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 17, 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
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. Discuss Protocol for Identifying Bait Sources *(P. Keliher, M. Ware)* **Possible Action**
5. Consider Approval of 2018 American Lobster and Jonah Crab Fishery Management Plan Reviews and State Compliance Reports *(M. Ware)* **Action**
6. Review NOAA Technical Memorandum on North Atlantic Right Whale Status and Recovery Challenges *(M. Asaro)*
7. Report on October 2018 Atlantic Large Whale Take Reduction Team Meeting *(M. Asaro, M. Ware)* **Possible Action**
8. Discuss American Lobster Addendum XXVII Timeline *(M. Ware)*
9. Update from the Electronic Tracking and Reporting Subcommittees *(M. Ware)*
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

1. Overview of Workshop Format and Goals *(J. Gilmore)*
2. Public Comment
3. Review Content and Format of 2014-2018 Strategic Plan *(R. Beal)*
4. Summary of Strategic Planning Workgroup Meeting *(R. Beal)*
5. Commissioner Discussion on Driving Forces *(J. Gilmore)*
   - Workgroup Recommendations *(R. Beal)*
   - Commissioner Input
6. Commissioner Discussion on Priority Planning *(J. Gilmore)*
   - Workgroup Recommendations *(R. Beal)*
   - Commissioner Input
7. Commissioner Discussion on Strategic Planning and Action Planning
   - Workgroup Recommendations *(R. Beal)*
   - Commissioner Input
8. Commissioner Discussion on New Commissioner Orientation
   - Workgroup Recommendations *(R. Beal)*
   - Commissioner Input
9. Commissioner Discussion on Use of Proxies *(R. Beal)*
10. Commissioner Discussion on Public Input to Commissioner Decisions
11. Develop Timeline for 2019-2023 Strategic Plan Approval
12. Adjourn

Commissioner & Ongoing Proxy Photo Shoot: *If time permits, the photo will be taken immediately following the Strategic Planning Workshop*

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**
7. Elect Vice-Chair **Action**
8. 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**

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 Risk and Uncertainty Policy *(J. McNamee)*
6. Update on the Northeast Area Monitoring and Assessment Program *(N. Lengyel*) **Action**
7. Update on River Herring Technical Expert Working Group *(C. Starks*)
8. 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
9. Progress Update on Benchmark Stock Assessments
   - Shad *(K. Drew)*
   - Atlantic Menhaden and Ecological Reference Points *(K. Drew)*
10. Review Noncompliance Findings, If Necessary **Action**
11. Other Business/Adjourn

11:00 – 11:15 a.m. **Business Session (continued)**

1. Consider Noncompliance Findings, If Necessary **Final Action**
2. 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 • Approval of Agenda • Approval of Proceedings from May 2018	8:30 a.m.
3.	Public Comment	8:35 a.m.
4.	Discuss Protocol for Identifying Bait Sources *(P. Keliher; M. Ware)* **Possible Action**	8:45 a.m.
5.	Consider Approval of 2018 American Lobster and Jonah Crab FMP Reviews and State Compliance Reports *(M. Ware)* **Action**	9:15 a.m.
6.	Review NOAA Technical Memorandum on North Atlantic Right Whale Status and Recovery Challenges *(M. Asaro)*	9:45 a.m.
7.	Report on October 2018 Atlantic Large Whale Take Reduction Team Meeting **Possible Action** *(M. Asaro; M. Ware)*	10:45 a.m.
8.	Discuss American Lobster Addendum XXVII Timeline *(M. Ware)*	12:00 p.m.
9.	Update from the Electronic Tracking and Reporting Subcommittees *(M. Ware)*	12:10 p.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. Protocol for Identifying Bait Sources (8:45 – 9:15 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

5. Fishery Management Plan Reviews (9:15 – 9:45 a.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

- Overview of the FMP Review Reports by M. Ware **(Briefing Materials)**

Board Actions for Consideration at this Meeting

- Accept the 2018 FMP Reviews and State Compliance Reports
- Approve *de minimis* requests

6. NMFS Technical Memo on North Atlantic Right Whales (9:45 – 10:45 a.m.)

Background

- 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

- Review of the technical memorandum by M. Asaro

7. Report on October 2018 ALWTRT Meeting (10:45 a.m. – 12:00 p.m.) Possible Action

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 by M. Asaro, M. Ware

Board Actions for Consideration at the Meeting

- Consider any management responses to the ALWTRT recommendations

8. American Lobster Addendum XXVII Timeline (12:00 – 12:10 p.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

9. Electronic Reporting and Tracking Subcommittee Updates (12:10 – 12:25 p.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

10. Jonah Crab Advisory Panel Membership (12:25 – 12:30 p.m.) Action
Background • Marc Palombo from MA has been nominated to the Jonah Crab Advisory Panel.
Presentations • Nominations by T. Berger **(Briefing Materials)**
Board Actions for Consideration at this Meeting • Approve Jonah Crab Advisory Panel nomination

11. Other Business/Adjourn

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
21 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0021

PAUL R. LEPAGE
GOVERNOR

PATRICK C. KELIHER
COMMISSIONER

October 3, 2018

Dear Dr. Hare,

I am writing in response to the recently released NOAA Technical Memorandum NMFS-NE-247, *North Atlantic Right Whales—Evaluating Their Recovery Challenges in 2018* ("Technical Memo" or "Memo"). Regrettably, I have significant concerns about the scientific merit of this document, which I have documented below in detail.

As I am sure you'll agree, any measures developed to protect right whales must be based on sound science in order to be effective. For this reason, it is imperative that the Technical Memo provide a comprehensive picture of the best available science to inform the critical decisions that the TRT is being asked to make. The title of the Memo implies a comprehensive look at all stressors across the right whale's range. While many category I and category II fisheries from Maine to Florida are regulated under the Atlantic Large Whale Take Reduction Plan, the content of the Memo is almost exclusively limited to the lobster fishery in the Gulf of Maine. There is little context offered for how right whales are utilizing expanded habitats in Canadian and Mid-Atlantic waters, and how that changing range and interactions with other fisheries affects risk of entanglement. Absent this information, any discussion on new regulations will be based on an incomplete picture, and provide uncertain benefit to whales. It is my sincere hope that you will endeavor to update and correct this document expeditiously, as we anticipate its use to inform the work of the Atlantic Large Whale Take Reduction Team (ALWTRT) at its upcoming meeting in Providence.

