erin Levesque (SC, Chair), Sydney Alhale (VA), Lee Paramore (NC), Tiffany Vidal (MA), Christopher Parkins (RI), Paul Nunnenkamp (NY), Lindy Barry (NJ), Michael Greco (DE), Harry Rickabaugh (MD), Ellen Cosby (PRFC), Steve Poland (NC), B.J. Hilton (GA), Dustin Addis (FL), and Wilson Laney (USFWS)

ASMFC Staff: Michael Schmidtke and Katie Drew

At the February 2018 meeting, the South Atlantic State/Federal Fisheries Management Board (Board) tasked the Weakfish Technical Committee (TC) with the following motion:

Move to task the Technical Committee to review weakfish discard data from the Northeast Federal Observer Program and from vessel trip reports (VTRs), analyze landings data to see if the occurrences of commercial trips approaching the 100-lb trip limit have increased, and to characterize the fisheries with substantial weakfish discards to see if different trip limits could be implemented to turn discards into landings and/or if fishing modifications could be made to minimize discards.

Motion by C. Batsavage, second by J. Clark.

To accomplish this task, the TC or a subcommittee of the TC met four times via conference call and carried on discussions between calls via email.

During the first call a subcommittee was formed, data sources were identified, and subcommittee members were tasked with making data requests to state and federal agencies. It was determined that although the group would summarize data, some of the data required to complete the task was confidential, so subcommittee members applied for confidential data access through the National Marine Fisheries Service (NMFS) and the Atlantic Coastal Cooperative Statistics Program (ACCSP). The second call was used to begin initial review of state data. At this point the group determined that finer-scale detail was required, so a request was made to state natural resource agencies to send revised data in a uniform format. Once all members of the sub-committee had confidential data access, the data were distributed, and two final calls were used to review data for trips that met or exceeded the 100 lb limit. The subcommittee determined how to best summarize data over the course of the time period (2009 – 2017) to identify potential trends.

There were no clear trends evident in either the number of trips meeting or exceeding the trip limit or the amount of weakfish discarded in any of the data sources examined. The subcommittee does note that the states reporting potential increases, which motivated this task, Virginia and North Carolina, did show notable one-year increases in number and percentage of trips at or exceeding the 100 lb trip limit toward the end of the time series. For

Virginia, this increase occurred in 2016, but was followed by a decline to more typical levels in 2017. For North Carolina, the increase occurred in 2017, but there is no way of knowing, with current information, whether this is the beginning of a trend or a single-year phenomenon. Therefore, the Weakfish TC does not recommend any changes to the current management plan. In the future these data can be revisited to include successive years of trip data to determine if a trend develops. Some of the summarized data that the subcommittee investigated are shown below.

Objective: To address the ASMFC Weakfish Management Board tasks to 1) investigate the occurrence of trips meeting or exceeding the 100 lb trip limit and 2) to examine discard data from the NMFS observer program.

Data sources: Data were from 2009-2017 and came from state agencies, Vessel Trip Reports (NMFS), and the Fishery Observer Program (NMFS).

Task 1

Investigate the occurrence of trips meeting or exceeding the 100 lb trip limit.

In 2010, a 100 lb trip limit was established as a part of Addendum IV to Amendment 4 (2009) in the Weakfish Management Plan. The Weakfish Technical Committee requested trip level data from state natural resource agencies and NMFS Vessel Trip Reports (VTRs) in order to summarize the number of trips meeting or exceeding the 100 lb trip limit and quantify the weight of weakfish harvested during those trips. Data provided by individual states did not show any clear trends in either increases or declines in the percentage of trips that were equal to or exceeded the 100 lb limit (Figure 1). Vessel Trip Report data from the NMFS similarly did not indicate any trending in the number of commercial trips meeting or exceeding the 100 lb limit (Figure 2). The percentage of pounds reflected in trips \geq the 100 lb trip limit similarly did not show any patterns in either state (Figure 3) or VTR (Figure 4) data. Peaks and declines were not synchronized among the states and individual states did not reflect an upward trend in catch. A summary of number of trips and weight of weakfish for all states combined in each of the two data sources is shown in Table 1. *De minimis* states (Massachusetts, Connecticut, Georgia, and Florida) were not included in analyses due to minimal impact on the commercial fishery and to avoid portrayal of confidential information from the small number of commercial trips catching weakfish in these states. Additionally, South Carolina was not included due to their lack of commercial weakfish harvest during the time series investigated. Trips and landings reported by the Potomac River Fisheries Commission are included with Virginia or Maryland.

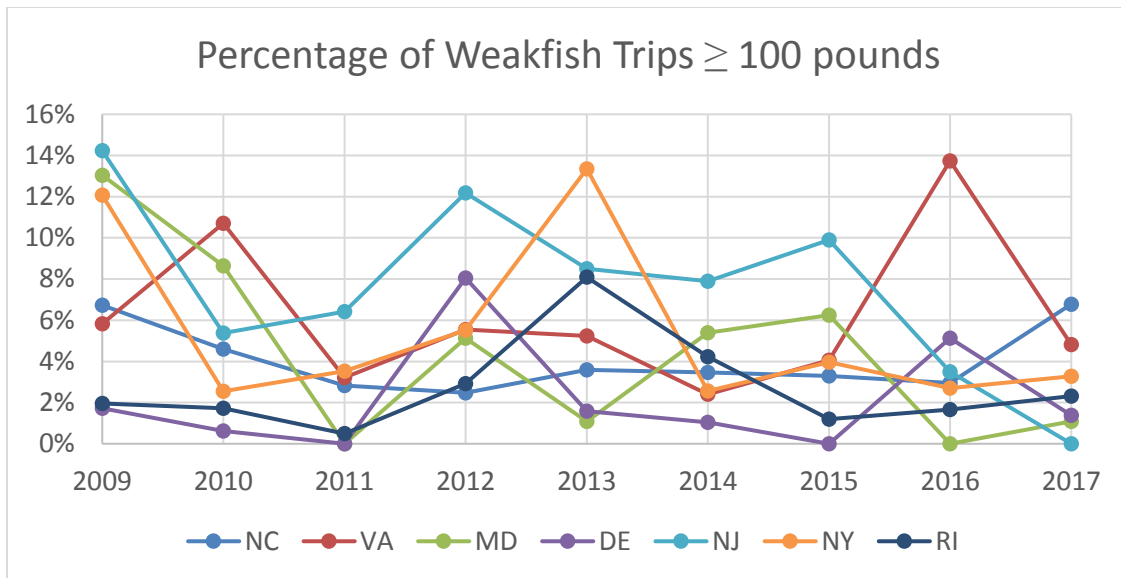


Figure 1. Percentage of commercial trips meeting or exceeding the 100 lb trip limit as provided by states.

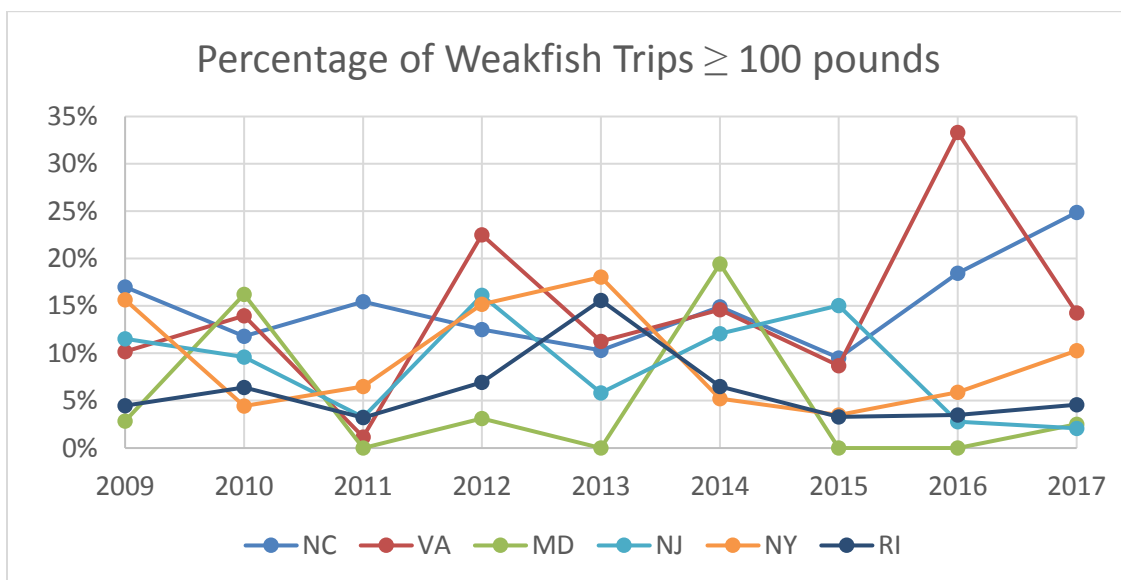


Figure 2. Percentage of commercial trips meeting or exceeding the 100 lb trip limit as provided by the NMFS in Vessel Trip Reports (VTRs). Note that Delaware is absent from the VTR data since there were no VTRs from the time period used in this analysis.

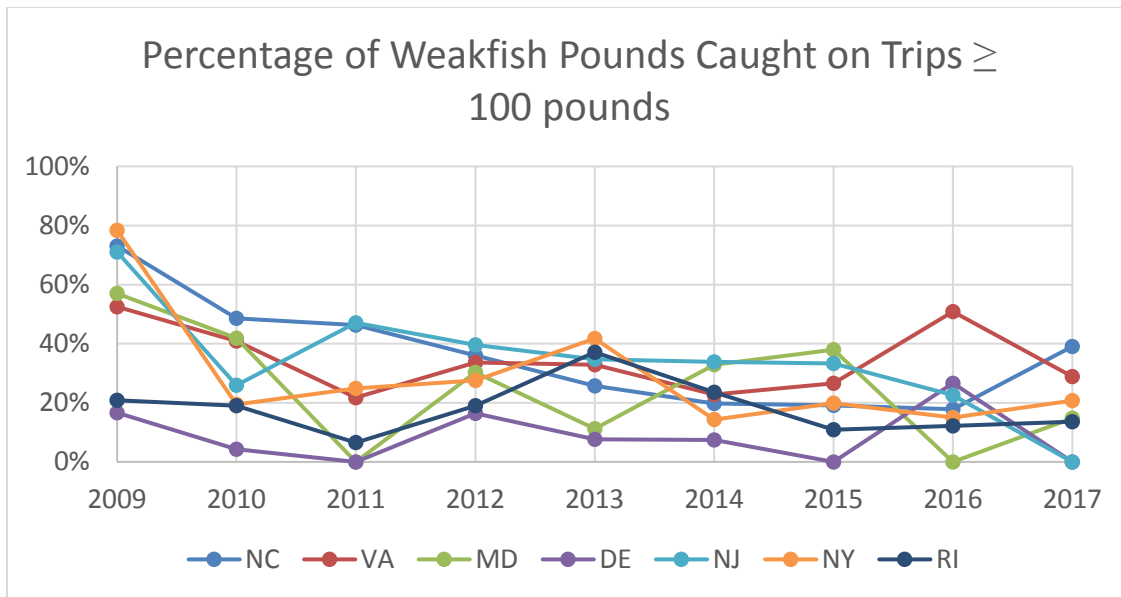


Figure 3. Percentage of weakfish pounds harvested on trips meeting or exceeding the 100 lb limit as provided by states.

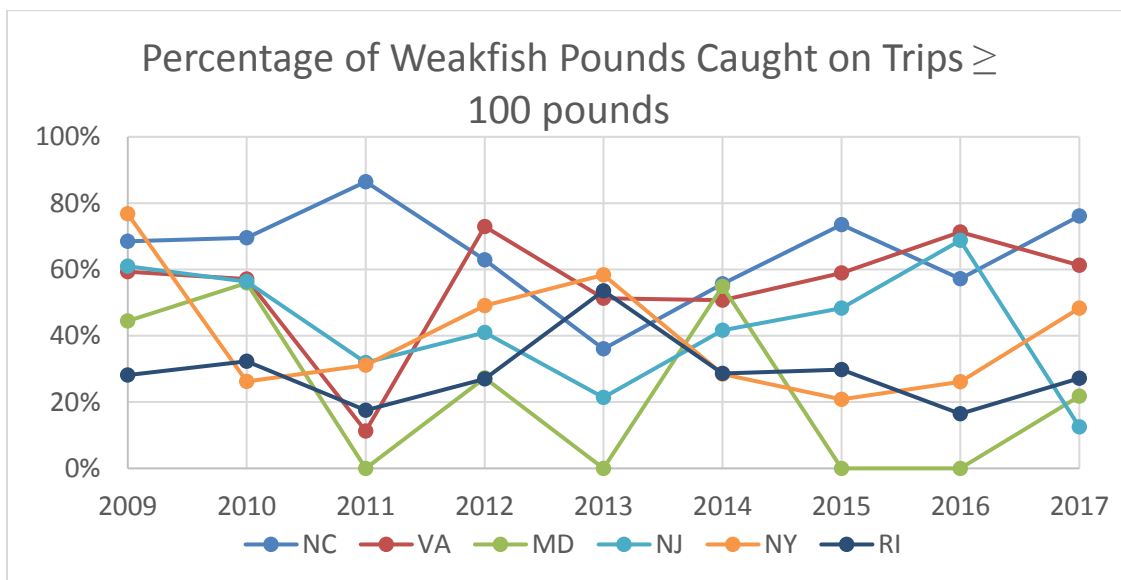


Figure 4. Percentage of weakfish pounds harvested on trips meeting or exceeding the 100 lb limit as provided by the NMFS in Vessel Trip Reports (VTRs). Note that Delaware is absent from the VTR data since there were no VTRs from the time period used in this analysis.

Table 1. A summary of trips and weight for all states combined by data source.

<u>State Data</u>						
Year	Total Trips	Trips >= 100 lbs	% Trips >=100 lbs	Total Pounds	Pounds from Trips >=100 lbs	% Pounds from Trips >=100 lbs
2009	9,128	635	6.96%	304,568	206,349	67.75%
2010	8,529	487	5.71%	195,691	82,243	42.03%
2011	7,615	224	2.94%	123,196	45,609	37.02%
2012	12,157	529	4.35%	245,557	75,449	30.73%
2013	15,119	928	6.14%	317,826	102,672	32.30%
2014	10,649	356	3.34%	184,086	36,860	20.02%
2015	7,555	270	3.57%	135,642	28,104	20.72%
2016	9,030	403	4.46%	170,378	41,830	24.55%
2017	8,919	463	5.19%	160,481	49,344	30.75%
<u>Vessel Trip Reports (NMFS)</u>						
Year	Total Trips	Trips >= 100 lbs	% Trips >=100 lbs	Total Pounds	Pounds from Trips >=100 lbs	% Pounds from Trips >=100 lbs
2009	1,167	145	12.43%	61,479	41,478	67.47%
2010	1,079	94	8.71%	40,321	21,775	54.00%
2011	1,131	64	5.66%	31,699	14,584	46.01%
2012	1,754	233	13.28%	60,911	28,304	46.47%
2013	2,059	275	13.36%	68,075	34,153	50.17%
2014	1,355	132	9.74%	36,294	15,052	41.47%
2015	902	59	6.54%	26,822	13,070	48.73%
2016	1,301	133	10.22%	40,825	18,723	45.86%
2017	1,251	127	10.15%	33,754	16,232	48.09%

Task 2

Examine discard data from the Northeast Fisheries Observer Program.

As with the number of commercial trips meeting or exceeding the 100 lb limit, the percentage of discarded pounds of weakfish does not show a clear temporal trend (Figure 5). Years that demonstrate extreme high or low values are not reflected among states.

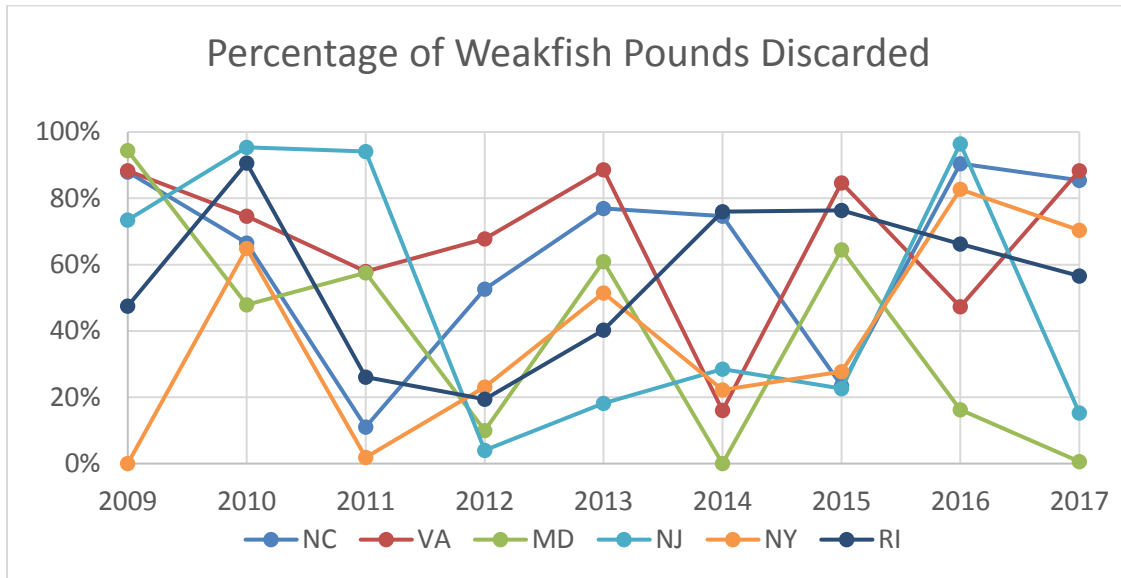


Figure 5. Percentage of weakfish discarded as observed on commercial trips by the Northeast Fisheries Observer Program.



Atlantic States Marine Fisheries Commission

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MEMORANDUM

September 17, 2018

To: Weakfish Management Board
From: Tina Berger, Director of Communications
RE: Advisory Panel Nominations

Please find attached a new nomination to the Weakfish Advisory Panel – Jeffrey Buckel, a recreational angler and fishery scientist from North Carolina. Please review these nominations 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: Mike Schmidtke

M18-95

Weakfish Advisory Panel

Bolded names await Board review and approval

Massachusetts

Whit Griswold (rec/conserv)
R.F.D. 409
295 Lambert's Cove Road
Vineyard Haven, MA 02568
Phone: 508.693.6100
awgriswold@yahoo.com
Appt. Confirmed 2/10/00
Appt Reconfirmed 2/04; 2/08; 8/18

Connecticut

2 vacancies

New York

Brad Loewen (comm)
7 Tenth Street
East Hampton, NY 11937
(631)324-7221
Email: cloewen@aol.com
Appt. Confirmed 5/30/96
Appt. Reconfirmed 9/15/00
Appt. Reconfirmed 1/23/06
Appt Reconfirmed 5/10 & 4/14

George Scocca (rec)
5 Pinecone Lane
Commack, NY 11725
Phone (day): (631)863-0170
Phone (eve): (631)543-7412
FAX: (631)543-1492
Email: george@worcast.com
Appt. Confirmed 8/5/99
Appt. Reconfirmed 1/23/06
Appt Reconfirmed 5/10
Confirmed participation 4/2014

New Jersey

Robert Christensen (charterboat)
PO Box 333
Marmora, NJ 08223-0333
Phone: (609)408-3474
Email: robsea@eti.com
Appt. Confirmed 5/21/02
Appt. Confirmed 2/9/06
No answering machine – no message left

Chuck R. Law (comm/gillnet)

100 East Dawes Avenue
Somers Point, NJ 08244
Phone: (609)927-1441
Appt. Confirmed 5/21/02
Appt. Confirmed 2/9/06 & 4/14

Delaware

Daniel T. Dugan (rec)
20 South Woodward Avenue
Wilmington, DE 19805
Phone: (302)636-9300
Email: dugan@delanet.com
Appt. Confirmed 5/25/04
Appt Reconfirmed 5/08 & 4/14

Vacancy - commercial

Maryland

J. David Martin (processor/comm)
10134 Waterview Drive
Ocean City, MD 21842
Phone: (443)497-3062
Email: occaptaindave@gmail.com
Appt. Confirmed 4/24/95
Appt. Reconfirmed 9/15/99
Appt Reconfirmed 9/03
Appt Reconfirmed 9/07

Vacancy - recreational

Virginia

Robert H. Pride, III (rec)
11 Rivercrest Drive
Poquoson, VA 23662
Phone (mobile): 757-675-5010
Prider74@alum.daren.edu
Appt. Confirmed 4/24/95
Appt. Reconfirmed 9/15/99
Appt Reconfirmed 9/03
Appt Reconfirmed 9/07 & 4/14

Ernest L. Bowden (comm/gillnet)
4219 School St.
Chincoteague, VA 23336
Phone (day): (804)336-5792
Phone (eve): (804)336-5792
Email: dusky@intercom.net

Weakfish Advisory Panel

Bolded names await Board review and approval

Appt. Confirmed 4/24/95
Appt. Reconfirmed 9/15/99
Appt Reconfirmed 9/03
Appt Reconfirmed 9/07
Incorrect telephone number

Ronald. Burrough (comm/poundnet)
PO Box 39 New Point
Mathur, VA 23125
Phone: (804)725-3554
Appt. Confirmed 4/24/95
Appt. Reconfirmed 9/15/99
Appt Reconfirmed 9/03
Appt Reconfirmed 9/07
Incorrect telephone number

North Carolina

William Mandulak (rec)
1712 Pony Run Road
Raleigh, NC 27615
Phone: (919)876-2983
Email: wreelfun@bellsouth.net
Appt. Confirmed 2/9/05
Appt Reconfirmed 5/10; 4/14; 8/18

Jeffrey A. Buckel (rec)
CMAST-NCSU
303 College Circle
Morehead City, NC 28557
Phone (ay): 252.222.6341
Phone (eve): 252.422.1969
jabuckel@ncsu.edu

Vacancy – commercial otter trawl or gillnet

South Carolina

Fred Kinard (rec)
472 Hugger Street
Charleston, SC 29403
Phone: (843)723-1135 or (843)588-2859
FAX: (843)851-4602
Email: fredkinard@hotmail.com
Appt. Confirmed 2/20/02
Appt Reconfirmed 2/06
Appt Reconfirmed 5/10 & 4/14

Georgia

Gene Neville (rec)

301 Wendwood Drive
Statesboro, GA 30458-5076
Phone: (912)681-4230
FAX: (912)724-4258
Appt. Confirmed 10/15/01
Appt Reconfirmed 10/05
Appt Reconfirmed 5/10

Potomac River Fisheries Comm.

Thomas L. Lewis
1685 Green Field Road
Reedville, VA 22539
Phone (day): (804)453-3373
Phone (eve): (804)453-4328
FAX: (804)453-6208
Email: kakky1960@yahoo.com
Appt. Confirmed 8/17/06
Appt Reconfirmed 5/10
Confirmed participation 5/1/14



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 _____ Chris Batsavage _____ State: __ NC __
(your name)

Name of Nominee: _____ Jeffrey A Buckel _____

Address: __ CMAST-NCSU, 303 College Circle _____

City, State, Zip: _____ Morehead City, NC 28557 _____

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

Phone (day): __ 252-222-6341 _____ Phone (evening): __ 252-422-1969 _____
FAX: __ 252-222-6311 _____ Email: __ jabuckel@ncsu.edu _____

.....
FOR ALL NOMINEES:

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

__black sea bass_____	__cobia_____
__weakfish_____	__dolphinfish_____
__gray triggerfish_____	__snowy grouper_____

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

__red drum_____	__summer flounder_____
__spanish mackerel_____	__striped bass_____
__southern flounder_____	__bluefish_____

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? _____
2. Is the nominee employed only in commercial fishing? yes no
3. What is the predominant gear type used by the nominee? _____

FOR CHARTER/HEADBOAT CAPTAINS:

1. How long has the nominee been employed in the charter/headboat business? _____
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? 40 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. *Fisheries scientist*

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? 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):

Fisheries scientist

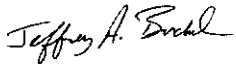
FOR ALL NOMINEES:

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.

Additional information for Jeff Buckel:

Buckel is a fishery scientist with NC State University and fishes for weakfish as a recreational angler. A current project in his lab uses tagging and predator-prey modeling to determine sources of weakfish mortality (fishing and natural). Buckel served on the peer review committee for the 2016 weakfish stock assessment.

Additionally, Buckel targeted weakfish as a recreational angler in Delaware Bay during the late 70s and 80s and continues to target them in North Carolina.

Nominee Signature:  Click here to enter text. Date: 7/20/2018

Name: Jeffrey A. Buckel
(please print)

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



State Director - *ongoing* Proxy

State Legislator

Governor's Appointee

Atlantic States Marine Fisheries Commission

Horseshoe Crab Management Board

*October 24, 2018
11:15 a.m. – 12:15 p.m.
New York, New York*

Draft Agenda

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

1. Welcome/Call to Order (*M. Rhodes*) 11:15 a.m.
2. Board Consent 11:15 a.m.
 - Approval of Agenda
 - Approval of Proceedings from October 2017
3. Public Comment 11:20 a.m.
4. Set 2019 Harvest Specifications **Final Action** 11:30 a.m.
 - Review Horseshoe Crab and Red Knot Indices of Abundance for 2018 Adaptive Resource Management (ARM) Model Runs (*K. Anstead*)
 - Review Results of 2018 ARM Model Runs (*K. Anstead*)
 - Set 2019 Harvest Specifications (*M. Schmidtke*)
5. Progress Update on Horseshoe Crab Benchmark Stock Assessment (*K. Anstead*) 11:50 a.m.
6. Consider 2018 Fishery Management Plan Review and State Compliance Reports (*M. Schmidtke*) **Action** 11:55 a.m.
7. Elect Vice-Chair **Action** 12:05 p.m.
8. Review and Populate Advisory Panel Membership (*T. Berger*) **Action** 12:10 p.m.
9. Other Business/Adjourn 12:15 p.m.

The meeting will be held at the Roosevelt Hotel, 45 East 45th Street & Madison Avenue, New York, NY; 212.661.9600

MEETING OVERVIEW

Horseshoe Crab Management Board Meeting
Wednesday October 24, 2018
11:15 a.m. – 12:15 p.m.
New York, New York

Chair: Dr. Malcolm Rhodes (SC) Assumed Chairmanship: 10/17	Horseshoe Crab Technical Committee Chair: Rachel Sysak (NY)	Stock Assessment Subcommittee Chair: Dr. John Sweka (FWS)
Vice Chair: Vacant	Horseshoe Crab Advisory Panel Chair: Allen Burgenson (MD)	Law Enforcement Committee Representative: Doug Messeck (DE)
Delaware Bay Ecosystem Technical Committee Chair: Greg Breese (FWS)		Previous Board Meeting: October 17, 2017
Voting Members: MA, RI, CT, NY, NJ, DE, MD, DC, PRFC, VA, NC, SC, GA, FL, NMFS, USFWS (16 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from October 17, 2017 Board Meeting

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. Set 2019 Delaware Bay Horseshoe Crab Bait Harvest Specifications (11:30-11:50 a.m.) Final Action

Background

- The ARM Subcommittee met by conference call in October 2018.
- The Virginia Tech Trawl Survey was conducted in 2017, so the ARM Subcommittee used population estimates from this survey to estimate horseshoe crab abundance in the Delaware Bay region.
- The ARM model was run using estimated abundances of horseshoe crabs in fall of 2017 and red knots in spring of 2018 to provide a recommendation for harvest specifications for Delaware Bay states in 2019 (**Briefing Materials**).

Presentations

- Horseshoe Crab and Red Knot Abundances and Results of 2018 ARM Model Runs by K. Anstead.

Board actions for consideration at this meeting

- Consider ARM harvest recommendations and set specifications for the Delaware Bay states in 2019.

5. Progress Update on Horseshoe Crab Benchmark Stock Assessment (11:50 a.m.-11:55 a.m.)**Background**

- A benchmark stock assessment is currently underway. Several workshops and developments have occurred since the last Board meeting which impact the progress and timeline of the assessment.

Presentations

- Progress Update on Benchmark Stock Assessment by K. Anstead.

6. Consider Approval of the 2018 FMP Review and State Compliance (11:55 a.m. -12:05 p.m.)**Action****Background**

- State Compliance Reports were due March 1, 2018.
- The Plan Review Team reviewed each state report and compiled the annual FMP Review (**Supplemental Materials**).
- The Potomac River Fisheries Commission, South Carolina, Georgia, and Florida have requested and meet the requirements of *de minimis* status.

Presentations

- Overview of the FMP Review by M. Schmidtke

Board actions for consideration at this meeting

- Accept 2018 FMP Review and State Compliance Reports.
- Approve *de minimis* requests.

7. Elect Vice-Chair (12:05-12:10 p.m.) Action**8. Review and Populate Advisory Panel Membership (12:10 -12:15 p.m.) Possible Action****Background**

- Delaware nominated Lawrence Voss to be appointed to the Horseshoe Crab Advisory Panel (AP) as a representative of the commercial pot fishery (**Briefing Materials**).

Board actions for consideration at this meeting

- Approve the nomination to appoint Lawrence Voss to the Horseshoe Crab AP.

9. Other Business/Adjourn

Horseshoe Crab

Activity level: High

Committee Overlap Score: Low (SAS overlaps with BERP)

Committee Task List

- TC/SAS – October 2018-May 2019: Benchmark stock assessment
 - SAS – October 2018 – February 2019: data analysis and report writing
 - TC – February 2019: review benchmark assessment report
 - SAS – March 2019: 3 day Peer Review Workshop
 - SAS Chair – May 2019: Present the stock assessment to the Board
- TC – March 1st: Annual compliance reports due
- ARM & TC – Fall: Annual ARM model to set Delaware Bay specifications, review red knot and VT trawl survey results

TC Members: Rachel Sysak (NY, TC Chair), Gregory Breese (USFWS), Jeff Brunson (SC), Joanna Burger (Rutgers), Ellen Cosby (PRFC), Claire Crowley (FL), Justin Davis (CT), Jeffrey Dobbs (NC), Steve Doctor (MD), Amber Francis (NJ), Adam Kenyon (VA), Mike Millard (USFWS), Natalie Ameal (RI), Derek Perry (MA), Linda Stehlik (NMFS), Chris Wright (NMFS), Jordan Zimmerman (DE), Kristen Anstead (ASMFC), Michael Schmidtke (ASMFC)

SAS Members: John Sweka (USFWS, SAS Chair), Linda Barry (NJ), Jeffrey Dobbs (NC), Michael Kendrick (SC), Natalie Ameal (RI), David Smith (USGS), Rachel Sysak (NY), Richard Wong (DE), Kristen Anstead (ASMFC), Michael Schmidtke (ASMFC)

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
HORSESHOE CRAB MANAGEMENT BOARD**

The Marriott Norfolk Waterside
Norfolk, Virginia
October 17, 2017

These minutes are draft and subject to approval by the Horseshoe Crab Management Board
The Board will review the minutes during its next meeting

TABLE OF CONTENTS

Call to Order, Chairman Malcolm Rhodes1
Approval of Agenda1
Approval of Proceedings, October 2016.....1
Public Comment.....1

Review Results of Eel and Whelk Bait Practices Survey.....1

2018 Benchmark Stock Assessment6
 Review Terms of Reference.....7
 Review Data Confidentiality Practices Within the Assessment.....8
 Advisory Panel Recommendations..... **Error! Bookmark not defined.**

Set 2018 Harvest Specifications for the Delaware Bay.....14
 Review Horseshoe Crab and Red Know Indices of Abundance14
 Review Results of the ARM Model Run Integration Biomedical Data and Recommendations
 from the ARM Subcommittee, Technical Committee, and Advisory Panel.....15

2017 FMP and State Compliance Reports23

Populate Advisory Panel with Nontraditional Stakeholders.....24

Elect Vice-Chair25

Other Business25

Adjournment.....25

INDEX OF MOTIONS

1. **Approval of Agenda** by Consent (Page 1).
2. **Approval of Proceedings of October 2016** by Consent (Page 1).
3. **Move to accept the Terms of Reference for the 2018 Horseshoe Crab Benchmark Stock Assessment and add a Term of Reference evaluating the sub-lethal effects of biomedical bleeding** (Page 14). Motion by Stewart Michels; second by Colleen Giannini. Motion approved by consent (Page 14).
4. **Move to select Harvest Package 3 for 2018 Horseshoe crab harvest in Delaware Bay** (Page 15). Motion by Stewart Michels; second by Michael Millard. Motion carried (Page 15).
5. **Move to initiate an addendum that the ARM model incorporate the biomedical harvest using the Preferred Option** (Page 19). Motion by Mike Millard; second by Chris Wright. Motion fails (Page 21).
6. **Move to accept the Horseshoe Crab 2017 FMP Review and State Compliance Reports and approve *de minimis* requests for the Potomac River Fisheries Commission, South Carolina, Georgia and Florida** (Page 24). Motion by Robert Boyles; second by Rob O'Reilly. Motion carried (Page 24).
7. **Move to nominate John Maniscalco as Vice-Chair of the Horseshoe Crab Management Board** (Page 25). Motion by Dan McKiernan; second by Michelle Duval. Motion carried (Page 25).
8. **Move to adjourn**, by Consent (Page 25).

ATTENDANCE

Board Members

Ray Kane, MA (GA)	Michael Luisi, MD, proxy for D. Blazer (AA)
Rep. Sarah Peake, MA (LA)	Rachel Dean, MD (GA)
Dan McKiernan, MA, proxy for D. Pierce (AA)	Ed O'Brien, MD, proxy for Del. Stein (LA)
Bob Ballou, RI, proxy for J. Coit (AA)	Rob O'Reilly, VA, proxy for J. Bull (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Catherine Davenport, VA (GA)
David Borden, RI (GA)	Kyle Schick, VA, proxy for Sen. Stuart (LA)
Colleen Giannini, CT, proxy for M. Alexander (AA)	Michelle Duval, NC, proxy for B. Davis (AA)
Sen. Craig Miner, CT (LA)	David Bush, NC, proxy for Rep. Steinburg (LA)
Lance Stewart, CT (GA)	Robert Boyles, Jr., SC (AA)
Sen. Phil Boyle, NY (LA)	Malcolm Rhodes, SC (GA)
Emerson Hasbrouck, NY (GA)	Spud Woodward, GA (AA)
Russ Allen, NJ, proxy for L. Herrighty (AA)	Pat Geer, GA, proxy for Rep. Nimmer (LA)
Tom Fote, NJ (GA)	James Estes, FL, proxy for J. McCawley (AA)
Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)	Sherry White, USFWS
Stewart Michels, DE, proxy for D. Saveikis (AA)	Chris Wright, NMFS
Craig Pugh, DE, proxy for Rep. Carson (LA)	Martin Gary, PRFC
Roy Miller, DE (GA)	

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

Ex-Officio Members

Steve Doctor, Technical Committee Chair

Doug Messeck, Law Enforcement Representative

Staff

Robert Beal
Toni Kerns
Tina Berger

Mike Schmidtke
Megan Ware
Kristen Anstead

Guests

Loren Lustig, PA, Gov. Appointee Commissioner
Mike Millard, USFWS

Andrew Shiels, PA, Administrative proxy

The Horseshoe Crab Management Board of the Atlantic States Marine Fisheries Commission convened in the Hampton Roads Ballroom V of the Marriott Waterside Hotel, Norfolk, Virginia, October 17, 2017, and was called to order at 9:45 o'clock a.m. by Chairman Malcolm Rhodes.

CALL TO ORDER

CHAIRMAN MALCOLM RHODES: I wanted to welcome everyone to the Horseshoe Crab Management Board meeting. If you are on another flight, please get on the correct plane. My name is Malcolm Rhodes; I'm taking over for Jim Gilmore, and wanted to welcome you all here.

APPROVAL OF AGENDA

CHAIRMAN RHODES: We had sent out materials previously; we had an agenda, and I was wondering if there were any additions or corrections to it. Seeing none; we'll move for approval by consent.

APPROVAL OF PROCEEDINGS

CHAIRMAN RHODES: We also received the proceedings from last October's meeting. Were there any corrections or changes to those? Seeing none; we'll approve those by consent.

PUBLIC COMMENT

CHAIRMAN RHODES: This is a time for public comment for any issues not on the agenda. Is there anyone from the public who wishes to speak to the Board?

REVIEW RESULTS OF EEL AND WHELK BAIT PRACTICES SURVEY

CHAIRMAN RHODES: Great, seeing none; we will move down to Item Number 4. Rachel is going to review the results of the eel and whelk bait practices survey.

MS. RACHEL SYSAK: Good morning everyone. I'll be presenting the Horseshoe Crab Technical Committee's report on Bait Use Surveys of the American Eel and the Channeled Whelk Fisheries.

We had two main goals with this survey. One was to discover how horseshoe crabs are used as bait in the trap pot gear, for both the American eel and the channeled whelk fisheries.

We wanted to look at things like preference, prevalence, and how the bait performed. The second goal was to provide information for the future viability of manufactured or artificial baits. We wanted to know things like the amount of horseshoe crab that was used, average cost per trap, and the industry's impression of manufactured baits.

For our methods, between January and February of 2017 surveys were mailed to all current permit holders in the eel and channeled whelk fisheries. The only exceptions to that were New York only mailed the survey to fishers that were active in the previous two years, and South Carolina does not currently permit the use of horseshoe crabs as bait.

However, they do have a small scale whelk fishery, and a description of that fishery and its bait practices was included in Appendix 3 of the bait survey report. For the survey responses, on this graph you can see the state on the left hand side and in blue are how many surveys were sent, and orange are the number of responses that were received.

Overall for the American eel surveys that were sent out; the return rate was 30 percent. Massachusetts and Connecticut do not currently have active American eel fisheries. For the responses for the channeled whelk fisheries, again in blue are the surveys sent and orange are the number of responses that were received back. The return rate for the voluntary surveys was 32 percent overall. For Massachusetts the survey was a requirement for permit renewal; so that's why they had such a high return rate. As you can see also from this chart, Georgia and Florida do not currently have channeled whelk fisheries.

One of the first things that we asked was how experienced the responders were. As you can see, the largest slice of this pie is over 20 years of experience, 33 percent had more than that and over 50 percent had at least 11 years of experience. Overall the respondents were experienced in their fishery.

The results for bait preference, the next couple of slides I'm going to try to use the same color scheme. You'll notice that the channeled whelk fishery responses on the circle chart are in purple and the American eel fishery are in green. Overall the channeled whelk fishery is using more horseshoe crabs as bait than the American eel fishery; 92 percent of channeled whelk fishers reported using horseshoe crabs as bait, versus only 23 percent of American eel fishers.

Now to expand on that in both fisheries most fishers were reporting using multiple primary baits in their pots. Only 8 percent of channeled whelk fishers reported only using horseshoe crabs, versus 1 percent of American eel fishers only using horseshoe crabs. For a brief summary of the other primary baits that they were using, these were the four main primary baits.

They included fish as racks or whole, shellfish, blue crabs and green crabs; and this was for both fisheries. To continue on how they were using horseshoe crabs. The American eel fishery uses more female crabs than male crabs; 66 percent of American eel fishers reported using female crabs versus 49 percent of channeled whelk fishers.

In addition to that most fishers are not using whole crabs, so both fisheries use a larger proportion of male crabs than female crabs; and this could be related to the fact that male crabs are smaller than female crabs. If you look at this circle chart; I know it's a little bit busy. But the darker green for the American eel fishery is less than a quarter female; and the lighter section is greater than a half of a male, and the same color scheme for the channeled whelk fishery.

We also asked them about bait saving devices, like bait bags. They were more common among channeled whelk fishers than American eel fishers; 92 percent of channeled whelk fishers reported some type of bait saver use, versus only 21 percent of American eel fishers. Most states, with the exception of Delaware, do not currently require the use of bait saving devices in these fisheries.

We also asked questions on the type of gear they were fishing. Coastwide the channeled whelk fishery has more fishing gear to bait on average. There was an average reported maximum of 212 pots in the water for channeled whelk fishers versus 165 pots for American eel fishers. Channeled whelk fishers were also fishing more pots per trip on average; they had 147 pots versus only 80 pots for the American eel fishers.

There were regional differences and gear composition for the channeled whelk fishery, Massachusetts through New York fish less pots on average than New Jersey through Virginia. For the American eel fishery, Maryland had several fishers that reported extremely high maximum pots in the water and pots used per trip; which kind of skewed some of those numbers. For how bait is needed seasonally, the coastwide channeled whelk fishery has two peaks, and a defined season that begins in April and ends after December. Peak fishing activity, as you can see from this chart, occurs between May through July, and September through December. This is just the number of responses.

For the American eel fishing activity, the coastwide fishery also has two peaks, but it occurs more continuously through the year. Peak fishing activity occurs between March through June and September through November. We asked about each fisheries manufactured bait usage. Both fisheries had low percentage of participants who had tried manufactured or artificial baits.

For the fishers that tried the baits, most of them reported poor results. As you can see on this pie chart, the orange are the people who have never used it, and that big chunk of blue are the people that said yes they used it, but had poor results. If you can see the tiny little sliver of red, those are the people that used it and thought it worked.

Based on Technical Committee discussions of the previous manufactured bait trials that we had, poor results might not have been solely based on bad performance. Fishers reported issues of cost, and issues of availability that also affected their view of manufactured bait. For information that is important for any viability of a future manufactured bait. Both fisheries and all current bait practices, the bait typically lasts for two days. On average it's costing \$1.50 or less per pot.

Overall the price per pot was generally more expensive in the whelk fishery than in the eel fishery. Based on these results that we received, manufactured bait, in order to be viable, would need to last at least two days; and it would need to cost \$1.50 or less to have a chance of success. It would also need to use either less than an eighth of a female horseshoe crab, or less than a quarter of a male horseshoe crab; to use less crabs per trap than the current bait practices, questions?

CHAIRMAN RHODES: Well first of all, I want to thank the Technical Committee for making the survey and getting all the results together. This was something that the Board asked the Technical Committee to do at the annual meeting last year; so this is helpful to all of us to understand kind of where we are with the baits, what they're used for and where we're going. I saw hands up over here, Emerson and Tom.

MR. EMERSON C. HASBROUCK: Hi Rachel, thank you for that presentation, it was very good; and thank you for doing that survey, it's very interesting. The one question I had was on one of your slides you showed that shellfish was a large component of alternative bait. What was

included in that category of shellfish? Was it basically bivalve mollusks or was it something else? What was grouped in there?

MS. SYSAK: We included complete breakdowns in the supplemental materials we sent out; but it was a mix, and it was very dependent on which state you were in. It was largely bivalve mollusks, but there were, I believe some shrimp and other things included in that category as well. We break down the full list in the report.

CHAIRMAN RHODES: Tom.

MR. THOMAS P. FOTE: Rachel, we've done this kind of study before over the years. I think it's been three or four times we've done this study. Did you go back and look at the comparison of what the results on this were in compared to the other two studies, I think two or three. I'm not sure exactly the number, to see if we started getting more participation or less, as far as using artificial bait?

MS. SYSAK: I wasn't involved in any of the previous studies, and I wasn't aware that we looked at how bait was used. Are you talking specifically about the artificial bait studies that were previously done?

MR. FOTE: Yes.

MS. SYSAK: We didn't do a cross comparison. The Technical Committee felt that we should at least get a baseline of what current fishery practices were doing; and just an overall view of the manufactured bait that had been used. Certainly not everybody who participated in those previous bait trials might have responded on this report. Responses were anonymous. We weren't able to kind of go back and see if everyone who participated in the other trials participated in this. We only got a broad overview of just their impression of manufactured bait.

MR. FOTE: I want to follow up to that. When I was looking at the participation from surveys; and

since part of my background was marketing advertising, I really realized that Massachusetts skewed the numbers on one of those, in comparison to New Jersey who basically had a lot of things going out, a lot questionnaires going on and very small response.

If you looked at individual states, New Jersey's response was probably less than 3 percent or 4 percent or 5 percent of what was going on, and how did you weight those. Because you're looking at it in one way, Massachusetts kind of skewed the numbers for all the other states because it was mandatory.

MS. SYSAK: Right, so for our analysis of the results we did break it down by state. We did a lot of side-by-side analysis of how each state's results came out. In this particular presentation that I did, we took the overall results; because for the most part, even though yes there were a larger number of responses for Massachusetts, and a larger number of participants in Massachusetts.

But overall their results were very similar. The biggest differences that we saw was in the amount of gear that they used; so they had larger participation, but a smaller amount of gear that they reported on average and a smaller amount of gear per trip.

CHAIRMAN RHODES: Roy Miller.

MR. ROY W. MILLER: Thank you, Rachel for the survey report. What is discouraging for me, and perhaps other members of the Board are the poor results for artificial baits. Our state spent a fair amount of money a number of years ago, funding University of Delaware studies on artificial baits; and we all had high hopes for artificial baits.

To see there, I think it was less than 1 percent or something; it was a very low percentage reported use. Did you receive any feedback on what the principal complaints were, and how that situation

could be rectified or is there a light at the end of the tunnel with regard to artificial baits?

MS. SYSAK: We had a lot of detailed discussions before we sent this survey out and we were discussing a lot of the complaints that we had received about artificial baits. That was why we tried to put this together in a way that we got at what the average cost was, how long it was used for, and how much horseshoe crab was in it; because the artificial bait trials, I believe that were used in the past, used based on these survey results about the same amount of horseshoe crab that the fishery was already using on its own.

In addition to that I know that there were reports of longevity issues, because I guess the type of manufactured bait that was sort of a puck dissolved fairly quickly; and didn't get to that two day soak time. Those were complaints, and also another complaint was that the cost was about the same or more than what was already available. That was once again why we sent this out; to just try to get a bigger picture of what would a manufactured bait need to actually be successful?

MR. MILLER: Could I follow up just a second.

MS. SYSAK: Sure.

MR. MILLER: The reason that's discouraging is I remember the trials, and there was much better bait integrity earlier on in the process; when it was still in the experimental research phase. Something happened between the experimental research phase and the production phase that decreased the integrity of that bait. I find that discouraging.

CHAIRMAN RHODES: I saw Rob O'Reilly.

MR. O'REILLY: Thank you for the report. I just wanted to make a correction about the states requirements. In Virginia, the timing might be off here, but I remember Bob Fischer from VIMS did a study. I want to say that by 2006 bait bags were

required in Virginia, where only a half of a female horseshoe crab could be used, and whole male crab. I just wanted to make that correction. The other situation is in that graphic where you look at the bait, and fish, and shellfish, and everything is sort of included.

It probably isn't weighed or weighted by regional differences. For example, not only are there regional differences, but also there are magnitude of differences in terms of the harvest. It may be good in a further follow up to something like that to look at the regional specific uses of bait relative to the expected amounts of bait; because of the harvest amount. I just wanted to add that so thank you very much.

MS. SYSAK: Thank you, also that we did break down everything by region, by state in the actual baits that we report if you wanted to look at the differences.

CHAIRMAN RHODES: Are there any other questions? Bob.

MR. ROBERT BALLOU: I probably have the wrong name tag, sorry. Thank you, Rachel. Does the, I realize we call it artificial bait, or manufactured bait, same concept. Does the manufactured bait remain available; or did this survey hark back to the trial period, which I believe was a couple of years ago. I have a follow up, but I'm just wondering do you know whether the artificial bait remains available to the industry this year today, as an alternative to using actual horseshoe crabs?

MS. SYSAK: This is based mostly on the Technical Committee discussions, but to our knowledge it isn't in a wide available or large use at all in the past couple years. Past the trials it doesn't seem that any of them were successful.

MR. BALLOU: My follow, and thank you for that. I share much of what Roy Miller indicated, and that is I just feel that it's tough to do an analysis like this when you don't have a readily available alternative. Given Roy's comments about how

there seemed to be a transition in integrity that strikes me that the industry is obviously going with what is most available, and then of course price and efficacy all fold in.

Where do we go from here? I mean I think that is going to be a key part of the discussion either about to happen or currently happening. It strikes me that we've either got to just rely on market forces, which may well be influenced by an assessment, which may well reduce the availability of horseshoe crabs.

Then low and behold the market responds, or we try to nudge that issue by trying to work again through a bait trial process; to try to see if we can address the very issues that you raise, and an excellent analysis in terms of cost. I mean clearly this is not going to work unless it is cost effective and the efficacy is there, and the convenience is there.

I remembered thinking about the difference between just having a cooler full of hockey pucks versus having the back of your boat full with the crabs. It seems to me like we still have a door to knock on here; but I'm just not sure how best to proceed. This survey is great, but it's not compelling in terms of what it tells us.

It seems to me that we've got to figure out best how to move forward, and either that's going to happen through the pressure of a stock assessment and potentially some limitations on the availability of crab; or we're going to have to work to try to figure out how to encourage the availability of a product that is appealing to the industry, which then allows for a natural transition.

CHAIRMAN RHODES: Colleen.

MS. COLLEEN GIANINI: I just wanted to speak to Roy's concerns too with some of the observations that I had during those initial artificial bait trials; specifically one of them being the economics of the cost per bait. In our experience that we had

in Connecticut, it required two times the amount of bait that the manufacturers thought would be necessary to result in catches that would be worthwhile.

Consistency was a problem in warm weather, and in areas with high flow. The bait seemed to disappear almost overnight. One of the other big issues with it was because it requires refrigeration, and not freezing, the availability of shore side walk-in refrigerators was a problem in our area. I'm not sure if other states have that issue. But freezing the artificial bait, at least the bait that we had with the manufacturer that made it, it essentially just freeze dried the product and that affected its performance as well.

CHAIRMAN RHODES: All right one more, Pat.

MR. PAT GEER: There is a company in North Carolina; I think it's called Kepley BioSystems that has got North Carolina Sea Grant money to look at what they're calling OrganoBait. They also have a large National Science Foundation Grant to develop these baits in like a cube, so it doesn't need refrigeration.

They're starting to look at, they've been looking at lobsters and blue crabs, but they also want to look at these fisheries as well; trying to eliminate horseshoe crabs. Has anybody heard of this company at all? I'm just seeing shaking heads. They've contacted us because of work they're doing, but there is a company that is out there trying to develop these, and they have a very large National Science Foundation Grant to do this.

The idea of this grant is to be able to create a business that can do this on a regular basis and have it be cost effective. They are just in the infancy of this project; so I don't know how successful they're going to be. But we should all be aware that there are other companies out there trying to do this.

CHAIRMAN RHODES: Thanks for the information. Stewart.

MR. STEWART MICHELS: Rachel that was an excellent and very thorough review of the fishery and their needs. Just to clarify, so currently the fishery is operating with the same amount of horseshoe crab. They are basically using the same amount of horseshoe crab now that was contained in that alternative bait.

MS. SYSAK: Yes. Some of that was because of the reasons that Colleen stated; which two times the amount that they thought would be necessary ended up being necessary, and consistency issues, so if it broke down they needed more. That was what ultimately made it the same amount that people are already using; and those are just for the baits that also included horseshoe crab in that mixture.

CHAIRMAN RHODES: Thank you, great presentation, wonderful talk from the Board, lots of points brought up, historic and kind of looking towards for going in the future. Is there any more discussion on this topic?

2018 BENCHMARK STOCK ASSESSMENT

CHAIRMAN RHODES: All right seeing none; we'll move to the fifth topic, which is preparing for the 2018 Benchmark Stock Assessment. I'm turning it over to Kristen.

MS. KRISTEN ANSTEAD: Good morning. This morning I want to go over our plans for a benchmark stock assessment for next year, and then present the terms of reference for your consideration. This is just a reminder of the previous stock assessments that have been done for horseshoe crab.

In 2009 was our last benchmark, and at that time there was no formal set of reference points. I've included a table from the stock assessment overview of kind of the status of the horseshoe crab population in each of the regions. New England and New York both showed declining

population; and Delaware Bay and the southeast were having increasing populations at that time. There was an update done in 2013, and the results were consistent with the benchmark for the most part. During both of these times it was stated that biomedical should be considered to be included in the models for horseshoe crab. It was not included in that benchmark or that update. The reason that biomedical increasingly should be included as part of the coastwide and regional trends, is because proportionately it's making up more of the overall harvest.

You have your bait harvest in green, and then the lighter blue is the biomedical harvest. It's thought that 15 percent we attribute the 15 percent mortality to their harvest, so 85 percent we believe survive, and that's the light blue, the combined – all of the biomedical harvest. Then the small, dark blue is the mortality that we're attributing to them.

But as bait harvest has come down proportionately speaking, biomedical is making up more of this kind of coastwide numbers. This is where we are with biomedical facilities. I believe the 2009 benchmark, there were four facilities at that time. We now have six along the coast. We still have some data confidentiality issues; because while there are four in the Delaware Bay, which exceeds the Rule of Three, regionally we would still be getting into some confidentiality issues.

For example, if we did publish Delaware Bay numbers, Massachusetts could subtract what they harvest and then identify what South Carolina harvests. We will still have some data confidentiality issues, even though we have more facilities at this time. This is the table that's included in the FMP review every year of the number of horseshoe crabs harvested, bled and the 15 percent mortality applied to those.

That is in the bottom in the, I guess it's orange. The FMP establishes a mortality threshold of 57,500 horseshoe crabs; which has been

exceeded from 2007 to 2015. You can see for the first time that in 2016 it was not exceeded, and this was due to temporary changes in productivity. We're moving into the 2018 assessment with these concerns over New England and New York continuing to show declining trends and the continued need to include biomedical in a regional assessment. That is what we've been tasked with moving forward.

How we will present this still sort of remains to be seen. We're doing our data workshop January/February of next year; and once the SAS kind of looks at the data, looks at the potential models, sees the biomedical, we hope to have a better idea of how we'll move forward with this black box assessment.

REVIEW TERMS OF REFERENCE

MS. KRISTEN ANSTEAD: What I would like to do now is go through the terms of reference. I've abbreviated them.

If you want to see the full terms of reference they are on Page 58 of your meeting materials. But I've sort of summarized them. I'll just kind of talk about what's different from our standard TORs that are in our TC Guidance Document. These have been amended to kind of address this regional task; as well as the biomedical inclusion. Since we're tasked with doing a regional assessment, the first TOR will be to define and justify the use of population structure.

We're likely to also look at this population on a coastwide level; but if we are going to do it regionally we need to thoroughly examine how that should look. The TOR 2 is pretty standard characterized precision and accuracy of fishery independent and fishery dependent data; including biomedical data. TOR 3 will be to develop the models; and there are some sub-points under that. But I've put up the H bullet, because it is specific to horseshoe crab; which will be incorporate biomedical into the models used, and reassess the associated mortality of bled crabs on a coastwide and a regional level. As you

know right now we do the 15 percent mortality; and this is a benchmark, so this is an opportunity to go back to the literature, to look at different datasets, and really consider is 15 percent the best for the coastwide?

Should we be doing this regionally? Is what's happening in one region different from what's happening in other, and should they have different mortality associated with it? We'll go back to the drawing board for that. That's an explicit task for our TORs. Four and 5 are to characterize the uncertainty in the model and to perform retrospective analysis. TOR 6 is to recommend a stock status and reference points.

Then 7 are other potential scientific issues, and one that has been added as a sub-bullet here is to compare any model output for the Delaware Bay Region with the output from the ARM model. We currently use the ARM model to set the harvest specifications in the Delaware Bay. If the stock assessment is showing a different picture than the ARM model is, or the same, we need to discuss that in the stock assessment.

Then TORs 8-10 is the minority report if there is one, to make research recommendations, and also recommend a timing of the next assessment going forward. Then we have kind of the mirror of them in the peer review; and those are also pretty standard TORs. Now, I think we'll do the AP report.

REVIEW DATA CONFIDENTIALITY PRACTICES WITHIN THE ASSESSMENT

MR. MIKE SCHMIDTKE: The Advisory Panel met in September via conference call; and they have some recommendations that they would like to make in reference to the stock assessment process.

One thing that I just wanted to hit on before we move to that is related to the confidentiality practices within this assessment.

We've discussed with the SAS, the Stock Assessment Subcommittee has applied and is in the process of gaining confidential access to data; so they will have legal permission to view those data. When we get into the actual data workshop we're going to be having closed door sessions; where basically members that does not have confidential access, TC members, data providers that do not have that access will be asked to leave the room.

The only people in the room will be those that have confidential access. There will be a similar type of closed door process for the review as well. There are going to be some intricacies; but we're making our efforts to make sure that we're within the bounds that we're legally bound to for confidentiality purposes.

MR. SCHMIDTKE: Now I'm going to turn it over to Jim Cooper to present the APs recommendations for the stock assessment process.

DR. JIM COOPER: By the way, the Advisory Panel appreciates your work, and that of the staff in helping us put this together. There is one correction for you. There was a slide earlier about the number of biomedical companies; and there is an error on that slide. There is no biomedical company called HepTest in Virginia; that is an inaccuracy.

You can reference the FDA. The FDA decides who is a biomedical producer. They may be using horseshoe crabs for some type of scientific process; but they are certainly not part of the biomedical. We've alerted the staff to this, and we hope that this can be corrected in the future. Going on to the slide, our group of course is eager to see the 15 percent mortality reevaluated; and hopefully they will look at all types of information to try to arrive at a good opinion on that matter. You know the 15 percent mortality has been sort of held in great reverence since it was initially suggested from a study in Charleston; associated with a graduate student there, who observed that after a week that 3 of 15 crabs or 3 of 20 crabs did

not survive for the full week. That's where the original 15 percent came from.

We would suspect that this is most likely the highest possible or the highest mortality that one would expect from this kind. Our industry has found that it's probably close to 10 percent; that is a 90 percent survival. I understand that someone will be commenting on this a little bit later in the day, in this session.

But nevertheless, we can go on to that. The AP certainly recommended that not only would they look at horseshoe crab peer reviewed papers, with regard to mortality assessment and that type of thing, but look at other information as well. A couple of the peer reviewed papers that are out there we think suffer from the methodology issues. But I think the SAS can look into that appropriately.

We would also hope that marine resource studies that have been done by some of the states and some of them are really elegant studies, this is difficult work to do and we would hope that that would be looked at as well; and look at the historical data that the biomedical facilities have come up with over the years.

No one is more dedicated and striving more to guarantee the sustainability of the horseshoe crab than our industry. We have an enormous responsibility of protecting the world's injectable medication supply. We are indeed interested in good management decisions from this; and we work hard to make sure that we guarantee their sustainability.

Now we would hope that you would include a biomedical scientist in this SAS process. Their role would not be in looking at the modeling, but making sure that the methodology of some of these studies is evaluated properly; so that the numbers they get help them understand whether or not this represents what's going on in the biomedical community.

We would also recommend that the findings of the SAS would be reviewed in some way, or form or fashion, with appropriate confidentiality, be reviewed before any final submission. I want to assure you that what we want here is meaningful dialogue to be taking place with the biomedical community; as well as others, because we want good outcomes.

I've heard the rumor that an SAS stock assessment study on the Atlantic sturgeon was made based on one peer reviewed paper; and bad management decisions came out of that effort. We want to see that that is avoided here. We're anxious to have good dialogue here, and give the SAS as much information as they need; meaningful and truthful information, so that you can make good decisions. Thank you very much.

CHAIRMAN RHODES: Thank you, Kristen and Dr. Cooper. Are there any Board questions? Tom Fote.

MR. FOTE: I don't have a question, but I have a comment. We've complained about AP reports that didn't seem to be AP reports; and more part of what one person felt about the industry. This seemed to me to be a little bit that way; and I would like to make sure that doesn't happen again.

CHAIRMAN RHODES: Mike Millard.

MR. MIKE MILLARD: A question for Kristen on that Table 2 that had the biomedical numbers involved in it. Row C talks about the number of biomedical only crabs collected. Then Row E is labeled number of biomedical only crabs bled. The difference between collected and bled ranges from, I don't know something like 30,000 to 60,000. What is the disposition of those crabs that were collected but not bled?

MR. COOPER: Would you like me to answer that please?

MS. ANSTEAD: Well let me ask a clarifying question. Is this in reference to the biomedical crabs that aren't counted that are double use in some states, I think Massachusetts that the biomedical bleeds it and then they turn it over to bait?

MR. MILLARD: Well, the label on C says that this is not the double use crabs, this is biomedical only crabs; not those counted against state bait quotas.

MR. SCHMIDTKE: I can answer that just from viewing data annually for the FMP review. The disposition of crabs is reported; and generally crabs can be rejected for a variety of reasons such as size or such as injury. Injury can sometimes be specified. From our perspective, from the reporting perspective, what level of injury there is that occurs. It could be minor injury; it could be more than that.

Sometimes it is included, sometimes it isn't. It kind of varies from report to report. But generally those are crabs as we interpret with the reports that we received that those crabs are alive, as far as we can tell, and they're rejected for other reasons than mortality; because those that are rejected because they're dead are specifically reported to us. Those would be included within the observed mortality of biomedical only crabs from collection to release. That would be the fourth row down.

CHAIRMAN RHODES: Follow up.

MR. MILLARD: Thank you, Mr. Chair for a follow up. I guess that's what I'm getting at Mike is there is observed dead, and then there are crabs that are culled due to injury. Do we know the ultimate end to those injured crabs? Are they anywhere accounted for in here?

MR. SCHMIDTKE: That's something that has been discussed by the TC, as well as the Plan Review Team. With our current knowledge that we have, we don't know. That would be something that we

would have to ask; and that may require a specific study to actually investigate what would happen for rejected, non-bled crabs. I don't know that we have that information available to us currently.

MS. ANSTEADT: I'll just add that that last column is the amount observed in the observed mortality plus the 15 percent, so those are the only mortalities that are included in that final column.

CHAIRMAN RHODES: Rob O'Reilly.

MR. ROB O'REILLY: The gentleman giving the Advisory report may have been talking about this; but I couldn't pick it up exactly. But there was a slide that listed Wako harvesting from the EEZ and landing in Virginia. My understanding is that hasn't happened in about five years, and there is no intent to do that in 2018 either. I'm not sure if that coincides with what the Advisory report was talking about; sounded like a different company name up there perhaps. But anyway, Wako has not made its presence in Virginia for about five years.

CHAIRMAN RHODES: Dr. Cooper.

DR. COOPER: I'm trying to remember the slide. I think if I'm correct it listed two companies in Virginia, and Wako is an FDA licensed facility for making LAL reagent. There may be a representative here from there, but that's what I can tell you and I know this to be the case. The other company that is listed there, some of the principals sold their business to Wako more than a decade ago, so maybe that is the source of the inaccuracy. Does that answer your question?

MR. O'REILLY: Sure, thank you.

CHAIRMAN RHODES: Bob.

MR. BALLOU: A question for Kristen and then another question for Dr. Cooper if I may. First, Kristen on Term of Reference 6, it says recommend stock status as related to reference points if available. Why that caveat, if available?

MS. ANSTEADT: Well there was no formal stock status that came out of the last one. We are hopeful that we will have more data this time to be able to evaluate a larger suite of models; and we hope to get a formal reference point and stock status out of that. It's keeping it loose. But that is the goal as it is with every stock assessment; we hope to make that more than it was last time.

MR. BALLOU: If I could, Mr. Chair, could I ask Dr. Cooper a question regarding the AP report. First of all I thought the AP report was very well done and very helpful. I did note, and I'm pulling up the page right now. There is a fairly strongly worded comment from you, Dr. Cooper in the report, noting that the preference for peer reviewed literature (and this has to do with the biomedical evaluation of mortality, I believe) that a preference for peer reviewed literature could be a concern.

If I understand the comment correctly, in that it would miss the point of actually looking at the actual practices and the actual mortality occurring at the biomedical facilities. If I understand that correctly, and I would like you to comment on that, is the follow to that that what might really be needed is an independent, third party, scientific review of practices actually occurring at the biomedical facilities? If so, then I would like to ask through the Chair whether that's something that this Board could pursue.

DR. COOPER: Well, with respect to that comment. It's my personal opinion, and I believe the opinion of other AP members certainly from the biomedical community, and also from, and I've talked with this with Rick Robins as well who is from the other industry. We feel that there have been academic groups have done very difficult experiments and worked hard, to try to look at the mortality issue. But we have great question with their methodology used. We're stressing the animals far greater than what would have occurred at the biomedical facility. Now I know of some of the state marine resource

groups that are doing a lot of work, elegant studies, trying to address the mortality issue.

I would be amenable to the Board looking at an independent group, and looking carefully at the methodology of such studies that might be done. You know unfortunately the horseshoe crab is not amenable to study in a laboratory environment. It is a difficult creature to work with, and then after the bleeding introduce them into an environment that represents normal foraging and so forth, very difficult. It's a challenging study.

CHAIRMAN RHODES: Bob, to your question. I think as we go into this stock assessment, they're going to be looking at that literature and perhaps next year is going to be the appropriate time when they've reviewed what literature is out there, see if they're good studies or if something more needs to be looked at. I think that would probably be the best time for the Board to task a subcommittee to look at that; if the rest of the Board agrees. Emerson.

MR. HASBROUCK: I had a similar concern as to what Bob just voiced. I would support any effort along those lines; whether it's soon or further down the road, but not too far down the road. My other question was Dr. Cooper in his presentation had mentioned that the industry is protecting the world's biomedical supply; which I think is a very admirable goal.

But I'm wondering, in terms of protecting the world's biomedical supply, what percent of the lysate that is collected along the east coast of the United States is used in the United States, and how much is exported to the rest of the world?

DR. COOPER: I'm not a marketing person, but I would estimate that the LAL consumed by, and LAL meaning the Atlantic Ocean product, consumed by the U.S. is probably about 40 percent; because our FDA really urges and requires the companies to use a lot of redundant testing. They in my opinion, perhaps consume

more reagent than is actually necessary to get the job done.

But in terms of answering your question, I would think that 40 percent of the LAL is U.S. and the rest is Europe, and to a great extent Japan. I think perhaps the amount of the reagent that is produced by the *Tachypleus* might take care of maybe 10 to 20 percent of the world's supply. Is that enough information?

MR. HASBROUCK: That answered my question, thank you.

CHAIRMAN RHODES: Any other Board members; any public comment, sorry, Stewart.

MR. MICHELS: Just a point of clarification on that 15 percent mortality estimate that is attributed to the biomedical harvest. I believe that value is not based on a single study; but actually on a range of studies that the Technical Committee reviewed, and they basically used an average of the observed mortality in those studies.

Then to the point of on the terms of reference, I was wondering, Kristen, do you think it would be possible to also include some kind of evaluation of the sublethal effects of bleeding on the horseshoe crab population? I know there has been some indication in the past that these animals may not spawn in the year that they're bled and such.

MS. ANSTEAD: Yes, I think some of that would be evaluated as part of kind of digging into this literature. We're going to do a call for data, maybe next week. We hope that any datasets out there that have to do with biomedical will be part of things that we get to consider going forward. But if you want to make that an explicit TOR to evaluate sublethal affects that is at the will of the Board.

MR. MICHELS: I would.

CHAIRMAN RHODES: We'll get to it. Are there any other Board members, any public that wants to? Okay. Please state your name and association.

MS. BENJIE SWAN: Hello everyone, Benjie Swan from Limuli Laboratories. I put some comments together that I will read. My comments, some of them will directly answer some of the questions that were raised today; and also kind of give a different way of thinking about biomedical mortality.

All right here goes. My comments are as follows: Regarding biomedical mortality. Dead horseshoe crabs are counted at the biomedical facility prior to bleeding and at release; accounting for mortality from collection to release. From this point on their mortality rate is not known, and difficult to ascertain because of their release into the wild.

At the onset of the industry, Anne Rudloe's study, 1983, established a 10 percent greater mortality rate for bled animals than un-bled. Her study had a large sample size of 10,000 horseshoe crabs, and the crabs were released into a small, enclosed bay, mimicking the biomedical return-to-sea policy.

More recently studies have attempted to improve on Rudloe's study, and to arrive at mortality rates. However, the resultant mortality rates are most likely higher than the actual value; since the bled animals were kept in recirculating tanks for two weeks or longer; rather than being released into their natural environment.

One study, intending to mimic the time horseshoe crabs are on deck, placed horseshoe crabs that were already captured and studied for two weeks into a barrel. The barrel was then placed on top of a roof for four hours in the sun; then covered for another four hours in the shade. They were eventually bled, and driven around in a hot van, and stored again.

Still, under these extreme conditions 16 of the 21 crabs lived, 76 percent survival. What should be gleaned from these studies are not the resultant rates, but other relevant facts. The most important fact is that horseshoe crabs are hardy animals; able to withstand hours out of the water in wide ranges of temperatures.

The studies also collectively show that the mortality rate is variable; depending on a variety of stressors, such as the amount of blood collected, time out of the water, and temperatures endured. Using best management practices, the survival of the collected horseshoe crabs is guaranteed to be high. Nevertheless, the number of crabs that die from bleeding is estimated to be 15 percent based on these studies; despite biomedical companies protest that horseshoe crabs do not die from bleeding. Other alarmist concerns want to push the mortality rate higher; suggesting there is a large, unaccounted numbers of dead animals due to culling at sea and the possible demise of the rejected horseshoe crabs.

However, these numbers are accounted and reported, and add very little to the overall mortality. Fishing vessels trawl in a manner that minimizes injury and death, and the small percentage of horseshoe crabs rejected at the biomedical facility, is for minor injuries that would almost be invisible to the untrained eye.

Regarding threshold numbers, establishing a threshold number for biomedical mortal crabs under the horseshoe crab fishery management plan in 1998 was misguided. First of all, the word threshold implies a limit. However, it was not the intention to limit the collection of horseshoe crabs for the manufacture of Limulus Amoebocyte Lysate.

Secondly, how the specific number of 57,500 was calculated remains a mystery. As reporting of biomedical numbers was not required prior to Addendum III in 2003. For 13 years, from 2004 to 2016, the average of the reported number of

dead horseshoe crabs was 5,086 horseshoe crabs, and the estimated mortal number calculated after release is 58,721; still close to the 57,500.

Over the years the number of biomedical only harvest crabs and in turn mortal crabs increase slightly. The increase can be attributed to management measures that resulted in fewer bait crabs utilized, and more males used to compensate for taking fewer females. My last point is a suggestion to incorporate synthetic lysate into the Atlantic States Marine Fisheries Commission discussions and documents.

I find this to be completely out of the realm of the Atlantic States Marine Fisheries Commission's jurisdiction. Managing the horseshoe crab research for bait harvest, and finding alternative sources of bait is part of the fisheries biologists/manager's expertise. To think about discussing the needs of human health in the testing of pharmaceutical products is beyond the scope of fisheries.

To promote a product that is not accepted as an alternative for LAL is irresponsible. To summarize; to continually suggest that mortality due to biomedical use is unaccounted for and substantial is contrary to the facts. The facts are that the mortality of horseshoe crabs associated with manufacturing lysate, is a very small number; compared to the number of horseshoe crabs used for bait and the total population.

Fact 2, that biomedical best management practices, especially our return-to-sea policy, ensure the utmost survival of the horseshoe crabs, and Number 3 that exceeding the threshold number is of no relevance and should be eliminated. That would be it. If anybody has any questions, I would be happy to answer them. Mike Schmidtke has a copy of my letter if anyone would like a copy.

CHAIRMAN RHODES: Thank you for your comments, any other comments? At this point we do need to accept the terms of reference. If

there are any additions to it or any other task, this would be the time to add them. Stewart.

MR. MICHELS: If I may, I would like to make a motion to accept the terms of reference, and add to the terms of reference an evaluation of the sub-lethal effects of bleeding on horseshoe crab.

CHAIRMAN RHODES: Do we have a second? Colleen. Is there any discussion, any objection? **Seeing none; we will approve the Terms of Reference by consent,** and move on to Item 6, which is setting the 2018 Harvest Specs. Kristen. I guess I'll add that to read that into the record.

All right the motion was: **Move to accept the Terms of Reference for the 2018 Horseshoe Crab Benchmark Stock Assessment, and add a Term of Reference evaluating the sub-lethal effects of biomedical bleeding. Motion by Mr. Michels, second by Ms. Giannini, and it was approved by consent; now onto the next.** While we're bringing up the slide, you guys in the back, it's great to sit up here where you can actually read the little bars and see what they mean.

SET 2018 HARVEST SPECIFICATIONS FOR THE DELAWARE BAY

MS. ANSTEAD: Now I'm going to walk us through the 2018 harvest specifications for the Delaware Bay. We set the harvest specifications using the ARM model. We go through this each year; and I've just put up the goals of the ARM model, which is to manage the harvest of horseshoe crabs in the Delaware Bay to maximize that harvest, but also maintain ecosystem integrity for the stopovers for the birds, mainly the red knots.

REVIEW HORSESHOE CRAB AND RED KNOW INDICES OF ABUNDANCE

MS. ANSTEAD: I'll go through briefly in this presentation where we are with the red knots and the horseshoe crab populations; as well as review the harvest packages, and then tell you what the specifications are. First as a reminder of some of

the thresholds that are in the ARM model, we have two population thresholds.

One is for a female horseshoe crab and one is for red knots. The way the model functions is that there must be 80 percent carrying capacity of female horseshoe crabs available in the Delaware Bay to get female harvest of horseshoe crabs; so that's 11.2 million female crabs, or there is a red knot population threshold, which is 81,900 birds.

There is an additional threshold that there must be a two-to-one spawning-beach-sex ratio. We've never come close to not having that. But that is an additional threshold in the model that if that was not seen on the beaches that would also limit harvest. This is just to remind you that if both population estimates are below threshold, we don't have female harvest of horseshoe crabs in the Bay.

This is where we are with the red knots right now. The estimates come from mark-resight investigations. The red line is the population threshold. You can see that for 2017 the estimates were similar to 2016. There were 49,000 approximately birds, which is below the bird threshold of 81,900.

You can also see that even with the confidence intervals we haven't come close to the threshold in the last few years. It's worth noting that the stopover duration was shorter this year. It was 9.5 days, and last year it was 12.3. The estimates of horseshoe crab abundance come from the Virginia Tec Trawl Survey; but as you may recall that doesn't run every year.

In lieu of the survey for the years that we don't have it, the Committee developed a composite index, which is made up of a few surveys in that region. You can see how well they're tracking each other there. The Virginia Tec Trawl Survey is in the black lines; so it did run this year, so our population estimate is from that. Additionally that supplied an extra data point for kind of comparing the performance of the composite

index. The 2016 estimate of female horseshoe crabs is 7.7 million females; which is also under the threshold of 11.2 female horseshoe crabs.

These are the five harvest packages from the ARM, and they range from a full moratorium at Harvest Package 1, to a midrange male only harvest at 2; 500,000 male only harvest in Package 3, 4 is kind of the midrange female/male harvest, and then 5 would be the highest male and female harvest that we have.

The model looks through all possible states of the population; the juvenile abundance of horseshoe crabs, birds, males, females, and it builds a giant matrix of all possible combinations, and then applies the harvest packages to that and that is how we get our harvest. This is just a summary of where we are. The horseshoe crabs, that is 7.7 million females estimated in the Bay. The red knot abundance was 49,000; and therefore the harvest package is again Harvest Package 3, which it has been for the last several years. With that I will take questions.

CHAIRMAN RHODES: Are there any questions from the Board? At this point we will need a motion to approve these specifications. Stewart Michels.

MR. MICHELS: So moved.

CHAIRMAN RHODES: Thank you, and a second. Second by Mike Millard, is there any discussion? Do we have any opposition? All right well this motion is approved by consent also, so this is a motion to select Harvest Package 3 for 2018 horseshoe crab harvest in Delaware Bay; motion by Mr. Michels, second by Mr. Millard and approval by consent.

**REVIEW RESULTS OF THE ARM MODEL RUN
INTEGRATION BIOMEDICAL DATA AND
RECOMMENDATIONS FROM THE ARM
SUBCOMMITTEE, TECHNICAL COMMITTEE, AND
ADVISORY PANEL**

CHAIRMAN RHODES: Guys, I'm not going to say anything, but we'll move on to the next area of business right now; and this is Review the Results of the ARM Model Run and Incorporating the Biomedical Data. Is that you first Kristen?

MS. ANSTEAD: While she gets that up, I will just remind you that last year that we went, I think it might have been 2016; we went under short term review of the ARM model, where we were tasked with evaluating some different parts of it. It was not the full long term review; which would have been more thorough.

But one of the tasks we had last year was to look at incorporating biomedical data into the ARM model; particularly since we're talking about doing that for the benchmark. We felt it was appropriate to see if we could also put in the ARM model; so that all of the output is similar. We put forth a preferred option for including biomedical; as well as a minority opinion.

I will briefly review both of those and the Board had tasked us with seeing how that would affect the harvest package selection in the model performance. That is what I'm going to go through today. The preferred option for including biomedical is here. What we have on the left side are the current harvest packages that we just reviewed.

Then to the right would be how we would deal with biomedical going forward; if we included the biomedical data in the arm model under the preferred option. These are not real numbers, so biomedical data the confidentiality has not been breached by doing this. It was kind of taken from a fraction of what we're attributing to the coastwide, and applying a sex ratio to it. If these were real numbers what we would do would be taking a running average; so a three to five year average of what's harvested in the Delaware Bay, and we would update that number every few years. You couldn't really do the math to put an exact number on what that harvest is.

Biomedical is fairly stable for their harvest, so having an average that is only updated every so often is not so much a concern. We would still capture any major changes, but it would not have to be done every year. That harvest would be subtracted from the current harvest packages. Biomedical, this is not a quota; this is just explicitly showing that harvest is happening in the Delaware Bay from the biomedical industry, and by working that into the harvest packages.

You can see that for example, Harvest Package 3, which is the 500,000 male-only crabs for the bait fishery, would then be adjusted to subtract the biomedical from it. That is how that would operate. Again, our current harvest packages 1 through 5, I wanted to talk briefly about how often each is selected under the current ARM model.

You can see that Harvest Package 1, 3, and 5 are selected much more often than 2 and 4. This is under all scenarios. Yes, we always get Harvest Package 3, but that is because of the population thresholds. But if we were over those thresholds, you can see that the model actually chooses Harvest Package 5 more than the rest of them; and it rarely chooses Package 2 and 4.

That will be relevant here in a moment. Under this preferred option, when the ARM model was rerun, Harvest Package 1 was selected 99 percent of the time under the preferred option that it was under our current ARM model. Rarely did putting the biomedical data in, actually the model chose a different harvest package, so that was fairly consistent.

When it did, instead of a moratorium less than 1 percent, it went to that male-only harvest and less than 1 percent it went to the highest female-male harvest. That is how this table works. You can see that Harvest Package 2 and 3 didn't change at all by putting the biomedical data in. If the model under the current ARM model selected Harvest Package 3, it still selected Harvest

Package 3 by including biomedical data in those harvest packages.

Harvest Package 4 changed the most, 85 percent of the time it still had Harvest Package 4; but the other 15 it did go to the full moratorium. But again that is where these frequencies come into. Harvest Package 4 is chosen about 1 percent of the time; given all possible states of the populations. While that is the biggest change, it also is the package that gets selected very rarely.

We also put forth a minority opinion for dealing with biomedical data in the ARM model. This put the 15 percent mortality attributed to biomedical in the population dynamics model. Briefly, this is a simple version of how the population dynamics model works in the ARM model, where juvenile horseshoe crabs can stay as juvenile horseshoe crabs from year to year.

They can also go on to be pre-breeders, or they can skip that stage and go right to being adults. Then additionally some die. The same with pre-breeders, and then we get to the adult stage. Some stay in the adult stage, some get harvested as bait, and some die as well. The way the minority option would work is by including the 15 percent in that kind of red state as I have in the graph; so putting it right into the population dynamics model. This is the table you just saw. The green all the way to the right is how it would change under the minority opinions. You can see it's a little different from the preferred option. In general, still pretty similar results. Harvest Package 1, 3, and 5 were very similar. By including biomedical in the population dynamics model, those three packages very rarely changed to a different package by including biomedical. Harvest Package 2 now was never selected.

When it was selected it most likely went to 1, but it also sometimes went to 3. Then Harvest Package 4 also was 88 percent of the time was still selected as Harvest Package 4; but 12 percent of the time it went to that full male and female harvest. There was some change, but in general

that's fairly similar results to what we have already by including biomedical either way.

Just in summary, there was little change to the harvest packages by including biomedical under both the preferred and the minority opinion. The preferred option was the preferred option, because the ARM Committee felt that there was more transparency to it. You see what the biomedical harvest is with those harvest packages.

There were some concerns that this puts biomedical and bait harvest against each other; that the bait fishermen now see that the biomedical is taking away from their quota for the year. But it's also worth noting that they don't often reach that quota, and New Jersey doesn't harvest their portion of it.

There is a bit of a buffer there that it might not affect it as much, but it's still potentially baiting those two against each other. The minority opinion, oh I should also mention that if we go with the preferred option of including biomedical that would require an addendum; because the harvest packages are in the addendum. It would require an addendum to change them to have the biomedical harvest there.

The minority opinion was favored by some, because it doesn't require an addendum and it still maintains the same harvest packages, it's just putting that biomedical in the population dynamics model; but it is less transparent, because it's kind of hidden in the inner workings of the ARM model, rather than explicitly out there in the harvest packages.

These were presented to the various TCs that fall under the horseshoe crab; and they did maintain that the preferred option is recommended. Because of the benefits I just went through, neither one of them is more accurate. There are just two different ways of dealing with it; so both the Subcommittee and the TCs recommended that going forward.

CHAIRMAN RHODES: Dr. Cooper, do you want to do the AP response? Mike.

MR. SCHMIDTKE: The Advisory Panel reviewed these results as well. The Advisory Panel looked at them and they agreed with the TCs and Subcommittee on the fact that there is very little change in the harvest packages, due to incorporation of biomedical mortality. The Advisory Panel would recommend that this mortality not be included in the annual runs of the ARM model.

If the Board does have a preference for incorporating biomedical mortality into the ARM, the Advisory Panel has recommended the minority option be the preferred option; sighting the benefits of protecting the confidentiality, since the mortality would be worked within the population dynamics model itself it would not be exposed to the public. We wouldn't be able to see that overt subtraction from the harvest packages; and in addition it would not lower the quotas. It would not impact the harvest packages themselves.

CHAIRMAN RHODES: Any questions from the Board? Mike.