Overall, the Memo is inconsistent in its application and interpretation of various data sets and publications. In some cases, conclusions directly contradict statements and information previously presented by NOAA. In several instances, the paper lacks citations or cites inappropriate sources (i.e. industry documents instead of raw data; unpublished articles) and appears to be stating conclusions or opinions without any supporting data (i.e. that the 2015 vertical line regulations are making entanglements worse). Our most substantive concerns are addressed below but please note that this list does not represent an exhaustive list of the issues we identified, which range from minor technical points to omissions of core data sources.

First and most significantly, the Memo suggests that the 2015 vertical line regulations increased the strength of rope and therefore the severity of entanglements by altering fishing practices and encouraging the use of larger diameter ropes as vertical lines. There are no current data sets or analyses used to support this theory. The paper instead cites Knowlton et al. 2016. While the Knowlton paper accurately characterizes the change in rope strength through manufacturing processes over time, the data

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used encompass the years 1994-2010. This time period was largely before any of the substantial changes in gear due to regulations, such as the sinking groundline regulation in 2009 and the vertical line rule in 2015, and overlapped with a time period in which right whales actually saw population increases. There has been no recent assessment that states that fishermen have been using larger diameter rope in response to the vertical line regulations in 2015.

Additionally, to our knowledge, there is no published analysis of ropes taken from right whales that includes the time period since the vertical line regulations went into effect in 2015, nor any assessment of the efficacy of those regulations. The most recent publication that details current instances of entanglements that resulted in serious injuries or mortalities, NOAA's "Serious Injury and Mortality Determinations for Baleen Whale Stocks Along the Gulf of Mexico, United States East Coast, and Atlantic Canadian provinces, 2011—2015" (Ref Doc. 17-19) was published in 2017 and relies on data from 2011-2015 (prior to the implementation of the vertical line rule). Instead of using this most recent agency source, the Memo repeatedly cites Knowlton et al. 2012 to point out the increasing rate of entanglements and that 83% of the population has been entangled at least once. Knowlton et al. 2012 is a comprehensive 30-year retrospective of the right whale catalogue but does not provide an assessment of entanglements in the right whale population beyond 2009. While it is indisputable that entanglements are increasing, a more recent assessment would provide a more accurate picture of the current threats facing right whales, which are changing rapidly. In fact, due to the lack of data on this critical question, NOAA recently funded DMR's current research project to improve understanding of gear usage, hauling load and vertical line breaking strength. In sum, the Memo fails to take a comprehensive look at how entanglement rates and severity have changed since the implementation of the sinking groundline and vertical line regulations went into effect in 2009 and 2015, respectively, nor does it assess changes or trends in entangling gear during that time period. It is therefore an unreliable assessment of current regulations.

Second, the Memo cites increased Maine landings to indicate increased effort. Most importantly, landings are not a proxy for effort, and have never been used as an accepted metrc for increased risk of entanglement. The Memo cites Maine state landings data to demonstrate increased effort offshore without describing where the data apply in terms of fishing areas. It uses these landings to assert that there is an increased overlap and therefore level of risk "offshore." The data provided by DMR staff represents landings generated from logbooks from 10% of randomly selected harvesters licensed by the state. Contrary to the assertion made in Figure 2c, Maine logbook reported landings have increased both inshore (which we define from 0-12 miles) and offshore (from 12 miles to the Area 1 boundary), but, when comparing the two areas, the inshore portion has increased at five times the rate of the offshore area. It appeared, from the webinar held at the time of publication, that NOAA interpreted "offshore" as being out to the Hague Line (based on the webinar presenter's interpretation of heat map slides, which are not included in the Memo). These heat maps interpolate VTR data for lobster. While Area 3 has 50-100% of Federal licenses reporting through VTRs (ASMFC TC Memo July 2015), most Area 1 Federal lobster permit holders are exempt from VTR requirements and those with permits required to report represent less than 10% of Maine Federal permit holders and 3% of the total license holders in Maine (ASMFC TC Memo January 2017). Maine has only a handful of Area 3 license holders (permitted by NOAA), and the majority of effort that we categorize as being beyond 12 miles would end at the Area 1/3 boundary, approximately 40 miles from the coastline. Area 3 VTR data could characterize "offshore" effort but was not used in the Memo. It is unclear why NOAA would choose to use state landings records for only one state that is dominated by inshore effort if seeking to accurately characterize offshore effort, as the majority of the truly "offshore" effort (in Area 3) is from permitholders in other states.

While the State of Maine recognizes that the size of our fishery is the reason for the focus on our impact to right whales, effective management measures will require a clear picture of changing population distribution and abundance in recent years. The Memo repeatedly points to an expanding range and increasing overlap with fisheries as sources of increased risk. It notes decreased observations of right whales in the Gulf of Maine and Bay of Fundy during the summer months and southeast coast in the winter, and increased presence in the Gulf of St. Lawrence in the summer and off the mid-Atlantic in the winter. Despite the changes in distribution, the only fishery considered for "increased" overlap is the Gulf of Maine lobster fishery, despite the parallel assertion that the Gulf of Maine is an area of decreased presence and the fact that NOAA's own observation resources have been diverted to Canada because of this shift. There is also little assessment of the unregulated fisheries they encounter in the Bay of Fundy, on the Scotian Shelf and into the Gulf of St. Lawrence, or the devastating interactions that resulted when right whales overlapped with changes in the snow crab fishery in 2017.

Additionally, there is no discussion of the role of other US regions or fisheries despite the fact that the Memo states that right whales are increasingly using other areas, such as the mid-Atlantic. Furthermore, the Memo includes little discussion of the impact of other U.S. or Canadian fisheries on right whales. All vertical lines do not present the same level of risk; the location, the season, the type of gear, and whether it incorporates conservation regulations (e.g. the use of weak links and sinking line in surface systems) all factor into the level of risk posed by a given line. Additionally, lines that overlap with right whale feeding aggregations inherently pose more risk of entanglement. A shift in habitat use out of the Gulf of Maine and into Canadian waters does not double risk, but rather it shifts the spatial intensity of the risk that exists. The Memo does not cite evidence for the assertion that closures are regionally effective, nor does it cite any basis for Figure 4's assertion that vertical lines have increased in the Northeast since 2011. In fact, this claim directly contradicts a presentation made by Mark Murray-Brown to the New England Fishery Management Council in December 2017, pointing to the reduction of 2740 miles of vertical line achieved through implementation of the 2015 regulations.

There are additional instances where a more comprehensive data set is available but inexplicably not used. For example, Figure 5 seems to be trying to show the relevance of the lobster fishery in entanglements, but most of the entanglements shown are from years prior to when the sinking groundline and vertical line rules were implemented. This Figure shows only those entanglements where the set locations are known, and it is unclear whether it shows all entanglements or only those resulting in serious injury or mortality. Notably absent from the Memo is any reference to the much more robust dataset curated by NMFS that documents entanglements to confirmed fisheries, which would provide a much more comprehensive look at the causes of entanglements across the right whale's range. Use of this dataset would also allow a look at how entanglements have changed, either by the confirmed fishery to which the entanglements are attributed, or by characteristics of the rope (i.e. diameter) over time. Two of the entanglements in Maine shown on this map also fail to note that Maine lobster gear was the secondary cause of entanglement. The use of range-wide, recent fishery confirmed instances of entanglement would inform consideration of what measures would most effectively curtail the current entanglement problem. Focusing on only entanglements where the set location is known drastically limits an already small dataset and could result in the misalignment of new regulations with the current entanglement risk.

I strongly believe the Maine lobster industry takes the threats to right whales seriously and will work to identify a meaningful solution appropriate to the risk posed by their fishery under current biological and environmental conditions and considering past regulatory actions. However, conclusions

based on conjecture, without sound scientific basis, will alienate their critical participation in this process. The net result of the oversimplified picture painted by this Memo is likely to be regulations imposed on a fishery or in an area that will result in very little conservation benefit for the right whale but will come at a great cost to the fishermen in terms of money, time, and safety.

I look forward to working with you and your staff to improve the accuracy of the information which will inform the ALWTRT's work going forward. If you have any questions or would like to discuss this further, please contact Erin Summers, email: erin.l.summers@maine.gov; telephone: (207) 633-9556.

Sincerely,

Patrick C. Keliher
Commissioner

Cc: Mike Pentony, Regional Administrator, Greater Atlantic Regional Office
Mike Asaro, Protected Resource Division, Greater Atlantic Regional Office

Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: American Lobster Management Board

FROM: Megan Ware, FMP Coordinator

DATE: October 15, 2018

SUBJECT: Recent Meeting of Atlantic Large Whale Take Reduction Team

The Atlantic Large Whale Take Reduction Team (ALWTRT) met October 9-12 in Providence, Rhode Island. Over the course of the week, the ALWTRT reviewed the NMFS Technical Memo on North Atlantic right whale recovery challenges (included in briefing materials for Lobster Board meeting), received updates on management and enforcement activities pertinent to right whales, and reviewed NMFS ongoing right whale field monitoring. The second half of the meeting focused on reviewing a series of proposals, submitted by ALWTRT members, which included measures to reduce serious injury and mortality from entanglement. These proposals contained a range of management measures including gear markings, area closures, effort reductions, vertical line reductions, and gear modifications. No decisions were made at this meeting but there were requests for additional analyses on several of the proposals to inform future decisions in March 2019. An agenda from the October meeting is attached to this memo.

Ahead of the October 22nd American Lobster Management Board meeting, staff highly encourages Board members to review the proposals discussed at the ALWTRT meeting. A link to the individual proposals, as well as additional meeting materials and presentations, can be found below.
https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/October%202018/27_october_2018_full_trt_meeting.html

Atlantic Large Whale Take Reduction Team Meeting

October 9 – 12
Omni Providence, Rhode Island

Meeting goal: Develop and discuss potential modifications to the ALWTRP to further reduce impacts of U.S. fixed gear fisheries on large whales and reduce mortality and serious injury to below PBR for right whales

Anticipated output of this meeting: Suite of potential recommendations to reduce large whale entanglements, to be evaluated and considered for refinement and consensus decision-making at our March 2019 ALWTRT meeting.

Day 1. Tuesday, October 9, 1:00 – 5:30 pm	
Opening Comments	
1:00 – 1:45 pm	Welcome and Introductions • Greetings: Sam Rauch, Mike Pentony • Introductions: Round robin • Meeting goals review: Mike Asaro • Logistics and agenda review: Scott McCreary and Bennett Brooks
Overview of Right Whale Problem Statement	
1:45 – 3:15 pm	• Review of North Atlantic right whale recovery challenges: Sean Hayes • Questions/Discussion
3:15 – 3:30 pm	Break
U.S. Management and Enforcement Updates	
3:30 – 4:45 pm	• Summary of large whale entanglements, serious injuries and mortalities: David Morin, Allison Henry • Enforcement updates: NMFS and USCG • Recovery plan implementation: Diane Borggaard, Barb Zoodsma • Questions/discussion
Wrap up	
4:45 – 5:00 pm	Opportunity for brief Team member initial reflections
5:00 – 5:30 pm	Public comments and close

Day 2. Wednesday, October 10, 8:00 am – 6:15 pm	
8:00 – 8:15 am	Recap of Day 1
NMFS Field Monitoring and Research Updates	
8:15 – 9:15 am	• NEFSC aerial survey update: Tim Cole • Southeast update: Clay George • Large whale unusual mortality event updates: Jackie Taylor • Questions/discussion
Canadian Research and Management Updates	
9:15 – 10:15 am	• 2018 efforts and looking forward: Randy Jenkins
10:15 – 10:30 am	Break
Recent Fishery Gear Research	
10:30 – 12:00 pm	• Preliminary commercial trap/pot fishery gear characterization study : Erin Summers • Summer 2018 and future ropeless research: David Casoni • Review of scarring analysis and weak rope research projects: Amy Knowlton • Update on NEFSC planned gear research • Discussion of additional work being done: weak rope development, ropeless fishing efforts • Questions
12:00 – 1:00 pm	Lunch
Outcome of Feasibility Subgroup Efforts	
1:00 – 2:30 pm	• Summarize feasibility subgroups' efforts: Colleen Coogan • Review of Advanced Notice of Proposed Rulemaking: Mike Asaro • Discussion of best practice recommendations for ropeless fishing exemptions
2:30 – 2:45 pm	Break
Process for presenting and reviewing candidate proposals for modifying the ALWTRP	
2:45 – 3:15 pm	• Review discussion objectives and joint problem-solving goals • Discuss proposal presentation process • Identify breakout group composition and review process
Presentation of Proposals	
3:15 – 5:45 pm	Six to eight proposals: • Five-minute presentation per proposal • Ten to 15 minutes per proposal for clarifying questions
Wrap up	
5:45 – 6:00 pm	Opportunity for brief Team member reflections
6:00 – 6:15 pm	Public comments and close

Day 3. Thursday, October 11, 8:00 am – 5:30 pm	
8:00 – 8:15 am	Recap of Day 2
8:15 – 8:30 am	Call for any last minute revisions to proposals Review breakout group joint problem-solving goals and process
Breakout Groups (with mid-morning break)	
8:30 – 11:30 am	Breakout group proposal review
11:30 – 12:00 pm	Initiate discussion of breakout groups' findings regarding proposals' merits • Up to 20-minute discussion for each proposal
12:00 – 1:00 pm	Lunch
Identify Merits of Proposals (with mid-afternoon break)	
1:00 – 2:30 pm	Continue discussion of breakout groups' findings regarding proposals' merits • Up to 20-minute discussion for each proposal
2:30 – 5:00 pm	Discuss proposal elements that merit further analysis, including new ideas or new combinations of ideas
Wrap Up	
5:00 – 5:15 pm	Opportunity for brief Team member reflections
5:15 – 5:30 pm	Public comments and close