MR. MICHAEL LUISI: I guess this is a question for Kristen. Is there a table or someplace I can look to see what the effects of the different packages on the bait fishery are; related to the minority report or the minority opinion? You know you showed the one table that had the preferred option alternative with what is being taken out of the bait fishery; for the purposes of being accounted for by the biomedical industry.

However, under the minority opinion, does the package change the same way? The reason I ask is because I think it's very difficult when you look at what's being referred to as a non-quota for the biomedical industry; but then you're taking it away from established quota in the bait fishery. I certainly have concerns about putting the two forces together. I would just like to know what

those packages look like under the minority opinion.

MS. ANSTEAD: That was also a recognized concern among our talks; and that's why we went ahead and put forth the minority opinion. Those harvest packages are unchanged in the minority opinion. The crabs that die through biomedical are just put into the population dynamics model. Instead of subtracting what's harvested each year, when we do the ARM model we put in what was harvest.

Those were crabs that died, as well as their survival rate goes in there as well, just in general outside of bait harvest. This would just add that 15 percent mortality, so when we subtract what died that year, whether through bait harvest or natural mortality, it would just add an additional amount for the biomedical harvest from the running average of their actual numbers. The harvest packages would be unchanged. They would be as they are, and that is why it doesn't require an addendum.

CHAIRMAN RHODES: Follow up.

MR. LUISI: Under Package 3 there would still be a 500,000 crab allowance for the bait industry under the minority opinion.

MS. ANSTEAD: Correct.

CHAIRMAN RHODES: Mike.

MR. MILLARD: Two comments. The first I would like to get out that I do support adding biomedical mortality into the ARM. I don't know if you're ready to take a motion on that a little later in this discussion; but I would be willing to do that. More importantly, back to the sensitivity analysis of the preferred option.

I appreciate that. That was helpful. It seems to me though that another sensitivity we could look at, because my understanding is that used 15 percent. For many meetings now we've discussed

and argued about the 15 percent. I'm wondering if we could task the TC to do a sensitivity analysis on that 15 percent figure; run a range through there from 5 percent to 10 percent, and see if that makes a difference. Maybe we can put this whole argument about what that exact percentage is to bed; if it doesn't really matter in our management scheme.

MS. ANSTEAD: The ARM model, the 15 percent that's used follows the benchmark. Part of this process of us reevaluating that number is if we come up with a different number for the Delaware Bay that will translate over to the ARM model. If it turns out that the Delaware Bay mortality is 8 percent in the new benchmark; that will then be the mortality used in the ARM model.

I do understand your point. If we decreased it to 5 percent, even for these sensitivity runs. I suspect that the harvest packages still wouldn't change that much. Because by using the 15 percent they barely changed anyway. But that can certainly still be ARM model Subcommittee task.

CHAIRMAN RHODES: Follow up.

MR. MILLARD: Do I interpret that to say that we really don't need to be arguing about what the exact percentage is in our management scheme?

MS. ANSTEAD: I think we're looking forward to reevaluating it; because it is a number that comes up and it is contentious. I think we should be concerned about it, and it's an important number. We look forward to relooking at the data to see maybe if there is a more appropriate number for that.

CHAIRMAN RHODES: Chris.

MR. CHRIS WRIGHT: I had the same question as Mike; whether or not they did a hypothetical run at 5 percent or 30 percent; because if it does go up, we might as well get that out in the open right now.

CHAIRMAN RHODES: Emerson.

MR. HASBROUCK: I've got a concern similar to Mike Luisi's concern. I'm not sure that I've got it straightened out in my mind yet. If I understand it properly, if the biomedical harvest is included in the ARM model run, there really isn't any difference in which harvest package gets selected. Is that right?

MS. ANSTEAD: Correct.

MR. HASBROUCK: That's the first part. But the other part is that if the preferred option is chosen, then we'll be in a situation where a quota managed bait fishery, their quota will be reduced by a non-quota-restricted harvest. Is that correct?

MS. ANSTEAD: That is also correct. I think it's worth mentioning that the quota for say Harvest Package 3, which is always selected, the 500,000 would then be reduced to 464, so yes it is reduced but the biomedical is still a very small portion of the mortality that's being attributed to the Delaware Bay crabs. But, we've done these two options in case that that changes in the future; that we now have a method of dealing with that.

CHAIRMAN RHODES: Did you have a follow up?

MR. HASBROUCK: John just asked something, so I'll ask that as my follow up; and I believe the answer is no, but let's just verify that. Has the quota been reached in the past several years, and if not how close has the bait catch come to that quota? Then thirdly, do we anticipate that bait catch may go up or down in the future?

MR. SCHMIDTKE: Within the Delaware Bay the quota has not been reached in recent years; and I looked in the hypothetical of the preferred option with those reduced harvest packages, if that level has even been exceeded. Even with the lowering that resulted from these alternative runs that level has not been exceeded since the ARM has been instituted.

CHAIRMAN RHODES: Stewart.

MR. MICHELS: Correct me if I'm wrong. Is that because New Jersey simply chooses not to harvest their portion of the Delaware Bay?

MR. SCHMIDTKE: Yes, that is certainly a contributing factor.

MR. LUISI: Mr. Chairman, I would also like to that point raised by Emerson. A few years ago when female crab harvest was prohibited; and we went to male only. It took the industry a little time to rebuild that market that they had. Over the last few years, specifically to Maryland, we have been being able to access more and more of our male-only allocation. The market is there; so we foresee the issue of reducing our bait-crab allowance based on the biomedical industry subtraction as problematic to our continued efforts to keep that bait industry thriving at the point where it is.

CHAIRMAN RHODES: Any other discussion? Mike, did you have a motion you wanted to make or not at this point?

MR. MILLARD: Yes, I'll throw it out. I move that the ARM model incorporate biomedical mortality in the preferred option methodology.

CHAIRMAN RHODES: Do we have a second? All right, Chris Wright, discussion? Emerson.

MR. HASBROUCK: For clarification. If the Board approves that the ARM model incorporate, and I'll wait until the motion is up there, incorporate the biomedical harvest. Does that necessarily mean then that part of that process will be that the bait fishery quota will be reduced by the biomedical harvest, or is that going to be a separate motion?

MR. SCHMIDTKE: With the wording of this current motion using the preferred option, then yes that would mean that the bait quota would be reduced by the level that the biomedical mortality is evaluated at. Additionally, I believe we would

need to make this move for an addendum. Is that correct, Toni?

MS. TONI KERNS: Mike, that is correct. In order to change the parameters or the impacts of the ARM model, we would need to initiate an addendum to do so. I know Mike is talking to Sherry; so I'm not sure. We would need to initiate an addendum to change the parameters, so it would be an option in the addendum if we were to move forward with this.

CHAIRMAN RHODES: John.

MR. JOHN MANISCALCO: To be clear, we can't account for the biomedical harvest in the ARM model, but set harvest specifications only for the bait fishery. Is that correct?

MR. SCHMIDTKE: Using the preferred option that would require an addendum and that would have the reduction in the harvest package. That's the reason why it would require the addendum; is because we're changing the actual harvest packages. If we went with the minority option then there would be no change to the harvest package; and that's why that would not require the addendum.

CHAIRMAN RHODES: Mike Luisi.

MR. LUISI: Just for clarification purposes. We've already established the 2018 specifications, right. This would be an addendum that would be worked on for 2019 and beyond.

CHAIRMAN RHODES: That's correct, and also I believe we discussed this last year and the will of the Board was to wait until after the 2018 stock assessment was completed to look at this. But we can revisit, you know initiation of an addendum or initiating an addendum if that is the Board's will. Emerson.

MR. HASBROUCK: While I have no problem supporting the utilization of the biomedical harvest in running the ARM model. I can't

support this motion, in that it will end up reducing the quota of a quota managed fishery by the amount that is harvested by a non-quota managed fishery or harvest. I can't support this motion as it is.

MS. KERNS: Just to make sure we have the right words up there. Is the maker of the motion and the seconder of the motion okay if we say move to initiate an addendum that?

MR. MILLARD: Yes.

CHAIRMAN RHODES: Any further discussion on this? Russ.

MR. RUSS ALLEN: I'm really struggling to figure out why we need to do an addendum right now; when we have a stock assessment coming up, and I know how this Board works with other species. We're going to say as this addendum moves on we're going to say, well why didn't we wait for the results of the stock assessment? For that reason I would be opposed to this motion at this time. But if it got tabled from we were actually going to maybe do an addendum or an amendment. I think that makes more sense.

CHAIRMAN RHODES: Well are you making a motion to table this to time specific?

MR. ALLEN: No, I just put that out there for discussion; and if someone thinks that's the right thing to do we could do it, or we just vote it down now. That's fine with me, thanks.

CHAIRMAN RHODES: Eric.

MR. ERIC REID: I'm not struggling at all. This is not the time to pass this motion, at all.

CHAIRMAN RHODES: All right, any further discussion on this? Does anyone need to caucus? Take two minutes to caucus. Are we ready to vote on the motion? Emerson.

MR. HASBROUCK: I have a question that might help us here; in terms of our discussion amongst the New York caucus, as well as speaking to our neighbors in New Jersey. If we initiate an addendum, is the harvest quota linked to including the biomedical catch in the ARM model, or can the addendum process separate that out; so that we can incorporate the biomedical harvest in the ARM model without having the bait fishery quota reduced by the biomedical harvest?

MR. SCHMIDTKE: Not using the preferred motion. That would not accomplish that. I think what you're getting at, Emerson, are you suggesting the potential of incorporating the biomedical harvest in addition to the current bait quotas? Is that what you're asking about, whether that's a possibility?

MR. HASBROUCK: I'm not sure of your question. But what I'm suggesting is that we incorporate the biomedical harvest when we run the ARM model, but that we do not reduce the resulting bait quota by the amount of the anticipated biomedical harvest.

MR. SCHMIDTKE: That would be the minority option. That would be the minority option where the biomedical mortality is incorporated into the population dynamics model itself; but the harvest packages, the quotas themselves do not change.

MR. HASBROUCK: Right, I understand that. Voting in favor of the motion then essentially moves forward the preferred alternative; and will not consider the minority opinion.

MR. SCHMIDTKE: Correct.

CHAIRMAN RHODES: Mike.

MR. LUISI: One further clarification that came up in our caucus. Would we need to take action on the minority opinion, if this motion were to be opposed, if it didn't carry does the minority opinion then move forward or do we have to take

up some form of an action by the Board today on either the preferred or the minority opinion?

CHAIRMAN RHODES: At this point we do not need to make any action going forward. This was brought out as a follow up that they were tasked to look at the biomedical harvest with the ARM model. They came up with the two options. At this point it was for information, if the Board wanted to look at either option, or beginning an amendment.

That was at this point or we could take this as information, we'll get the stock assessment and next year we may revisit this same issue and look at the minority, the preferred or possibly a different option as we get more information. There is no further requirement if this does not pass. **That being said, all in favor of the motion could they raise their hands please; opposed same sign, abstentions, null votes? All right the motion fails 2 to 13.** Is there any other Board action on this? Bob.

MR. BALLOU: I'll give this a shot. I would like to move to incorporate the biomedical harvest using the minority option.

CHAIRMAN RHODES: Okay, so you would move to initiate an addendum?

MR. BALLOU: No. That is not my intent.

CHAIRMAN RHODES: Oh, I'm sorry. All right, do we have a second? Emerson. All right, discussion Bob?

MR. BALLOU: It's all been said. I feel that the first part makes sense to me. The second part that would be the preferred option, the addendum approach does not make sense to me. I would rather wait the outcome of the assessment. To me it makes sense to incorporate; but going with the minority approach.

CHAIRMAN RHODES: Michelle.

DR. MICHELLE DUVAL: Procedurally we've set the specifications for 2018. I think our opposition to the previous motion was in line with New Jersey's concerns. While I support incorporation of biomedical mortality into the ARM model, and this type of approach, I kind of feel like this would still be getting the cart before the horse a little bit; in that we've set the 2018 specifications.

The stock assessment process is beginning in January. According to the timeline that I've read in the briefing materials, we're going to be presented with the stock assessment at the annual meeting next year; which is also the same time at which we would be setting specifications for the following year.

Bob, I guess the way I see it is that we've already set the specs for 2018, so if we were to use a minority option to incorporate biomedical mortality in the ARM model, we would be doing that for the 2019 specs. Yet presumably we would be setting those specs once we had received the information or the output from the stock assessment at this time next year. Does that make sense or am I confusing people?

CHAIRMAN RHODES: It makes sense. Tom.

MR. FOTE: I agree with everything you said, so it makes sense to me.

CHAIRMAN RHODES: Rob.

MR. O'REILLY: I think you were asked this question and you answered about taking no action. What Michelle is indicating does make sense; and I think at least a number of us, the way we voted on the last motion, probably understand the implications, so thank you.

CHAIRMAN RHODES: Bob.

MR. BALLOU: I've been swayed by the discussion. I plan to vote against my own motion.

CHAIRMAN RHODES: Would you like to withdraw it?

MR. BALLOU: Whatever you prefer, Mr. Chair. I would be happy to withdraw or just call the question; whichever you prefer.

CHAIRMAN RHODES: Emerson, would you be all right with withdrawing?

MR. HASBROUCK: I will be fine with that.

CHAIRMAN RHODES: Okay, Mike.

MR. MILLARD: Even in light of the withdrawn motion, I have a question I think that will help me. Maybe it's for you, Kristen. We often say let's wait for the upcoming stock assessment before we take any action; and I get that when we have the normal, biological reference points. I should probably know the answer to this, but it's not occurring to me right now. What is it that will come out of this stock assessment that will change the ARM model routine?

MS. ANSTEAD: The percentage that we're attributing to biomedical for their mortality could potentially change. Other than that the ARM model is not part of the stock assessment. The only thing we're tasked with, with the two of them as they relate to each other, is comparing any model output from the Delaware Bay Region with what comes out of the ARM model. The only number that will transfer over is a percent. If that changes from 15 percent, if it's reduced or increased that would then be changed also in the ARM model. Does that answer your question?

MR. MILLARD: Yes, I think so. The ARM model is insensitive, for the most part; the packages that it's going to pick are insensitive to any stock assessment results.

MS. ANSTEAD: They're not really related. I mean they are related to each other in that they're using data. But nothing from the benchmark gets fed into the ARM model except for that percent

mortality; if we even incorporate biomedical into the ARM model.

2017 FMP AND STATE COMPLIANCE REPORTS

CHAIRMAN RHODES: All right, is the Board comfortable where we are with this? Good. Seeing lots of nodding heads; we'll move on to the 2017 FMP and State Compliance Reports.

MR. SCHMIDTKE: We received state compliance reports to perform the 2017 fishery management plan review. The Plan Review Team conducted that review. Just as a brief reminder of the management history, the FMP was approved in 1998. There have been seven addenda; the most recent one being the institution of the ARM framework. You've already seen this graph, so I don't want to spend a whole lot of time on it.

But as you can see just going from 2015 to 2016 there was an increase in the bait harvest; and a decline in the biomedical collection, as well as a decline in the estimated biomedical mortality. In 2016 the total coastwide harvest was 787,223 crabs; with the majority of this coming from New York, Delaware, and Maryland. This was a 35 percent increase from 2015; and there were state specific increases in landings in Rhode Island, New York, Delaware through North Carolina, and Florida. Approximately 65 percent of the coastwide quota of 1.59 million pounds was landed. Biomedical facilities collected 426,195 crabs. This was a 21 percent decrease from the previous five-year average. There were temporary changes in production in 2016 that resulted in a lower number than has been seen over the past few years. The biomedical only mortality estimates, so these again the estimated mortality of crabs that were not then incorporated into the bait industry.

That estimate was 48,780 crabs; using the 15 percent number with the uncertainty of multiple studies that are used in formulating that number. We present a range from 5 percent to 30 percent mortality. You can see the associated numbers there. There is a text edit that I noticed as I was

making the presentation; but it's not in the actual text of the FMP review.

We did a little bit of consideration of what that 15 percent was actually incorporating; and the last two sentences of Page 6, and this is in the graph but not in the text. But those where it says up to the point of release, should be up to the point of bleeding. The 15 percent is meant to incorporate mortality associated from the process of bleeding on forward to release. That is a point of clarification there.

De minimis, states may apply for de minimis if their combined average bait landings for the last two years are less than 1 percent of the coastwide bait landings for the same two-year period. Measures in these states, they are not required to implement any harvest restriction measures; but they are required to implement the monitoring requirements from A, B, E, and F of the FMP.

The Potomac River Fisheries Commission, South Carolina, Georgia and Florida all requested and qualified for de minimis for 2017. New Jersey qualified, since they do not have a bait harvest; but they did not request de minimis status. The Plan Review Team has a few recommendations and statements regarding this year's review of the FMP and compliance.

There was a concern with the number of crabs that are unidentified by sex within the biomedical reports. There was a reporting format that was worked on collectively among the horseshoe crab Technical Committee, since many of those members are the ones that provide the data. We worked to develop that so that it's a bit clearer when those reports are submitted to the Plan Review Team; so that we can be able to identify what is in those reports a bit more clearly.

This new format will be included in the compliance report template for 2018. This is not asking for any new information; it's just a clarification of format. The Plan Review Team recommends continued funding for the Virginia

Tech Trawl Survey. This survey was funded in 2017, and we are in the process of attaining funding for 2018. But that has not been finalized, so we hope to hear good news on that sometime soon.

Other than that the Plan Review Team found all states to be consistent with the FMP; with the exception of the District of Columbia, who did not submit a report and has not done so for the last 15 or more years. The PRT would recommend to the Board that all states be found in compliance with the requirements of the FMP with the exception of the District of Columbia; and that the Board approve de minimis status for the Potomac River Fisheries Commission, South Carolina, Georgia, and Florida. With that I will take any questions.

CHAIRMAN RHODES: Mr. Boyles.

MR. ROBERT H. BOYLES, JR.: Mike, I seem to remember discussions about D.C. in years past. Is this something we could make a recommendation to the Policy Board to excuse the District of Columbia from its obligations and its membership on the Horseshoe Crab Board?

MR. MILLARD: As far as I understand that is something that has been talked about at previous meetings; and the hurdle that is in the way is that District of Columbia is not present at these meetings. As far as I know, we cannot excuse them without their presence, or the Board could not, excuse me.

CHAIRMAN RHODES: Great question. Toni.

MS. KERNS: We'll just follow up with Brian and see if you want to be removed from the Board, if he wants to be removed from the Board then we can take him off the declared interest the next time we approve that the Policy Board can, then they'll be removed.

CHAIRMAN RHODES: Mr. Boyles.

MR. BOYLES: A question, maybe for our New Jersey delegation. I know they did not request de minimis. I would ask, is there interest in that and if so I would make the motion; if you're ready, Mr. Chairman.

CHAIRMAN RHODES: Mr. Boyles.

MR. BOYLES: Mr. Chairman, I would make, oh my cheat sheet is gone. I would make the motion that we accept the 2017 FMP review and approve the de minimis request of South Carolina, Georgia, Florida and PRFC.

CHAIRMAN RHODES: Do we have a second? Mr. O'Reilly. Is there any discussion; any objection. **All right, the motion was to accept the Horseshoe Crab 2017 FMP Review and State Compliance Reports and approve de minimis requests for Potomac River Fisheries Commission, South Carolina, Georgia, and Florida; motion by Mr. Boyles, second by Mr. O'Reilly, and the motion passed by consent.**

POPULATE ADVISORY PANEL WITH NONTRADITIONAL STAKEHOLDERS

CHAIRMAN RHODES: All right on to the next, I believe Tina is going to speak to us about getting some nontraditional stakeholders on the AP.

MS. TINA BERGER: Hi there. Recently we sent out a notice of a call for nominations for nontraditional stakeholders to the Horseshoe Crab AP; based on the Board's fairly recent discussion about adding some shorebird interest to that AP. We received a number of nominations; and it would be our request to the Board that we get a couple of volunteers from the Board to sit in with staff and review those nominations, and make recommendations to the Board at its next meeting for the addition of candidates to the AP.

CHAIRMAN RHODES: Basically, if I'm getting this correct, it's going to be creating a subcommittee from this Board looking at adding two nontraditional, probably at least one from the

shorebird group, if not both. If it's the will of the Board we'll get together a handful of Commissioners to populate that group; and go over the nominees. Is there any objection to that plan? All right seeing none; is that okay with you?

MS. BERGER: Yes, but I would be selfish and ask for a couple of people, two or three people to step up, maybe in addition to you, Malcolm, just to meet via conference call, so we can do that sooner than later.

CHAIRMAN RHODES: All right. Anyone who would be interested in reviewing those members, all right, Stewart, Pat, Bob. Thank you all very much.

ELECT VICE-CHAIR

CHAIRMAN RHODES: We are at the pin ultimate part of this. We need to elect a Vice-Chairman for the Board. Do we have any nominations? Yes.

MR. DAN McKIERNAN: I would like to nominate John Maniscalco as the Vice-Chair.

CHAIRMAN RHODES: Second. **Second by Dr. Duval, any discussion, any objections, all right congratulations!**

OTHER BUSINESS

CHAIRMAN RHODES: With that is there any other business to be brought before the Board? Dr. Duval.

DR. DUVAL: Just really quickly. Just prior to the Board meeting, this is something I let staff know about. But I just wanted to make note of it here is that during some dealer checks that we had it was brought forward that one of our dealers found a couple of tickets from 2014 that resulted in 3,371 unreported horseshoe crabs from 2014. I passed this along to staff to let them know.

The statute of limitations in North Carolina is two years for a misdemeanor, so we are unable to take any action on this. But after talking to Mike and talking to Toni, it seems like that amount did

not put us over any, while it exceeded North Carolina's horseshoe crab quota, it did not put us over any quota limits from a coastwide perspective. But perhaps Toni or Mike wants to speak to that. I'm just bringing this up in the interest of full disclosure.

MR. SCHMIDTKE: What we discussed related to that was the possibility of a retrospective quota transfer. There have been quota transfers in the past, specifically from Georgia to North Carolina. We looked into that option, but with the timing of it being in 2014, as well as the fact that within that year the additional unreported crabs would not have exceeded the regional quota, so for that South Atlantic population. We do not need to have that quota transfer; that retrospective quota transfer, and we can just move forward from here and update the numbers that are within the landings history.

ADJOURNMENT

CHAIRMAN RHODES: All right, any other business? Seeing none; I want to thank everyone for being efficient for the discussions at this meeting; for our Chairs who condensed a lot of information and have us all waiting for the stock assessment next year.

(Whereupon the meeting adjourned at 11:46 o'clock a.m. on October 17, 2017)

**Relative Abundance and Distribution of Horseshoe Crabs in the Carl N. Shuster
Horseshoe Crab Reserve:
Supplemental Report to the Atlantic States Marine Fisheries Commission
Horseshoe Crab and Delaware Bay Ecology Technical Committees**

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Abstract

Horseshoe crabs, *Limulus polyphemus*, are important to a diverse group of stakeholders, including biomedical companies, commercial fishers, and environmental interests. Decreasing abundances of horseshoe crabs and shorebirds led to management actions including harvest quotas and establishment of the Carl N. Shuster, Jr. Horseshoe Crab Reserve in 2001. We have conducted a trawl survey in the coastal Delaware Bay area, including part of the Reserve, to monitor the horseshoe crab population since 2002. Abundance of mature males and females appears to be increasing in the coastal Delaware Bay area through this time, but not within the Reserve. About half of the mature crabs, but only around a quarter of the immature and newly mature crabs have been observed within the Reserve. Size-frequency distributions suggest that horseshoe crabs first recruited to coastal waters outside of the Reserve, and that recruitment to the Reserve increased with age. We cannot separate the impact of conventional management actions from that of the Reserve, but the combination of approaches appears to be achieving their objectives of protecting and maintaining the spawning stock in support of horseshoe crab management efforts.

Introduction

Horseshoe crabs, *Limulus polyphemus*, occur along the Atlantic coast of the United States from Maine to Florida and in the eastern Gulf of Mexico, with the largest spawning concentration in Delaware Bay (Shuster, 1982; Shuster and Botton, 1985). In

the Mid-Atlantic region, they migrate to coastal embayments in the spring to deposit their eggs on intertidal sandy beaches (Shuster and Botton, 1985). Coincident with horseshoe crab spawning, migrating shorebirds stop over in the Delaware Bay area to feed on the eggs (Shuster and Botton, 1985; Tsipoura and Burger, 1999). The crabs also are caught for use as bait in eel and whelk fisheries, as well as by the biomedical industry (ASMFC, 1998). Intensive bait harvesting in the 1990s is believed to have reduced the horseshoe crab population to such low levels that shorebird populations declined as a result (USFWS, 2003; Morrison et al., 2004). Concerns regarding the possible over-harvesting of horseshoe crabs and the declining shorebird populations prompted New Jersey, Delaware, and Maryland to implement state-level harvest restrictions (Walls et al., 2002). The Atlantic States Marine Fisheries Commission (ASMFC) followed by initiating a coast-wide fishery management plan (FMP) in 1998 (ASMFC, 1998).

In 2000, the ASMFC established a coastwide harvest cap with a 25% reduction from 1995-1997 reference period landings (RPL). The ASMFC also recommended that the National Marine Fisheries Service (NMFS) close federal waters within 30 nautical miles of Delaware Bay to horseshoe crab harvest to protect horseshoe crabs and promote the effectiveness of the FMP (ASMFC, 2000; NOAA, 2000). The ASMFC was concerned that horseshoe crabs could be harvested from the federally controlled exclusive economic zone and landed in states with less restrictive management, circumventing the management actions implemented by those three states. For example, in 1998 following restrictions imposed by the three states and prior to the harvest cap and federal area closure, 75,000 crabs were landed in Pennsylvania, which previously had no reported landings, and over a million crabs were landed in Virginia, whereas their RPL were only a fifth of that (ASMFC, 2000). The Carl N. Shuster, Jr. Horseshoe Crab Reserve, which became effective 7 May 2001, prohibits the taking of horseshoe crabs, but does not restrict harvest of other species (NOAA, 2001). Additional amendments to the FMP, and a unilateral moratorium imposed by New Jersey, reduced annual bait fishery harvests since 2004 by New Jersey, Delaware, Maryland, and Virginia to about 25% of the RPL (ASMFC, 2004a; ASMFC, 2006).

There is some debate over the effectiveness of closed areas as fishery management tools. Supporters of closed areas suggest that the protection they afford can

increase stock biomass, serve as a buffer against overfishing outside the reserves, and act as a source of recruitment and fishable biomass to the fished areas (Lauck et al., 1998; Jones, 2007). Opponents counter that they provide little, if any, benefit to fisheries that cannot be achieved by conventional management methods such as catch and effort controls (Shipp, 2003; Kaiser, 2005). However, they may provide the greatest benefit when they are used in conjunction with conventional fishery management methods (Hilborn et al., 2006). Regardless of whether closed areas are used alone or in concert with conventional management actions, they should be evaluated for the ability to fulfill their objectives. In 2002, a trawl survey was initiated that specifically targeted horseshoe crabs in order to provide relative abundance and demographic information for stock assessment purposes, and to provide quantitative feedback on management efforts. The purpose of this study was to describe the demographics and relative abundance of horseshoe crabs in the Delaware Bay area and the portion of the population within the Carl N. Shuster, Jr. Horseshoe Crab Reserve. We also examined characteristics of the Reserve to assess whether it could fulfill the objectives set for it.

Methods

The coastal Delaware Bay area (DBA) survey extended in the Atlantic Ocean from shore out to 22.2 km (12 nautical miles), and from 39° 20' N (Atlantic City, NJ) to 37° 40' N (slightly north of Wachapreague, VA; Figure 1). This area was sampled from 2002 to 2011, and again in 2016 and 2017. The DBA survey area was stratified by distance from shore and bottom topography, important factors in determining horseshoe crab relative abundance in the Mid-Atlantic (Hata and Berkson, 2004). Troughs are components of the prominent ridge and swale topography of the Mid-Atlantic coast, and horseshoe crabs tend to be more abundant in troughs than in nontrough areas (Hata and Berkson, 2004). Troughs were defined as topographic features at least 2.4-m deep, at least 1.8-km long, and no more than 1.8-km wide. Therefore, the survey area was stratified by distance from shore into an inshore zone 0-5.6 km (0-3 nmi) from shore, and an offshore zone 5.6-22.2 km (3-12 nmi) from shore, and by bottom topography into trough and nontrough sites. The resulting strata were inshore-trough, inshore-nontrough, offshore-trough, and offshore-nontrough.

The horseshoe crab reserve (HCR) extends from the 3-nmi limit of state territorial waters to 74° 22.5' W, and from 38° 22.0' N to 39° 14.6' N (NOAA, 2001). This study utilized slightly different limits to correspond with the whole-minute latitude/longitude grid system employed by the trawl survey: from the 3-nmi limit east to 74° 22' W or to the 12-nmi territorial sea limit, and from 38° 22' N to 39° 15' N. We compared horseshoe crabs caught within the entire DBA survey area to those caught in the portion of the survey area that overlapped with the HCR area. Although a portion of the HCR extends farther offshore than the survey area (Figure 1), we believe there are relatively few horseshoe crabs within that unsampled portion during the survey timeframe (see Results). Reserve strata were offshore-trough, and offshore-nontrough. Annual station selection was based on the entire DBA, so the proportion of stations within the HCR was variable.

Sampling was conducted aboard a 16.8-m chartered commercial fishing vessel operated out of Ocean City, MD. We used a two-seam flounder trawl with an 18.3-m headrope and 24.4-m footrope, rigged with a Texas Sweep of 13-mm link chain and a tickler chain. The net body consisted of 15.2-cm (6-in) stretched mesh, and the bag consisted of 14.3-cm (5 5/8-in) stretched mesh. Tows were usually 15-minutes bottom time, but were occasionally shorter to avoid fishing gear (e.g., gill nets, crab and whelk pots) or vessel traffic, or when the net unexpectedly hit an underwater obstruction. Start and end positions of each tow were recorded when the winches were stopped and when retrieval began, respectively. Bottom water temperature was recorded for each tow.

Horseshoe crabs were culled from the catch, and either all individuals or a subsample were examined for prosomal width (PW, millimeters) and identified for sex and maturity. Maturity classifications were: immature, newly mature - those that are capable of spawning but have not yet spawned, and mature - those that are have previously spawned. Newly mature and mature males are morphologically distinct, and are believed to be classifiable without error. However, some error is associated with distinguishing newly mature from immature females. All examined females that were not obviously mature (i.e., bearing rub marks) or immature (too small or soft-shelled) were probed with an awl to determine presence or absence of eggs. Females with eggs but without rub marks were considered newly mature. Females with both eggs and rub marks were considered mature. Initial sorting classifications were: presumed adult males

(newly mature and mature), presumed adult females, and all immature. Up to 25 adult males, 25 adult females, and 50 immatures were retained for examination. The remainder were counted separately by classification and released. Characteristics of the examined subsamples were then extrapolated to the counted portions of the catch.

The average 15-minute tow in the DBA was 1.22 kilometers at 4.9 KPH. Net-spread was measured from 113 tows from 2011 to 2016, and averaged 9.6 meters. Net-spread was negatively correlated with tow speed ($r = -0.245$; $F = 7.06$; $p = 0.009$), so speed was used to estimate net-spread for collections in which net-spread was not measured.

For each tow, catch density (catch/km²) was calculated from the product of tow distance (in km) and estimated net-spread (converted from meters to km) assuming that all fishing was done only by the net, and that there was no herding effect from the ground gear (sweeps):

$$\text{catch/km}^2 = \text{catch}/[\text{tow distance (km)} \times \text{net-spread (km)}].$$

Preliminary studies indicated that survey gear efficiency increases with size, but never reaches 100% efficiency. Therefore, population estimates should be considered low. Within each stratum, the mean catch per square-kilometer and associated variance were calculated assuming a normal-distribution catch-frequency model. Stratum mean densities and variance estimates were combined using formulas for a stratified random sampling design (Cochran, 1977) to produce a stratified mean density (\bar{X}_{st}). Population totals were estimated by multiplying stratified mean density (\bar{X}_{st}) by survey area (DBA = 5127.1 km²; HCR = 1934.5 km²):

$$\text{Population total} = \bar{X}_{st} \times (5127.1 \text{ km}^2 \text{ or } 1934.5 \text{ km}^2).$$

Standard deviations and coefficients of variation presented here were derived from the stratified mean density (\bar{X}_{st}). The approximate 95% confidence intervals were calculated using the effective degrees of freedom (Cochran, 1977) and standard deviation of \bar{X}_{st} , then multiplied by area as above to calculate confidence limits of the population totals.

Within each region (DBA and HCR), annual size-frequency distributions, in intervals of 10-mm prosomal width, were calculated for each sex/maturity category by pooling size-frequency distributions of all stations in a stratum in a year to calculate the relative proportions for each size interval. Those proportions then were multiplied by the

stratum mean density that year to produce a stratum size-frequency distribution. Stratum size-frequency distributions then were multiplied by the stratum weights and added in the same manner as calculating the stratified mean density. Areas under the distribution curves then would represent the stratified mean density at each size interval.

Approximate ages were assigned to size groups following Smith et al. (2009). Within this report annual size-frequency distributions were averaged over all years for brevity and clarity.

Results

Over the trawl survey time-series, the total Delaware Bay area horseshoe crab population ranged from a low of 17.8 million in 2003 to a peak of 65.0 million in 2009 (Table 1; Figure 2). The estimated population of mature females ranged from 2.8 to 7.8 million, while mature males ranged from 5.4 to 24.0 million. Over all years, mature males outnumbered mature females 2.4 to 1, whereas immature females outnumbered immature males 1.4 to 1. The ratio of newly mature males to females varied widely depending on year, but averaged 1.0 male per female.

About half of the mature crabs occurred in the Reserve, but only around a quarter of the immature and newly mature crabs occurred there. The population of mature females in the HCR ranged from 1.4 to 4.7 million, while males ranged from 1.7 to 10.7 million (Table 2; Figure 2). Mature males outnumbered mature females in the HCR 2.1 to 1 over all years. Over all years, an average of 52% of mature females and 45% of mature males were caught in the Reserve. About 23% of immature females and 18% of immature males occurred in the HCR, while 23 and 26% of newly mature females and males, respectively, occurred there.

The relative proportion of mature horseshoe crabs within the HCR appeared to be related to average water temperature. The apparent fraction of mature females and males in the HCR relative to the entire DBA was highest in 2009 when the average DBA bottom water temperature was lowest (Figure 3). This fraction decreased as average bottom water temperature increased (males: $r = -0.739$; $n = 12$; $T = -3.46$; $p = 0.006$, females: $r = -0.740$; $T = -3.47$; $p = 0.006$). No similar relationships were evident for any

other demographic groups. This may reflect seasonal movement of mature crabs from Bay spawning grounds in Spring and Summer to offshore coastal waters in the Fall.

The estimated population of mature males and females in the DBA appear to be increasing over the time-series (males: $r = 0.804$; $n = 12$; $T = 4.28$; $p = 0.002$, females: $r = 0.594$; $n = 12$; $T = 2.33$; $p = 0.042$). However, the populations of mature males and females within the HCR do not appear to be increasing over time (males: $T = 0.90$; $p = 0.387$, females: $T = -0.05$; $p = 0.958$). The numbers of mature males and females in the HCR do not appear to be correlated with numbers in the entire DBA (males: $T = 1.67$; $p = 0.126$, females: $T = 1.250$; $p = 0.241$). In contrast, populations of newly mature crabs in the HCR are correlated with numbers in the entire DBA (males: $r = 0.816$; $T = 4.46$; $p = 0.001$, females: $r = 0.647$; $T = 2.68$; $p = 0.023$).

Horseshoe crabs were generally distributed inshore and in the center of the DBA survey area. Average densities of mature horseshoe crabs diminished toward the northern and southern survey limits as well as toward the offshore limit (Figure 4). Densities of immature males and females were generally highest inshore, and south of the Delaware Bay mouth. Newly mature crabs were distributed similarly to immature crabs – primarily inshore and south of Delaware Bay and the Reserve. For all demographic groups, high densities around 38.8° N and 12 km from shore were associated with the deeper water of the Delaware Shelf Valley outside the Bay mouth.

Average annual size-frequency distributions indicate that most immature horseshoe crabs less than about 150-mm occurred outside the Reserve (Figure 5). Immature crabs appeared in the DBA region beginning around age 8. At larger sizes, and presumably older ages, horseshoe crabs became more uniformly distributed, appearing in the HCR beginning around age 10. Newly mature and mature crabs had unimodal and generally symmetrical size distributions, suggesting they matured at consistent sizes and, presumably, ages, although males apparently mature at a smaller size and younger age than females. Size ranges of newly mature and mature crabs were similar to each other, indicating that little growth occurred after maturity, so size distributions of mature crabs did not reflect age structure. The average annual size-frequency distribution of newly mature and mature crabs within the HCR mirrored distributions in the entire DBA.

Discussion

Abundance estimates presented here were subject to an unknown degree of bias due to unknown gear efficiency. Preliminary studies conducted by us indicate that the population totals presented here are probably underestimates, with the degree of underestimation being greater for smaller crabs. However, we believe that the degree of underestimation did not differ between HCR and non-HCR regions, so that regional comparisons were not substantially affected.

Although abundance estimates were biased, they may not be unreasonable. Smith et al. (2006) estimated the spring 2003 Delaware Bay spawning population at 13.7 million males and 6.25 million females. They also calculated that about 70% of the spawning population, or 9.6 million males and 4.4 million females, overwintered outside of the Bay during the 2002-2003 winter. In comparison, we estimated populations of 11.3 million adult (newly mature and mature combined) males and 6.3 million adult females in the DBA in fall 2002 that could have spawned in spring 2003. Furthermore, the estimates may be reasonable considering that some of the adults we enumerated probably spawned in other coastal embayments adjacent to the survey area.

Catches of mature males and females appeared highest in the center of the survey area and decreased toward the survey area periphery. Abundance decreases north of Atlantic City, NJ, at the survey's northern boundary, and at depths greater than 30-meters (Botton and Haskin, 1984; Botton and Ropes, 1987). Survey depths were typically less than 29-m, but reached 42.7-m in the Delaware Shelf Valley. This distributional information indicates that the trawl survey coverage was reasonably adequate for monitoring abundance of the mature component of the Delaware Bay population, and for assessing the portion of that population within the Reserve. Average densities of mature crabs were higher at Reserve latitudes than outside, suggesting that they generally remain near Delaware Bay after spawning, although tagging studies indicate some movement of adults between Reserve and non-Reserve areas (Swan, 2005). Closed areas may have the greatest fishery management benefit for species with moderate degrees of adult movement (Botsford et al., 2003; Gell and Roberts, 2003). However, this trawl survey did not begin until after the Reserve was established, so we cannot evaluate whether the Reserve influenced distribution.

Although it appears sufficient for protecting mature crabs, the Reserve does not appear to be well suited for protecting younger crabs. Closed areas are often cited as a potential source of recruitment to fished areas. However, spawning occurs outside the Reserve in coastal embayments, and juveniles remain close to the spawning beaches for several years, moving to deeper water as they mature (Rudloe, 1981; Botton and Loveland, 2003; Smith et al., 2009). On average, about 75% of immature and newly mature crabs occurred outside the Reserve, and nearly all crabs less than about 150-mm occurred outside the Reserve. Abundance of immature crabs did not appear to diminish toward the southern survey boundary, so variability in their numbers may not be fully captured in the trawl survey. Furthermore, their distribution makes it unclear if they are of Delaware Bay, Chesapeake Bay, or mixed origin. In addition, the distribution of immature crabs south and inshore of the HCR, along with their unknown origin, suggests that the HCR is of limited value in protecting them.

The combination of the Horseshoe Crab Reserve and restrictions in New Jersey (harvest moratorium) and Delaware (no trawling allowed within state waters) effectively comprises a sanctuary for mature crabs that spawn in Delaware Bay, protecting about half of the male population, while harvest of females is prohibited in all coastal waters from New Jersey to Virginia. In addition, about 38% of the entire trawl survey area was within the Reserve. These values compare favorably with suggestions that closed areas should protect up to 50% of the population and cover 20-40% of the fishing grounds in order for any benefits to be realized (Lauck et al., 1998; Gell and Roberts, 2003). While protecting a large portion of the spawning population, this *de facto* sanctuary also protects the migratory corridor between coastal waters and Delaware Bay spawning grounds. Closed areas may be especially important at such vulnerable spatial bottlenecks (Gell and Roberts, 2003).

One suggested benefit of closed areas is that the protection they afford allows for the re-extension of size and age structures that had been truncated by fishing, and thereby re-extension of reproductive potential through increased fecundity (Gell and Roberts, 2003; Roberts et al., 2005). Although fecundity is correlated with size (Leschen et al., 2006), horseshoe crabs do not appear to grow much, if at all, after reaching maturity (Smith et al., 2009). We did not observe substantial differences in size structures

between adult crabs inside and outside the Reserve, suggesting that egg production would not be increased through this mechanism. Horseshoe crabs cannot be aged directly, but indirect methods using ages of epifauna or relative carapace wear exist (Botton and Ropes, 1988; Smith et al., 2009). We did not evaluate such characteristics during the trawl survey, but examination in the future may be useful for comparing the relative age structures of horseshoe crabs inside and outside the Reserve.

Closed areas have been recommended as fishery management tools with various potential benefits. However, whether any benefits are realized is dependent on the targeted species and the particular objectives of the closed area, as well as its characteristics. It is doubtful that any effects on stock size due to the Reserve could be separated from those solely due to harvest restrictions, especially given that initial harvest restrictions and Reserve implementation occurred near simultaneously, at least in biological terms. Horseshoe crabs may take ten years or more to mature, and a similar time span is expected before management actions are manifested as increases in stock size (Shuster and Sekiguchi, 2003; ASMFC, 2004b), and it appears that abundance of mature crabs in the Delaware Bay area is beginning to increase. Nevertheless, characteristics of the Reserve and mature horseshoe crab distribution appear to fit criteria necessary to accomplish its objective to protect the spawning stock in support of the FMP.

References

- ASMFC (Atlantic States Marine Fisheries Commission). 1998. Interstate fishery management plan for horseshoe crab. Fishery Management Report Number 32. Atlantic States Marine Fisheries Commission, Washington, DC.
- ASMFC. 2000. Addendum I to the fishery management plan for horseshoe crab. Fishery Management Report 32a. Atlantic States Marine Fisheries Commission, Washington, DC.
- ASMFC. 2004a. Addendum III to the fishery management plan for horseshoe crab. Fishery Management Report 32c. Atlantic States Marine Fisheries Commission, Washington, DC.
- ASMFC. 2004b. Horseshoe crab 2004 stock assessment report. Atlantic States Marine Fisheries Commission, Washington, DC.
- ASMFC. 2006. Addendum IV to the fishery management plan for horseshoe crab. Fishery Management Report 32d. Atlantic States Marine Fisheries Commission, Washington, DC.
- Botsford, L. W., F. Micheli, and A. Hastings. 2003. Principles for the design of marine reserves. *Ecol. Appl.* 13:S25-S31.
- Botton, M. L., and H. H. Haskin. 1984. Distribution and feeding of the horseshoe crab, *Limulus polyphemus*, on the continental shelf off New Jersey. *Fish. Bull.* 82:383-389.
- Botton, M. L., and R. E. Loveland. 2003. Distribution, abundance, and survivorship of young-of-the-year in a commercially exploited population of horseshoe crabs *Limulus polyphemus*. *Mar. Ecol. Prog. Ser.* 265:175-184.
- Botton, M. L., and J. W. Ropes. 1987. Populations of horseshoe crabs, *Limulus polyphemus*, on the northwestern Atlantic continental shelf. *Fish. Bull.* 85:805-812.
- Botton, M. L., and J. W. Ropes. 1988. An indirect method for estimating longevity of the horseshoe crab (*Limulus polyphemus*) based on epifaunal slipper shells (*Crepidula fornicata*). *J. Shellfish Res.* 7:407-412.
- Cochran, W. G. 1977. *Sampling Techniques*, 3rd ed. John Wiley and Sons, Inc., New York.
- Gell, F. R., and C. M. Roberts. 2003. Benefits beyond boundaries: the fishery effects of marine reserves. *Trends Ecol. Evol.* 18(9):448-455.

- Hata, D., and J. Berkson. 2003. Abundance of horseshoe crabs (*Limulus polyphemus*) in the Delaware Bay area. *Fish. Bull.* 101:933-938.
- Hata, D., and J. Berkson. 2004. Factors affecting horseshoe crab *Limulus polyphemus* trawl survey design. *Trans. Am. Fish. Soc.* 133:292-299.
- Hilborn, R., F. Micheli, and G. A. De Leo. 2006. Integrating marine protected areas with catch regulation. *Can. J. Fish. Aquat. Sci.* 63:642-649.
- Jones, P. J. S. 2007. Point-of-view: Arguments for conventional fisheries management and against no-take marine protected areas: only half of the story? *Rev. Fish Biol. Fish.* 17:31-43.
- Kaiser, M. J. 2005. Are marine protected areas a red herring or fisheries panacea? *Can. J. Fish. Aquat. Sci.* 62:1194-1199.
- Lauck, T., C. W. Clark, M. Mangel, and G. R. Munro. 1998. Implementing the precautionary principle in fisheries management through marine reserves. *Ecol. Appl.* 8:S72-S78.
- Leschen, A. S., S. P. Grady, and I. Valiela. 2006. Fecundity and spawning of the Atlantic horseshoe crab, *Limulus polyphemus*, in Pleasant Bay, Cape Cod, Massachusetts, USA. *Mar. Ecol.* 27:54-65.
- Morrison, R. I. G., R. K. Ross, and L. J. Niles. 2004. Declines in wintering populations of red knots in southern South America. *Condor* 106:60-70.
- NOAA (National Oceanic and Atmospheric Administration). 2000. Atlantic Coastal Fisheries Cooperative Management Act Provisions; Horseshoe Crab Fishery; Closed Area. *Fed. Regist.* 65:61135-61139.
- NOAA. 2001. Atlantic Coastal Fisheries Cooperative Management Act Provisions; Horseshoe Crab Fishery; Closed Area. *Fed. Regist.* 66:8906-8911.
- Roberts, C. M., J. P. Hawkins, and F. R. Gell. 2005. The role of marine reserves in achieving sustainable fisheries. *Philos. Trans. R. Soc. B* 360:123-132.
- Rudloe, A. 1981. Aspects of the biology of juvenile horseshoe crabs, *Limulus polyphemus*. *Bull. Mar. Sci.* 31:125-133.
- Shipp, R. L. 2003. A perspective on marine reserves as a fishery management tool. *Fisheries* 28(12):10-21.

- Shuster, C. N., Jr. 1982. A pictorial review of the natural history and ecology of the horseshoe crab, *Limulus polyphemus*, with reference to other Limulidae. *In* Physiology and Biology of Horseshoe Crabs (J. Bonaventura, C. Bonaventura, S. Tesh, eds.), p. 1-52. Alan. R. Liss, Inc., New York.
- Shuster, C. N., Jr., and M. L. Botton. 1985. A contribution to the population biology of horseshoe crabs, *Limulus polyphemus* (L.), in Delaware Bay. *Estuaries* 8:363-372.
- Shuster, C. N., Jr., and K. Sekiguchi. 2003. Growing up takes about ten years and eighteen stages. *In* The American Horseshoe Crab (C. N. Shuster, Jr., R. B. Barlow, H. J. Brockmann, eds.), p. 103-130. Harvard Univ. Press, Cambridge, MA.
- Smith, D. R., M. J. Millard, and S. Eyler. 2006. Abundance of adult horseshoe crabs (*Limulus polyphemus*) in Delaware Bay estimated from a bay-wide mark-recapture study. *Fish. Bull.* 104:456-464.
- Smith, D. R., M. T. Mandt, and P. D. M. MacDonald. 2009. Proximate causes of sexual dimorphism in horseshoe crabs (*Limulus polyphemus*) of the Delaware Bay. *J. Shellfish Res.* 28:405-417.
- Swan, B. L. 2005. Migrations of adult horseshoe crabs, *Limulus polyphemus*, in the Middle Atlantic Bight: a 17-year tagging study. *Estuaries* 28:28-40.
- Tsipoura, N., and J. Burger. 1999. Shorebird diet during spring migration stopover on Delaware Bay. *Condor* 101:635-644.
- USFWS (U. S. Fish and Wildlife Service). 2003. Delaware Bay shorebird-horseshoe crab assessment report and peer review. U. S. Fish and Wildlife Service Migratory Bird Publication R9-03/02. USFWS, Arlington, VA.
- Walls, E. A., J. Berkson, and S. A. Smith. 2002. The horseshoe crab, *Limulus polyphemus*: 200 million years of existence, 100 years of study. *Rev. Fish. Sci.* 10:39-73.

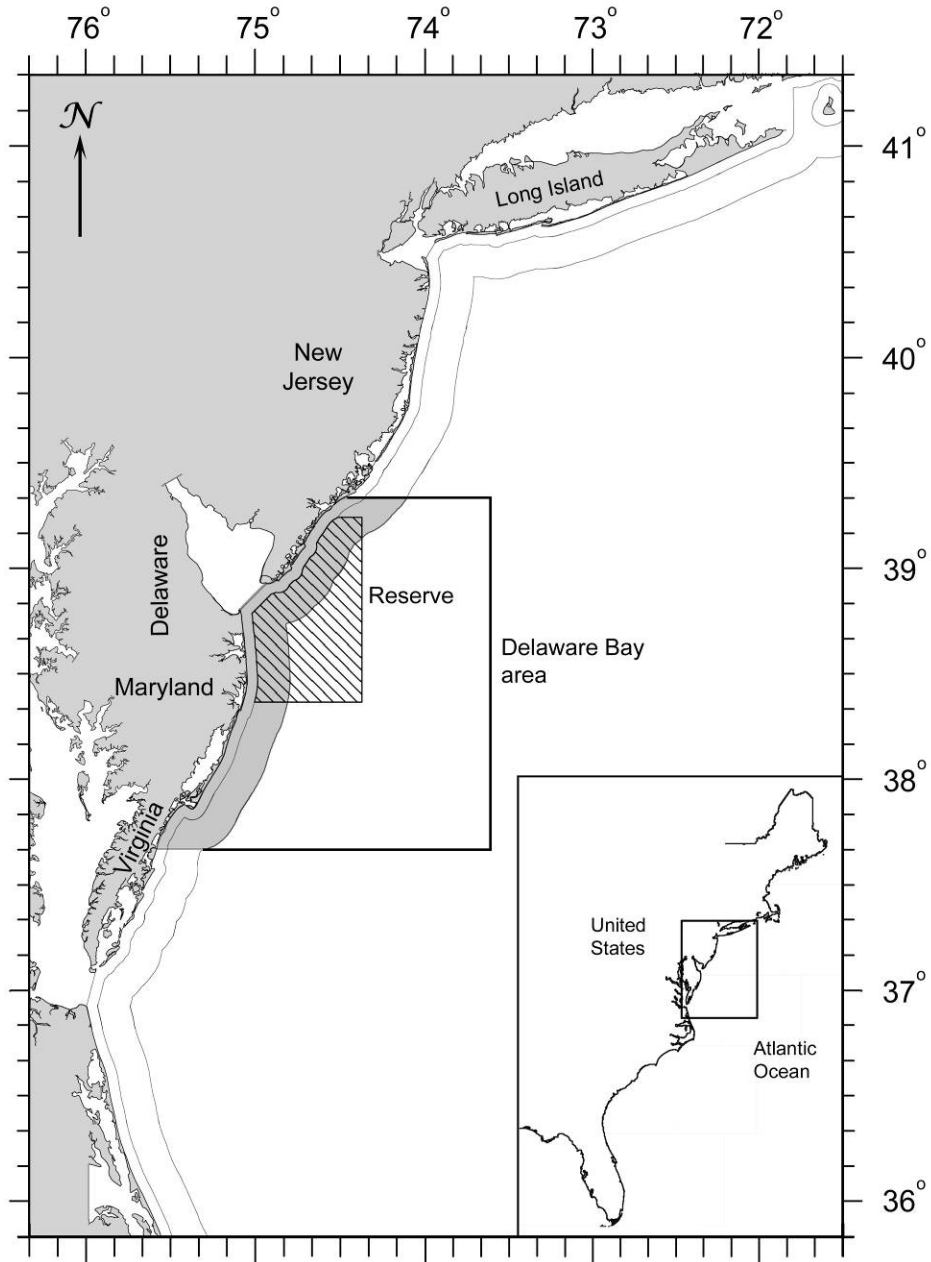


Figure 1. Delaware Bay horseshoe crab trawl survey area and Carl N. Shuster, Jr. Horseshoe Crab Reserve. Contours indicate 5.6 and 22.2-km (3 and 12-nmi) from shore.

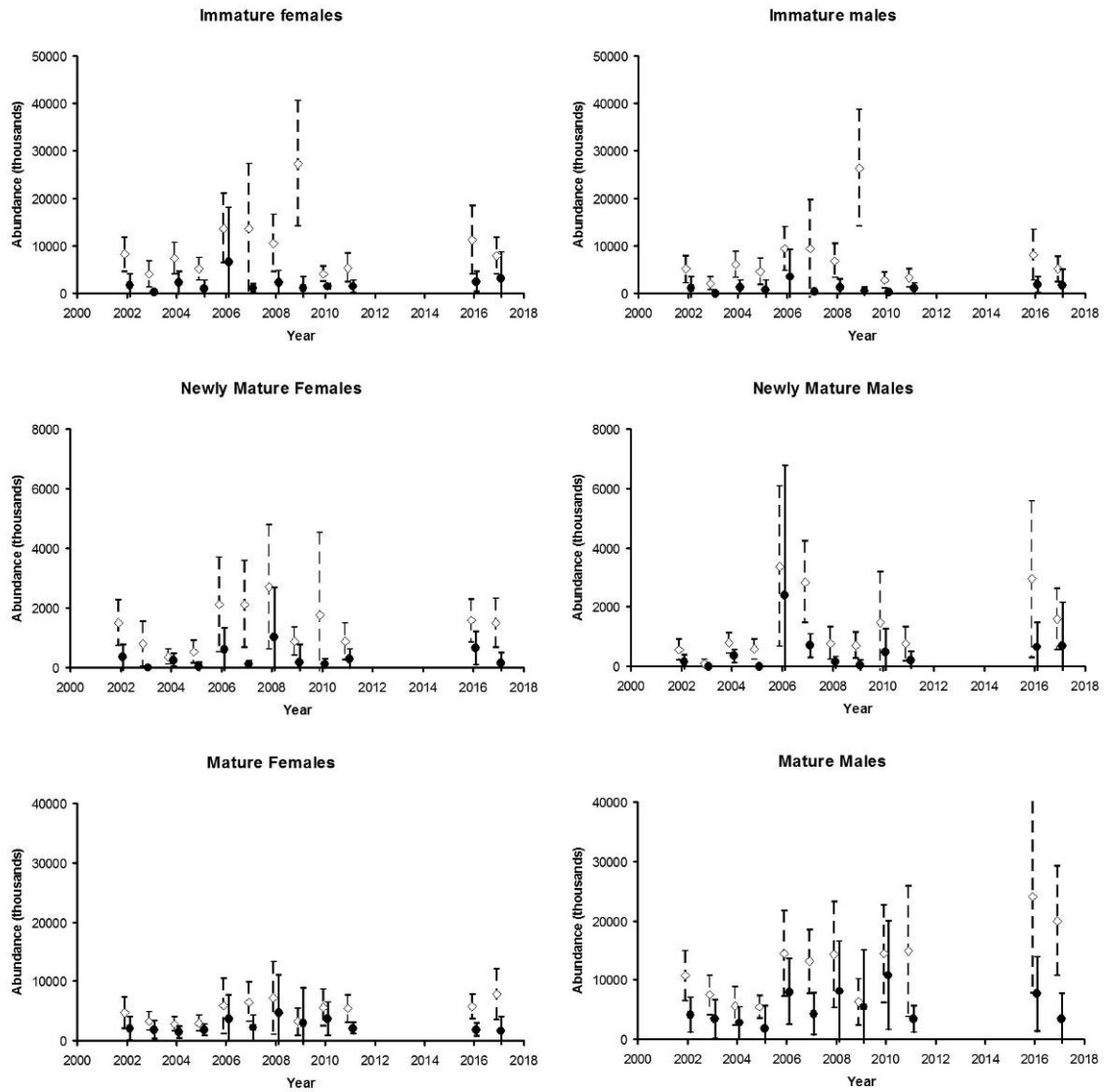


Figure 2. Plots of estimated abundance (in thousands) of horseshoe crabs by demographic group. Vertical lines indicate 95% confidence limits. Open symbols and dashed lines indicate the entire Delaware Bay area. Solid symbols and lines indicate the Horseshoe Crab Reserve. Data are from Tables 1 and 2. Note differences in y-axis scales.

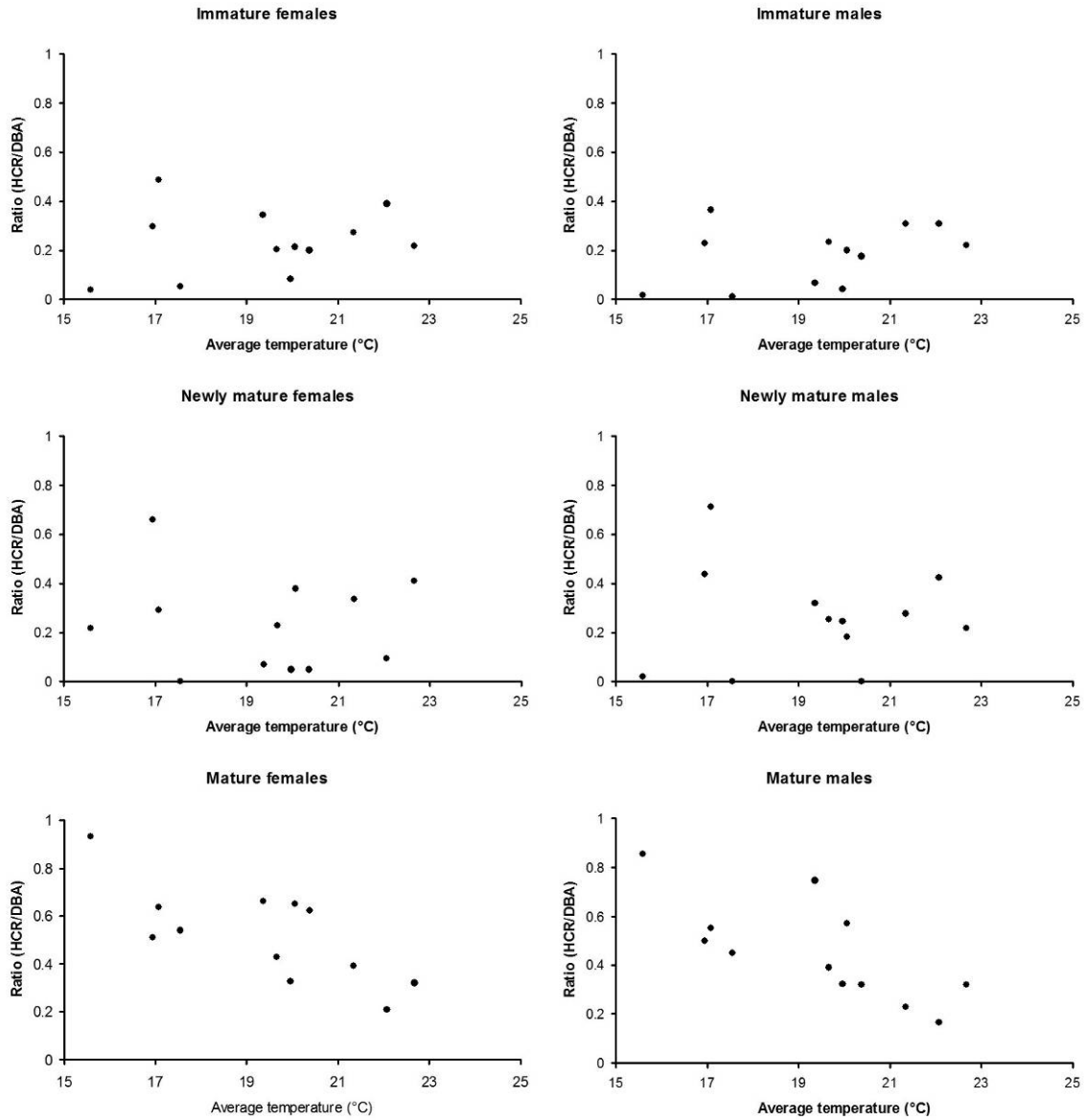


Figure 3. Plots of the fraction of total numbers of horseshoe crabs in the Horseshoe Crab Reserve (HCR) relative to the entire Delaware Bay area (DBA) survey against average DBA bottom water temperature, by demographic group.

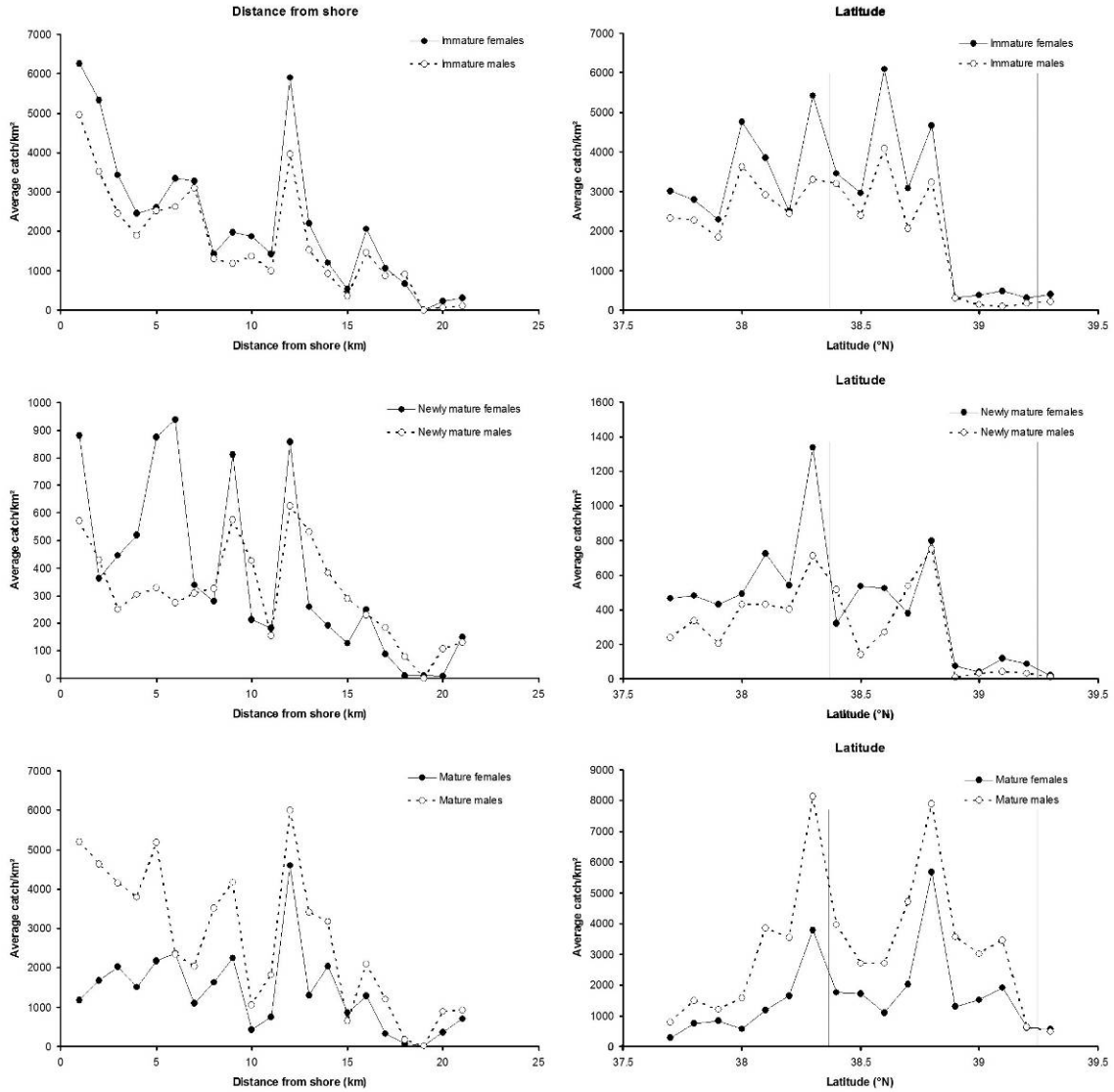


Figure 4. Average density (catch/km²) of horseshoe crabs in the Delaware Bay area survey by distance from shore (left panels) and latitude (right panels) by demographic group. Immature crabs are depicted in the top panels, newly mature crabs are in the middle panels, and mature crabs are depicted in the bottom panels. Vertical lines in the right-hand panels indicate the southern and northern limits of the Horseshoe Crab Reserve.

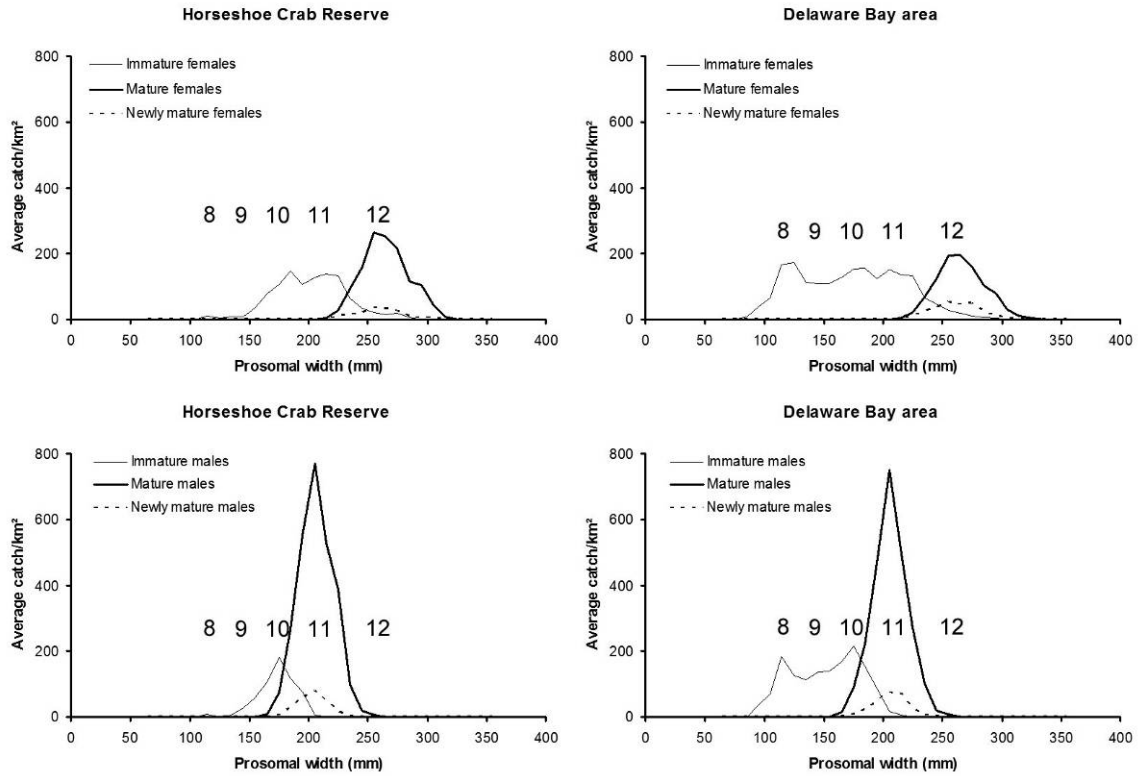


Figure 5. Size-frequency distributions of horseshoe crabs in the Horseshoe Crab Reserve (left panels) and Delaware Bay area (right panels), all years averaged, by demographic group. Females are depicted in the top panels, males are depicted in the bottom panels. Approximate age designations are from Smith et al. (2009).

Table 1. Estimated abundance, in thousands, of horseshoe crabs in the Delaware Bay area (DBA) trawl survey (Total), with upper and lower 95% confidence limits (UCL, LCL), coefficient of variation (CV), and standard deviation (sd). Estimates are given by demographic group and survey year. Abundance estimates were calculated using a normal-distribution catch-frequency model.

	Total	UCL	LCL	CV	sd		Total	UCL	LCL	CV	sd
Immature females						Immature males					
2002	8,222	11,875	4,568	0.21	344	2002	5,076	7,998	2,155	0.28	273
2003	4,089	6,860	1,317	0.32	255	2003	2,114	3,462	766	0.30	123
2004	7,376	10,616	4,135	0.21	305	2004	6,033	8,786	3,281	0.22	260
2005	5,104	7,521	2,687	0.23	227	2005	4,673	7,414	1,932	0.28	255
2006	13,714	20,988	6,439	0.25	672	2006	9,378	13,971	4,786	0.23	428
2007	13,692	27,335	48	0.41	1,088	2007	9,350	19,735	-1,035	0.45	828
2008	10,595	16,578	4,612	0.26	544	2008	6,897	10,443	3,350	0.23	314
2009	27,375	40,519	14,231	0.23	1,242	2009	26,435	38,730	14,140	0.23	1,162
2010	4,102	5,706	2,497	0.19	152	2010	2,781	4,423	1,139	0.29	156
2011	5,426	8,433	2,420	0.27	284	2011	3,301	5,219	1,382	0.28	182
2016	11,292	18,441	4,144	0.30	668	2016	8,185	13,512	2,858	0.31	498
2017	7,948	11,818	4,077	0.23	364	2017	5,082	7,829	2,335	0.26	257
Mature females						Mature males					
2002	4,779	7,431	2,128	0.26	243	2002	10,711	14,972	6,450	0.19	400
2003	3,308	4,851	1,764	0.22	144	2003	7,454	10,827	4,082	0.21	312
2004	2,767	3,919	1,615	0.20	109	2004	5,586	8,875	2,297	0.28	308
2005	2,957	4,323	1,592	0.22	124	2005	5,408	7,322	3,494	0.17	181
2006	5,867	10,517	1,218	0.31	353	2006	14,461	21,734	7,188	0.23	637
2007	6,553	9,864	3,243	0.25	313	2007	13,100	18,506	7,694	0.20	514
2008	7,172	13,336	1,008	0.40	561	2008	14,244	23,240	5,247	0.30	838
2009	3,230	5,523	936	0.33	211	2009	6,319	10,255	2,383	0.29	360
2010	5,588	8,698	2,478	0.26	289	2010	14,396	22,600	6,192	0.27	765
2011	5,388	7,629	3,147	0.20	205	2011	14,857	25,890	3,825	0.33	951
2016	5,735	7,770	3,700	0.17	193	2016	24,017	40,196	7,837	0.30	1,416
2017	7,785	12,033	3,537	0.27	403	2017	19,985	29,245	10,724	0.23	884
Newly mature females						Newly mature males					
2002	1,509	2,278	741	0.24	72	2002	561	925	196	0.31	33
2003	787	1,547	26	0.45	69	2003	78	222	-66	0.84	13
2004	367	613	120	0.32	23	2004	786	1,120	452	0.20	31
2005	531	908	154	0.34	36	2005	580	927	233	0.29	33
2006	2,122	3,705	540	0.33	139	2006	3,377	6,076	678	0.38	251
2007	2,129	3,584	674	0.33	135	2007	2,841	4,214	1,468	0.23	129
2008	2,697	4,780	613	0.36	192	2008	776	1,315	237	0.33	50
2009	883	1,366	399	0.26	45	2009	708	1,157	259	0.31	43
2010	1,770	4,532	-992	0.74	255	2010	1,464	3,180	-252	0.56	159
2011	882	1,495	269	0.34	58	2011	766	1,343	190	0.36	54
2016	1,583	2,304	863	0.22	68	2016	2,939	5,588	290	0.43	248
2017	1,502	2,323	680	0.27	79	2017	1,590	2,623	557	0.32	98

Table 1 (continued).

	Total	UCL	LCL	CV	sd
All					
2002	30,858	40,779	20,937	0.16	933
2003	17,829	25,380	10,279	0.20	691
2004	22,915	32,096	13,733	0.19	861
2005	19,253	26,127	12,380	0.17	646
2006	48,919	69,148	28,691	0.20	1,902
2007	47,665	75,120	20,210	0.26	2,403
2008	42,380	63,506	21,254	0.24	1,981
2009	64,950	91,590	38,310	0.20	2,523
2010	30,101	47,091	13,111	0.27	1,583
2011	30,621	45,933	15,309	0.23	1,371
2016	53,751	83,178	24,324	0.26	2,693
2017	43,891	62,296	25,487	0.21	1,755

Table 2. Estimated abundance, in thousands, of horseshoe crabs in the Horseshoe Crab Reserve (HCR) portion of the Delaware Bay area (DBA) trawl survey (Total), with upper and lower 95% confidence limits (UCL, LCL), coefficient of variation (CV), and standard deviation (sd). Estimates are given by demographic group and survey year. Abundance estimates were calculated using a normal-distribution catch-frequency model.

	Total	UCL	LCL	CV	sd		Total	UCL	LCL	CV	sd
Immature females						Immature males					
2002	1,676	4,117	-764	0.62	534	2002	1,185	3,485	-1,115	0.82	503
2003	217	700	-265	0.86	97	2003	25	90	-39	1.00	13
2004	2,208	4,581	-165	0.48	551	2004	1,374	2,859	-111	0.49	345
2005	1,012	2,752	-728	0.40	209	2005	818	2,723	-1,086	0.54	229
2006	6,691	18,072	-4,689	0.66	2,289	2006	3,438	9,247	-2,370	0.66	1,168
2007	1,131	1,994	269	0.32	189	2007	402	720	84	0.31	64
2008	2,257	4,724	-211	0.46	539	2008	1,375	3,022	-273	0.43	307
2009	1,051	3,527	-1,426	0.74	402	2009	487	1,345	-371	0.55	139
2010	1,412	1,977	846	0.17	124	2010	187	350	24	0.31	30
2011	1,476	2,837	116	0.29	221	2011	1,020	2,273	-232	0.39	203
2016	2,446	4,559	333	0.39	490	2016	1,809	3,455	164	0.41	382
2017	3,098	8,758	-2,562	0.23	364	2017	1,577	5,044	-1,890	0.26	257
Mature females						Mature males					
2002	2,038	3,995	82	0.41	428	2002	4,168	7,086	1,251	0.30	638
2003	1,790	3,335	245	0.34	311	2003	3,368	6,647	90	0.38	659
2004	1,412	2,326	497	0.28	205	2004	2,792	5,516	69	0.43	622
2005	1,838	2,793	883	0.12	115	2005	1,730	5,595	-2,135	0.52	464
2006	3,746	7,628	-136	0.24	466	2006	8,018	13,571	2,465	0.28	1,173
2007	2,156	4,280	32	0.40	449	2007	4,264	7,810	718	0.32	713
2008	4,664	11,057	-1,729	0.56	1,351	2008	8,101	16,584	-382	0.43	1,792
2009	3,004	8,826	-2,819	0.61	946	2009	5,413	15,112	-4,286	0.56	1,575
2010	3,695	6,565	824	0.32	606	2010	10,745	19,894	1,596	0.35	1,933
2011	2,112	3,090	1,135	0.21	227	2011	3,422	5,595	1,248	0.28	487
2016	1,836	2,900	771	0.26	250	2016	7,666	13,939	1,392	0.36	1,434
2017	1,626	3,985	-734	0.27	403	2017	3,342	7,615	-932	0.23	884
Newly mature females						Newly mature males					
2002	345	766	-76	0.52	92	2002	142	382	-99	0.72	53
2003	0	0	0	0.00	0	2003	0	0	0	0.00	0
2004	242	462	22	0.38	48	2004	345	560	130	0.28	49
2005	26	185	-133	0.48	6	2005	0	0	0	0.00	0
2006	615	1,332	-102	0.45	144	2006	2,402	6,751	-1,946	0.70	874
2007	105	223	-13	0.44	24	2007	696	1,106	286	0.25	90
2008	1,026	2,686	-635	0.66	351	2008	142	333	-50	0.57	42
2009	191	753	-371	0.92	91	2009	15	197	-168	0.98	7
2010	125	287	-38	0.53	34	2010	465	1,280	-349	0.72	172
2011	296	614	-23	0.39	59	2011	212	491	-68	0.48	52
2016	652	1,211	93	0.38	130	2016	636	1,488	-216	0.58	191
2017	143	491	-205	0.27	79	2017	673	2,163	-818	0.32	98

Table 2 (continued).

	Total	UCL	LCL	CV	sd
All					
2002	9,555	16,941	2,169	0.33	1,615
2003	5,401	10,384	418	0.36	1,002
2004	8,372	15,433	1,311	0.38	1,638
2005	5,425	13,158	-2,308	0.33	929
2006	24,911	53,095	-3,274	0.44	5,668
2007	8,754	14,815	2,693	0.29	1,325
2008	17,563	36,662	-1,536	0.46	4,175
2009	10,161	29,316	-8,995	0.59	3,111
2010	16,628	29,697	3,560	0.32	2,761
2011	8,538	14,156	2,920	0.24	1,046
2016	15,045	25,206	4,883	0.30	2,357
2017	10,458	27,951	-7,035	0.21	1,755

MEMO

To: Delaware Bay ARM Working Group
From: Jim Lyons, USGS Patuxent Wildlife Research Center, Laurel, MD
Re: Red Knot Stopover Population Estimate for 2018
Date: 27 August 2018

1 Acknowledgments

We thank the many volunteers in Delaware and New Jersey who collected mark-resight data in 2018. We are grateful to A. DeRose-Wilson (Delaware DFW), A. Dey (New Jersey ENSP), and volunteers in Delaware and New Jersey for data entry and data management, and L. Usyk (bandedbirds.org) for data management.

2 Methods

Mark-resight data, including counts of marked and unmarked birds, were collected according to the methods for mark-resight investigations of Red Knots in Delaware Bay (Lyons 2016). Red knots have been individually marked with engraved leg flags at Delaware Bay and other locations for many years; each leg flag is engraved with a unique 3-character alphanumeric code (Clark et al. 2005). Surveys to locate flagged birds were conducted on each beach every three days according to the sampling plan (Table 1). During these resighting surveys, agency staff and volunteers surveyed the entire beach and recorded as many alphanumeric combinations as possible. While searching for birds marked with engraved leg flags, observers also periodically used a scan sampling technique to count marked and unmarked birds in randomly selected portions of Red Knot flocks (Lyons 2016).

Table 1. Dates for mark-resight survey periods (3-day sampling occasion) in Delaware Bay.			
Survey period	Dates	Survey period	Dates
1	≤10 May	6	23-25 May
2	11-13 May	7	26-28 May
3	14-16 May	8	29-31 May
4	17-19 May	9	1-3 June
5	20-22 May	10	4-6 June

As in previous years, all flag resightings were validated with banding data available in the data repository at <http://www.bandedbirds.org/>. Resightings without a corresponding record in bandedbirds.org of physical capture and banding (i.e., “misread” errors) were not included in the analysis (orange engraved flags from Argentina notwithstanding, see below). We also deleted resightings of 21 flagged individuals whose flag codes were accidentally deployed in both New Jersey and South Carolina (A. Dey, pers. comm.). Banding data from Argentina are not available in bandedbirds.org; therefore, all

resightings of orange engraved flags were included in the analysis without validation using banding data.

To estimate stopover population size, we analyzed the mark-resight data and data from the scan samples of the marked-ratio using the methods of Lyons et al. (2016). In this “superpopulation” approach, passage population size is estimated using the Jolly-Seber model for open populations to account for the flow-through nature of migration areas and probability of detection during surveys.

In the analyses for Delaware Bay, the days of the season were aggregated into 3-day sampling periods, the same sampling periods used in prior analyses (a total of 10 sample periods possible each season, Table 1). Data were aggregated to 3-day periods because this is the amount of time necessary to complete mark-resight surveys on all beaches in the study (data summary provided in Appendix 1).

With the mark-resight superpopulation approach, we estimated the number of birds that were carrying leg flags, and then adjusted this number using the estimated proportion of the population with flags to account for unmarked birds. The estimated proportion with leg flags is thus an important statistic. We used the scan sample data (i.e., the counts of marked birds and the number checked for marks) and a binomial model to estimate the proportion of the population that is marked. To account for the random nature of arrival of marked birds in the bay and the addition of new marks during the season, we implemented the binomial model as a generalized linear mixed model with a random effect for the sampling period. More detailed methods are provided in Lyons et al. (2016) and Appendix 2.

3 Summary of Mark-resight and Count Data Collected in 2018

Mark-resight encounter data.—With birds from six countries reported, the 2018 Red Knot mark-resight database included a total of 3,820 individual birds recorded at least once by observers in Delaware Bay (Table 2). One assumption of the mark-resight approach is that individual identity of marked birds is recorded without error (see Lyons 2016 for discussion of all model assumptions). Using the banding data available from bandedbirds.org as described above, some of the recording errors are removed before analysis (i.e., flags that have never been deployed in the field). Field observers submitted 20,541 resightings in 2018; 699 were not validated with banding data, for an overall misread read of 3.4%. These invalid resightings were removed before analysis, but a second type of “false positive” is still possible, i.e., false positive detection of flags that were deployed prior to 2018 but were not in fact present in Delaware Bay in 2018. It is not possible to identify this second type of false positive by cross-referencing to physical captures (banding data) or other QA/QC methods.

Marked-ratio data.—In 2018, 502 marked-ratio scan samples were collected: 337 samples in Delaware and 165 in New Jersey (Appendix 3). There were days early in the season and in the middle of the season when the number of scan samples was relatively low (<10 samples), and there were no data on marked ratio collected in the last two

survey periods in which mark-resight data were collected (1-3 and 4-6 June). Because there were no scan samples with marked ratio data after 31 May (survey period 8), yet observations of marked birds continued into survey periods 9 & 10 (first week of June), we used the overall average proportion marked for all survey periods to estimate stopover population size in periods 9 and 10.

Aerial and ground count data.—Aerial and ground surveys were conducted on two dates in 2018: 23 and 26 May.