Day 4. Friday, October 12, 8:00 am – 12:00 pm	
8:00 – 8:15 am	Recap of Day 3
8:15 – 11:30 am	• Review team recommendations for promising proposal elements to advance for additional NMFS analysis. • Finalize selection and create work plan for NMFS analyses and preparation for March meeting
11:30 – 11:45 am	Public comments and close

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

FOR AMERICAN LOBSTER (*Homarus americanus*)

2017 FISHING YEAR

Prepared by the Plan Review Team

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2018 REVIEW OF THE ATLANTIC STATES MARINE FISHERIES COMMISSION FISHERY MANAGEMENT PLAN FOR AMERICAN LOBSTER (*Homarus americanus*)

***This document covers fishery activities in 2017 as well as trap reductions which took place ahead of the 2018 fishing year*.**

1.0 Status of the Fishery Management Plan

Year of ASMFC Plan's Adoption:	Amendment 3 (1997)
Framework Adjustments:	Addendum I (1999) Addendum II (2001) Addendum III (2002) Addendum IV (2003) Addendum V (2004) Addendum VI (2005) Addendum VII (2005) Addendum VIII (2006) Addendum IX (2006) Addendum X (2007) Addendum XI (2007) Addendum XII (2008) Addendum XIII (2008) Addendum XIV (2009) Addendum XV (2009) Addendum XVI (2010) Addendum XVII (2012) Addendum XVIII (2012) Addendum XIX (2013) Addendum XX (2013) Addendum XXI (2013) Addendum XXII (2013) Addendum XXIII (2014) Addendum XXIV (2015) Addendum XXVI (2018)
Management Unit:	Maine through North Carolina
States with a Declared Interest:	Maine through Virginia (Excluding Pennsylvania and DC)
Active Committees:	American Lobster Management Board, Technical Committee, Lobster Conservation Management Teams, Plan Development Team, Plan Review Team, Advisory Panel, Electronic Reporting Subcommittee, Electronic Tracking Subcommittee

2.0 Status of the Fishery

2.1 Commercial Fishery

The lobster fishery has seen incredible expansion in landings over the last 40 years. Between 1950 and 1975, landings were fairly stable around 30 million pounds; however, from 1976 – 2008 the average coastwide landings tripled, reaching 92 million pounds in 2006. Landings have continued to increase over the last decade, reaching a high of 158 million pounds in 2016 (Table 1). In 2017, coastwide commercial landings decreased to 137 million pounds. The largest contributors to the 2017 fishery were Maine and Massachusetts with 82% and 12% of landings, respectively. Landings, in descending order, also occurred in New Hampshire, Rhode Island, New Jersey, New York, Connecticut, Maryland, Delaware, and Virginia. The ex-vessel value for all lobster landings in 2017 was $565.2 million.

Table 2 shows the break-down of commercial landings by Lobster Conservation Management Area (LCMA). Area 1 has historically had the highest landings and accounted for 80% of total harvest between 1981 and 2012. This is followed by LCMA 3 which accounted for 9% of total landings between 1981 and 2012. Yearly trends in Table 2 show that while landings have generally increased in LCMA 1, they have decreased in LCMA's 2, 4, and 6. Landings by LCMA are updated through each benchmark stock assessment.

Landings trends between the two biological stocks have also changed, as a greater percentage of lobster are harvested from the Gulf of Maine/Georges Bank (GOM/GBK) stock. In 1997, 26.3% of coastwide landings came from the Southern New England (SNE) stock. However, as the southern stock declined and abundance in the Gulf of Maine increased, this percentage has significantly changed. In 2000, only 15.6% of landings came from the SNE stock and by 2006, this declined to 7%. In 2017, approximately 2.07% of coastwide landings came from the SNE stock.

2.2 Recreational Fishery

Lobster is also taken recreationally with pots, and in some states, by hand while SCUBA diving. While not all states collect recreational harvest data, some do report the number of pounds landed recreationally and/or the number of recreational permits issued. In 2017, New Hampshire reported 6,797 pounds of lobster harvested recreationally, representing 0.12% of total landings in the state. New York reported 1,972 pounds of lobster harvested recreationally, representing 1.4% of state landings. Massachusetts reported 212,112 pounds of lobster landed recreationally in 2016; however, a value for 2017 was not available at the time of this report. Connecticut and Rhode Island do not collect information on the number of pounds recreationally harvested but did issue 269 and 541 recreational lobster licenses, respectively.

3.0 Status of the Stock

The 2015 peer-reviewed stock assessment report indicated a mixed picture of the American lobster resource, with record high stock abundance throughout most of the GOM/GBK and record low abundance and recruitment in SNE (Table 3).

The assessment found the GOM/GBK stock is not overfished and not experiencing overfishing. GOM and GBK were previously assessed as separate stock units; however, due to evidence of seasonal migrations by egg-bearing females between the two stocks, the areas were combined into one biological unit. While model results show a dramatic overall increase in stock abundance in the GOM/GBK, population indicators show young-of-year estimates are trending downward. This indicates a potential decline in recruitment and landings in the coming years.

Conversely, the assessment found the SNE stock is severely depleted and in need of protection. Recruitment indices show the stock has continued to decline and is in recruitment failure. The inshore portion of the SNE stock is in particularly poor condition with surveys showing a contraction of the population. This decline is expected to impact the offshore portion of the stock, which is dependent on recruitment from inshore.

Both the Technical Committee and the Peer Review Panel highlighted the need for management action in SNE. Specifically, the Panel recommended close monitoring of the stock status along with implementing measures to protect the remaining lobster resource in order to promote stock rebuilding.

The next stock assessment is scheduled for 2020.

4.0 Status of Management Measure

4.1 Implemented Regulations

Amendment 3 established regulations which require coastwide and area specific measures applicable to commercial fishing (Table 4). The coastwide requirements are summarized below.

Coastwide Requirements and Prohibited Actions

- Prohibition on possession of berried or scrubbed lobsters
- Prohibition on possession of lobster meats, detached tails, claws, or other parts of lobsters by fishermen
- Prohibition on spearing lobsters
- Prohibition on possession of v-notched female lobsters
- Requirement for biodegradable “ghost” panel for traps
- Minimum gauge size of 3-1/4”
- Limits on landings by fishermen using gear or methods other than traps to 100 lobsters per day or 500 lobsters per trip for trips 5 days or longer
- Requirements for permits and licensing
- All lobster traps must contain at least one escape vent with a minimum size of 1-15/16” by 5-3/4”
- Maximum trap size of 22,950 cubic inches in all areas except area 3, where traps may not exceed a volume of 30,100 cubic inches.

Amendment 3 to the Interstate Fishery Management Plan for American Lobster (December 1997)

American lobster is managed under Amendment 3 to the Interstate FMP for American Lobster. Amendment 3 establishes seven lobster management areas. These areas include the: Inshore Gulf of Maine (Area 1), Inshore Southern New England (Area 2), Offshore Waters (Area 3), Inshore Northern Mid-Atlantic (Area 4), Inshore Southern Mid-Atlantic (Area 5), New York and Connecticut State Waters (Area 6), and Outer Cape Cod (OCC). Lobster Conservation Management Teams (LCMTs) comprised of industry representatives were formed for each management area. The LCMTs are charged with advising the Lobster Board and recommending changes to the management plan within their areas.

Amendment 3 also provides the flexibility to respond to current conditions of the resource and fishery by making changes to the management program through addenda. The commercial fishery is primarily controlled through minimum/maximum size limits, trap limits, and v-notching of egg-bearing females.

Addendum I (August 1999)

Establishes trap limits in the seven lobster conservation management areas (LCMAs).

Addendum II (February 2001)

Establishes regulations for increasing egg production through a variety of LCMT proposed management measures including, but not limited to, increased minimum gauge sizes in Areas 2, 3, 4, 5, and the Outer Cape.

Addendum III (February 2002)

Revises management measures for all seven LCMAs in order to meet the revised egg-rebuilding schedule.

Technical Addendum 1 (August 2002)

Eradicates the vessel upgrade provision for Area 5.

Addendum IV (January 2004)

Changes vent size requirements; applies the most restrictive rule on an area trap cap basis without regard to the individual's allocation; establishes Area 3 sliding scale trap reduction plan and transferable trap program to increase active trap reductions by 10%; and establishes an effort control program and gauge increases for Area 2; and a desire to change the interpretation of the most restrictive rule.

Addendum V (March 2004)

Amends Addendum IV transferability program for LCMA 3. It establishes a trap cap of 2200 with a conservation tax of 50% when the purchaser owns 1800 to 2200 traps and 10% for all others.

Addendum VI (February 2005)

Replaces two effort control measures for Area 2 – permits an eligibility period.

Addendum VII (November 2005)
Revises Area 2 effort control plan to include capping traps fished at recent levels and maintaining 3 3/8" minimum size limit.

Addendum VIII (May 2006)
Establishes new biological reference points to determine the stock status of the American lobster resource (fishing mortality and abundance targets and thresholds for the three stock assessment areas) and enhances data collection requirements.

Addendum IX (October 2006)
Establishes a 10% conservation tax under the Area 2 trap transfer program.

Addendum X (February 2007)
Establishes a coastwide reporting and data collection program that includes dealer and harvester reporting, at-sea sampling, port sampling, and fishery-independent data collection replacing the requirements in Addendum VIII.

Addendum XI (May 2007)
Establishes measures to rebuild the SNE stock, including a 15-year rebuilding timeline (ending in 2022) with a provision to end overfishing immediately. The Addendum also establishes measures to discourage delayed implementation of required management measures.

Addendum XII (February 2009)
Addresses issues which arise when fishing privileges are transferred, either when whole businesses are transferred, when dual state/federal permits are split, or when individual trap allocations are transferred as part of a trap transferability program. In order to ensure the various LCMA-specific effort control plans remain cohesive and viable, this addendum does three things. First, it clarifies certain foundational principles present in the Commission's overall history-based trap allocation effort control plan. Second, it redefines the most restrictive rule. Third, it establishes management measures to ensure history-based trap allocation effort control plans in the various LCMAs are implemented without undermining resource conservation efforts of neighboring jurisdictions or LCMAs.

Addendum XIII (May 2008)
Solidifies the transfer program for OCC and stops the current trap reductions.

Addendum XIV (May 2009)
Alters two aspects of the LCMA 3 trap transfer program. It lowers the maximum trap cap to 2000 for an individual that transfers traps. It changes the conservation tax on full business sales to 10% and for partial trap transfers to 20%.

Addendum XV (November 2009)
Establishes a limited entry program and criteria for Federal waters of LCMA 1.

Addendum XVI: Reference Points (May 2010)
Establishes new biological reference points to determine the stock status of the American lobster resource (fishing mortality and abundance targets and thresholds for the three stock assessment areas). The addendum also modifies the procedures for adopting reference points to allow the Board to take action on advice following a peer reviewed assessment.

Addendum XVII (February 2012)
Institutes a 10% reduction in exploitation for LCMAs within Southern New England (2, 3, 4, 5, and 6). Regulations are LCMA specific but include v-notch programs, closed seasons, and size limit changes.

Addendum XVIII (August 2012)
Reduces traps allocations by 50% for LCMA 2 and 25% for LCMA 3.

Addendum XIX (February 2013)
Modifies the conservation tax for LCMA 3 to a single transfer tax of 10% for full or partial business sales.

Addendum XX (May 2013)
Prohibits lobstermen from setting or storing lobster traps in Closed Area II from November 1 to June 15 annually. Any gear set in this area during this time will be considered derelict gear. This addendum represents an agreement between the lobster industry and the groundfish sector.

Addendum XXI (August 2013)
Addresses changes in the transferability program for Areas 2 and 3. Specific measures include the transfer of multi-LCMA trap allocations and trap caps.

Addendum XXII (November 2013)
Implements Single Ownership and Aggregate Ownership caps in LCMA 3. Specifically, it allows LCMA 3 permit holders to purchase lobster traps above the cap of 2000 traps; however, these traps cannot be fished until approved by the permit holder's regulating agency or once trap reductions commence. The Aggregate Ownership Cap limits LCMA fishermen or companies from owning more traps than five times the Single Ownership Cap.

Addendum XXIII (August 2014)
Updates Amendment 3's habitat section to include information on the habitat requirements and tolerances of American lobster by life stage.

Addendum XXIV (May 2015)
Aligns state and federal measure for trap transfer in LCMA's 2, 3, and the Outer Cape Cod regarding the conservation tax when whole businesses are transferred, trap transfer increments, and restrictions on trap transfers among dual permit holders.

Addendum XXVI

Advances the collection of harvester and biological data in the lobster fishery by improving the spatial resolution of data collection, requiring harvesters to report additional data elements, and establishing a deadline that within five years, states are required to implement 100% harvester reporting. The Addendum also improves the biological sampling requirements by establishing a baseline of ten sampling trips per year, and encourages states with more than 10% of coastwide landings to conduct additional sampling trips.