Banding location (flag color)	No. flagged individuals detected
U.S. (lime green)	2,731 (71%)
U.S. (dark green)	462 (12%)
Argentina (orange)	389 (10%)
Canada (white)	182 (5%)
Brazil (dark blue)	35 (<1%)
Chile (red)	21 (<1%)
Total	3,820 (100%)

4 Summary of 2018 Migration

The pattern of arrivals at Delaware Bay in 2018 was bi-modal; there were peaks of arrivals around 15 and 21 May (Fig. 1a). After the peak in arrivals at about 21 May, there was a steady decline in the proportion arriving at each sampling period. There was no evidence of a wave of late-arriving birds, a pattern that has been evident in some past years. Nevertheless, a substantial fraction of the total stopover population arrived after 21 May. The sampling occasions from 24 May to the end of the season, when taken together, accounted for approximately 30% of all birds in the stopover population.

Stopover persistence is the probability that a bird present in the bay during sampling occasion i is present in the bay at sampling occasion $i + 1$. Estimated stopover persistence was relatively high during the first half of the season; there was a slight decrease in stopover persistence, indicating some turnover in the population, around 21-24 May (Fig. 1b). After 24 May there was a large drop in stopover persistence, when a large fraction of the stopover population departed the study area. Following Lyons et al. (2016), we used the Jolly-Seber model to estimate stopover duration. In 2018, estimated average stopover duration was 9.7 days (95% CI 9.3–10.1 days).

Unlike 2017, when probability of resighting was relatively constant and relatively high (Appendix 5, Fig. A5c), in 2018, probability of resighting was highly variable among the survey periods (Fig. 1c). Resighting probability was low early in the season and then again during 17-22 May. During 17-19 May, the weather was cold and rainy, and some observers noted that poor weather had impacted survey efforts. (Appendix 6).

The estimated proportion of the 2016 stopover population with marks (leg flags) was 0.107 (95% CI 0.093–0.123, Fig. 2), slightly greater than the 2017 estimate (0.099). The estimated proportion marked was slightly greater than average in the early part of the season, and lowest in survey period 4 (Fig. 2).

5 Stopover Population Estimation

The passage population size in 2018 was estimated at 45,221 (95% CI: 42,568–49,508), slightly lower than the estimate in 2017 (49,405 [46,368–53,109]). This superpopulation estimate accounts for turnover in the population and probability of detection.

The time-specific stopover population estimates in 2018 increased steadily between 10 and 23 May, peaked around 23–25 May at 26,762 birds (23,988–30,022), and then declined steadily until nearly all birds had departed the study area in early June (Fig. 1d).

Aerial surveys in 2018.—The aerial survey conducted on 23 May 2018 detected 32,930 birds, a substantial increase from the aerial survey index in 2017 and greatest index since 2011 (Table 2). The aerial survey total was approximately 23% greater than the mark-resight estimate (26,762) for the corresponding 23–25 May mark-resight survey period (Table 3, Fig. 1d). The second aerial survey of 2018, on 26 May, resulted in a count of 21,200 birds, which was similar to the corresponding mark-resight estimate (21,543) for the survey period 26–28 May.

6 References

- Clark, N.A., S. Gillings, A.J. Baker, P.M. González, and R. Porter. 2005. The production and use of permanently inscribed leg flags for waders. *Wader Study Group Bull.* 108: 38–41.
- Lyons, J.E., W.P. Kendall, J.A. Royle, S.J. Converse, B.A. Andres, and J.B. Buchanan. 2016. Population size and stopover duration estimation using mark-resight data and Bayesian analysis of a superpopulation model. *Biometrics* 72:262–271.
- Lyons, J.E. 2016. Study design guidelines for mark-resight investigations of Red Knots in Delaware Bay. Unpublished report. 13 pp.

Table 3. Number of Red Knot detected during aerial and ground surveys of Delaware Bay in 2018. Data provided by A. Dey, New Jersey Division of Fish and Wildlife, Nongame and Endangered Species Program.

	Delaware	New Jersey	Total
Aerial Surveys			
23 May 2018	7,010	25,920	32,930
26 May 2018	11,500	9,700	21,200
Ground Surveys			
23 May 2018	6,239	24,338	30,577
26 May 2018	12,563	8,409	20,972

Table 4. Stopover (passage) population estimate using mark-resight methods compared to peak-count index using aerial- or ground-survey methods. The mark-resight estimate of stopover (passage) population accounts for population turnover during migration; peak-count index, a single count on a single day, does not account for turnover.

Year	Stopover population ^a (mark-resight N^*)	95% CI Stopover pop- ulation N^*	Peak-count index [aerial (A) or ground (G)]
2011	43,570	(40,880–46,570)	12,804 (A) ^b
2012	44,100	(41,860–46,790)	25,458 (G) ^c
2013	48,955	(39,119–63,130)	25,596 (A) ^d
2014	44,010	(41,900–46,310)	24,980 (A) ^c
2015	60,727	(55,568–68,732)	24,890 (A) ^c
2016	47,254	(44,873–50,574)	21,128 (A) ^b
2017	49,405 ^e	(46,368–53,109)	17,969 (A) ^f
2018	45,221	(42,568–49,508)	32,930 (A) ^b

^a estimate for entire season, including population turnover

^b 23 May

^c 24 May

^d 28 May

^e Data management procedures to reduce bias from recording errors in the field; data from observers with greater than average misread rate were not included in the analysis

^f 26 May

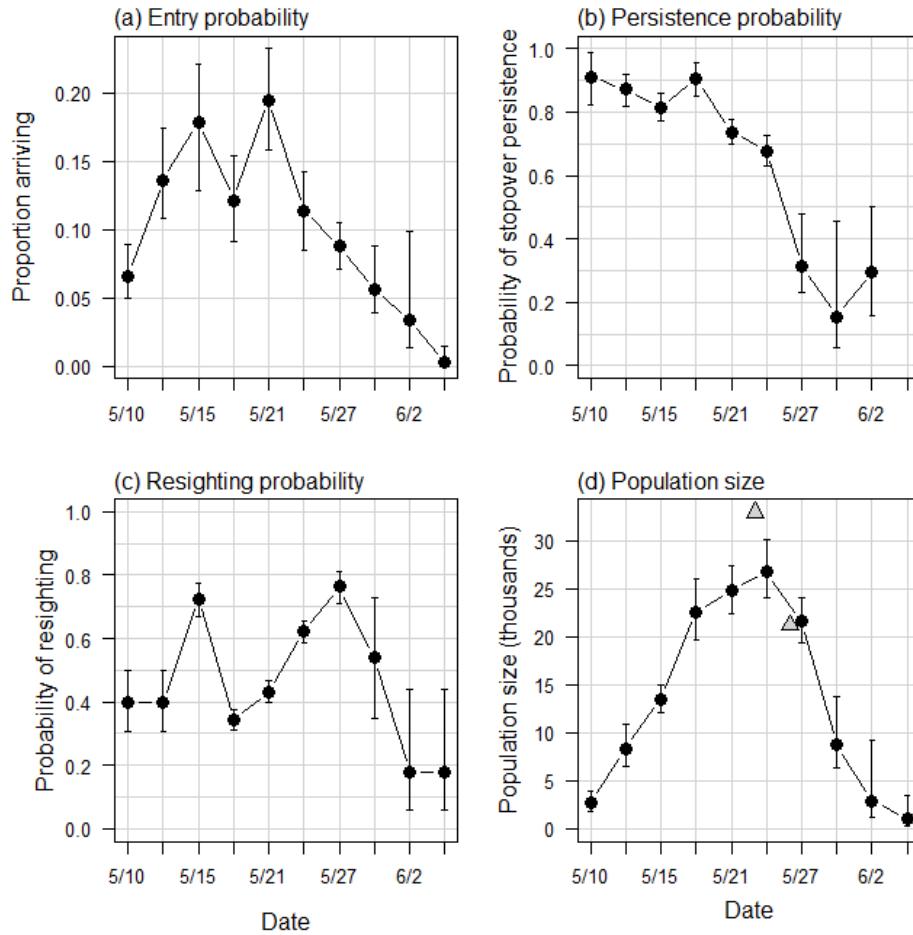


Figure 1. Estimated Jolly-Seber (JS) model parameters from a mark-resight study of Red Knots in Delaware Bay in 2018: (a) proportion of stopover population arriving in Delaware Bay, (b) stopover persistence, (c) probability of resighting, and (d) time-specific stopover population size. Dates on the x-axis represent sampling occasions (3-day survey periods). Triangles in (d) are total counts made by aerial survey on 23 and 26 May 2018.

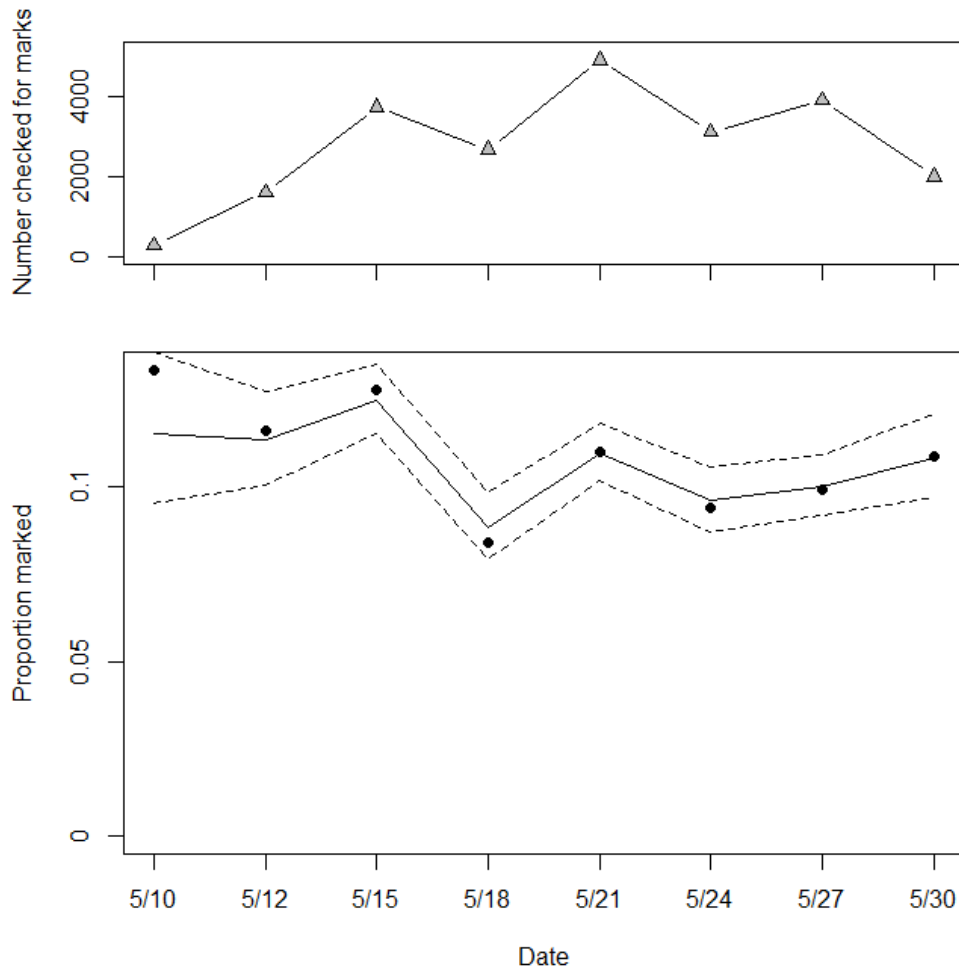


Figure 2. Estimated proportion of the Delaware Bay stopover population that has leg flags in 2018. Marked proportion was estimated from marked-ratio scan samples for each 3-day sampling period. The dates for the sampling periods are shown in Table 1. Sample size (number scanned, i.e., checked for marks) for each sample period is shown in the upper panel. The estimated proportion marked at each sample occasion (bottom panel) was estimated with the generalized linear mixed model described in Appendix 2. Solid and dashed lines are median proportion marked and 95% CI; circles show (number with marks/number scanned).

Appendix 1. Summary of 2018 mark-resight data (“m-array”). NR = never resighted.

Sample	Dates	Resighted	Next resighted at sample										NR
			2	3	4	5	6	7	8	9	10		
1	7-10 May	125	47	37	2	8	2	4	0	0	0	25	
2	11-13 May	376		244	13	15	23	2	0	0	0	79	
3	14-16 May	1224			356	228	155	60	4	0	0	421	
4	17-19 May	671				290	130	50	3	0	0	198	
5	20-22 May	1172					553	149	14	0	0	456	
6	23-25 May	1586						828	34	3	0	721	
7	26-28 May	1644							281	4	2	1357	
8	29-31 May	511								15	3	493	
9	1-3 June	57									5	52	

Appendix 2. Statistical Methods to Estimate Stopover Population Size Using Mark-Resight Data and Counts of Marked Birds

We converted the observations of marked birds into encounter histories, one for each bird, and analyzed the encounter histories with a Jolly-Seber (JS) model (Jolly 1965, Seber 1965, Crosbie and Manly 1985, Schwarz and Arnason 1996). The JS model includes parameters for recruitment (β), survival (ϕ), and capture (p) probabilities; in the context of a mark-resight study at a migration stopover site, these parameters are interpreted as probability of arrival to the study area, stopover persistence, and resighting, respectively. Stopover persistence is defined as the probability that a bird present at time t remains at the study area until time $t + 1$. The Crosbie and Manley (1985) and Schwarz and Arnason (1996) formulation of the JS model also includes a parameter for superpopulation size, which in our approach to mark-resight inferences for stopover populations is an estimate of the marked (leg-flagged) population size.

We chose to use 3-day periods rather than days as the sampling interval for the JS model given logistical constraints on complete sampling of the study area; multiple observations of the same individual in a given 3-day period were combined for analysis. A summary (m-array) of the mark-resight data is presented in an appendix.

We made inference from a fully-time dependent model; arrival, persistence, and resight probabilities were allowed to vary with sampling period [$\beta_t \phi_t p_t$]. In this model, we set $p_1 = p_2$ and $p_{K-1} = p_K$ (where K is the number of samples) because not all parameters are estimable in the fully-time dependent model (Jolly 1965, Seber 1965, Crosbie and Manly 1985, Schwarz and Arnason 1996).

We followed the methods of Royle and Dorazio (2008) and Kéry and Schaub (2012, Chapter 10) to fit the JS model using the restricted occupancy formulation. Royle and Dorazio (2008) use a state-space formulation of the JS model with parameter-expanded data augmentation. For parameter-expanded data augmentation, we augmented the observed encounter histories with all-zero encounter histories ($n = 2000$) representing potential recruits that were not detected (Royle and Dorazio 2012). We followed Lyons et al. (2016) to combine the JS model with a binomial model for the counts of marked and unmarked birds in an integrated Bayesian analysis. Briefly, the counts of marked birds (m_s) in the scan samples are modeled as a binomial random variable:

$$m_s \sim \text{Bin}(C_s, \pi), \quad (1)$$

where m_s is the number of marked birds in scan sample s , C_s is the number of birds checked for marks in scan sample s , and π is the proportion of the population that is marked. Total stopover population size \widehat{N}^* is estimated by

$$\widehat{N}^* = \widehat{M}^* / \widehat{\pi} \quad (2)$$

where \widehat{M}^* is the estimate of marked birds from the J-S model and $\widehat{\pi}$ is the proportion of the population that is marked (from Eq. 1). Estimates of marked subpopulation sizes at each resighting occasion t (\widehat{M}_t^*) are available as derived parameters in the analysis. We calculated an estimate of population size at each mark-resight sampling occasion \widehat{N}_t^* using \widehat{M}_t^* and $\widehat{\pi}$ as in equation 2.

To better account for the random nature of the arrival of marked birds and addition of new marks during the season, we used a time-specific model for proportion with marks in place of equation 1 above:

$$m_{s,t} \sim \text{Binomial}(C_{s,t}, \pi_t) \quad (3)$$

for s in $1, \dots, n_{\text{samples}}$ and t in $1, \dots, n_{\text{occasions}}$

$$\text{logit}(\pi_t) = \alpha + \delta_t$$

$$\delta_t \sim \text{Normal}(0, \sigma_{\text{occasions}}^2)$$

where m_s is the number of marked birds in scan sample s , C_s is the number of birds checked for marks in scan sample s , δ_t is a random effect time of sample s , and π_t is the time-specific proportion of the population that is marked. Total stopover population size \widehat{N}^* was estimated by summing time-specific arrivals of marked birds to the stopover (B_t) and expanding to include unmarked birds using estimates of proportion marked:

$$\widehat{N}^* = \sum \widehat{B}_t / \pi_t$$

Time-specific arrivals of marked birds are estimated from the Jolly-Seber model using $\widehat{B}_t = \widehat{\beta}_t \widehat{M}^*$ where \widehat{M}^* is the estimate of the number of marked birds and $\widehat{\beta}_t$ is the fraction of the population arriving at time t .

Appendix 3. Number of marked-ratio scan samples.

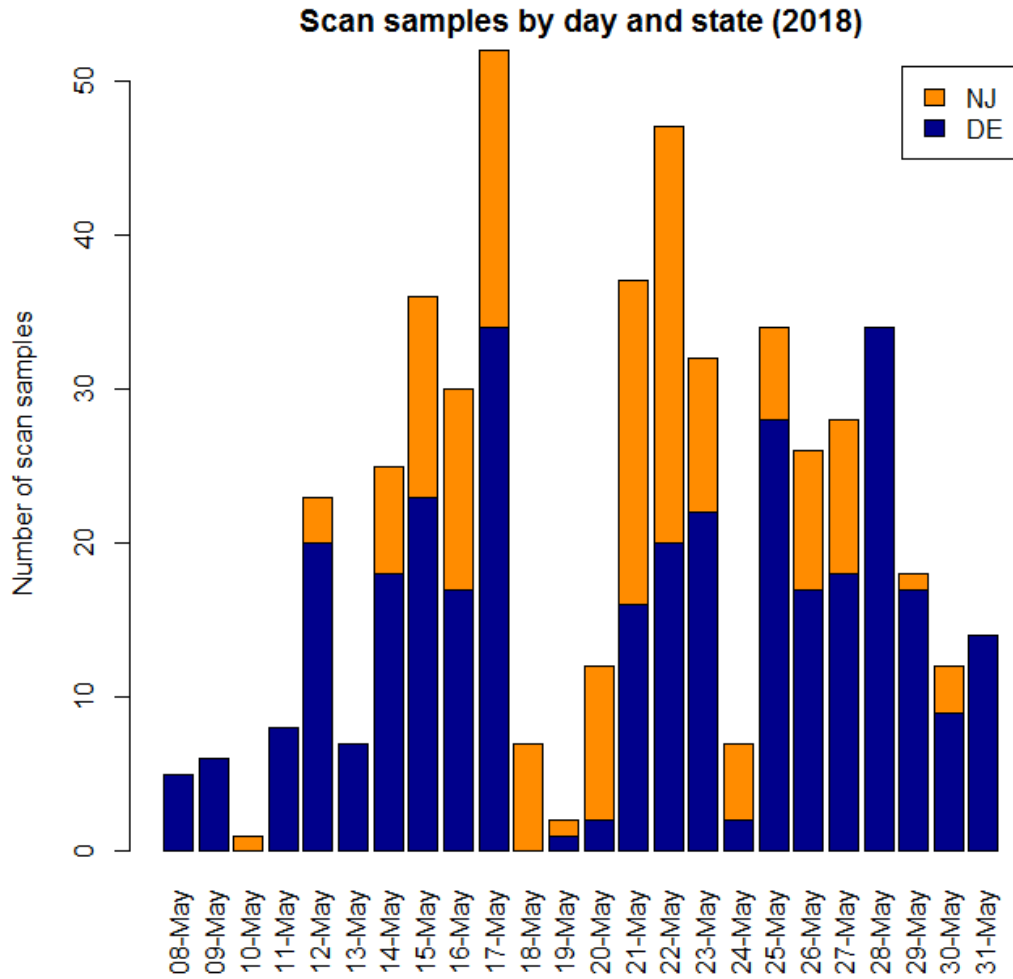


Figure A3.1. Number of marked-ratio scan samples collected in Delaware Bay in 2018 by field crews in Delaware (blue) and New Jersey (orange). In 2018, observers in Delaware and New Jersey collected 337 and 165 scan samples, respectively.

Table A3.1. Number of scan samples in each survey period (all DE and NJ sites). Red cells indicate no data. In many survey periods, scan samples were collected at only a fraction of all sites and may not be representative of the entire population. No scan samples were collected in the last two survey periods (9 & 10).

	< 10 May	11-13 May	14-16 May	17-19 May	20-22 May	23-25 May	26-28 May	29-31 May	1-3 June	4-6 June	
	Survey Period										
Location	1	2	3	4	5	6	7	8	9	10	Total
brockenbridge gut	0	0	1	0	1	1	0	2	0	0	5
cooksnorth	0	0	11	13	16	0	1	0	0	0	41
cookssouth	0	0	0	2	0	0	0	0	0	0	2
eastpt	0	0	1	0	2	0	0	0	0	0	3
fortes	0	0	6	0	2	8	0	4	0	0	20
fowler's beach	0	0	0	0	0	0	0	2	0	0	2
kimble	0	0	0	0	2	0	0	0	0	0	2
kimblenorth	0	0	3	1	3	0	2	0	0	0	9
kimblesouth	0	0	6	0	20	11	8	0	0	0	45
kitts hummock beach	0	0	0	0	0	0	3	0	0	0	3
mispillion harbor	10	33	54	34	34	50	65	36	0	0	316
norbury	0	0	2	0	0	0	1	0	0	0	3
norburycrk	0	0	4	0	3	0	0	0	0	0	7
north bowers beach	0	2	0	0	0	0	0	0	0	0	2
pickering beach	0	0	0	0	1	0	0	0	0	0	1
pierces	0	0	0	10	0	2	7	0	0	0	19
primehook beach	0	0	2	0	0	1	1	0	0	0	4
reedssouth	1	3	0	0	10	0	0	0	0	0	14
south bowers beach	0	0	1	0	2	0	0	0	0	0	3
ted harvey wildlife	0	0	0	1	0	0	0	0	0	0	1
Total scan samples	11	38	91	61	96	73	88	44	0	0	502
Number of sites with ratio samples	2	3	11	6	12	6	8	4	0	0	

Appendix 4 Minimum length-of-stay

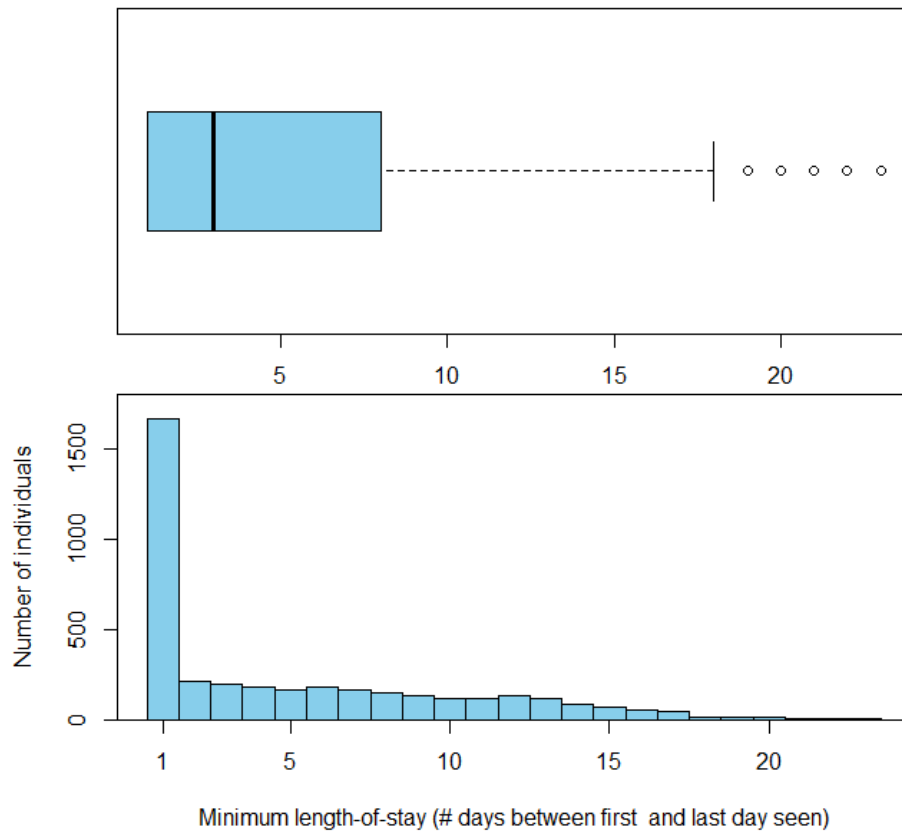


Figure A5. Minimum length-of-stay (MINLOS) in 2018 ($n = 3,820$ birds). This is a plot of raw data and is not a model-based estimate. MINLOS does not account for time present in the study area before first detection, or after last detection, and therefore is biased low as an estimate of true stopover duration. The mean and median MINLOS in 2018 were 5.0 and 3 days, respectively. Model-based estimates of stopover duration suggest that stopover duration in 2018 was approximately 9.7 days.

Appendix 5. 2017 Superpopulation

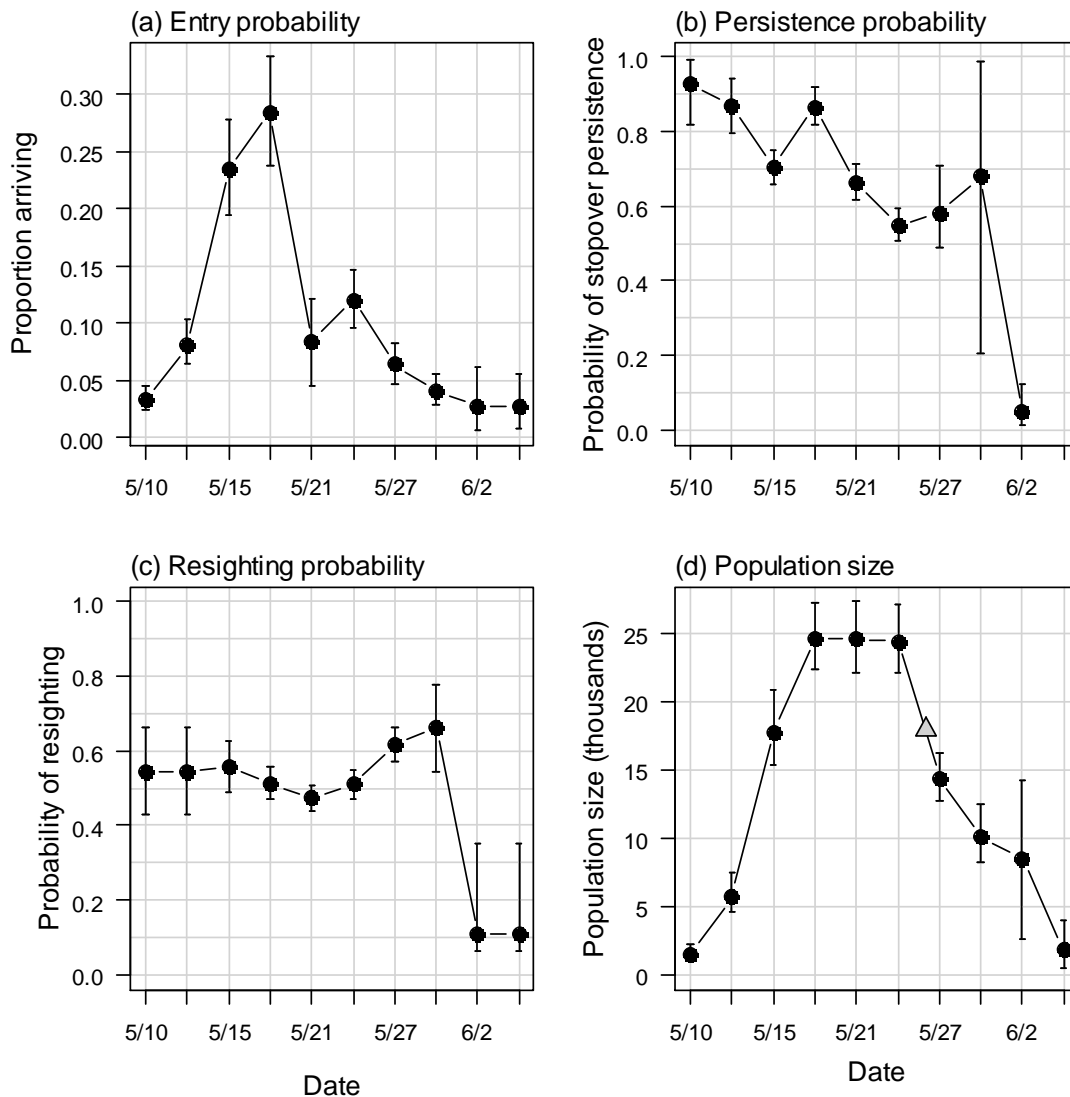
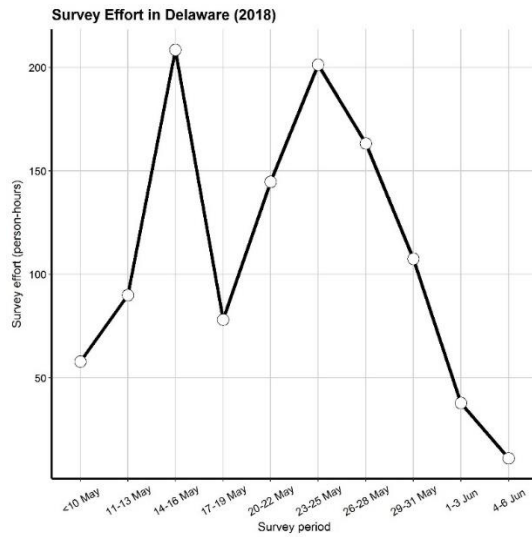


Figure A5. Estimated parameter values at sampling points throughout **the 2017 season** for Red Knot stopover population analysis at Delaware Bay using mark-resight data and the Jolly-Seber model for open populations: (a) proportion of stopover population arriving in Delaware Bay, (b) stopover persistence, (c) probability of resighting, and (d) time-specific stopover population size. Triangle in (d) is total count made by aerial survey on 26 May 2017.

Appendix 6



Site	Period										Total	
	1	2	3	4	5	6	7	8	9	10		
Big Stone Beach	0	0	0	0	1	0	0	0	0	0	0	1
Brockenbridge Gut	1	1	2	1	1	1	1	1	1	1	0	10
Cedar Beach	0	1	0	0	0	0	0	0	0	0	0	1
Fowlers Beach	1	1	1	1	1	2	2	1	1	1	0	11
Kitts Hummock Beach	1	1	1	1	1	1	2	1	1	0	0	10
Mispillion Harbor	6	6	7	4	6	6	7	5	1	1	1	49
North Bowers Beach	0	1	1	1	1	1	1	1	1	0	0	8
Pickering Beach	2	1	1	1	1	1	1	1	1	1	0	10
Port Mahon	1	1	1	1	1	1	1	1	1	0	0	9
Primehook Beach	2	2	5	2	6	5	3	3	1	0	0	29
Slaughter Beach	2	1	1	2	1	2	1	1	1	0	0	12
South Bowers Beach	2	1	1	1	2	1	1	1	1	0	0	11
Ted Harvey Wildlife Management Area	1	1	1	1	1	2	1	1	1	0	0	10
Total number of sites surveyed	10	12	11	11	12	11	11	11	11	1	0	101

Figure A6. (top left) Mark-resight survey effort in Delaware during 2018. The data were aggregated into the same 3-day periods used for the mark-resight analysis to estimate population size. The weather during 17-19 May was cold and rainy and may have caused reduced sampling effort in the study area. The relatively low survey effort during this period corresponds to a relatively low estimated probability of resighting at this time (see Figure 1c). (bottom) Number of surveys at each site. While Mispillion Harbor and Primehook Beach were surveyed more than other sites, nearly every site was visited in nearly every survey period. These data were provided by A. DeRose-Wilson and are for Delaware sites only.

Horseshoe Crab Harvest Recommendations Based on Adaptive Resource Management (ARM) Framework and Most Recent Monitoring Data

Report to the Delaware Bay Ecosystem Technical Committee by the ARM Subcommittee

October 2018

This report summarizes annual harvest recommendations. Detailed background on the ARM framework and data sources can be found in previous technical reports¹.

Objective statement

Manage harvest of horseshoe crabs in the Delaware Bay to maximize harvest but also to maintain ecosystem integrity and provide adequate stopover habitat for migrating shorebirds.

Alternative harvest packages

These harvest packages were compared to determine which will best meet the above objective given the most recent monitoring data. Harvest is of adult horseshoe crabs of Delaware Bay origin.

Harvest package	Male harvest (×1,000)	Female harvest (×1,000)
1	0	0
2	250	0
3	500	0
4	280	140
5	420	210

Population models

Population dynamics models that link horseshoe crabs and red knots were used to predict the effect of harvest packages. Three variations in the models represent the amount and type of dependence between horseshoe crabs and red knots. Stochastic dynamic programming was used to create a decision matrix to identify the optimal harvest package given the most recent monitoring data.

Monitoring data

Sources of data for horseshoe crab abundance were a set of trawl surveys conducted by Virginia Tech University.² Red Knot abundance estimates are taken from a mark-resight estimate for red knot abundance³. These data and methods can be evaluated in the respective reports from those studies.

Horseshoe crab abundance (millions)			Red knot abundance (×1,000)	
Year	Male	Female	Year	Male and female
2017 (Fall)	19.9	8.4	2018 (Spring)	45.22

Harvest recommendations

Decision matrix was optimized incorporating recommendations on red knot stopover population estimates and associated calibration of red knot threshold⁴.

Recommended harvest package	Male harvest (×1,000)	Female harvest (×1,000)
3	500	0

Quota of horseshoe crab harvest for Delaware Bay region states. Allocation of allowable harvest under ARM package 3 (500K males, 0 females) was conducted in accordance with management board approved methodology in *Addendum VII to the Interstate Fishery Management Plan for Horseshoe Crabs*. Note: Maryland and Virginia total quota refer to that east of the COLREGS line.

State	Delaware Bay Origin HSC Quota		Total Quota	
	Male	Female	Male	Female
Delaware	162,136	0	162,136	0
New Jersey	162,136	0	162,136	0
Maryland	141,112	0	255,980	0
Virginia	34,615	0	81,331	0

References

- ¹ McGowan, C. P., D. R. Smith, J. D. Nichols, J. Martin, J. A. Sweka, J. E. Lyons, L. J. Niles, K. Kalasz, R. Wong, J. Brust, M. Davis. 2009. A framework for the adaptive management of horseshoe crab harvests in the Delaware Bay constrained by Red Knot conservation. Report to the Atlantic States Marine Fisheries Commission Horseshoe Crab Technical Committee.
ASMFC Horseshoe Crab Stock Assessment Subcommittee. 2009. Horseshoe crab 2009 stock assessment report. Report to the Atlantic States Marine Fisheries Commission Horseshoe Crab Technical Committee.
ASMFC 2009. Terms of Reference and Advisory Report to the Horseshoe Crab Stock Assessment Peer Review. Stock Assessment Report No. 09-02.
- ² Virginia Tech Trawl Survey report, January 22, 2018
- ³ Jim Lyons' 2018 estimate in the 27 August, 2018 Memo
- ⁴ ARM's recommendations for improved estimates of red knot stopover population size and associated calibration of red knot threshold



Atlantic States Marine Fisheries Commission

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MEMORANDUM

October 3, 2018

To: Horseshoe Crab Management Board
From: Tina Berger, Director of Communications
RE: Advisory Panel Nomination

Please find attached a new nomination to the Horseshoe Crab Advisory Panel – Lawrence Voss, a commercial pot fishermen from Delaware. 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: Mike Schmidtke

M18-89

HORSESHOE CRAB ADVISORY PANEL

Bolded names await approval by the Horseshoe Crab Management Board
Bolded and italicized name denotes Advisory Panel Chair

October 9, 2018

Massachusetts

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Appt. Confirmed 4/7/98
Appt. Reconfirmed 10/02; 10/06; 5/10; 8/18
Participation: Active

Brett Hoffmeister (biomedical)
Associates of Cape Cod
331 Barlows Landing Row
Pocasset, MA 02559
Phone (day): 508.444.1426
BHoffmeister@acciusa.com
Appt Confirmed 2/3/16
Appt. Reconfirmed 8/18
Participation: Active

Rhode Island

Vacancy (comm/otter trawl)

New York

John L. Turner (conservation)
10 Clark Bouelvard
Massapequa, NY 11762
Phone (day): 631.451.6455
Phone (eve): 516.797.9786
redknot@optonline.net
Appt. Confirmed 2/10/05
Appt Reconfirmed 5/10
Participation: Active; attended last meeting in 2016 (only one meeting since)

Peter Wenczel (pot/conch)
675 West Shore Drive
Southold, NY 11971
Phone: 631.765.5669
pwenczel@optonline.net
Appt. Confirmed 4/7/98
Appt. Reconfirmed 10/02
Appt. Reconfirmed 10/06
Appt Reconfirmed 5/10

Participation: Inactive; attended last meeting in 2010

New Jersey

Benjie Swan (biomedical)
Limuli Laboratories
Dias Creek, 5 Bay Avenue
Cape May Courthouse, NJ 08210-2556
Phone: 609.465.6552
Swan24@verizon.net
Appt. Confirmed 8/5/10
Participation: Active

Delaware

Lawrence Voss (comm./pot)
3215 Big Oak Road
Smyrna, DE 19977
Phone: (302)359-0951
shrlvss@aol.com

2 vacancies - dealer/processor & conservation/environmental

Maryland

George Topping (comm/trawl)
32182 Bowhill Road
Salisbury, MD 21804
Phone: 443.497.2141
george@zztopping.com
Appt. Confirmed 5/16
Participation: Active

Jeffrey Eutsler (comm/trawl)
11933 Gray's Corner Road
Berlin, MD 21811
Phone: 443.497.3078
jeffeutsler@me.com
Appt. Confirmed 2/4/98
Appt. Reconfirmed 10/02
Appt. Reconfirmed 10/06
Appt Reconfirmed 5/10
Participation: Active

William R. Legg (comm/pot/eel)
110 Rebel Road
Grasonville, MD 21638
Phone: 410.820.5841
Appt. Confirmed 4/7/98
Appt. Reconfirmed 10/02
Appt. Reconfirmed 10/06
Appt Reconfirmed 5/10
Participation: Inactive; attended last meeting in 1998

Allen L. Burgenson (biomedical)
8875 Hawbottom Road
Middletown, MD 21769
Phone: 301.378.1263
allen.burgenson@lonza.com
Appt. Confirmed 8/21/08
Participation: Active

Virginia

Richard B. Robins, Jr. (processor/dealer)
3969 Shady Oaks Drive
Virginia Beach, VA 23455
Phone (day): 757.244.8400
Phone (eve): 757.363.9506
richardbrobins@gmail.com
Appt. Confirmed: 2/9/00
Appt. Reconfirmed 1/2/06
Appt Reconfirmed 5/10
Participation: Active

1 vacancy - comm/pot/conch

South Carolina

Chair -- Dr. James F. Cooper (biomedical)
P.O. Box 9435
Greensboro, NC 27429-0435
Alternate address:
400 Club Course Drive
N. Charleston, SC 29420
Phone: 842.795.7316
jimandfran@earthlink.com
Appt. Confirmed 5/21/97
Appt. Reconfirmed 10/1/01

Appt. Reconfirmed 1/2/05
Appt. Reconfirmed 5/10
Participation: Active

Cindy Sires (comm/pot/trawl)
7609 White Point Road
Yonges Island, SC 29449
Phone: 843.607.3287
troubleyi@aol.com
Appt. Confirmed 8/5/10
Participation: Inactive; never attended meeting since appt in 2010

Nontraditional Stakeholders

Jeff Shenot
7900 McClure Road
Upper Marlboro, MD 20772
Phone: 301.580.4524
JUGBAY@msn.com
Appt. Confirmed 8/2018

Walker Golder
7741 market Street, Unit D
Wilmington, NC 28411-9444
Phone (day): 910.686.7527
Phone (eve): 910.619.6244
wgolder@audubon.org
Appt. Confirmed 8/2018

At-Large Seats

Tim Brush (hydropower)
Normandeu Associates
917 Route 12, #1
Westmoreland, NH 03467
603-355-2333
603-355-2332 fax
tbrush@normandeu.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: John Clark State: Delaware
(your name)

Name of Nominee: Lawrence H. Voss

Address: 3215 Big Oak Road

City, State, Zip: Smyrna, DE 19977

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

Phone (day): 302-359-0951 Phone (evening): same

FAX: _____ Email: shrlyvss@aol.com

FOR ALL NOMINEES:

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

- 1. American Eel
- 2. Horseshoe Crab
- 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?

American Eel

Striped Bass

Horseshoe Crab

Atlantic Menhaden

Blue Crab

American Oyster

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

In addition to the above:

Weakfish

White Perch

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 X no _____

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

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

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.

Nominee Signature: Lawrence H. Voss

Date: 9/25/18

Name: Lawrence H. Voss
(please print)

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

[Signature]
State Director

[Signature]
State Legislator

[Signature]
Governor's Appointee

Atlantic States Marine Fisheries Commission

Summer Flounder, Scup, and Black Sea Bass Management Board

October 24, 2018
1:30 - 3:30 p.m.
New York, New York

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>R. Ballou</i>) | 1:30 p.m. |
| 2. Board Consent | 1:30 p.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from August 2018 | |
| 3. Public Comment | 1:35 p.m. |
| 4. Review Ongoing Board Activities and Actions (<i>C. Starks</i>) | 1:45 p.m. |
| 5. Consider Approval of Draft Addendum XXXII (Black Sea Bass and Summer Flounder Recreational Management) for Public Comment (<i>C. Starks and K. Rootes-Murdy</i>) Action | 2:00 p.m. |
| 6. Progress Update on Black Sea Bass Commercial Working Group (<i>C. Starks</i>) Possible Action | 3:00 p.m. |
| 7. Review and Populate Advisory Panel Membership (<i>T. Berger</i>) Action | 3:25 p.m. |
| 8. Other Business/Adjourn | 3:30 p.m. |

The meeting will be held at the Roosevelt Hotel, 45 East 45th Street & Madison Avenue, New York, NY; 212.661.9600

MEETING OVERVIEW

Summer Flounder, Scup, and Black Sea Bass Management Board

October 24, 2018

1:30 - 3:30 p.m.

New York, New York

Chair: Bob Ballou (RI) Assumed Chairmanship: 10/17	Technical Committee Chair: Greg Wojcik (CT)	Law Enforcement Committee Representative: Snellbaker (NJ)
Vice Chair: Adam Nowalsky	Advisory Panel Chair: Vacant	Previous Board Meeting: August 8, 2018
Voting Members: NH, MA, RI, CT, NY, NJ, DE, MD, PRFC, VA, NC, NMFS, USFWS (13 votes for Black Sea Bass; 12 votes for Summer Flounder and Scup)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from April and May 2018

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

4. Review of Ongoing Board Activities and Actions (1:45-2:00 p.m.)

Background

- Since April, Board and Council members, ASMFC, Council and NOAA staff have been developing short and long term strategies to reform recreational black sea bass management. This work will continue through the end of 2018 and into 2019.
- Two draft addenda are currently in development. Draft Addendum XXXI addresses conservation equivalency, Block Island Sound transit, and slot limits, and was approved for public comment in August. Draft Addendum XXXII proposes recreational management options for summer flounder and black sea bass. If approved for public comment, public hearings for both documents will be scheduled for November 2018.
- A working group consisting of several Board members was formed in August to address commercial management issues for black sea bass fishery.

Presentations

- Review of Ongoing Board Activities and Actions by C. Starks

5. Consider Approval of Draft Addendum XXXII (Black Sea Bass and Summer Flounder Recreational Management) for Public Comment (2:00-3:00 p.m.) Action

Background

- In May, the Board initiated Draft Addendum XXXII to specify recreational management for black sea bass for 2019 and beyond; the Board added summer flounder recreational management to the Draft Addendum in August.
- A working group consisting of Board members and ASMFC staff met twice in September to develop management options for inclusion in the draft addendum based on Board feedback.
- Draft Addendum XXXII proposes several options for summer flounder and black sea bass recreational management, including status quo state allocations for summer flounder, coastwide measures for black sea bass, and setting measures through a specifications process for both species. **(Briefing Materials)**

Presentations

- Draft Addendum XXXII for Black Sea Bass and Summer Flounder Recreational Management by C. Starks and K. Rootes-Murdy

Board Actions for Consideration

- Approve Draft Addendum XXXII for public comment

6. Progress Update on Black Sea Bass Commercial Working Group (3:00-3:25 p.m.)

Background

- In August, the Board created a working group to address commercial management issues for black sea bass fishery.
- The working group met in September to propose issues, goals and objectives for commercial black sea bass management. **(Briefing Materials)**

Presentations

- Black Sea Bass Commercial Working Group Report by C. Starks

7. Summer Flounder, Scup, and Black Sea Bass Advisory Panel Membership (3:25 – 3:30 p.m.) Action

Background

- Kurt Martin from Massachusetts; and Brent Fulcher and James Ruhle from North Carolina have been nominated to the Summer Flounder, Scup, and Black Sea Bass Advisory Panel.

Presentation

- Nominations by T. Berger **(Briefing Materials)**

Board Actions for Consideration at this Meeting

- Approve Summer Flounder, Scup, and Black Sea Bass Advisory Panel nominations

8. Other Business/Adjourn

Summer Flounder, Scup, & Black Sea Bass 2018 TC Tasks

Activity level: High

Committee Overlap Score: High (Multi-species committees for this Board)

Committee Task List

- November 2018: webinar meeting to recommend 2019 federal rec measures for scup and black sea bass
- 2018 Summer Flounder Benchmark Stock Assessment
 - November 2018: Assessment Peer Review
- January-March 2019: Development of summer flounder and black sea bass rec measures

Summer Flounder SAW Working Group: Tiffany Cunningham, Jason McNamee, Mark Terceiro

TC Members: Greg Wojcik (CT, TC Chair), Julia Beaty (MAFMC), Sydney Allhale (VA), Peter Clarke (NJ), Kiley Dancy (MAFMC), Justin Davis (CT), Steve Doctor (MD), Emily Gilbert (NOAA), Jeff Kipp (ASMFC), John Maniscalco (NY), Jason McNamee (RI), Kirby Rootes-Murdy (ASMFC), Gary Shepherd (NOAA), Caitlin Starks (ASMFC), Mark Terceiro (NOAA), Todd VanMiddlesworth (NC), Tiffany Cunningham (MA, TC Vice Chair), Richard Wong (DE)

DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
SUMMER FLOUNDER, SCUP AND BLACK SEA BASS MANAGEMENT BOARD

The Westin Crystal City
Arlington, Virginia
August 8, 2018

These minutes are draft and subject to approval by the Summer Flounder, Scup and
Black Sea Bass Management Board.
The Board will review the minutes during its next meeting.

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

TABLE OF CONTENTS

Call to Order, Chairman Robert Ballou	1
Approval of Agenda	1
Approval of Proceedings, April 2018	1
Public Comment.....	1
Update on the Strategic Plan for Black Sea Bass Management.....	1
Consider Options for Recreational Management	
Black Sea Bass.....	6
Summer Flounder	23
2018 Fishery Management Plan Reviews and State Compliance Reports for Summer Flounder, Scup, and Black Sea Bass.....	32
Other Business	32
Advisory Panel Nominations.....	32
Research Set Aside	33
Adjournment.....	36

INDEX OF MOTIONS

1. **Approval of agenda** by consent (Page 1).
2. **Approval of Proceedings of the April 30, 2018 Summer Flounder, Scup, and Black Sea Bass Board joint meeting with the Mid-Atlantic Fishery Management Council Board's as well as the Board's May 3, 2018 meeting** (Page 1).
3. **Move that non-compliance issues be removed from further development from draft Addendum XXXII for 2019 for recreational black sea bass and be considered with joint federal measures** (Page 21). Motion by Adam Nowalsky; second by Rob O'Reilly. Motion postponed.
4. **Move to postpone until the joint meeting with the MAFMC in August 2018** (Page 22). Motion by Eric Reid; second by Raymond Kane. Motion carried (Page 22).
5. **Move that the Summer Flounder, Scup, Black Sea Bass Board create a working group and request to meet with the Mid-Atlantic Fishery Management Council's Research Steering Committee to examine the possibility of reestablishing the Research Set Aside program** (Page 33). Motion by Emerson Hasbrouck; second by Eric Reid. Motion carried (Page 35).
6. **Move to adjourn** by consent (Page 36).

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

ATTENDANCE

Board Members

Nichola Meserve, MA, proxy for D. Pierce (AA)	Roy Miller, DE (GA)
Raymond Kane, MA (GA)	John Clark, DE, proxy for D. Saveikis (AA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
Bob Ballou, RI (Chair)	Dave Blazer, MD (AA)
David Borden, RI (GA)	Russell Dize, MD (GA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Ed O'Brien, MD, proxy for Del. Stein (LA)
Matt Gates, CT, proxy for P. Arrestad (AA)	Rob O'Reilly, VA, proxy for S. Bowman (AA)
Sen. Craig Miner, CT (LA)	Bryan Plumlee, VA (GA)
Maureen Davidson, NY, proxy for J. Gilmore (AA)	Sen. Monty Mason, VA (LA)
Emerson Hasbrouck, NY (GA)	Chris Batsavage, NC, proxy for S. Murphey (AA)
John McMurray, NY, proxy for Sen. Boyle (LA)	Mike Blanton, NC, proxy for Rep. Steinburg (LA)
Joe Cimino, NJ, proxy for L. Herrighty (AA)	Mike Ruccio, NMFS
Tom Fote, NJ (GA)	Marty Gary, PRFC
Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)	Mike Millard, USFWS

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

Ex-Officio Members

Staff

Robert Beal	Caitlin Starks
Toni Kerns	Jessica Kuesel
Kirby Rootes-Murdy	Megan Ware

Guests

Heather Corbett, NJ DFW	Desmond Kahn, Newark, DE
Kiley Dancy, MAFMC	Aaron Kornbluth, PEW Trusts
Arnold Leo, E. Hampton, NY	Paul Perry, Gloucester, MA
Jonathan Hare, NOAA	

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

The Summer Flounder, Scup and Black Sea Bass Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Hotel, Arlington, Virginia, Wednesday, August 8, 2018, and was called to order at 2:30 o'clock p.m. by Chairmen Robert Ballou.

CALL TO ORDER

CHAIRMAN ROBERT BALLOU: *(We join the meeting already in progress)*

APPROVAL OF AGENDA

CHAIRMAN BALLOU: Does anyone on the Board have any recommended modifications to the agenda? Chris Batsavage.

MR. CHRIS BATSAVAGE: Maybe under Other Business we'll want to discuss Advisory Panel nominations; or at least potential Advisory Panel nominations, please.

CHAIRMAN BALLOU: Sure, we'll do that under Other Business. Any other recommended changes? Emerson Hasbrouck.

MR. EMERSON C. HASBROUCK: Yes under new business I have a brief item I would like to bring up; thank you.

CHAIRMAN BALLOU: Do you want to just give us, what item would that be? What would be the name of the item?

MR. HASBROUCK: Just a quick discussion on RSA, Research Set Aside.

CHAIRMAN BALLOU: We'll add those two items to the agenda under other business or new business. Any other recommended changes? Any objection to approving the agenda as modified just now? Seeing no objection; the agenda as modified stands approved by consent, and we're on to the next item, which is the meeting minutes.

APPROVAL OF PROCEEDINGS

CHAIRMAN BALLOU: This would be approval of the proceedings from the Board's April 30, 2018 meeting; which was our joint meeting with the Mid-Atlantic Council, as well as the Board's May 3, 2018 meeting, which was the brief meeting we had to address the resolution of the appeal to Addendum XXX per the recommendation of the Policy Board. Are there any recommended changes to either of those two proceedings?

Seeing none; is there any objection to approving those two sets of meeting minutes as proposed? Seeing none; both meeting minutes stand approved by consent, and we're on to Item 3, which is public comment.

PUBLIC COMMENT

CHAIRMAN BALLOU: An opportunity for anyone from the audience who would like to address the Board on any item that is not on the agenda. Is there anyone who would like to do that? Is there anyone who has signed up? Well, we're checking now; but if anyone has signed up they would be here and their hand would be up I assume at this moment. Seeing no hands; I'll assume there is no request for public comment.

**UPDATE ON THE STRATEGIC PLAN FOR
BLACK SEA BASS MANAGEMENT**

CHAIRMAN BALLOU: We'll move on to Item 4, which is an update on the Strategic Plan for black sea bass management. Item 4 is a brief update on the Board's Strategic Planning Process for black sea bass management.

Caitlin Starks to my right has a presentation that summarizes the various efforts; either already underway or slated for consideration, both short term and long term, pertaining to black sea bass management both recreational and commercial. I will note that there are a lot of moving parts; which makes this attempt to summarize and align where we are, where

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

we're going, and how we plan to get there rather challenging.

But I view it as a welcome challenge because it reflects how active and committed we are as a Board to addressing the many important issues that confront us. With that I'll turn the microphone over to Caitlin for her presentation.

MS. CAITLIN STARKS: I'll plan to keep this brief; so we stay to our allotted time, but in this presentation I'll go over the status of the Strategic Plan for reforming black sea bass recreational management, and also the next steps for the Board regarding commercial management. At the joint meeting of the Board and Council in April, 2018, the Board Chair and Vice-Chair presented a draft Strategic Plan for reforming black sea bass recreational management; which addressed a range of concerns brought up by managers and stakeholders in recent years.

The Board and Council discussed the Strategic Plan; offered their support for its further development, and following the meeting they provided input and feedback on the document. A summary of this feedback is provided in the meeting materials. Then in June, a group of ASMFC Council and NOAA staff, plus several Board and Council members met in Philadelphia to discuss and flush out some of the ideas that were presented in the document.

In the next slides I'll briefly go over some of those ideas; and then provide some next steps for continuing work on the Strategic Plan. At the June meeting the group had a higher level discussion of some of the key ideas that were in that Strategic Plan draft document; mainly focusing on some of the long term, in order to identify the direction we want to start moving in for black sea bass recreational management. Some of the main topics discussed were how to improve the stability of management while still abiding by Magnuson Stevens.

Considering we are required to manage sea bass to an annual catch target and also how we might be able to incorporate stock status and fishing mortality into management, in order to build a framework where measures can be more stable from year to year. The last bullet up on this slide was not explicitly discussed at the June meeting; but considering the Board's motion in May, the long term strategy should also aim to address any changes in distribution and abundance of the resource.

This is where we are in terms of moving through the Strategic Plan as it was laid out at the April meeting. For the interim program the goal is to establish a recreational management program that is reasonable for all of the states; while this long term strategy is being further developed. That can somewhat lead somewhat easily into that full program. We'll discuss this more under the next agenda item; but for now I'll just say we're facing a few challenges with setting up a program for 2019, due to the timing of information available for setting measures. As usual, we'll get Wave 6 harvest information in mid-February, but the timing of the operational assessment that will happen for black sea bass is still uncertain.

That could definitely affect the RHL for 2019, but for now we're just basing all of our decisions on the old MRIP information, because we don't have that stock assessment yet, and we don't know how or if that RHL might change. For the long term recreational management program, the next steps moving forward are to continue developing the long term program for recreational management over the course of the next year; through the working group, and build on some of the ideas that have been discussed thus far.

In addition to the development of the recreational program, it will also be important moving forward to start developing the commercial aspects of the long term program. As you'll recall in May, the Board made a three-

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

part motion; the last part of which was to task the PDT with developing a white paper identifying actions that would consider changes in distribution and abundance of the black sea bass resource in future management of both the recreational and commercial fisheries.

We already have work ongoing for the recreational side that can address this directive; so the next step on this front would be to get a working group of Commissioners together to start thinking about the questions that we need to answer and the data that we have available for managing the commercial fishery.

Unless there is any objection to following this type of approach we can move forward with putting that working group together following this meeting; and David Borden has already kindly agreed to chair that for us. Here is just a very general estimated timeline of how work might move forward on these two items; one being the Strategic Plan for recreational management, and the other being commercial issues.

At this meeting the Board will address the interim program through an addendum for 2019 management; and possibly future years from September until the end of this year staff will continue working on developing some of those long term management strategy goals, and possibly bring something back to the working group.

Additionally, that separate working group can convene to address how to fold in the changes in commercial management into the bigger picture management strategy. In early 2019 we'll hopefully have that Operational Assessment that will inform us about recent harvest and the status and distribution of the stock.

This will hopefully give the working group a better information base on which to start developing a management document to

address the long term. Just to close out this presentation; I want to lay out some of those working parts that Bob alluded to, so that the Board has these in front of them and can keep track. First we've got the draft Addendum that we'll talk about in the next item; and that addresses the short term recreational management program. Second, the Board and Council will consider the Addendum in a framework on conservation equivalency, Block Island Sound Transit, and slot limits for the Council side next week at the joint meeting. Third, the Board can put together a working group and start addressing those commercial management aspects. Fourth, the Board will probably have to react to the 2019 Operational Assessment; depending on the results of that.

Then fifth, the development of the long term black sea bass management strategy will continue through those two working groups; considering both recreational and commercial management with the idea being that we'll ultimately need an amendment to implement some of those bigger picture changes.

Lastly, you will hopefully get a new assessment sometime in the near future that would allow the Board to be basing some of those bigger picture management changes on that current information about the stock status abundance and distribution of black sea bass. I will stop there and let anyone ask any questions.

CHAIRMAN BALLOU: Questions, comments, based on Caitlin's presentation as to sort of where we are, where we're looking to go and how we're hoping to get there. Nichola Meserve.

MS. NICHOLA MESERVE: I'm very pleased to see that there is a plan in place and action is going to be taken on the commercial issues as well; and it will be led by my esteemed colleague to my right here. I was wondering if there is the potential for the working group to also talk about recreational issues some more;

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

as the draft addendum is developed for the next Board meeting.

I say that because we have the Strategic Plan; the reform initiative that had some additional ideas in it for possible implementation in 2019. I am not sure if the working group, when we last met on the recreational issues, looked at that document again to see if there is anything else that we could pull into the draft amendment; just a suggestion to not close the door yet on things that we might be able to possibly look at for 2019.

MS. STARKS: Yes, I believe the idea is to after this meeting we'll be discussing in further detail some of those options for 2019 management under the next agenda item. But after any decisions are made about what to include or not include in that addendum, we'll have another working group meeting to really flush out some of those topics.

CHAIRMAN BALLOU: Additional questions or comments; yes, Rob O'Reilly.

MR. ROB O'REILLY: That was fairly quick. The Operational Assessment, which we used to call an update I guess. Will that slow down the process for a benchmark assessment; or is the benchmark assessment already established and certain? Because I'm imagining that we're going to know quite a bit more with the benchmark and with the new MRIP data placed within that model; so that if it's a matter of the same personnel or some of the same personnel getting involved with the operational that they would with the benchmark.

Lately for some species, like summer flounder, we've just had survey updates and catch updates rather than an operational assessment. Is all that being taken into account?

CHAIRMAN BALLOU: I am not sure. We have a couple tentative hands going up. I'm not sure who is best to answer. I will just say that I'm

not aware that the benchmark has yet been scheduled. We have an aspirational goal of 2020, but that may or may not prove to be viable. I think as of right now we need some clarification on we're clear that we have an operational update scheduled for early 2019. We have hopes that there will be another benchmark 2020 would be right now our target or hope. But I don't believe it's been scheduled. Toni.

MS. TONI KERNS: There is no black sea bass benchmark on the books; and currently the NRCC is working on a wholesale change in how we move forward with the assessment process. We can report back to the Commission on that once the NRCC has come to a closer solution or a final decision. That is where we stand; and we're still hoping to try to get black sea bass a little earlier in 2019 than even late in the year this year. It's not off the table.

CHAIRMAN BALLOU: Thank you for that. Mike Luisi.

MR. MICHAEL LUISI: To Rob's question regarding the new MRIP numbers. Rob, it is my understanding that the Operational Assessment that we're talking about will incorporate the new time series on recreational; the calibration time series as that goes forward, while I have the microphone Caitlin, if you could go back just to your summary slide.

I just wanted to add for clarity for next week. I know many of you will be coming down to Virginia Beach for our joint meeting with the Council. But I wanted to add to that summary that we will need to set ABCs for black sea bass for 2019 next week. The hope, the SSC has recommended an ABC, which the Council and the Board will need to consider.

While I know that the Director of the Science Center is somewhere – he was somewhere in the room areas – Jon, we are hoping to get that operational assessment as early as possible in

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

2019, so that it may influence a change possibly to the ABC that we would set next week for 2019. We haven't had a commitment yet; maybe John can speak to when that is being planned. But the hope is that we will set the ABC next week with an Operational Assessment coming as early as possible in 2019 to potentially influence that change to the ABC for 2019.

CHAIRMAN BALLOU: Any further questions or comments? Dr. Hare, did you want to respond, thank you?

DR. JONATHAN A. HARE: I don't know if it's a response or just a comment. The MRIP, the new MRIP estimates will be part of the Operational Assessment done in 2019. Our target at this point is to do scup, bluefish and black sea bass together in April. But we still are considering the request to try to do black sea bass earlier. However, looking at the new MRIP data which we've had for about a month, that is going to be challenging; because there are some challenges with that data as we saw yesterday.

The catch estimates have increased; but more importantly, the relative new catch estimates to the past catch estimates have been changing through time. It is that change in the relative estimates through time which are going to make the assessments complicated. The 2019 Operational Assessment will include the MRIP data. Then I also just wanted to note that we did provide an assessment update to the Mid-Atlantic late June; and the SSC has reviewed that. I believe the SSC will be reporting out at that next week in Virginia. Then the other question, just for my clarification, and maybe I can ask this. You don't need to answer, but I'm trying to understand what the rationale for the new benchmark assessment is; because what new science will be available for a new modeling or a new assessment that you can try different management approaches without a new benchmark assessment? I just wanted to;

if possible, explore the rationale for a new benchmark; since we just did one in 2016.

CHAIRMAN BALLOU: Thank you, Dr. Hare. I know you weren't looking for a response; but I'll just offer one for what it's worth, and that is to the extent that there might be an interest in exploring region-specific reference points. That is something that the current assessment does not afford the Board the opportunity to pursue.

To the extent that there might be interest in pursuing that that would be one example of an issue that might be a basis for wanting to see a new benchmark sooner rather than later; because we're struggling with this issue of how to deal with this shift in resource distribution and abundance, and whether there might be a need to see if there is a way to manage the resource with regard to its northern and southern spatial configuration.

We can't currently do that as I understand it under the benchmark. That was one of the issues that I know was discussed; sort of in the Strategic Plan as a discussion item, and that's really all it is right now, a discussion item. But it's my response to your question as to what might warrant another benchmark.

DR. HARE: Thank you.

CHAIRMAN BALLOU: Other questions, comments. David Borden.

MR. DAVID V. BORDEN: To that point; I'm glad that Dr. Hare raised that issue, because it's kind of critical as I understand it to that type of management strategy to do the work. But that may be separable from doing a full benchmark stock assessment. In other words, if you could – and this is just so that Jon can think about this – if there was a way of reformulating the 2016 Benchmark Stock Assessment so that it enabled that type of consideration. Then that might obviate the need for a full blown benchmark, another benchmark.

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

CHAIRMAN BALLOU: Good point. Are there any other comments, yes, Adam Nowalsky?

MR. ADAM NOWALSKY: Which of the proposed assessments, operational, benchmark, et cetera, would get us the first look at the impact of the perceived large 2015 year class that we could use that information to affect management decisions? I mean I would just go back in time. It was a 2012 year class that we didn't respond to until January, February of last year. I'm hoping that we can respond to what anecdotally and some early science information is showing is out there sooner than five years.

CHAIRMAN BALLOU: Dr. Hare, I don't want to put you on the spot. But is that a question that you could respond to; with regard to whether the Operational Assessment would be able to undertake the sort of evaluation that Adam is looking for, namely with regard to recent year class strength?

DR. HARE: There is information about the strength of the 2015 year class in the update that was produced the end of June. I think the Mid SSC considered that information. Then when the update is done in 2019, there will be more information about the strength of the 2015 year class in that Operational Assessment.

We typically, through a lot of these species which are managed in the Mid-Atlantic and ASMFC jointly, we do annual updates so that every year there is an update of the information about year class strength. That strength of that year class will become more and more confident as updates are done and Operational Assessments are done.

CHAIRMAN BALLOU: Anything else? Seeing no hands; I'll just note Rob, I agree with you that that was quick. But I would like to think that it was helpful and further suggest that it might be the sort of thing we do almost every meeting; where we start out the meeting with a quick update on sort of where we are with all of these

moving parts, to just kind of make sure that we are caught up and clear on where we are, where we're looking to go, what's new, what might have developed since our last meeting.

That is the intent. It was a quick 15 minute agenda item; but it was intended to kind of hit the reset button, get us back to where we need to be and now we continue on with our business. That's the intent. With that and again, you'll probably see it on future agendas; because I think it is a helpful exercise to undertake.

**CONSIDER OPTIONS FOR RECREATIONAL
MANAGEMENT MEASURES**

BLACK SEA BASS

CHAIRMAN BALLOU: With that we will now move on to Item 5, which is to consider options for black sea bass and summer flounder recreational management. This is a possible action item. Actually I think it is an action item; in that I think implicitly we've already initiated a new addendum for recreational black sea bass.

But it certainly couldn't hurt to make that explicit via a motion today; and we would need a motion to initiate a new addendum for recreational summer flounder management. The current addendum expires at the end of this year. Those would be the action items that we might be looking for at the end of the two presentations that we're about to hear.

The goal today is to consider the recommendations that have emerged from staff, and the recreational working group and based thereon provide guidance to staff for the development of draft documents to be brought back before the Board for consideration at our next meeting in October. We'll start with a presentation from Caitlin on black sea bass; then follow with a presentation from Kirby Rootes-Murdy on summer flounder. Caitlin, the floor is yours.

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

MS. STARKS: There is a memo on this in the briefing materials; to kind of summarize what we're looking at in terms of management for black sea bass recreational fishery in 2019; and possibly future years. But this presentation will provide a more detailed overview. To start, this is a quick overview of the presentation. I'll go through some of the background on black sea bass management; then review options for management in 2019 and future years, and then go over the recommendations from the Rec Working Group on what should be included in the draft addendum, and then finally wrap up with next steps. Earlier this year at the February meeting the Board approved Addendum XXX to the Black Sea Bass FMP. This Addendum established regional management with three regions and allocated the RHL to those regions; based on a combination of exploitable biomass and harvest information, and in March regional measures were approved for 2018.

However, in April the previously approved allocations of Addendum XXX were appealed by the Northern Region; which includes Massachusetts, Rhode Island, Connecticut and New York, on the basis that the decision was inconsistent with the FMP, and there was incorrect application of the technical data.

Portions of the appeal were brought forward to the ISFMP Policy Board; which considered that appeal on May 3, and instructed the Board to approve a new set of measures for 2018. In May the Board adopted those new measures, and also initiated a management action for black sea bass recreational management in 2019 that would consider changes in resource abundance and distribution.

That brings us to today. At this meeting it is the Board's objective to consider options to include in a draft addendum for management in 2019; and possibly future years. I'll go over these options in the next slides; but before I do that I just want to lay out the information that we're

currently working with, and we've already had a little bit of discussion about today.

Our new MRIP estimates were released in July; but they've not yet been incorporated into an assessment, and we don't have the new information from an assessment to inform the RHL for 2019 or any changes to that RHL. The 2019 RHL was recommended by the SSC already at 3.08 million pounds; but it's not yet been adopted. As Mike Luisi said, we'll be taking that up next week with the Council.

As I mentioned in my previous presentation, the Operational Assessment for black sea bass that is scheduled for early 2019, and we're not exactly sure of when that will be completed. But it does have some uncertainty, or give us some uncertainty about how our RHL for 2019 might be affected if the results of that Operational Assessment show us that we're in a different situation than we think we are now.

The RHL could possibly change for 2019 if we have that information in time. Other than the default of coastwide measures, right now there is not a management program that we can use for 2019 without a new addendum; because of the changes that we made to Addendum XXX. That brings me to some options that we have for considering in a new addendum for 2019.

Our first option, as always, is coastwide measures; because that is the default under the black sea bass FMP, and that would not require a new management document. The second option is state-by-state measures; and a third is regional measures. For both of these our typical route would be to determine in advance through an addendum some scheme that would guide the development of state measures; whether that's state or region specific shares of the RHL based on proportional harvest, or catch per angler, or another metric. Making those decisions about how to divvy up the RHL was essentially the exercise that we went through with Addendum XXX. Just remembering all

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

those options that we included in that addendum, we could potentially consider some of those same options again for 2019. However, there is a fourth option that could be considered for 2019; and that is to set measures through the specifications process.

This option would constitute a change in the process; where basically the decision making on the state or regional shares or measures would be removed from the addendum itself, and the states would be able to determine and negotiate their measures starting towards the end of the year, and into 2019 once there is more information available.

This could avoid some of the frustration and confusion that has been produced when we take example measures out to the public in an addendum for public comment; and then that's based on preliminary information. Following the public comment period we get new information that changes everything; so it does create some confusion for the public.

Setting measures through specifications wouldn't really change the information and the process that we go through to develop state measures or regional measures. It would just allow it to happen outside of that addendum. Like we've done in the past, the TC would start analyzing the harvest information in the fall; and develop preliminary harvest projections under different sets of measures, and then tweak those as new information becomes available, in order to achieve but not exceed our 2019 RHL.

The benefit here is that this work can be developed without the rush of needing to get those example measures into an addendum for public comment. It could therefore be higher quality work, and could wait to use more complete harvest information from later in the year. This isn't to say that the public would not have a chance to comment on any potential measures.

The public would still have plenty of opportunities to provide input through the state processes that occur even when the Commission is considering addenda to set measures. States take those measures out to the public through their own processes as well. This also means state shares would not be written into an addendum; and could therefore be modified annually without needing a new management document to do so, if the 2019 addendum were set up to allow that.

To try and give you all a better idea of how this might work, this is an example timeline. Today the Board can identify the options that they want to include in this draft addendum for 2019. For the purposes of this example, we'll say that the Board chooses to include this option to set measures through specifications.

Between now and October, we'll develop a draft document; which the Board would consider for approval for public comment in October. Then if approved, following the comment period, the Board would take up the document for final approval in December. If the specifications option is selected, then the states would then begin considering and evaluating different sets of measures using a similar technical process as has been done in the last recent years.

A quick note here, while the intent of this option is not to include those shares or measures in the addendum itself, the addendum could still contain some guiding principles for the development of those measures. For example, it could include regional alignment or constraints on the differences in regional measures; as we included in Addendum XXX. Then those principles, whatever was selected by the Board, would have to be followed as measures were developed during the specifications process. Essentially, what we're suggesting here is something similar to what the Board did this May after the appeal. They had their regional

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

alignment; and limits to how much measures could differ.

Then the states worked out those measures together, following within those limits. Following the preliminary negotiations and the development of the measures, in February and March the Board would likely still need to react to the Wave 6 harvest data, and tweak those measures some more to keep the harvest within the RHL. I'll just note again that this timeline will probably look different; depending on what happens with the timing of that Operational Assessment.

I'll start now going through some of those Working Group recommendations on options to include in this addendum. On their call in July the group discussed all the options that I just laid out; and recommended moving forward with the option to set measures through specifications, with the rationale that it would provide the Board with the most flexibility to react to new information in 2019.

They also recommended several guiding principles to include in the addendum to shape the development of measures; and finally also recommended including options for reducing noncompliance in the fishery. I'll go through those in more detail on the next slides. For the guiding principles that the group recommended including in the addendum, they recommended a regional management approach using the same three regions as defined in Addendum XXX; Massachusetts through New York, New Jersey as its own region, and then Delaware through North Carolina.

For each region a regulatory standard was recommended to require states measures to either be completely consistent or differ by no more than some prescribed amounts. Options that they discussed included differences of one inch in minimum size, up to three fish in bag limit, and several options on the difference in season length, and some of those were 115

days; which is the maximum difference in seasons in 2018, and 57 days, which is one-half of that and then having the option of having no limit on the seasonal differences.

Along the coast they also recommended limiting the difference in measures between regions to better address equitable access coastwide. One option is for no state to have a bag limit that is more than double that of any other state; and the draft addendum could also consider limits to differences in season length and minimum size, with consideration given to the regional differences and seasonal availability and size distribution.

One idea they also discussed was that potentially the 2018 measures that we have now could serve as a cap on the disparity of measures between states in a region, and between regions. The Working Group also noted that available information on resource distribution and angler effort should be taken into account in setting specifications. This could potentially include harvest information by state, state survey information, and any other available data that would reflect changes in distribution and abundance of black sea bass. Finally, the group recommended two options for how long this addendum could stay in place. Option one is that it could stay in place until a new management is developed for the long term; which will likely take two to three years for an amendment. Option two is to limit the duration to two years. Staff would like to note here that even if this addendum were allowed to stay in place until the long term management strategy, or a new amendment were developed that the Board would always have the option to replace it with a new program via an addendum at any time.

Several options that the Rec Working Group brought up for improving noncompliance, and this was specifically to address the October, 2017 Board motion to task the existing working group with developing options aimed at

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

reducing noncompliance in the summer flounder, scup, and black sea bass fisheries. They recommended some things focusing on addressing uniform and effective enforcement of regulatory programs by state; with regard to size, bag, and season limits.

They recommended including fillet laws to improve enforceability of measures, having some measures of accountability for angler violations by charter and party boat captains, rules for assigning harvest to individual anglers on those party and charter vessels, and also limitations on commercial and recreational fishing on the same trip. To wrap up; this is a potential timeline for the development of this action. Today the Board is discussing options to consider including in this draft addendum for 2019.

In October the Board will consider approval of the draft addendum for public comment; and then in December the Board could consider final approval of the Addendum. In February, the states would then be able to propose some draft measures; following whatever process ends up being selected in the final addendum, and maybe finalize those measures in March, depending on the status of the Operational Assessment, maybe later if it's pushed back.

I'll also add what Nichola brought up earlier that the Rec Working Group can meet between now and October again to further develop some of the options that the Board decides on today. With that I'll just put this up here that the Board's goal is to consider some of these options to include in the draft addendum for 2019 and beyond; and I will take any questions.

CHAIRMAN BALLOU: Questions for Caitlin. Emerson.

MR. HASBROUCK: Could you go back to your previous slide, please, timeline? It might be a typo; but I see December, 2019. Should that be 2018, and if so, if it is are we going to have a

special Board meeting, or is that going to be done at the joint Council/Commission meeting in December?

MS. STARKS: I believe it would be taken up at the joint meeting; and yes, it is 2018; the December joint meeting.

CHAIRMAN BALLOU: Thank you for that clarification. Dr. Hare.

DR. HARE: Just a comment on the timeline. You know you have the Operational Stock Assessment in between February and March. It is currently scheduled for April; and it is highly likely that we will be unable to push it earlier. In terms of thinking about the plan, you know I might plan for April, and then we will do our best to have it be earlier rather than plan for it to be earlier and then have problems when we do it in April.

CHAIRMAN BALLOU: We're trying. We're really trying.

DR. HARE: So are we.

CHAIRMAN BALLOU: I know, I know. I get your point; and I think we're also just trying to do our best to ensure that it's recognized as a high priority, given its potential influence on our 2019 management program. But appreciate where you're coming from, thank you for that. Additional questions for Caitlin. We'll turn to kind of reviewing these options and thinking through what we want to pursue. But right now I'm really just looking for questions on her presentation. Mike Luisi.

MR. LUISI: Caitlin, can you go back a couple slides to where you established. It was the slide that had kind of the baselines where you deviate whether you're within the region; you deviate by one inch or three fish. Yes that's the one. I just want to understand. I can understand the difference with the intraregional limitations; such that in the case

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

of the second bullet, you couldn't deviate from a state within a region by what is defined there.

But I just want to go on record to express my concern regarding how I read this as being an interregional difference between regions; where a bag limit in a state could be no greater than two times that of another state. The way that I read that and thinking about how the bag limits, so I don't have them all in front of me right now. But I know that the bag limits in New England are awfully small during certain times of the year. Let's say that for instance, Massachusetts may have a 5-fish-bag limit.

I know in some cases I think it even drops below five in some states; maybe to three. Would that mean if we were to move forward with something like that that if a state has a 3, 4, or 5 fish bag limit that the southern region, which I think we all know has a 15-fish-bag limit, would have to make modifications not to exceed two times that of a state that has a very small bag limit. Would that be the intent there? I just wanted to put that out there to see what your thoughts were; and just express my concern regarding that.

MS. STARKS: I think that generally was the intent of the option. But again, it could be further developed by the Working Group to come up with a different number. But it may have also intended to say regions that are next to each other. That is details that we would definitely want to work out.

CHAIRMAN BALLOU: Good exchange there, thank you. John.

MR. JOHN CLARK: Yes, just kind of following up on Mike's question. My recollection of this meeting in my notes was that these were suggestions not recommendations; and that was definitely a point of contention on the call. My notes were that we wanted to look at 15 fish in the southern region, because they are smaller fish. That is the same biomass maybe

as five fish in New England. That was clearly my notes. That was not a recommendation that was a suggestion by some people.

CHAIRMAN BALLOU: Fair enough. I think that is a fair characterization as to how it went; and it just kind of rolled forward as not necessarily a consensus opinion, but just among the issues that were raised during the call. But thank you, John for that clarification. Tom Fote.

MR. THOMAS P. FOTE: At one point New Jersey had a 2-fish-bag limit, and we're now looking at 10 times 2 fish, a double 2 fish. What I was looking at in a part of that discussion was if the highest bag limit say in the New England is 10 fish, then it could be up to 20 fish in the other regions adjacent, because that's the highest bag limit, not looking at the lowest bag limit. I wouldn't want to basically curtail anybody to four fish because we have a 2-fish-bag limit during a certain period of time, just to keep it open if they're bycatching fish. That is what I was interpreting that to mean.

CHAIRMAN BALLOU: Additional questions? Seeing no hands; I think what we would now like to do is get the Board's feedback on which if any of these recommended options staff should pursue for further development, whether it's a good slate of options and all should be further developed, whether there are additional options that should be considered.

This sort of process that we go through at this stage is to really kind of get your sense as to whether this is a good working outline to pursue; or whether there should be any modifications made to it. I would like to open the floor now to thoughts on that issue. David Borden.

MR. BORDEN: Bob, could Caitlin put up that slide with the options. I think it's the prior one. Yes, do we have to have the coastwide measures in there? If we don't then I think we

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

should take it out. I can't see that being considered.

CHAIRMAN BALLOU: There has been a suggestion to remove coastwide measures as an option in this addendum. Is there any objection to that suggestion? Toni.

MS. KERNS: I don't have an objection. But it's a default measure of the Plan. It's difficult for us to completely remove it from an addendum, because it's part of the FMP. If there is nothing else then that is what we default to as part of the FMP.

CHAIRMAN BALLOU: David, I know you want to respond so I'll go to you. But I really hear Toni on this; and that is if the Board couldn't come to terms with the addendum, we would need a default. We would need something to have in place for management. As she indicated, this is the FMP default provision. Do you have further thoughts on how to handle this?

MR. BORDEN: I thought of that and it's really status quo. The default is taking the place of status quo. But I think we should narrow this in the interest of time. I would also support taking out the state-by-state measures.

CHAIRMAN BALLOU: Before we go to that are you comfortable leaving in coastwide; given its status as a default? Okay, and is there any objection to leaving it in given its status as a default? Seeing no objection; the next suggestion is to remove state-by-state measures. Are there thoughts on that suggestion? Is there any objection to that? Seeing no objection; we'll remove that and we're now left with three options, broadly speaking, coastwide regional and setting measures through the specifications process. Is the Board comfortable with those three broad categories of options? Mike Luisi.

MR. LUISI: You know we went through Addendum XXX last year and we all remember

how that ended up; and staff put a ton of time into developing allocations based on the regions, based on different time periods. We thought at the time that we kind of came to some agreement, some compromise between the winners and the losers that come as a result of allocation decisions.

I just would hate to go back through all of that again. With all of the other work that we have in front of us that I think we can do a much better job of putting our energies into; which would be the future, which would be 2020 and beyond, rather than focusing again on allocation of the resource as was presented in Addendum XXX.

I think the regional structure is sound. I think that is there. You've had these regions for a number of years. I am concerned that if we start looking at shares, time periods, ten years, five years, two years, three years. We're going to go down a rabbit hole again in this addendum; and we're going to find ourselves at the same point that we were last year.

It would be my preference to focus this addendum on the 2019 fishery; and perhaps 2020, given the timeline that Caitlin presented in just the idea that we would be setting measures through specifications. Eliminate the grind of presenting and developing and going out to the public with allocation options that is only going to create more drama than what I think is necessary at this time.

We have to fix this fishery for the future. 2019 is upon us. We're not going to fix it in a few months; between now and when 2019 measures need to be in place. My opinion would be to remove the regional measures; remove the line that goes to state shares over the RHL, and just drop regional measures into the specifications process. That would be what I would suggest.

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

CHAIRMAN BALLOU: On the floor is the suggestion; thoughts on that. Nichola.

MS. MESERVE: I agree with Mike Luisi. My interpretation of the Working Group's recommendation was that the specifications process would replace any options for regional measures or state-by-state measures, because of the difficulty that we find ourselves in with the assessment timing, the new recreational harvest estimates, the turmoil and process that we went through with Addendum XXX. I support the Working Group's recommendation on that and the others as well.

CHAIRMAN BALLOU: I don't see any other hands; so I'm going to ask, is there any objection to the suggestion that was just made and seconded essentially, to remove regional measures as well so that our two broad categories would be the coastwide measures as the FMP default. Then the primary focus, obviously as the other alternative or as the sole alternative, would be to set measures through the specifications process. I'll just start by saying is there any objection. Seeing none; Caitlin if you want to flick to the next slide or maybe it's the slide after this. It's the one that has the guiding principles; this would be now, if I understand correctly. These would be the options that would be further developed for consideration in the draft addendum. Let's leave this slide up and see. There have already been some references to that last bullet item; the interregional issue. How does the Board feel about this range of sub-options, let's call them, under the specification setting approach. Emerson.

MR. HASBROUCK: I'm a little confused. We just had a brief discussion about removing a regional approach. But the regional approach that's here is listed here; so does that mean we could still discuss a regional approach through the specification setting process? Is that what this means?

CHAIRMAN BALLOU: Caitlin.

MS. STARKS: Yes. Having an addendum that says an option is to set measures through the specifications process; but with some guidelines that include regional management, would mean through the specifications process but not through the addendum itself, the Board would determine measures that were for regions.

CHAIRMAN BALLOU: You're nodding; so that apparently answers your question, Emerson. Thank you for that. To be honest with you, I also got spun around a little bit on that difference between setting forth regional measures in a draft addendum, which is what we've done in the past per regional shares. You know maintaining a regional approach but doing it through a specifications process. With that are there additional thoughts, comments on this range of issues to be addressed through the draft addendum. Matt.

MR. MATTHEW GATES: Yes, we have options there for limiting how different we can be. Last year we ran into a little trouble with some of those; when we were forced to take a reduction in the northern region. Kind of the way it worked out is one state had to take the majority of that reduction.

I would like to see us have an option that we could at least take out to public comment on that would maybe limit how much any one state within a region would have to reduce; if in fact we had to do a reduction. For instance, if we had to take like say the northern region had to reduce by 100,000 fish, limit what each state would need to reduce by to maybe 50 percent of that so that one state is not taking all of the reduction.

CHAIRMAN BALLOU: Okay, Caitlin is nodding and writing that down. It sounds like that is something that she'll do her best to work up and develop. Of course we're starting from a different baseline this year than we were last

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

year; but I do take your point. Additional thoughts and I would like to particularly call the Board's attention to that last item that John Clark, you spoke to. Obviously that is a new issue.

It's something that we've never addressed before as far as I know. You know there is the conceptual issue of trying to limit differences in measures between regions; and then there is the "how do you do that" component to that. I guess I'm looking for some Board feedback on the general concept of trying to obtain more consistency, let's say between the regions, and then as well how might that be accomplished? Whether it's appropriate to be addressed or at least pursued, and revisited in October after it's further developed, or whether it's something the Board does not want to pursue. That is what I think we need feedback on; given some of the earlier comments we had. Mike, did you have a thought on that? I'm sorry, your hand kind of went up and then it went down. It's down. Now David Borden's hand is up.

MR. BORDEN: Bob, just to question you. You just referenced we're going to be starting from a new baseline in this. I'm a little confused on it. The new baseline is going to be what?

CHAIRMAN BALLOU: I was just thinking about the current regulations that are in place, and reductions needed on a state-by-state basis, and how they would affect an individual state regulation. That was just what was spinning in my head when Matt was making his comment. But Toni has a thought on that.

MS. KERNS: Because this is a specification process and there are no rules about. Well, we don't know what we're going to have to do for next year. We don't know what this year's catch is going to look like. We don't know what the quota will look like for next year. I would say you have no baseline; in reality.

You will have potentially through the document some consistency standards that you can go off of; but it will be part of the specification process where the TC will look at the performance of the fishery, the availability of the fishery, CPUE, effort, all different information and provide recommendations to the Board on the types of measures that they think will work to meet the RHL of 2019.

Then the Board will have to grapple with that information and work together to develop a set of regulations. I think it's a little bit different than last year; in the sense of having a baseline. That will come into play a little bit about what Matt was getting at, and that discussion and negotiation with the region will be part of what we work through, and how the TC makes their recommendations to the Board.

CHAIRMAN BALLOU: Good point and I also realize that 2018 harvest is also another issue that changes year to year. Thank you for that clarification; and maybe that helps debunk this issue of there really isn't a baseline, as Toni was just saying. David.

MR. BORDEN: Thank you for the clarification. I'm more comfortable with that. I just point out, other than all of the agony we all went through last year trying to reach compromises on this. I would just make the observation that there were a number of people both in the Mid-Atlantic region and the South Atlantic region that at the end of the discussion were expressing some willingness to moderate their increases, in order to minimize some of the negative impacts on the northern region. I think this process can work; but that type of discussion has to take place right up front.

CHAIRMAN BALLOU: Rob O'Reilly.

MR. O'REILLY: The RHL does decrease for 2019, so we have to keep that in mind, 3.08 million pounds. Concerning the 15 fish, I can't speak for the southern region in entirety. As a matter

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

of fact last year was the first time there was a southern region; prior to that it was just coincidental that the states observed the federal waters rule.

Last year sort of put the stamp on a southern region; Delaware through North Carolina. The 15 fish is held pretty dearly in Virginia; and last year before things settled out, there were those who would rather have the season truncated a little bit as opposed to the 15-fish-bag limit not being there, because there was some talk about going to 10 at one point.

That said; I think it's good that we maybe get some information on the creel and the success rate towards 15 fish. I remember many years ago, which is ten, so that's many years ago. When we were looking at problems with black sea bass, and Toni Kerns was the person coordinating. We found out we really couldn't do much getting much of an impact for a reduction, unless we got down to 6 fish. I remember that distinctly.

You know it was even higher than 15 then, so that is a sticking point at least for Virginia; probably would remain so. I think we know that when you get in the charter or the headboat business the proverbial lure is there; and I don't think that has gone away over all the years. That is why the 15 fish is held pretty tightly in Virginia. I appreciate the time to talk about that.

CHAIRMAN BALLOU: Mike Luisi.

MR. LUISI: Just quickly Bob, since you asked to address that last bullet. I think instead of dealing with it right now, I can see three or four different ways that could be fleshed out, whether the regions are next to one another, whether they are across regions, whether it is the smallest bag limit of a state or as Tom Fote alluded to, the largest bag limit within a state. I just think we can spend some time dealing with

the details on a workgroup call; rather than now.

CHAIRMAN BALLOU: Thank you for that suggestion, Adam.

MR. NOWALSKY: I differ a little bit. I agree with Mike's comments earlier that about where is our time best spent. I disagree with the last comment about maybe we could spend a little more time working on this last bullet point. My own opinion is the Working Group talked about it. There was a difference of opinion on the call. That last bullet point was one suggestion that was there.

When we look at the disparity between the regions right now, if we try to hold ourselves to that standard, quite frankly that is a no go right there. You've got the southern states, and then there is New Jersey. There is no way you could get to that constraint right there. I think we're wasting our time on that item.

The frustration level and the last presentation about what we're working on longer term that is really where our focus needs to be. I understand the concerns about competition, et cetera. The Working Group couldn't decide if this was something to even work on; couldn't get agreement on it. I think we should just take it off the table right now, personally.

CHAIRMAN BALLOU: John Clark.

MR. CLARK: I was thinking along the lines of Adam there. I know it's just semantics, but rather than limit differences and measures between regions, just something like maintain equity between regions, so it doesn't put us into that kind of narrow focus that we just have to make sure our measures are similar to each other's.

CHAIRMAN BALLOU: Mike Ruccio.

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

MR. MICHAEL RUCCIO: That was the same thought I think that I had. It strikes me; you know having listened to the conversation of the Working Group and now here. I haven't heard anybody overtly reject this as a concept. But the particulars of how it's going to be implemented are what we're kind of starting to stumble on.

I would offer that there are a lot of particulars on what we're going to implement for next year that are really difficult to kind of conceptualize right now; because there are so many moving parts this year, even more than in a normal year where we would just deal with the timing of MRIP data availability. We have the potential for a stock assessment that is going to come in mid process; and I needn't mention MRIP and the changes there.

Perhaps one way to move forward would just be to, as John had said, either just have the limit differences or try to maintain equity; something that is almost aspirational that is in there, but moves away from having specification of specific no more than two times difference between states. That would give the flexibility to try to work towards measures that are similar. But if we find that we need that as a tool to be able to use, then it wouldn't preclude being able to use that. That might be a good compromise.

CHAIRMAN BALLOU: Nichola, did I see your hand?

MS. MESERVE: I appreciate the most recent comments about keeping in the concept, possibly removing that one particular example that was discussed on the call. But I would like to see the working group continue on this concept. My recollection from last call was that this again was a northern vs. southern disagreement.

That's a trend that we keep on seeing; and unless we can have some compromise on these

bag limits, I fear that we're not going to be very content with the interim program or the full program whenever we get to it. I hope we can continue to have this discussion; and keep this concept moving forward, even if it's just aspirational.

CHAIRMAN BALLOU: I'm going to take one more comment from Tom Fote; and then I'm going to ask for whether there is consensus on keeping this in, at least as a concept or removing it. If there are differences of opinion I think we're going to need a motion. Tom Fote.

MR. FOTE: We're talking about affecting party and charterboats. Let me see, if we have a 10-fish-bag limit in New Jersey, and you have a 5-fish-bag limit in New England, nobody is going to drive down to New Jersey to catch 10 small fish when they can get five big fish in New England. The same thing happens true. We have people from New Jersey that go up even when it's only 10 fish, because they know they're getting 10 big black sea bass; compared to what they catch in Jersey. But they ain't going the other way around.

Nobody is coming from New England to fish in New Jersey for black sea bass; because they're afraid all they're going to catch is small fish. When you look at the poundage wise, there is really no difference between it. A 5-fish-bag limit in New England is about equal to a 10-fish-bag limit in New Jersey.

CHAIRMAN BALLOU: I'll take one more comment from Maureen.

MS. MAUREEN DAVIDSON: In response to Tony's remarks, people might not drive from New England, but they will drive from New York to catch the more fish in New Jersey if there is a huge difference in our state possession limits.

CHAIRMAN BALLOU: Here is where I think we are. There are some differences of opinion; no surprise, we're talking about black sea bass.

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

But my sense is that there is more support for at least keeping it in as a concept, having the Working Group further discuss it. We've got our next meeting in October, where we would have the time to really decide whether it belongs in or not versus, I'll call it the Adam Nowalsky suggestion, and that is just take it out now because we've got more important things to spend our time on.

I'm going to ask it this way. Is there objection to keeping it in as a concept; with the understanding that that suggested example doesn't seem to be a very popular one. The onus on the working group would be to look at other ways to address that issue, or perhaps I think to Mike Ruccio's point, and perhaps just have it in there as a guiding principle.

Use it for what it's worth; but not necessarily have any specificity associated with it. It seems to me that that could be an option as well. Let me see if I can just ask the question and then not talk over myself. Is there objection to leaving it in as a concept for further development by the Working Group? Seeing no objection; we'll leave it in as a concept. I think we now have a good suite of options. I'm going to look to Caitlin to see if there is anything else that we need to work on or discuss.

Probably the compliance issues, so let's switch to the compliance issues next. I'm sorry that is actually the third leg of this. There are two more issues. The first of the two issues that we need to still look at is whether the Board is comfortable with this duration issue. We've got two options for duration.

No one on the working group recommended one year; I think we can all appreciate that perspective. It was either two years or sort of indefinitely but better stated, until new management is developed for the long term. Is the Board comfortable with those two options for the duration component of this addendum? Yes, Joe.

MR. JOE CIMINO: Not being part of the Workgroup, can we define new management? Are we speaking to reference points specifically?

CHAIRMAN BALLOU: I think, well I'll let Toni tackle that.

MS. KERNS: It would be just until we have either that long term change. What we're trying to do with the long term recreational management measures changes, which Caitlin went over earlier, because in order to make those changes we would need an amendment. I don't know how long an amendment will take. But I know that in the past the Board has constantly asked us to do a new addendum every single year, and that becomes difficult for the states as well as us, and for the public.

We're trying to set us up to have something in place until we have something new in place. That can be the amendment or if you guys decide next year or two years or three years down the line. If we don't have an amendment and you don't like what you have approved through this management process, you can start another addendum. At any time you can always do another addendum.

CHAIRMAN BALLOU: Adam.

MR. NOWALSKY: I would define new management as performance evaluation no longer based on annual comparison of MRIP to a RHL. That is what I would define new management as.

CHAIRMAN BALLOU: But you're not necessarily suggesting we put it in the document that way; but you're just kind of helping inform this discussion, as I understand it.

MR. NOWALSKY: Correct. The question of what is new management. I think that was going back again to that last presentation; that meeting in June. That was really the basis for

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

the discussion point that this Annual Performance Evaluation isn't working; how do we move to something different? That is what we're moving towards, I believe long term. That's what I think our new management program is. I don't think we need it explicitly defined; but the purpose of this conversation, I hope that helps.

CHAIRMAN BALLOU: Any further thoughts on this particular issue; the duration issue? Seeing none; it looks like there is consensus for these two options to be carry forward. Then our last set of issues, and if you could put that slide up, has to do with reducing noncompliance. Here are the bullets that were teed up, I think through some input from various folks.

I mean this came up during the Working Group call, and then I think there was some follow up. Here's right now the sort of slate of issues that could be further developed, and included in the draft addendum under this category of reducing noncompliance. Thoughts on this overall issue, and the bullets provided?

MR. FOTE: Yes, I brought this up on the call, because I hear it constantly in New Jersey, because of our strict filleting laws. You know, you have to bring fish in. If you're a party and charter boat you have to have a special permit, you've got to bring those racks in, and it's inconsistent with other states. Some states don't really have enforceable rules is what my law enforcement has been telling me for years. I'm just looking for more consistency that we can actually enforce the filleting laws and the no filleting laws that will all be the same. Whatever they are, whatever rules you want to set up, as I was saying; we want to have similar bag limits we should have the same laws on filleting, so if you go to a different state you don't wind up being able to circumvent the law.

CHAIRMAN BALLOU: Any other thoughts on this? I will go to Roy first and then Mike Ruccio.

MR. ROY W. MILLER: Quickly, could you define for me looking at Bullet Point 3 and 4. If harvest is assigned to individual anglers, what would the charter and party boat captains be held accountable for?

MS. STARKS: These were two ideas that kind of are on the same thread. I might look to Nichola; because she's got some detail on how we might construct those laws.

CHAIRMAN BALLOU: Nichola.

MS. MESERVE: Part 3 was, I believe, based on a rule that Massachusetts perhaps other states have. I'm not sure until we have this exercise of looking at this more. But we have a rule where charter and party boat captains can also be held accountable for the violations that occur on their vessel by anglers.

Our regulation says that discretion is given to the law enforcement officer as to when to apply that. If the vessels are using all their best management practices of announcing the rules, posting the rules, having measuring devices the officer uses their discretion. I think the fourth bullet has to do with whether comingling of catch is allowed.

If coolers have to be labeled or if there is some way to assign that particular harvest to an angler; so that there isn't an instance where the catch is just abandoned during a law enforcement intercept, and then no one is held responsible for it. I think this list needs more details for each one as to particular options. But these were what were discussed on the call; or in e-mails following up as rules that other states may have already on their books.

CHAIRMAN BALLOU: Mike Ruccio.

MR. RUCCIO: Just a process question, I guess. I don't have any specific issues with any of these points; I think they are all worth consideration, but was curious how and when this will go to

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

the Enforcement Committee, and what the nexus might be if there is development of specific measures, kind of comparable measures, to go into the Federal FMP.

Because so much of the enforcement process now happens through JEA agreements with NOAA OLE; we would want, I think for maximum effectiveness, to ensure that both the Commission and the Federal FMP reflect any changes, particularly if it comes to something like fillet laws so that we're consistent across state and federal waters.

CHAIRMAN BALLOU: Good point, good questions. Mike Luisi, did you want to take a stab at that?

MR. LUISI: To that point, I was remembering an e-mail that I received recently regarding this exact issue. Some of the issues here are things that have been brought up at joint meetings that we've had with the Council; specifically the filleting at sea, and accountability of the either charter captain or the individual angler on a boat.

I got an e-mail back at the end of July. There is a meeting being planned between the Law Enforcement Committee, Tilefish Committee, and HMS Committees to discuss a number of things; but some of them are related to what's on the board here. I wonder if it would be reasonable to, due to Mike's comments as well.

Perhaps this Law Enforcement issue could turn into one of those joint framework/addenda or addendum with the Council, since we're kind of discussing all the same parts. I would hate to go in two different directions; and it might be worth just pulling out what we've already discussed as the addendum that we're going to work on for 2019.

Have kind of a parallel track with the Law Enforcement concerns in addition to something at the Council level; you know a framework that

would be done at the Council. I don't have anybody here to ask as to whether or not a framework right now is reasonable to include in the Council's priorities. But maybe by next week we can follow back up on something like that.

CHAIRMAN BALLOU: I was thinking the same thing, Mike. I was wondering if we could maybe park this issue for now; see if we could add it to the agenda next week at our joint meeting, and see if there is an opportunity to do just what you and Mike are suggesting, I think, and that is kind of integrate these issues into a joint action, to ensure consistency at both the state and federal levels.

Does that sound like a reasonable approach? Is there any objection to that approach? It isn't necessarily being taken out of this pending document; but the idea would be to explore whether there is a better venue, so it could come out I guess. If we find that there is a better venue to address it via a joint framework action. Eric Reid.

MR. ERIC REID: My question is do you have envisioned something that would have to be approved by both bodies; or would that be an oral process? It only worries me because if it is a Mid-Atlantic Council action and a Commission action, I just want to make sure that the New England viewpoint isn't diluted.

CHAIRMAN BALLOU: Understood. Well, I assume the whole point is that it would be a joint action between the Board and the Mid-Atlantic Council. I'll just leave untouched the issue of the New England angle there. This addendum, is this going to be a joint action? No. I guess to your point; and really to your point, Eric as well. The way to make this a joint action, the way to make sure that there is consistency between what this Board wants to pursue and any need to align with federal waters rules is through a joint action via the Mid-Atlantic. It sounds like this could be an

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

issue that could be peeled off and addressed in that way. That is what I'm sensing from the way this discussion is going; but maybe we need to either further discussion now or park it until next week. David Borden.

MR. BORDEN: For my own edification; does the timeline change if we make it a joint action?

CHAIRMAN BALLOU: Toni.

MS. KERNS: The Mid-Atlantic Council does not have any priorities; and I think Chris has said, and you can correct me if I'm wrong, Mike. I don't think that they in their priorities they don't have this action for this year; so for staff time to work on something for this year. If it's a joint action and if it's not frameworkable, then they would have to go into an amendment. Then I would suggest that it slide into the long term amendment.

This issue may take more than the two months that we have between now and annual meeting to flesh out as well. If that happens then I would again suggest that we push it to a different document; whether it is an addendum that happens before the amendment or into the amendment, up to the Board. But I think you would all want to address 2019 in a timely fashion; but that is up to the Board. But that is the sense that we have gotten so far.

CHAIRMAN BALLOU: Yes, I'm going to channel my colleague from Massachusetts, Nichola Meserve, and just remind the Board that this is already an issue that has been delayed once. What we're talking about now is essentially delaying it again. Not that it isn't a good suggestion given that we seem to be thinking of a better venue; a better process to address it. But to Toni's point that means further delay. To your question I think, Eric, it would mean that it would not get addressed in the short term.

Now it may turn out that it's going to be a very difficult, if not impossible issue to address in the

short term solely by the Board, given its overlap with federal waters issues. I think that is the sense I get from the way this discussion is going is trying to figure out how we can address this in a timely fashion; because it is a priority issue that this Board has identified quite a while ago that is now coming back to the fore. Here we are talking about potentially shifting it into another venue; which would cause further delay. Mike Ruccio.

MR. RUCCIO: I didn't raise it to try to be obstructionist at all, or to see it delayed. I just thinking through the issues there is a lot of overlap between what would be state and federal here. I appreciate the discussion. Maybe one way to approach it is to keep it in for now; to begin the development through the Commission process, and that will reveal if it can be through just a Commission related action, or if it needs to involve Mid-Atlantic.

If these issues stem far enough that it's something that we kind of half joke, maybe we should bring in the South Atlantic and HMS too. But as we start to tease this apart in development, it may be that it is appropriate to consider a really broad scope. Another way to approach it would be just to start the work now and try to bring partners along as we need. You know I can't speak for the Council. It would probably need to be part of their prioritization process this fall to spin up another action; because as Toni said, it's not currently slated.

CHAIRMAN BALLOU: Thoughts on that suggestion. Rob O'Reilly.

MR. O'REILLY: I responded to Nichola when she sent this around. I'm thinking at least from what I can understand, some of the accountability and some of the teeth in the law in Massachusetts really has changed recently, because of violations. I related how our system works. But beyond that it seems that maybe if there is going to be a delay that we find out what the states can do; and what NOAA can do.

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

It is problematic to have a number of states in federal waters with 80 to 85 percent of their fishery occurring in federal waters; and to have this not in a situation where we have the federal component. I think that's going to be a problem. But the other problem I see is we are going after this without really knowing what we have at hand. At least I don't.

I don't know what all the states have; in terms of these various items that we're looking about noncompliance. It might be good to know that. It might be good to gather that information. You've got the state regulations; have the federal rules, Law Enforcement is going to meet; Mike Luisi just talked about sort of a joint meeting that is going to be looked at. I'm not sure we're ready.

CHAIRMAN BALLOU: Adam.

MR. NOWALSKY: I agree with those last comments. I understand the frustrations. I've experienced them first hand with customers, myself, as well as fellow captains. I understand them. I also know though that a couple of bad apples are the ones that really raise the stink. It isn't always the entire barrel that is rotten and needs to be thrown out. We have a disaster headed for us in the 2019 black sea bass fishery. I'm going to come right out and say it.

A 3.0 something million pound RHL, a 2015 year class that is huge, management's failure to respond to the 2011 year class that was huge, and now in a massive deficit of regulations. We have a disaster on our hands next year, Mr. Chairman. While I understand that these noncompliance issues are important. We need all hands on deck; coming up with the best possible solution we can for next year. To that end, if we can't do it by consensus I am prepared to make a motion to not have this be part of the rest of the addendum we work on for this year.

CHAIRMAN BALLOU: Let's see if we have consensus; or whether we need to do it in the form of a motion. Does the Board support the suggestion that this essentially be and I'm paraphrasing, but this is my understanding, held off for inclusion in this addendum and further developed, but for purposes of being addressed through a joint action with the Mid-Atlantic Council. Is there opposition or objection to that revised approach? Eric Reid. There is at least some opposition; so I'm going to ask Adam to offer that in the form of a motion; and we'll have a vote on it. Go ahead, Adam.

MR. NOWALSKY: I move that non-compliance issues be removed from further development for the addendum for 2019 and beyond recreational black sea bass, and be considered with joint federal management.

CHAIRMAN BALLOU: Let's see if we can get that up on the board. I'm sorry, moved by Adam, seconded by Rob O'Reilly. We'll get that up on the board. I would recommend that we not discuss it further; given the very healthy discussion we've just had, and the need to move on to summer flounder.

I'll be inclined to call the question; unless there is pressing need for further discussion. But I'll wait for it to get up on the Board; and there it is. Move that non-compliance issues be removed from further development from the Addendum for 2019 and beyond for recreational black sea bass, and be considered with joint federal measures. Moved by Mr. Nowalsky and seconded by Mr. O'Reilly, yes, Nichola.

MS. MESERVE: I'm just wondering if the maker of the motion would be willing to remove the "and beyond;" because it seems like we would never consider it, even with joint measures with that clause in the motion.

CHAIRMAN BALLOU: Well the motion belongs to the Board; so is there objection to moving

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

the phrase “and beyond” from this motion? Is there any objection to that? Adam.

MR. NOWALSKY: The intent of the motion was that the proposed addendum we’re working on, we talked about 2019 and 2020, or maybe not until a new management program was in place. I just didn’t want to be back here at the same time having the same discussion for 2020; even though every other recreational piece of the addendum is moving forward.

My hope is that in 2020 there would be a joint management action that would be going into place to address these issues. That would be my hope; but that was the only reason for choosing and beyond. I’m certainly open to any changes that would not take away from that concern.

CHAIRMAN BALLOU: Mike Luisi.

MR. LUISI: My accounting makes this Addendum XXXII; if Addendum XXXI is the joint action with the framework to consider slot limits and transit provisions and all of that conservation equivalency. If this is XXXII we might as well just say it’s Addendum XXXII.

CHAIRMAN BALLOU: Is there any objection to modifying the motion to read from draft Addendum XXXII? Seeing no objection; let’s modify that motion as such. It would just say from Draft Addendum XXXII for recreational black sea bass; striking for 2019 and beyond. How is that? I think that is what I just heard recommended. If you could just strike for 2019 and beyond, any further thoughts on this? David Borden.

MR. BORDEN: I’m opposed to the motion for the reason that I liked Mike’s suggestion. He’s the Chair of the Mid-Atlantic Council; he wanted to have this discussion with the Council. I think that if this motion doesn’t pass, I would encourage us to have that discussion with the Mid-Atlantic Council, and see whether or not

the Council can figure out a way to accelerate their action on this. We would keep it in on an interim basis; and then maybe consider this later, depending upon that input.

CHAIRMAN BALLOU: My take is that even if this motion were to pass, it doesn’t preclude us from jump starting this as early as next week at our meeting with the Mid-Atlantic Council, at least to broach the issue and start to plan for its development. I just wanted to clarify that. Eric.

MR. REID: Okay, so now I’m going to go home and I’m going to explain to my commercial fishermen that noncompliance will be removed from further development for the recreational sea bass fishery. The PR of that is just staggering to me. I can’t accept that. I’m probably outnumbered. But it won’t be the first time that’s right. I’m going to make a motion to table until the joint meeting with the Mid-Atlantic next week, and have this conversation there. Is that time specific enough?

CHAIRMAN BALLOU: It would be move to postpone until.

MR. REID: Motion to table, to have this discussion with the joint meeting next week.

CHAIRMAN BALLOU: Toni is saying it should be move to postpone until the joint meeting with the Mid-Atlantic Council in August, 2018, which is next week’s meeting. Is there a second to that motion? Seconded by Ray Kane, so moved and seconded motion to postpone. Is there any need to further discuss this motion?

Is the Board ready for the question? **If so, all in favor of the motion please raise your hand; opposed please raise your hand, any abstentions, and any null votes? The motion passes 9-3 with no abstentions and no null votes.** We will revisit this at next week’s meeting. Mike is that okay? Mike, go ahead.

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

MR. LUISI: I'm running for Chair again next week; so if I mess up enough today maybe they won't bring me back on as Chair. I'm going to get in trouble if I say too much. The Council is under, they are under more strict guidelines as to what can be added to their agendas. They need to have those agendas posted weeks, months in advance of meetings.

New business that comes before the Council comes before the Council at the end of the Council meeting; which nobody from the Board will be remaining, unless you decide to stay all day through Thursday. I'm a little concerned about when we'll fit this into our agenda. I'll leave it at that. There is probably an opportunity to have a quick discussion.

I don't want to get in trouble; as far as adding additional items to an agenda that was not announced in the Federal Register. Chris isn't here to ask how the details of that works. But I just want to put it out there to make sure the Board understands that there are certain limitations that the Council has in adding additional items to their agenda; different from what the Commission does through Board meetings.

CHAIRMAN BALLOU: Mike Ruccio.

MR. RUCCIO: It's a good point. I think the notice requirements pertain to if the Council were to be taking any kind of action on this. I think initiating a discussion, you would probably be okay. There is still the open-ended question of whether or not there is time to do that within everything that's scheduled.

But I think in prior cases where there has been kind of a spontaneous issue that's come up, it is okay for the Council to initiate a discussion on it. It's just really, you have to then push it to another meeting with appropriate notice to then take it back up and then move it forward. This may not, I guess the caveat with it is this

may not advance it the way that we had thought; but it could still be discussed.

CHAIRMAN BALLOU: Emerson and I do want to try to wrap this up as soon as possible; so I'll take two more comments. Then I think we really have to move on to summer flounder. Emerson.

MR. HASBROUCK: Yes, based on the information Mike just provided us, I pass.

CHAIRMAN BALLOU: Rob O'Reilly.

MR. O'REILLY: Just quickly, are no states dealing with noncompliance whatsoever; or any of those five elements whatsoever? I think we all ought to think about that and figure out what we're doing, and then add NOAA to that National Marine Fisheries Service. Then if we are able to have a conversation at the Council meeting next week, I think that is what we all should know about what's going on.

CHAIRMAN BALLOU: I'm just going to say that I guess what we need is to ask our staff to immediately coordinate with the Mid-Atlantic staff following this Board meeting to try to see if we can squeeze in sometime next week to take up this issue. I think that's the best we can do with it for now. I think if I'm not mistaken, we've covered all the ground that we need to on recreational black sea bass. I'm getting a nod in the affirmative; so we're going to now switch to recreational summer flounder, and Kirby Rootes-Murdy has a presentation.

**CONSIDER RECREATIONAL MANAGEMENT
OPTIONS FOR SUMMER FLOUNDER**

MR. KIRBY ROOTES-MURDY: I'll try to go through this as quick as possible; because we're a little bit behind schedule. I'm going to go through a memo that was included in supplemental materials as a background section that includes management, recreational data, science, and then four possible options for

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

looking at summer flounder recreational management for 2019 and beyond.

Briefly, as you guys are aware, you've seen this in past addenda for summer flounder. We have been managing the fishery in a number of ways over the last 25 years. Back in 1993, we had coastwide measures. After a number of years it was determined that those weren't sufficient for managing the resource.

Framework 2 and Addenda III and IV on the Commission side, created conservation equivalency, we had Addendum VIII that put in place the state-by-state harvest targets that became very much attached to conservation equivalency. From 2004 to 2013 that is what the states used to manage their recreational fishery. Starting in 2014 through 2016, we had addenda that implemented mandatory regional management. Then obviously Addenda XXVIII, which was initiated in 2016, implemented for 2017, specified what the 2017 measures were to be. The Board chose last year to extend that into 2018.

In terms of recreational data, it is important to keep in mind that MRIP formally MRFSS, is our main source of data for understanding how recreational catch and harvest is across the coast. In July of this year MRIP released revised catch and effort estimates all the way back through the entire time series.

That was based on a new mail-based fishery effort survey, and revised Access Point Angler Intercept Survey that you heard about yesterday. For summer flounder in particular what these changes have meant is that the estimates, the harvest estimate have changed over time anywhere from 25 percent increase to a 210 percent increase from previous estimates. This creates a challenge; in terms of understanding its impact on the resource right now.

When looking at the science side of things, we had a benchmark assessment back in 2013 that indicated the stock was not overfished, and overfishing was not occurring. In 2015 and 2016, we received assessment updates that indicated otherwise that the resource was in fact experiencing overfishing. There is as you probably are well aware, a retrospective pattern in the assessment model right now that is overestimating the biomass and the recruitment, and underestimating the fishing mortality rate.

There is currently a benchmark assessment underway for summer flounder. We're anticipating that to be completed and peer reviewed in November of this year. That will incorporate calibrated MRIP estimates; and the Board and Council will consider the results of that assessment in February, 2019.

I just want to make it clear. There was some elusion, or at least a reference to what the 2019 specs are. Right now we don't have for summer flounder or black sea bass 2019 harvest specs. We have proposed specifications that are derived from the SSCs recommendation; and this body will take up next week jointly with the Mid-Atlantic Council what those harvest specifications should be for 2019.

For summer flounder in particular, we have a bit of a challenge because there are these proposed specifications that come out of basically running the parts of the assessment model with additional data in it. We know that these harvest specs, which will be considered next week, will likely be reconsidered in February, 2019.

That is why there is an asterisk on it that they're coming out of a recommendation and there is a formula that you probably are aware of in deriving an RHL from an ABC. I just want to make sure that's clear. I've tried to lay out that we have a number of challenges when it comes

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

to trying to manage next year's recreational fishery for summer flounder.

There is the MRIP data release, the timing of the benchmark assessment, landings specifications at next week's joint meeting will be revisited in February of 2019. If we were to try to do things as we have done the last few years, in terms of coming up with example measures based on preliminary harvest estimates, and initiating an addendum to plug those example measures into, we would likely have to do that work twice. The Technical Committee would have to do that work twice; because we know we're going to get new information in the early part of next year.

For potential options, I have four of them. I'm going to try to go through them as quickly as possible. The first is that if this Board chooses, you could move to add options into the draft Black Sea Bass Addendum XXXII; as Mike pointed out that would allow summer flounder recreational measures to be set through a specification process.

I think the simplest way I can try to explain this to you all is that it would take the addendum in future years out of what we've been doing in the past. There would still be a public comment process that the states would facilitate; once we get example measures developed by the Technical Committee.

But there would not be an addendum that lays out what those example measures are. We would have a February meeting likely; where the states would sign off on generally how those regions would look, and then we would probably have to have a March or later meeting to have the states sign off on what the measures would be. Again, annual addenda would not be required under this approach.

The second option is to extend the provisions of Addendum XXVIII for an additional year. The ISFMP Charter allows the Board to extend those

provisions up to one year. It would require a two-thirds majority vote. It's important to know that there would likely be the need to initiate some action to demonstrate that there is a good faith effort to put in place a set of measures or some kind of management program beyond that.

In the interim there would be some work that would still be needed. The third option is to use voluntary regions under conservation equivalency; to establish 2019 regulations. We have the ability through the FMP right now to form voluntary regions. That is specified in Addendum XVII.

It's important to know that those regions must have the same size limit, bag limit, and season length. The start and end date of the season can vary, but the total season length has to be the same for those states within a region. The fourth possible option, actually I'm sorry, I misspoke. We have five possible options.

The fourth is to initiate an addendum that considers recreational management strategies for 2019 and beyond. It would be a similar process as previous years; including trying to put in place example measures, which I've already outlined, might be problematic. The fifth option would be to work within the provisions of the FMP; so that would be going back to either a coastwide set of measures, or state-specific harvest target based on that states performance in 1998.

If we were to go down this route, there would be the need for the Board to choose or at least specify, whether to use calibrated vs. un-calibrated data for that harvest target proportion. I have in the next slide, after questions if you have any, I have what that breakdown is. They are frankly very minimal changes from what the un-calibrated harvest estimates were for 1998. But if that is of interest I can always put that on the screen. At this point I'll take any questions.

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

CHAIRMAN BALLOU: I apologize; I had to leave the table. Did you mention during your presentation the possibility of combining this addendum with the black sea bass addendum?

MR. ROOTES-MURDY: Yes.

CHAIRMAN BALLOU: Thank you. I'm sorry I missed that; so questions for Kirby, David Borden.

MR. BORDEN: Kirby, could you go back to the original slide; I think it may be the first or second slide that has the timeline on it. I think what I'm referring to is the one where you've got the options, the one with the options that we have. We've got five options. I think the first one.

MR. ROOTES-MURDY: You've got it. It should say five instead of four.

MR. BORDEN: Maybe I'm not clear on which slide it is. But let me ask the question anyways. If we were to, yes this is the one. If we were to extend the provisions of the current FMP, until we get to the point where we do the revisions to it. How much of the fishery is taking place during that period? In other words, you don't have to extend the provision for a whole year, if you just extended it for three months then we would only do the work one, right? Do I have that correct?

MR. ROOTES-MURDY: I think the challenge is that if we extend the provisions for what you're saying is part of 2019 but not the full year, we would still have to have a management document that is being worked on, and then we would have to be replacing that. If we're doing an addendum to replace Addendum XXVIII, we would still need to go out and do public comment for it.

The time table for that would be super truncated versus what we've done in the past; because we have the assessment results in

2019, and the Board then would have literally a couple of months before people's fishing season start, to try to get an addendum reviewed by the public, provide comments, and the Board sign off on options. Does that make sense?

MR. BORDEN: Okay thank you, yes.

CHAIRMAN BALLOU: Adam Nowalsky.

MR. NOWALSKY: Options one through four would all be contingent, implementation of any of them would all be contingent upon a joint decision with the Mid-Atlantic Council in December; to move in the direction of conservation equivalency versus coastwide measures, correct?

MR. ROOTES-MURDY: Well, I think all five of them, unless we were to do coastwide measures, we still have to do conservation equivalency jointly between the Council and the Commission.

MR. NOWALSKY: Then we would be going down the path of assuming that's what was going to happen; which is similar to what we've been doing. Then once the Service, assuming that that decision for conservation equivalency was voted in the affirmative at the joint meeting. The Service would have to wait to see what our program looked like, before deciding to implement the final rule for conservation equivalency.

I guess where I'm going with this is I'm not sure from a timeframe perspective three and four are even viable at this point; in terms of being able to go through all of our processes. Keeping in mind now at least this Board has the benefit of having two different FMP coordinators by the species. But there is still a lot of co-staff work that has to be done between these two. Is it realistic to think some new management program can be implemented in time to pass

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

muster for federal review for implementation in the 2019 season? Is that realistic?

MR. ROOTES-MURDY: Maybe I'll take a first stab at it and Mike Ruccio can maybe provide the Services perspective. But annually what we do when the Board and Council sign off on doing conservation equivalency is that at some point, in generally April, we try to send what those measures will be that the states have agreed to, and have implemented or are in process of implementing that in combination constrain the coastwide harvest to the RHL.

That is what we have to do with any of these options. We have to show that we're going to constrain harvest to the RHL. That's what the Plan dictates. I guess that's what I'm trying to make clear is that with any of these that we're doing conservation equivalency that remains. That is going to be there.

CHAIRMAN BALLOU: Mike Ruccio.

MR. RUCCIO: Just to add on a little bit to that. Kirby has hit the nail right on the head. The actual details of what we've done in years past, you know we're active members, participatory both in the Council and the Commission process. We have members that are part of the Technical Committee as well as NEFMC that has been up at the Council level, if there is evaluation of new or different technical approaches.

Then the kind of lynchpin for our approval of conservation equivalency is a letter from the Commission that outlines the case for why the measures are conservationally equivalent. In years past that's been a very simple letter that kind of speaks to whatever addenda and the requirements of the addenda.

But in some of the more recent years, where we've had some departures from kind of the standard, particularly in years where we've needed a reduction and it hasn't simply been

evaluation of this is what the measures were, here is the percent reduction we're trying to get to, where we've kind of massaged data, things of that nature.

The letters we've gotten from the Commission have been more detailed. To the extent that the Commission feels confident, it can enact its process and provide us with that documentation in a letter to make our decision. The answer is yes. If the Commission doesn't think that it's possible to work through that process or timeframe in a manner that would lend itself to being able to make that type of evaluation on the timeframe that's necessary to get measures in, then the answer I guess would be no. But Toni's got her hand up; so she's going to help out too.

CHAIRMAN BALLOU: Toni.

MS. KERNS: Adam, I think what you're getting at is under Option 3, if I'm remembering correctly is the addendum process that we've been doing for the past like three, or four or five years. In that process Kirby outlined that in order to utilize that and set us up on the timeframe that we would need to be at to provide the Service that letter; we would have to ask the TC to do double the work, because we won't have the data.

We'll have to put example measures in that use the old MRIP data; and then come January, we'll have a new assessment, hopefully, with new information. Then we would have to ask the TC to then go and redo the information that was in that addendum with the new data. The process, the ability is there but it's asking a lot of your staff, our staff and the National Marine Fisheries Service, and Mid-Atlantic Council staff.

The regional approach we would just hold, or the voluntary regions, I think is that Option 3, sorry that's Option 3. We would just hold off; because we have the ability to do that right now. We would probably ask the TC to hold off

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

on making any recommendations until after the assessment comes out. Any of these options will require a tight turnaround and a lot of quick work; once the assessment has been released, in order to try to get close to a reasonable deadline to send that letter over to NOAA. Does that help?

CHAIRMAN BALLOU: Adam.

MR. NOWALSKY: What I'm hearing is that any of them could be done. Four will involve substantially more work specifically from the TC; if I heard you correctly, and one through three are probably similar, with the exception that the voluntary regions would require more input from Commissioners from this Board, maybe another workgroup or something to try to hash out, because it's something we haven't done before.

CHAIRMAN BALLOU: Toni.

MS. KERNS: I would say that is correct; and I would add that Number 4, I think that avenue is going to be more confusing to the public, because what we take out for public comment will be based on the un-calibrated MRIP estimates, and then what you guys actually made your management changes on would be based on calibrated MRIP estimates.

CHAIRMAN BALLOU: Additional questions; John.

MR. CLARK: I'm just trying to get clear on this Option 2. First of all, this would just be doing what we're doing right now right? We would just be continuing the current addendum, correct? Then the second part, I was just going to ask do we know yet, have any idea of what our performance is this year, how that would relate to the RHL for 2019? We don't have any wave data yet, so we're pretty much in the dark right now and we don't know how the RHL for 2019, whether it will go lower or higher based on the assessment.

MR. ROOTES-MURDY: As I've said we've got these interim, I'm going to call them interim specifications; proposed specifications that you all are going to take up next week. The RHL does go up. But I'm trying to hit home the point that I would not put a lot of stock in that; because it's updating parts of the assessment without the new calibrated MRIP information. As we've noted, we had this retrospective pattern that is in the current assessment; so it would likely be revised either way down the road.

CHAIRMAN BALLOU: John.

MR. CLARK: Given all that wouldn't the simplest and safest thing just be to go with Option 2?

CHAIRMAN BALLOU: Toni.

MS. KERNS: Just to clarify. The Charter allows the provision to extend for six months under the current program; so you could use the current program, but then the second extension would be an additional six months, but in that timeframe you have to initiate another document to move forward with management changes. It does require additional work.

MR. CLARK: They all require additional work; but I'm just saying for right now is it the simplest, or are they all pretty much a pain in the rear?

MS. KERNS: I think it depends on how you want to move forward with summer flounder management. What is outlined in the white paper that was in your briefing materials is that trying to think about what you all have been doing, and try to streamline this process and not have to do addendum from year after year.

One of the benefits that we see from the staff perspective to the annual setting of specifications is that I don't see it to be very different than what we used to do with

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

coastwide measures; except for the fact that there is the lack of the allocation there that is preset. The allocation discussion would have to be either done every year; or we work it into some of the conditional provisions of an addendum.

But in terms of public comment, it's not any different than what we used to do before where you all went home and really got the majority of the comment from your own stakeholders; and then brought those back to the table. I think it's very similar.

MR. CLARK: Under two, you would still have to go out for public comment; even though we're just extending what we're doing?

MS. KERNS: What I just described was the Option 1 specification settings. Under Option 2, you can extend the provisions for the first six months; and then you can extend the provisions for a second six months, but you still need to do another management document for the future. During that second six month period, you have to have management changes moving in process.

MR. CLARK: But at the second six months we would know what the actual RHL is and we would have a path forward at that point; which we don't really have now.

MS. KERNS: In theory, but is that path forward something different than this process that you have been using for the past four years? I think that Option 1 sets you up to utilize the process that you've been using for the past four years.

CHAIRMAN BALLOU: If I could just follow. Does Option 2, extending the provisions of the addendum for a year at two six months increments? Does that mean that the current state regulations would be the same; or could they be modified?

MS. KERNS: They can be modified; and they would have to be in order to meet the RHL, whether that would go up or go down, it would depend on the performance and what the RHL is set at.

CHAIRMAN BALLOU: How does that differ from Option 1? I think I hear members of the Board struggling, and I am as well now. Between the process that would play out, Options 1 and 2 would differ in terms of the way the process would play out.

MS. KERNS: Option 1 sets you up for the future; Option 2 is only a one-year fix.

CHAIRMAN BALLOU: We need to shift from comments to recommendations for moving forward. I'm actually looking for the latter; but if there are still burning questions, we'll entertain them. Mike Luisi.

MR. LUISI: I think that with all the moving parts, with the assessment, with the benchmark that is happening. We're going to need to be able to act pretty quickly. We talked about black sea bass and this Option 1 that is presented here for summer flounder in that we could make modifications to our upcoming seasons recreational specifications by a Board motion.

I think that needs to be included; and I would suggest that summer flounder be added to Addendum XXXII, to incorporate it with black sea bass as we move forward. If everything else fails, I think a two-thirds vote to extend the current provisions should be an option for us. But anything in addition to that I think just delays and adds significant workload at a time when there are too many moving parts.

There are too many unknowns and uncertainties for us to have any idea even in December, January, even February of really what the picture holds for this upcoming season. Right now, I would prefer if we just moved forward with just Options 1 and 2; as

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

potential solutions for us for going forward for 2019. Then we could take up additional work after the benchmark is presented and reported and we can grasp it more; perhaps we set ourselves up for an amendment or something for the future.

CHAIRMAN BALLOU: Kirby.

MR. ROOTES-MURDY: I think Mike, to really hone in on that then. What would be helpful is probably a motion to add summer flounder to this addendum; and then regarding the extending the provisions of Addendum XXVIII that can be done really at any point over the next few months. I mean when we have these joint meetings, or when we meet in October. December the joint meeting would probably be the next time to really consider that. It's kind of in your back pocket; but you don't have to necessarily move forward concurrently. Does that make sense?

CHAIRMAN BALLOU: Yes it sounds like it would not have to be an option developed for an addendum. It would just be the fallback option if Option 1 didn't play out appropriately. Regarding Option 1, and thinking about the timeframe for the recreational black sea bass addendum which is going out to public comment and hearing between October and December. Can we do that having not yet made a decision on conservation equivalency? Toni.

MS. KERNS: Yes, I think you can. It would become a tool in the toolbox for you guys to utilize; just like voluntary regions and anything else under conservation equivalency.

CHAIRMAN BALLOU: But it would have to be built on the assumption that conservation equivalency was going to be adopted. Then if so, here is the management program that would be in place.

MS. KERNS: Yes. You have lots of tools under conservation equivalency that you can utilize.

You can use state-by-state measures, you can use voluntary regions. This would just become another tool for you all to utilize under conservation equivalency.

CHAIRMAN BALLOU: Yes, and I'm sorry. I just want to make sure that the sequencing didn't cause an awkwardness; in terms of asking the public to comment on an option that required first a vote by the Council and the Board to adopt conservation equivalency. But it doesn't sound like you're concerned about that; okay, other thoughts and comments. Adam.

MR. NOWALSKY: The first option specifically offers that the Addendum could define specific elements of the process; like what we talked about the sideboards, if you will of the black sea bass differences that we talked about. When did staff propose to get input from Board members on what those sideboards would be; or did they intend to develop them themselves through the PDT? I mean we expect to see this Board a draft addendum before us in October. When were those specific elements going to be developed and by whom?

CHAIRMAN BALLOU: Kirby.

MR. ROOTES-MURDY: We would basically jump on the Working Group train and have this Working Group consider those as well. It would be between now and October the Working Group would need to meet and talk about that; as part of developing the document.

MR. NOWALSKY: The same Working Group that is knee deep in black sea bass or another Working Group?

CHAIRMAN BALLOU: It's a good question. I'm going to leave it hanging for a moment. Remember that with summer flounder, assuming we take the same regional approach, we have a different regional configuration. Mass is a region by itself, so is Rhode Island, so is New Jersey, so is North Carolina. You've got

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

Connecticut and New York together, Delaware, Maryland, Virginia together.

Slightly different perspective there in terms of those guiding principles, in terms of intraregional issues; because it wouldn't make any sense to have to worry about intraregional issues when you've got states that are their own region. I'm not saying it isn't an important issue to be pursued; I just want to remind the Board that it would be addressed differently than black sea bass, given the different regional configuration. Adam.

MR. NOWALSKY: Again, who?

CHAIRMAN BALLOU: I'll now pick up the question and suggest that it be the same group; unless there is interest in forming another group or a different group. The same group that is currently addressing the black sea bass issue would be the likely culprits to pick up on this further development of this issue.

That's what's on the floor as a suggestion. I know it's getting late, and I know people are getting weary, I certainly am. But I want to see if we can come to consensus on a way forward; so to start out at the top, there are five options being presented. There seems to be particular interest in pursuing Option 1.

There has been a suggestion that Option 2 is that back pocket option that could always be drawn upon if need be. I haven't heard a whole lot of discussion or support for Options 3, 4, and 5; so I really need Board input right now on which of those five options the Board wants to pursue. Then we can talk a little bit more about and make sure we're clear on exactly how we're going to pursue them between now and October; whatever it is we're going to pursue. Mike.

MR. LUISI: Kirby mentioned that in order to add summer flounder to Addendum XXXII we would need a motion; which would be Option 1 as you

presented, Kirby. Is that correct? It would be better to have a motion, Mr. Chairman, or do you want to do it by consensus? My recommendation would be to add summer flounder to the document that Caitlin presented earlier.

Have the Working Group as was just mentioned; work on the details of the Sections dealing with guiding principles. They may be different. We may not have the same issues and guiding principles that we did with black sea bass; but that is something we can talk about to present to the Board in October for a draft document to go to the public.

CHAIRMAN BALLOU: I think I'm right there with you with the exception that what I'm thinking is a motion that would wrap together both black sea bass and summer flounder; if that's the maker of the motion's intent. First I would like to see if there is consensus on Option 1; which would require a motion, and we can wrap in black sea bass, and we can basically bring this whole meeting to a crescendo here, or is there still any interest in considering any of the other options? First let me just ask, is there consensus on, at least between now and October, focusing on the further development of Option 1 as the way forward for recreational summer flounder. If there is consensus on that then I think we are ready for a motion; and that motion would be to initiate. I thought we needed a motion to initiate addendum for both recreational black sea bass and summer flounder; since the Board has yet to explicitly take such action for either species.

MS. KERNS: I think if you have consensus around the table then it is in the record; and it's noted and it can be added, you don't have to do a motion.

CHAIRMAN BALLOU: I'm learning as I go. I thought we needed a motion to initiate addendum, but I guess not. As long as there is consensus, I guess it's the same concept,

meaning if there is no objection. It is basically the same concept as if there is no objection to initiating an Addendum XXXII that would address both recreational black sea bass and recreational summer flounder pursuant to the Board's discussion and guidance provided today. Pretending as if that were the motion up on the Board, and if it were, is there any objection to that motion?

I don't want to rush things; but I just want to make sure we're good, and if we are I see no objection so we're solid, I think on a way forward. In terms of the mechanism, I didn't get a warm and fuzzy from at least one Board member over the idea of drawing upon the same recreational working group. Is there another way forward or another approach, in terms of working through the development of this new addendum for both species; or should we continue to rely upon the existing recreational working group for that process?

If I don't see any hands up, I am going to assume that we'll use the same recreational working group. We'll start early and meet often if we need to; because I get the point that there is a lot of work to be done, but I think that is our charge right now. I think we need to do that. I'm going to look to my right to see if there are any other issues that we need to cover under Agenda Item 4. We're going to, and I'm sure there won't be a strong objection to this.

**2018 FISHERY MANAGEMENT PLAN REVIEWS
AND STATE COMPLIANCE REPORTS FOR
SUMMER FLOUNDER, SCUP, AND
BLACK SEA BASS**

CHAIRMAN BALLOU: We're going to push Item 5, the FMP reviews to our October meeting; which means we're down to Item 6. I'm sorry that was Item 6. We just covered Item 5, so I got myself out of whack. We've completed Item 5. We've just decided to postpone Consideration of the Approval of the 2018 Fishery Management Plan Reviews and State

Compliance Reports for Summer Flounder, Scup, and Black Sea Bass to our October meeting.

OTHER BUSINESS

We are now down to other business, and we have two issues and I think we can address at least one of them quickly; because I've already talked to Chris Batsavage, and Chris, why don't you go ahead and introduce the topic. Then we'll have a brief discussion on it.

ADVISORY PANEL NOMINATIONS

MR. BATSAVAGE: As you know, we all received a notice about our Advisory Panel members; to see who still for all our Boards, but for Summer Flounder, Scup, and Black Sea Bass to see who still wants to serve and who doesn't. In the process of that we received two nominations; or sent them on, and were wondering, what is the best way forward, as far as getting Board approval for two AP nominations from North Carolina?

CHAIRMAN BALLOU: My suggestion was since the Board has not had the opportunity to review those candidates, they weren't in the meeting materials. There were two options that I thought of. One was to potentially pick this up at next week's meeting; but I'm sensing that that might not be the greatest idea. Mike Luisi is confirming that that is not the greatest idea. The other option is to do it through an e-mail to the Board. If the Board is comfortable with that approach, I think we've done that with other AP nominations.

We'll do an e-mail; Caitlin will handle that. Chris, if you could forward the nominees to Caitlin, whatever you have on them. She'll put them out to the Board and of course any other state that might have any AP nominees can do the same. The Board will have the opportunity to respond yay or nay on the recommended appointments from North Carolina, and we'll handle it that way. Are you comfortable with that approach, Chris?

MR. BATSAVAGE: Yes that works fine. Thank you.

CHAIRMAN BALLOU: Is the Board comfortable with that approach? Seeing no objection that is how we'll handle that issue with regard to North Carolina's AP nominees, and there are two as I understand it.

RESEARCH SET ASIDE

CHAIRMAN BALLOU: Now we're on to, Emerson Hasbrouck, you had asked to have some time for RSA Research Set Aside.

MR. HASBROUCK: Yes thank you, Mr. Chairman, and I'll try to move quickly on this. Some of you may recall that several years ago there was a Mid-Atlantic Research Set Aside Program that provided about a million dollars a year for fisheries research. That program has been suspended.

On the basis of that I would like to move that the Summer Flounder, Scup, and Black Sea Bass Board create a working group to meet with the Mid-Atlantic Fishery Management Council's Collaborative Fisheries Research Committee, to examine the possibility of reestablishing the Mid-Atlantic Research Set Aside Program. If I get a second, I can expand on that a little bit.

CHAIRMAN BALLOU: Seconded by Eric Reid. Are we okay taking this issue up? It's essentially an action item that wasn't on the agenda; but I'm going to look to staff to indicate whether we're okay taking this on as an issue that wasn't on the agenda. Toni is over conferring with Mike. Let's first get it up on the Board. Emerson, I just want to make sure that procedurally we're okay with this. Typically under other business we don't take up action items; but maybe this is one that we're okay on. I just want to make sure. Tom, Fote.

MR. FOTE: Before I could vote on anything about the Research Set Asides, I want to make

sure that we've corrected the problems that were there; the reasons we suspended it, and that the money that was basically going for summer flounder was going, using from the RSA was going for summer flounder research, because there was money be going other places. I'm not comfortable doing it at this time; until I know what the results were from why we suspended it, and have they been corrected yet.

CHAIRMAN BALLOU: Again, I don't want to get into a substantive discussion. This is just, potentially if it is in order it is a motion to establish a working group.

MS. KERNS: I think what we can do is talk with the Council. This isn't something that would happen by the end of the year; because I don't think that their Committee is meeting this year. But it could be something that they can consider for their priorities for next year; and if it is something that gets included then we can do that.

It can be an "ask" of the Council; but the Council would also have to agree to get together their Committee and work with us. It's not a decision that we can make solely on our own. But I don't think that there would be an opposition to making the "ask."

CHAIRMAN BALLOU: I'm wondering if the motion should read a request; but Adam.

MR. NOWALSKY: Just for clarities sake that is the Council's Research Steering Committee. You can take off Collaborative Fisheries.

CHAIRMAN BALLOU: I guess I really need help. Procedurally is this motion in order at this point in the meeting under New Business, to move to create a working group to meet with the Mid-Atlantic Council. I should look at my chart instead of looking around. To move that the Summer Flounder, Scup, Black Sea Bass Board create a working group to meet with the Mid-

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

Atlantic Fishery Management Council's Research Steering Committee to examine the possibility of reestablishing the Research Set Aside program. Is there any procedural problem with taking this motion up right now?

MS. KERNS: No there is no action per se; it's just getting a working group together. It doesn't affect the outcome of the fishery management plan. I think it's totally fine. I just want to control expectations that this will get concluded in August the Council takes up their priorities in October. If it's a priority for them to establish the Committee to talk about these things, then we can jointly get together and talk, but there are some contingencies in order to make this happen.

CHAIRMAN BALLOU: With eyes wide open on this we have a motion by Mr. Hasbrouck, a second by Mr. Reid. Is there any further discussion on this? Adam Nowalsky.

MR. NOWALSKY: I would propose this be tweaked a little bit to reflect that what we're doing is request that the Council meet with a working group we create. As I read this right now, we're creating the working group first; essentially saying we're going to do it today. What I think we're really after is going to the Council and saying, we want to meet with your Research Steering Committee.

We believe that is the best way forward, and to get that dialogue going and discuss it with them. I can envision I would hope it wouldn't happen, but we could get a working group, we can come up with all these wonderful ideas. Then the Council turn around and say, well we've got this other proposed way of you doing it.

I think the intent of this is to reach out to the Council, express our interest in meeting with that Committee, and get some feedback from them. Then decide what we want to form; whether it's a working group, whether it's

Board Chair or whatever, thought for consumption.

CHAIRMAN BALLOU: Caitlin has a thought that I'm going to ask her to offer on the record. But I just want to note that while you were talking, Adam the motion has been perfected to read that the motion is to create a working group and request to meet with the Mid-Atlantic Council's Research Steering Committee. Emerson, did you have your hand up?

MR. HASBROUCK: Yes, thank you Mr. Chairman. I said earlier when I made the motion that if I got a seconder I would expand upon it a little bit. I understand there was a procedural issue; which I think we've addressed that. Just by way of real quick review. Four years ago the Mid-Atlantic Fishery Management Council suspended the Mid-Atlantic RSA program.

That vote was to suspend the RSA program not end it. At that time there was discussion about convening a working group and a workshop to address or to look into the issues relative to that RSA program. My intent here is for our Board to establish a working group; to work with the Mid-Atlantic Council Committee, not to go independently, but to work in conjunction with them.

The species that we're talking about for the Mid-Atlantic RSA is essentially summer flounder, scup, black sea bass, which are obviously managed by this Board, as well as bluefish and then butterfish and longfin squid. Those last two obviously we don't manage. There are a whole range of issues that have to be looked at before anybody can decide whether or not we should or should not go forward with an RSA program.

To Tom's question, you know that's one of the major issues. You know there needs to be involvement of Law Enforcement in this discussion; in terms of what specifically it was

that those bad actors did how they did it, and then what can be put in place to prevent that from happening in the future.

Listening to the discussion on glass eel harvest in Maine got me thinking about this. I mean they've had some issues where people were circumventing the law; in terms of that harvest and they've come up with a very good program to manage that. I think that if we get some people together and understand what the past problems were; and what the past benefits are, beyond just having a million dollars-worth of funds available for research every year.

That we might be able to go forward with a new and improved, if you will RSA program that addresses the deficiencies of the prior program, yet moves forward with the advantages of that prior program. That is what my intent was; and I see this having this Board establish a working group is the first step. Obviously, we can't meet with the Council's Committee until that Committee is ready to meet with us. I don't intend for us to go off on our own and review the issues, and come up with a plan, it has to be joint.

CHAIRMAN BALLOU: Caitlin, I'm sorry. It is so hard to listen and talk at the same time. Do you want to just reflect on the TC angle that you've been whispering in my ear about?

MS. STARKS: Yes, we just wanted to note as staff that it will be important for the Board to kind of give us a sense of priorities; in terms of what the TC is going to have to be looking at this fall and in the spring, since we'll be doing new measures for black sea bass and summer flounder, as well as some other additional things that have been brought up. We just wanted to note that.

CHAIRMAN BALLOU: I think that ties into Toni's comments that this is something that is going to have to be on an arc that won't necessarily get immediate attention; but will have to be fit in as best as possible. Mike Ruccio.

MR. RUCCIO: I don't want to belabor this discussion too much; but just for everyone's benefit, there have been quite a few discussions, and there has been work that has been ongoing to kind of continually evaluate both the problems that occurred, and talk about reestablishment of the RSA program.

I'm not entirely familiar enough with them to be able to speak informatively for everyone's benefit on that. But it strikes me that rather than spinning up a working group, it might be good just to ask for an update from the Council on what efforts have transpired since the suspension of the program. I know there has been quite a bit of work.

CHAIRMAN BALLOU: We have a motion. Is the Board ready to vote on this motion; any further discussion, any need to caucus? Yes, a 30 second caucus then we'll vote on this motion. Okay, who knew that we would be engaged in a new issue here at the end of this meeting? With that and given the amount of discussion. I realize this is a pretty substantive issue.

Let's make sure we're clear on the motion which is to move that the Summer Flounder, Scup, Black Sea Bass Board create a working group and request to meet with the Mid-Atlantic Fishery Management Council's Research Steering Committee to examine the possibility of reestablishing the Research Set Aside program.

All in favor of the motion please raise your hand; thank you, hands down. Opposed please raise your hand; any null votes, any abstentions. I'm sorry, any abstentions, 2, any null votes, 1. The motion passes 8-1 with 2 abstentions and 1 null vote. Completed, done, I don't think there is anything left on the agenda. Is there any objection to adjourning; one hand, Dr. Jon Hare?

Draft Proceedings of the Summer Flounder, Scup, and Black Sea Bass Management Board Meeting
August 2018

DR. HARE: I would just like to ask that when such a meeting is held with the Mid-Atlantic Council that the Northeast Fisheries Science Center and GARFO be included in that meeting; since we administer the RSA program. Then also just for a point of interest. The New England Fisheries Management Council is currently reviewing their RSA program. I don't know exactly what their timeline is for completing that review; but I think it's before the end of the year. They will have gone through their RSA program, which might add to your thoughts about it as well.

ADJOURNMENT

CHAIRMAN BALLOU: Thank you, any further business to come before the Board? Seeing none; we're adjourned. Thank you so much.

(Whereupon the meeting adjourned on
August 8, 2018)

Atlantic States Marine Fisheries Commission

DRAFT ADDENDUM XXXII TO THE SUMMER FLOUNDER, SCUP, BLACK SEA BASS FISHERY MANAGEMENT PLAN FOR BOARD REVIEW

Summer Flounder and Black Sea Bass Recreational Management



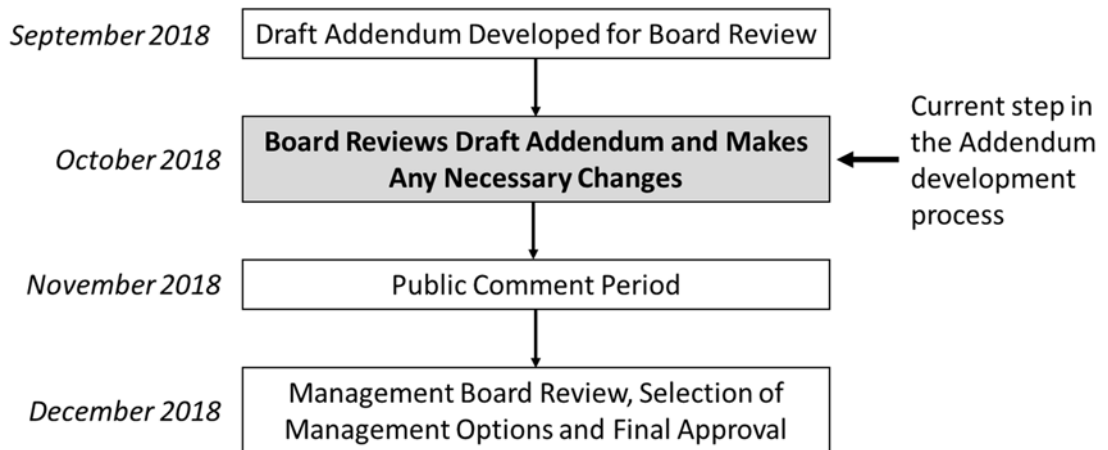
This draft document was developed for Management Board review and discussion. This document is not intended to solicit public comment as part of the Commission/State formal public input process. Comments on this draft document may be given at the appropriate time on the agenda during the scheduled meeting. If approved, a public comment period will be established to solicit input on the issues contained in the document.

ASMFC Vision:

Sustainably Managing Atlantic Coastal Fisheries

Public Comment Process and Proposed Timeline

In May 2018, the Summer Flounder, Scup, and Black Sea Bass Management Board (Board) initiated development of an addendum to the Interstate Fishery Management Plan (FMP) for Summer Flounder, Scup, and Black Sea Bass. The Draft Addendum addresses recreational management of summer flounder and black sea bass for 2019 and future years. This document presents background on summer flounder and black sea bass management; the addendum process and timeline; and a statement of the problem. It 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 [DATE], 2018 at 11:59 p.m. Comments may be submitted at state public hearings or by mail, email, or fax. If you have any questions or would like to submit comment, please use the contact information below.

Mail: Caitlin Starks, FMP Coordinator
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Table of Contents

1.0 Introduction.....	4
2.0 Overview	4
2.1 Statement of Problem	4
2.2 Background.....	5
2.3 Status of the Stock.....	11
3.0 Proposed Management Program	12
3.1 Summer Flounder Management Options	13
3.2 Black Sea Bass Management Options.....	15
4.0 Compliance.....	17
Literature Cited	17

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1.0 Introduction

Draft Addendum XXXII proposes alternative approaches for state management of the recreational summer flounder and black sea bass fisheries for the 2019 fishing year and beyond. The management unit for summer flounder in US waters is the western Atlantic Ocean from the southern border of North Carolina northward to the US-Canadian border. The management unit for black sea bass in US waters is the western Atlantic Ocean from Cape Hatteras, North Carolina northward to the US-Canadian border.

Summer flounder and black sea bass fisheries are managed cooperatively by the states through the Atlantic States Marine Fisheries Commission (Commission) in state waters (0-3 miles), and through the Mid-Atlantic Fishery Management Council (Council) and NOAA Fisheries in federal waters (3-200 miles). This draft addendum is proposed under the adaptive management and framework procedures of Amendment 12 and Framework 2 that are a part of the Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan (FMP).

The Commission's Summer Flounder, Scup, and Black Sea Bass Management Board (Board) approved the following motion on May 3, 2018:

Move to...develop a new action for the 2019 recreational fishery to address the changes in black sea bass abundance and distribution that consider management based on the distribution of the resources, along with any other options recommended by the Management Board.

On August 8, 2018 the Board also agreed to add recreational management for summer flounder to the issues to consider in Draft Addendum XXXII.

2.0 Overview

2.1 Statement of Problem

The Commission is currently facing a number of challenges with regard to recreational management for black sea bass and summer flounder. Among these are: the FMP does not provide an appropriate management program for the current distribution of the resources and fisheries along the coast; harvest estimates used for management are highly variable (leading to regulatory instability), and the availability of recreational data is not concurrent with management timelines.

The FMP strategies for managing the summer flounder and black sea bass recreational fisheries include coastwide measures (the same minimum size, possession limit, and season length) for both species, and in the case of summer flounder, state-by-state or regional measures based on achieving harvest targets derived from the proportion of each state's estimated 1998 recreational landings. Since the adoption of the FMP, the summer flounder and black sea bass resources and the recreational fisheries that utilize them have experienced shifts in abundance, distribution, and behavior. These changes render the management strategies incapable of

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achieving the overarching goals of constraining coastwide harvest to the coastwide recreational harvest limit (RHL) while providing fair and equitable access for fishery participants throughout the range of the resource.

Alternative regional approaches implemented in recent years have made progress toward reducing regulatory differences between states, but have faced other challenges related to achieving the RHL, via use of prior year recreational harvest estimates to establish regulations for the following year. The high variability of annual harvest estimates introduces uncertainty about their accuracy, makes it difficult to evaluate the effect of regulations, and often leads to annual changes in season, size, and possession limits, i.e., regulatory instability. Inherent delays in the production of recreational harvest estimates confounds the ability to gather informed public comment on proposed options and finalize regulations well in advance of each annual fishing season.

The purpose of this document is to establish a management approach that addresses several key management objectives, including: regional equity; regulatory stability; harvest opportunities commensurate with species abundance and distribution; and management measures that are responsive to late-breaking recreational harvest estimates, stock status information, and public input.

Of note, the Board intends to address all of the above-noted management challenges and objectives via comprehensive, long-term management reforms over the next several years. Those actions will draw upon improved recreational fishery data, new stock assessments, and innovative management tools. Accordingly, this document seeks to advance an interim approach that lays the foundation for broad-based, long-term management reform.

2.2 Background

In practice, the recreational fisheries for summer flounder and black sea bass are managed on a “target quota” basis. A set portion of the total allowable landings (40% for summer flounder and 51% for black sea bass) is established as an annual recreational harvest limit (RHL), and management measures are established that can reasonably be expected to constrain recreational harvest to this limit each year.

Specifically, recreational harvest estimates from the prior year are compared to the current year RHL to assess whether coastwide harvest needs to be reduced or can be allowed to increase. The regulations in place the prior year also serve as the basis for modeling the effect of alternative regulations on harvest in the current year.

The Marine Recreational Information Program (MRIP) is the primary source of recreational catch and effort data used to evaluate and regulate the fisheries¹. MRIP catch and effort

¹ MRIP is an evolving program with ongoing improvements to its methods. Several recent advancements include the transition from a telephone survey to a mail survey to estimate fishing effort have resulted in the need to

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estimates are generated by two-month “waves” (January–February is Wave 1, March–April is Wave 2, etc.), with each wave’s preliminary estimates being released roughly six weeks after its conclusion (e.g., May–June estimates released in mid-August). Full-year preliminary estimates are therefore available in mid-February of the following year. The release of final full-year estimates generally requires another two months, to allow for additional quality control checks.

The timing of recreational data releases has created challenges in developing management programs reflective of the most current recreational fishery information. For the past several years, management measures for summer flounder and black sea bass have been set through addenda. In order to come to final decision on management measures before the start of the fishing seasons (typically between February and April), draft addenda including proposed management options and example management measures were released for public comment late in the previous year (December); the Board would then review the public comments and approve the final document at the following meeting (typically in February). This timeline meant that the proposed (example) management measures in the addenda were based on the preliminary harvest data available in December (i.e., only Wave 1-5 data, coupled with a Wave 6 harvest projection based on the prior year’s Wave 6 data). However, Wave 6 harvest estimates released in February often diverged from the projected harvest, resulting in the need to adjust the proposed measures to constrain harvest to the RHL, well into the fishing season and long after public comment had been provided, creating confusion and frustration for all involved, particularly stakeholders.

2.2.1 Summer Flounder

Starting in 1993 under Amendment 2 and continuing through 1998, each state (Massachusetts through North Carolina) adopted the same minimum size, possession limit, and season length as established in federal waters for the recreational fishery. While these consistent measures were intended to uniformly impact the resource and stakeholders of all states, it was later determined that one set of management measures applied coastwide did not provide equitable access to the resource due to the significant geographic differences in fish abundance and size composition.

To address this disparity, the FMP was amended in 2001 (Framework Adjustment 2) to allow for the use of “conservation equivalent” management, through which state-specific measures would constrain coastwide recreational harvest the same as consistent measures. Each year, if the Council and Board opted to manage the fishery with state-specific conservation equivalency, the Board would have the lead in approving state-specific regulations, and the federal waters rules (coastwide measures) would be waived in favor of the state rules.

calibrate estimates of recreational catch and effort for 1981–2017 for comparison to newer estimates. In addition, the MRIP harvest estimates for 2018 need to be “back-calibrated” for comparison to the 2018 and interim 2019 RHLs, because these RHLs were based on stock assessment using the pre-calibrated MRIP harvest estimates.

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Concurrently, the Board adopted a series of addenda (Addenda III and IV in 2001, and Addenda VIII and XIV in 2004) implementing state-based conservation equivalency, including the establishment of state allocations based upon recreational landings estimates from 1998 (Addendum VIII). The Board also adopted Addendum XVII in 2005 (and the Council Framework Adjustment 6 in 2006), enabling the states to voluntarily opt into multi-state regions that would set regulations based on a pooling of their 1998-based allocations.

From 2001–2013, the Board and Council opted to use state-specific conservation equivalency tied to the proportion of each state’s estimated 1998 recreational landings. (No states opted to use the voluntary regional conservation equivalency approach offered in Addendum XVII.) Conservation equivalency provided states with the flexibility to tailor their regulations to meet the needs and interests of their fishery as long as their targets were not exceeded. Several year-specific addenda (XVIII in 2006 and XXIV in 2013) provided additional flexibility to the management system by allowing harvest opportunities forgone by states to be accessed by other states facing reductions.

This approach succeeded, initially, in mitigating the inequity in conservation burden among states due to coastwide measures, but later became viewed as an inadequate long-term solution. The evolving problems largely stemmed from substantial changes in resource status, stock dynamics, and angler effort along the coast subsequent to 1998, in which gave rise to major disparities in the regulatory programs among the states.

In response, the Board adopted Addendum XXV, which implemented conservation equivalency on a regional basis for 2014. Five² regions were established: 1) Massachusetts; 2) Rhode Island; 3) Connecticut, New York, and New Jersey; 4) Delaware, Maryland, and Virginia; and 5) North Carolina. All states within a region were required to have the same possession limit, size limit, and season length. Regulations were approved for each region that collectively were projected to constrain harvest to the RHL, with a focus on providing more equity in recreational harvest opportunities along the coast. Under this approach, management moved away from fixed state-by-state (or regional) allocations, although the Board retained the ability to revert to the use of 1998-based allocation (or coastwide measures) in the future.

The Board maintained a regional conservation equivalency management approach, with some variation, for 2015–2018 through multiple addenda. Addendum XXVI in 2015 retained the same regions and allowed for status quo regulations in all states. For 2016, Addendum XXVII implemented one change by establishing New Jersey as its own region so that the State could enact separate management measures for its portion of the Delaware Bay that were more closely aligned with Delaware’s management measures in the Bay, while maintaining regulations for the rest of New Jersey’s waters consistent with those of New York and

² Initially, in February 2014, the Board established four regions, one being Massachusetts and Rhode Island combined. Subsequently, in March 2014, the Board approved a request from Massachusetts and Rhode Island to split into individual regions to account for the significantly different recreational fisheries of the two states.

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Connecticut. For all other states, the same regulations in effect for 2014 and 2015 were maintained for 2016. Consequently, regional conservation equivalency provided for much more regulatory consistency over the three-year period 2014–2016, despite a 27% reduction in the RHL in 2016.

In 2017, the Board was faced with a 30% reduction in the RHL, producing a 41% harvest reduction when the preliminary 2016 harvest estimate was compared to the 2017 RHL. Estimated harvest for 2016 increased significantly from 2015 despite largely status quo measures. In fact, the previous three years showed how variable annual harvest estimates could be—at the coastal (50%), regional (>60%), and state (>100%) level—despite nearly consistent measures across the years, underscoring the difficulty of using prior year harvest estimates to predict future year harvest estimates. Given the limitations of projecting the impacts of different management measures (i.e., harvest estimate volatility and confidence intervals), the Board adopted an approach under Addendum XXVIII that applied broad action across all states/regions to reduce harvest while also providing more coastwide consistency in regulations.

Under Addendum XXVIII, each region was required to increase its minimum size by one inch, have a possession limit of four fish or less, and maintain its existing season length. North Carolina was exempted from the size limit increase because its fishery is confounded by three species of similar flatfish for which consistency in regulations is ideal. This approach continued the movement away from using the 1998-based allocations to set regional targets. Note that New Jersey implemented alternative regulations, reducing its season rather than its size limit due to expected socioeconomic effects on the fishery, arguing for conservation equivalency with regard to total removals. In response, the Board found that the alternative regulations were not conservationally equivalent, and the State was found out of compliance by the full Commission. However, the Commission's finding was not upheld by the U.S. Secretary of Commerce, and therefore, New Jersey ultimately maintained its alternative regulations for 2017.

Addendum XXVIII's regional management approach was extended into 2018, and the Board approved state regulations under a 17% harvest liberalization for each region (Table 1). The Board approved state regulations under a 17% harvest liberalization for each region (Table 1). The Board established a de facto harvest target for the coast that was more conservative than the 2018 RHL, based on concerns about stock status, projections of increased biomass that had not been realized, and ongoing difficulties in predicting the effects of modifications to the management measures.

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Table 1. 2018 recreational regulations for summer flounder. Color blocking indicates regions.

State	Minimum Size	Possession Limit	Season
MA	17"	5 fish	May 23–Oct 9
RI	19"	6 fish	May 1–Dec 31
CT	19"*	4 fish	May 4–Sep 30
NY	19"	4 fish	May 4–Sep 30
NJ Coast	18"***	3 fish	May 25–Sep 22
NJ DE Bay	17"	3 fish	May 25–Sep 22
DE	16.5"	4 fish	Jan 1–Dec 31
MD	17"***	4 fish	Jan 1–Mar 31
	16.5"	4 fish	Apr 1–Dec 31
VA	16.5"	4 fish	Jan 1–Dec 31
NC	15"	4 fish	Jan 1–Dec 31

*CT has 45 designated coastal sites where the minimum size is 17"

** NJ has 1 designated coastal site where the minimum size is 16" for 2 fish

*** MD was temporarily delayed in implementing its region’s liberalization

2.2.2 Black Sea Bass

Under Amendment 9, the Commission and Council used uniform coastwide size, season, and bag limits to constrain the recreational fishery to the annual RHL from 1996 to 2010. Over time, the states grew concerned that the coastwide regulations disproportionately impacted states within the management unit. The effect became more dramatic as the RHL decreased in the late 2000s (including the lowest ever value in 2009), harvest overages became common, and repeated coastwide reductions were necessitated.

In response, the Board approved a series of addenda which allowed states to craft individual measures to reduce harvest to the RHL, first through state shares in 2011 (Addendum XXI) and then through ad-hoc regional management for 2012–2017 (Addenda XII, XIII, XV, and XVII). A uniform set of measures still applied in federal waters and to federal for-hire permit holders who are ultimately subject to the most restrictive rule if state measures differ from federal measures. (Conservation equivalency, like that used for summer flounder to waive the federal rules when appropriate states rules are adopted, is being considered for implementation in 2020 through Draft Addendum XXXI.) Addendum XXI’s state shares of the RHL were loosely based on the proportion of each state’s harvest in 2010, and resulted in state-specific percent harvest reductions for 2011.

For 2012, the Board considered continuing a state-by-state allocation approach, but had concerns about restricting future access based on past fishery performance (which had proven problematic for summer flounder) and the likelihood of divergent state and federal regulations, particularly to the south where most harvest is taken in federal waters. Instead the Board selected the ad-hoc regional management approach, through which the northern region states of Massachusetts through New Jersey individually crafted state measures aimed at changing

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harvest by the same *percent*, while the southern region states of Delaware through North Carolina set their regulations consistent with the measures set for federal waters.

Under this approach, coastwide harvest reductions were required in all years except 2012 (liberalization) and 2017 (status quo) due to final harvest estimates that exceeded the projected harvests from the implemented regulations. Because 90% or more of the coastwide harvests came from north of Delaware, the Board differentially applied the required reductions between the two regions. While DE–NC continued to match the federal rule, MA–NJ were held responsible for achieving the coastwide reduction, implementing uniform percent harvest reductions, but with state-specific regulation changes in 2013, 2014, 2015, and 2016.

Multiple factors played a role in the inability of northern state regulations to restrict harvest to projected levels during this period. The lack of an accepted peer reviewed stock assessment with which to set catch limits for 2010–2016 resulted in the use of the constant catch approach in most years, a method relying on past landings data rather than current resource condition. The 2016 benchmark stock assessment would later reveal much higher abundance than previously assumed, and that the catch limits had been overly conservative. This mismatch between RHL and stock abundance—coupled with high variability in recreational harvest estimates—resulted in regulations that repeatedly underperformed, leading to additional restrictions. Increasingly restrictive regulations in the face of an apparently growing stock understandably angered and disillusioned much of the angling public.

While the ad hoc regional management approach afforded the states flexibility in setting their measures, it created wide discrepancies in conservation measures that were not tied to any original management plan baseline or goal (e.g., state allocations). The repeated use of uniform percent harvest reductions in the northern region, with no accountability for the effectiveness of regulations or shifting resource distribution, resulted in growing disparity in regulations within the northern region, as well as between the two regions. Scientific studies and the 2016 stock assessment have evidenced a northward shift in the black sea bass resource along the Atlantic coast.

For 2018, the Board initially adopted a new approach that allocated the RHL between three regions (MA–NY, NJ, and DE–NC) based primarily on 2006–2015 exploitable biomass estimates derived from the 2016 stock assessment. This approach resulted in harvest liberalizations for NJ and DE–NC, yet a sizeable reduction for MA–NY (Appendix I, Table 6). The Northern Region states of MA–NY appealed the decision, citing the recent shift in the resource northward, late-breaking revisions to harvest data with significant effects on state reductions, and results that were inconsistent with the objective of providing more equitable access. Through the appeals process a solution was brokered which allowed NJ and DE–NC to maintain their liberalizations, while better meeting the needs of MA–NY based on projections of resource availability in 2018. The final outcome of Addendum XXX established regulations for one year only (Table 2).

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Table 2. 2018 recreational regulations for black sea bass. Color blocking indicates regions.

State	Minimum Size	Possession Limit	Open Season
MA	15"	5 fish	May 19–Sep 12
RI	15"	3 fish	Jun 24–Aug 31
		7 fish	Sep 1–Dec31
CT	15"	5 fish (7 for authorized. for-hire vessels Sep 1-Dec 31)	May 19–Dec 31
NY	15"	3 fish	Jun 23–Aug 31
		7 fish	Sep 1–Dec 31
NJ	12.5"	10 fish	May 15–Jun 22
		2 fish	Jul 1–Aug 31
		10 fish	Oct 8–Oct 31
	13"	5 fish	Nov 1–Dec 31
DE	12.5"	15 fish	May 15–Dec 31
MD	12.5"	15 fish	May 15–Dec 31
VA	12.5"	15 fish	Feb 1–Feb 28
			May 15–Dec 31
NC	12.5"	15 fish	Feb 1–Feb 28
			May 15–Dec 31

2.3 Status of the Stock

2.3.1 Summer Flounder

The most recent summer flounder stock assessment update was completed in July 2016, using data through 2015 (NEFSC 2016). The assessment is an update of the model from the 2013 benchmark stock assessment, which is a combined-sex, age-structured ASAP assessment model. Results from the 2016 assessment update indicate that summer flounder was not overfished, but overfishing was occurring, in 2015. More detail on the assessment update can be found in the report:

[http://www.asmfc.org/uploads/file/55d237a9Summer flounder 2015 Assess Update.pdf](http://www.asmfc.org/uploads/file/55d237a9Summer_flounder_2015_Assess_Update.pdf)

The 2016 stock assessment update provided the basis for setting fishery specifications for 2017–2019. Data updates for 2017 and 2018 further informed the process for the 2018 and 2019 specifications (Table 3). A new benchmark stock assessment for summer flounder is scheduled to undergo peer review in November 2018, with results expected to be available in early 2019. These results could result in revised 2019 specifications.

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Table 3. 2017–2019 summer flounder specifications pertinent to the recreational fishery, as based on the 2016 stock assessment update.