4.2 On-Going Management Action

In response to signs of reduced settlement in the GOM/GBK, the Board initiated Draft Addendum XXVII in August 2017 to increase the resiliency of the stock. To this end, the Draft Addendum considers the standardization of management measures in the GOM/GBK stock. Draft Addendum XXVII continues to be developed by the PDT and it is expected that it will be available for consideration and approval for public comment in early 2019.

As a result of final action on Addendum XXVI, the Board established an Electronic Tracking Subcommittee and an Electronic Reporting Subcommittee. Membership on the two Committees is comprised of state representatives, technical committee members, federal partners, industry members, ACCSP staff, and ASMFC staff. The purpose of the Electronic Tracking Subcommittee is to design and implement a one-year tracking pilot program in the fishery. To-date, the Tracking Subcommittee has investigated existing tracking devices which may be applicable to the lobster fishery and has submitted a grant proposal for funding during the 2019 fishing year. The Electronic Reporting Subcommittee is working to guide the development of electronic harvester reporting in the lobster fishery. This includes identifying data needs for an electronic harvester reporting form, evaluating various electronic reporting software, and recommending simple and logical solutions. To-date, the Reporting Subcommittee has identified desired features in a lobster electronic reporting system and has explored several available software.

5.0 Ongoing Trap Reductions

Addendum XVIII established a series of trap reductions in LCMAs 2 and 3, with the intent of scaling the size of the SNE fishery to the size of the resource. Specifically, a 25% reduction in year 1 followed by a series of 5% reductions for five years was established in LCMA 2; a series of 5% reductions over five years was established in LCMA 3. The third year of reductions took place at the end of the 2017 fishing year and affect trap allocations in the 2018 fishery. Per Addendum XVIII, states with fishermen in Areas 2 and 3 are required to report on the degree of consolidation that has taken place. Ahead of the 2018 fishing year, 6,022 traps were retired in Area 2 and 7,115 traps were retired in Area 3. Trap reductions by jurisdiction can be found in Table 5. It is important to note that trap reductions also occur as the result of trap transfers as, per Addendum XIX, there is a 10% conservation tax on trap allocation transfers between owners.

6.0 Fishery Monitoring

The provisions of Addendum XXVI did not impact fishery monitoring programs in 2017. As a result, language in Addendum X sets the standard for fishery monitoring. Addendum X requires states to conduct sufficient biological sampling to characterize commercial catch. Specifically, it requires states weigh sampling intensity by area and season to match the 3-year average of the area's seasonal commercial catch. This volume of sampling, however, well exceeds current state budgets for lobster biological sampling. Addendum X also requires states to conduct 100% mandatory dealer reporting and at least 10% reporting of active harvesters. Table 6 describes the level of reporting and sampling by each state.

Overviews of the states' port and sea sampling are below. Several states, including Rhode Island and Connecticut, did not complete sea sampling trips in 2017; both states noted staffing limitation and budget constraints.

- Maine: Completed 162 sea sampling trips, sampling 229,673 lobster and 35,981 traps. Maine suspended its port sampling program following the 2011 sampling year.
- New Hampshire: Sampled 9,197 lobsters during 19 sea sampling trips and 1,197 lobsters through 12 port sampling trips.
- Massachusetts: Conducted a total of 72 sea sampling trips , sampling 50,886 lobsters in LCMA's 1, 2, and OCC. 1 port sampling trip was conducted and 121 lobsters were measured.
- Rhode Island: Due to staffing and budget constraints, sea sampling was not conducted in 2017. With planned staffing changes for 2018-2019, Rhode Island hopes to reinitiate sea sampling trips. Staff did conduct 9 port sampling trips that spanned catch from stat areas 526, 537, and 616.
- Connecticut: No sea sampling or port sampling trips were conducted in 2017.
- New York: Staff conducted 1 sea sampling trip which sampled 33 lobsters. Staff also conducted 2 market sampling trips, where 48 lobsters were sampled.
- New Jersey: Conducted 10 sea sampling trips and sampled 9,543 lobsters over 5,141 traps.
- Delaware: No sea sampling or port sampling trips were conducted in 2017.
- Maryland: No sea sampling or port sampling trips were conducted in 2017.
- Virginia: No sea sampling or port sampling trips were conducted in 2017.

7.0 Status of Surveys

Addendum X also requires fishery independent data collection by requiring statistical areas be sampled through one of the following methods: annual trawl survey, ventless trap survey, or young-of-year survey. *De minimis* states are not required to conduct biological sampling of their lobster fishery.

7.1 Trawl Surveys

Maine and New Hampshire: The Maine-New Hampshire Inshore Trawl survey began in 2000 and covers approximately two-thirds of the inshore portion of Gulf of Maine. The spring portion

of the survey completed 122 tows and sampled 24,660 lobsters. Spring survey abundance indices decreased from 2016 but are still well above the time series mean. The fall survey completed 101 tows and sampled 22,562 lobsters. Fall survey abundance indices also decreased from 2016 (Figure 2).

Massachusetts: The Division of Marine Fisheries conducts spring and autumn bottom trawl surveys in the territorial waters of Massachusetts. Only data collected from the autumn portion of the inshore trawl survey is used to calculate lobster relative abundance indices. In the GOM, relative abundance indices have generally increased over the last decade. In contrast, relative abundance indices in SNE remain low with the most recent values near or below the time series median (Figure 3).

Rhode Island: The RIDFW Trawl Survey program conducted seasonal surveys in the spring and fall, as well as a Monthly survey. In 2017, 44 trawls were conducted in both the spring and fall. 155 trawls were performed as part of the Monthly program. Spring 2017 mean CPUEs were 0.0 and 0.86 for legal and sub-legal lobsters, respectively. Fall 2017 CPUE were 0.11 for legal lobsters and 0.86 for sub-legal lobsters. The 2017 mean Monthly trawl CPUEs were 0.10 and 1.23 per tow for legal and sublegal lobsters, respectively. All abundances were low for the time series (Figure 4).

Connecticut and New York: Juvenile and adult abundance are monitored through the Long Island Sound Trawl Survey during the spring (April, May, June) and the fall (September, October) cruises. The spring 2017 lobster abundance index (geometric mean = 0.08 lobster/tow) was the lowest in the time series and similar to the 2013-2016 indices (0.44, 0.45, 0.31, 0.33, respectively). The fall 2016 and 2017 index values (0.02) ranked lowest in the time series, joining all indices since 2005 as collectively the lowest in the 33-year time series (Figure 5).

New Jersey: 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 lobsters per size class collected in each sampling area weighted by the stratum area, decreased from 2016 to 2017 for all three size classes (Figure 6).

7.2 Young of Year Index

Several states conduct young-of-year (YOY) surveys to detect trends in abundance of newly-settled and juvenile lobster populations. These surveys attempt to provide an accurate picture of the spatial pattern of lobster settlement. States hope to track juvenile populations and generate predictive models of future landings.

Maine: There are currently 40 fixed stations along the Maine coast. Of these 40 stations 38 have been sampled consistently since 2001 with two additional sites added to zone D in 2005. YOY survey indices continue to be below the series average for each region (Figure 7)

New Hampshire: New Hampshire Fish and Game conducted a portion of the coastwide American Lobster Settlement Index (ALSI). In 2017, a total of 29 juvenile lobsters were sampled from three sites, 20 of which were deemed older juveniles and six which were YOY. Figure 8 depicts the CPUE of lobsters for all NH sites combined, from 2008 through 2017. For each of these four indices, CPUE shows a general upward trend to a time series high in 2011, with sustained low levels from 2012 through 2016 and a slight uptick in 2017.

Massachusetts: Annual sampling for early benthic phase/juvenile (EBP) lobsters was conducted from August to September in 2015. Sampling was completed at 21 sites spanning 7 regions in Massachusetts coastal waters. Data for all sites were used to generate annual density estimates of EBP lobster and other decapod crustaceans. In 2017, densities of YOY lobsters remained low compared to the time series average in all sampling locations except Cape Ann (Figure 9). In LCMA 1, there were no YOY lobsters found in the Boston sampling locations while in LCMA 2 there were no YOY lobsters found in Buzzards Bay or Vineyard Sound sampling locations.

Rhode Island: For 2017, the YOY Settlement Survey was conducted at a total of six fixed stations with twelve randomly selected 0.5-meter quadrats sampled at each survey station. Average site abundance of lobster at suction sampling sites has generally declined since the mid-1990's (Figure 10). The 2017 YOY settlement survey index was 0.03 YOY lobster/m^2.

Connecticut: The CT DEEP Larval Lobster Survey in western Long Island Sound was discontinued in 2013. Alternative monitoring data are available for the eastern Sound from the Millstone Power Station entrainment estimates of all stages of lobster larvae. Both programs show a decline in abundance following the 1999 die-off (Figure 11).

7.3 Ventless Trap Survey

To address a need for a reliable index of lobster recruitment, a cooperative random stratified ventless trap survey was designed to generate accurate estimates of the spatial distribution of lobster length frequency and relative abundance while attempting to limit the biases identified in conventional fishery dependent surveys.

Maine: The Maine Ventless Trap Survey changed strategies in 2015 to cover more area by eliminating the vented traps at each site. This change allowed the survey to double the number of sites with ventless traps and increase the sampling coverage spatially to 276 sites. Traps were set during the months of June, July, and August. The stratified mean was calculated for each area using depth and statistical area. Overall, there were slight decreases in the number of sub-legal and legal lobsters caught in 2017, compared to the previous year (Figure 12).

New Hampshire: 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. Catch per unit effort (stratified mean catch per trap haul) from 2009 through 2017 is presented in Figure 13. The highest catch values of the time series were recorded in 2015, 2016, and 2017.

Massachusetts: The coast-wide ventless trap survey was initiated in 2006 and expanded in 2007 with the intention of establishing a standardized fishery-independent survey designed specifically to monitor lobster relative abundance and distribution. The survey was not conducted in 2013 due to a lack of funding; however, starting in 2014 the survey has been funded with lobster license revenues and will continue as a long-term survey. Relative abundance of sub-legal (< 83 mm CL) and legal-sized (≥ 83 mm CL) lobsters for Area 514 (part of LCMA 1) is shown in Figure 14 as the stratified mean CPUE. The mean CPUE of sub-legal lobsters in 2017 was slightly lower than recent years and was close to the time series average. The stratified mean catch per trap of legal-sized lobsters in 2017 was above the time series average.

Figures 15 and 16 show the time series of relative abundance (stratified mean CPUE) for sub-legal (<86 mm CL) and legal-sized (≥ 86 mm CL) lobsters in the southern MA region (Area 538 and northern Area 537; part of LCMA 2). The average catch of sub-legal lobsters was higher than the catch of legal-sized lobsters, and generally declined from 2006 through 2010 (the original time series). The spatial extent of the survey area was expanded in 2011 to include deeper waters outside Buzzards Bay, where thermal conditions are more tolerable. This expansion in survey area necessitates that the data from 2011 onwards be treated as a new survey index. In 2017, mean CPUEs of the sublegal and legal-sized lobsters in the original and the expanded survey area were below the time series average (Figures 15, 16).

Rhode Island: In 2017, the Ventless Trap Survey was conducted during the months of June-August over 18 sampling sites. A total of 3,482 lobsters were collected from 830 traps. All sampling was conducted in LCMA 2, NMFS Statistical Area 539. The CPUE of sub-legal lobsters decreased from 2016 to 2017, while the CPUE of legal lobsters remained steady. The stratified means catch-per-ventless trap on a six-pot trawl (three ventless, three vented) were 0.27 and 3.86 per ventless trap for legal and sublegal lobsters, respectively (Figure 17). Note, this calculation differs from previous years' reports, with the index excluding catches of vented pots to better reflect how VTS data is used in the lobster stock assessment.

8.0 State Compliance

States are currently in compliance with all required biological management measures under Amendment 3 and Addendum I-XXIV; however, the PRT notes that Connecticut and Rhode Island did not conduct any sea sampling, as specified in Addendum X. Both states noted staffing and budget constraints as contributors to the lack of sampling.

9.0 De Minimis Requests

The states of Virginia, Maryland, and Delaware have requested *de minimis* status. According to Addendum I, states may qualify for *de minimis* status if their commercial landings in the two most recent years for which data are available do not exceed an average of 40,000 pounds. Delaware, Maryland, and Virginia meet the *de minimis* requirement.