Management Specifications	2017	2018	2019
	mil lb.	mil lb.	mil lb.
OFL (Overfishing Limit)	16.76	18.69	20.60
ABC (Acceptable Biological Catch)	11.30	13.23	15.41
Recreational ACL (Annual Catch Limit)	4.72	5.53	6.22
Recreational ACT (Annual Catch Target)	4.72	5.53	6.22
Recreational Harvest Limit	3.77	4.42	5.15

2.4.2 Black Sea Bass

The most recent black sea bass stock assessment was completed in December 2016, using data through 2015 (NEFSC 2017). The assessment is a benchmark assessment, using a combined-sex, age-structured ASAP assessment model. Due to concerns regarding potential spatial structure of the stock, the assessment modeled black sea bass as two separate sub-units (North and South) divided approximately at Hudson Canyon, from which results were combined for the coastwide stock status determination. Results from the 2016 assessment indicate that black sea bass was not overfished, nor was overfishing occurring, in 2015. More detail can be found in the assessment report:

<http://www.asafc.org/uploads/file/5953f11d2016BlackSeaBassStockAssmt.pdf>

The 2016 benchmark stock assessment provided the basis for setting fishery specifications for 2017–2019. Data updates for 2017 and 2018 further informed the process for the 2018 and 2019 specifications (Table 4). A stock assessment update for black sea bass is expected to occur by April 2019. Results could result in revised 2019 specifications.

Table 4. 2017–2019 black sea bass specifications pertinent to the recreational fishery, as based on the 2016 benchmark stock assessment.

Management Specifications	2017	2018	2019
	mil lb.	mil lb.	mil lb.
OFL (Overfishing Limit)	12.05	10.29	9.18
ABC (Acceptable Biological Catch)	10.47	8.94	7.97
Recreational ACL (Annual Catch Limit)	5.38	4.59	4.10
Recreational ACT (Annual Catch Target)	5.38	4.59	4.10
Recreational Harvest Limit	4.29	3.66	3.27

3.0 Proposed Management Program

The Board needs to consider a management program for summer flounder and black sea bass in 2019 and thereafter. As a bridge toward future, broad-based management reform, the Board is considering changing the process of how recreational management measures are set annually. The Board is seeking public comment on each of the options included in the Draft Addendum.

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As proposed, the options for the two species are similar, but not exact. Both approaches involve the use of standards and guiding principles to formulate management measures that are subject to public review and input later in the process, allowing for more informed and transparent decision-making. Both approaches carry forward the basic structures of the regional management approaches developed in previous years for each species.

3.1 Summer Flounder Management Options

A) Status Quo (Coastwide or Conservation Equivalency Measures)

The Board and Council will specify coastwide measures to achieve the coastwide RHL or conservationally equivalent management measures using guidelines agreed upon by both management authorities in Framework 2 and Addenda XIV and XVII. Under conservation equivalency, the states implement state-by-state measures to achieve their individual harvest target or contiguous states voluntarily enter into an agreement forming regions to achieve their pooled harvest target. Harvest targets are based on the state allocations of the RHL established in Addendum VIII (Table 5).

Table 5. State summer flounder recreational allocations, as established by Addendum VIII

State	MA	RI	CT	NY	NJ	DE	MD	VA	NC
Allocation	5.5%	5.7%	3.7%	17.6%	39.1%	3.1%	3.0%	16.7%	5.6%

Note: Percentages are based on pre-calibrated MRIP data for 1998. Percentages changed slightly with the MRIP calibration and the Board would need to determine which data to use for state allocations.

B) Establish Recreational Management Measures through the Specifications Process

This option proposes a procedural change from the process used in recent years to establish annual recreational management programs for summer flounder. Through this change in process, the Board is not allocating shares of the RHL to states and/or regions.

If this option is selected, management measures would be set annually through a specification process, instead of being proposed and established through addenda. The process would involve the following steps:

- At the joint meeting with the Mid-Atlantic Fishery Management Council typically in December, the Board and Council would decide whether to specify coastwide measures to achieve the coastwide RHL or conservation equivalent management measures using guidelines agreed upon by both management authorities. If the latter, the Board would then be responsible for establishing recreational measures to constrain harvest to the RHL.
- The Technical Committee (TC) would continue to evaluate harvest estimates as they are released, and project how suites of possession limits, size limits and seasons would impact recreational landings in each region. In recommending adjustments to measures (reductions, liberalizations or no change), the TC would examine several factors and suggest a set of regional regulations, which when combined, would not exceed the RHL.

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These factors could include but are not limited to stock status, resource availability (based on survey and assessment data), and fishery performance (harvest, discards, effort, estimate uncertainty, inter-annual variability), as well as the standards and guiding principles set forth below. The Board would use information provided by the TC to approve a methodology for the states to use in developing regional proposals, typically at the Commission's Winter Meeting.

- The states would collaborate to develop regional proposals for the current year's recreational measures that include possession limits, size limits and season length pursuant to the Board-approved methodology. These proposals would be reviewed by the TC to ensure the data and analysis are technically sound. Public input on proposed measures would be gathered at the state level through state public processes, and brought to the Board by state commissioners for consideration when finalizing measures.
- The Board would establish final measures following the release of Wave 6 estimates in February (likely through an additional Board meeting or call). Once the Board has approved the regional measures and the states have promulgated them, the Commission would send a letter to the Regional Administrator certifying the Board-approved measures, in combination, will achieve but not exceed the RHL.

As part of this new process, the Board would also agree to a set of standards and guiding principles to structure the development of measures during specification setting (Section 3.1.1).

3.1.1 Standards and Guiding Principles for Establishing Management Measures for Summer Flounder

If option B above is selected, the following set of standards will structure how measures are developed during specification setting:

1. Measures will be developed using a six-region approach, where the regions are defined as: 1) Massachusetts, 2) Rhode Island, 3) Connecticut-New York, 4) New Jersey, 5) Delaware-Virginia, and 6) North Carolina.
2. Recreational measures for all states within a region will consist of the same minimum size limit, possession limit, and season length.
3. For regions that use alternative methodology or other types of regulatory changes outside of those proposed by the TC, the Board must consider and approve those approaches first.

In addition to the standards, the setting of measures through specifications should also strive to adhere to these guiding principles in order to provide fair and equitable access to the resource:

Recreational measures should be as similar to the prior year's measures as possible. This principle will ensure that regional measures do not change significantly on an annual basis

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nor that measures for states in bordering regions diverge significantly over time. While allowing for a reasonable amount of flexibility, the intent is to adjust regional measures unidirectionally along the coast, based on the performance of the fishery and stock availability, while maintaining an equitable opportunity to harvest fish for all stakeholders.

3.2 Black Sea Bass Management Options

A) Status Quo (Coastwide Measures)

The Board and Council will specify coastwide measures to achieve the coastwide RHL.

NOAA Fisheries would also open federal waters during February 1–28, 2019 at a 12.5” size limit and 15 fish possession limit. States that participate in the February 2019 black sea bass recreational fishery by also adopting these rules would be required to adjust their regulations for the remainder of the fishing year to account for their projected harvest during February (as established by the Board and Council).

B) Establish Recreational Management Measures through the Specifications Process

This option proposes a procedural change from the process used in recent years to establish annual recreational management programs for black sea bass. Through this change in process, the Board is not allocating shares of the RHL to states and/or regions.

If this option is selected, management measures would be set annually through the specifications process, instead of being proposed and established through addenda. The process would involve the following steps:

- At the joint meeting with the Mid-Atlantic Fishery Management Council typically in December, the Board and Council would decide whether to adopt coastwide measures or if the states would implement measures to constrain harvest to the RHL. If the latter, the Board would then be responsible for establishing recreational measures to be implemented in state waters that would constrain harvest to the RHL.
- The TC would continue to evaluate harvest estimates as they are released, and project how suites of possession limits, size limits and seasons would impact recreational landings in each region. In recommending adjustments to measures (reductions, liberalizations or no change), the TC would examine several factors and suggest a set of regulations for regions, which when combined, would not exceed the RHL. These factors can include but are not limited to stock status, resource availability (based on survey and assessment data), and fishery performance (harvest, discards, effort, estimate uncertainty, inter-annual variability), as well as the standards and guiding principles set forth below. The Board would use information provided by the TC to approve a methodology for the states to use in developing regional proposals, typically at the Commission’s Winter Meeting.

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- The states would collaborate to develop regional proposals for the current year's recreational measures that include possession limits, size limits and season length pursuant to the Board-approved methodology. These proposals would be reviewed by the TC to ensure the data and analysis are technically sound. Public input on proposed measures would be gathered at the state level through state public processes, and brought to the Board by state commissioners for consideration when finalizing measures.
- The Board would establish final measures following the release of Wave 6 estimates in February (likely through an additional Board meeting/call). Once the Board has approved the regional measures and the states had promulgated them, the Commission would send a letter to the Regional Administrator certifying the Board approved measures in combination will achieve but not exceed the RHL.

As part of this new process, the Board would also agree to a set of standards and guiding principles to structure the development of measures during specification setting (Section 3.2.1).

3.2.1 Standards and Guiding Principles for Establishing Management Measures for Black Sea Bass

If option B above is selected above, a set of standards would structure how measures would be developed during specification setting, dependent on the options selected below:

1. Measures will be developed using a three-region approach, where the regions are defined as Massachusetts through New York; New Jersey; and Delaware through North Carolina (north of Cape Hatteras).
2. The Board will determine how a coastwide harvest liberalization or reduction is distributed among the regions, based on factors including (but not limited to) resource distribution and expected availability, angler effort, prior year fishery performance, and TC recommendations. This process will result in annual de facto harvest targets for each region; these targets are not allocations nor do they necessarily set a precedent for setting future allocations. The regions will then work together to develop recreational measures that achieve the coastwide RHL.

The process for setting recreational measures within a region will be structured according to one of the following options:

Sub-option B1) Recreational measures within a region will be crafted using the prior year's measures as a starting point. States within the region will develop measures that collectively achieve but do not exceed the de facto harvest target set by the Board. In the event that a region is not required to reduce harvest from the prior year, no state will be

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required to restrict measures. In the event that a region is allowed to liberalize harvest, states will develop their measures in a manner that collectively reduces intraregional disparities (e.g. states with relatively restrictive measures, as determined by the TC based on performance, should be allowed a larger liberalization, while states with relatively liberal measures should take a smaller liberalization or remain at status quo). In the event that region must reduce harvest, states will develop measures in a manner that ensures each state takes an equitable reduction, with consideration given to prior year fishery performance, resource distribution and expected availability, angler effort, and TC recommendations.

Sub-option B2) Recreational measures within a region will be crafted using a regional regulatory standard as a starting point. The states within a region will establish a regulatory standard (including a minimum size limit, possession limit, and season (season could be defined using either start and end dates or number of days open)) to achieve the region's target harvest. Each state within the region would adopt the standard minimum size limit, but could implement a possession limit and season that are the conservation equivalent to the regulatory standard (based on state-specific projected harvest), provided the possession limit deviates from the standard by no more than 3 fish, and the disparity between the least and most restrictive seasons within the region does not increase (in number of open days) from the prior year.

In addition to the standards, the setting of measures through specifications should also strive to adhere to these guiding principles in order to provide fair and equitable access to the resource:

Regions should work together to limit disproportionate harvest reductions for individual states. The Board should reduce interregional differences between measures when possible, taking into account regional differences in availability.

4.0 Compliance

TBD

Literature Cited

NEFSC (Northeast Fisheries Science Center). 2016. Stock assessment of summer flounder for 2016. US Department of Commerce, Northeast Fisheries Science Center Reference Document 16-15; 117 p. Available from: <http://www.nefsc.noaa.gov/publications/>

NEFSC (Northeast Fisheries Science Center). 2017. 62nd Northeast Regional Stock Assessment Workshop (62nd SAW) assessment report. US Department of Commerce. Northeast Fisheries Science Center Reference Document 17-03; 822 p. Available at: <https://www.nefsc.noaa.gov/saw/archive.html>

Draft Document for Board Review. Not for Public comment.

NEFSC (Northeast Fisheries Science Center). 2018a. Summer flounder data and projection update for 2019. Available at: <http://www.mafmc.org/ssc-meetings/2018/july-17-18>

NEFSC (Northeast Fisheries Science Center). 2018b. Black sea bass 2017 catch and survey information for stock north of Cape Hatteras, NC - report to the Mid-Atlantic Science and Statistical Committee. Available at: <http://www.mafmc.org/ssc-meetings/2018/july-17-18>



Atlantic States Marine Fisheries Commission

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MEMORANDUM

October 3, 2018

To: Summer Flounder, Scup and Black Sea Bass Management Board
From: Caitlin Starks, FMP Coordinator
RE: Black Sea Bass Commercial Working Group Proposal

In August 2018, the Summer Flounder, Scup and Black Sea Bass Board agreed to establish a working group (WG) to focus on the commercial management of Black Sea Bass, and Bob Ballou appointed David Borden (RI) to Chair the sub-committee. The goal of the working group is to identify potential issues and strategies for the Board to consider within the commercial fishery management framework that relate to changes in black sea bass abundance and distribution. The working group also includes Rob O'Reilly (VA), John Maniscalco (NY) and Nichola Meserve (MA).

On September 25, 2018 the commercial WG met to address the following tasks: 1) define issues the commercial fishery is facing due to changes in abundance and distribution of black sea bass; 2) define goals and objectives; and 3) discuss strategies to address the issue(s). Based on the WG's discussion, this memo proposes a statement of the problem, objectives to address the problem, and some potential management strategies for the Board to consider at the October 2018 meeting. The WG is seeking the Board's feedback on this proposal and any general suggestions for additional strategies for the working group to explore. The WG will refine strategies to address the issues and report back to the board at a future meeting.

Statement of the Problem

Commercial black sea bass allocations to the states were first implemented in 2003 as part of Amendment 13, loosely based on historical landings from 1980-2001. The state shares in Amendment 13 allocated 67% of the coast-wide commercial quota between the states of Delaware through North Carolina and 33% between the states of New York through Maine. These state commercial allocations have been unchanged for 15 years, meanwhile the fishery and resource have/are experiencing shifts in distribution, abundance, behavior, effort, etc.

There is scientific information to support these shifts. According to the last black sea bass stock assessment, which modeled fish north and south of Hudson Canyon separately, the majority of the stock occurred in the south prior to the mid-2000s. Since then the biomass in the north has grown considerably and currently accounts for the majority of spawning stock biomass. While the region specific models created for the assessment were never intended to be stand-alone, this shift in black sea biomass distribution has been confirmed in peer reviewed journal articles (e.g., Bell et al., 2015).

Management should be responsive to shifts in in black sea bass distribution, abundance, behavior, fishing effort, harvest by gear type, etc. Allocations should be reviewed and revised on a regular basis to account for these changes to ensure equity of access and improve fishery efficiency (human safety, fuel use, and discards), using the latest and most appropriate data sources.

Coastwide black sea bass quota management (as currently conducted by NOAA Fisheries per the FMP) can also be problematic. Under the current regulations, all states are subject to fishery closures if a coastwide quota overage occurs, despite state-by-state quota management by the ASMFC. These

M18-103

closures can leave states with remaining commercial quota unable to utilize their full allocation of the resource. Management should aim to reduce impacts of state-specific commercial quota overages to other states.

Objectives and Goals to Address the Problem

The WG identified the following as management objectives for commercial black sea bass:

- Ensure fishing mortality and spawning stock biomass are maintained within established thresholds and targets, and the stock is not overfished nor experiencing overfishing
- Improve equity in access to the fishery among the states
- Improve fishery efficiency (e.g. use of time, fuel and other resources; reducing discards)

The WG discussed the need to determine what metric(s) would be used to evaluate equity in access to the fishery. Some ideas discussed were socioeconomic benefits or opportunities, as well as resource availability related to the distribution of exploitable biomass and abundance. The WG noted discard reductions and increased efficiency would likely result from allocations based on more current information on the resource's distribution along the coast.

The WG proposed gathering the following information, particularly for recent years, to guide further development of management objectives and strategies.

- Descriptions of each state's fishery (management program, participation, effort, landings by gear, distribution of landings and trips, etc.), provided by technical committee (TC) members
- A comprehensive review of survey data for black sea bass to inform understanding of stock biomass/abundance distribution and availability to state commercial fisheries
- Socioeconomic information for each state's fishery, provided by the Committee on Economics and Social Sciences
- Commercial size distribution
- More current scientific information on the geographic shifts in black sea bass biomass (e.g., an update of Bell et al.'s results for the shift in center of biomass)
- Utilization of federal black sea bass moratorium permits

Potential Management Strategies

During the conference call, the WG thought through some possible management strategies that could be considered for addressing the defined commercial issues for black sea bass. The WG agreed a wide range of options should be considered, and that some management strategies may require coordination with the Mid-Atlantic Fishery Management Council. Some of the ideas the WG supported exploring further included:

- Adjustments to the state by state allocations. Allocations could be based on a weighted combination of current quotas and other metrics representative of the stock distribution shift.
- Shared trip limits between states.
- A similar strategy to the scup model to increase equitability in access for federal vessels.
- Gradual transition from current to new allocations or management system.
- Establishing criteria to trigger review and/or revision of allocations based on new stock assessment information.
- Landings flexibility.



Atlantic States Marine Fisheries Commission

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MEMORANDUM

September 17, 2018

To: Summer Flounder, Scup and Black Sea Bass Management Board
From: Tina Berger, Director of Communications
RE: Advisory Panel Nominations

Please find attached three new nominations to the Summer Flounder, Scup and Black Sea Bass Advisory Panel – Kurt Martin, a commercial fisherman (fish weirs/traps/hand lines) from Massachusetts; and Brent Fulcher and James Ruhle, commercial trawl fishermen from North Carolina. Please review these nominations 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 and Kirby Rootes-Murdy

M18-92

Summer Flounder, Scup and Black Sea Bass Advisory Panel

Bolded names await Board review and approval

Massachusetts

Joseph Huckemeyer (party/charter; targets both scup/sf)

137 Pleasant Street

Hyannis, MA 02601

Phone (day): 508.790.0660

Phone (eve): 508.428.4029

FAX: 508.790.1321

joseph@meganet.net

Appt. Confirmed 5/9/07

Appt. Reconfirmed 10/28/14; 8/18

Phone: 401.742.1353

Mikecapt1@cox.net

Appt. Confirmed 10/28/14

Aaron Gewirtz (comm gillnet inshore; targets all 3 species)

360 Pine Hill Road

Wakefield, RI 02879

Phone: 401.218.5764

NBF05@verizon.net

Appt. Confirmed 10/28/14

James Tietje (charterboat; targets both scup and BSB)

227 Clinton Avenue.

Falmouth, MA 02540

Phone (day): 508.548.2626

FAX: 508.548.1569

patriottoo@aol.com

Appt. Confirmed 5/30/96

Appt. Reconfirmed 9/15/00

Appt. Reconfirmed: 3/20/07

Appt. Reconfirmed 10/28/14; 8/18

Travis Barao (rec; targets SF and BSB)

15 Gibbs Street

Rumford, RI 02916

Phone (day): 401.301.7944

Phone (eve): 401.270.7161

travisbarao@gmail.com

Appt. Confirmed 10/28/14

Kurt Martin (comm. fish weirs/traps/hand lines)

43 Rayber Road

Orleans, MA 02653

Phone: 508.237.5888

Timebandit100@hotmail.com

Connecticut

John (Jack) Conway (rec; targets SF)

34 Edward Road

North Branford, CT 06471

JConway@sikorsky.com

Appt. Reconfirmed 9/14

Appt. Reconfirmed 10/17/14

Appt. Reconfirmed 10/28/14

Kyle Douton (for-hire/tackle shop owner; targets all 3 species)

5 Rockwell Street

Niantic, CT 06357

Phone (day): 860.739.7419

Phone (eve): 860.739.8899

FAX: 860.739.9208

kyle@jbtackle.com

Appt. Confirmed 10/28/14

Rhode Island

Frank W. Blount, Jr. (rec/comm/for-hire; targets all 3 species)

390 Bridgetown Road

Saunderstown, RI 02874

Phone (day): 401.783.4988

Phone (eve): 401.789.2374

FAX: 401.782.8520

francesflt@aol.com

Appt. Confirmed 10/28/14

Michael C. Plaia (rec/comm/for-hire; targets all 3 species)

119 Currituck Road

Newtown, CT 06470

Phone: 203.512.4280

Makomike333@yahoo.com

Appt. Confirmed 10/28/14

Michael Hall (comm trawl offshore; targets all 3 species)

30 Old Richmond Townhouse Road

Carolina, RI 02812

New York

Bob Busby (party/charter; targets SF)
375 Burtis Place
PO Box 129
Peconic, NY 11958
Phone: 631.765.1768
Rbusby@optonline.net
Appt. Confirmed 5/9/07
Appt. Reconfirmed 10/17/14
Appt. Reconfirmed 10/28/14

Paul Forsberg (party/charter; targets scup)
1133 Marina Drive
Tarpon Springs FL 34689
pgfviking1@gmail.com
Appt. Confirmed 5/9/07
Appt. Reconfirmed 10/28/14

Marc K. Hoffman (recreational; targets BSB)
140-A Union Avenue
Lynbrook, NY 11563
Phone: 516.887.8202
Phone (cell): 516.244.2146
FAX: 516.887.8113
MKHoffman@optonline.net
Appt. Confirmed 5/9/07
Appt. Reconfirmed 10/28/14

Mark King (comm; targets all 3 species)
PO BOX 1039
Mattituck, NY 11952
Phone: 631-298-8782
Phone (cell): 631-766-7299
d713k@aol.com
Appt. Confirmed 10/24/14

Arthur Kretschmer (comm; targets all 3 species)
P.O. Box 81
Mattituck, NY 11952
Phone (home): 631.298.5372
Phone (cell): 631.397.2533
marcialom@msn.com
Appt. Confirmed 10/24/14

New Jersey

James R. Lovgren (comm; targets all 3 species)
17 Laurelhurst Drive
Bricktown, NJ 08724

Phone (day): 732.899.1872
Phone (eve): 732.840.9560
FAX: 732.840.4496
Appt. Reconfirmed 10/28/14

Greg DiDomenico (commercial offshore; targets all 3 species)
1636 Delaware Avenue
Cape May, NJ 08204
Phone: 609.675.0202
FAX: 609.898.6070
gregdi@voicenet.com
Appt. Reconfirmed 10/28/14

Robert Meimbresse (for-hire; targets SF)
179 Mudjekeewis Trail
Medford Lakes, NJ 08055
Appt. Confirmed 5/9/07
Captbob626@comcast.net
Appt. Reconfirmed 10/28/14

Bill Shillingford (recreational; targets SF)
20 Pinewood Court
Swainton, NJ 08210
Phone: 609.287.4689
Appt. Confirmed 5/9/07
BUCKTAIL8@aol.com
Appt. Reconfirmed 10/28/14

Delaware

P. Wes Townsend (comm/pot; targets BSB)
PO Box 207
Dagsboro, DE 19939
Phone: 302.542.1150
Pakafish1@yahoo.com
Appt. Confirmed 10/28/14

Michael P. Hynson, III (rec; targets all 3 species)
13 Wicklow Road
Bear, DE 19701
Phone: 302.893.3507
FAX: 302.221.5620
phynson@dbs4pos.com
Appt. Confirmed 10/28/14

Vacancy – recreational bait/tackle; targets SF

Maryland

Victor Bunting Jr. (for-hire; targets BSB)
11123 Bell Road
Whaleyville, MD 21872
Phone: 443.614.6484
Victorbunting@rocketmail.com
Appt. Confirmed 5/9/07
Appt. Reconfirmed 10/28/14

Allen "Buddy" Seigel (rec; targets SF and BSB)
1091 Ocean Parkway
Berlin, MD 21811
Phone (day): 443.340.2833
Phone (eve): 410.208.3887
buddyscrn@gmail.com
Appt. Confirmed 10/28/14

Jeff Eutsler (comm; target SF)
11933 Gray's Corner Road
Berlin, MD 21811
Phone (day): 443.497.3078
Phone (eve): 410.213.2436
Tandje1@comcast.com
Appt. Confirmed 2/2/16

Virginia

Mark Hodges (comm/pot; targets BSB)
2456 Bullock Trail
Virginia Beach, VA 23454-5219
Phone: (757) 463-5475
Email: mhodes@cox.net
Appt. Confirmed 5/9/07
Appt. Reconfirmed 10/28/14

Steven Wray (for-hire/bait & tackle; targets SF & BSB)
2109 West Great Neck Road, Suite 100
Virginia Beach, VA 23451
Phone: 757.237.7517
FAX: 757.481.4925
captstv@yahoo.com
Appt. Confirmed 10/28/14

C. Meade Amory (comm trawl; targets all 3 species)
101 South King Street
Hampton, VA 23669
Phone (day): 757.722.1915

Phone (eve): 757.876.6466
FAX: 757.723.1184
meade@amoryseafood.com
Appt. Confirmed 10/28/14

Dr. Ken Neill, III (rec; targets all 3 species)
117 Kenneth Drive
Seaford, VA 23696
Phone (day): 757.898.6832
Phone (eve): 757.890.2711
FAX: 757.890.0200
jackcrevelle@msn.com
Appt. Confirmed 10/28/14

North Carolina

Art Smith (processor; SF)
368 Hubs Rec Road
Belhaven, NC 27810
Phone (day): 252.721.0735
Phone (eve): 252.964.2195
artsmith@gotricounty.com
Appt. Confirmed 10/28/14
Appt. Reconfirmed 8/18

**Brent Fulcher (comm. otter/bottom trawl;
target all 3 species)**
P.O. Box 3321
New Bern, NC 28564
Phone (cell): 252.514.7003
Phone (work): 252.637.1552
bjseafood@earthlink.net

**James Ruhle (comm. otter/bottom trawl;
target all 3 species)**
P.O. Box 302
Wanchese, NC 27981
Phone: 252.423.0238
fvdaranar@aol.com

PRFC

John Dean (comm; targets SF)
49925 Hays Beach Road
Scotland, MD 20687
Phone: 301.904.8078
selbysuzi1121@aol.com
Appt. Confirmed: 11/25/96
Appt. Reconfirmed 7/26/00
Appt. Reconfirmed 2/07

Appt. Reconfirmed 10/28/14

Dandridge C. Crabbe (charterboat; targets SF)

51 Railway Drive

Heathsville, VA 22473

Phone: 804.453.3251

dcrabbe@crabbescharterfishing.com

Appt. Confirmed 12/11/01

Appt. Reconfirmed 2/07

Appt. Reconfirmed 10/28/14

Nontraditional Stakeholders

Roman Jesien (habitat; BSB interest)

MD Coastal Bays Program

9919 Stephen Decatur Highway, Suite 4

Ocean City, MD 21842

Phone (day): 410.213.2297

Phone (evening): 410.228.5193

science@mdcoastalbays.org

Appt. Confirmed 1/31/07

Vacancy



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 David E. Pierce State: MA
(your name)

Name of Nominee: Kurt Martin

Address: 43 Rayber Road

City, State, Zip: Orleans, MA 02653

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

Phone (day): 508-237-5888 Phone (evening): _____

FAX: 508-240-1755 Email: timebandit100@hotmail.com, lara.slifka@gmail.com

.....
FOR ALL NOMINEES:

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

- 1. summer flounder/scup/black sea bass
- 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.

Cape Cod Commercial Fishermen's Alliance _____

MASS Lobstermen's Association _____

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

black sea bass, scup, menhaden, long fin squid, mackerel, Atlantic herring

bluefish, butterfish sea robins, lobsters

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

tuna, cod, haddock, spiny dogfish _____

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? 33 years

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

3. What is the predominant gear type used by the nominee? Fish weirs, traps, hand lines

FOR CHARTER/HEADBOAT CAPTAINS:

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

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 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've been involved in commercial fishing and tried to stay involved in management of fisheries to ensure that my son can fish for the same species I have fished if he so chooses. I started shellfishing and lobstering in 1981. I began weir fishing with Mark Simonitsch in 1987. I've gone dragging for whiting, shrimp and groundfish, as well as hand lining for groundfish while continuing to lobster and shellfish. I went pot sea bass fishing in 1988, conch fishing in 1983. In the 90's I owned and operated a shellfish grant while continuing to lobster.

As a summer flounder, scup and black sea bass Advisor I would bring my knowledge of commercial fishing to the group. I would be able to provide guidance regarding fishing for scup and black sea bass. I am also familiar with the summer flounder fishery on Cape Cod as the weir boats fish and land alongside the dragger summer flounder commercial fisherman. In the past I have seen summer flounder in the weirs. As a weir, pot, and hand line black sea bass permit holder I bring fishing-type diversification to the table as well as 30 year trends in catch data for weir fishing.

I follow the current happenings at ASMFC and NMFS, and have submitted public comments about regulations in the past. I've also participated in research trips through the former Cape Cod Commercial Fishermen's Alliance and currently keep a temperature gauge on my lobster trap for NOAA Scientist Jim Manning.

I've served multiple terms as a Board of Director to the Cape Cod Commercial Fishermen's Alliance and seen them grow and change with the fishing times. I was treasurer for the Outer Cape Lobstermen's Association. I am committed to attend meetings, positively participating in the Advisory Panel.

Nominee Signature: *Kurt Martin*

Date: 08/22/2018

Name: Kurt Martin
(please print)

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

David Sene

State Director

State Legislator

Raymond N. Kay

Governor's Appointee



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 Chris Batsavage State: NC
(your name)

Name of Nominee: Jonathan Brent Fulcher

Address: PO Box 3321

City, State, Zip: New Bern NC 28504

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

Phone (day): 252 6371552

Phone (evening): 252 5147003

FAX: 252 6330775

Email: bjseafood@earthlink.net

FOR ALL NOMINEES:

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

1. Summer flounder
2. black sea bass
3. scup
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.

North Carolina Fishermans Assoc. Chairman
Southern Shrimp Alliance Board member

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

summer flounder
black sea bass
scup

Atlantic sea scallops
brown & white shrimp

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

same as above (4)

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? 34

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

3. What is the predominant gear type used by the nominee? otter / bottom trawl

FOR CHARTER/HEADBOAT CAPTAINS:

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

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? 31 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):

See above comm. fishing info.

3. How many years has the nominee lived in the home port community? 31 years

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

FOR OTHER INTERESTED PARTIES:

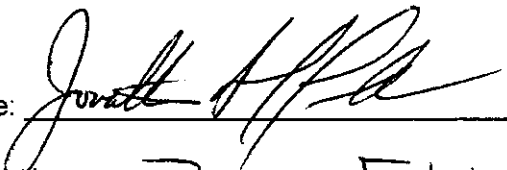
1. How long has the nominee been interested in fishing and/or fisheries management? _____ years
2. Is the nominee employed in the fishing business or the field of fisheries management?
yes no

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.

Currently I am an AP member for the NE
Scallops advisory board. I am also a
fin fish advisor for the NCDMF.

Nominee Signature: 

Date: 7-31-2018

Name: Jonathan Brent Fulcher
(please print)

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


State Director - Ongoing Proxy

State Legislator

Governor's Appointee



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 _____ Chris Batsavage _____ State: NC
(your name)

Name of Nominee: _____ James A. Ruhle _____

Address: _____ P.O. Box 302 _____

City, State, Zip: _____ Wanchese NC 27981 _____

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

Phone (day): _____ 252-423-0238 _____ Phone (evening): _____ 252-423-0238 _____

FAX: _____ Email: _____ fvdaranar@aol.com _____

.....
FOR ALL NOMINEES:

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

- 1. _____ Summer Flounder, Scup and Black Sea Bass _____
- 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?

_____ Summer flounder _____	_____
_____ Black Seabass _____	_____
_____ Illex _____	_____

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

_____ Atlantic Croaker _____	_____
_____ Mackerel _____	_____
_____ Sea Herring _____	_____

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? 50
2. Is the nominee employed only in commercial fishing? yes no
3. What is the predominant gear type used by the nominee? ___Otter Trawl_____

FOR CHARTER/HEADBOAT CAPTAINS:

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

Primary Participant on the NEAMAP inshore trawl survey from 2006 till present

Nominee Signature: _____ James A. Ruhle _____ Date: ____ 8/7/2018 _____

Name: _____ James A. Ruhle _____
(please print)

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

Chris Batsavage _____
State Director State Legislator

Governor's Appointee

Atlantic States Marine Fisheries Commission

Tautog Management Board

*October 25, 2018
8:00 – 9:00 a.m.
New York, New York*

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>D. McKiernan</i>) | 8:00 a.m. |
| 2. Board Consent | 8:00 a.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from May 2018 | |
| 3. Public Comment | 8:05 a.m. |
| 4. Review Technical Committee Report on Biological Sampling Requirements (<i>L. Barry</i>) Possible Action | 8:15 a.m. |
| 5. Discuss Commercial Harvest Tagging Program Implementation (<i>C. Starks</i>) Action | 8:30 a.m. |
| 6. Consider Approval of 2018 Fishery Management Plan Review and State Compliance Reports (<i>J. Kuesel</i>) Action | 8:50 a.m. |
| 7. Other Business/Adjourn | 9:00 a.m. |

The meeting will be held at the Roosevelt Hotel, 45 East 45th Street & Madison Avenue, New York, NY; 212.661.9600

MEETING OVERVIEW

Tautog Management Board Meeting
October 24, 2018
8:00 - 9:00 a.m.
New York, New York

Chair: Dan McKiernan (MA) <i>Assumed Chairmanship:</i> 11/17	Technical Committee Chair: Linda Barry (NJ)	Law Enforcement Committee Representative: Jason Snellbaker
Vice Chair: VACANT	Advisory Panel Chair: VACANT	Previous Board Meeting: May 1, 2018
Voting Members: MA, RI, CT, NY, NJ, DE, MD, VA, NMFS, USFWS (10 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from May 2018

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

4. Review Technical Committee Report on Biological Sampling Requirements (8:15-8:30 a.m.) Possible Action
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Background

- | |
|---|
| <ul style="list-style-type: none"> • In October 2017 the Board tasked the Technical Committee (TC) with evaluating the biological sampling needs to support regional stock assessments for tautog, and recommend any revisions to the biological sampling requirements. (Briefing Materials) • The TC met twice in 2018 via conference call to develop recommendations. (Briefing Materials). |
|---|

Presentations

- | |
|---|
| <ul style="list-style-type: none"> • Technical Committee Report on Biological Sampling by L. Barry |
|---|

Board Actions for Consideration
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- | |
|--|
| <ul style="list-style-type: none"> • Consider changes to the biological sampling requirements |
|--|

5. Discuss Commercial Harvest Tagging Program Implementation (8:30-8:50 a.m.)

Background

- The Board approved Amendment 1 for management use in October 2017, which requires the implementation of a commercial harvest tagging program for tautog in 2019.
- In collaboration with several state agency representatives, the TC and the Law Enforcement Committee, staff has developed draft guidelines for implementation of the commercial tagging program (**Briefing Materials**).
- Staff has encountered difficulties procuring tags and applicators for use in the tagging program that may impact the program's implementation.

Presentations

- Update on Commercial Harvest Tagging Program Implementation by C. Starks

6. Consider Approval of 2018 Fishery Management Plan Review and State Compliance Reports (8:50-9:00 a.m.) Action

Background

- State Compliance Reports are due annually on May 1.
- The Plan Review Team reviewed each state report and compiled the 2018 FMP Review.
- Delaware and Maryland have requested and meet the requirements for *de minimis*.

Presentations

- 2018 Fishery Management Plan Review by J. Kuesel

Board Actions for Consideration

- Approve 2018 FMP Review and State Compliance Reports
- Approve *de minimis* requests for Delaware and Maryland

7. Other Business/Adjourn

Tautog 2019 Tasks

Activity Level: Low

Committee Overlap Score: High (Menhaden, BERP, Summer Flounder, Scup, and Black Sea Bass)

Current Committee Tasks:

- TC – Evaluate biological sampling requirements (assess the feasibility of adding pelvic spines as an acceptable ageing structure)
- TC – May 1, 2019: compliance reports due
- 2019: Consider initiating a benchmark stock assessment as per the 5-year trigger and MRIP data calibration

TC Members: Sydney Alhale (VA), Coly Ares (Vice Chair, RI), Linda Barry (Chair, NJ), Sandra Dumais (NY), Scott Newlin (DE), Deb Pacileo (CT), Craig Weedon (MD), Tiffany Vidal (MA)

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

**The Westin Crystal City
Arlington, Virginia
May 1, 2018**

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

TABLE OF CONTENTS

Approval of Proceedings, October 2017, Chairman Dan McKiernan..... 1

Public Comment..... 1

Consider Approval of the Connecticut Proposal for Commercial Tautog Measures in 2018 1

 Technical Committee Report..... 2

Adjournment..... 5

INDEX OF MOTIONS

1. **Approval of Proceedings of October 2017 by Consent** (Page 1).
2. **Move to approve Connecticut's proposal to implement commercial tautog measures of 16 inch minimum size, 10 fish possession limit for Moratorium License Holders and 3 fish for Restricted Commercial Licenses Holders and open seasons of April 1st through April 30th, July 1st through August 31st and October 8th through December 24th** (Page 3). Motion by Justin Davis; second by Maureen Davidson. Motion carried (Page 4).
3. **Move to adjourn by Consent** (Page 5).

ATTENDANCE

Board Members

Dan McKiernan, MA, Chair	Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)
Raymond Kane, MA (GA)	Roy Miller, DE (GA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	John Clark, DE, proxy for D. Saveikis (AA)
Jason McNamee, RI (AA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
David Borden, RI (GA)	Russell Dize, MD (GA)
Justin Davis, CT, proxy for P. Aarrestad (AA)	Mike Luisi, MD, proxy for D. Blazer (AA)
Matt Gates, CT, proxy for Sen. Miner (LA)	Ed O'Brien, MD, proxy for D. Stein (LA)
Maureen Davidson, NY, proxy for J. Gilmore (AA)	Rob O'Reilly, VA, proxy for S. Bowman (AA)
Emerson Hasbrouck, NY (GA)	Kyle Schick, VA, proxy for Sen. Stuart (LA)
John McMurray, NY, proxy for Sen. Boyle (LA)	Peter Burns, NMFS
Jeff Brust, NJ, proxy for L. Herrighty (AA)	Sherry White, USFWS
Tom Fote, NJ (GA)	

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

Ex-Officio Members

Jason Snellbaker, Law Enforcement Representative

Staff

Bob Beal	Caitlin Starks
Toni Kerns	Katie Drew

Guests

Rep. Thad Altman, FL (LA)

The Tautog Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; Tuesday May 1, 2018, and was called to order at 11:15 o'clock a.m. by Chairman Dan McKiernan.

CHAIRMAN DAN MCKIERNAN: *(Recording started after the Welcome, Call to Order and Approval of Agenda.)*

APPROVAL OF PROCEEDINGS

CHAIRMAN MCKIERNAN: Next is the proceedings from the October, 2017 meeting. Are there any recommended changes to the minutes? Seeing none; by consent those are approved.

PUBLIC COMMENT

CHAIRMAN MCKIERNAN: Public Comment, has anyone signed up for public comment, Caitlin?

MS. CAITLIN STARKS: I didn't see anyone on the list.

CHAIRMAN MCKIERNAN: All right, is there anyone here who would like to speak on any issues that are not on this short agenda today? Seeing none; we'll move into the business at hand.

CONSIDER APPROVAL OF THE CONNECTICUT PROPOSAL FOR COMMERCIAL TAUTOG MEASURES IN 2018

CHAIRMAN MCKIERNAN: Review Connecticut Commercial Measures Proposal. Today we have a short agenda; it's a last minute item, it has to do with the state of Connecticut seeking approval for their commercial fishery proposal for this upcoming year and beyond. I believe the background here is the Board approved Amendment 1; just two meetings ago on October 17.

You all recall that there are four management units; and one of them after much deliberation

is the Long Island Sound management unit, which is co-shared by the states of New York and Connecticut. The plan itself required a 20.3 percent reduction in the commercial fishery beginning this year. Connecticut is seeking an alternative to that today. That material has been provided for you in the supplemental materials. There is a memo from the state of Connecticut; I believe Matt Gates. Caitlin, would you like to present some detail?

MS. STARKS: Just as a quick note; the memo from the Technical Committee reviewing this proposal is also provided on the back table. It was sent out on Friday; pretty last minute. If you need a hard copy they are back there. Thank you, I will be giving you an overview of Connecticut's proposal for the 2018 commercial tautog measures, New York's commercial measures for Long Island Sound, and providing the Technical Committee's report on both sets of measures.

This is the order that we'll go in here. For some context, the 2016 regional stock assessment for tautog indicated that the Long Island Sound stock is overfished and overfishing is occurring. The Board approved Amendment 1 in October, 2017, which requires a 20.3 percent reduction to the total tautog harvest; including recreational and commercial landings in Long Island Sound. This reduction has a 50 percent probability of achieving the F target by 2029. Connecticut and New York are the two states that share Long Island Sound and are subject to this reduction; and both states have taken the 20.3 percent reduction in their recreational measures, and New York has taken the reduction in their commercial measures as well. However, Connecticut is proposing to forego the reduction in their commercial tautog fishery for 2018, and possibly future years, and maintain measures similar to their 2017 measures.

The rationale behind their proposal is that the reduction would create a greater than expected hardship for Connecticut's commercial

fishermen; especially considering the state already reduced their commercial harvest by 66 percent between 2008 to 2011, and 2012 to 2015. The average commercial harvest for Connecticut from 2013 to 2015 is 6,100 pounds per year; which is 0.5 percent of the total harvest in Long Island Sound for New York and Connecticut.

If Connecticut maintains close to their status quo measures, and I'll go over the slight difference in a moment, the resulting overage in the total tautog harvest in the whole region is projected to be 0.1 percent for 2018. These are the measures that Connecticut is proposing; and they are pretty much the same as the 2017 measures; with one difference.

The slide here does not show that difference, it does show the difference. They have a 16-inch minimum size limit, 10-fish bag limit, unless you're a holder of a restricted license; in which case you have a 3-fish bag limit, and that's the difference. Last year it was 4 fish instead of 3, and then a total of 170 season days.

TECHNICAL COMMITTEE REPORT

MS. STARKS: The TC met to review the proposed commercial measures and found that they would not likely have a negative impact on the Long Island Sound stock in 2018; but the TC did highlight a caveat which is that if harvest in 2018 is to increase significantly, then these measures would need to be reevaluated and reconsidered. The TC also evaluated New York's 2018 commercial measures for tautog in Long Island Sound.

This is just because the methodology that New York used to craft their current measures was changed slightly from the last TC review. New York revised their measures and the methodology; in order to create measures that would reduce inequities and impacts to the eastern versus western areas of the Sound, and impacts to different gear types. The TC reported that these measures shown in the

table and the associated methodology used to create them are technically sound and that they will achieve the required reduction.

Our next steps for the Board are to consider the approval of the Connecticut proposal for commercial tautog measures in 2018. Also as part of their proposal, Connecticut requested that the Board task the Tautog Technical Committee with exploring means to create more consistency and equity in interstate commercial tautog measures in Long Island Sound. With that I will take any questions.

CHAIRMAN McKIERNAN: Do we have any questions for Caitlin? Caitlin, I have one. But I think it can be answered by the state of Connecticut. Were last year's regulations 4 or 3? Go ahead, Matt Gates.

MR. MATTHEW GATES: Last year the restricted license holders were restricted to 4 fish; basically to be in harmony with the recreational licenses and we are proposing to reduce it to 3, so we don't have to provide any incentive for recreational fishermen to circumvent the recreational rules by getting that restricted license.

CHAIRMAN McKIERNAN: Matt, if I could. That's why this is technically not a status quo proposal; it's more restrictive than what you had initially brought forward conceptually as status quo, but it's in fact more restrictive.

MR. GATES: Yes, it is slightly more restrictive.

CHAIRMAN McKIERNAN: Are there any other questions; yes, Jay McNamee?

MR JASON McNAMEE: The one question I had. In the document there is this non-preferred option that kind of lines up the commercial fishery with the recreational fishery, winds up being, it is more restrictive by a very small amount. It doesn't quite get them to the exact 292 or whatever it is they need to get to. I'm just wondering. I would like some feedback

from Connecticut as to why that one was non-preferred.

CHAIRMAN MCKIERNAN: Who would like to speak to that? Justin Davis.

MR. JUSTIN DAVIS: Essentially that option is non-preferred because I think when we did the math out it would save 75 fish or 76 fish, and so just sort of the administrative burden of going through the process of changing those regulations to potentially take that opportunity away from the small number of participants in our commercial fishery to reduce the days in the season. We just didn't feel like that was our preferred option; because it wouldn't achieve substantial conservation.

CHAIRMAN MCKIERNAN: Emerson Hasbrouck.

MR. EMERSON C. HASBROUCK: I would just like to inquire as to what a restricted license is in Connecticut.

CHAIRMAN MCKIERNAN: Matt Gates.

MR. GATES: We have a new commercial fishing license in Connecticut. It's open access and it allows for sort of restricted rod and reel possession limits.

CHAIRMAN MCKIERNAN: Any other questions? Matt, did you want to make another comment?

MR. GATES: Yes, just to expand on what Justin said in response to Jason's question. Also we thought that closing later in the season would impact lobster fishermen; who take fish in the lobster pots more since there is a closure in the lobster fishery, and it opens up later in the fall. We feel like lobstermen have already taken a hit on tautog landings due to the closure. This would not impact them as much.

CHAIRMAN MCKIERNAN: Anyone else? All right seeing none; is there a motion that someone would like to make; yes, Justin Davis?

MR. DAVIS: I'll make a motion; which I think will magically appear on the board here in a second. **I move to approve Connecticut's proposal to implement commercial tautog measures of 16 inch minimum size, 10 fish possession limit for Moratorium License Holders and 3 fish for Commercial License Holders and open seasons of April 1st through April 30th, July 1st through August 31st and October 8th through December 24th.**

CHAIRMAN MCKIERNAN: Can I get a second? Yes, Maureen Davidson second. All right, any discussion on the motion? I think we've gotten a lot of good background on it; so I'm not sure you need to speak to the motion any more than you have. But you're welcome to; yes, Jay McNamee.

MR. McNAMEE: Just make a couple of comments. I'm fine with this I think. We're talking about a very small amount of fish. Your commercial harvest has been restricted pretty significantly. I think the statistical argument is a valid one. I guess what I would like to offer is, and I guess coupled with Mr. Chair your observation that this is in fact slightly more restrictive with that lower bag.

I guess that gives me additional comfort. I guess the one thing I was thinking about as I was reading through this and thinking about it. There would have been a lot of value for you had you had a quota; or something where you could have a little bit more precise management control on your commercial fishery. I just wanted to offer that. That would have been probably a simple solution here. It's been an effective management measure in Rhode Island and Massachusetts, and so I wanted to offer that as a thought to them.

CHAIRMAN MCKIERNAN: I guess I would like to make a comment. This is my first meeting as Board Chair, and I look at the challenges that we have over the next two years while I'm Chair. The biggest is the execution of this tagging program. In some ways I look at tautog

tagging as going to be on a small scale the kind of changes that we have to deal with, with new MRIP numbers; that I think when we start issuing tags to tautog fishermen, and we have them tag the tautog, and then we chase the fishermen down for the unused tags.

We may find that the numbers of fish taken under the authority of the commercial permit may be different than what's being reported now under the dealer or the harvester data. To me this is all like pre-tag; because post-tag we're going to have to deal with some very different issues. Anyone else? Yes, Tom Fote.

MR. THOMAS P. FOTE: I'm not familiar with Connecticut's restricted fishing license. I know in our state when we put in for certain species hook and line fishermen. Allowing them to do that they had to show a history of selling fish before the regulations were put in place and things like that.

Plus there had to be an ongoing record keeping and everything else basically to do this. What you said is this is an unrestricted license. Can anybody just walk in? Because then it would increase, because of the high price of tautog, it would increase the price. It would make it worthwhile for people that would normally not go out to fish for tautog, to go out just to make the extra money that's involved. I'm just curious how this is being regulated.

CHAIRMAN McKIERNAN: Matt Gates.

MR. GATES: Thanks, Tom. The license is open access. It is restricted to the recreational creel limit; and it's been in place now since 2016, and we really haven't seen anybody take advantage of that. For three fish, and I think people think about the live market with tautog being so far removed from where our tog fishery is prosecuted that we just haven't seen that kind of increase.

CHAIRMAN McKIERNAN: Anyone else? All right, time for a vote. Is there any objection to

the motion on the board; if not, excuse me, Tom.

MR. FOTE: Can we just caucus for a second?

MR. McKIERNAN: Sure. Caucus 30 seconds; all right have we caucused successfully? **All right is there any objection to the motion? Seeing none; motion passes by consent.** Next on the agenda, other business, we will be looking for a Vice-Chair at a future meeting. I hope one of you will step up and maybe we'll look for that at the August meeting. Caitlin, is there anything else?

MS. STARKS: I just wanted to make a quick note about the commercial tagging program; and that we are working together to put together some guidelines for the states on how to implement the program, and we'll be reaching out to the state administrators soon to get input on that. I just wanted to keep you all in the loop on that process.

CHAIRMAN McKIERNAN: Yes, and if I could, my staff have been working with Caitlin. We tried out some of the tags last year. My agency is doing a hook and line tautog study. We found that the tags are pretty good, but the applicator of the tag can be challenging to use. Caitlin has been talking to the company; and I think they are trying to make some changes to the applicator, and develop one that might be a little easier to use, especially on the water. Jason.

MR. McNAMEE: Yes, with regard to this. I'm glad you guys are conferring on this and testing the devices and all that. That is great. Is it going to come back through? I'm trying to think of what is going to be the signal to the states. Is it going to come through the Technical Committee? Is the Technical Committee going to review the guidance that you develop? I'm just trying to figure out when I'm going to know its go time.

CHAIRMAN McKIERNAN: I'm going to turn to Toni for a little assistance.

MS. TONI KERNS: I think we'll probably work with a couple of the states to get your guidance; and then bring it back to the Technical Committee, and then bring it back to the Board for final approval of the actions that need to move forward. I'm hoping that we can use what's contained in the amendment; in order to not have to do another management document to implement the tagging program. There was a lot of information contained in the amendment itself that I think we should be able to work within. The timing part will be a little tricky. The company has indicated to Caitlin that by the end of the year-ish, they won't give us any good, solid dates yet about when they can change that applicator. We would really like to test out that applicator before we force a change for the tagging program itself, to make sure that it is something that does work on the water, because we recognize that having tags fly all over the boats is not going to be a productive use for anybody. Whether or not it gets implemented for 2019 or 2020 is still unclear to us as staff; until we get some more solid dates from this company.

CHAIRMAN McKIERNAN: Yes, Jason.

MR. McNAMEE: I'll just offer Rhode Island staff for any consultation that you might need.

ADJOURNMENT

CHAIRMAN McKIERNAN: All right, I think that is all we have today. Is there any other business before the Board? Seeing none; this meeting is adjourned. Enjoy your lunch.

(Whereupon the meeting adjourned at 11:45 o'clock a.m. on May 1, 2018)



Atlantic States Marine Fisheries Commission

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MEMORANDUM

September 18, 2018

To: Tautog Management Board
From: Tautog Technical Committee
RE: Recommendations for Biological Sampling

Technical Committee Members: Sydney Alhale (VA), Lindy Barry (Chair, NJ), Coly Ares (Vice Chair, RI), Tiffany Vidal Cunningham (MA), Sandra Dumais (NY), Craig Weedon (MD), Scott Newlin* (DE), Deb Pacileo* (CT); *not present on conference calls

ASMFC Staff: Caitlin Starks, Katie Drew, Jessica Kuesel

At the October 2017 meeting, the Tautog Management Board (Board) tasked the Technical Committee (TC) to investigate the biological sampling needs to support continued regional stock assessments for tautog, and recommend any revisions to the biological sampling requirements. This task resulted from a Plan Review Team concern that in recent years several states were unable to meet the minimum requirement of 200 samples. On June 1 and September 7, 2018 the Tautog TC convened via conference call to address this task. A summary of the TC discussions and recommendations are provided below.

Evaluation of Biological Sampling Requirements

The TC discussed the current sampling requirements and potential improvements. Specifically, they considered the potential for a regional versus state requirement, the challenges states are facing with sampling, and geographic differences along the coast. Though the TC recognized that a regional sampling requirement would align with the stock structure used in the assessment, they were also concerned that it could reduce the quantity of samples and negatively impact the assessment and some states being consistently undersampled.

After analyzing the effect of sample size on the precision of length-at-age estimates, the TC recommended maintaining state-level sampling requirements as the best way to ensure adequate sampling throughout the managed regions. The TC also agreed that the minimum number of samples should be maintained at 200 per state in order to support the stock assessment. State samples would continue to be pooled to develop regional age-length keys. Reducing the number of required samples per state could increase existing gaps in the age-length distribution. These gaps should be addressed using fishery-independent samples and/or obtaining biological samples through non-lethal methods, such as collecting pelvic spines for ageing. Further studies could also aim to determine if there are differing age-length structures between regions that would require a greater or smaller number of samples than the current requirement.

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The TC noted that if a region is consistently undersampled, the sampling requirements should be reevaluated. States should also document their sampling efforts to demonstrate intent to comply with the requirements.

Pelvic Spines as an Ageing Structure

The TC also discussed alternative sampling sources and ageing structures that could be used to augment biological sampling. Because of stock status, lethal sampling from fishery-independent surveys is not preferable for some regions, but several TC members suggested using pelvic spines to age fish as a non-lethal alternative. TC was generally interested in pursuing the feasibility of this option, as adding this structure could help states reach the minimum number of samples, especially when opercula are unavailable from the commercial fishery due to the prevalence of the live tautog market.

Before offering full support for using pelvic spines as a supplemental ageing structure, the TC agreed they should fully evaluate the age information to ensure it is comparable to those structures currently used in the stock assessment. They expressed interest in collecting paired samples of pelvic spines and opercula and if the comparison yielded positive results, performing an ageing exchange. However, several members expressed concerns that some states would not have sufficient budgeting or staff to collect and analyze both types of samples, especially as the pelvic spines require additional analysis and expertise.

At this time, the TC is considering the spines only for the purposes of gathering paired samples for comparative studies, and to supplement age sample sizes when the preferred structures are limited. If pelvic spines are confirmed to be equivalent to opercula and otoliths, then each state could determine which ageing structure they prefer to collect.

As a first step, the TC recommended the states determine their ability to participate in a paired exchange, as well as their interest level. If a state is consistently able to meet the required number of samples using opercula and/or otoliths, then it may not be logical for them to devote resources to investigating the use of an additional ageing structure. There was no final conclusion on the appropriate number of spines to collect per state for the paired exchange.

Guidance for Implementing the Tautog Commercial Harvest Tagging Program

1. Introduction

In October 2017, the Tautog Management Board approved Amendment 1 to the Tautog Fishery Management Plan (FMP). In addition to establishing new management goals and objectives and regional targets and biological reference points, Amendment 1 also addresses the increasingly pervasive issue of illegal harvest of undersized and unreported tautog by establishing a commercial harvest tagging program.

This document aims to provide guidance to the states for implementing the commercial harvest tagging program for tautog. Section 2 of the document provides the base requirements of the tagging program as defined in Amendment 1. Section 3 provides more detailed guidance on each element of the program, and additional considerations the states should address in their rules and regulations when implementing the tagging program.

The guidance provided in this document is intended to promote consistency in application of the tagging program across states, while allowing the states some flexibility to align their program with the needs of their unique fisheries. Establishing similar and complementary tagging programs across the states will have numerous benefits, including enhanced enforceability of the program, reduced likelihood of regulation loopholes, and consistent data for use in stock assessments, among others.

2. Commercial Tagging Program Requirements

Per Amendment 1 to the Tautog FMP, all states within a regional management unit are required to participate in the commercial harvest tagging program. *De minimis* status does not preclude a state from the requirements of the commercial harvest tagging program.

A. Tag Information and Type

All states will use the same single-use tag. The tag will be inscribed with the year of issue, state of issue and a unique number. The unique number will be linked back to the permit holder. States will distribute tags to participants. It is unlawful to sell or purchase commercially caught tautog (alive or dead) without a commercial tag. The cost of the tag will be financed by states or fishermen at the discretion of each state or jurisdiction.

B. Tag Application

All commercially caught tautog will be tagged by the commercially-permitted harvester at the time of harvest or prior to offloading. Tautog must be landed in the state that is identified on the tag.

C. Tag Allowance (Biological Metric)

States are required to allocate commercial tags to the commercially-permitted harvesters based on a biological metric, which will be described in the Annual Commercial Tag Report (Section G). This metric is an estimate to determine the number of fish tags that will be required per year; the goal is to avoid surplus tags. For example, the majority of states in the

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striped bass commercial tagging program use the average commercial weight per fish from the previous year, or some variation thereof as the biological metric.

D. Tag Accounting

All states will require the tag recipients to return unused tags from the previous fishing year no later than February 15. The return method will be further described by each state. The number of unused tags will be included in the Annual Commercial Tag Report (Section F), along with the disposition of other returned tags (e.g., used, broken, lost, etc.). Tag recipients who do not comply with this section may be subject to penalties set forth in Section E.

E. Penalties

It is recommended that states strengthen their penalties for tautog violations and include counterfeit tag operations, in order to deter illegal harvest of tautog. License revocation or suspension is supported as a primary penalty for state or federal violations. Civil and/or criminal penalties can be also effective deterrents. It is recommended that cases of undocumented “lost” tags should result in a 1-year suspension from the commercial tautog fishery (for the subsequent fishing year).

F. Annual Commercial Tag Report

The existing compliance report will be modified to include a Commercial Tag section that must be completed by each state. The report must include the following information. The Board may modify the sections of the report via Board action.

- Describe the biological metric
- Number of tag violations.
- Complete the following table:

State	MA	RI	CT	NY (LIS)	NY (south shore)	NJ	DE	MD	VA
Quota (if applicable)									
Maximum Commercial Harvest per Region									
Avg. Commercial Weight									
Number of Participants									
Number of Tags Issued									
Number of Tags Returned									

3. Commercial Tagging Program Recommendations

Tag Distribution

Tags must be purchased only from the approved manufacturer and distributed only to licensed/permitted commercial harvesters in their state.

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Information on the approved manufacturer and specific tags will be provided to the state agencies responsible for distribution. Each tag will have an inscription including a letter to indicate the state, digits to indicate year, and additional digits to serve as a unique identifier.

Licensed commercial tautog harvesters must obtain standard tautog harvest tags only as instructed by the state fishery management agency in which they have a commercial tautog license. It is recommended that state agencies supply tags to permitted harvesters. There are a number of concerns associated with individual harvesters ordering tags directly from the tag supplier, including the administrative burden on the supplier, potential for harvesters to make errors when ordering tags, harvesters ordering tags in excess, and timing, among others. Harvesters may only obtain tags if they possess all required licenses/permits for commercial tautog. Tags are not transferrable.

An initial allotment of tags should be distributed prior to the start of the fishing season on a designated date, to be determined by each state agency dependent on the timing of the commercial season. Subsequent allotments of tags during the season can occur as needed.

State agencies will issue consecutive tag numbers to licensed harvesters, and record the numbers issued to each harvester. The state agency will issue a number of tags based on a sound biological metric (e.g. a scientific sample of the mean weight of legal-sized fish harvested in open season divided into the state's projected landings in weight). States may choose to order more than the estimated number of tags needed in order to have a buffer. For example, the number of tags ordered or issued to harvesters could equal the projected number of landings plus 20%. Each state can determine how much of a buffer would be necessary.

It is unlawful for any person to reuse, counterfeit, alter or modify any tautog identification tag, or to possess, use or attempt to use any counterfeit, altered or modified tags. All such tags found by any state law enforcement agent are to be seized, together with any fish and all other tags in possession. It is recommended that the state or jurisdiction, after a hearing, revoke or suspend licenses and/or recall all tautog identification tags issued to any person found guilty, and restrict said person's future participation in the commercial fishery or market.

Tag Application

Commercially permitted harvesters must apply tags to all tautog on the fishing vessel prior to offloading or carrying on the day of harvest. Tag application can occur in harbor or at sea. Tags must be applied consistently to the operculum bone on one side (Figure 1). The Board should determine which side would reduce interference with state biological sampling.

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Figure 1. Tautog with properly applied commercial tag.

To enhance enforcement and compliance, States should require the following:

- tags be applied by the harvester in sequential order, so that it is easier to determine when tags were applied
- restrictions on the possession of tags during closed fishing periods
- restrictions on harvesters applying tags during closures

Tautog must remain tagged while in possession for purpose of resale (until they reach the final consumer). If portions of tautog are removed from the carcass and sold, the tag should be retained with the carcass until all portions are sold. Possession of untagged tautog or tautog fillets or steaks without an accompanying tag in establishments where fish are sold or offered for sale (including wholesale establishments, retail establishments and restaurants) is presumptive evidence of intent to sell, trade, or barter such tautog.

Tag Accounting

Any unused tags shall be returned by the harvester to the state agency that issued them. Unused tags must be returned no later than February 15 of the following year, or within 90 days of the end of the fishing season, whichever is sooner. It is recommended that states require tags to be returned prior to permit renewal.

Reporting

Each commercial fisherman participating in a tautog fishery is required to file a year-end tagging report to their state agency detailing all tautog landed no later than February 15 of the following year, or within 90 days of the end of the fishing season, whichever is sooner. All unused tags issued must be returned with the report.

It is recommended that the Board modify the table required in the annual commercial tag report to include additional information on tags used, and tags lost, broken or defective (see section F). The table should be modified as follows:

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State	MA	RI	CT	NY (LIS)	NY (south shore)	NJ	DE	MD	VA
Quota (if applicable)									
Maximum Commercial Harvest per Region									
Avg. Commercial Weight									
Number of Participants									
Number of Tags Issued									
Number of Tags Used									
Number of Tags Lost/Defective/Broken									
Number of Tags Returned									

If feasible, harvesters could be required to submit reports more frequently than once per year, depending on season length. Monthly or quarterly reports would enhance law enforcement’s ability to track tags. Reports that include the dates of when a sequence of tags were applied and the number of fish harvested (in addition to weight) would further enhance law enforcement’s ability.

Any primary buyer permitted to purchase tautog could also be required to provide written reports to the state permitting agency of purchases and harvest information including the date of the purchase, buyer's and harvester's tautog permit numbers, and harvester's Commercial Fisherman Registration License number, the gear type, city or county of landing, weight of whole fish, and numbers of tags that apply to that harvest. Permitting and reporting requirements for buyers and dealers vary by state, so states should determine the requirements and timing of buyer reports.

Tag Expiration

Tags will expire when the fishing year for which they were issued ends (unless a state determines this would unnecessarily restrict harvest and sale at the end of the year, in which case an alternative expiration date could be determined). It will be illegal for any dealer to buy or sell any tautog with an expired tag. Tautog with expired tags may be sold only directly to the final consumer.

Tautog Exportation

It is unlawful to sell or purchase tautog without a commercial tag. This is to prevent the sale or purchase of untagged tautog into a state or jurisdiction where there is currently no commercial fishery program.

Any exported tautog must be marked with an unexpired numbered tag that identifies the state of origin and must be accompanied by documents that verify state of origin.

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Penalties

States will enforce the requirements of the commercial tagging program and will determine the penalties associated with violating the regulations.

It is recommended that any violation of the commercial tagging program requirements result in one or a combination of the following actions:

- suspension or revocation of the commercial license/permit, wholesale dealer permit, retail dealer permit, or authorization to purchase tautog
- confiscation of all tautog caught, possessed or sold in violation
- seizure and forfeiture of all property used in violation
- fines

Outreach

States should implement outreach programs to raise awareness of the commercial tagging program among harvesters, dealers, restaurants, markets, consumers and other parts of the supply chain for commercial tautog.

**REVIEW OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
FISHERY MANAGEMENT PLAN FOR
TAUTOG
(*Tautoga onitis*)**

2017 Fishing Year
(January 1 – December 31)



Prepared by:

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October 2018

July 2018
2018 REVIEW OF THE
ASMFC FISHERY MANAGEMENT PLAN FOR
TAUTOG (*Tautoga onitis*)
2017 Fishing Year

Management Summary

<u>Management Documents:</u>	Fishery Management Plan - March 1996 Addendum I to FMP (May 1997) Addendum II to FMP (November 1999) Addendum III to FMP (February 2002) Addendum IV to FMP (January 2007) Addendum V to FMP (August 2007) Addendum VI to FMP (March 2011, revised March 2012) Amendment 1 to FMP (October 2017)
<u>Management Unit:</u>	US state waters from Massachusetts through Virginia ¹ .
<u>Declared Interest:</u>	Massachusetts Rhode Island Connecticut New York New Jersey Delaware Maryland Virginia National Marine Fisheries Service U.S. Fish & Wildlife Service
<u>Active Boards/Committees:</u>	Tautog Management Board (Board) Tautog Plan Development Team (PDT) Tautog Plan Review Team (PRT) Tautog Technical Committee (TC) Tautog Stock Assessment Subcommittee (SAS) Tautog Advisory Panel (AP)
<u>Stock Assessments:</u>	Benchmark: 1999, 2005, 2015 Update: 2011 (revised in 2012), 2016

¹ North Carolina was originally included in the management unit, but as of 2017 was removed due to insignificant landings. North Carolina's landings will continue to be monitored.

I. Status of Fishery Management Plan

Fishery Management Plan for Tautog

The original FMP responded to concerns about the vulnerability of tautog to overfishing and increasing fishing pressure in the early 1990s. It established goals and objectives for tautog management, and adopted a fishing mortality rate (F) target of 0.15 to rebuild the stocks and prevent overfishing; however, an interim target of 0.24 was applied for two years (1997–1998). States were required to implement state-specific, Board-approved plans to reduce F from the coastwide average of 0.58 (i.e., a 55% reduction), or an alternative state-specific F, if it could be demonstrated as equivalent. Recreational and commercial minimum size limits of 13" in 1997 and 14" beginning in 1998 were required. Tautog pots and traps were also required to have degradable fasteners on one panel or door.

Addendum I

Addendum I modified the FMP's compliance schedule to allow all states until April 1, 1998 to implement management measures to reach the interim F target. Several states were having difficulty determining a state-specific F to meet the original compliance schedule due to data deficiencies. In addition, the compliance schedule implemented the interim F target one year earlier in the area north of Delaware Bay (April 1, 1997) than further to the south (April 1, 1998). The addendum also delayed the implementation of management measures to achieve the permanent F target from April 1, 1999 to April 1, 2000. Finally, the Addendum included *de minimis* requirements and corrected several typographical errors in the FMP.

Addendum II

Addendum II further extended the compliance schedule to achieve the permanent F target until April 1, 2002 because the effects of the regulations to achieve the interim F target were uncertain. It also listed four issues to be considered in subsequent revisions of the FMP: (1) development of alternative F targets that will allow states to quantify harvest reductions associated with a variety of management approaches, (2) clarification of the F targets to be met by sector or overall state program, (3) monitoring requirements to improve fisheries and biological data collection, and (4) data requirements to analyze management options by fishing modes within commercial and recreational fisheries.

Addendum III and Technical Addendum I

Addendum III addressed the four issues listed in Addendum II. It adopted a new F target based on achieving 40% of the spawning stock biomass ($F_{40\% SSB}$), which was estimated at 0.29 (compared to the coastwide average F estimate of 0.41). The addendum required states to maintain current or more restrictive measures for 2002 and implement measures to achieve the new F target—a 48% reduction through restrictions in the recreational fishery only—by April 1, 2003. It also updated information on tautog habitat and established monitoring requirements to support stock assessments. Technical Addendum 1 corrected a typographical error in Addendum III.

Addendum IV

Addendum IV established SSB target and threshold reference points based on a benchmark stock assessment completed in 2005. The target was set as the average SSB over 1982–1991, and the threshold at 75% of this value. It also set a new F target of 0.20 to initiate rebuilding. States were required to implement recreational management programs to achieve a 28.6% reduction in F relative to 2005 (and maintain existing commercial management programs) by January 1, 2008.

Addendum V

As individual states developed management proposals to comply with Addendum IV's mandated reduction in fishing mortality, it became apparent that commercial harvest of tautog had grown in proportion to the recreational fishery in some states. The Board approved Addendum V to give states flexibility for implementing reductions in their recreational *and/or* commercial fisheries to reach the fishing mortality target rate of $F = 0.20$ established in Addendum IV by January 1, 2008.

Addendum VI

Based on the 2011 stock assessment update indicating that tautog were still overfished and experiencing overfishing, Addendum VI reduced the F target to 0.15 to rebuild the stock. States were required to implement Board-approved regulations in their commercial and/or recreational fisheries to reduce harvest by 39%. The addendum also allowed for regional considerations if a state or group of states could demonstrate that the local F is below the rates indicated in the stock assessment update.

Amendment 1

Amendment 1 replaces the original FMP, with an implementation date of April 1, 2018 for most measures. Major revisions to the FMP include: new goals and objectives, establishment of four tautog stocks for regional recreational and commercial management, and creation of a commercial harvest tagging program (implementation in 2019).

Goals:

- To sustainably manage tautog over the long-term using regional differences in biology and fishery characteristics as the basis for management.
- To promote the conservation and enhancement of structured habitat to meet the needs of all stages of tautog's life cycle.

Objectives:

- To develop and implement management strategies to rebuild tautog stocks to sustainable levels (reduce fishing mortality to the target and restore spawning stock biomass to the target), while considering ecological and socio-economic impacts.
- To adopt compatible management measures among states within a regional management unit.
- To encourage compatible regulations between the states and the EEZ, which includes enacting management recommendations that apply to fish landed in each state (i.e., regulations apply to fish caught both inside and outside of state waters).

- To identify important habitat and environmental quality factors that support the long-term maintenance and productivity of sustainable tautog populations throughout their range.
- To promote cooperative interstate biological, social, and economic research, monitoring and law enforcement.
- To encourage sufficient monitoring of the resource and collection of additional data, particularly in the southern portion of the species range, that are necessary for development of effective long-term management strategies and evaluation of the management program.
- To work with law enforcement to minimize factors contributing to illegal harvest.

Regional Management: Based on the 2016 regional stock assessment, Amendment 1 delineates the stock into four regions due to differences in biology and fishery characteristics: Massachusetts - Rhode Island (MARI); Long Island Sound (LIS); New Jersey - New York Bight (NJ-NYB); and Delaware - Maryland - Virginia (DelMarVa). The four regions are required to implement measures to achieve the regional fishing mortality target with at least a 50% probability.

The 2016 assessment found that all regions except MARI were overfished, and overfishing was occurring in the LIS and NJ-NYB regions in 2015. As such, Amendment 1 requires the LIS region to reduce harvest by at least 20.3%, and the NJ-NYB region to reduce harvest by at least 2%. The MARI and DelMarVa regions were not required to reduce harvest, but established regional measures.

Commercial Harvest Tagging Program: Amendment 1 also establishes a commercial harvest tagging program to address an illegal, unreported and undocumented fishery. Implementation of the program is tentatively scheduled for 2019.

II. Status of the Stocks

Current stock status is based on the 2016 stock assessment update. The assessment evaluates each of the four regions—MARI, LIS, NJ–NYB, and DelMarVa—separately using the ASAP statistical catch-at-age model with landings and index data through 2015. The assessment update indicated that all regions except MARI were overfished in 2015. It also found overfishing was occurring in the LIS and NJ-NYB regions in 2015. Overfishing was not occurring in the MARI nor DelMarVa regions. F was at the target in the DelMarVa region. The current overfishing and overfished definitions for management use are shown in Table 1, and spawning stock biomass (SSB) for each region relative to the respective targets and thresholds are shown in Figures 1-4. It is important to note that the status determinations were made using spawning potential ratio (SPR) reference points for the MARI, NJ-NYB and DelMarVa regions, and maximum sustainable yield (MSY) reference points for the LIS region.

III. Status of Assessment Advice

The current reference points for this fishery are based on a regional stock assessment update that includes data through 2015. The peer review panel in the 2005 and 2015 benchmark stock assessments advised a regional approach for tautog because of the potential for sub-stock structure; this species does not appear to make north-south migrations. The 2015 benchmark stock assessment peer review panel also endorsed the use of estimates from the ASAP regional model and supported use of the new reference points in conjunction with a regional management approach. A regional approach with new reference points has been adopted for management use through Amendment 1. The next assessment (update or benchmark) has not been scheduled.

IV. Status of the Fishery

Total Harvest

Between 1981 and 2017², total coastwide tautog harvest (recreational + commercial) peaked at 17.8 million pounds in 1986. Harvest has since significantly declined, even before state regulations were implemented to restrict them. Total harvest during the ASMFC managed period (1997–2017) has averaged 3.3 million pounds per year (Figure 5, Table 2).

Recreational Harvest³

Tautog is predominantly taken by the recreational fishery: 90% on average, by weight (Table 2). Coastwide, anglers harvested a historic high of 16.9 million pounds of tautog in 1986 (Figure 5); however, 1986 was a unique year in which recreational harvest in Massachusetts was unusually high. Since then, harvest has generally declined. The smallest harvests occurred in both 1998 and 2011, at 1.5 million pounds each. Recreational harvest decreased from 2.7 million pounds in 2016 to 1.8 million pounds in 2017. Most recreational harvest occurs in Wave 6 (November–December) (Figure 6). At the state level, Connecticut and New Jersey anglers harvested the most tautog in 2017 (Tables 4 and 5).

Recreational live discards have generally increased relative to harvest over the time series. Prior to the FMP's implementation in 1996, discards were usually less than harvest, but since then the estimated number of fish discarded annually has been several times greater than the harvested number (Table 4). In 2017, live discards were seven times the estimated harvest. A discard mortality rate of 2.5% is assumed for the recreational tautog fishery, resulting in an estimated 91,257 recreational dead discards in 2017. This equates to 18.2% of the recreational harvest.

² Systematic recreational data collection for tautog began in 1981, while commercial data exists back to 1950.

³ All recreational data included in this report are derived from MRIP data prior to recalibration accounting for the new Fishing Effort Survey (FES) and recent design changes to the Access Point Angler Intercept Survey. The recalibrated MRIP estimates will be incorporated into an operational assessment in 2019 for management use.

Commercial Landings

Historically, tautog was considered a “trash fish” until the late 1970s, when demand increased and a directed commercial fishery developed. Landings quickly rose, peaking in 1987 at nearly 1.2 million pounds, then rapidly began to decline. In 1992, states began to implement commercial regulations, which contributed to a decline in landings (Figure 7, Table 2). The value (dollars per pound) for tautog has increased since the late 1970s, coinciding with the increase of landings. In 2017, the coastwide average value reached \$3.65 per pound (Figure 7).

Commercial landings accounted for 15% of total coastwide harvest in 2017. In some states commercial landings were more significant, e.g., 34% of New York’s total 2017 harvest (Table 3). New York also had the most commercial landings of tautog in 2017, with Massachusetts landing the second greatest amount (Table 6). Data on commercial discards are not available.

V. Status of Research and Monitoring

Addendum III requires all states to collect the following data to continue support of a coast-wide stock assessment: commercial and recreational catch estimates, and 200 age and length samples per state, within the range of lengths commonly caught by the fisheries⁴. Table 9 lists the number and source of samples collected by states in 2017.

Ongoing fishery-independent and fishery-dependent monitoring programs performed by each state are summarized in Tables 10 and 11, respectively. Details of monitoring results are found in the state compliance reports.

VI. Status of Management Measures and Issues

Amendment 1 to the Tautog Fishery Management Plan was approved by the Board in October 2017. All measures within the plan, including regional management programs, have been implemented as of January 2018 with the exception of the commercial tagging program. The commercial tagging program is currently being developed by state and ASMFC staff and has a tentative implementation date in 2019.

VII. Implementation of FMP Compliance Requirements

A. Submission of Compliance Report

All states in the tautog management unit submitted state compliance reports for the 2017 fishing year.

⁴ Addendum III also required a suitable time series of fisheries independent indices of abundance as determined by the Tautog Technical Committee; however the TC has not defined this and as such there are no fishery independent monitoring requirements.

B. De Minimis Status Requests

A state may apply for *de minimis* status with regards to its commercial fishery. To qualify for *de minimis* status a state must prove that its commercial landings in the most recent year for which data are available did not exceed 10,000 pounds or 1% of the coastwide⁵ commercial landings, whichever is greater. States must request *de minimis* status each year, and requests for *de minimis* status will be reviewed by the PRT as part of the annual FMP review process.

If *de minimis* status is granted, the *de minimis* state is required to implement the commercial minimum size provisions, the pot and trap degradable fastener provisions, and regulations consistent with those in the recreational fishery (including possession limits and seasonal closures). The state must monitor its landings on at least an annual basis. If granted *de minimis* status, a state must continue to collect the required 200 age/length samples. *De minimis* status does not impact a state's compliance requirements in the recreational fishery.

The commercial landings threshold for *de minimis* status for 2017 is 10,000 pounds. The states of Delaware and Maryland have requested and qualify for continued *de minimis status* for the commercial sector. The PRT recommends that the Board approve the states of Delaware and Maryland's requests.

C. Regulatory Requirements: 14" minimum size limit for recreational and commercial fisheries; degradable fasteners on one panel or door in fish pots and traps; and regional management programs to achieve the required regional target F.

State regulations are summarized in Tables 7 and 8. The PRT finds that each state has met the regulatory requirements and recommends the Board find all states in compliance with the regulatory requirements.

D. Biological Sampling Requirements: commercial and recreational catch estimates; and 200 age/length samples (Addendum III)

Most states collected 200 or more age/length samples in 2017 as required by Addendum III (Table 9). Connecticut, New York, and Delaware fell short of the required number of samples, with 75, 96, and 92 samples, respectively. Connecticut relies solely on the Long Island Sound Trawl Survey (LISTS) for tautog age samples, which has encountered fewer tautog in recent years, and cannot conduct additional sampling due to funding and staff limitations. New York noted that efforts to obtain samples from the recreational fishery were hampered by weather, vessels targeting other available species, and because some of the crews were unwilling to give them racks for aging because they were using them as bait. Additionally, rumors of substantial cuts and other unpopular management measures coming to the fishery generally made it

⁵ Amendment 1 changes the *de minimis* requirement for 2018 and beyond such that landings in the most recent year for which data are available cannot exceed 10,000 pounds or 1% of the *regional*, rather than coastwide, commercial landings.

difficult to get cooperation from captains to sample on board. In the commercial fishery, the majority of tautog caught commercially are going to the live market and are therefore not available for collecting age samples. NYS DEC staff had difficulty obtaining samples from fish markets, but was able to get commercial samplers via a contractor who sampled both markets and dockside. However, the agreement with the contractor ended in June and difficulty with renewing the contract prevented DEC from obtaining additional samples via the contractor. Delaware also noted issues with acquiring recreational samples prevented the state from collecting the required number of samples.

The PRT finds that all states met (or tried to meet) the intent of the sampling requirements and recommends the Board find all states in compliance with the sampling requirements of the FMP.

As some states are consistently unable to meet the 200 age/length sample requirement, in 2017 the PRT suggested the required number of samples should be reevaluated. As a result, the Board tasked the TC with evaluating the biological sampling needs to support continued regional stock assessments for tautog, and recommending any revisions to the biological sampling requirements. The TC met in June 2018 to discuss this topic, and is in the process of analyzing available data and gathering additional information before making a recommendation.

VIII. Prioritized Research Needs

The Technical Committee identified the following research recommendations to improve the stock assessment and our understanding of tautog population and fishery dynamics. Research recommendations are organized by topic and level of priority. Research recommendations that should be completed before the next benchmark assessment are underlined. The Technical Committee will update these recommendations as part of the next benchmark stock assessment.

8.1 Fishery-Dependent Priorities

High

- Expand biological sampling of the commercial catch for each gear type over the entire range of the stock (including weight, lengths, age, sex, and discards).
- Continue collecting opercula from the tautog catch as the standard for biological sampling in addition to collecting paired sub-samples of otoliths and opercula.
- Increase catch and discard length sampling from the commercial and recreational fishery for all states from Massachusetts through Virginia.
- Increase collection of effort data for determining commercial and recreational CPUE.

- Increase MRIP sampling levels to improve recreational catch estimates by state and mode. Current sampling levels are high during times of the year when more abundant and popular species are abundant in catches, but much lower in early spring and late fall when tautog catches are more likely.

8.2 Fishery-Independent Priorities

High

- Conduct workshop and pilot studies to design a standardized, multi-state fishery independent survey for tautog along the lines of MARMAP and the lobster ventless trap survey.
- Establish standardized multi-state long-term fisheries-independent surveys to monitor tautog abundance and length-frequency distributions, and to develop YOY indices.
- Enhance collection of age information for smaller fish (<20 cm) to better fill in age-length keys

8.3 Life History, Biological, and Habitat Priorities

Moderate

- Define local and regional movement patterns and site fidelity in the southern part of the species range. This information may provide insight into questions of aggregation versus recruitment to artificial reef locations, and to clarify the need for local and regional assessment.
- Assemble regional reference collections of paired operculum and otolith samples and schedule regular exchanges to maintain and improve the precision of age readings between states that will be pooled in the regional age-length keys.
- Calibrate age readings every year by re-reading a subset of samples from previous years before ageing new samples. States that do not currently assess the precision of their age readings over time should do so by re-ageing a subset of their historical samples.

Low

- Evaluate the potential impacts of climate change on tautog range, life history, and productivity.
- Conduct a tag retention study to improve return rates, particularly in the northern region.
- Define the status (condition and extent) of optimum or suitable juvenile habitats and trends in specific areas important to the species. It is critical to protect these habitats or to stimulate restoration or enhancement, if required.
- Define the specific spawning and pre-spawning aggregating areas and wintering areas of juveniles and adults used by all major local populations, as well as the migration routes used by tautog to get to and from spawning and wintering areas and the criteria or

times of use. This information is required to protect these areas from damage and overuse or excessive exploitation.

- Define larval diets and prey availability requirements. This information can be used as determinants of recruitment success and habitat function status. Information can also be used to support aquaculture ventures with this species.
- Define the role of prey type and availability in local juvenile/adult population dynamics over the species range. This information can explain differences in local abundance, movements, growth, fecundity, etc. Conduct studies in areas where the availability of primary prey, such as blue mussels or crabs, is dependent on annual recruitment, the effect of prey recruitment variability as a factor in tautog movements (to find better prey fields), mortality (greater predation exposure when leaving shelter to forage open bottom), and relationship between reef prey availability/quality on tautog condition/fecundity.
- Define the susceptibility of juveniles to coastal/anthropogenic contamination and resulting effects. This information can explain differences in local abundance, movements, growth, fecundity, and serve to support continued or increased regulation of the inputs of these contaminants and to assess potential damage. Since oil spills seem to be a too frequent coastal impact problem where juvenile tautog live, it may be helpful to conduct specific studies on effects of various fuel oils and typical exposure concentrations, at various seasonal temperatures and salinities. Studies should also be conducted to evaluate the effect of common piling treatment leachates and common antifouling paints on YOY tautog. The synergistic effects of leaked fuel, bilge water, treated pilings, and antifouling paints on tautog health should also be studied.
- Define the source of offshore eggs and larvae (in situ or washed out coastal spawning).
- Confirm that tautog, like cunner, hibernate in the winter, and in what areas and temperature thresholds, for how long, and if there are special habitat requirements during these times that should be protected or conserved from damage or disturbance. This information will aid in understanding behavior variability and harvest availability.

8.4 Management, Law Enforcement, and Socioeconomic Priorities

Moderate

- Collect data to assess the magnitude of illegal harvest of tautog and the efficacy of the tagging program.

Low

- Collect basic sociocultural data on tautog user groups including demographics, location, and aspects of fishing practices such as seasonality.

Figures & Tables

Figure 1. Spawning Stock Biomass targets and thresholds for MARI region.

Source: 2016 ASMFC Tautog Stock Assessment Update.

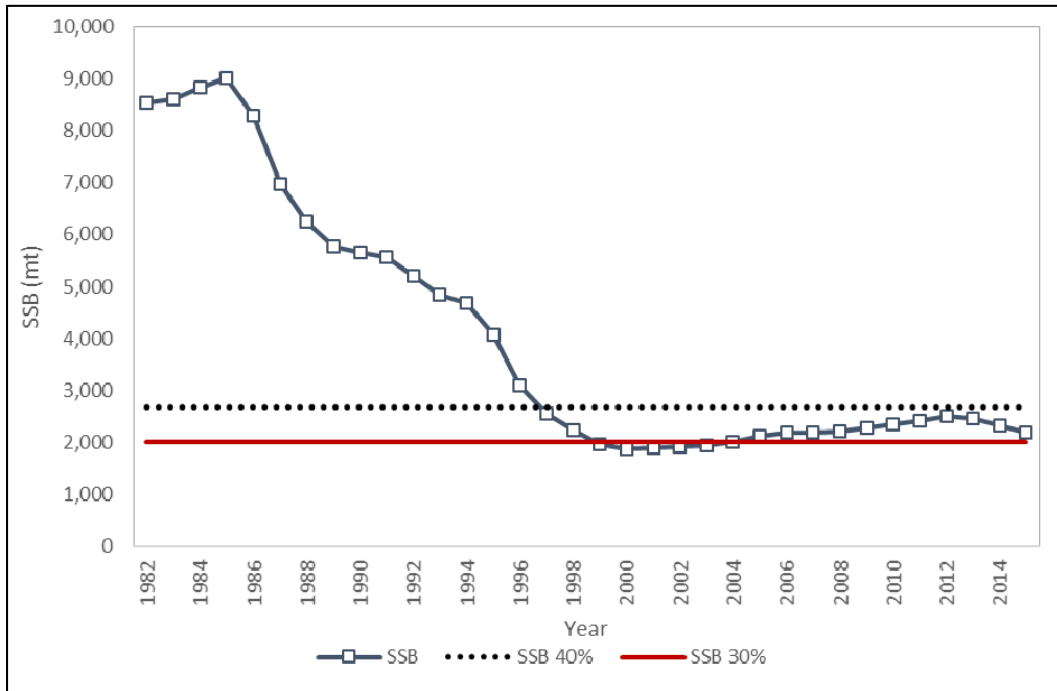


Figure 2. Spawning Stock Biomass targets and thresholds for LIS region.

Source: 2016 ASMFC Tautog Stock Assessment Update.

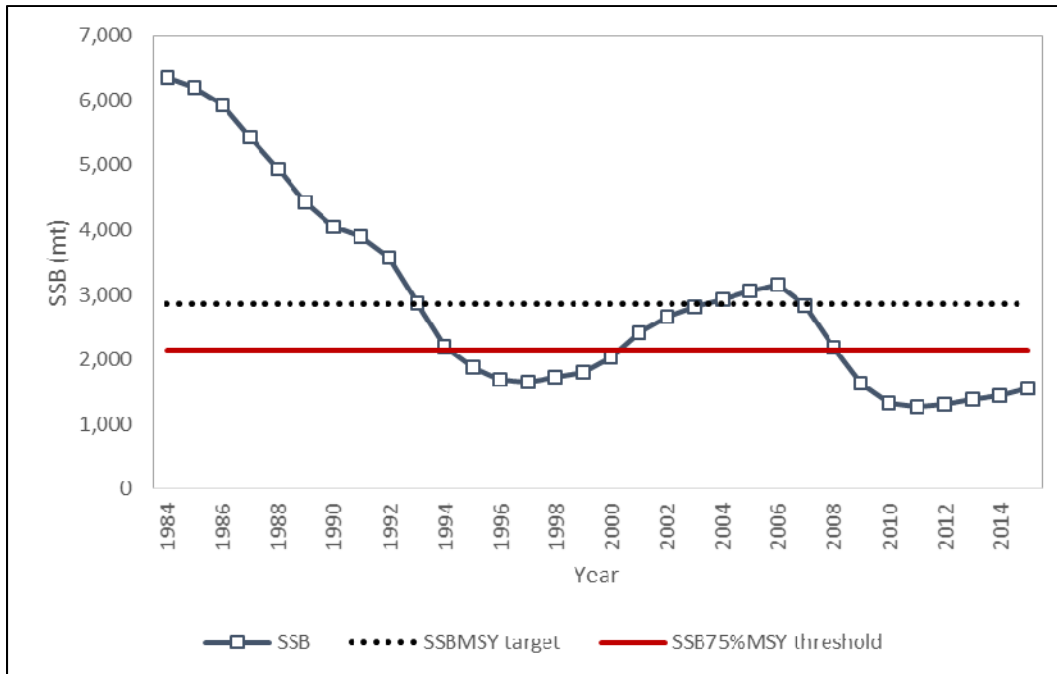


Figure 3. Spawning Stock Biomass targets and thresholds for NJ-NYB region.

Source: 2016 ASMFC Tautog Stock Assessment Update.

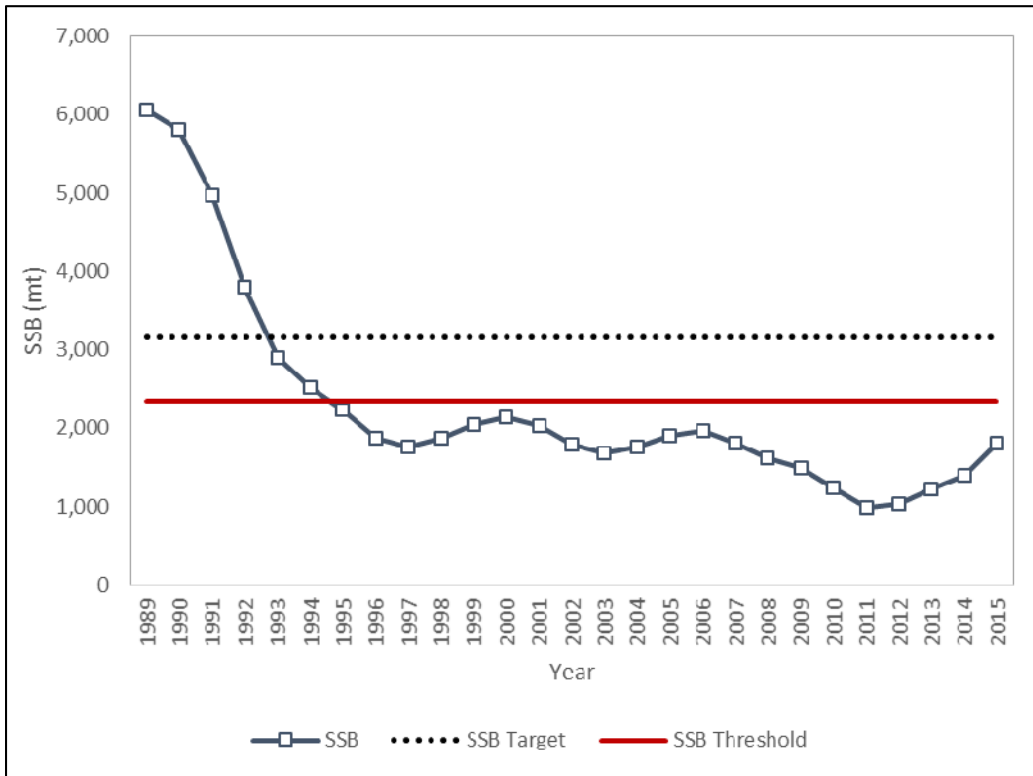


Figure 4. Spawning Stock Biomass targets and thresholds for DMV region.

Source: 2016 ASMFC Tautog Stock Assessment Update.

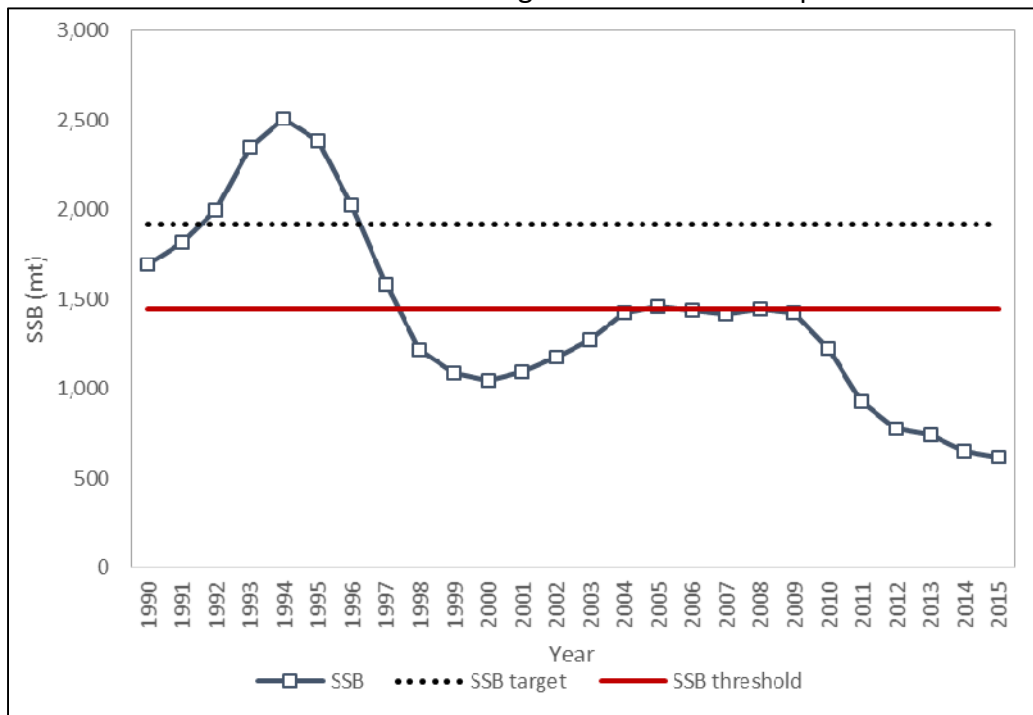


Figure 5. Total tautog harvest (recreational and commercial).
 Source: NMFS, MRIP.

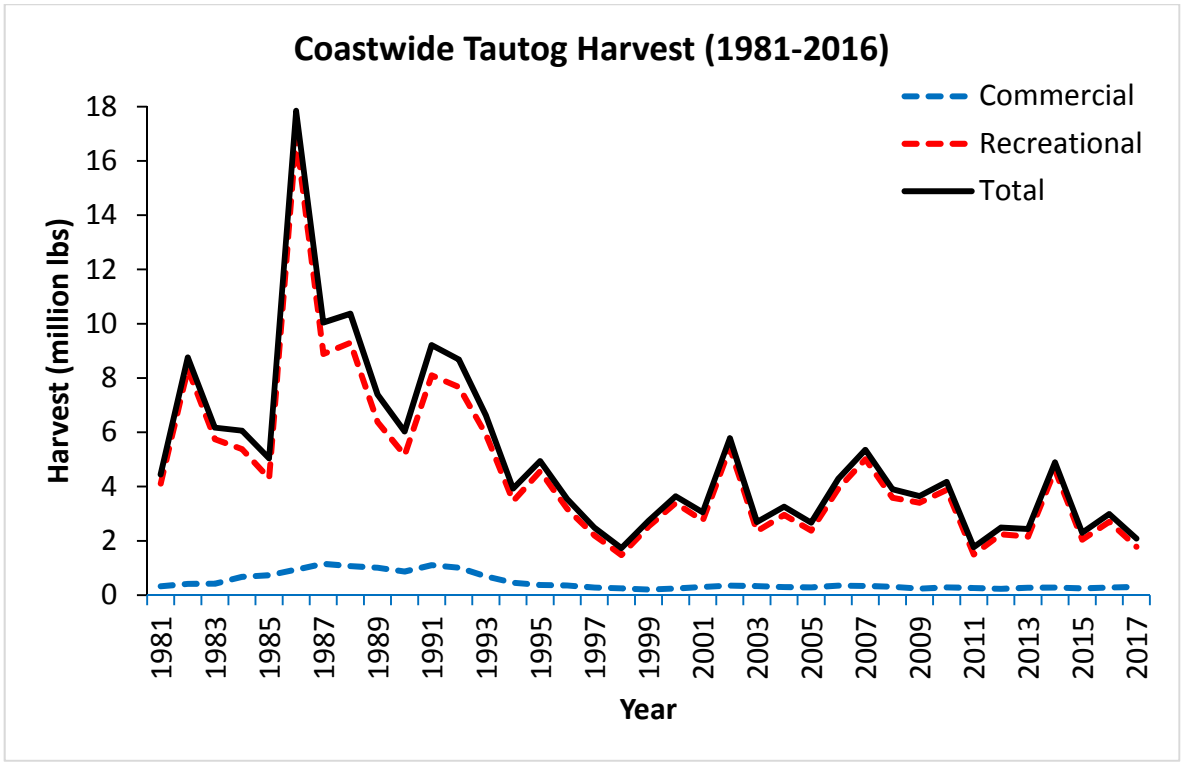


Figure 6. Percent of annual recreational tautog harvest by wave (2015-2017). Source: MRIP.

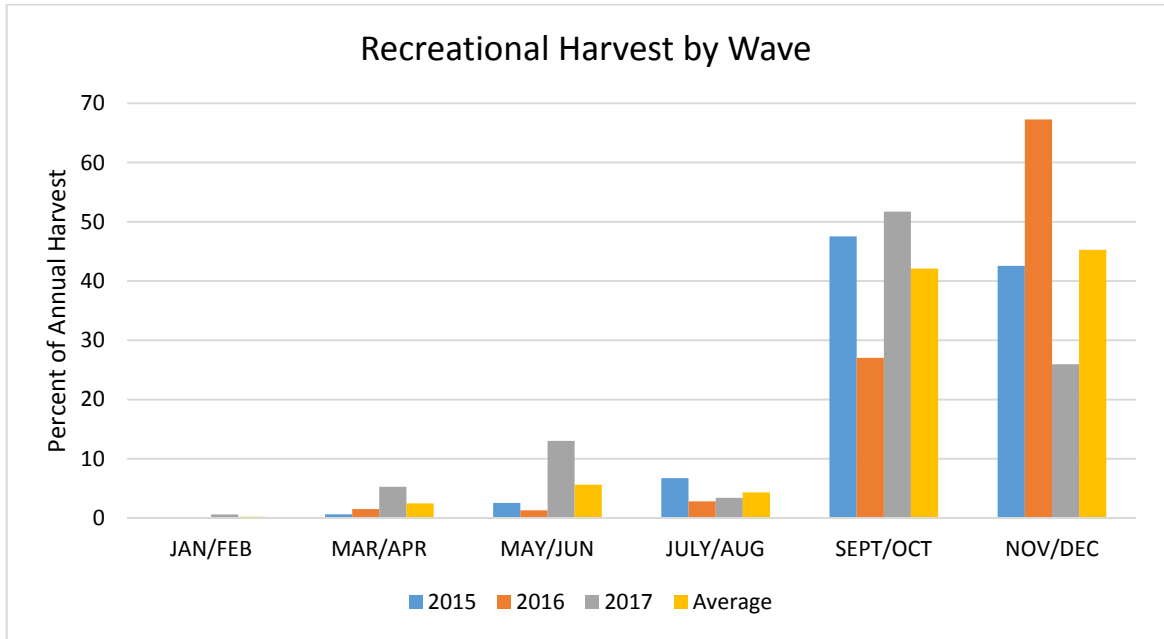


Figure 7. Changes in tautog commercial landings (lbs) and value (\$/lb) over time.
 Source: NMFS. Values unadjusted for inflation.

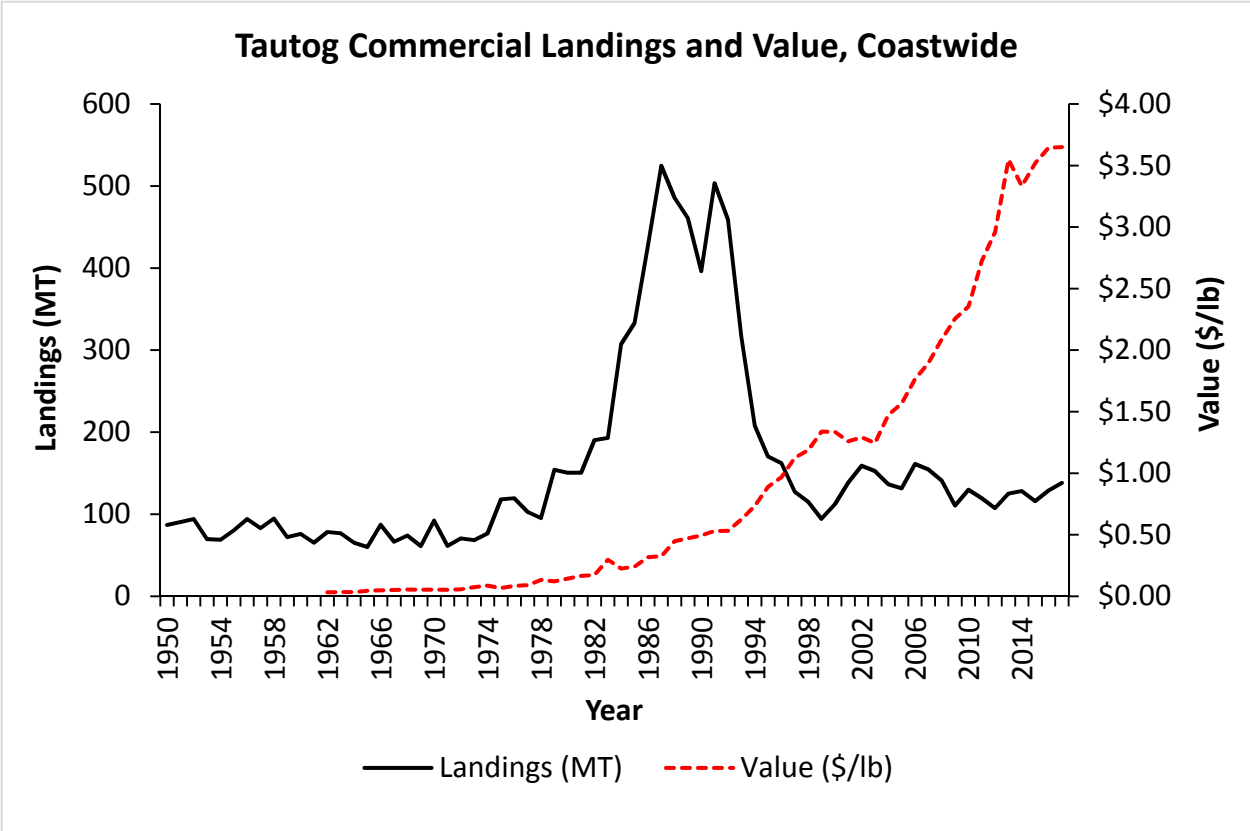


Table 1. Current fishing mortality and biomass targets and thresholds for each region. Source: ASMFC 2016 Tautog Assessment Update.

Region	F_{target}	F_{threshold}	F_{3yravg}	SSB_{target}	SSB_{threshold}	SSB₂₀₁₅	MSY or SPR	Status
MARI	0.28	0.49	0.23	2,684 mt	2,004 mt	2,196 mt	SPR	Not overfished, overfishing not occurring
LIS	0.28	0.49	0.51	2,865 mt	2,148 mt	1,603 mt	MSY	Overfished, overfishing
NJ-NYB	0.20	0.34	0.54	3,154 mt	2,351 mt	1,809 mt	SPR	Overfished, overfishing
DMV	0.16	0.24	0.16	1,919 mt	1,447 mt	621 mt	SPR	Overfished, overfishing not occurring

Table 2. Tautog recreational and commercial landings from 1981–2017, in pounds.

Source: State Compliance Reports, NMFS, and ACCSP Data Warehouse.

Year	Commercial Landings (lbs)	Recreational Harvest, A + B1 (lbs)	Total Harvest (lbs)	% Recreational
1981	331,900	4,115,046	4,446,946	92.5
1982	419,556	8,337,958	8,757,514	95.2
1983	425,519	5,749,538	6,175,057	93.1
1984	677,615	5,381,193	6,058,808	88.8
1985	734,370	4,305,087	5,039,457	85.4
1986	940,806	16,906,397	17,847,203	94.7
1987	1,157,100	8,888,783	10,045,883	88.5
1988	1,070,814	9,301,700	10,372,514	89.7
1989	1,016,431	6,377,752	7,394,183	86.3
1990	873,505	5,156,175	6,029,680	85.5
1991	1,110,111	8,101,441	9,211,552	87.9
1992	1,012,172	7,671,225	8,683,397	88.3
1993	698,440	5,927,020	6,625,460	89.5
1994	459,490	3,468,112	3,927,602	88.3
1995	375,567	4,567,374	4,942,941	92.4
1996	357,434	3,184,901	3,542,335	89.9
1997	280,912	2,204,039	2,484,951	88.7
1998	254,186	1,479,762	1,733,948	85.3
1999	207,981	2,532,690	2,740,671	92.4
2000	247,177	3,398,348	3,645,525	93.2
2001	305,193	2,749,701	3,054,894	90.0
2002	350,820	5,431,145	5,781,965	93.9
2003	336,685	2,357,940	2,694,625	87.5
2004	300,749	2,959,168	3,259,917	90.8
2005	289,984	2,379,790	2,669,774	89.1
2006	355,504	3,923,886	4,279,390	91.7
2007	340,925	5,009,021	5,349,946	93.6
2008	310,940	3,589,422	3,900,362	92.0
2009	243,644	3,408,159	3,651,803	93.3
2010	286,081	3,885,107	4,171,188	93.1
2011	263,241	1,503,076	1,766,317	85.1
2012	236,974	2,248,763	2,485,737	90.5
2013	275,839	2,158,563	2,434,402	88.7
2014	282,624	4,608,251	4,890,875	94.2
2015	255,915	2,043,032	2,298,947	88.9
2016	283,906	2,704,452	2,988,358	90.5
2017	304,600	1,784,869	2,089,468	85.4
Average	477,695	4,589,159	5,066,854	90.1

*Commercial landings do not include data from states that had confidential data (1987 excludes NC; 1999-2003, 2005-2006, 2010-2011, 2013-2014, and 2017 exclude Delaware; and 2011, 2012, and 2014 exclude Maryland).

Table 3. 2017 tautog landings by sector: percent recreational and commercial by weight.

State	Commercial Landings (%)	Recreational (A+B1) (%)
MA	21.2	78.8
RI	18.0	82.0
CT	1.5	98.5
NY	34.3	65.7
NJ	confidential	confidential
DE	confidential	confidential
MD	confidential	confidential
VA	31.1	68.9
NC	0.7	99.3
Coastwide	14.6	85.4

Table 4. Estimated recreational harvest (A+B1) by state and coastwide discards of tautog in number of fish, 1981-2017. Source: MRFSS/MRIP (pre-recalibration), queried July 13, 2018.

Year	MA	RI	CT	NY	NJ	DE	MD	VA	NC	Coastwide Total Harvest	Live Discards	Dead Discards
1981	228,736	233,508	100,308	721,062	132,271	3,457	4,670	236,768	3,072	1,663,852	386,614	9,665
1982	1,051,022	214,938	231,187	646,693	583,550	137,328	35,105	71,599	15,062	2,986,484	292,888	7,322
1983	670,508	245,796	200,676	612,163	344,580	4,350	2,126	579,795	36,549	2,696,543	676,332	16,908
1984	258,256	490,128	287,470	286,077	516,086	28,388	42,835	207,192	NA	2,116,432	647,963	16,199
1985	100,941	115,404	182,318	1,105,234	840,627	62,001	486	91,957	8,252	2,507,220	716,738	17,918
1986	1,980,719	671,592	333,396	1,183,114	2,369,852	141,290	5,476	322,905	12,660	7,021,004	1,104,064	27,602
1987	617,068	130,729	312,430	929,887	1,015,123	99,706	90,523	126,783	3,698	3,325,947	1,406,300	35,158
1988	621,679	207,799	234,198	828,183	564,286	94,491	107,570	368,320	4,462	3,030,988	1,240,696	31,017
1989	250,077	116,506	303,782	562,549	710,958	249,928	34,709	284,477	11,354	2,524,340	1,068,964	26,724
1990	233,444	153,433	75,871	953,622	841,770	61,526	45,467	111,998	3,428	2,480,559	1,241,464	31,037
1991	176,905	291,946	191,137	871,221	1,067,283	128,985	26,770	168,068	6,804	2,929,119	2,256,854	56,421
1992	357,949	193,786	319,221	413,236	1,018,205	68,769	106,255	100,952	5,249	2,583,622	1,611,027	40,276
1993	216,553	118,775	180,055	505,632	773,213	82,475	60,231	300,484	4,785	2,242,203	1,971,438	49,286
1994	78,483	82,304	150,109	196,937	208,003	65,837	157,260	231,740	2,271	1,172,944	1,479,938	36,998
1995	72,461	54,570	120,259	118,006	707,963	300,303	43,542	222,186	3,178	1,642,468	2,103,325	52,583
1996	79,798	55,528	72,558	82,826	470,431	57,751	9,695	224,447	6,605	1,059,639	1,158,674	28,967
1997	39,075	70,628	32,200	92,907	196,724	65,133	85,682	106,678	11,432	700,459	1,080,040	27,001
1998	25,034	56,084	66,797	68,887	11,667	62,584	6,512	50,923	9,487	357,975	1,409,354	35,234
1999	91,476	52,136	15,701	196,564	165,505	95,309	20,180	42,880	8,437	688,188	2,283,012	57,075
2000	87,552	38,687	10,648	79,245	462,371	113,686	20,129	34,725	5,555	852,598	1,730,087	43,252
2001	115,658	39,993	16,579	45,913	467,728	50,541	23,715	28,985	2,418	791,530	2,038,258	50,956
2002	102,662	62,423	100,240	629,772	347,831	185,684	42,038	25,987	4,514	1,501,151	3,173,716	79,343
2003	46,808	120,061	167,875	128,729	102,593	63,181	13,555	76,236	12,185	731,223	1,684,236	42,106
2004	21,816	124,419	16,464	278,749	90,214	70,608	8,690	150,703	9,137	770,800	1,737,892	43,447
2005	72,038	160,524	35,699	84,280	43,055	60,831	28,129	60,484	13,603	558,643	1,454,563	36,364
2006	79,639	81,611	200,708	246,882	200,725	111,028	14,894	105,137	1,234	1,041,858	2,649,091	66,227
2007	91,304	125,233	352,819	223,798	300,179	99,605	43,308	60,992	15,181	1,312,419	3,629,993	90,750
2008	34,237	103,760	167,179	318,899	172,518	101,735	19,128	56,384	689	974,529	2,494,972	62,374
2009	24,879	85,416	85,915	346,276	127,403	119,941	37,963	60,470	2,895	891,158	2,309,218	57,730
2010	45,743	197,062	116,058	145,663	374,599	56,505	57,338	127,221	3,720	1,123,909	2,881,296	72,032
2011	32,828	19,304	25,823	111,406	136,674	45,483	11,853	46,441	981	430,793	1,915,440	47,886
2012	24,796	104,425	194,101	61,508	37,611	46,570	5,356	13,920	9,936	498,223	2,026,300	50,658
2013	57,736	136,190	104,451	76,797	111,377	38,368	3,851	5,976	5,963	540,709	2,187,380	54,685
2014	100,297	68,768	318,201	300,399	169,879	50,467	494	25,917	3,997	1,038,419	4,065,320	101,633
2015	39,860	98,404	125,819	99,119	157,008	7,483	2,988	11,540	2,014	544,235	2,572,804	64,320
2016	24,243	86,528	165,315	270,944	83,466	30,032	1,870	17,127	1,517	681,042	4,105,503	102,638
2017	69,139	56,633	126,127	100,597	114,963	19,343	7,592	2,866	3,791	501,051	3,650,298	91,257

Table 5. Tautog recreational harvest (A + B1) by state in pounds, 1981-2017.

Source: MRFSS/MRIP (pre-recalibration), queried July 13, 2018.

Year	MA	RI	CT	NY	NJ	DE	MD	VA	NC
1981	790,611	664,568	242,337	1,496,039	161,424	6,584	10,296	742,653	536
1982	3,226,868	777,930	610,608	1,674,949	1,241,155	428,037	90,645	271,919	15,849
1983	1,837,262	615,595	458,582	1,124,844	414,957	4,437	6,551	1,267,166	20,144
1984	733,877	1,809,822	733,710	541,805	717,261	95,740	79,110	669,869	NA
1985	328,042	277,384	471,185	2,034,903	741,656	144,859	1,107	298,797	7,154
1986	7,862,584	2,042,584	838,346	2,833,208	2,132,571	264,744	10,049	918,138	4,173
1987	1,751,373	507,424	1,106,607	2,288,076	2,130,955	387,075	266,094	442,751	8,430
1988	2,255,930	612,123	610,171	2,380,285	1,331,833	249,803	446,947	1,410,003	4,605
1989	1,076,366	296,889	1,038,217	1,018,016	1,289,185	743,339	78,391	806,336	31,012
1990	895,327	389,579	200,000	1,980,289	1,256,488	142,627	59,721	229,442	2,703
1991	798,889	1,007,549	648,634	2,352,646	2,189,144	354,498	106,223	619,214	24,645
1992	1,668,485	656,712	1,048,639	1,199,558	2,485,693	183,854	159,730	255,995	12,559
1993	752,599	389,733	531,024	1,800,794	1,361,612	217,881	105,231	758,410	9,738
1994	373,189	328,668	417,438	585,037	330,551	152,033	177,358	1,101,130	2,708
1995	309,224	237,093	402,616	369,643	1,722,714	793,339	115,993	613,349	3,405
1996	397,284	248,840	245,817	193,046	1,123,174	158,751	26,483	778,315	13,191
1997	166,042	301,109	84,297	331,529	483,639	204,420	182,995	391,258	58,751
1998	96,695	316,339	231,622	208,743	41,431	257,348	27,648	273,515	26,420
1999	363,472	223,763	61,143	761,446	511,673	358,329	37,677	203,249	11,940
2000	442,816	203,602	58,475	258,100	1,812,960	373,581	56,126	188,187	4,502
2001	502,247	165,380	63,157	171,927	1,482,613	159,961	72,357	127,555	4,503
2002	521,611	265,116	447,140	2,135,221	1,184,560	652,007	104,246	116,797	4,448
2003	221,843	479,345	603,861	315,384	164,327	200,618	43,212	308,838	20,513
2004	104,513	682,329	77,219	965,837	276,724	243,467	21,633	553,866	33,579
2005	376,624	815,377	148,564	310,961	145,311	221,132	89,237	242,590	29,995
2006	296,636	380,140	842,213	782,424	734,509	406,336	47,463	430,157	4,008
2007	349,950	635,094	1,383,279	823,475	1,065,237	301,005	144,111	246,827	60,045
2008	106,871	491,403	715,317	1,094,903	518,814	365,619	62,710	232,557	1,228
2009	70,806	322,955	305,077	1,478,263	414,249	400,120	130,369	268,314	18,006
2010	163,057	918,693	409,370	508,487	1,044,598	151,793	201,769	477,734	9,605
2011	129,669	80,300	88,728	450,171	381,449	152,899	33,859	184,445	1,556
2012	94,699	534,716	982,891	252,745	133,048	171,329	17,670	49,988	11,677
2013	197,775	629,896	389,918	355,232	395,539	138,051	18,681	23,836	9,636
2014	399,812	297,955	1,643,470	1,365,338	579,934	187,915	3,004	121,352	9,472
2015	181,119	376,395	512,650	373,240	508,685	25,580	11,897	50,787	2,680
2016	72,342	338,501	705,146	1,162,729	262,665	100,253	7,708	52,236	2,873
2017	247,807	241,529	550,027	329,122	300,428	63,359	25,623	11,417	15,558

Table 6. Commercial landings for tautog in pounds, by state, 1981-2017.

Source: ACCSP Data Warehouse and State Compliance Reports.

Year	MA	RI	CT	NY	NJ	DE	MD	VA	NC
1981	102,900	69,800	20,500	81,400	54,400	1,000	1,200	700	N/A
1982	69,300	86,300	21,200	90,400	148,200	800	100	2,600	656
1983	57,600	142,600	33,500	88,400	100,600	800	N/A	1,700	319
1984	68,100	334,700	32,700	102,500	129,700	1,400	2,600	1,200	4,715
1985	63,300	403,200	50,100	84,500	125,500	3,200	2,400	1,639	531
1986	165,800	363,100	104,200	201,300	100,700	300	2,600	1,800	1,006
1987	250,000	420,500	159,200	225,200	95,200	500	3,800	2,700	confid
1988	277,100	328,900	112,100	255,000	88,000	600	6,100	2,800	214
1989	352,100	214,800	99,700	285,400	51,900	500	4,000	7,500	531
1990	289,074	211,084	82,008	181,543	99,112	500	3,954	5,151	1,079
1991	354,346	371,597	54,000	226,413	93,022	1,300	3,164	5,058	1,211
1992	292,291	359,767	65,700	169,011	116,332	200	4,058	4,389	424
1993	160,336	201,593	86,064	89,467	153,474	300	1,432	5,423	351
1994	37,062	130,719	43,000	71,375	162,641	400	1,718	11,441	1,134
1995	35,298	94,989	20,466	72,879	115,970	600	4,416	30,020	929
1996	32,579	64,817	33,327	105,466	89,435	1,599	3,622	26,137	452
1997	64,240	39,601	14,519	78,228	49,726	841	7,663	25,471	623
1998	91,319	20,304	6,905	68,892	42,426	1,715	5,682	14,770	2,173
1999	75,619	26,090	12,961	37,886	27,307	confid	6,489	20,901	728
2000	96,001	43,719	8,504	39,953	39,636	confid	3,896	14,794	674
2001	84,330	56,065	22,259	62,795	60,152	confid	4,591	14,587	414
2002	148,073	50,007	26,781	60,805	36,605	confid	5,010	22,834	705
2003	86,205	54,650	40,784	72,264	66,766	confid	5,213	10,705	98
2004	88,192	36,581	26,037	76,606	51,057	3,064	6,049	13,079	84
2005	99,344	42,838	24,053	52,525	61,163	confid	4,338	5,667	56
2006	147,609	47,261	16,841	71,683	58,119	confid	5,411	8,533	47
2007	95,820	63,441	30,002	73,797	62,979	2,814	3,297	8,588	187
2008	73,867	48,027	20,160	88,571	63,958	2,253	2,964	10,946	194
2009	54,703	50,920	21,194	87,289	14,591	2,116	1,638	11,132	61
2010	75,317	44,054	16,948	93,153	49,213	confid	1,285	6,077	34
2011	57,787	47,426	14,784	82,761	45,865	confid	confid	14,590	28
2012	67,870	50,126	6,233	76,373	20,831	1,444	confid	13,870	227
2013	70,157	53,428	5,887	110,849	22,079	confid	1,458	11,776	205
2014	63,191	53,384	5,164	121,538	31,665	confid	confid	7,545	137
2015	61,752	47,140	7,249	111,925	17,538	2,107	1,173	6,937	94
2016	58,095	50,680	7,651	144,650	13,367	2,083	1,098	6,252	30
2017	66,481	52,844	8,485	171,508	confid	confid	confid	5,165	116

Table 7. State recreational regulations implemented for tautog in the 2017 fishing year.

STATE	SIZE LIMIT (inches)	POSSESSION LIMITS (fish/person/day)	OPEN SEASONS (dates inclusive)
Massachusetts	16"	3	Jan 1 – Dec 31
Rhode Island	16"	3	Apr 15 – May 31
		3	Aug 1 – Oct 15
		6 (10 fish/day/vessel max for private/rental mode)	Oct 16 – Dec 15
Connecticut	16"	2	Apr 1 – Apr 30
		2	July 1 – Aug 31
		3	Oct 10 – Nov 23
New York	16"	4	Oct 5 – Dec 14
New Jersey	15"	4	Jan 1 – Feb 28
		4	Apr 1 – Apr 30
		1	Jul 17 – Nov 15
		6	Nov 16 – Dec 31
Delaware	15"	5	Jan 1 – Mar 31
		3	Apr 1 – May 11
		5	July 17 – Aug 31
		5	Sept 29 – Dec 31
Maryland	16"	4	Jan 1 – May 15
		2	May 16 – Oct 31
		4	Nov 1 – 26
Virginia	16"	3	Jan 1 – Apr 30 Sept 20 – Dec 31

Table 8. State commercial regulations implemented for tautog in the 2017 fishing year.

STATE	SIZE LIMIT	POSSESSION LIMITS (number of fish)	OPEN SEASONS	QUOTA (pounds)	GEAR RESTRICTIONS
Massachusetts	16"	40	Sept 1 – 100% of Quota	64,643*	Mandatory pot requirements. Limited entry and area/time closures for specific gear types.
Rhode Island	16"	10	Apr 15 – May 30 Aug 1 – Sept 15 Oct 15 – Dec 31	51,348**	Harvest allowed by permitted gear types only.
Connecticut	16"	4 (restricted licenses) 10 (all other)	Apr 1 – Apr 30 Jul 1 – Aug 31 Oct 8 – Dec 24	-	Mandatory pot requirements.
New York	15"	25 (10 fish w/ lobster gear and when 6 lobsters are in possession)	Jan 1 – Feb 28 Apr 8 – Dec 31	-	Mandatory pot requirements. Gill or trammel net is prohibited.
New Jersey	15"	> 100 lb requires directed fishery permit	Jan 1 – 15 June 11 – 30 Nov 9 – Dec 31	103,000	Mandatory pot requirements.
Delaware	15"	5 3 5 5	Jan 1 – Mar 31 Apr 1 – May 11 July 17 – Aug 31 Sept 29 – Dec 31	-	Mandatory pot requirements.
Maryland	16"	4 2 4	Jan 1 – May 15 May 16 – Oct 31 Nov 1 – 26	-	Mandatory pot requirements.
Virginia	15"	-	Jan 1 – Jan 21 Mar 1 – Apr 30 Nov 1 – Dec 31	-	Mandatory pot requirements. Pots prohibited in tidal waters.

* Massachusetts' quota adjusted for overage in 2016 from a base quota of 64,753 lbs.

** Rhode Island's quota of 51,348 lbs is divided equally among the three sub-periods.

Table 9. Number of age/length samples by state in 2017. Addendum III requires all states to collect 200 samples per year. Source: State compliance reports

State	2017 Samples	Sample Sources
MA	1,150	Fishery independent pot, rod and reel, and trawl surveys, ventless trap survey for Lobster
RI	326	Recreational fishery sampling, RIDMF Fish Pot Survey, RIDMF Trawl Survey
CT	75	Long Island Sound Trawl Survey
NY	96	Commercial markets and dockside sampling, recreational sampling
NJ	504	Recreational fishery and NJ Bureau of Marine Fisheries Ocean Trawl Survey
DE	92	Recreational sampling
MD	265	Recreational sampling
VA	211	Commercial sampling and Marine Sport Fish Collection Project

Table 10. Ongoing fishery-independent surveys, as of 2017. Shaded cells indicate survey data used in 2016 stock assessment.

State	Areas Surveyed	Survey Type	# of Survey Stations	Dates of Survey	Initial Year
MA	MA territorial waters	Trawl	1 station per 19 square nautical miles	May and September	1978
	Buzzards Bay, south of the Elizabeth Islands, and portions of Rhode Island Sound	Trap	42 stations twice per month	June through September	2015
	Buzzards Bay and Vineyard Sound	Rod & Reel	48 stations per month	Spring (Apr-May) Fall (Sep-Nov)	2016 (fall)
RI	Narragansett Bay	Trawl	13 stations per month	June through October	1990
	Narragansett Bay, Rhode Island Sound and Block Island Sound	Trawl	44 stations	Spring (April-May) Fall (Sept/October)	1979
	Narragansett Bay Beach	Seine	18 stations per month	June through October	1988
	Coastal Ponds	Seine	24 stations in 8 coastal ponds per month	May through October	1994
	Narragansett Bay	Trap	10, 5 pot trawls set per month	April through October	2013
CT	Long Island Sound (CT and NY waters)	Trawl	40 stations per month	Spring (April-June) Fall (Sept-Oct)	1984
NY	Peconic Bay	Trawl	16 stations per week	May through October	1987
	Western Long Island (Little Neck, Manhasset Bay, Jamaica Bay)	Seine	5-10 sites, semimonthly	May through October	1984
	Long Island Sound	Trap	35 stations per week	May through October	2007
NJ	Nearshore ocean waters between Cape May and Sandy Hook	Trawl	30 tows in Jan; 39 tows per month in Apr, Jun, Aug & Oct	Jan, Apr, June, Aug & Oct	August 1988
DE	Fisheries independent surveys do not collect tautog in quantities needed for monitoring purposes				NA
MD	Maryland Coastal Bays	Trawl	20 stations per	April through October	1989
		Seine	19 stations per month	June, September	1989
	Submerged Aquatic Habitat in Sinepuxent Bay	Seine	5 zones	September only	2015
VA	Fisheries independent surveys do not collect tautog in quantities needed for monitoring purposes				NA

Table 11. Ongoing fishery-dependent monitoring in each state, as of 2017

State	Fishery Sector	Data Collected	Data Source
MA	Commercial	Landings at the trip level	Harvesters and primary buyers
	Commercial	Length	Market sampling
RI	Recreational	Age, Length	Recreational harvest sampling
	Commercial	Age	Fish Pot Survey
CT	Commercial	Monthly landings	Harvesters and dealers
NY	Commercial	Age, Length	Markets and dockside sampling
NJ	Commercial	Age, Length, Weight, Sex	Commercial vessel sampling
	Recreational	Age, Length, Sex	Party/charter boat sampling (retained fish)
DE	Commercial	Landings	Monthly harvester logbooks
	Recreational	Age, Length	Recreational harvest sampling
MD	Recreational	Age, Length, Weight, Sex	Charter boat hook and line sampling
	Commercial	Landings	Harvest reports
VA	Commercial	Age, Length, Weights	Samples from commercial hook-and-line gear, haul seines, pots/traps, pound nets
	Recreational	Age, Length, Weights	VMRC Marine Sport Fish Collection Project
		Tagging data	Game Fish Tagging Program

*Surveys as part of MRIP occur in all states and are not included in the table. Commercial landings monitoring by the Standard Atlantic Fisheries Information System (SAFIS) is also excluded.

Atlantic States Marine Fisheries Commission

ISFMP Policy Board

*October 25, 2018
9:15 – 11:00 a.m.
New York, New York*

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. Gilmore*) 9:15 a.m.
2. Board Consent (*J. Gilmore*) 9:15 a.m.
 - Approval of Agenda
 - Approval of Proceedings from August 2018
3. Public Comment 9:10 a.m.
4. Update from Executive Committee (*J. Gilmore*) 9:20 a.m.
5. Update on the October 2018 Atlantic Large Whale Take Reduction Team Meeting and Possible Impacts to Commission-managed Species 9:30 a.m.
6. Update on the Risk and Uncertainty Policy (*J. McNamee*) 9:40 a.m.
7. Update on the Northeast Area Monitoring and Assessment Program (*N. Lengyel*) **Action** 9:50 a.m.
8. Update on River Herring Technical Expert Working Group (*C. Starks*) 10:05 a.m.
9. Standing Committee Reports 10:15 a.m.
 - Update from the Atlantic Coastal Fish Habitat Partnership (*L. Havel*)
 - Habitat Committee (*L. Havel*) **Action**
 - Law Enforcement Committee (*M. Robson*)
 - Assessment Science Committee **Action** (*S. Murray*)
10. Progress Update on Benchmark Stock Assessments 10:40 a.m.
 - Shad (*K. Drew*)
 - Menhaden and Ecological Reference Points (*K. Drew*)
11. Review Noncompliance Findings, If Necessary **Action** 10:50 a.m.
12. Other Business 10:55 a.m.
13. Adjourn 11:00 a.m.

The meeting will be held at the Roosevelt Hotel, 45 East 45th Street & Madison Avenue, New York, NY; 212.661.9600

MEETING OVERVIEW

ISFMP Policy Board Meeting
Thursday October 25, 2018
9:15-11:00 a.m.
New York, New York

Chair: Jim Gilmore (NY) Assumed Chairmanship: 10/17	Vice Chair: Pat Keliher (ME)	Previous Board Meeting: August 9, 2018
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 August 9, 2018

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. Update from Executive Committee (9:20-9:30 a.m.)

Background

- The Executive Committee will meet on October 23, 2018

Presentations

- J. Gilmore will provide an update of the two meetings

Board action for consideration at this meeting

- none

5. Update on the October 2018 Atlantic Large Whale Take Reduction Team Meeting and Possible Impacts to Commission Managed Species (9:30-9:40 a.m.)

Background

- The Atlantic Large Whale Take Reduction Team met October 9-12 to deliberate on the scope of measures which may be considered to reduce the effects of US fisheries on the right whale population.
- A series of recommendations regarding potential action were developed at the meeting. These will undergo further review ahead of the next ALWTRT meeting in March 2019.

Presentations

- Report on the ALWTRT Meeting focusing on non-lobster fisheries.

Board discussion for consideration at this meeting

- Possible Impacts to Commission managed species

6. Update on the Risk and Uncertainty Policy (9:40-9:50 a.m.)**Background**

- In 2016, the Risk and Uncertainty Policy Workgroup presented a draft Commission Risk and Uncertainty Policy and were advised by the Board to continue development.
- The Risk and Uncertainty Policy Workgroup held a Workshop to walkthrough the Policy using striped bass as an example.

Presentations

- J. McNamee will present the progress to-date the workgroup has made.

Board action for consideration at this meeting

- None

7. Update on the Northeast Area Monitoring and Assessment Program (9:50-10:05a.m.)**Action****Background**

- A NEAMAP Summit was held January 31 – February 1, 2018
- The NEAMAP structure, mission, and goals have been revised (**Briefing Materials**)

Presentations

- N. Lengyel will give an overview of NEAMAP activities

Board action for consideration at this meeting

- Approve the NEAMAP structure, mission and goals

8. Update on River Herring Technical Expert Working Group (TEWG) (10:05-10:15 am)**Background**

- In 2013, NOAA and ASMFC established the TEWG to compile and provide information for the development of a dynamic conservation plan to restore coastal river herring populations.
- The Terms of Reference (TORs) of the TEWG include the identification of threats to river herring, conservation actions to address those threats, and key data gaps as well as a list of research projects and associated costs to fill existing data gaps. Since its establishment, the TEWG has met biannually to carry out the TORs. (**Briefing Materials**)
- In the past year, the activity level of the TEWG and its associated subgroups has been low. Subgroups have identified data gaps, but have had less focus on identifying critical threats and conservation actions.
- NOAA and ASMFC staff are proposing revisions to the TEWG mission statement and TORs to clarify the function and charge of the TEWG, as well as provide direction for continuing work within the subgroups. Staff is seeking direction from the Board on the TEWGs role in informing river herring management.

Presentations

- Update on the River Herring Technical Expert Working Group (TEWG) by C. Starks

Board actions for consideration at this meeting

- Provide feedback and direction for continuing TEWG work

9. Standing Committee Reports (10:15-10:40 a.m.) Action
<p>Background</p> <ul style="list-style-type: none"> • The Southeast Fish Habitat Conservation Mapping Project Results • Preliminary overview of FY2019 NFHAP proposals • The Habitat Committee has completed a Living Shorelines Factsheet • The Law Enforcement Committee met on October 23 and 24, 2018 • The Assessment and Science Committee reviewed and made changes to the Commissions Stock Assessment Schedule
<p>Presentations</p> <ul style="list-style-type: none"> • L. Havel will present an overview of ACFHP Committee activities and review the living shorelines fact sheet (Supplemental Materials). • M. Robson will present and overview of the LEC activities • S. Murray will review changes to the stock assessment schedule (Briefing Materials)
<p>Board action for consideration at this meeting</p> <ul style="list-style-type: none"> • Approve the Living Shorelines Factsheet • Approve the revised stock assessment schedule

10. Progress Update on Benchmark Stock Assessments (10:40- 10:50 a.m.)
<p>Background</p> <ul style="list-style-type: none"> • The next American shad benchmark stock assessment is scheduled to be completed in the summer of 2019. • The next Atlantic menhaden and ecological reference points benchmark stock assessment is scheduled to be completed by the end of 2019
<p>Presentations</p> <ul style="list-style-type: none"> • Dr. Drew will provide a progress report on the shad, Atlantic menhaden and ecological reference points benchmark stock assessments
<p>Board action for consideration at this meeting</p> <ul style="list-style-type: none"> • None

11. Review Non-Compliance Findings, if Necessary Action

12. Other Business

13. Adjourn

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
ISFMP POLICY BOARD**

**The Westin Crystal City
Arlington, Virginia
August 9, 2018**

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, Chairman James J. Gilmore 1

Approval of Agenda 1

Approval of Proceedings, May 2018 1

Public Comment..... 1

Update from State Director’s Meeting and Executive Committee..... 4

Review of the Annual Performance of the Stocks 11

Coordination between ASMFC and the New England Fisheries Management Council..... 20
 Consider Changing the Atlantic Herring Section to a Management Board 20

Update on the Atlantic Coastal Fish Habitat Partnership 21

Progress Update on Benchmark Stock Assessments 22
 American Shad..... 22
 Horseshoe Crab 23

Adjournment..... 26

TABLE OF MOTIONS

1. **Approval of Agenda by Consent** (Page 1).
2. **Approval of Proceedings of May 2018** by Consent (Page 1).
3. **On behalf of the Atlantic Herring Section, move to recommend to change the Herring Section to a Board and invite the NEFMC to have one voting seat. This action is conditional on NEFMC adding an ASMFC staff seat to their Herring PDT and an ASMFC seat to the Herring Committee, with the understanding that is not the same person** (Page 20). Motion passes by unanimous consent (Page 21).
4. **Motion to Adjourn** by consent (Page 26).

ATTENDANCE

Board Members

Pat Keliher, ME (AA)	John Clark, DE, proxy for D. Saveikis (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	David Blazer, MD (AA)
Doug Grout, NH (AA)	Russell Dize, MD (GA)
Ritchie White, NH (GA)	Ed O'Brien, MD, proxy for Del. Stein (LA)
Raymond Kane, MA (GA)	Steve Bowman, VA (AA)
Dan McKiernan, MA, proxy for D. Pierce (AA)	Brian Plumlee, VA (GA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Steve Murphey, NC (AA)
Bob Ballou, RI, proxy for J. McNamee (AA)	Michael Blanton, NC, proxy for Rep. Steinburg (LA)
David Borden, RI (GA)	Robert Boyles, SC (AA)
Justin Davis, CT, proxy for P. Aarrestad (AA)	Malcolm Rhodes, SC (GA)
Sen. Craig Miner, CT (LA)	Ross Self, SC, proxy for Sen. Cromer (LA)
James Gilmore, NY (AA)	Spud Woodward, GA (AA)
Emerson Hasbrouck, NY (GA)	Doug Haymans, GA (GA)
Joe Cimino, NJ, proxy for L. Herrighty (AA)	Krista Shipley, FL, proxy for J. McCawley (AA)
Tom Fote, NJ (GA)	Martin Gary, PRFC
Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)	Sherry White, USFWS
Andy Shiels, PA, proxy for J. Arway (AA)	Rachel Baker, NMFS
Roy Miller, DE (GA)	

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

Staff

Bob Beal	Kristen Anstead
Toni Kerns	Jeff Kipp
Lisa Havel	

Guests

(Sign-in sheet not available)

Mel Bell
Annie Hawkins, RODA
Arnold Leo, E. Hampton, NY

The Interstate Fisheries Management Program Policy Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; Thursday, August 9, 2018, and was called to order at 8:00 o'clock a.m. by Chairman James J. Gilmore.

CALL TO ORDER

CHAIRMAN JAMES J. GILMORE: Good morning everyone. Welcome to the ISFMP Policy Board Meeting. My name is Jim Gilmore; I'll be chairing the meeting today. A few of us are a little tired from our festivities last night. Then we were wandering the city for hours because Toni abandoned us after she took us to a ballgame, and people like me who aren't familiar with cities were completely stressed out trying to find my way back home.

No, we had a great time last night at the ballgame. Even though the Nats lost, the folks from the south were thrilled that the Braves won. Congratulations!

APPROVAL OF AGENDA

CHAIRMAN GILMORE: Let's get into the agenda. First off, we have to approve the agenda. But I think we have a few changes we're going to make. First off, there was an Item 8 on the Update on Risk and Uncertainty. We're going to postpone that until the annual meeting; because that was Jay Mac.

If you haven't heard, Jay Mac had knee yesterday or the day before; oh ankle surgery, sorry, some kind of leg surgery. Anyway, he's out of commission, so we're going to postpone that to the annual meeting. We are going to add in, there is a topic we were talking about strategic planning at the last meeting. Leadership went and had a meeting on this so we're going to do an update on that. Are there any other changes to the agenda? Okay seeing those we'll adopt those with the changes I just made.

APPROVAL OF PROCEEDINGS

CHAIRMAN GILMORE: We had proceedings from May of 2018. They are in the briefing information. Are there any changes to the proceedings? Okay, seeing none; we'll adopt those by unanimous consent.

PUBLIC COMMENT

CHAIRMAN GILMORE: Before each meeting we have a chance for public comment on issues not on the agenda. Are there any public comments? I believe we have one from Anne Hawkins is going to talk about RODA. Come on up to the public microphone, Anne.

MS. ANNE HAWKINS: I'm Annie Hawkins. I work with the Responsible Offshore Development Alliance; and wanted to take a brief opportunity to introduce this new group that we've formed to the Commission, and talk a little bit about what we're doing and how we may be able to work together.

I apologize for having the sniffles this morning. But at least I decided not to make everyone fall asleep with a PowerPoint, so we'll keep it short. We're a new group that has come together of commercial fishermen up and down the Atlantic coast. We've got board members from Maine; all the way down to North Carolina, some of whom are Commission members, some of whom are Council members. Eric Reid is the Treasurer of RODA; so he is also a good resource to ask any follow up questions, or he can correct me or supplement anything if he's got anything else to add.

The point of RODA is to sort of take a new approach to improve the compatibility of the new developments that we're seeing offshore on the Outer Continental Shelf with commercial fisheries. Right now we're particularly focused on offshore wind; as it's a huge issue. But we're also sort of structured in a way to address other things that will come down the pike; like sand and gravel extraction, offshore aquaculture, things that we're starting to see in the Atlantic.

We found that over the last few years the permitting processes and the use of scientific data going into these processes really has not been what we would like to see from the commercial fishing side. We want to make sure that we are coming together with a unified voice; in a way that makes us a lot more able to participate effectively in the process. Like I said, we have 13 board members at this point from Maine down to North Carolina. Board members are individuals with direct interest in the commercial fishing industry.

We have representatives from essentially every federally permitted fishery; and some state permitted fisheries in the Atlantic. We are a membership-based organization. Our goal would be to have membership from absolutely anybody from the commercial fishing side who is interested in joining us and working with us on these topics.

RODA has sort of two main points; one is policy and the other is science. On the policy side, like I said the main goal was to bring this unified voice so that we can be more effectively engaged in these permitting processes. We think there is a lot of value in having conversations directly with the fishing industry; and with offshore energy developers, and other developers and lease holders on the Outer Continental Shelf. Those conversations have not been happening too much to date.

To coordinate among the many efforts that are going on with sort of each state and each developer that have their own advisory panels and are convening their own working groups of fishermen. It has been a lot of work for a lot of fisheries and a lot of fishing representatives who attend all of these meetings; and to really keep on top of everything that is going on with every state and then federally.

We're hoping to sort of be – not only hoping to but we have been – a way to coordinate a lot of those interactions; and to be a clearing house. Get information out to the industry; get

information back from developers, and just make everything a little bit more streamlined, so that we're not spending so much time and effort chasing each individual project and each individual proposal.

On the science side we're in discussions with National Marine Fisheries Service; both at GARFO, the Science Center, and Headquarters to form a formal partnership on a new collaborative research program, where we can really start to identify/prioritize the data gaps that we have and the sort of analytical efforts that we need to start to better understand how offshore leases should be sited and designed, and make sure that they're as compatible as possible with fishing interests. I think that is sort of the brief overview. I didn't want to take too much time; but just to let the Commission know that we're starting on this effort. We're starting to form our partnerships; sort of across the board, and hoping to interact with you guys down the road as we develop and really get rolling here. Thanks.

CHAIRMAN GILMORE: Thanks, Anne. Okay, we'll take a couple of questions.

MR. THOMAS P. FOTE: Anne, I noticed in your presentation when you started beginning, you started talking about also sand and gravel. Now, I'm very tied into the recreational community, and we've been looking at what's been going on in New Jersey with them doing 30 miles of beach replenishment for the last two years. Basically, we have no inshore fishery in the last couple of years; and the same thing with the commercial, we lost numerous lumps, and numerous places little fish spots.

Somehow they got on the plan and basically have been destroyed over the period of time. I think if you're looking for a partner in some of this stuff when it comes to sand mining and things like that; also I've been at a number of BOEM meetings, and basically sat with Greg and yelled at them, when they basically don't put the proper overlays and show where the fish

areas are. If we can help, basically we'll work with you.

MS. HAWKINS: Great thanks that's good to hear. I've had a lot of conversations with BOEM that that program is going to be expanding quickly for New Jersey, from Maine all the way down to Florida. We're definitely keeping an eye on that.

CHAIRMAN GILMORE: I'll let Eric have, actually Dennis had something else or whatever. I don't want to get into a big discussion on this; because I don't want to break with the rules of public comment, and we start getting into dialogue on it. But I'll take two questions. I've got, who is it Eric and Dave? Go ahead, Dave.

MR. DAVID BLAZER: Yes, I'm sorry. I just wanted to, because in Maryland we're going through a lot of these different issues. I just want to make sure that I get your contact information; so that we can put our commercial fishermen in touch with these folks, so they know that there is a concerted effort, because they are struggling right now.

CHAIRMAN GILMORE: Eric.

MR. ERIC REID: I don't have a question. I just wanted to say thank you, Mr. Chairman. Being from New York, you have some idea of what is going on with wind power. Love four letter words; wind is a four letter word. There are a lot of other four letter words that are associated with wind power.

Executive Director Beal has had some conversations with myself; and I really appreciate you guys giving us some time this morning. We're more than happy to talk to you offline. Obviously there is some interest in covering our collective rear ends for this matter. Thanks a lot, I appreciate it.

CHAIRMAN GILMORE: Thanks Eric and Anne. Thank you again, yes and my state and many of the New England states and expanding south

now. This is becoming a major issue that I think the coordination and communication is going to be key in getting us out of this; because we've had some very spirited meeting in New York on the topic. Thanks again. Dennis, do you have a comment on this or public comment? Go ahead.

MR. DENNIS ABBOTT: I just wanted to comment about our meeting conduct. I don't have a problem. But in the past couple of meetings I've noticed a couple things; and I'll use some specific examples. Yesterday Marty Gary chose to abstain in a vote. I don't think that the Chair is under any obligation to abstain. I think the Chair should be voting; because they're here representing, in his case the Potomac River, Bob Ballou in the past representing Rhode Island.

I think it is incumbent, and I thought it was obligatory for the Chairs to vote. I mean the argument could be made that Chairs only vote to make a tie or break a tie. If that was the case then I think that if you called a roll call, you would call the Chair last to do that. But I think the Chairs should be voting.

They probably think they're doing the proper thing by not voting; but I think that they come here to vote, and especially in a three-person caucus. It could make the difference of if there is a divided delegation. I just think we should make it clear that the Chairs should vote. The other thing is several times the Chairs have recused themselves from chairing the meeting.

Pat did that and I don't know who else did it. But I thought you only had to do that if you were representing yourself; and not representing the department or the state. I don't see a problem with sitting in the Chair. But you know if you're going to make a speech about something singular to yourself, then you should recuse. Again, I think that the Chairs should essentially conduct the whole meeting; other than exceptional circumstances. I just wanted to bring that up.

CHAIRMAN GILMORE: Yes, I appreciate it Dennis. I think that the Chair voting issue I think it is important you raise it that they have the opportunity to vote. But again, there is that rule about, I mean most of my local councils are the tie breaker issue. But I think it is important to note that if the Chair so decides to either vote or not vote that is still their prerogative.

But they do have the capability to vote if it's an important enough issue; so I think that's good. The recusing thing that's a judgment call, and I understand that. But I think you're probably right in some cases we probably could stay at the table. We've become more sensitive in a lot of states about the perception of what we're doing. Are we being purely objective in running a meeting? That's usually what I got. But good comments, thank you.

UPDATE FROM STATE DIRECTOR'S MEETING AND EXECUTIVE COMMITTEE

CHAIRMAN GILMORE: Is there any other public comment before we move on? Okay seeing none; our first agenda item is an update from the State Director's meeting, so I'm going to go into my notes the best I can. First off, there was one item that also J. Mac was not at the Executive Committee meeting, and he was going to do an update on the appeals process.

But we did not do that; so we've delayed that or rescheduled that for the annual meeting. One thing we did do, John Clark had sent a letter in on another point that we should consider under that. We decided we are going to include that under Jay's efforts. I think that letter was distributed to everyone; I believe. If you see that letter, you can get into the details of John's. But we are going to include that in the evaluation of the appeals process.

CHAIRMAN GILMORE: The next item we got into was the update on federal appropriations.

The short story is that we find ourselves in the great position of having a surplus; as we're

going into our upcoming times. Bob is going to just do a quick summary of what he went through; just so you understand it. Then we'll come back to some suggestions out what we're going to do. Bob.

EXECUTIVE DIRECTOR ROBERT E. BEAL: Just very briefly. The bottom line is that due to Congressional increases to the Council and Commission line, as well as some procedural changes at National Marine Fisheries Service, about 2.9 million dollars of additional funding came to the three interstate commissions.

Obviously not all of it came to ASMC; but a fair chunk of it did, and some of it was indirectly coming to projects like SEAMAP and some others. The procedural changes, I think the best example is SEAMAP. Prior to the changes there was overhead or administrative fees taken off of Headquarters, and then also at the Regional Office.

The National Marine Fisheries Service made the decision that only maintenance and administration fees should be taken off at Headquarters, and no regional deductions would be made. In the SEAMAP example, this freed up about \$350,000.00 that could be applied to the SEAMAP program in the Southeast, Caribbean, and the Gulf of Mexico.

About a third of that went to the east coast. It required no additional appropriations from Congress; but the National Marine Fisheries Service decided to treat some of the overhead issues differently. It ultimately resulted in more dollars available for on-the-water research; which is great, because the SEAMAP program was really kind of scraping bottom for now. There are other examples like that. Those procedural examples are about 1.4 million dollars accumulative; when you look at all three Commissions. It's a fair amount of money.

The Congressional increase to the Council and Commission budget line was on the order of like about 1.6 million dollars. The Congressional

language associated with that said that all of the increase was going to be distributed to the three interstate commissions; so ASMFC, the Gulf States Commission, Pacific States Commissions, and one international commission, which is a Pacific Salmon Commission.

After a number of machinations and back and forth with the commissions and everything else, about in the ballpark a half a million dollars of that money has come to ASMFC; or will be coming to ASMFC in a five-year-cooperative agreement. The final budget was approved by Congress pretty late in the process; as you folks know.

The only option that we really had was bringing that money to essentially our office; and parking that in that five-year-cooperative agreement. We didn't have time to work with NOAA to distribute that money to the states through the Atlantic Coastal Act formula. The bottom line is we have on the order of half a million dollars at ASMFC; about \$70,000.00 of that has already been set aside for an ACCSP data security audit. Since ACCSP houses obviously a lot of federal data, there are federal standards that must be upheld; as far as establishing firewalls and passwords, and all the other things that ensure folks aren't able to go through a website or some other portal and gain access to that federal data.

As I said, \$60,000.00 or \$70,000.00 of that is going to be to conduct the audit. There may be some expenses on the back end to update hardware and software; but we'll know that once we get there. After the Commission's overhead and other things, there is on the order of \$400,000.00 available for the states to do things through the Commission.

At the State Director's meeting and the Executive Committee, it was agreed that staff would go back and put together a proposal and some options for; what are the priority projects that this money should be used for. The one

thing that we need to be able to do is go back to Congress and say, hey we did some good stuff with this increased money.

It can't just sort of be absorbed into the cracks and fund some meetings and other kind of non-spectacular things. We need to make sure we have impressive and interesting projects; and things that we can go back to Congress and say we appreciate the money, and in fact we did some good stuff with the money you gave us. We'll be working on that between now and the annual meeting. If you have any ideas that you think you want to get put onto this list.

The Executive Committee will be the ultimate folks who decide on the priorities. But I think one of the important things to remember, it is five-year money. We don't have to spend it all right away. Keeping some available in case there are some dips in funding in future years may be part of the strategy as well. Mr. Chairman that is a summary of where we are; and we'll be reporting back at the annual meeting to the Executive Committee.

CHAIRMAN GILMORE: Thanks Bob. I think since the Executive Committee meeting I've already been approached with several ideas. At this point, I think the best thing to do if you've got ideas is to send them directly to Bob, and then just cc me and Pat. We'll make sure they're included within staff's effort right now.

Then we'll obviously have more discussion. I guess that's what happens when you say you have a lot of money in a meeting. Nobody has any ideas; but they go to bed and then suddenly there are a thousand ideas, which is good. Questions for Bob on this, okay seeing none; our next item was on aquaculture.

Louis Daniel, who has been heading up the Commission's aquaculture efforts essentially, did an overview on the expanding world of aquaculture. I think traditionally most of us in our states have had smaller scale things; heavily

focused on shellfish. However, the last couple of years it has expanded dramatically.

Now, with the federal priority of aquaculture, it's expanding quite dramatically into things; not only our traditional shellfish, but also inshore finfish, offshore shellfish, kelp. I didn't know what sugar kelp was until a few months ago. Now everybody wants to grow sugar kelp. It's the same thing with conflicting uses on it; so it's a very big issue, emerging issue at this point. I think there was consensus in the room that it's an emerging issue for the Commission and important to the Commission; since it can have impacts not only maybe directly but also in the species we manage, because we have a lot of areas that if you go offshore we've got offshore wind, we've got offshore aquaculture, we've got shipping.

We've got a whole lot of things going on out in the ocean. I told at the meeting the other day, I was at a resiliency meeting for the federal government a few weeks ago in Cape May. I had a slide; and it's a fishing boat. If you start bringing all these in, it looks like he's in the middle of the ocean; and by the time you put in cruise ships and protected species or whatever. Suddenly the ocean gets to be a very crowded place for our commercial fishermen trying to make a living.

Anyway, with all of these issues and particularly our focus on aquaculture, there was consensus that we should move ahead. We've going to form a committee made up of state and federal experts from different camps or whatever; to start looking and better defining this issue, its relationship to the Commission.

I volunteered my two new staff I have; because our Governor has committed ten million dollars to just shellfish aquaculture in the last year. We were fortunate to get staff; so I've got some people that we want to put on this to better define how we move forward on this. We will have this committee.

Actually, we're not sure if it's a new committee or a resurrection of a previous committee. But we will have a group looking at this and then reporting back to us; hopefully initially at the annual meeting on suggestions on how we move forward. That is that. Are there any questions on that? Craig.

SENATOR CRAIG A. MINER: More of a comment I guess. In Connecticut aquaculture is predominantly done, at least shellfish, through the Department of Agriculture. I don't know how you imagine communication occurring; if it's just with our Agency of DEEP, it wouldn't necessarily give the Commission the whole story. Have you thought about that?

CHAIRMAN GILMORE: I'm not sure how many states are like that. I know we were having the same problem with whelk; and now Agriculture gave DEEP whelk in Connecticut. Now we can start talking about whelk. That's a good point, Craig. I'm not sure; we probably maybe have to broaden that once we get an idea of how many states actually have it in their Agricultural Department.

But one thing, just in terms of Connecticut that makes this complicated, and Louis had brought this up is that some of these things, in terms of harvest or whatever involve federal permits from the Army Corp. We have an issue in Oyster Bay that is the different standards for Oyster Bay versus when we look at Connecticut and we can see your dredges working; that don't have the same restrictions that we have in New York. There is a lot of inconsistency across the board we're going to have to look into. It's a good point. Eric.

MR. REID: I really appreciate the fact that the Commission is going to take up this issue. Being in the commercial fishing industry, we're suffering not quite the death by a thousand cuts, but we're getting close. It is a concern to us; because the ocean is a lot smaller than you would think it is. I appreciate the Commission

either reactivating or activating whatever it is. But it's good to see that effort.

CHAIRMAN GILMORE: Other questions, comments? Seeing none; we'll move on to our next topic was ecosystem reports. Toni is going to give us a little update on that. Essentially the Councils put together, these ecosystem reports are pretty useful and we want to maybe partner with them on it. Toni.

MS. TONI KERNS: Actually, I spoke with Jon Hare the other day; after following up from our meeting. We're going to work together to either develop an ecosystem report for just the Commission; or blend some Commission species into the current reports that the Northeast Fisheries Science Center is already doing for the Mid-Atlantic; as well as the Gulf of Maine and New England areas.

The South Atlantic Fisheries Science Center is I think in the process of starting to put together reports for the South Atlantic Council. We'll work with them to see if we can also get some Commission species into those reports. Jon said that he would help us with that as well; so we appreciate that a lot.

CHAIRMAN GILMORE: Are there any comments or questions for Toni? Wow, we're going to be out of here at eight thirty. The next topic was MRIP. Mike Cahall came in. There is a white paper that was put together. As most of you are probably aware that we took over. We had APAIS and it's been working very well.

Mike presented a series of graphs and charts; and actually we've exceeded improvements. I think they were looking for a 10-15 percent improvement; a lot of them are over 20 percent, which was indicative that the states are running the program. The data is getting much better. I think those interactions with the fishing community and people that understand the fishery works a lot better than having contractors.

There is essentially the NOAA Fisheries is interested in us taking over other parts of that survey. Mike has been looking into that aspect; and reported back that he's going to be pursuing that more diligently now, since it seems to make sense. There are three other aspects of the program that he is looking into. We'll be continuing to work on it.

I believe and if I recall, I guess we would be shooting for some time in 2020; where we would maybe take on these new efforts. But there will be updates on the details of that. What it means obviously the Feds have said that they would pay for the additional cost that would be transferred to the states.

There are a whole lot of administrative and funding issues that we would have to look at. But the general message was that if it is working under APAIS that we should maybe take on some other aspects of this; to improve the data, and just get MRIP to be a better predictive tool for our recreational fisheries. That was sort of an update and to be continued; and we'll be getting updates in the next couple of meetings. Are there any questions on that? Okay seeing none; our next item was, oh we're going to go into the last thing we had was actually went into a closed door session we had under the whale law suit.

Bob had given us an update on that; which is only procedural things. Other than that that was pretty much the end of the Executive Committee meeting. Any questions on anything I brought up during the Executive Committee meeting? Seeing none; we're going to go into the one item I added in, which was Strategic Planning.

We currently are at the point where we are supposed to be doing a new Strategic Plan. We talked about this a few months ago. But because of a lot of the things going on at the Commission right now, a lot of times the Strategic Plans, we go through a workshop exercise and produce a document. Then put a

lot of effort to it and then nobody kind of looks at it any more.

There are so many issues going on, we decided that we would have a discussion among the leadership; and talk about maybe what is the best effort to be doing right now, in terms of the next few years. We had a meeting up in Burnt Island, Maine. Bob will give us the details; because he took notes, thank God. The rest of us were eating lobsters and drinking, no. Actually, you know what, in some respects when we got there and our planes were all screwed up.

We got there late at night. I think we stayed up until probably eleven o'clock that night without any agenda. I think it was probably one of the best meetings I've had at the Commission; because you got to think and brainstorm without really a lot of noise around you. We kind of fed off each other; which I thought was very helpful. Pat graciously offered Burnt Island for us to meet; a nice perfect location that was away from all the noise except for the fog horn. Bob.

EXECUTIVE DIRECTOR BEAL: I was going to say the same thing. If Pat Keliher invites you to an island off of Maine in the summer, you should probably take him up on it. If he offers to bring lobster, you should really take him up on it. It was a good spot. The group that got together was me and Jim Gilmore and Pat as the current Chair; then we had previous Chairs, Doug Grout, Robert Boyles, and David Borden.

The six of us got together for about a day and a half and just tried to figure out where the Commission could and should go in the future. At the previous Strategic Planning conversation that the Commission had, there seemed to be two levels of conversation going on. One is the very mechanical. We've got a Strategic Plan that expires at the end of this calendar year; and we need to figure out what to do about that.

Then the next level was kind of the more philosophical, higher level thinking of how do we make the Commission function better? How do we get the states to cooperate as efficiently and as effectively as they can? I mean are we comfortable with where the Commission is going and how it's operating right now? Really we took a lot more time talking about the latter; the kind of higher level, how do we get the Commission functioning like the well-oiled machine that it can be, and it is obviously a very effective organization. How do we capitalize on 15 states coming together? Really the first thing that we agreed to is that the premise or the principal for all of our conversation is that the states are better off working together than individually. Going into it with the mindset that bringing this group together is better than trying to have 15 states individually manage 27 species of fish.

All the conversations stem from that. There were a lot of different levels. But one of the things that we talked about is driving forces. What are we reacting to right now? Climate change came up, or changing ocean conditions I guess is what we're supposed to call it. Changing ocean conditions came up quite a bit.

That seems to be one of the underpinnings of everything that is happening around here. Fish are being distributed differently, productivity is changing, animals are in different places, and that obviously sparks the need and the interest for reallocation. Reallocation is a tough issue. Reallocation strains the cooperation between states.

Strained cooperation between states means sometimes we knock on the door of the Secretary of Commerce and ask for his help. You know all those things are just interrelated. Climate change, allocation, cooperation, Secretarial interactions, those seem to be collectively. When you put those four issues together it seems to be collectively the main issues that we need to tackle as a group of 15 states.

Again, that seems to be the driving force and it seems to be what we need to address in order to have this group continue to function as a strong organization. One of the things that came up quite a bit was prioritization. The Commission, we have obviously the Five Year Strategic Plan, we do a very detailed One Year Action Plan, but in the middle we don't do much.

There is this two to three year planning horizon where there is not much going on. We don't have kind of a rolling one year or a two year prioritization and work schedule. The group agreed that we need this sort of mid-term two to three year planning is what we need to focus on. Putting together a 25 page action plan each year with all the details of that sort of play-by-play things that the Commission is going to do, probably isn't the most effective tool.

A lot of thing in that large action plan are things that we have to do every year; they are mechanical. Deke and I are going to go to Capitol Hill and do outreach on Capitol Hill. Laura is going to manage grants. Mike Cahall is going to manage data. But the things we need to focus on are, what are the new projects and what are the priorities moving forward?

Part of that discussion was you know there are some species that we deal with that maybe we can let them ride for a little bit. We need to refocus the energy of the Commission on the high priority issues; the high profile things, the difficult questions. Sometimes we try to tackle every problem simultaneously across 27 species of fish. I don't think we can do that.

I think it strains sort of every level of the Commission. It strains the staff to write the documents, it strains the scientists to support the documents, and it strains frankly the folks around this table. You guys only have so much time and so much bandwidth that you can put into the Commission. If you're trying to tackle high priority, medium priority, and low priority all at the same time, it gets pretty difficult.

Those are some of the big issues we talked about are reprioritizing those. The other thing that is related to that was improving our working relationship with the three councils and NOAA Fisheries. There is obviously, as fish are moving differently, and this goes back to climate change somewhat.

As fish are moving differently, the portfolio of activities at ASMFC, and the three east coast councils, and NOAA Fisheries seems to need to change a little bit. There are times when we're cooperating and tripping over each other. We don't have time to do our jobs; let alone duplicate effort at one of the councils.

We need to focus on that; and the idea is bringing the leadership of the Commission, some leadership from the Regions and NOAA Fisheries, as well as Headquarters, and the three councils all together and start talking about this distribution of work between all of us. We'll try to get that going; maybe through the NRCC, and bringing the southern states or the South Atlantic Council to an NRCC meeting and start talking about that division of labor.

Predictability, stability, it came up quite a bit as something that we want to work on. Orientation of new commissioners came up a lot. Can we do a better job of that? A lot of times there are new folks that pop up at our meetings on a fairly regular basis; and it seems to be at an increasing rate. How can we do that a little bit better?

I think we've done a good job of sort of mechanically getting new Commissioners up to speed on what hotel they need to go to and how they fill out a travel form. But we may not be doing as good a job as we can; about how do we kind of get those folks immersed in the Commission culture, and develop friendships, and working partnerships with other states, and the leadership of the Commission? That orientation indoctrination issue came up quite a bit.

After we had all these discussions, and I haven't finalized the notes they're still in working form. But the outcome, I think at the end of the day and a half meeting was that there is room for improvement; and we'll pull together all these ideas in a functioning document. It's not functioning yet; it's just my random notes.

Ultimately I think what we decided was a workshop of some sort at the annual meeting in New York to bring everyone together, to highlight and give some more detail of the conversations that we had, and really highlight some of the action items that we came up with on Burnt Island. Get the input from the rest of you and make sure where the six of us thought we might be able to go makes sense for the rest of the group.

We'll put aside a couple hours at the annual meeting to talk strategic planning. We may not have a new Strategic Plan on January 1, 2019. But we'll figure out a way to bridge that gap. We'll get an action plan that focuses on one year; but incorporates two to three year timeline. We'll bring that to the annual meeting as well.

I think that is the next step is to put these notes in a functional form, get them to you guys, and get everybody together and start talking about where the Commission goes collectively as a group of 15 states with our federal partners. That is my quick summary; maybe not that quick. But that is my summary of what we did. You know the other folks that were here can chime in if they would like to.

CHAIRMAN GILMORE: That was perfect, Bob. I think that covered it pretty well. Other than to emphasize that the last, I've been here a little over 10 years now, maybe 11, and in that time I think prior to my coming in 2007 and '08, the Commission turnover was pretty low. Then I think in the last few years in particular, we've got some folks that have been around a long time, but more often than not we've gotten new folks.

Kind of like that core of maybe what made the Commission function more efficiently in the past; I think we want to tap into. Plus, with the new folks and the new Commissioners in the room there are new ideas we want to tap into. Again, following that theme of on Burnt Island, I think if we can get a workshop together and not have distractions for a couple hours. I think we can come up with even some better ideas as we move forward.

I'll leave it up to the other folks that were at the meeting. We did have to take Robert Boyles' cell phone away; because he's been Googling all those great expressions, well you know. Hanging together or we'll hang alone. That's very helpful, it's great though. Other comments, or if any of the other members that were at Burnt Island want to chime in and make some comments; please do, if there are questions or comments about how we're going to proceed. John Clark.

MR. JOHN CLARK: Those sound like great ideas. I feel the same way about the Five Year Plan. Every time it comes up it's like, oh that's right there is a five year plan. I'm just curious when you say a two to three year plan coming off of one year. What is the difference here? Can you give a little more detail of what you're thinking on that Bob?

EXECUTIVE DIRECTOR BEAL: Yes John, I think the group felt that two to three year kind of rolling plan would be a lot more effective and a lot more informative to the Commissioners; rather than this document that we only look at once every five years. Then it gets dusty. It would be a document that – we haven't really mapped it out – but I envision something with a lot of detail in Year 1.

In Year 2 and 3 it maps out some of the longer term projects such as stock assessments and amendments and longer term addenda that we're going to work on. I think hopefully it's a helpful tool that says maybe we need to do something on species X. But that's going to

have to wait until Year 2 or Year 3 to tackle that. It's not as high priority as sorting out black sea bass; as Adam Nowalsky was talking about yesterday.

We've got a mess on our hands there; and we need to put a lot of horsepower into that to figure it out. Maybe things that are lower priority and longer term issues, they get displaced a little bit while we work on the high priority issues. I think we still have to have, or it's still valuable to put down some of the driving forces and other things. But I think we really want to focus on mapping out our workload over the next two to three years.

CHAIRMAN GILMORE: Other questions? Bob Ballou.

MR. ROBERT BALLOU: I just want to throw out the thought about the application of strategic planning at the Board level; and black sea bass is a perfect case in point. I think we emerged from yesterday's Board meeting with three working groups; one to continue, two new ones. I mean we're doing everything we can to try to get our arms around the vast arrays of issues.

There are quite a number associated with black sea bass; which as Board Chair makes me feel compelled to try to get those organized in some sort of strategic plan for just that species, and of course that Board deals with three species. I'm not aware that that is really a part of our process; that we do strategic planning at the Board level.

While I totally recognize and appreciate the importance of doing it at the higher level, I think part of the discussion should be to think about how we could sort of institutionalize it at the Board level; because I think it could really help. We spin so many issues up; and then we only have an hour and a half to address them all. Inevitably we don't get to them all; and inevitably some fall off. Then people say didn't

we already decide to do that; and where is that?

I just want to throw that out as a suggestion. It may not be as applicable for every board; but certainly for the board that I'm currently working on. Boy do we need organization and guiding principles to kind of move us through the next two to four years; as it may be, to try to fix some of the major problems we're facing in those fisheries. I just wanted to throw that out as something that relates; but didn't sound like it was in the mix of discussion. But I think it might be an element worth pursuing.

CHAIRMAN GILMORE: Great point. I think that's right on the money. I think that will help out in our discussion when we move this forward. You did a great job yesterday; by the way. I was sitting there. It's exactly that point is kind of stepping back and looking at how we're managing stuff; instead of just following what we've done in the past is really where we need to get to.

Are there other questions? Okay, so we'll get that together for the annual meeting; and hopefully we'll have a more robust discussion at that point.

REVIEW OF THE ANNUAL PERFORMANCE OF THE STOCKS

CHAIRMAN GILMORE: Are there other questions? Okay, so we'll get that together for the annual meeting; and hopefully we'll have a more robust discussion at that point. Okay, next item is the Review of Annual Performance of Stocks; and Toni is going to lead us through that. Toni.

MS. KERNS: As a reminder, this is a part of our Five Year Strategic Plan. We do get reminded of our Strategic Plan every year when I go over the Annual Performance of the Stock; slightly. This was initiated back in 2009; and several of the tasks that we developed for our One Year Action Plan come from this Review of the

Annual Performance of the Stock, or in theory would come from this Review of the Annual Performance of the Stock.

We want to validate the status of each of our species; as well as look at the rate of progress that the boards are making in rebuilding these important fisheries. If the Policy Board is not satisfied with the speed at which some of these stocks are rebuilding, then is there any additional corrective action that this Board could make in recommendations to the individual species board? That leads to input in the 2019 Action Planning process; which may be a little different, as we just heard, for next year.

But it doesn't mean that this can't lead to advice into whatever process that we use; as well as I said before, feedback to those species management boards. We have five categories for species; the rebuilt and sustainable, recovering and rebuilding, species of concern, depleted species, and species that are unknown. I'm going to get more into the species of concern, depleted, and unknown.

The list for species that are rebuilt and sustainable or recovering and rebuilding, have not changed from last year. These have all stayed status quo. Well, this is all based on information that we had prior to the Board meeting. As we did hear from the assessment from Atlantic herring, I would suggest it probably would move to a species of concern.

While it is not overfished and overfishing is not occurring; as the base of the current assessment, if we added one more year of data we would probably have overfishing occurring, and be overfished, Megan or just overfished? That's all right, sorry. I put you on the spot there. For species of concern we have coastal sharks, horseshoe crab, summer flounder and winter flounder.

For two of these species, horseshoe crab and summer flounder, we'll be having assessments in the upcoming year; so there is not much

information that has really changed, in terms of the science and the recommendations that the TC has made. I'm not going to go into details on those; and coastal sharks have such a large number of species and species complexes.

I'm not going to go into each of those individual species. But the Coastal Sharks Board yesterday did initiate a management action; to help the Board respond to some of the changes in a quicker fashion, when it's looking at management changes that HMS has either promulgated through emergency action, or already done through federal rule making, in order to close loopholes in state waters more quickly.

For winter flounder, the first addendum in 2009, Addendum I, reduced both the recreational and commercial harvest by 11 and 31 percent. Then following in 2011, for the stock status NOAA Fisheries increased the 2012 state water subcomponent to 272 metric tons; based on the overfishing status.

This was an expansion of the rebuilding timeframe; which allowed that change to occur. The Commission's Winter Flounder Board in 2012 increased the maximum possession limit for non-federally permitted commercial vessels, from 250 to 500 pounds. Then in 2017, NOAA Fisheries reduced the states waters subcomponent to 67 metric tons; and reduced the total stock wide annual catch limit to 428 metric tons.

The Commission's Board has maintained its trip limits in the Gulf of Maine winter flounder since 2012. This is one of the stocks that the Commission has expressed concerns to the New England Council. While we have some fairly restrictive measures in this fishery; we haven't seen much change in the rebuilding of this species.

We're just concerned; because we are just not really sure why that rebuilding is not occurring, and it's something that we've had some

conversations with the Council about, and hope to move those forward. For depleted species we have American eel, the southern New England American lobster, American shad, Atlantic sturgeon, northern shrimp, river herring, tautog, weakfish, and winter flounder. The only change is that sturgeon moved from unknown into depleted; with the results of the stock assessment last year. For southern New England lobster there is not a lot of changes; in terms of the status of the stock since the 2013 assessment.

I won't go over those again. The Technical Committee had advised to use output controls. The Board continues to use input controls. The TC had recommended some extreme reductions in harvest; but the Board approved a 10 percent reduction. The Board did approve additional reporting. It's going to move to 100 percent reporting over a five-year timeframe; which is something that the TC had been recommending to the Board for a while.

For river herring, while the Commission has in place sustainable fishery management plans for in-river harvest, the TC has also made recommendations to address bycatch in ocean fisheries. Both the New England Fishery Management Council and the Mid-Atlantic Council have addressed bycatch in federal waters through catch caps.

Some of the states have not addressed bycatch in their states ocean waters. For northern shrimp, we have seen some all-time lows in total biomass since roughly 2012 in the northern shrimp fishery. There has been a moratorium in place since 2015. The Section has continued to do that over time; following the advice of the Technical Committee.

This is another species where we're not seeing significant changes in rebuilding; even though we've made some drastic changes to the fishery, and not having one at all. For tautog, the 2016 stock assessment indicated that the Long Island Sound and the New Jersey/New

York Bight regions were experiencing overfishing.

Then the Long Island Sound, New Jersey/New York Bight and the Delmarva Regions are overfished. The assessment proposed new reference points for each region; and management programs in which the Board adopted through Amendment 1. The one difference was that the Board approved a lower harvest reduction for Long Island Sound; 23.3 percent versus 47 percent that was recommended by the Technical Committee.

While I have everyone's attention on tautog, I've gotten a lot of questions about the tagging program that is a part of Amendment 1. Caitlin and myself have been trying to work together with the tagging company to get the applicator for tags; as well as the tags, so that both products are easy to use on the water. We're having some difficulty with that company.

There is only one company so far really that we have found that the tags are non-tamperable, and can hold all the information that we need. We are going to continue to do that; but I don't believe we are going to be able to implement that program for 2019 at this point, based on not having a prototype that seems feasible to Caitlin and I, as well as the timeframe in which states would need to implement a mandatory tagging program at this point.

We're hoping that we can get a better prototype; so that states can have their fishermen at least do some trials in 2019, and then have that program be a requirement for 2020. If we can't get the company to make an applicator, and it's really the applicator that is the problem right now, if we can't get the company to make an applicator, we're going to try to source an applicator from a metal smith in some other way, as soon as I track a metal smith down. If anybody knows any let me know. Moving on, winter flounder in the southern New England, Mid-Atlantic area, the stock is at 18 percent of the SSB target. It has

remained low and declining since the early 2000s.

Recruitment has been declining since the early '80s. It was at an all-time low in 2013; and there was an ever so small slight increase in recruitment in recent years. Following the TC advice, the Board maintained a 50 pound trip limit for non-federally permitted commercial vessels. In 2018, NOAA set the state water subcomponent at 73 metric tons; which was a slight increase from the 70 metric tons in 2017.

The total stock-wide-annual-catch limit was reduced to 700 metric tons from 749. This is another species that we are working with the New England Council on; and hope to make some progress with them. For unknown species, there is the Atlantic croaker, Jonah crab, spot, and spotted sea trout.

For Jonah crab, the landings have continued to increase in a rapid rate since the early 2000s. The landings were at 17.25 million pounds in 2017. The status of this resource is still unknown; and there is not enough information to conduct a coastwide stock assessment at this point. We still need to get age information.

There are some states that are conducting age-at-maturity studies to help with this. We also need to get additional information on the extended motivation of their migration patterns; and have research on the recruitment of juvenile Jonah crabs, as well as get size distribution, sex composition for Jonah crabs, in order to conduct the assessment.

Included in that lobster mandatory harvester reporting requirement, Jonah crab will be a part of that. We will get some additional information from all states in that five year timeframe; when that addendum comes into play. After this meeting the Board will hear some new information on Atlantic croaker and spot; in terms of how to get better information on this species for status of the resource using the traffic light analysis.

The TC is going to recommend that we use this new version of the traffic light; which looks at age and regional distributions. It will be their recommendation to utilize those; and do some management changes, because some of the triggers under the new traffic light will get tripped for both of those species.

We'll see how the South Atlantic Board responds to the TCs advice for those two species. Again, from this is there any direction or feedback that is necessary of needed to go to individual species management boards; and is there anything that this Board would like to direct for planning in 2019?

CHAIRMAN GILMORE: Questions, comments, directions? We put this on the agenda too early; no one is awake yet. Roy Miller.

MR. ROY W. MILLER: Thank you Toni for that briefing. Do we have any special emphasis on depleted species? You know we continue to list southern New England winter flounder, weakfish, and southern New England lobster as depleted species. American eel is another one; still listed as a depleted species year after year after year. The public sees this; and the optics of it is frankly not favorable for us. What can we do to emphasize work on depleted species; and what are we doing? I'm curious.

MS. KERNS: It's what each of the management boards, how they respond to the TCs advice on these depleted species. At times I understand that some of the advice is not necessarily fishing related. It may be something else for shad and river herring, eel. It may be looking at habitat recommendations; in order to improve passage, those types of things.

But it is up to the Board to either put the emphasis on those species or not. In some cases there is some emphasis; in other cases I think that there is less emphasis, and the priority goes to other species. It's the direction from either this Board to those individual species boards to do more work on those

species; or up to the individual species boards as well.

But this is the kind of feedback that we would be seeking here; in order to drive the action plan for next year, or specific directives back to those individual species board. My other question back would be to you all. Roy was the only person that had his hand up before. Every year we go through this action of going over the annual performance of the stocks; but there is usually not much direction. I'm trying to determine whether or not if this is a useful activity for this Board or not.

CHAIRMAN GILMORE: Go ahead Roy, follow up.

MR. MILLER: Quick follow up. I think the public would benefit from an explanation. I know we have our annual status of the stock reports. I think the public can understand that there are certain things that are beyond our control; like climate change which has already been discussed. But if we were to emphasize in our stock reports for these depleted species, what we think the drivers are, what is within our control and what is not within our control. I think it would be helpful for the general public to gauge how we're doing as a Commission.

CHAIRMAN GILMORE: Yes, I like that idea, Roy. I know under Magnuson, some of the suggestions to get rid of overfished or depleted; but then how much of that is under our control? I think that is probably a good idea to start listing the things that maybe we'll have a chance of improving; given the circumstances. Ritchie White.

MR. G. RITCHIE WHITE: That is what I was going to add to what Roy was initially saying; that for the public I think it's really important to show the species that there is nothing left for us to do. I mean we can't affect a comeback and have those listed separately from ones that we are working on; and that we do have some ability to make some changes.

CHAIRMAN GILMORE: Go ahead.

MR. DOUGLAS E. GROUT: I had a similar point; because I look at some of these species. The Board on some of these species has been very active. Southern New England lobster, since we got this overfished, we've spent a lot of time trying to address that. We put in a number of management actions; whether it's going to be effective or not that is the question.

You know because of the impact of climate change. There has been a lot, even though shad and river herring, we have put through major amendments. But there is a lot of work going on up and down the coast to try and improve the habitat; and the availability of habitat. The Council has put in actions to try and reduce, or at least cap the amount of bycatch that's going on.

There is a lot of work that's going on. Some of them you're right. Southern New England winter flounder, we've been kind of sitting there. But that's because it seems that the Council is the driving factor on this; even though we do have our own management plan that addresses things in state waters.

I know some of the reviews here talk about some of the actions that we've been working on. They've had a brief description in there; but maybe this whole concept of species that we have definitive information that climate change is affecting their abundance levels. Maybe we need to have something like that in there for the public to realize that some species like northern shrimp, there is not much we can do other than to put a moratorium on there.

CHAIRMAN GILMORE: Dan.

MR. DANIEL MCKIERNAN: I think one of the problems comes from the term depleted. If I haven't done my laundry in a week, my sock draw is depleted. I think the implication of a stock that is depleted is that it's been overused

or extracted to a very large extent. We always struggle with that. But to Roy's point.

I think it would be useful when ASMFC publishes some kind of a report that depicts a stock in not so healthy condition; that they could include links to things that the individual states and the Commission are doing. For example, in the case of eels, there is a lot going on with enhancing eel passage. You know Maine is taking down dams, and in Massachusetts we're putting up eel ladders. I think Roy brings up a good point. Try to get some highlights of the little things that are going on collectively by the states.

CHAIRMAN GILMORE: Eric.

MR. REID: There is something in state waters that's we don't ever, we want to talk about it but we never talk about it; because we can't, and that's seals. You know when you come to something like flounders. I mean they're depleted because the seals are eating the damn things. We need to have some conversation at some point what the effect of that population is on fish stocks in general.

We just don't seem to be able to have it. When you talk about cod you should talk about seals. When you talk about anything that is in state waters you should talk about seals. I would like to see that in the mix too. What is the effect of that population?

CHAIRMAN GILMORE: Yes, seals and cormorants. I told my council that the day I have to give out depuration permits on seals, I think I'm quitting, because I don't want to be around for that feedback. Tom.

MR. FOTE: Yes, we can blame seals for a lot of things. But a lot of what is affecting the stocks like winter flounder are not seals but other environmental things that we've been doing. One of the reasons we started a Habitat Committee in '93, was to look at this; and then

we ran into the brick wall, because we don't control what other agencies do.

You look at what some of these stocks; it always makes me sad when I look at weakfish. I mean the last Atlantic Coast Conservation Act came about because now Senator Carper, but then Congressman Carper wanted to put a bill in on weakfish to bring it back. I thought we did everything we should to bring it back; but look at the stocks now. They are in worse shape than when we started building the plan; and it is not fault of our plan, it is things that we can't control.

But there is a lot of man-made factors that are affecting what stocks are doing; especially in the inshore stocks. If we look at winter flounder, we look at weakfish, we look at any of the estuarine-dependent species; and you look at the change of sewer plants from the '70s on. The Clean Water Act, when we changed how we handled sewer and started putting chemicals into the environment that weren't there before; because they bind to the chemicals.

We need to basically point that out. But we don't have any control over it. There is nothing we can do as an agency; and that's always where the problem ran. We would make comments. Even the National Marine Fisheries Service makes suggestions; but then it's BOEM or somebody else that makes the decisions or the Army Corps of Engineers as we found out over the years. There are real concerns of how we do that.

CHAIRMAN GILMORE: Other questions? I'll go to the audience in a second, Arnold. When you said seals, Eric, we were at the State Directors meeting in South Carolina. We had this problem, and I thought how difficult it is with these things eating our species we're trying to manage. Then Oregon, if you haven't heard, has that unique thing where they have the endangered seal eating the endangered salmon.

It was almost funny that they said well, did you ever think of moving the seals out? They said yes, we put them in trucks; we drive them to the coast. They are so in tune to this, they beat the truck back to the place where they were eating all the salmon again. I said well there you go; we don't have it that bad at least, we don't have endangered species eating other ones. Are there any comments on the Board before I go to a hand from the audience? Okay, Toni.

MS. KERNS: I'm still going to pose my question back to the Board. Is this a useful exercise every year for you all? Is there any advice or recommendations that you want us to utilize; in order to drive the action plan for next year, or advice back to the species board? We have the one page status of the stock sheets that we already do.

Then we do this in addition to those. I'm just trying to figure out what is the best way to get information to this Board; and then get feedback to the species boards or to staff for doing the annual reviews. There doesn't seem to be much advice back for either of those things coming out of this discussion. I'm trying to figure out if this is a useful exercise every year or not.

CHAIRMAN GILMORE: Pat.

MR. PATRICK C. KELIHER: Toni, I think it's a very useful exercise; and I think moving forward, if we do go in the direction of this kind of two to three year rolling plan, it becomes even more relevant. I think the comments made here today in regards to these species that cannot be helped in a separate section or column for those species is going to be critical; and I think the depleted comments by Dan are on point.

I am surprised that Dan does his own laundry though. But other than that I also see it more broadly than just this Board. I think I get more comments about this list from the public than I do individual boards. I think from a public perception, you know the outward facing

transparency of the Commission is important. I think that is really where this list comes to play.

CHAIRMAN GILMORE: Steve.

MR. STEVEN W. MURPHY: Yes, I concur. I think this is very useful. I think we're from North Carolina's perspective, where I think we were getting hung up is in the terminology; and the terminology was confusing to the public, and so we did away with it. Our stock overview for this year that I'm going to present to our state commission next week, will just be specific to the fishery management terms.

Is it overfished? Is overfishing occurring? Then if we do have concerns what are those? If we have unknowns, what are those? I think often we get trapped on our own terminology; trying to be helpful. For example, with herring going from rebuilt sustainable. Then it kind of skips recovering and goes right to concern. From a public perception standpoint there, everybody would be like oh my God, what happened, you skipped one? I think it's very helpful. I think the narrative is extremely helpful for us as a state.

CHAIRMAN GILMORE: Emerson.

MR. EMERSON C. HASBROUCK: Yes, I find this to be helpful; and would suggest that we continue with it. It condenses all this information into one place for us and for the public; and it brings this information in front of us every year, so that we can have a discussion like this, and as well as keeping this information in mind when we go back to the work of our individual boards.

CHAIRMAN GILMORE: Doug. I had Adam first.

MR. ADAM NOWALSKY: I would defer to a past Chairman.

MR. GROUT: I will be glad to defer to the distinguished Commissioner from New Jersey; and I'll take second seat here.

MR. NOWALSKY: Well, I want to get home today so I'll continue with my comments. I agree that this is useful. I think the comments we've heard around the table about perhaps there are some concerns about the information we're presenting to the public; and how it's perceived may be relevant.

I recall when we went through the process of providing the definitions for the five status that we offer; came to the conclusion that depleted was a better use for overfished, where we were using a term previously. We came up with the definition of reflects low levels of abundance though it is unclear whether fishing mortality is the primary cause.

Well I think we can all conclude that for a number of these species under depleted at this point, weakfish, winter flounder, southern New England, northern shrimp. Fishing mortality is definitely not the primary cause at this point. I don't know whether we can just modify that definition we've had; whether it's time for a sixth definition here. Whether we find some way to add that discussion to the individual species sheets; where we're clearly identifying that.

But if there is this concern about the public perception of depleted; and the public believing that it may be due to us not doing our jobs due to fishing mortality. We would use this tool to find a way to clearly define that for those species we know, fishing mortality is not the primary cause, let's put that front and center.

CHAIRMAN GILMORE: Doug.

MR. GROUT: The distinguished Commissioner from New Jersey stole my thunder. But I agree with him totally. I know we struggle. We work very hard to come up with some definitions to replace overfished and overfishing; to try and get the public perception that it was in some cases that we weren't doing our job, to depleted and depleted clearly reflects, at least according to our definition that we worked very

hard on that it may not necessarily be something related to fishing mortality.

There are a number of species where that applies. Now maybe, as Adam suggested as well as Dan. You know maybe there needs to be some kind of a split out; where if we know the cause is overfishing, then we need to put those species in one category, and then the ones that are impacted by changing ocean conditions into a depleted category.

CHAIRMAN GILMORE: Bob.

EXECUTIVE DIRECTOR BEAL: The other thought is that the species that are on the rebuilt/sustainable is kind of the good news list. It almost implies there is nothing to do; or we're in good shape, we can let them ride. Reflecting back on our conversation in Maine, there is a lot of work to be done on some of those species.

You know Pat Keliher and I were running around Capitol Hill trying to find money for Gulf of Maine/Georges Bank lobster to do research; to stay ahead of climate change issues, and make sure they don't get into the northern shrimp category, where there is nothing else we can do, or the southern New England lobster category. You know black sea bass as I mentioned earlier. It's on the good news list; because the stock is in good shape. It doesn't mean there is not a lot of work that the Commission and Council have to do to fix those species. I think highlighting the challenges; even though there are a lot of them, doesn't mean we can just sort of sit on our hands and let those kind of cruise for a while there. There is a lot of work to be done on some of those.

As Toni said, this has been going on since 2009. We've been providing this report; and it was really focused on biology. Are there enough animals in the ocean of each species? I think we've kind of evolved since then; and there are some other pieces that we can probably include in this presentation. Help the public understand that just because there is a lot of

them doesn't mean there is nothing we need to do; and just because there are none of them doesn't mean there is a lot we can do. Just to describe where they are a little bit better; but just another thought.

CHAIRMAN GILMORE: Good points there everyone. Since a few have mentioned that you only hear from the public, why don't we take a public comment, Arnold Leo?

MR. ARNOLD LEO: I am Arnold Leo; I represent the fishing industry of the town of East Hampton, Long Island. Well, first I should say I have always found this summary very useful, Toni, and hope that it continues to be available. The first comment for Toni, I'm not sure if you've ever tried to manually, physically handle tautog; but they are an extremely powerful fish, and very, very difficult to handle.

When I was pound trap fishing, we always did everything we could to avoid having to actually put our hands on them. We usually moved them around with a dip net. I just think that any tagging program for them is going to run up against that difficulty of actually handling them to put a tag into them, you know. I just mention that for the record.

But the concern I have is that with the recalibrated landings data. It seems to me that it may affect some of these categorizations here. For example, striped bass actually is at 150 percent of its rebuild goal; has certain triggers that are sort of right on the edge. With a recalibrated biomass that may indeed show that it's in much better shape than believed. Is that being taken into account?

MS. KERNS: Arnold, for each of these species we will do assessments with the updated MRIP information; the calibrated data. When we do those assessments it will be reflected in this report. But until a stock assessment is done for each individual species, we won't use the new calibrated data.

It will be just a part of our assessment process each species will go through. For species that we don't have reference points that are based on the catch, if there are some then we can start to utilize the calibrated data in the next year's report. But this report mostly just used the un-calibrated information; since it was pulled together before that data were released.

MR. LEO: Thanks, and just finally, as Adam and others have said. I think it would really be useful on the depleted stock to make that further distinction between those species such as weakfish; where no matter how much you curtail fishing effort, it has yet to show any improvement in the biomass. It just seems that that would be very useful to show in this listing those species which are beyond the reach of management efforts.

CHAIRMAN GILMORE: From the sounds of it, it looks like it's a good idea to continue this for all the reasons mentioned; and just also that we periodically then are forced to look at it, because if we don't we're going to forget about them, and then somebody said whatever happened to weakfish or winter flounder, which occasionally shown pulses of improvement. We've gotten some actually good numbers this year on winter flounder on the south shore, which nobody can figure out. Toni, you did a great job on this; and that's what you get as your reward is you get to continue this.

MS. KERNS: Thank you, Mr. Chairman; I have great staff members that help pull this together.

CHAIRMAN GILMORE: Craig.

SENATOR MINER: Of all the species that are on one list or the other, is it possible to have staff make a recommendation as to which one is most likely to fall from a good list to a not-so-good list; and one that we could conceivably move the needle on if we did certain things? I think about this new found resource of federal money; and wonder whether science might help us get somewhere.

Eels for instance, there may be some states that have a population that don't know they have a population; don't have the resources to know whether they have a population. Yet the value of that resource is such that if we did have that information, we might be able to stimulate changes in behavior; where passageways were developed, dams were removed that sort of thing.

I don't have any idea what might trigger those decisions. But I just wonder. Sometimes it's a matter of picking something that we can make a difference on; rather than looking at the totality of some number of species and saying, you know if we put a little bit of focus here and a little bit of focus there we can't demonstrate a significant change. That was my thought. But I do think it is a worthwhile exercise that you're going through now.

MS. KERNS: I don't have an answer for you, Craig; I would have to think about it a little. Maybe for some species we could; and other species we might not be able to figure that out at all.

SENATOR MINER: Well, and that's my point. If there is some that we could then maybe that is where we should focus; not to say that any is less valuable. It's just that there might be an impact.

CHAIRMAN GILMORE: All right, we'll get Toni a crystal ball for her toolbox.

**COORDINATION BETWEEN ASMFC AND THE
NEW ENGLAND FISHERIES MANAGEMENT
COUNCIL**

**CONSIDER CHANGING THE ATLANTIC HERRING
SECTION TO A MANAGEMENT BOARD**

CHAIRMAN GILMORE: All right we've got to move on. Our next topic is coordination between ASMFC and the New England Fisheries Management Council on Atlantic herring. Bob, Pat, and I met several weeks ago with the New

England Council leadership to discuss sea herring management. I think from that meeting we agreed that better communication and coordination on sea herring management was necessary; considering the status of the stock. There was one suggestion that the Herring Section was a Section with ASMFC, and maybe that was not conducive to the improved communication. It was brought up at the Atlantic Herring Section on Tuesday; and Pat was the Chair. Do you want to just do a little background?

MS. KERNS: The motion's up there.

MR. KELIHER: Perfect. As the Chair said there have been a couple conversations actually; a meeting between leadership and the Council, and then it spilled into the, as my staff called it, the jamboree we had on Burnt Island. I don't know where they got that idea, but. We did have a very good conversation at the Section; and there is nothing like a depleted stock to bring everybody together in the spirit of cooperation.

As such a motion was made by Mr. Reid and seconded by myself. I'll read it into the record. Move to recommend the Policy Board to change the Herring Section to a Board, and invite the New England Fisheries Management Council to have one voting seat. This action is conditional on the Council adding an ASMFC seat to their Herring PDT and an ASMFC seat to the Herring Committee; with the understanding it is not the same person. As this was a Section motion it doesn't need a second. But we would open the floor for conversations. Toni.

MS. KERNS: I just want to add one little word in there that it was an ASMFC staff seat to their Herring PDT; and then ASMFC seat to the Herring Committee. There is a small distinction.

CHAIRMAN GILMORE: **Discussion on the motion? Seeing none; is there any objection to the motion? Seeing none; we will adopt that**

and approve that by unanimous consent. The Herring Section is now the Herring Board.
Thanks everyone.

UPDATE ON THE ATLANTIC COASTAL FISH HABITAT PARTNERSHIP

CHAIRMAN GILMORE: Okay, Item 7 is we have an update on the Atlantic Coastal Fish Habitat Partnership; and Lisa Havel is going to give us that update.

DR. LISA HAVEL: I'll be brief; as always. The Steering Committee for ACFHP met in person May 17 through 18 in Savannah, Georgia. We received updates on the Science and Data Initiatives, our Southeast mapping project, our website update, and collaboration with the National Fish Habitat Partnership and other fish habitat partnerships.

We'll give a little bit of information on our Southeast Fish Habitat Mapping Project. This is funded by NOAA; and it covers North Carolina down to Florida. We're spatially prioritizing fish habitat protection and restoration sites. We're using variables in the analysis such as habitat, threats like impervious surface, as well as species diversity for some regions.

This is a JS mapping and analysis; and we're looking at diadromous, estuarine, as well as coastal for south Florida corals. The results of the analysis will be available online; in a website-based tool. We will also have static maps available for each weighted variable that went into each analysis; and provide information on how to access the original datasets.

This will be finalized in the next few weeks; and we have received funding from NOAA to move this project up to the northeast as well, so we'll be covering the entire Atlantic coast. ACFHP is also currently working on updating our website. We've contracted Zing Studios; based on Boulder, Colorado to do this. We're updating all of our content; as well as the layout. We'll

have more information on our priority habitats; as well as our conservation projects. We're also creating a species habitat matrix database. We published a paper on our species habitat matrix back in 2016; and we're now going to have a queryable database that you could modify and download as a CSV file, which you can search and modify by sub-regions, species life stage, as well as habitat.

This year we funded four conservation projects through U.S. Fish and Wildlife National Fish Habitat Action Plan Funding. These are in New York, New Jersey, Maryland, and North Carolina. This is our first time funding conservation projects in New York and New Jersey; and it's also our first year funding for projects.

The first project is a seagrass conservation moorings project in Cockles Harbor, on Shelters Island in New York. Cockles Harbor has the most substantial eel grass extent in any New York harbor; and we'll be working to retrofit traditional chain and black moorings with bungee-like conservation moorings to reduce the impact on the seagrass below.

This will improve eelgrass habitat extent and quality; and will benefit species such as bay scallop, fluke, puffers, alewives, American eel, and striped bass. This is being led by the New York State DEC; the Division of Marine Resources. In New Jersey we helped fund a portion of the Colombia Dam Removal Project.

This will open up 11 miles of river and 9 miles of tributaries for shad and river herring, American eel and sea lamprey. This is part of a larger project to restore Paulinskill, which is New Jersey's third largest tributary to the Delaware River. The dam is the first obstruction to fish migration for Paulinskill.

This project will also improve public safety to reduce flooding; and is being led by the Nature Conservancy. The project we're funding in Maryland will help restore SAV in fresh water

and mesohaline regions. The Maryland DNR will be collecting seeds and distributing three different species of mesohaline and one freshwater species of SAV.

The SAV will filter polluted runoff, provide food for water fowl, provide habitat for blue crabs, juvenile striped bass, and other species, and will help the Chesapeake Bay program reach their goal of 185,000 acres of SAV. Finally, in North Carolina, we're helping to fund an oyster reef restoration project in Back Sound in the Rachel Carson Reserve.

This will restore 0.11 acres of oyster reefs along Carrot Island in Beaufort. They'll be using oyster catcher materials to protect over three acres of salt marsh. In this area the shoreline is eroding at a rate of one to two meters per year; so hoping this will help reduce that erosion rate, and will benefit species such as red and black drum, spotted sea trout, blue crab, black sea bass, flounder and gag grouper. This project is being led by East Carolina University.

I would also like to let you all know that we this week released our FY 2019 funding. You can find it under opportunities, and then funding on our website; and the deadline to apply for projects is September 25. If you need help accessing that announcement, just come and find me at that table over there and I'll point you to it; so that if you have any projects in mind we're happy to take a look at them. I would like to thank you all for your continued operational support; and with that I'll take any questions.

CHAIRMAN GILMORE: Thanks Lisa, questions? Mel.

MR. MEL BELL: If I wanted to learn a little bit about that oyster catcher material, should I just talk to you afterwards? I'm just curious as to what it was.

DR. HAVEL: Yes absolutely. Actually, we had the inventor of it come to our Steering

Committee meeting back in May; so I have a whole PowerPoint presentation on it, happy to share that with you.

CHAIRMAN GILMORE: Thanks Lisa, great report and keep up the great work. As I said Item 8 was a Jay Mac item; so we're going to skip that to the annual meeting.

PROGRESS UPDATE ON BENCHMARK STOCK ASSESSMENTS

CHAIRMAN GILMORE: We're up to Item Number 9; which is a progress update on stock assessments and Jeff Kipp is going to do shad first, and then Kristen is going to do horseshoe crabs. Jeff.

AMERICAN SHAD

MR. JEFF J. KIPP: I'm here to give an update on the progress of the 2019 American shad benchmark stock assessment. Since I think I've given a previous progress report, we've had our data deadline come and go on June 1. We have experienced many delays in the data submissions.

At this point we have the majority of datasets submitted; we are still waiting on a few datasets from some of the agencies. That has led to a little bit of a delay in our milestones for the assessment. Our next milestone is our methods workshop. That was originally scheduled for October; and we're now going to bump that back a little bit into November.

We're currently planning that methods workshop; the timing and location of that workshop in November. That will be our next in-person meeting for the shad assessment; and again that will be tentatively schedule to present that to the Shad and River Herring Management Board at the annual meeting in 2019. I can take any questions on this shad assessment now; if there are any.

CHAIRMAN GILMORE: Justin.

MR. JUSTIN DAVIS: I'm just curious, Jeff. The Methods Workshop, what exactly is that and what sort of topics will that be covering?

MR. KIPP: Actually this is really the first time we're doing a titled methods workshop; and so it's a little bit new take to the assessment process for some species that either have never been assessed or haven't been assessed in a long time. The idea and objective of that workshop is to sit down; take a look at what we have now from the available data, the types of inputs we were able to develop from those available data.

Start generating some ideas and some discussions on what we think the appropriate assessment techniques are for that assessment. Given for shad we're assessing several stocks along the coast with varying degrees of data availability and data types; we think that will be a really useful workshop, to give some clarity as to how we're going to proceed for assessing those different stocks.

CHAIRMAN GILMORE: Other questions. Doug.

MR. GROUT: For the data that you're still waiting on. Are the Directors of the States that you're waiting on data aware that they are still waiting on this data?

MR. KIPP: At this point I don't think we have reached out to the Directors. We've been working with state's TC members to get those resolved; and again at this point we have the majority of the datasets, but there are still some. I think we've at least been in contact with the TC members; and have an idea of what the bottlenecks are there, and what the issues are.

But I just wanted to make that clear that the data did come in quite late for a lot of the datasets; and for those we're still waiting on, it's unclear for some when they'll be available. But we are working with the TC members at this

point; to try and get those all available to the Stock Assessment Subcommittee.

CHAIRMAN GILMORE: John Clark.

MR. CLARK: Jeff, I know some of the stocks such as the Delaware are assessed independently. Is this assessment to look at all these together; or is it just putting all these individual assessments together?

MR. KIPP: It is to look at the coastwide resource; but we do have a stock structure group within the assessment, and right now we are moving forward with a stock structure of mostly by river systems. It will be looking at individual rivers; and treating those as independent stocks.

HORSESHOE CRAB

CHAIRMAN GILMORE: Other questions for Jeff? Okay seeing none; Kristen is going to do horseshoe crabs now. Kristen.

DR. KRISTEN ANSTEAD: I'll actually echo what Jeff said; which is we've also experienced quite a lot of data issues with horseshoe crab, as well as modeling issues. We are also facing a delayed timeline. I'll start with the data issues. We did our landings validation back in November; and coming out of that we noticed very large discrepancies between our ACCSP validated landings, and the compliance reports.

We do expect some wiggle room around terminal years; it wasn't that. It wasn't a thousand crabs here or there; it was sometimes on the order of 30,000 crabs from one state by year, so that our landings were several hundred thousand crabs different when we compared compliance reports to our validated landings.

We reached back out to some individuals. It was clear that this was more than one state; so Heather Konell at ACCSP actually had to do a second landing validation for horseshoe crab. That happened in April and May of this year.

We were scheduled to give you the stock assessment by February next year; and we actually did not have final landings until last month. We had some pretty big data problems for our landings. After that we had similar problems with our biomedical landings; which we also need to assess this stock, as it's one of our TORs. Those are still unresolved as of today. We also had some issues with fishery independent data; sort of what Jeff was saying, some delays, some submissions that had problems that had to be revised.

All of that has sort of delayed our modeling; as we handle these data management and QA/QC issues. We had our second modeling workshop last week actually; and there we also identified some modeling problems. It was clear that the CSA for the Delaware Bay was not fully developed. At that meeting, where we anticipated viewing final runs and coming up with stock status, we were not able to do that.

We did spend some extra time developing that model; and need some more time to move that from its current platform into another modeling language. The positive news coming out of this is I think the CSA is going to be much more developed than it was last time. We're adding biomedical into the CSA; which was not there last time for the Delaware Bay.

We've made bycatch estimates; and we should have a simulation model that we're testing it with, to address some of the peer review comments from last time. The good news is I think this is going to be a really good model. The bad news is it's not fully developed; and we're going to need more time.

We're proposing moving it from presenting it to you all in February of next year to the following meeting. We'll have our peer review around February; and hopefully bring it to you in May. Just an update then from that final product, we will have similar to last time, time series for the regions outside of Delaware Bay. Unfortunately we don't have the level of data we need to run

a model in those regions; to get stock status and reference points at more of a quantitative level.

We will do the time series, ARIMA, and we're exploring some others that will relate indices to catch. In the Delaware Bay like I said; we should have much better CSA models than we had last time, and give us a really nice way to compare it to what's coming out of the ARM model, so positive news there. With that I can take some questions.

CHAIRMAN GILMORE: Ritchie.

MR. WHITE: This actually would be a question for Jim. It seems like there is fairly substantial timely reporting and data availability. I'm wondering if it is something that staff or the Executive Committee, is it worth reviewing these to see if there needs to be any changes? I guess that would be my question. Is it something that should be looked into?

CHAIRMAN GILMORE: Okay, Toni has got an opinion.

MS. KERNS: Well, I don't know about an opinion. I think Ritchie; it's a two-part issue. One has to do with the validation portion. The Coordinating Council talked about this; and we're trying to work through this problem. I think that ACCSP staff and assessment staff and coordinators are doing an excellent job trying to work through this issue; but there is disconnect at times between the state ACCSP coordinator and the TC member, and the information that they are providing to the Commission. I think that there needs to be potentially a little bit more work on the state side on that coordination. ACCSP is doing a great job trying to get that to happen. We have changed some of our processes; in order to try to better coordinate that. But I think back home if folks could help us with that; that would be good.

On the second part there are delays that are happening. At times we are bringing that to

State Directors when science staff says to me; hey this person has gone way beyond their deadline. Then I go and I'll talk to perhaps Jim, or Doug, whoever it is and let them know that is occurring. I don't know if there is some additional steps that we need to do on that level; and that would be say something that we could talk about.

CHAIRMAN GILMORE: Maybe we'll put this on the Executive Committee meeting, and just have an update on it to see, better frame it out a little bit more and discuss it at that point. Yes, Bob.

EXECUTIVE DIRECTOR BEAL: This data issue is confounding; it's difficult. There are a lot of different sources for it. Our science staff, the modeler folks is spending a lot of time chasing down data. You know we've got a lot of talented people; but a lot of their time goes to chasing data versus modeling. That's probably not the most productive use of their time.

Lynn Fegley, I think is in the back there. Lynn Fegley is the Chair of ACCSP Coordinating Council right now; and she is pushing an initiative to, I think she is calling it Data Accountability or something along those lines, to help make sure that the data that is being provided by the states is up to the ACCSP standards.

Then it may reconcile some of the differences between annual compliance reports and the ACCSP output from the database and those sorts of things. There are efforts going on to sort this out. But I think Executive Committee or some other conversation to work through this would be helpful, for sure.

CHAIRMAN GILMORE: Ah, horseshoe crabs and data. John Clark.

MR. CLARK: Thanks for that update, Kristen. Rich Wong showed me some of the work that's been done that he's been doing with the Delaware Bay stock; and it really looks great.

Does pushing this back mean he'll have more time; because I know we've told him to move ahead with getting the help he needs to do the ADMB work on that? He'll have more time to get that work done?

DR. ANSTEAD: That's the goal; to give him more time to fully develop that model, as well as move it into a platform where he can get some error around his point estimates of fishing mortality and population abundance, because especially if that number is slightly different from what is coming out of the ARM. I think it's going to be critical that we have error around that. We need that to bring that to peer review.

It will also give us time to do that simulation testing; which the peer review that's one of the reasons the peer review did not approve either of the models or any of the models last time; was because they hadn't been tested, and we did test the surplus production model, and in fact eliminated it as a possibility for modeling horseshoe crabs. We need that extra time for that as well as developing a reference point to compare the model output.

CHAIRMAN GILMORE: Bob Ballou.

MR. BALLOU: Kristen, can you speak more to the delays associated with the biomedical data; and whether that is also being resolved, or whether that's really sort of snagged?

DR. ANSTEAD: Some of the landings in the biomedical overlapped. ACCSP does not house the biomedical data; with the exception of some New England, because of that double use policy. ACCSP we get the bait landings from them. It's less of a kind of compliance report ACCSP. But we did have some issues with some states putting their biomedical, and with their landings is partially doing that. That was the first level of problems; is can you please separate these out.

The second level was then when we tried to extend that time series; because biomedical does start in 2004, when we started collecting that data more robustly. That would limit any modeling in the Delaware Bay from 2004 on; which is actually quite short for a horseshoe crab life span. We kind of reached out to the biomedical; can you help us reconstruct a few years of data based on your record keeping, because they've kept wonderful records.

At which point we found inconsistencies then between what we had and what they had. We had three data streams, ACCSP, biomedical, and state data. We have not yet resolved that. Fortunately right now, the unresolved state is not in the Delaware Bay. We can continue to model on that in the meantime. It's certainly been an issue for several data streams, and several sources of that discrepancy.

MR. BALLOU: Just a quick follow. I mean I very much appreciate the efforts you guys are going through. It just strikes me as almost hypocritical that we spend so much time complaining about the need for more timely stock assessments; and then once we get into the weeds, we get bogged down with these data issues. You know I think it's really incumbent upon all of us, up and down the chain, to come together, and really up front and early.

Work as hard as we can to support the science needs to get these assessments done. This is almost like a sad commentary on a problem that I realize is multifaceted; and has to do with a lot of different moving pieces, so it doesn't sound like there is one particular direction to point in. But I'm guessing I speak for many when I say we really need to do our jobs as best as we can to support the science; because we keep saying we need better science in a more timely fashion. Then we hear these reports.

CHAIRMAN GILMORE: Okay, any other questions for Kristen? Seeing none; Kristen, Jeff, thanks for your reports.

CHAIRMAN GILMORE: Item Number 10 is under noncompliance findings. Since we do not have one, we don't have an action under that.

ADJOURNMENT

CHAIRMAN GILMORE: That moves us into our last item, Other Business. Is there other business to come before the ISFMP Policy Board? Seeing none; we are adjourned.

(Whereupon the meeting adjourned at 9:50 o'clock a.m. on August 9, 2018)

Northeast Area Monitoring and Assessment Program (NEAMAP) Mission & Goals

Mission: The mission of NEAMAP is to provide a cooperative state/federal program to facilitate the collection, analysis, and dissemination of fishery-independent data in the Northeast area (the Atlantic coast from the Gulf of Maine to Cape Hatteras, NC). Data are collected to support fisheries management and to enhance knowledge of marine fish and invertebrate stocks and the ecosystem. Fishery independent data are provided for use by government agencies, recreational and commercial fisheries, researchers, and others. The intent of the Program is to provide coordination among existing fishery-independent surveys in order to optimize activities and maximize the usefulness of data collected by such surveys.

Goal 1: Collect and analyze fishery-independent data on Northeast-area living marine resources and habitats to support stock assessments and management needs.

Objectives:

1. Conduct routine surveys and special studies, as needed, of regional living marine resources and their environments;
2. Collect data on priority species to support stock assessment and other evaluations;
3. Collect environmental data coincident with living marine resource monitoring activities;
4. Obtain, process, and archive, as appropriate, biological specimens and samples;
5. Identify and monitor essential fish habitat.

Goal 2: Enhance coordination among Northeast-area fishery-independent surveys to; optimize survey operations, explore novel methods and technologies, solve common issues across programs, and maximize the utility of fishery-independent data.

Objectives:

1. Identify gaps in sampling and make recommendations on how to fill them, either through the expansion of existing surveys or the development of new surveys;
2. Develop technical protocols to serve as guidance for NEAMAP surveys and to standardize data collection methods;
3. Establish committees and workgroups, as needed, to address common challenges, enhance coordination among NEAMAP surveys, and ensure that activities are responsive to management needs;
4. Sponsor meetings to cooperatively plan and evaluate activities;
5. Sponsor special workshops and symposia to help evaluate or plan sampling strategies, designs, or methods;
6. Seek and apply to grant opportunities to support technology testing and gear acquisitions of interest to NEAMAP;
7. Foster relationships with stakeholders and use stakeholder expertise to enhance survey design and methods;
8. Continue to build cooperative-collaborative partnerships with the fishing industry.

Goal 3: Promote the use and dissemination of Northeast-area fishery-independent data.

Objectives:

1. Explore options for coordinated data management, including the possibility of creating a single data repository, in order to enhance the accessibility and utility of survey data;
2. Establish data handling and processing protocols for all NEAMAP data;
3. Coordinate data management activities with other existing programs, including common use of codes and formats;
4. Provide biological specimens to cooperating agencies and other investigators upon request, subject to certain limitations (time, space, funding);
5. Maintain partnerships with governmental and non-governmental organizations to improve dissemination and utilization of NEAMAP fishery-independent and ecological data;
6. Inform fisheries research and management agencies, Congress, the fishing industry, non-governmental organizations, and other stakeholders of NEAMAP activities by providing outreach materials, reports, presentations, and/or other means.

Goal 4: Identify and prioritize long- and short-term needs for Northeast-area fishery-independent data program.

Objectives:

1. Maintain and develop new partnerships with government, non-governmental organizations, and industry to increase knowledge relevant data needs for the Northeast region;
2. Conduct annual internal reviews of program activities to ensure that data collected addresses stock assessment and management needs;
3. Develop a 5-year program plan for NEAMAP that makes recommendations on how to expand current or create new surveys to fill gaps in the data requirements for species assessments or management.

Goal 5: Secure funding to support NEAMAP activities.

Objectives:

1. Develop an annual operations plan and annual budget allocation plan consistent with program needs, participant capabilities, and budget and operational constraints;
2. For currently operating surveys, execute a new funding strategy to secure stable funding for the next five years
3. Explore options for funding short-term activities (workshops, symposia) and additional long-term surveys.

Long-Term Benchmark Assessment and Peer Review Schedule (Revised September 2018)

Species	2012	2013	2014	2015	2016	2017		2018	2019	2020	2021
American Eel	ASMFC					Update					
American Shad									ASMFC		
American Lobster				ASMFC						x	
Atlantic Croaker						ASMFC					
Atlantic Menhaden	Update		SEDAR			Update			SEDAR		
Atlantic Sea Herring	SARC 54			Update				SARC-Spring			
Atlantic Striped Bass		SARC 57		Update	Update			SARC-Fall			
Atlantic Sturgeon						ASMFC					
Black Drum			ASMFC						x		
Black Sea Bass	Update	Update	Update	Update	SARC- Fall	Update		Update	SARC-Spring	Update	
Bluefish	Update	Update	Update	SARC-Spring	Update	Update		Update	SARC-Spring	x	
Cobia									SEDAR		
Horseshoe Crab		Update							ASMFC		
Menhaden ERPs	Update		Update						SEDAR		
Northern Shrimp	Update	Update	SARC-Spring	Update	Update	Update		ASMFC	Update	Update	
Red Drum				SEDAR							x
River Herring	ASMFC					Update					
Scup	Update	Update	Update	SARC-Spring	Update	Update		Update	SARC-Spring		
Spanish Mackerel	SEDAR 28									SEDAR	
Spiny Dogfish	Update	Update	Update	Update	Update	Update		Update	Update	Update	
Large Coastal Sharks					SEDAR	SEDAR					
Small Coastal Sharks		SEDAR									
Spot						ASMFC					
Spotted Seatrout				VA/NC	FL						
Summer Flounder	Update	SARC 57	Update	Update	Update	Update		SARC- Fall	Update	Update	
Tautog					ASMFC						x
Weakfish					ASMFC				Update		
Winter Flounder			Update	Update		Update					

SA Staff
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Note all species scheduled for review must be prioritized by management boards and Policy Board.

Additional Notes:

- BSB, Bluefish, Scup Spring 2019 MRIP Operation assessments (April 2019 Review Wksp)
- Cobia Stock Structure review Summer 2018, then benchmark assessment in 2019
- Large Coastal Sharks 2017 SEDAR for sandbar shark
- Spotted Seatrout States conduct individual assessments

	SEDAR Peer Review
	ASMFC Peer Review
	Fall SARC Review (November)
	Spring SARC Review (June)
	x = 5 year trigger date or potential review
	Completed

Italics = under consideration, not officially scheduled

River Herring Proactive Conservation Planning Process
River Herring Technical Expert Working Group
Terms of Reference
Draft
[March 26, 2014]

1. Introduction and Background:

On August 12, 2013, NOAA Fisheries announced that listing river herring under the Endangered Species Act as either threatened or endangered was not warranted. NOAA Fisheries also announced the agency would provide funding to the Atlantic States Marine Fisheries Commission (ASMFC) in order to work with our partners to implement a coordinated coastwide effort to proactively conserve river herring and address data gaps. The primary objective of this initiative is to develop and implement a dynamic conservation plan to help restore river herring throughout its Atlantic coastal range. This will include identifying important conservation efforts, addressing critical data gaps, and monitoring and evaluating progress in achieving the goals. This effort will coordinate and build upon the many previous and ongoing efforts to further river herring conservation, including fisheries work by the Mid-Atlantic Fishery Management Council (MAFMC) and the New England Fishery Management Council (NEFMC) and habitat restoration by the Atlantic Coastal Fish Habitat Partnership and the Nature Conservancy. A Technical Expert Working Group (TEWG) will be compiling information that will be used by NMFS and ASMFC in the development of this plan. The plan is intended to increase public awareness about river herring, stimulate cooperative research efforts, and foster efforts to conserve the species.

2. Roles and Responsibilities

2.1 Structure:

Given the many threats that river herring face, conservation of river herring must be holistic. Therefore, we have worked with various organizations to identify individuals who possess expertise related to river herring, threats to their survival, and/or methods for assessing human and non-human impacts to river herring (e.g., connectivity, water quality/quantity, climate change, etc.) to participate on the TEWG. The TEWG will establish subgroups by topic and/or region to focus discussions where the group deems is necessary. NOAA Fisheries and ASMFC will look to volunteers from the TEWG to chair subgroups. There may be times that the TEWG may also call on other Federal and non-Federal subject matter experts to provide expert information to the working group for consideration.

The majority of meetings will be convened by conference call/webinar, and all meetings will be open to the public and may be recorded. Any documents produced by the TEWG will be made

available to the public. TEWG member affiliation and contact information will also be made available to the public.

2.2 Function and Charge:

The TEWG is being established to help NOAA Fisheries and ASMFC develop a dynamic conservation plan to help restore river herring throughout their Atlantic coastal range. This will include the following:

- Identify threats to both species throughout their range
- Identify and create a list of conservation actions to address critical threats and associated costs
- Identify key data gaps
- Create a list of research projects and associated costs to fill existing data gaps
- Provide/compile information for NMFS/ASMFC to use in the development of a dynamic, long term conservation plan
- Track and monitor progress of conservation actions and research
- Revise actions as needed

The goal of the TEWG meetings will be information gathering, whereby individual expert opinion on data, ideas, or recommendations will be sought from all participants. The meetings are not consensus driven. Larger discussions of the TEWG will take a broad look at the issues and not focus on only one topic. Meetings of the subgroups will provide an opportunity for detailed focus on specific topics. The TEWG is not charged with making listing recommendations or other management recommendations.

TEWG participation may include meetings (e.g., in person, video, web/teleconferences), e-mail exchange, analyses/modeling, writing and review of documents. The level of participation (e.g., time commitment) will be determined by the individual member, but participation and contribution as appropriate in the larger TEWG discussions is expected. A long-term (i.e., multi-year) commitment is requested to ensure continuity and minimize disruption during the conservation planning process.

Atlantic States Marine Fisheries Commission

South Atlantic State/Federal Fisheries Management Board

October 25, 2018
11:30 a.m. – 1:00 p.m.
New York, New York

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>) | 11:15 a.m. |
| 2. Board Consent | 11:15 a.m. |
| • Approval of Agenda | |
| • Approval of Proceedings from August 2018 | |
| 3. Public Comment | 11:20 a.m. |
| 4. Review Public Comment Summary for Cobia Draft Amendment 1 Public Information Document (<i>M. Schmidtke</i>) | 11:30 p.m. |
| 5. Provide Guidance to the Cobia Plan Development Team on Options for Inclusion in Draft Amendment 1 (<i>P. Geer</i>) Possible Action | 12:00 p.m. |
| 6. Consider 2018 Fishery Management Plan Reviews and State Compliance Reports for Black Drum, Spotted Seatrout, and Spanish Mackerel (<i>M. Schmidtke</i>) Action | 12:30 p.m. |
| 7. Other Business/Adjourn | 1:00 p.m. |

The meeting will be held at the Roosevelt Hotel, 45 East 45th Street & Madison Avenue, New York, NY; 212.661.9600

MEETING OVERVIEW

South Atlantic State/Federal Fisheries Management Board Meeting

Thursday, October 25, 2018

11:30 a.m. – 1:00 p.m.

New York, New York

Chair: Pat Geer (GA) Assumed Chairmanship: 02/18	Technical Committee (TC) Chairs: Black Drum: Harry Rickabaugh (MD) Cobia: Vacant Atlantic Croaker: Chris McDonough (SC) Red Drum: Vacant	Law Enforcement Committee Representative: Capt. Bob Lynn (GA)
Vice Chair: Robert H. Boyles, Jr.	Advisory Panel Chair: Tom Powers (VA)	Previous Board Meeting: August 9, 2018
Voting Members: NJ, DE, MD, PRFC, VA, NC, SC, GA, FL, NMFS, USFWS, SAFMC (12 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from August 9, 2018

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

4. Review Public Comment Summary for Cobia Draft Amendment 1 Public Information Document (11:30 – 12:00 p.m.)
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Background

- In May 2018, the Board initiated Draft Amendment 1 to the Cobia FMP to reflect removal of Atlantic cobia from the South Atlantic and Gulf of Mexico Fishery Management Councils’ Coastal Migratory Pelagic Resources FMP and establish recommendations for measures in federal waters.
- In August 2018, the Board approved release of a Public Information Document (PID) requesting public input on management options to be included in Draft Amendment 1. **(Briefing Materials)**
- Five public hearings were held in September by the Commission for the states/jurisdictions of Maryland, Potomac River Fisheries Commission, Virginia, North Carolina, South Carolina, and Georgia. An additional public hearing was held by state staff

in New Jersey. A total of ten members of the public attended the six hearings. (**Briefing Materials**)

- Written comments were accepted from August 10 through October 10, 2018. (**Supplemental Materials**)

Presentations

- M. Schmidtke will present the Public Comment Summary.

5. Provide Guidance to the Cobia Plan Development Team on Options for Inclusion in Draft Amendment 1 (12:00 p.m. – 12:30 p.m.) Possible Action

Board actions for consideration at this meeting

- Provide guidance to the Plan Development Team for management options to include in Draft Amendment 1 to the Cobia FMP.

6. Consider 2018 Fishery Management Plan Reviews and State Compliance for Black Drum, Spotted Seatrout, and Spanish Mackerel (12:30 – 1:00 p.m.) Action

Background

- Black Drum State Compliance Reports are due on August 1. The Black Drum Plan Review Team (PRT) has reviewed state reports and compiled the annual FMP Review. No states have requested *de minimis* status. (**Supplemental Materials**)
- Spotted Seatrout State Compliance Reports are due on September 1. The Spotted Seatrout PRT has reviewed state reports and compiled the annual FMP Review. New Jersey and Delaware have requested *de minimis* status (**Supplemental Materials**).
- Spanish Mackerel State Compliance Reports are due on September 1. The Spanish Mackerel PRT has reviewed state reports and compiled the annual FMP Review. New Jersey, Delaware, and Georgia have requested *de minimis* status (**Supplemental Materials**).

Presentations

- M. Schmidtke will present the FMP Reviews.

Board actions for consideration at this meeting

- Consider approval of the 2018 FMP Reviews, state compliance, and *de minimis* requests for spotted seatrout and Spanish mackerel.

7. Other Business/Adjourn

South Atlantic Board

Activity level: Moderate

Committee Overlap Score: Moderate (American Eel TC, Horseshoe Crab TC, Shad and River Herring TC, Sturgeon TC, Weakfish TC)

Committee Task List

- Black Drum TC – Fall 2018/Winter 2019: Review 2014 benchmark stock assessment research recommendations and make recommendation for 2019 stock assessment
- Cobia PDT – October 2018 – May 2019: Draft Amendment 1 process; current step: develop Draft Amendment 1
- Red Drum SAS – Fall 2018/Winter 2019: Develop assessment roadmap and update ASC on progress
- Atlantic Croaker TC - July 1: Compliance Reports Due
- Red Drum TC – July 1: Compliance Reports Due
- Cobia TC – July 1: Compliance Reports Due
- Atlantic Croaker PRT – August 1: Update Traffic Light Analysis
- Spot PRT – August 1: Update Traffic Light Analysis
- Black Drum TC – August 1: Compliance Reports Due
- Spotted Seatrout PRT – September 1: Compliance Reports Due
- Spanish Mackerel PRT – October 1: Compliance Reports Due
- Spot PRT – November 1: Compliance Reports Due

TC Members:

Atlantic Croaker: Chris McDonough (SC, Chair), Kristen Anstead (ASMFC), Michael Schmidtke (ASMFC), Tim Daniels (NJ), Michael Greco (DE), Harry Rickabaugh (MD), Jason Rock (NC), Dan Zapf (NC), Dawn Franco (GA), Joseph Munyandorero (FL), Wilson Laney (USFWS)

Black Drum: Harry Rickabaugh (MD, Chair), Jeff Kipp (ASMFC), Michael Schmidtke (ASMFC), Jordan Zimmerman (DE), Chris Stewart (NC), Chris McDonough (SC), Ryan Harrell (GA), Dustin Addis (FL)

Cobia: Michael Schmidtke (ASMFC), Linda Barry (NJ), Angela Giuliano (MD), Alex Aspinwall (VA), Anne Markwith (NC), Mike Denson (SC), Chris Kalinowsky (GA), Christina Wiegand (SAMFC), Michael Larkin (SERO)

Red Drum: Jeff Kipp (ASMFC), Michael Schmidtke (ASMFC), Tim Daniels (NJ), Michael Greco (DE), Robert Bourdon (MD), Lee Paramore (NC), Joey Ballenger (SC), Chris Kalinowsky (GA), Behzad Mahmoudi (FL), Wilson Laney (USFWS), Roger Pugliese (SAFMC)

Spanish Mackerel (PRT): Michael Schmidtke (ASMFC), Randy Gregory (NC), BJ Hilton (GA), Dustin Addis (FL), Christina Wiegand (SAFMC), John Hadley (SAFMC)

Spot (PRT): Michael Schmidtke (ASMFC), Harry Rickabaugh (MD), Adam Kenyon (VA), Dan Zapf (NC), Chris McDonough (SC), Dawn Franco (GA)

Spotted Seatrout (PRT): Michael Schmidtke (ASMFC), Douglas Lipton (MD), Steve Poland (NC), Joey Ballenger (SC), Chris Kalinowsky (GA)

SAS Members:

Red Drum: Jeff Kipp (ASMFC), Michael Schmidtke (ASMFC), Angela Giuliano (MD), Lee Paramore (NC), Joey Ballenger (SC), Liz Herdter Smith (FL)

DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
SOUTH ATLANTIC STATE/FEDERAL FISHERIES MANAGEMENT BOARD

The Westin Crystal City
Arlington, Virginia
August 9, 2018

Draft Proceedings of the South Atlantic State/Federal Fisheries Management Board Meeting
August 2018

TABLE OF CONTENTS

Call to Order, Chairman Pat Geer	1
Approval of Agenda.....	1
Approval of Proceedings, May 2018	1
Public Comment	1
Consider 2018 Traffic Light Analysis for Atlantic Croaker and Spot	1
Consider Postponed Motion from May, 2018 Board Meeting	5
Plan Development Team Recommendations	5
Update of the Revised SEDAR 58 Schedule.....	17
Review Cobia Technical Committee Report on Recreational Landings	17
Consider Draft Public Information Document from Amendment 1 for Cobia for Public Comment.....	18
Review and Populate Advisory Panel.....	21
Election of Vice Chair	21
Other Business	22
Adjournment.....	22

These minutes are draft and subject to approval by the South Atlantic State/Federal Fisheries Management 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 May 2018** by Consent (Page 1).
3. Postponed Motion from May 3, 2018:
Move to initiate an addendum to the spot and croaker fishery management plans that incorporates the new traffic light analyses and management response to those analyses (Page 11). Motion by Chris Batsavage; second by Marty Gary. Motion failed (Page 17).
4. **Move to approve the Public Information Document for Draft Amendment 1 to the Cobia Fishery Management Plan for Public Comment** (Page 21). Motion by Lynn Fegley; second by Spud Woodward. Motion carried (Page 21).
5. **Move to approve Craig Freeman as a member of the South Atlantic Species Advisory Panel** (Page 21). Motion by Joe Cimino; second by Lynn Fegley. Motion carried (Page 21).
6. **Move to elect Mr. Robert Boyles as Vice Chair** (Page 21). Motion by Spud Woodward; second by Malcolm Rhodes. Motion carried (Page 21).
7. **Motion to adjourn** by Consent (Page 22).

Draft Proceedings of the South Atlantic State/Federal Fisheries Management Board Meeting
August 2018

ATTENDANCE

BOARD MEMBERS

Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)	Mel Bell, SC, proxy for Sen. Cromer (LA)
Roy Miller, DE (GA)	Malcolm Rhodes, SC (GA)
John Clark, DE, proxy for David Saveikas (AA)	Spud Woodward, GA (AA)
Russell Dize, MD (GA)	Doug Haymans, GA (GA)
Lynn Fegley, MD, proxy for D. Blazer (AA)	Krista Shipley, FL, proxy for J. McCawley (AA)
Pat Geer, VA, proxy for S. Bowman (AA), Chair	Marty Gary, PRFC
Michael Blanton, NC, proxy for Rep. Steinburg (LA)	Jack McGovern, NMFS
Chris Batsavage, NC, proxy for S. Murphy (AA)	John Carmichael, SAFMC
Robert Boyles, SC (AA)	

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

Ex-Officio Members

Chris McDonough, Atl. Croaker Technical Committee Chair

Staff

Toni Kerns	Tina Berger
Robert Beal	Jessica Kuesel
Mike Schmidtke	

Guests

Joe Cimino, NJ DFW	Mike Millard, USFWS
John Clark, DE DFW	

The South Atlantic State/Federal Fisheries Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; Wednesday August 9, 2018, and was called to order at 10:45 o'clock a.m. by Chairman Pat Geer.

CALL TO ORDER

CHAIRMAN PAT GEER: Okay folks let's get started and begin the South Atlantic State/Federal Fisheries Management Board meeting. My name is Pat Geer of Virginia; and I am the Chairman.

APPROVAL OF AGENDA

CHAIRMAN GEER: The first order of business is approval of the agenda. Are there any modifications to the agenda? What we will probably do, letting you know since we're starting early, we're probably going to try to go right through this and then have lunch after we're done.

We hopefully can get through this in the two hour period we have; but we're going to try to go through this as quickly as possible. If we go any longer we'll break for lunch. We'll see how things go on that one. Hearing any changes to the agenda? Hearing none they are approved by consent.

APPROVAL OF PROCEEDINGS

CHAIRMAN GEER: Approval of the proceedings from the May 3rd. Lynn.

MS. LYNN FEGLEY: I just noticed that in the proceedings from the last meeting under the Index of Motions, Item 3. The motion is listed as to reopen Maryland's commercial fishery for red drum. We would love to have a correction for that. Thank you.

CHAIRMAN GEER: Also that Georgia is still dear to my heart, but I am now in Virginia, so I am no longer the proxy for the delegate in Georgia.

PUBLIC COMMENT

CHAIRMAN GEER: All right moving on, any public comment on the issues that is not on the agenda today? Hearing none; move on to Item Number 4, and this is Consideration of the Traffic Light Approach for Atlantic Croaker and Spot.

CONSIDER 2018 TRAFFIC LIGHT ANALYSIS FOR ATLANTIC CROAKER AND SPOT

CHAIRMAN GEER: We've been working on this for some time now; and Chris McDonough is going to give a brief overview of what they've been working on, so Chris, you have the floor.

MR. CHRIS McDONOUGH: I like the way he said brief. A lot of this stuff you guys have seen before; so I'm going to start off with spot, covering the regular traffic light that we've been doing up to now, and then the regional approach, starting off with the traffic light for the harvest and adult composite indices.

For the harvest composite, the top one there that did trip in 2017, which would have been the second year in a row for that one. Then the adult composite index did not trip in 2017. Since both of them didn't trip, there wasn't any management concern for that; at least for spot the way that was done. The juvenile composite index indicated, this is using the Maryland juvenile survey, didn't exceed the 30 percent threshold in 2017, but it would have triggered since it was carried over from the two previous years that had. These declines in the traffic light indicate continued poor recruitment in the Chesapeake for spot.

For the shrimp trawl discards, this is the late addition, it wasn't in the report. But the shrimp trawl discards also didn't change a great deal from 2016. Discard levels are still pretty low; particularly using that 1989 to 2012 reference period for the traffic light. But a few things to consider are both the Mid-Atlantic and South Atlantic commercial harvest for spot continue to decline; although there was a slight uptick in

the Mid-Atlantic compared to the South Atlantic.

One trend you see with the Mid-Atlantic is you would see a lot of year-to-year angler variability; which that points more towards stability issues. Then for recreational landings, the trends are a little more varied. But one thing to point out in 2017 was that the Mid-Atlantic recreational landings were up quite a bit; whereas the South Atlantic continued to decline.

The summary for the traffic light for the current method did not trigger in 2017 at the 30 percent threshold level. Then neither the juvenile shrimp fishery survey would have triggered in 2017 as well; but since they are advisory indices that we're mainly concerned with the harvest in the adult indexes.

Now for the regional, as the Board directed back in the last meeting, upon the recommendations from the Technical Committee looking at how to improve it. We were looking at adding the CHESMAP Survey and the North Carolina DMF Program¹⁹⁵ for juveniles; the CHESMAP Survey being used for juveniles and adults.

The regional metric approach was a little bit more in line with what we were seeing with harvest surveys; and then also partitioning them by age. I'm not going to read all these. Then the last major change was instead of having triggering occurring of two consecutive years, it was recommended triggering would occur if that red proportion exceeds a 30 percent or more for two of any of the three terminal years in the index.

For the regional TLAs, the Mid-Atlantic did trigger as well as the South Atlantic. The traffic light pretty much shows what you saw in both the harvest figures, where you've got a general decline; although the harvest composite in the Mid-Atlantic actually had low proportion of red, but it would have still triggered in 2017.

In the South Atlantic you're seeing a more steady decline; which is indicated by those increasing proportions of red. For the abundance composites compared to the coastwide one, the Mid-Atlantic did trigger in 2017 above the 30 percent threshold. Then for the South Atlantic it did not trigger in 2017; however the last two years have seen increasing proportions of red.

It was above 30 percent in 2017; so that declining trend continues, or at least that indicates a declining trend. Particularly in the Mid-Atlantic, the addition of the CHESMAP Survey is really what is driving that increased proportion. But it does bring it more in line with what we're seeing in the harvest metric. For the juvenile composite, in this case we're still using for the Mid-Atlantic we're using the Maryland Survey and it also did trigger in 2017. It just illustrates that continued poor recruitment, the fifth year in a row it would have triggered. Then finally, the shrimp fishery which isn't regional that's just in the southern. But the main difference on this one is that now it's using a 2002 to 2016 reference period; which gets rid of the really high levels of discard that were in the other reference timeframe. There was actually a slight increase the last couple years of discards in the shrimp fishery; which is showing up in those increased proportions of red.

However, in 2017 it did actually go down. The summary for the regional traffic light, the harvest composite for both regions triggered in 2017; which did agree with what was happening coastwide. The adult composite triggered in the Mid-Atlantic but did not in the South Atlantic; and the juvenile traffic light in the Mid-Atlantic still showed that pattern to decline, high proportions of red in both the harvest and the adult traffic light.

At this point management response moderate concern would be triggered under this for the Mid-Atlantic; while no management response would be triggered for the South Atlantic. The regional TLA basically, bottom line is the

addition of the other indices is giving us much better synchrony between the harvest and the abundance characteristics within the traffic light. With that that's for spot. We can take some questions on spot and then we can go on to croaker.

CHAIRMAN GEER: Why don't we do that? Are there any questions for Chris at this point on spot? I think the questions are probably going to be the same; moving on.

MR. McDONOUGH: Okay moving on. Croaker, the same format, we'll go over the coastwide TLA and then we'll hit the regional one. For croaker harvest composite continues to show decline, did trigger in 2017. It would have been the fifth year in a row that it's triggered for croaker; and the adult composite index, while it does have declining proportions of green, hasn't hit red yet so it would not have triggered in 2017.

We're seeing disparity there between the two. For the juvenile composite index, which in this case for croaker are the VIMS Juvenile Index and the North Carolina Program 195; they actually in 2017 show completely opposite trends. The VIMS Survey was at one of the lowest values in the entire time series, whereas the North Carolina Survey was up; which is why you get that kind of just red and green on 2017 was a bit unusual. But it did not trip.

Then the shrimp survey, and this is using that 1989 to 2012 reference period, shows a slight increase in recent years in discards; but we still haven't hit that 30 percent level. Like with spot we see a decline in commercial landings; both Mid-Atlantic and the South Atlantic for croaker that peaked in the early 2000s, and basically has just been in decline ever since. Most of the coastwide trends for commercial landings are driven primarily by Virginia and North Carolina where the bulk of the landings occur.

Recreational landings show similar trends with both regions; although the Mid-Atlantic matches up almost exactly the same with

commercial for recreational, whereas the South Atlantic had peaks much earlier in the time series, and it has declined but it's kind of maintained a relative steady state since the mid '90s. For the traffic light for the coastwide under the current management scheme, management concern was not triggered in 2017 for croaker; and neither of the juvenile composite or the shrimp traffic light tripped in 2017 either. But you do see that pattern of high variability with juvenile croaker like you do with spot. Just like with spot, with the improvement recommendations going with a regional approach in South Atlantic and Mid-Atlantic, as well as adding additional surveys; the CHESMAP Survey in the Mid-Atlantic and the South Carolina DNR Trammel Net Survey in the South Atlantic. The age split between adults and juveniles, adults being fished Age 2 or older.

The same regional divide between the Virginia/North Carolina Boarder. Updated reference period of 2002 to 2012, and then instead of consecutive years for triggering three out of four in croaker, it would be triggering any three out of four terminal years in the traffic light. Actually Mid-Atlantic and South Atlantic, both triggered in 2017; and a continuing pattern has been triggering for the last couple of years, matching up with that decline we're seeing in landings both recreationally and commercially in croaker.

One thing, in recent years we're approaching the 60 percent level, so actually those declines continue. For the regional adult composite, the addition of the CHESMAP Survey brought the Mid-Atlantic traffic light more in greater agreement with the harvest composite. You see the Mid-Atlantic did trip in 2017, which is following right in line with what we see with the harvest composite.

South Atlantic did not trigger in 2017; it was actually over 30 percent in 2016, but in 2017 actually it had gone up. That is mainly because the SEAMAP Survey had an increase. For the juvenile composite, the Mid-Atlantic juvenile composite did trip in 2017; and it actually was

above 60 percent. It was actually because the value was so, particularly for the VIMS survey, the index value was so low. That is why that red proportion is so high.

Then in the South Atlantic the juvenile index did not trip, where you've got slight it was the increase in the North Carolina Survey, which we saw in the other coastwide as well. Finally the shrimp fishery did exceed 30 percent in three of the last five years; but it would not have tripped in 2017.

But this again, using the updated or reference period of 2002 to 2016 that increase in the shrimp trawl discards for croaker is showing up as the higher proportions of red in recent years. For the regional croaker summary, harvest composite triggered for both regions; again agreeing with the coastwide TLA, and then the adult and juvenile composite characteristics triggered in the Mid-Atlantic but did not in the South Atlantic.

Again, we're looking at a moderate management concern that would have been triggered in the Mid-Atlantic, whereas it would not have been triggered in the South Atlantic. I know I went through that rather quickly, but I'll take questions on both I guess, and we can go through it.

CHAIRMAN GEER: Are there any questions for Chris? Roy.

MR. ROY W. MILLER: Just trying to wrap my head around the results. Thank you for the report, Chris. It would appear that there is a concern over both spot and croaker for the Mid-Atlantic Region. Is that a fair summary of this analysis?

MR. McDONOUGH: Yes.

MR. MILLER: The next obvious question obviously, and this is for this Board to decide, is what if anything do we do about it? We all know that both of these species are prone to large fluctuations in their abundance; and

natural events may be a driver in these fluctuations, and probably are, events beyond our control.

The question is how extreme does it have to get before we take some management action; and would management action even benefit stocks like spot and croaker? Those are just some questions. I know well, I would appreciate any advice from the Technical Committee in this regard, any advice they could give to the Board.

CHAIRMAN GEER: I have Lynn.

MS. FEGLEY: Thank you for the presentation. Could you talk a little bit about, because we have this issue where especially with croaker we've tripped in the Mid-Atlantic but not the South Atlantic? I know there was some conversation in the TC that if the Mid-Atlantic would take action the South Atlantic should follow suite; because there is some movement of the fish between the areas. I was just wondering if you could offer us some clarity on that.

MR. McDONOUGH: Yes that was quite a point of discussion with the Technical Committee as well as the Plan Development Team. We did feel that if it was triggering in one region and not in another, to try and impose or make management recommendations just for one region would be difficult.

If things were done, some type of management guidelines, whatever they end up being was done. We would think it would probably encompass both the South Atlantic and the Mid-Atlantic; because it would be a lot easier to oversee and some of those trends as you pointed out. Some of them, particularly croaker indicate that it's more likely some of it is environmentally driven; for these long term cycles, particularly when you look at the real long term commercial landings.

With that in mind we're actually kind of right in the middle of a down period for croaker. Whether if we do something now, and I think

this is going to be addressed coming up with the Plan Development Team recommendations and stuff that actually directly address that. But yes those are things that we've been wrestling with.

CHAIRMAN GEER: Anyone else? Roy, I mean John.

MR. JOHN CLARK: Look at that. I got mistaken for Roy Miller. That's pretty impressive. Thank you, Mr. Chair. Chris, I was just curious as to whether these long cycles with both these species have been looked at in relation to like the Atlantic Multi-decadal Oscillation or the NAO, because I know in Delaware they did some work with weakfish and saw some pretty interesting correlations there.

MR. McDONOUGH: Yes. There have been a couple of studies done by Jon Hare looking at particular with croaker, not so much with spot, in changes in population overwintering temperatures in the NAO. Actually one of the recommendations that are going to be covered with the Plan Development Team recommendations was to further examine, and try and model some of the longer term trends as something of a prediction tool with the surveys as well as some of these things, and being able to draw in. But that's kind of going above and beyond. But yes that is certainly on the table to look at.

CHAIRMAN GEER: We're kind of moving right into our next agenda item. I have a technical question to ask of Chris. I know the VIMS Trawl Survey had a major vessel and gear change starting in July of 2015; were they accounted for? Were those adjustments accounted for in the numbers?

MR. McDONOUGH: I believe they were, because the last two years when they had to do the survey it took longer, because they had to kind of bring it back to the previous adjusted units for their conversion.

CONSIDER POSTPONED MOTION FROM MAY, 2018 BOARD MEETING

CHAIRMAN GEER: Are there any other questions about the data or technical questions for Chris? Hearing none; we'll move on to our next agenda item, which is concerning postponement of the motion from the Addendum.

CHAIRMAN GEER: Mike is going to give a presentation of the PDTs recommendations for potential response management triggers.

PLAN DEVELOPMENT TEAM RECOMMENDATIONS

DR. MIKE SCHMIDTKE: In the last South Atlantic Board meeting a motion was postponed. It was a motion to initiate an addendum to the spot and croaker fishery management plans that would incorporate the new traffic light analyses as well as management response to triggers from those analyses. In the aftermath of that meeting a Joint Species Plan Development Team was populated; and they started looking at potential management responses to the TLA updates.

The initial guidance coming out of the meeting was that they would try to look at what responses would achieve a percent red of 35 percent or less. As we got into some of the discussions, the team interpreted that the Board direction for the percent red was applicable to the abundance index rather than the harvest; achieving lower proportion red of harvest would mean that we would need to harvest more.

We interpreted that to be applicable to the abundance index; but one difficulty that the PDT ran into was the lack of a relationship between the harvest and abundance, which is the entire motivation for the task that they were given, as well as the lack of any well-defined stock recruit relationship with either of these species.

That makes it very difficult to try to get any reasonable prediction of an increase in abundance that would result from a harvest reduction. There was more of a larger goal that the PDT wanted to achieve in that they wanted to establish some type of management for these species to begin with; rather than shooting for a certain percent red.

It's been mentioned already, looking at the landings history for croaker especially, these cycles of high and low harvest throughout the history of the fishery. We're clearly in a low point of the cycle; and the overarching goal that the PDT has is that while we're at this low point we don't want to have the stock be fished to the point that it can't recover again. While we recognize that the low fluctuation isn't necessarily due to the fishing, we want to still have the stock at a point where it can recover as it has in the past. Along those lines, we're thinking more about measures that the fishery can kind of deal with as long term management measures that would continue to have this position established; and they would be reevaluated after they're put in place for croaker after three years and for spot after two years, in accordance with what is spelled out in the TLA addenda for those species.

Once we got into discussions about what types of options from a regulatory standpoint would be at our disposal, and could be potentially implemented, seasons were one of those that were given some consideration as well as trip limits; in the form of either vessel or bag limits. Size limits would be really only applicable to croaker. Spot, just the way that the fishery is executed and the biology of the species, the size limits may not be as useful for that.

But those were some of the options that the PDT recommends the Board consider including in a potential management response to the triggers from the updated TLA. There is some precedent for these types of regulations at the state level. There are some states that have implemented bag, size, possession limits and

seasons for croaker; as well as creel and aggregate bag limits for spot.

There are a couple reference points that we could look at the state level then, considering the coastwide management response. The other point that the PDT wanted to make was the consideration of a coastwide management response to the regional triggers. We need to keep in mind that spot and croaker are both single stocks along the coast; they are not divided at the Virginia/North Carolina line.

The regional approach to the TLAs is an artifact of the survey sampling; it is not a construct of the biological stocks or the assessment stocks. These are not distinct populations; therefore any type of downturn in one and action taken in one area is going to have effects in the other region as well. In addition there is an overlap of the fisheries among states.

There has been a lot talked about, particularly with fishermen crossing over between Virginia and North Carolina and fishing croaker on either side of there; because of the connections between the fisheries in the regions there is also some motivation for a coastwide response. If the Board wants to have consideration to the specific regions and how local fisheries are conducted, the PDT would recommend consideration of some type of regionally apportioned TLA response.

We included an example in the memo that we submitted for supplemental materials. That example is if the long term management regime that was established were 100 pound trip limit, and there were a trigger in the Mid-Atlantic under that regime, then a potential response would be an 80 pound trip limit, so a 20 pound trip limit reduction in the Mid-Atlantic and a 90 pound trip limit in the South Atlantic, so a 10 pound trip limit reduction there.

This isn't to indicate any type of actual numbers that would be applied; but more of the idea that if there were a regional trigger there could be a stronger response within that region. But

there needs to be some type of coastwide interaction to take into account that these fish and the fisheries themselves are connected throughout the coast. Then one final point that the PDT discussed, I didn't really include it here, because it's not particularly relevant to the Addendum. But they did discuss that there may be some use in the long term of considering some type of workshop or something to look at those environmental fluctuations relative to the abundance; and consider if there is possibility of an environmental forecasting type of model, based off of the North Atlantic Oscillation or some other environmental metric.

Getting back to the Addendum that was postponed from the last meeting, I just wanted to provide an idea of a timeline. There has been some, in discussions I've had with Board members, there has been some interest in getting a little bit more public input on this Addendum. From the standpoint of how that would be conducted, there is the potential that states could hold their own public hearings, or they could solicit input from their own stakeholders and then kind of send that to the Plan Development Team; for us to incorporate in a draft addendum.

To give a little bit more time for this type of process to happen, I've developed two different schedules for this Addendum, a faster and slower track. The difference would be one meeting period, so we would either have final Board action in February or May of next year; depending on the Board's direction and whether states want to solicit that public input on their own.

The Commission would still attend and hold public hearings after the draft Addendum is approved for public comment that would occur, depending on the track either in October of this year or February of next year. Just as a review before the Board votes on the postponed motion, I just wanted to put kind of a summary table here that highlights the differences between the current TLA and the proposed new TLA.

Those are shown in bold in the various categories of the new indices that would be incorporated. The age structuring that would be incorporated, a new reference time period, the updated triggering mechanism as well as now with what Chris has shown you, you see the TLA result for this year using the current versus the new method. With that I can turn it back over.

CHAIRMAN GEER: Thank you very much, Mike. Thank you for doing this for us; it's nice to have it. This is the motion that's we postponed from last meeting. First of all if there are any questions for Mike, I see several hands going up. Chris.

MR. CHRIS BATSAVAGE: Thanks for going through the potential process, Mike. That is very helpful. In terms of coming up with management options relative to trip limits and seasons, I mean you gave a general timeline for the development of a potential addendum. What kind of timeline do you expect for the Plan Development Team to put options together; and I guess what level of detail. This may be a question for the Board. What level of detail are we looking for, for options such as trip limits and seasons; especially if we start looking to this at a state or regional level?

DR. SCHMIDTKE: That's something that I think that I would probably ask for Board member input, and Board members would probably, from a couple that I've talked to. That was part of the motivation for them wanting to get a little bit more public input; because we're not trying to have necessarily a drastic harvest reduction. That is not necessarily what is being recommended here, but to have some type of management in place that constrains harvest so that the fishery is put in a good position for the population to come back whenever conditions allow. But at the same time, to have something there that the fishery can deal with that the fishery can survive on.

CHAIRMAN GEER: I have Krista and Lynn.

MS. KRISTA SHIPLEY: I'll apologize, since I haven't been part of the conversations in the past. I just want to make sure I understand. This motion and then the PDT recommendations, the PDT recommendations were to include long term management into the addendum in addition to potential management triggers, is that correct?

DR. SCHMIDTKE: Yes.

MS. SHIPLEY: Since this motion was from the last meeting when we didn't have that PDT recommendation, does that motion include those long term management measures as well?

DR. SCHMIDTKE: One of the items that we were tasked with; we had the mindset of what can be done. What changes can be applied to this fishery? The PDT were of the mindset that long term management measures would probably be more beneficial than necessarily anything that was trying to be applied in a short term; as far as whether that is part of the motion, I might have to look for guidance on that.

MS. TONI KERNS: I'm sorry Mike; I was having a sidebar conversation with Caitlin about a compliance report.

DR. SCHMIDTKE: As far as whether the recommended long term management that was not available in the last meeting would inherently be incorporated into this motion.

MS. KERNS: I think the Board can decide here today if you would like to include that and that can be added; and it would be on the record here today and you would be fine.

CHAIRMAN GEER: Okay. Then I have Lynn.

MS. FEGLEY: Could you go back to the slide that outlines the timeline that you had up? I'll say that I was one of the people that I had a great anxiety over the idea of implementing management measures on a fishery like spot that has never been managed through an

addendum. Spot is a really big deal in our state; it is fished by many different, often conflicting sectors.

We already struggle a little bit to smooth those waters. It's going to require some pretty hefty public outreach on our end. I recognize that an amendment probably isn't the right thing to do here; but we're going to need that time, I think to get out to our stakeholders. Just to be clear. If we choose to pass this motion today, the states would go out and have those meetings with their people.

We would bring our management ideas, submit them to the PDT, and they would develop an addendum with our management options for Board review in February. That would then go out to public comment, and we would approve in May. I think that's fine. But my one concern is because these initial hearings that we would do as states, they wouldn't be ASMFC hearings, they would be us talking to our states. We need to make sure amongst the states I think that we have a consistent message. I think Mike, your point that what we're looking for is we're not looking so much for reductions as we're looking for a break. We're looking for just a cap on where we're harvesting so the fisheries aren't growing.

Maybe what we need, could you provide to us, would it make sense to have a table of all of the states? I looked for this for spot; a table for what all of the states has in terms of regulations. In Maryland for spot we have nothing. But Virginia has, I don't know what Virginia has. Maybe it would be something that we could propose to our stakeholders that we match Virginia; or Virginia matches North Carolina.

Because I have a little bit of a concern that what I don't want to have happen is to have all the states come back and have very disparate ideas of what they can stomach; in terms of a regulation. I'm looking for some way to get some consistency and some equity, and maybe the start there is to just have that

understanding of what everybody already has in place, so maybe we can try to find some consistency.

CHAIRMAN GEER: Those regulations for croaker are in the FMP review; which is in our packets that we have for the review this year. Now, there aren't any for spot as you said then that's the issue. I don't know if there are any regulations for spot.

MS. FEGLEY: Does anybody have regulations for spot?

DR. SCHMIDTKE: South Carolina has spot in an aggregate bag limit, and I believe there is a creel limit for Georgia. Is that correct? Yes.

CHAIRMAN GEER: But that's it. I mean if you're interested, those regulations for croaker are in our information packet that we have. Follow up, Lynn.

MS. FEGLEY: Yes thank you. I guess I'm still interested in getting some. I'm getting some feedback from the PDT or from the Technical Group that these long term measurements. I think what your words were, we're looking for long term management; not necessarily a reduction. How do we ask that question to our stakeholders?

How do we couch that to them? You know when we say okay management is coming on spot, what is that going to look like? Do we say we're going to cap harvest, so by our estimation harvest won't be able to increase over the next five years? I'm just trying to understand how we give them some box of what those management measures might look like.

CHAIRMAN GEER: Toni.

MS. KERNS: I was going to address Lynn's other question before. I think that one Lynn, you are correct. We should probably make sure that everybody is using the same information or base information. I think Mike can provide to each of the states the information on the traffic

light, and then tables for what each state have for regulations; so that you can start with those. Then when you and I were talking earlier, I was envisioning these state hearings to sort of give the PDT some additional information from the fishery or from the fishermen about sort of what types of management might be feasible to them; or you know what their vision is in terms of getting at addressing the concerns that we have in this fishery. I don't know, and I would turn to you to say, all of you and ask. Do you have to put these questions into specific box or not; or can it be a little bit open ended? I don't know.

CHAIRMAN GEER: Lynn, follow up?

MS. FEGLEY: I think the nature of how open ended our hearings is depends on how specific we want those options to look in this addendum. If this addendum is going to have options, for example trip limits of 100 pounds per vessel per day. Then that is a very specific and could be an Armageddon option for some states and not for others.

But if the option is going to look more like implement a trip limit such that. I don't know what such that something happens. Then that is open ended. I'm trying to understand what level of detail those options are going to look like in that final addendum, so that we can guide our people to give us the input to create those.

CHAIRMAN GEER: Any additional discussion? Chris and then Krista.

MR. BATSAVAGE: From Lynn's comments, I guess a thought I have on how to frame this for the hearings is I think for the technical folks in our state to do some work on looking at what the average catch per trip is or the range of landings per trip. Just thinking about like the commercial fishery and the different commercial fisheries, to get a sense of what are we dealing with today?

I mean we see what the landings are, but I think what we're really trying to get to with trip limits is how is the fishery behaving? What are they catching right now? It could be a situation, probably a situation where a one-size-fits-all trip limit won't achieve what we're trying to do. We don't want to turn landings into discards in this exercise; at least try to avoid it as much as possible.

There may be some work that needs to be done ahead of time just by the technical staff from the states before we go out to public hearings. Give the fisherman, the public something to work from. You know we don't want it too prescriptive, as Lynn talked about, you know saying we're thinking about this trip limit. At the same time, we don't want it too open-ended either. Just trying to find that happy medium is a challenge we face right now.

MS. SHIPLEY: I think Florida might be in a little bit of an unusual situation; at least with croaker, not having any species specific regulations for that for croaker specifically. I don't think we have them for spot either, but I would have to verify that. I'm having a really hard time wrapping my head around implementing long term management measures for a species that we don't currently specifically regulate, and when TLA measures are not being tripped. I wanted to put that on the record. I'm a little bit uncomfortable with that. I'm certainly uncomfortable with any fast tracking of that in the timeline. If long term measures are going to be implemented, without having the data in front of me I have no idea if the per trip landings are very consistent, or if they are incredibly variable; things like that. I'm certainly uncomfortable with fast tracking that and I'm relatively uncomfortable with including long term measurements without looking at the data a lot more before we figure out what those could potentially be; and talking to people about that.

CHAIRMAN GEER: Robert and then Roy.

MR. ROBERT H. BOYLES, JR.: Just maybe for the Board's knowledge. I wanted to share kind of what South Carolina's motivation was for our spot/croaker. We put basically a backstop management measure in place; really with a lot of support from our constituents, who were looking at potential exploitation, large variability year to year in that exploitation, and came to us and said hey.

Don't you think we ought to have something in place? We've got a relatively modest 50 fish aggregate bag limit on spot, croaker, and whiting. It really was designed really just to be a backstop, not necessarily in response to any management issues. That got favorably received by our General Assembly, so just for the Board's edification. Just know that was kind of our thinking when we went down this road several years ago.

CHAIRMAN GEER: Roy.

MR. MILLER: I'm thinking of things that we could do today. Just to take off on the idea that Krista proposed, perhaps. I see these two species as ones of concern for the Mid-Atlantic; but not necessarily a crisis. Therefore, I see no compelling need to use the fast track approach, using that diagram up before us now.

I think we could eliminate that and consider a slow track approach now. What we should do is the next question; but I think we need public input as to what management mechanisms are palatable, would not put people out of business, and would be conducive to furtherance of these stocks. I'm still struggling for, frankly what those management measures should be. I kind of like South Carolina's model of a backstop aggregate limits.

It sort of reminds me of the old maxim that if you maximize the amount of eggs in the water, eventually good things are going to happen; that environmental conditions will be favorable, and year class success will benefit. Beyond that I'm groping for specifics. I like the idea I've seen on one document, what everyone's size limit

and/or season or bag limits are. That would be helpful, and maybe we can go from there.

CHAIRMAN GEER: Are there any other comments? All right, well, we have a motion that we postpone this and we have to take care of that. I'm hearing in general people want to slow things down. I see two hands, I see Robert and then I've got Bryan.

MR. BOYLES: Mr. Chairman, just a question for staff. What does it look like when we are kind of going down this road where we're kind of casting about for answers; not really sure we want to do an addendum or amendment? But we really do want to get feedback on kind of what the potentials are. Can you all help us? Have we been down this road with other species before; you know trying to engage our constituents and stakeholders with hey, what do you all think? This is what we see. Can they prescribe something for us to chew on?

CHAIRMAN GEER: Toni.

MS. KERNS: I think what you're describing is scoping, right? While yes we can do scoping through an amendment process, a lot of times we don't get the feedback that you all get when you hold hearings for smaller group meetings with your states. When I was discussing this with Lynn, we talked about this alternative path; not because we're not trying to do the work, but just that a lot of the public hearings that we've been having, people haven't been showing up.

If we're looking for some real feedback from industry and the fishery, I thought we might be more successful in having these state meetings to come back to us. I think that you know in terms of the process of what we do here. If you all are not comfortable initiating an addendum until you've gotten that feedback from the public. That is certainly fine. I don't think that it's problematic. You can get that feedback and then come back to this Board and determine how you want to move forward. Then we go from there.

CHAIRMAN GEER: Bryan, then Adam.

MR. J. BRYAN PLUMLEE: My question was very similar to Roberts. I was curious about the quality of the public comments through the amendment process. I'm sort of surprised as a new member, at the lack of public comment at these proceedings. I know how much we debated the actions that are taken here on a state level, our VMRC. I would imagine at these various jurisdictions you have the same type of debates that we do, very vigorous.

But not seeing it here, and I think the public comment process is a very important one, when you're talking about initiating management where there has not been management. I wouldn't mind seeing, I guess a similar timeline with an amendment process, but it may not be a significant difference from what I'm hearing from Toni, to go that path. I don't know if that is very helpful to the discussion, but I wanted to bring it up.

CHAIRMAN GEER: Okay, I had Adam and then Joe.

MR. ADAM NOWALSKY: Just looking at these I understand what staff was trying to do in providing this table. Just from anybody listening to this conversation though, I'm not really sure this is from a perception standpoint. We're talking about fast tracking or slow tracking anything here.

The fast track is pretty much a normal addendum schedule; so in this case it's the fastest track, but I wouldn't really say it's anything expeditious from a perception standpoint, nor do I think the slower track is necessarily a slow track, allowing an extra meeting cycle to go through is not uncommon in anything we go through in these deliberative processes. From that perspective, again for anybody listening, I think either of these aren't fast, aren't slow. One just allows for more deliberation. Where I think we're struggling with though, when we go back to that motion that is before us right now is it was really a two-

part motion. We had information brought forward to us about incorporating some new pieces to the traffic light analyses that I think we're pretty much all in agreement we want to use, and want to see move forward. What we're struggling with though is then how quickly we need to craft and enact the management responses.

Building on what Toni just said, if we want to not initiate this addendum, vote this down, withdraw it, whatever the process would be. I think another potential path forward here might be to move forward with an addendum. Purely on the basis of incorporating those new TLAs that we want to use, so we have them available to us, and use that timeframe to work with our constituents on considering what management responses might be, and take that up as a separate addendum next year.

CHAIRMAN GEER: Joe and then Robert.

MR. JOE CIMINO: I don't have any issues with the timelines discussed if it is a slow track. One thought for me being part of this process for a long time is we tend to forget that spot doesn't even have a technical committee, and it's really just part of an omnibus amendment. I think issues are here to stay for a bit. I think management action is going to be needed at some point. I think it may be appropriate to start moving on that. I certainly see a lot of overlap.

I wouldn't be opposed to seeing spot in the croaker FMP. Being the only state that sits on both the South and the Atlantic Herring Section, which is soon to become a Board. There was talk about what may be a great bait crisis with the loss of Atlantic Herring coming forward. I definitely, without question see ripple effects for the South Atlantic and the spot and croaker fisheries with that bait crisis.

CHAIRMAN GEER: Robert.

MR. BOYLES: Mr. Chairman, I think I'm ready to make a motion; if you're ready to receive one.

CHAIRMAN GEER: I'm not seeing any other hands go up. Okay, you have the floor.

MR. BOYLES: Oh man. I would move to amend the postponed motion. Is that in line from a parliamentary perspective, or do we need to deal with this postponed motion first? A substitute, excuse me.

CHAIRMAN GEER: Go ahead, Bob.

EXECUTIVE DIRECTOR ROBERT E. BEAL: I think parliamentary; the postponed motion is the motion that is before the Board now so treat that as just a motion that was made today if you want. You know, move to amend or move to substitute; anything you want to do is available to this motion Rob.

CHAIRMAN GEER: Robert.

MR. BOYLES: **Mr. Chairman, I would move to amend that motion by striking the words of the postponed motion "and management response to those analyses." In other words, the move to initiate an addendum to the spot and croaker FMP then incorporates a new traffic light analyses, and if I get a second I'll explain.**

CHAIRMAN GEER: Second by Lynn.

MR. BOYLES: Mr. Chairman, what I'm thinking is that we've got a recommendation from the TC to look at the new traffic light analyses to incorporate that in these plans. It strikes me that we could use some discussion with our constituents back home, on terms of potential future management. The way I look at this is simply an addendum to update it with a new traffic light analyses; and then to give the rest of us time to go home and talk to our constituents and say look.

This is what we're seeing coastwide with respect to these species. What do we think we need to do? You know South Carolina has moved, Georgia has moved, or we've got management measures in place now. Maybe

other jurisdictions might want to consider that. Then maybe we can get back on the same page. My intention is to just simplify this, with respect to updating with the new traffic light analyses.

CHAIRMAN GEER: Lynn.

MS. FEGLEY: I like this approach and I like this idea of simplifying and separating. What I want to make sure, especially given Joe's point about what is happening with herring and other bait issues. I want to make sure we're not, there is a balance here. You know we don't want to drag our feet.

I think once we go down this road we need to really make that commitment amongst ourselves that we are going to go back and have these conversations with our constituents. I really like the idea of figuring out for each of our states what that backstop would be. What is a tolerable backstop, and then having that discussion here, so we can figure out what to do with that information?

CHAIRMAN GEER: Mike and then Toni.

DR. SCHMIDTKE: Just I guess a reminder kind of, of what the implications of simplifying the motion would mean. Should an addendum go through that only incorporates the new traffic light updates, the same management responses that are in the current addendum, it would be Addendum I think it is II for croaker and I for spot.

But the same management responses would still apply. As written right now, those are rather vague as is. Those are things that would need to be addressed probably in fairly short order; because what's going to happen is should this motion pass, and the addendum go through and we incorporate the new TLA. Next year when we have the TLA update, there is going to be management action initiated; and it's going to be defined as either management action with moderate or significant concern. That's the guidance on it. The Plan Development Team at that point would then be

looking back to the Board for direction on what does a moderate concern management response look like; in crafting whatever that would be, just a reminder of that.

CHAIRMAN GEER: I've got Toni and then Roy.

MS. KERNS: Mike started part of what I was going to say, and as a reminder. Taking out the TLA is sort of like taking out reference points to the public. It's not always a straightforward piece of information for comment. Having that disjointedness, because you'll have the old management triggers and the new traffic light may also be a little bit confusing to the public.

It's okay. If we need to take this time to figure out where we are we can do that. We don't have to do the traffic light response immediately. We can pause, in order to get this information from the public if necessary. I think that it's on record and we're having this conversation that we are moving forward. It's just that we're gathering all the information that we think we need, in order to move forward in a logical stepwise approach.

CHAIRMAN GEER: Robert.

MR. BOYLES: Mr. Chairman, if it pleases the Board I would move to withdraw my motion then.

CHAIRMAN GEER: Consider it. Okay. Now we're back to where we were to start with. Roy.

MR. MILLER: In consideration of Robert's offer to withdraw the motion. I have to wonder, do we really need an addendum to adopt the traffic light analyses? Can't we just do that like any other tool in our tool boxes? You know when we moved away from virtual population analysis to newer updated models; we didn't use the addendum process to do that.

DR. SCHMIDTKE: If the Board wants to adopt all of the recommendations then an addendum would be required. I think probably the biggest

factor in determining that is the updated triggering mechanism. Right now the triggering mechanism is three consecutive years for croaker, two consecutive years for spot.

One of the proposed recommendations from the TC is for three out of four terminal years, and two out of three terminal years for croaker and spot respectively; because that impacts the management coming out of the previous addenda that would require a new addendum.

CHAIRMAN GEER: Excuse me, but I didn't follow protocol. I should have asked was there any opposition to Mr. Boyles removing his motion; hearing none, well, Lynn?

MS. FEGLEY: Just one more question about this motion. I think we all as Adam said, we all agree that the new traffic light method is something we need to proceed with. If we were to approve this motion, do we need to be specific that we're going to deviate somewhat from the typical addendum process, which is you know the three meeting and take a little more time for public input? Do we need to specify that in the motion?

CHAIRMAN GEER: Toni.

MS. KERNS: If you're not ready to initiate the addendum you don't have to do that today. You guys can wait and do your public process. Get this information. Then come back to the Board and figure out how you want to move forward. You may get information from the public and decide you want to do something that requires an amendment.

I can't predict what the Board will want to do. But you don't have to initiate. But Lynn, no you don't have to put in the motion the timeframe in which you do this. Oftentimes we skip a meeting in between, in order to do analyses in order to draft the addendum. It's just a matter of on record saying that here is the timeline that we're working on.

CHAIRMAN GEER: I've got John then Lynn and Adam.

MR. JOHN CARMICHAEL: Yes, from trying to catch up with this and see what's going on; it definitely seems like we need to slow down and figure out what we're trying to do. I certainly learned more about the traffic light in relation to management just now with the favored substitute. We have this early discussion that we need some sort of tapping the brakes or backstopping or general broad action perhaps.

But then the traffic light seems to lend itself to more of the right here and now type of actions that the Board doesn't seem to think is the appropriate move. I think this needs a slower consideration to figure out what do you do with the traffic light? When the traffic light says you're triggering, what do you do? Our current plan apparently doesn't describe that well enough.

But I also think as Lynn started out. There needs to be, to go out and do this addendum, we need to get the feedback and we need to be on the same page, which says we need to know what the goal is. If anything it would seem that in October we need to maybe if the states can go out and get some feedback, discuss what the goal would be of the addendum and the management, and certainly one is to define what you do when you trigger a traffic light.

But we'll have to put that in terms of long term type things, instead of the short term which it really seems to be geared to. To me that is kind of a challenge; and it might take the PDT having to hear from the state feedback as to what the tolerance is, or what do people even perceive as the need? Then we can maybe go from there.

CHAIRMAN GEER: Then I had Lynn and then Adam. All right Lynn, Adam.

MR. NOWALSY: What are the recommendations from staff versus the merits of voting this motion down, postponing it again,

or adding some text to it to indicate that we need this time to go out to the public, or substitute for it to go ahead and let the public know what we're doing?

CHAIRMAN GEER: Okay, Bob.

EXECUTIVE DIRECTOR BEAL: Well, you know it does sound like there is a consensus building to slow things down and think about it and hear from the public a little bit. I would almost recommend, it's up to the group obviously, but postpone this again until the annual meeting in October.

In the meantime states can make an effort to reach out to their fishing public and see if they can find any folks that are interested in spot and croaker and get some feedback on that. I would suggest that we as staff try to get the AP together, or APs? It's one AP, one South Atlantic AP, right? Yes so the Advisory Panel together and talk about these.

I also think you know online survey and maybe a couple webinars; something sort of this multi-faceted approach to reach out to the public and get some perspective on what's going on out there, what they would like to see as far as management. Bring that back to the October meeting, and then based on that knowledge hopefully substantial knowledge.

This Board can then decide where to go. That would just be my recommendation, sort of this multi-pronged approach between now and October trying to get some data and feedback from the public, and just postpone this again until you get back together at the annual meeting. Just hearing what you're saying that seems to be maybe one way out.

CHAIRMAN GEER: I would have a question about that. Do we want to postpone or do we want to turn this down and start over; because if we postpone it we have to bring it back up at the next meeting. It's just kind of leaving it out there. We can always have a motion later on.

EXECUTIVE DIRECTOR BEAL: Sure, yes I think either approach is similar, you know. You'll get what you get from the public and you can decide where to go at the next meeting.

CHAIRMAN GEER: I had Adam and then Marty.

MR. NOWALSKY: I just wonder if another seven to eight weeks is enough time to get the information we need. This was initiated in May, three months ago. I think it's quite clear that some of these conversations have already been occurring; but yet we don't have that information now. I'm not sure the annual meeting would give us enough time to simply postpone until then; and might encourage me to go in the direction of moving this question, voting on it, and then should it not pass taking it up at some future date.

CHAIRMAN GEER: All right, we've been going around on this so I think. Marty, you have the last words.

MR. MARTIN GARY: I don't want to muddy the waters. Thanks, Mr. Chairman. I like what Bob just suggested, and I appreciate what Adam just said. I can't speak for any other jurisdictions other than my own. We have this ongoing conversation with our constituents, and it's always is anything being done about spot and croaker, same thing over and over and over.

We don't see them. They remember the hay days, and I think they understand there are some cyclical components to this. But they saw what they had at what point and it's not been good since then. They keep asking, are you guys doing anything about this? I say it is being discussed; so just from our perspective, I like what Bob said. It isn't a problem for us to between now and the annual meeting to meet with our advisors and talk to them and come back. But I appreciate what Adam said. Maybe for the other states it's a little more problematic. But I like the idea of postponing. I'm not sure when we revisit it, but I would be supportive of that.

CHAIRMAN GEER: A whole bunch of hands going up, let's go with Lynn then Roy, Chris.

MS. FEGLEY: I was just going to say that I would be in favor of voting this motion down and starting again, and allowing us. You know we have had a conversation in Maryland, but what we haven't provided is any sort of real tangible, okay this is actually what we could do in terms of actual regulatory ideas.

I think those are the conversations that we need to start having. As somebody said, we may all come back and find that we are considering something more appropriate for an amendment. If we come back with information, I think we just need to get the information and start over. We just have to be committed to going forward with it.

CHAIRMAN GEER: Then I had Roy.

MR. MILLER: I hear what Lynn is saying, and I also heard what Bob said. I'm not sure that voting this motion down sends the right message. Postponing action is a reasonable alternative. In terms of proactive things we can do between now and when we next take up this motion again, certainly we can cut and paste information that is already available to us, to show what each state does in the way of management measures for spot and croaker, if any for spot.

We can have that in front of us and be able to hand that to the general public. We could have a list of potential management responses to triggers being tripped. We know that some, particularly for the Mid-Atlantic already tripped using the traffic light analyses; presuming we are going to continue with the traffic light analyses.

You know having it on paper, ready to distribute to the public to get their feedback would be beneficial, I think. Give them a heads up; these are our concerns. These are the things we could do, and have that available to us when we

next take up this motion. That's kind of my recommendation.

CHAIRMAN GEER: Chris.

MR. BATSAVAGE: I think a lot has already been said what I was thinking. But getting to the timing of the public hearings and when we take this back up again. Going back to comments I had earlier about trying to characterize the fisheries in our state, each of our states. It is going to take a little bit of time.

You know we just started talking about going, reaching out to our stakeholders. From my perspective I think I'll need to go back home and talk to our staff to see what's feasible, see existing meeting schedules for our advisory committees for instance, getting the information together. Again, we're maybe more than tapping the brakes right now. I think we need to do a little more planning to figure out the path forward; as far as moving ahead with meetings, what is the expectation of getting these done. What do we hope to get out of it? There so almost afraid to say assembling a workgroup to talk about this more after this meeting. But I think there are still a lot of questions as far as timing overall right now.

CHAIRMAN GEER: John.

MR. CLARK: I think I'll be nulling out with Roy here, because I think we should wait on this. This just reminded me of another sciaenid whose abundance seems to be controlled by factors not related to fishing; weakfish. We took action years ago, they haven't come back. Now we get complaints about why did you cut it back?

The few times I'm out there and there are weakfish, I can only keep one. I mean the public will obviously, when these actions don't bring the stock back, which they may very well not, because we don't know why they are crashing. It could just be something beyond our control. I don't see any reason to hurry on this.

CHAIRMAN GEER: Okay. All right, we will need a motion if we want to postpone again, or to vote this down. I'm not seeing any hands going up. **Call the vote. It's a postponed motion from last meeting; move to initiate the addendum to the spot and croaker fishery management plans that incorporates the new traffic light analyses and the management response to those analyses. Motion by Mr. Batsavage and seconded by Mr. Gary. All those in favor raise your right hand; all those against, null votes, abstentions, the vote fails 0 to 8 to 1 to 2.**

All right well thank you very much for that lively discussion; and we will be taking this up and everyone needs to go to their states, and that is the key to this. We need to go out and communicate to our stakeholders; as Marty was saying, people are asking what's happening with spot and croaker.

Why aren't we doing anything; but starting to have those conversations, so we can come back to this table with some thoughts and some ideas. Thank you very much for that and we're moving on.

UPDATE OF THE REVISED SEDAR 58 SCHEDULE

CHAIRMAN GEER: We're going to go right through our Item Number 6, which is lunch; because I'm sure it's not out there yet, and we'll go to Item Number 7, which is the update of the revised SEDAR 58 Schedule, and that is on Page 36 of your materials. Mike.

DR. SCHMIDTKE: As you all are probably very aware, MRIP updated their estimates of recreational catch and landings earlier this year. With that information SEDAR has decided to push back the activity for the Cobia SEDAR 58 Stock Assessment. The new dates are shown up on the screen that in effect is about two months.

Everything is pushed back about two months from when it was originally scheduled. But the main highlights are shown there on the screen.

The date that the Board would have a final document ready to review and to potentially respond to would be February of 2020. I just wanted to make the Board aware of that date change.

REVIEW COBIA TECHNICAL COMMITTEE REPORT ON RECREATIONAL LANDINGS

CHAIRMAN GEER: Are there any questions to this? Moving on to Item Number 8, which is the review of the Cobia Technical Committee report on recreational landings.

DR. SCHMIDTKE: Our Technical Committee has had a lot of turnover in the last couple months especially. We have lost both our Chair and maybe we could potentially have some other movements, so right now I'm going to just give the Technical Committee report; and we will have a new cobia TC Chair established by the next meeting.

In February of this year the TC was tasked with evaluating recreational management using pounds and numbers of fish, and providing a recommendation on alternative techniques. One that was specifically talked about was done with black sea bass; and looking into some smoothing techniques, things of that nature.

The TC addressed this with three conference calls; and the main conclusions from each of those calls are listed there on the screen. The first one they decided that they needed more information on how MRIP conducts their estimation process, in order to fully evaluate any type of smoothing or outlier analysis or anything like that.

The second call was a call with MRIP staff. We had Dr. Van Voorhees, as well as John Foster and Richard Cody on the phone; and they answered some questions about the MRIP estimation process, specifically as it pertains to cobia. Upon review of the information provided on that call, the TC was then able to form some conclusions and recommendations for the Board.

The TCs recommendation is that if it is practically feasible that management be based on numbers of fish rather than pounds. This removes additional error that is associated with either MRIP or the Southeast Fisheries Science Center; whichever average weight technique is being considered applying an average weight, especially when that average weight will be based on either a small sample size or a sample that is grouped among multiple states or multiple years.

The TC did not see any type of violation of MRIP survey design in 2015 or '16, when cobia recreational landings were very high; thus they did not find any justification for altering these estimates via smoothing or outlier techniques. One of the main points made by the TC, and that was conveyed to the TC with that call with MRIP is that if those high years are moved, you also have to give some consideration that there are low outliers, in which the lows of 2011 or 2012 would potentially be looked at for removal as well.

It was reiterated that MRIP is best suited for evaluating landings trends as opposed to the year-to-year effects; and there has already been action taken related to cobia through a commission to account for this using the current three-year-evaluation process as opposed to evaluating landings on that year-to-year basis.

The TC also recommended the use of alternative metrics for stock monitoring; such as those from age or length data. For example, one of these could be evaluating trends in age distribution over time. This would require states that don't have programs collecting this type of data to begin collections. This information would not be intended to replace any type of information coming out of MRIP; as far as the catch estimates. But it would be more to provide context to any management actions that are taken in response to MRIP estimates. This information was also reflected by the Cobia Plan Development Team; and it is incorporated as a topic in the Public

Information Document for draft Amendment 1. It will be brought up later on in our meeting today as well. But that is the end of the TC report; and I can take any questions on that.

CHAIRMAN GEER: Any questions for Mike on this topic? Chris.

MR. BATSAVAGE: I might have missed this. I apologize in advance if I did. Under the scenario of managing by numbers of fish, would we be converting basically the pounds in the numbers in a similar manner how we do that for black sea bass and summer flounder?

DR. SCHMIDTKE: Under the current FMP there would need to be some type of conversion; because the recreational harvest limit is in pounds. There would need to be some numbers/pounds conversion there. But I think that kind of the spirit of the TCs tasking was for more of the longer term view and in light of the draft Amendment that is underway right now.

The potential to change the management regime from an evaluation of coastwide poundage limit to something else; and if that be some type of numbers limit or something like that. But the TC was more trying to say that the effect of the harvest is better evaluated by the numbers of fish that are removed by the fishery; rather than the poundage. This more associated more error associated with the poundage.

CHAIRMAN GEER: Any other questions for Mike on this? Let's move forward.

**CONSIDER DRAFT PUBLIC INFORMATION
DOCUMENT FROM AMENDMENT 1 FOR COBIA
FOR PUBLIC COMMENT**

CHAIRMAN GEER: Up to Item Number 9, which is Consider the Draft Public Information Document from Amendment 1 for Cobia for Public Comment; and Mike, you have the floor again. This is Page 39 of your materials; if you're following along.

DR. SCHMIDTKE: First I'm going to just do a review of the amendment process, where we are in our timeline, and then I'll go into some of the items talked about in the Public Information Document. The first step of our amendment process is a public information document. It's the Commission's way of scoping.

That provides the public the opportunity to identify issues, management alternatives, contribute to any type of topics that are not currently being considered. They are able to provide input in that way. After the public information document has gone out, public hearings are held; and then a draft amendment is then developed in light of the information that's received during those initial public hearings.

The draft amendment is a more focused document; which lays out a suite of options; and those options can then be selected for the final amendment. There is another opportunity for the public to comment on the options that are listed in the draft amendment as well, before final Board review.

The timeline that we're currently on for draft Amendment 1 is to have a final Board review in August of 2019. In the aftermath of this meeting, should this document be approved for public comment, we would hold public hearings in the time period between now and annual meeting, and there would be a review of the public comment at annual meeting. The written public comment period would begin shortly after this meeting; as long as there is time there to incorporate any changes that the Board has for the Public Information Document. We would then send that out and we would begin scheduling public hearings. The dates that you see there for the public hearings are approximate.

There is some flexibility in those; depending on whether we need to have the public comment summary completed in time for briefing or supplemental materials in the next meeting. But that would be around the timeframe in that

mid-September area that we would be looking to schedule public hearings in the various states.

The issues that are covered by the PID as of now are recommended management for federal waters, a harvest specification process, and biological monitoring. The Board is able at this meeting to add or to edit these topics before the PID goes out for public comment. I'll give a bit of background on each of these issues; and then pose some of the questions that are listed in the PID that we're hoping to get Board and public input on.

The first topic is recommended management for federal waters. The motivation for this is that several of the management measures that are listed in the current FMP are directly tied to a federal FMP. For example, the RHL is set equivalent to 99 percent of and monitored concurrently with the recreational allocation of the federal ACL.

With the action that has been taken by the Gulf and South Atlantic Councils, they've approved the removal of Atlantic cobia from the coastal migratory pelagics FMP, and that is now pending secretarial review. But should the secretary approve that removal as well, there would no longer be a federal plan for cobia. That federal ACL for Atlantic cobia would no longer exist; and would need to be replaced with something else.

The Atlantic Coastal Act allows the Commission to recommend measures for promulgation in federal waters. NOAA Fisheries would be the body that implements these measures. There is a need to address both commercial and recreational measures in the FMP. There has been a lot of focus with the cobia fishery on the recreational side of things; but there are both commercial and recreational measures that would need to be addressed in a draft amendment.

There is a list for both the recreational and commercial fisheries of the types of measures

that are currently in place; and those are some of the things that could be considered for implementation in federal waters. One of the big questions is the process of how these measures should be implemented in federal waters; for example, should separate measures be considered for federal versus state waters.

Should state regulations be essentially extended latitudinally by sectioning off portions of federal waters with different regulations; or should vessels fishing in federal waters be subject to regulations of their state of landing or some other type of method of implementation? That is a question that we're posing to the Board and to the public for input. The second topic covered in the PID is the harvest specification process. There has been a Board desire to consider alternative management strategies to a coastwide quota type of system that is in place right now. SEDAR 58 is underway. It will be released along the timeline that was specified earlier. This harvest specification process would really allow the Board the ability to select from a range of management measures and response to the assessment; as well as potentially move away from a coastwide quota type of system, if that is the Board's desire. This specification process would need to be established for, again both commercial and recreational fisheries for cobia.

There are several questions listed in the PID along with this; but some of those to highlight are what measures should be considered with this specification process? How often should measures be set? Should they be set around an annual basis, or right now there is kind of a three-year-evaluation process of landings; should that timeframe be applied to a harvest specification process?

Should there be an annual harvest limit for both or either fishery? Should harvest be evaluated in pounds or numbers? Then there are some questions about commercial permitting that have been raised. They were somewhat inherited with the cobia fishery; as it's being transferred to the Commission from the

Council, in the sense that there is some confusion about what defines a commercial fisherman when it pertains to cobia.

Are commercial, and this is an area that we would probably look towards the Board and those states that have had confusion along the lines of their commercial permitting for input on what should be done at the state level versus what should be done at the Commission level along those lines. The final topic that is addressed in the PID is biological monitoring.

It was brought up by the Technical Committee in evaluating the impact of recreational landings. The gist of it is again, to provide context to the Board in response to, well in addition to landings information that would also give some information on the health of the stock. This could potentially be implemented through biological monitoring requirements; as are seen in other FMPs.

A question posed to the Board and the public is should the FMP require biological sampling; for which fisheries should that be required, and what would the requirements or the specifications of this sampling process be? Finally just kind of a cover all, if the Board has any other issues that are not addressed in the Public Information Document that you would like to see added, those are things that can be discussed and added in the aftermath of this meeting. That's all I have.

CHAIRMAN GEER: Thank you very much, Mike and Robert has his hand up.

MR. BOYLES: Mike, great presentation. Brave new world as we enter into this realm with cobia management. I just wanted to put on record, I'm a little concerned about the requirements for biological monitoring; with respect to you know this is a rarely encountered species.

I certainly don't dispute the fact that we need to have some provisions to get a handle on what's going on with the stock. But I am

concerned about sampling availability. I would submit to you South Carolina anglers, and certainly our staff, you know have spent a lot of time in the water chasing cobia, sometimes to little avail. I just would hate to get us painted in that box.

CHAIRMAN GEER: Robert, I think some of that was I think along the lines of maybe the carcass recovery program that's in Georgia, the freezer programs that we have in Virginia; those kinds of things where it's by opportunity. If states have those kind of programs already, maybe adding cobia to that list of species that could be collected through that program. That is one option that is relatively, if the state already has one of those programs, relatively easy to initiate for the species. Are there any other comments or additions? Krista.

MS. SHIPLEY: This is pretty minor. Would it be possible to get Atlantic or Atlantic Migratory Group or something like that into the title of the document, just to alleviate any confusion? I know that it's in the first paragraph of the document; but I think it would be great to have that in the title.

CHAIRMAN GEER: That can be done, thank you. Are there any other comments, and additions anybody wants to add to the PID? Okay we need to have an action on this. Do we want to consider this for public comment, this PID? I don't see any hands go up. Lynn.

MS. FEGLEY: You need a motion. **I would move to approve the PID, there we go that.**

CHAIRMAN GEER: I see a lot of hands go up. It's getting close to lunch; seconded by Spud Woodward. **Move to approve the Public Information Document for Draft Amendment 1 to the Cobia Fishery Management Plan for Public Comment; motion by Ms. Fegley, seconded by Mr. Woodward, hearing no opposition approved by consent.** Thank you for that.

I'm going to in the sake of time, unless somebody has an objection to it. Oh, I'm sorry. I have to say that it was approved without objection. I apologize. Thank you.

Fisheries Management Plan Reviews and State Compliance Reports for Croaker and Red Drum

If there is no objections, Item Number 10 the Fisheries Management Plan Reviews and State Compliance Reports for Croaker and Red Drum.

I'm going to suggest we approve those via e-mail. Are there any objections to that?

REVIEW AND POPULATE ADVISORY PANEL

CHAIRMAN GEER: So, we're going to move on to Item Number 11. Is Tina here? We have a nomination for a new AP member from Virginia, Craig Freeman. Do you want me to do it? We have a new member, Craig Freeman who is an Advisory Panel member. You have his information in your packet. Joe Cimino when he was at Virginia kindly recommended him; and so we need to approve him to the Advisory Panel, so I need a motion. Joe.

MR CIMINO: **I think it's only fitting, Mr. Chair. I move to approve Mr. Freeman.** As you can see from the packet, he really checks all the boxes here. I think he would be a great addition.

CHAIRMAN GEER: Do we have a second to that. Lynn Fegley. Move to approve Craig Freeman as a member of the South Atlantic Board Advisory Panel. Motion by Mr. Cimino, seconded by Ms. Fegley, is there any opposition to this motion? **The motion is carried.**

ELECTION OF VICE CHAIR

CHAIRMAN GEER: All right, getting us back on schedule, the last item we have is election of a Vice Chair. Mr. Woodward.

MR. A. G. "SPUD" WOODWARD: **It is my privilege to nominate the sage of the low country, Robert Boyles, Jr.**

CHAIRMAN GEER: Second the motion by Mr. Haymans. We will close nominations; any opposition? Welcome aboard, Robert, and I look forward to many Jeffersonian and I like the Lombardi.

MS. KERNS: We need someone else to second it.

CHAIRMAN GEER: He did. Oh same state, I'm sorry. Malcolm. I apologize for that. Well, thank you again, Robert, we appreciate it.

OTHER BUSINESS

CHAIRMAN GEER: Is there any other business to come before the Board? Hearing none, all right so the main thing is I want everyone to go back to your states, talk about spot and croaker.

As far as the PID, please as soon as possible talk to Mike for scheduling public hearing dates. Do that as soon as possible. You'll be getting an e-mail from us concerning the red drum and Atlantic croaker approval of the management plan and state compliance. Is there anything else to come before this Board? Mike.

DR. SCHMIDTKE: Sorry, just one more thing. This was at the end of the red drum presentation, so that is why it wasn't addressed directly. The Assessment Science Committee tasked the Red Drum Stock Assessment Subcommittee with several pieces of guidance coming out of the last red drum assessment. There has been quite a bit of changeover for the Red Drum Stock Assessment Subcommittee; so that needs to be repopulated, so that they can start addressing some of the guidance from the ASC.

That is something that can be taken care of by e-mail. But I just wanted to make you aware of that. We're going to be looking at particularly areas for tagging information as well as the use of stock synthesis related to red drum. Please be mindful of that. Watch out for your e-mail, and talk to your state scientists or anybody else

that you would be interested in putting on that SAS.

ADJOURNMENT

CHAIRMAN GEER: Okay, anything else; motion to adjourn, thank you?

(Whereupon the meeting adjourned at 12:10 o'clock p.m. on August 9, 2018)

Atlantic States Marine Fisheries Commission

PUBLIC INFORMATION DOCUMENT

**For Draft Amendment 1 to the Interstate Fishery
Management Plan for Atlantic Migratory Group Cobia**



August 2018

Vision: Sustainably Managing Atlantic Coastal Fisheries

**The Atlantic States Marine Fisheries Commission seeks your input on the initiation of
Amendment 1 to the Interstate Atlantic Cobia Fishery Management Plan**

The public is encouraged to submit comments regarding this document during the public comment period. Comments must be received by **5:00 PM (EST) on October 4, 2018**. Regardless of when they were sent, comments received after that time will not be included in the official record. The South Atlantic State/Federal Fishery Management Board will consider public comment on this document when developing the first draft of Amendment 1 to the Fishery Management Plan.

You may submit public comment in one or more of the following ways:

1. Attend public hearings held in your state or jurisdiction, if applicable.
2. Refer comments to your state's members on the South Atlantic State/Federal Fishery Management Board or South Atlantic Advisory Panel, if applicable.
3. Mail, fax, or email written comments to the following address:

Dr. Michael Schmidtke
Fishery Management Plan Coordinator
Atlantic States Marine Fisheries Commission
1050 North Highland Street, Suite 200A-N
Arlington, Virginia 22201
Fax: (703) 842-0741
mschmidtke@asmfc.org (subject line: Cobia Amendment PID)

If you have any questions, please call Dr. Michael Schmidtke at 703-842-0740.

**YOUR
COMMENTS
ARE INVITED**

The Atlantic States Marine Fisheries Commission (Commission) is developing an Amendment to the Interstate Fishery Management Plan (FMP) for Atlantic Migratory Group Cobia (Atlantic cobia). The Commission, under the Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA), is charged with developing FMPs that are based on the best available science and promote the conservation of the Atlantic stock throughout its range, from Georgia through New York¹. The states of New Jersey through Florida, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries), the United States Fish and Wildlife Service (USFWS), and the South Atlantic Fishery Management Council (SAFMC) participate in the management of Atlantic cobia via the Commission's South Atlantic State/Federal Fisheries Management Board (Board).

This is your opportunity to inform the Commission about changes observed in the fishery, actions you feel should or should not be taken in terms of management, regulation, enforcement, or research, and any other concerns you have about the resource or the fishery, as well as the reasons for your concerns.

**WHY IS THE
ASMFC
PROPOSING
THIS ACTION?**

At its May 2018 meeting, the Board initiated the development of Amendment 1 to the interstate Cobia FMP to reflect the removal of Atlantic cobia from the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region (CMP FMP) and establish recommendations for measures in federal waters, i.e. the Exclusive Economic Zone (EEZ; 3-200 miles from the shore).

In June 2018, the SAFMC and Gulf of Mexico Fishery Management Council (GMFMC) approved Regulatory Amendment 31 to the CMP FMP, which would remove Atlantic cobia from the CMP FMP (SAFMC, 2018a). This means that, pending approval by the Secretary of Commerce, the SAFMC will no longer manage Atlantic cobia, and the Commission will have sole management authority. The SAFMC is the management body that previously recommended the annual catch limit (ACL) and other measures used by NOAA Fisheries to manage federal waters. Additionally, the Recreational Harvest Limit (RHL) from the interstate FMP is currently dependent on the federal ACL, and state commercial fisheries are required to close if a federal closure occurs due to the commercial ACL being met. To accommodate the SAFMC's action to remove Atlantic cobia from the CMP FMP, the Commission will establish a mechanism for recommending management measures to NOAA Fisheries for implementation in federal waters through authority and process defined in the ACFCMA.

¹ Cobia caught along the east coast of Florida are part of the Gulf of Mexico Migratory Group, which is managed by the South Atlantic Fishery Management Council in cooperation with the Gulf of Mexico Fishery Management Council.

The Commission would also like to explore mechanisms for a harvest specification process. A harvest specification process, in general terms, would allow the Board to periodically (over an annual or multi-year time period) set management measures from a range of approaches defined in Amendment 1. This would ideally provide increased flexibility for states to establish or revise management measures in response to certain changes in the fishery or stock status without needing to alter the interstate FMP through an addendum or amendment process.

WHAT IS THE PROCESS FOR DEVELOPING AN AMENDMENT?

The publication of this document and announcement of the Commission’s intent to amend the existing interstate FMP for Atlantic cobia is the first step of the formal amendment process. Following the initial phase of information gathering and public comment, triggered by this Public Information Document (PID), the Commission will evaluate potential management alternatives and the impacts of those alternatives. The Board will also seek to narrow the number of proposed management options, especially for measures that would be recommended for implementation in federal waters. The Commission will then develop Draft Amendment 1, incorporating the identified management options, for public review and comment. Following consideration of public comment, the Commission will specify the management measures to be included in Amendment 1, as well as a timeline for implementation. In addition to issues identified in this PID, the Draft Amendment may include other issues identified during the public comment period for this PID.

The process and current timeline for completion of Amendment 1 is as follows:

<u>Step</u>	<u>Anticipated Date</u>
Approval of Draft PID by the Board	Aug 2018
Public review and comment on PID <i>Current step</i>	Aug – Oct 2018
Board review of public comment; Board direction on what to include in Draft Amendment 1	Oct 2018
Preparation of Draft Amendment 1	Oct 2018 – May 2019
Review and approval of Draft Amendment 1 by Board for public comment	May 2019
Public review and comment on Draft Amendment 1	May – Aug 2019
Board review of public comment on Draft Amendment 1	Aug 2019
Review and approval of the final Amendment 1 by the Board, Policy Board and Commission	Aug 2019

WHAT IS THE PURPOSE OF THIS DOCUMENT?

The purpose of this document is to inform the public of the Commission’s intent to gather information concerning Atlantic cobia and to provide an opportunity for the public to identify major issues and alternatives relative to the management of this species. Input received at the start of the amendment development process can have a major influence on the final outcome of the amendment. This document is intended to solicit observations and suggestions from fishermen, the public, and other interested parties, as well as any supporting documentation and additional data sources.

To facilitate public input, this document provides a broad overview of the issues already identified for consideration in the amendment; background information on the Atlantic cobia population, fisheries, and management; and a series of questions for the public to consider about the management of the species. In general, the primary question on which the Commission is seeking public comment is: **“How would you like management of the Atlantic cobia fishery to look in the future?”**

WHAT ISSUES WILL BE ADDRESSED?

The primary issues considered in this PID are:

- Recommended Management for Federal Waters
- Harvest Specification Process
- Biological Monitoring

ISSUE 1: Recommended Management for Federal Waters

Background: The interstate FMP, approved in November 2017, was the Commission’s first involvement in Atlantic cobia management (ASMFC, 2017). The interstate FMP initially established management measures designed to complement those of the CMP FMP. However, during the development of the interstate FMP, the SAFMC initiated Amendment 31, which removes Atlantic cobia from the CMP FMP. Amendment 31 was passed by the SAFMC and GMFMC in June 2018 (SAFMC, 2018a) and currently awaits final approval by the Secretary of Commerce.

Several measures in the interstate FMP were designed to match measures from the CMP FMP or included language that directly connects the two FMPs. For example, the interstate FMP’s RHL is “set equivalent to 99% of and monitored concurrently with the recreational allocation of the federal ACL”. In addition, “should the coastwide [commercial] ACL be met, a coastwide commercial closure will occur” (ASMFC, 2017). The removal of Atlantic cobia from the CMP FMP means that the SAFMC will no longer recommend a federal ACL for approval by NOAA Fisheries. Thus, the Commission must amend these and other portions of the interstate FMP to allow for future management of Atlantic cobia in the absence of a federal FMP.

In instances when there is a commission FMP for a species but no federal FMP, federal regulations for that species can be promulgated by NOAA Fisheries.

Specifically, the Commission recommends compatible management measures for commercial and recreational fishing in federal waters, as authorized by the ACFCMA (Sec. 5103). These measures may include those currently in the interstate FMP, such as minimum size, bag or possession, vessel limits, and annual harvest limits in pounds, but other management structures (as data permits), such as harvest limits in numbers of fish or management without annual harvest limits, could also be investigated for consideration.

Public Comment Questions:

- What types of regulations should the Commission recommend be implemented into federal waters, e.g. quota, bag limits, seasons, size limits?
- Should vessels fishing in federal waters be subject to cobia regulations of their state of landing, or
 - Should state jurisdictional boundaries be extended by latitude to apply federal regulations in sectioned areas of federal waters, or
 - Should a separate set of regulations be developed specifically for fishing in federal waters, or
 - Should the Commission consider some other strategy?

**ISSUE 2:
Harvest
Specification
Process**

Background: With the Commission assuming sole management authority for Atlantic cobia, the Board has also expressed a desire to consider alternative management strategies to those currently in place. Additionally, a stock assessment (SEDAR 58) is scheduled for completion shortly after the Board's consideration of Amendment 1 for final approval. A harvest specification process that includes several management options would maximize the Board's flexibility to react to the results of SEDAR 58 and future assessments or changes in the fishery in a timely manner. Ideally, this process would define measures that could be periodically considered for implementation through Board approval. Additionally, it could specify potential management responses if the stock were determined by an assessment to be overfished (where the population is too small to support a reference level of harvest) or experiencing overfishing (removal of fish faster than they are replaced through reproduction).

Several management strategies, some used in current management of Atlantic cobia, could be redefined or introduced for future consideration in the harvest specification process, including:

- Management through coastwide or state size, bag, or possession limits, seasons, or other limits
- Establishment and allocation of a Commission-defined coastwide harvest limit to recreational and commercial sectors
 - Allocation of coastwide recreational and commercial harvest limits to states or regions

- Management without a coastwide limit on harvest, such as fishing mortality-based management in which measures based on a target fishing mortality rate are set following an assessment and are left unchanged until the next assessment shows whether these measures resulted in a population increase or decrease; after which measures may be adjusted.
- Setting commercial and recreational management measures for one or multiple years
- Evaluation of recreational landings in numbers of fish rather than pounds
- Consideration of alternative data sources, such as state sampling programs, for evaluating stock health and management between assessments

Public Comment Questions:

For Both Commercial and Recreational Fisheries

- If a coastwide limit continues to be considered, how should it be set?
 - How should it be allocated?
 - To the commercial and recreational sectors?
 - To the states?
- What options should be considered if the stock status is overfished or overfishing is occurring or if harvest limits/quotas/targets are exceeded?
- Should management regimes without coastwide harvest limits be considered? If so, what could those look like?

For the Recreational Fishery

- What recreational management options should be allowed for consideration in the specification process?
- Should the current 3-year time period for evaluating recreational harvests against management targets be reduced?
- Should recreational harvests be evaluated in numbers of fish or pounds?

For the Commercial Fishery

- What commercial management options should be allowed for consideration in the specification process?
- Should commercial measures be set to remain in place for multi-year periods?
- Should a coastwide landings permitting mechanism be established through the states for commercial harvest of Atlantic cobia in federal waters?
 - Or, should the Commission recommend that NOAA fisheries require a federal permit to harvest cobia commercially in federal waters?

**ISSUE 3:
Biological
Monitoring**

Background: Biological monitoring programs are those that collect information such as fish length, weight, age, and sex. These attributes help describe the population structure, and by studying how they change over time, managers can make more informed regulatory decisions. For example, one of Virginia’s biological monitoring programs, the Marine Sportfish Collection Project, collects donated cobia carcasses to track characteristics of harvested fish over time. Information collected by this program was used to calculate average weights that informed Virginia’s 2018 regulations.

A critical component of biological monitoring programs, particularly those driven by citizen efforts (e.g. freezer donation programs), is having consistent participation from the fishing community. If the fishing community’s participation is only high during the beginning of a program or fluctuates considerably from year to year, the data become less reliable. However, monitoring programs also provide an opportunity for managers, stakeholders, and scientists to cooperate in data collection, communication, and management of the fishery.

Public Comment Questions:

- Should states be required by the FMP to collect biological data on cobia?
- Should the same biological monitoring requirements be required of all states or should requirements vary based on the size of the states’ fisheries (for example 1 fish length per 1,000 pounds harvested)?
- Should biological monitoring be conducted for the commercial sector, recreational sector, or both?
- What types of biological monitoring programs would you participate in? Examples include freezer donation or weigh-in stations.

**BACKGROUND
INFORMATION
ON THE MGMT
& STOCK
STATUS OF
ATLANTIC
COBIA**

Summary of Fishery Management

The Commission began coordinating interstate management of Atlantic cobia (*Rachycentron canadum*) in state waters (0-3 miles) in 2018. Management authority in federal waters lies with NOAA Fisheries. As outlined in the Commission’s Charter, fishery management plans shall be designed to prevent overfishing throughout the species’ range, be based on the best available science, minimize waste of fishery resources, protect fish habitat, provide for public participation, and allow for fair and equitable allocation among the states.

The Commission’s interstate Cobia FMP, approved in November 2017 (ASMFC, 2017), was developed to complement Atlantic cobia regulatory measures from Framework Amendment 4 to the SAFMC’s CMP FMP (SAFMC, 2016). Specific measures established by the interstate FMP for state waters include commercial size and possession limits and adherence to the commercial allocation of the federal ACL, as well as recreational size, vessel, and bag limits and an RHL set equivalent to 99% of the recreational allocation of the federal ACL. The current commercial ACL is 50,000 pounds, and the recreational ACL is 620,000 pounds,

resulting in an RHL of 613,800 pounds (Table 1). One percent of the recreational ACL is designated to account for harvest in *de minimis* states, which are those that have historically caught minimal (less than one) percentages of the coastwide recreational Atlantic cobia harvest. Coastwide commercial size and possession limits and recreational size, vessel, and bag limits from the interstate FMP match measures from the CMP FMP, but states are able to implement more restrictive measures.

One management aspect that is unique to the interstate FMP is allocation of the RHL into state harvest targets. States that have harvested significant percentages (greater than 1% of coastwide harvest) of Atlantic cobia – currently Virginia, North Carolina, South Carolina, and Georgia – are allocated percentages of the RHL based on historical harvests (Table 1). These allocations are regarded as harvest targets, and each state must implement recreational vessel limits and seasons (as needed to achieve state targets, see Table 2), in addition to coastwide size and bag limits, to achieve their target. Harvests are evaluated against targets as an average harvest over a 3-year time period. If the 3-year average harvest exceeds a state’s target, that state is required to revise their recreational vessel limit or seasons to achieve their target in the subsequent 3-year period (ASMFC, 2017).

Under the interstate FMP, states may qualify for *de minimis* status if they harvested less than 1% of the coastwide recreational harvest in 2 of the previous 3 years. *De minimis* states may match the recreational measures of an adjacent or the nearest non-*de minimis* state or adopt a year-round 1 fish vessel limit with a minimum size of 29 inches fork length. State recreational measures used to implement the interstate FMP for the 2018 fishing year are shown in Table 2.

Table 1. Recreational harvest targets for non-*de minimis* states for the 2018 fishing year, based on a Recreational Harvest Limit of **613,800** pounds.

State	GA	SC	NC	VA
Harvest Target (pounds)	58,311	74,885	236,313	244,292

Table 2. State regulatory measures for the 2018 fishing year.

State	Recreational Measures	Commercial Measures
NJ	<i>De minimis</i> ; same as Virginia	<u>Coastwide</u> Possession Limit: 2 fish per person Minimum Size: 33 in fork length or 37 in total length Vessel Limit: 6 fish If commercial fishing in federal waters is closed, commercial fishing in state waters is also closed. <u>Deviations</u> -Virginia possession limit is per licensee rather than per person -No commercial harvest in South Carolina state waters -GA possession limit is 1 fish per person and minimum size is 36 in fork length
DE	<i>De minimis</i> ; management pending	
MD	<i>De minimis</i> ; same as Virginia	
PRFC	<i>De minimis</i> ; same as Virginia	
VA	Bag Limit: 1 fish per person Minimum Size: 40 in total length Vessel Limit: 3 fish Season: June 1-September 30	
NC	Bag Limit: 1 fish per person Minimum Size: 36 in fork length Vessel Limits/Seasons: <u>Private</u> May 1-31: 2 fish June 1-Dec 31: 1 fish <u>For-Hire</u> May 1-Dec 31: 4 fish	
SC	Bag Limit: 1 fish per person Minimum Size: 36 in fork length or 40 in total length Vessel Limits: Southern Cobia Management Zone from June 1-April 30: 3 fish Other areas: 6 fish Season: Southern Cobia Management Zone: June 1-April 30 Other Areas: Open year-round -If recreational fishing in federal waters is closed, recreational fishing in all SC state waters is also closed.	
GA	Bag Limit: 1 fish per person Minimum Size: 36 in fork length Vessel Limit: 6 fish Season: March 1-October 31	
For all instances when a bag or possession limit is not equal to the vessel limit, the more restrictive rule applies.		

**This table summarizes only those regulations that fulfill requirements of the interstate FMP. State legislative documents should be referenced for comprehensive lists of regulations.*

Summary of Stock Status and Fishery

Atlantic cobia will undergo a benchmark stock assessment in 2019 through Southeast Data, Assessment, and Review (SEDAR) 58. The most recently completed stock assessment of Atlantic cobia, SEDAR 28, determined the GA/FL border as the demarcation between the Atlantic and Gulf of Mexico stocks. A Stock Identification Workshop is currently in progress to revisit questions about the stock boundary using more recent genetic and tagging information. Preliminary conclusions of the Stock Identification Workshop identify separate Atlantic and Gulf stocks and do not disagree with the current stock boundary at the GA/FL border. Final results of this workshop, the subsequent peer review, and stock identification resolution will be available in September 2018. Preliminary reports for this process are available at: <http://sedarweb.org/sedar-58-stock-id-process>.

SEDAR 28 determined overfishing was not occurring and the stock is not overfished (SEDAR, 2013). However, information from this assessment and recent landings trends have led to concerns about future stock status. Spawning stock biomass (SSB) is a measure of the weight (from which number is easily estimated) of adult fish, capable of producing offspring for future generations. If SSB is equal to the SSB needed to produce maximum sustainable yield (SSB_{msy}), the ratio of these numbers (SSB/SSB_{msy}) would be one. A ratio greater than one indicates SSB is greater than SSB_{msy} and the stock would be expected to sustain fishing at maximum sustainable yield (MSY), while a ratio less than one would indicate the stock is not likely able to sustain fishing at MSY and could become overfished. SSB peaked in the early 1990s and, to a lesser degree, more recently in 2002 (Figure 1). However, since 2002, SSB has shown a declining trend, approaching SSB_{msy} in 2011, the terminal year of SEDAR 28. The current ACL of 670,000 pounds (including both the commercial and recreational sectors) was set as a precautionary measure in the aftermath of this assessment.

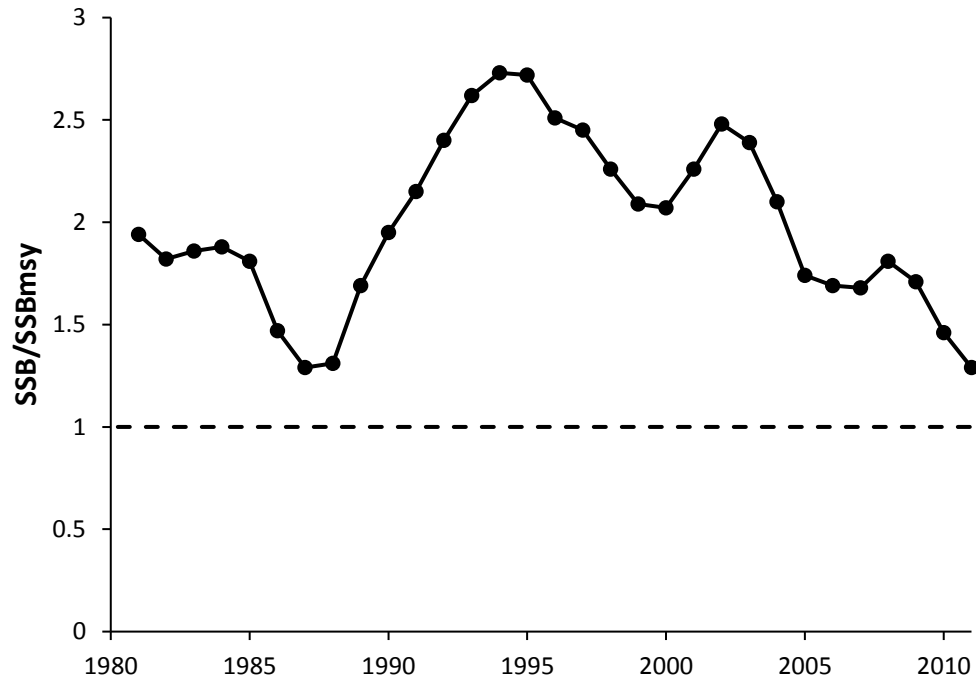


Figure 1. Cobia spawning stock biomass (SSB) relative to the MSY biomass (SSBmsy) reference for 1981-2011 (SEDAR, 2013).

The vast majority of Atlantic cobia harvest comes from the recreational sector, although the commercial sector has increased in more recent years (Figure 2). Total landings have generally increased since the 1980s. However, over the last 15 years, recreational landings have been highly variable without a strong positive or negative trend, while commercial landings have shown a more steady increase. More recently, concerns over management have been expressed due to fishing closures resulting from overages of the recreational ACL in two of the last three years and overages of the commercial ACL in each of the last three years. These overages and the inability of the CMP FMP to regulate catches in state waters, where the majority of the Virginia and North Carolina cobia fisheries occur, led to Commission involvement in cobia management through the interstate FMP.

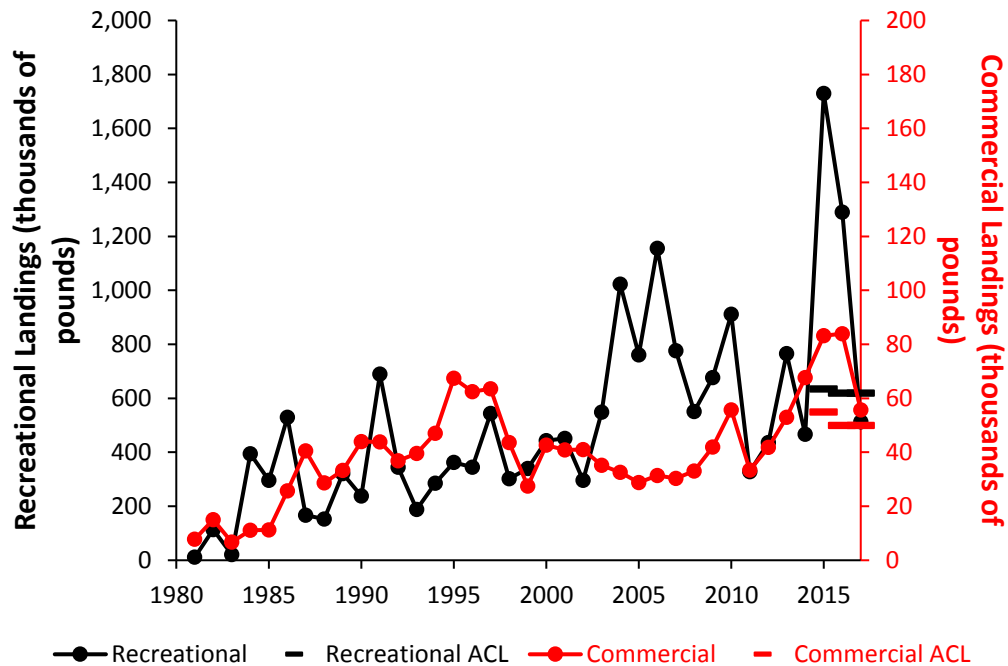


Figure 2. Recreational (black; left axis) and commercial (red; right axis) landings and recent Annual Catch Limits (ACL) for Atlantic cobia. Recreational landings were estimated using effort estimates from the Coastal Household Telephone Survey. Sources: Atlantic Coastal Cooperative Statistics Program (ACCSP) and Marine Recreational Information Program (MRIP) (June, 2018).

Distribution of Atlantic cobia landings has varied for the recreational sector but remained more consistent for the commercial sector. Proportions of annual coastwide recreational harvest vary throughout the time series, with Virginia and North Carolina harvesting the majority of Atlantic cobia in most years (Figure 3). In recent years, these proportions have been substantially impacted by recreational closures in federal waters, where Georgia and South Carolina fisheries are primarily executed, while fishing continued in the state waters of North Carolina and Virginia. Commercial harvests have historically come primarily from North Carolina and Virginia (Figure 4). In South Carolina, cobia is designated as a game fish in state waters, so all commercial harvest must occur in federal waters. In the most recent years, Virginia’s commercial fishery has grown noticeably, likely because of an exemption for its hook and line fishermen, implemented in 2014, which allowed them to keep up to 6 cobia per day instead of the two-per-licensee allowed for other commercial gears. However, as a result of the interstate FMP, that exemption was removed prior to the 2018 fishing season, so Virginia commercial landings are expected to decrease.

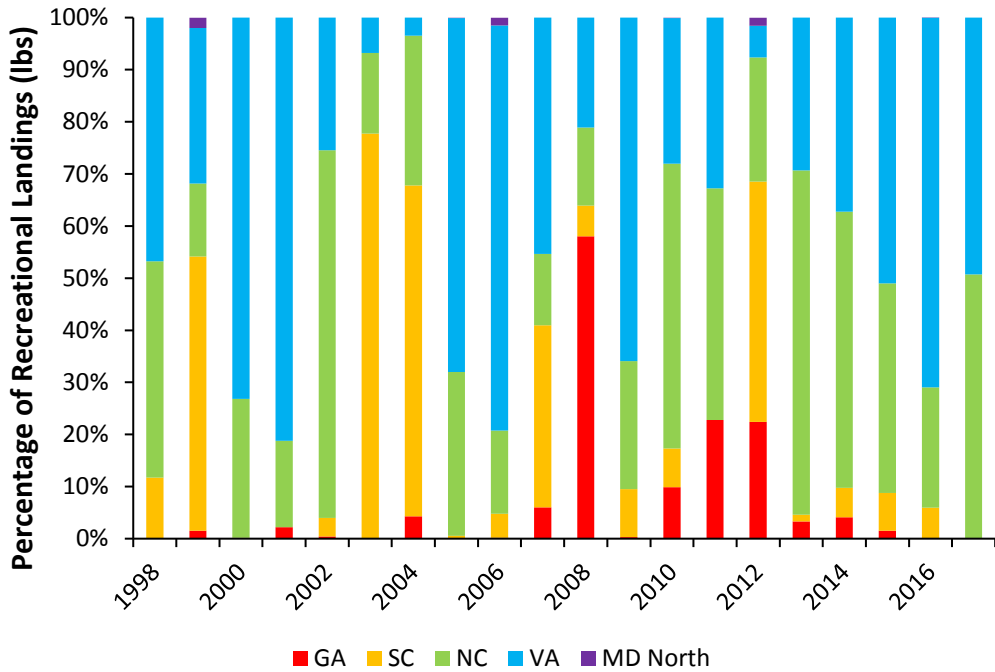


Figure 3. State/regional percentages of recreational landings of Atlantic cobia. Recreational landings were estimated using effort estimates from the Coastal Household Telephone Survey. Sources: ACCSP and MRIP (June, 2018).

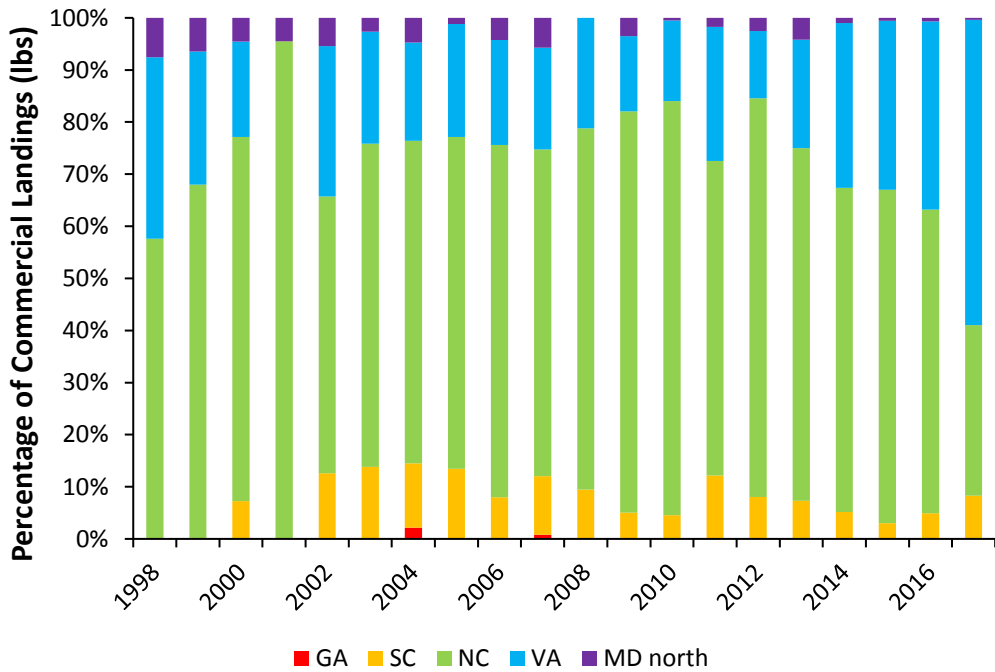


Figure 4. State/regional percentages of commercial landings of Atlantic cobia. Years with confidential landings for each state are omitted. Sources: ACCSP and MRIP (June, 2018).

Social and Economic Impacts

The following summarizes selected impact considerations that are mainly based on social and economic analyses in Chapter 4 of the Amendment 31 to the CMP FMP (see SAFMC, 2018a).

The ASMFC currently limits the Atlantic cobia RHL to the recreational Atlantic cobia ACL established by the SAFMC (ASMFC, 2017). However, if implementation of Amendment 1 leads to state level allocations based on an overall harvest level substantially higher than the current RHL, this change may create the potential for an increase in harvest of Atlantic cobia that could lead to positive short-term economic value² effects for the Atlantic cobia private recreational angler component. In addition, if for-hire trip demand increases due to Amendment 1 effects such as a higher RHL and a more predictable and consistent cobia regulatory environment, there could be beneficial aggregate economic value effects in the Atlantic cobia for-hire business component. Moreover, in some communities, it is possible that higher overall harvest levels could also translate to significant short-term local economic impact³ effects due to increases in Atlantic cobia fishing related expenditures (e.g. local spending lodging, restaurant meals, groceries, etc.) by for-hire vessel owners and crews as well as local and non-resident anglers in the recreational sector targeting Atlantic cobia (SAMFC, 2018a).

If ASMFC Atlantic cobia commercial management measures implemented in the interstate FMP are similar to the current federal CMP FMP regulations, the SAFMC (2018a) concluded that there should be no substantial near-term changes in commercial fishery economic value and economic impact effects compared to the current federal management regime. However, the SAFMC noted that it was uncertain how future ASMFC regulations might affect Atlantic cobia commercial harvest in federal waters (SAFMC, 2018a), hence making the distribution, magnitude, and direction (negative or positive) of possible economic effects unclear.

Relative to the current federal management regime, the SAFMC also concluded that the near-term social effects on the for-hire and private angler components of the recreational sector as well as the commercial sector are expected to be minimal because, in recent years, the majority of Atlantic cobia recreational and commercial harvest has occurred in North Carolina and Virginia state waters. In

² Estimates of economic value such as consumer and producer surplus should not be confused with the economic impact or contribution estimates associated with recreational or commercial fishing activities (SAFMC, 2018).

³ In this section, the term “economic impact” denotes an economic distributional analysis that estimates the aggregated economic contributions (e.g. jobs and household income) to local and/or regional economies associated with recreational or commercial fishing activities. However, these analyses should not be interpreted to represent the net impact effects if managed fish species were not available for harvest or purchase (SAFMC, 2018b).

contrast, long-term impacts on the social environment are expected to be “...highly dependent on future management measures...” implemented by ASMFC (SAFMC, 2018a) and therefore currently unknown.

While SAFMC estimates of cumulative economic effects of the federal Atlantic cobia closure actions are not available, it is apparent that these in-season closures in the federal waters by NOAA Fisheries have had a proportionally more negative economic effect on recreational and related fishing communities in Georgia and South Carolina compared to those found further north (SAFMC, 2018a). However, if ASMFC’s management measures lead to a situation such that the recreational sector based in South Carolina and Georgia have increased access in federal waters, it could possibly generate additional beneficial effects on the social and economic environments in these states.

In summary, social and economic impacts of Amendment 1 are quite dependent on management options chosen. Nevertheless, a broad goal of the shift from complementary management to management solely through the Commission is to increase flexibility and timeliness for state-level management strategies, allow for more consistent regulations, reduce fishing closures that have resulted in inequitable access to the resource, and foster a more predictable regulatory environment for both the recreational and commercial sectors.

References

- Atlantic Coastal Fisheries Cooperative Management Act, Title 16 U.S.C. §§ 5101-5108 (1993).
- Atlantic States Marine Fisheries Commission (ASMFC). 2012. Interstate Fisheries Management Program Charter. 1995. Revised February 2016.
- ASMFC. 2017. Interstate Fishery Management Plan for Atlantic Migratory Group Cobia.
- South Atlantic Fishery Management Council (SAFMC). 2016. Framework Amendment 4 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region. Charleston, SC. 160 pp.
- SAFMC. 2018a. Regulatory Amendment 31 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region. Charleston, SC. 194 pp.
- SAFMC 2018b. The Economic Contribution of Fisheries for Species Managed by the South Atlantic Fishery Management Council, Report May, 2018. Charleston, SC. 23 pp.
- Southeast Data, Assessment, and Review (SEDAR). 2013. SEDAR 28 – South Atlantic Cobia Stock Assessment Report. Available online at: http://sedarweb.org/docs/sar/S28_SAR_SACobia_WithAddendumFinal_5.16.2013.pdf



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MEMORANDUM

October 5, 2018

To: South Atlantic State/Federal Fisheries Management Board

From: Dr. Michael Schmidtke

Subject: Cobia Draft Amendment 1 PID Public Hearing Summaries

In September, 2018, Public Hearings were held to discuss management options for topics presented in the Public Information Document (PID) for Cobia Draft Amendment 1. Hearings were held for Maryland (MD) jointly with the Potomac River Fisheries Commission (PRFC), Virginia (VA), North Carolina (NC) (two hearings), and South Carolina (SC) jointly with Georgia (GA). An additional hearing was held by state staff in New Jersey, and the summary of that hearing is included in this report as well.

No public attended hearings in Morehead City, NC, and Colonial Beach, VA (joint MD-PRFC hearing). Across all six hearings held, a total of ten public individuals attended.

Due to Hurricane Florence, the schedule of hearings was adjusted such that written Public Comment is being accepted through October 10, 2018. A full summary of all Public Comments, including written comments not included in this summary, will be available in Supplemental Materials for the South Atlantic Board meeting at the Commission's 2018 Annual Meeting.

M18-105

Cobia Draft Amendment 1 Public Information Document Public Hearing Summary (NJ; state-held)

Galloway, NJ

September 6, 2018

6 Attendees

Staff: 5 New Jersey Department of Environmental Protection Staff

Attendees: Kevin Wark

Management in Federal Waters

- Have the federal regulations mirror the state regulations.

Harvest Specification Process

- Prefers evaluations in numbers of fish.
- Suggests a state permit system which would allow for better monitoring.

Additional Comments

- Supports the use of VTRs to provide full documentation of fishing activity and to establish fishing history for the vessel/fisherman.
- Observed cobia are attracted to structures uncovered by sand mining with the result that people are starting to target cobia in waters off NJ.
- Observed that with warmer water, there are higher numbers of cobia.
 - The fish come closer to shore in August and September but are gone in October.
- Observed that net fishermen don't normally high-grade their cobia catches.
- NJ should have either a small bag limit or have specifications to include incidental cobia catch.
- Even though NJ has relatively small cobia landings, they should have some allotment/recognition in the management plan.
- Don't force the commercial fishermen to dump/waste their cobia catches.
 - Fishermen don't direct their activity to harvest cobia but would like to sell their incidental catches even late in the season when the "directed" fishery is closed (NJ fishermen are still encountering the cobia at that time).
- States should define who is commercial versus recreational for accountability with quotas.

Cobia Draft Amendment 1 Public Information Document Public Hearing Summary (VA)

Newport News, VA

September 19, 2018

6 Attendees

Staff: Dr. Michael Schmidtke (ASMFC), Pat Geer (VA), Alex Aspinwall (VA)

Attendees: Mike Avery (Virginia Saltwater Sportfishing Association), Craig Freeman, Dr. Andrew Scheld (Virginia Institute of Marine Science)

Management in Federal Waters

- Avery and Freeman supported regulations for federal waters determined by state of landing.

Harvest Specification Process

- Avery: Suggested adding cobia to the commercial Greater Atlantic Regional Fisheries Office to monitor commercial harvest in federal waters. Any additional permit to provide additional monitoring of commercial harvest in federal waters should be free.
- Avery: Would prefer streamlining of reporting process. Report catch to single agency then share data among different users.
- Avery: Recreational stakeholders want stability in the season. Once season and limits are decided, don't want mid-season changes or closures. Prefer multi-year but at least annual setting of season then allow season to play out.
 - Freeman supported.
- Avery: Happy with process of state allocation then allowing states to set own regulations to adhere to quota/target. Fine with current management structure but not with current allocation due to the exclusion of Florida east coast from the FMP's jurisdiction. If east coast of Florida were included with Atlantic stock, 2015 and 2016 recreational harvests would not have been overages.
- No specified preference on numbers vs. pounds for recreational harvest.
- Avery: Would be nice to have some form of benefit for trophy fish provision (1 fish over 50 in total length)

Biological Monitoring

- Avery: Don't want to see additional requirements that would become burdensome for fishers.
- Freeman: Any station or freezer needs to be conveniently located for adequate participation.

Additional Comments

- Freeman: Current commercial regulations, particularly the possession limit of 2 fish per license holder (VA-specific), resulting in decline in commercial harvest to the point that commercial fishery is not viable.
- Freeman and Avery: Would like to remove the per license holder provision (which is VA-specific) to the coastwide 2 fish per person possession limit.
- Freeman: Commercial limit in VA should not be less than the recreational (effectively is if only 1 license holder on a vessel)
- Avery: Does not accept results of the SEDAR 58 Stock ID Workshop or that they should be applied in management jurisdictions. Thinks that Commission management should include east coast of Florida, and quota allocations for that region should be added to quota from Georgia north then allocated to states along the Atlantic coast.
- Freeman: Changes to commercial regulations in 2018 did have a significant economic impact on commercial fishery.

Cobia Draft Amendment 1 Public Information Document Public Hearing Summary (GA, SC)

Pooler, GA

September 24, 2018

6 Attendees

Staff: Dr. Michael Schmidtke (ASMFC), Doug Haymans (GA), Dawn Franco (GA), Chris Kalinowsky (GA), Robert Boyles (SC)

Attendees: Frank Gibson (SC), Daniel Utley (SC), Collins Doughtie (SC), Al Stokes (SC)

Management in Federal Waters

- Doughtie: State jurisdictional boundaries should be extended by latitude into federal waters.
 - Stokes supported. Would help law enforcement as well.
 - Utley supported.

Harvest Specification Process

- Doughtie: Supports Board ability to make quick regulation changes. Supports increased use of webinars to gather public comment more quickly.
- Stokes: Supports recreational management using numbers of fish.
- Stokes: Concern about difference in commercial and recreational per person limits. Recreational fishermen would get commercial licenses, catch under commercial regulations, and then sell directly to restaurants. Were able to continue fishing outside of recreational season. Would like to have similar regulations between commercial and recreational.
- Doughtie: Would support gamefish status extended into federal waters off SC.

Biological Monitoring

- Doughtie: Don't think weigh-in stations would work. Freezers already set up in SC.

Additional Comments

- Doughtie: Should consider lowering recreational coastwide vessel limit to 2 fish per vessel per day.
 - Utley supported.
- Doughtie: Observed a lot of small fish in 2018; anticipating fairly large cobia harvest in 2019, but don't want fishing so much as to make population crash.
- Doughtie: Trophy fish regulation, similar to Virginia's for hook and line, could be considered for other areas. Should not be too large because female fecundity may regress at the oldest ages/largest sizes. Should be research-informed. Potential drawback is measurement of a large cobia that's close to limit could be difficult/dangerous.

Cobia Draft Amendment 1 Public Information Document Public Hearing Summary (NC)

Manteo, NC

September 26, 2018

4 Attendees

Staff: Chris Batsavage (NC), Bruce Crostic (Marine Patrol)

Attendees: Bill Gorham, Travis Kemp

Management in Federal Waters

- Kemp: Federal recreational regulations should be based on state where the fish is landed.
- Gorham: Maintain most liberal recreational regulations in federal waters (1/person & 6/vessel) or restrict harvest to state of landing

Harvest Specification Process

Harvest Limits

- Kemp: Do not manage under current ACL.
- Gorham: A coastwide harvest limit should cover the documented migratory range of Atlantic cobia, which includes northeast Florida; if not, then do not manage under an ACL; another option is to set the harvest limit at a percentage above the peak harvest (or a percentage over a time series average) to allow for more management flexibility, especially during times of high cobia abundance.
- Gorham and Kemp: Flexibility in management to achieve stability in the regulations is key; do not want to see the harvest limit drastically reduced—there isn't much more NC can do with the regulations to reduce harvest

Recreational Management Options

- Gorham and Kemp: All recreational management options except for gear restrictions (ex. Circle hooks, no live bait, etc.) should be considered in the specification process.
- Gorham: Should be at least a 5-year time period for evaluating recreational harvest against management targets or reset the recreational harvest limit after the next stock assessment—stable regulations are needed.
- Gorham: Number of fish should be used instead of weight to manage recreational fishery—how would that be done (calculated, implemented)? Number of fish would provide a level playing field among the states and provide more stable regulations.

Commercial Management Options

- Gorham: Anything that preserves the commercial cobia fishery should be explored. Better communication is needed among the agencies to avoid early commercial closures. Commercial discards (in the fall) when the fishery is closed is a concern.

Commercial quota is very small, especially compared to cobia aquaculture. Maybe state-by-state commercial allocations, but overall commercial allocation very small.

Biological Monitoring

- Gorham and Kemp: Data collection (biological monitoring) should be required by the states in order to ensure that it happens.
- Gorham: supports NC's carcass collection program and is willing to help the process (collecting more cobia samples, stakeholder buy-in); carcass collection freezers are needed at charter boat marinas to collect more samples; life history information is really needed; concerned that size limit (36") may bias carcass samples toward female fish and impact this could have on the cobia population long term

Additional Comments/Questions

- Who pays for biological monitoring? State-funded, not typically funded by ASMFC; cost of monitoring not typically paid for by fishermen in state.
- NC has a spring pulse fishery of variable length; a summer/early fall pier fishery, a shorter pulse fishery in the fall as well as a commercial bycatch fishery in the fall and VA has cobia in their waters for 6 months—how can we manage based on migratory patterns of the species among the states and in the states?
- Kemp: Small cobia are very abundant now. A lot of small cobia were caught during a recent surf fishing tournament on Hatteras Island; has cleaned more male cobia this year compared to other years.
- Gorham: Cobia fishery in VA is very large (larger than last stock assessment); doesn't want to see small ACL reduce harvest even further.
- Kemp: Very little directed cobia effort by private boat anglers in NC after possession limit decreased to 1 per vessel on June 1.
- Gorham: Better accounting of anglers targeting cobia in NC is needed to get a better idea of effort and harvest.
- Kemp: Mandatory reporting of cobia in VA doesn't seem to be a problem up there; compliance seems like it's good.
- Gorham: Speaks on behalf of a lot of anglers, which is why many people don't come to hearings. Calls fishermen along the NC coast to get their thoughts and feedback before coming to meetings.
- Gorham and Kemp: Have a private Facebook page where anglers can provide questions and comments to us and we provide comments to the managers. Will survey anglers on the Facebook page.