10.0 Regulatory Changes

Maine:

- Maine DMR adopted regulations to expand the Hancock County Trawl Limit area in Zone B by expanding the western boundary of the area to the 6-mile line. In this area, it is unlawful to have more than 3 lobster traps on any trawl.
- Based on a referendum of the Zone B lobster license holders, Maine DMR adopted regulations to change the Zone B 5:1 exit ratio using the currency of lobster licenses not renewed to a 3:1 exit ratio using the currency of lobster licenses not renewed.
- Based on a referendum of the Zone C lobster license holders, Maine DMR adopted regulations to establish Zone C as a limited entry zone with an exit ratio of 1:1 using the currency of lobster licenses not renewed.
- Based on a referendum of the Zone E lobster license holders, DMR adopted regulations to change the Zone E 5:1 exit ratio currency from the number of traps tags associated with licenses not renewed to the number of licenses not renewed.
- For consistency with changes in statute, DMR adopted regulations to require that limited entry zones that opt to use trap tags retired in their exit ratio calculation, use the historic high of trap tags purchased, up to the current zone limit.
- DMR adopted regulations for consistency with statutory changes to create a separate waiting list for existing lobster license holders wishing to change their declared lobster zone (a transfer list) to allow transfers “one for one”, with no net increase from transfers in any zone. DMR will authorize any such “swaps” annually until there are no matches remaining.
- DMR adopted regulations to clarify that if an individual completes the apprentice program in multiple zones, the minimum of the 24-month requirement is met 24 months from the date the individual logs their first day in the apprenticeship program.
- DMR adopted regulations making technical corrections to Chapter 25. It moved existing lobster trawl limits that are currently in Chapter 55 into Chapter 25, so that all lobster trawl limits are located in the same chapter.
- DMR struck expired language regarding second zone tags in Zones B and C, and F and G, now that a statewide second zone tag system is in place.
- DMR adopted regulations to create an exemption that would allow a lobster and crab fishing license holder to take and possess up to 5 gallons of Jonah crab claws detached at sea.
- DMR adopted regulations to make clerical corrections to the Lobster Zone line boundaries, amended the regulation for greater clarity, and added positions where Lobster Zone lines intersect with the Lobster Management Area 3 line.
- Statutes were amended to change the legal hauling hours to allow for a 4 am start time (instead of ½ hour before sunrise) for the month of October statewide, in both state and federal waters.
- Statutes were amended to specify the thickness of hairless hide bait that may be used by lobster fishermen, as long as the total thickness of fat and animal hide does not exceed 1-1/4 inches.

- Statutes were amended to remove the existing 10-year time limit for military service after which an individual is eligible to obtain a lobster license held and used prior to entering the military. A person who, upon appeal, is issued a lobster license shall submit landings data for the following 2 license years. During the second licensing year following the successful appeal, the person shall provide landings reports indicating a minimum of 50 landings days and sales of lobster to a lobster dealer. If a person fails to meet the requirements, the Commissioner shall revoke the license.
- Statutes were amended to improve enforcement of the lobster fishery as follows:
    - Expanding offenses that are cause for license suspension, or in some cases, revocation. The suspension may be imposed following a conviction through the court, or through the administrative suspension process.
        - Theft - lobster related
        - Receiving stolen goods - lobster related
        - Obstructing a Marine Patrol Officer
        - Assaulting, criminal threatening, terrorizing, or stalking a Marine Patrol Officer or a family member
        - Hindering apprehension or prosecution
        - Obstructing criminal prosecution
        - Arson - lobster related (mandatory suspension)
        - Aggravated criminal mischief - lobster related (mandatory suspension)
    - Trap molesting is now a criminal offense (rather than civil).
    - Untagged gear of less than 25 traps remains a civil offense and untagged gear in excess of 25 traps is now a criminal offense.
    - Specifying the following minimum and maximum license suspension lengths:

Violation	**First offense – Suspension length**	**Second offense – Suspension length**	**Third offense– Suspension length**
Trap molesting ***(changed from civil to criminal offense)***	Minimum 2 years Maximum 6 years	Minimum 2 years Maximum 10 years	Permanent revocation
Over the trap limit ***(remains a criminal offense)***	Minimum 3 years Maximum 10 years	Permanent revocation	(NA – license already permanently revoked)
Intentionally fishing sunken trawls ***(remains a criminal offense)***	Minimum 3 years Maximum 10 years	Permanent revocation	(NA – license already permanently revoked)
Artificially removing the eggs from a female lobster ***(remains a criminal offense)***	Minimum 4 years; potential for permanent revocation	Minimum 4 years; potential for permanent revocation	Minimum 4 years; potential for permanent revocation
Arson/destruction lobster boat	Permanent revocation	(NA – license already permanently revoked)	(NA – license already permanently revoked)

- For those violations classified as criminal, Marine Patrol may obtain a warrant from a judge to authorize the use of a tracker (to record the speed and location of a vessel) if the judge determines that there is probable cause to suspect that a violation is being committed.
- Following a license suspension for one of the violations listed in the table, the Commissioner is also authorized to require the license holder reentering the fishery to utilize a Vessel Monitoring System (VMS) for a length of time equal to that of their license suspension. Costs associated with the equipment are borne by the license holder.
- In addition, a license holder may be limited to only 300 traps when they return to fishing (when the license suspension is over) and build back up to the Zone trap limit by up to 100 traps per year.

Massachusetts

- MA instituted a change in regulations to prohibit placement of non-trap structures attractive to lobsters CMR 6.02(3)(e).

New York

- New York adopted Emergency Rules on May 16, 2018 to repeal the most restrictive rule for closed seasons. It is expected that the final rule will be adopted before September 8, 2018 to permanently repeal the closed season most restrictive rule before the start of the LMA 6 closed season. The ASMFC American Lobster Board repealed the most restrictive rule for closed seasons at the 2017 annual Board meeting.

11.0 Enforcement Concerns

Maine:

- In September of 2017, a fisherman was charged with exceeding the trap limit. There were also charges for fishing untagged gear and violation of trawl limits. These charges were brought as a result of a largescale Marine Patrol investigation. The fisherman was found at fault at an administrative hearing and at a follow-up length of suspension hearing with the Commissioner his license was suspended for 3yrs. This represents the statutory minimum for “over the limit” cases.

Rhode Island

- A remaining difficulty enforcement faces with lobster regulations is determining whether lobsters caught truly came from a lobster trap with an associated lobster trap allocation (LTA), or a trap targeting a different fishery (e.g. Rock crab, Black sea bass) without an LTA but operated by an individual or company with LTAs. In 2016, RIDEM DMF proposed that rock crab (*Cancer irroratus*) be included under the new management to help enforce lobster harvesting by removing gear that could catch lobsters outside the LTA program, while also reducing the number of lines in the water for marine mammal protection. Given public comment, industry did not support this

because much of the rock crab fishery does not hold a LTA and could not prove history records for qualification.

New York

- There were minor enforcement issues in 2017, such as a few cases of undersize vents and non-functional emergency escape panels. Some people bought old used gear that still had the 1 15/16 vents in them. A few traps were being fished without the current allocation tags.

12.0 Research Recommendations

The following research recommendations are from the 2015 Stock Assessment and were compiled by the Lobster TC and Stock Assessment Subcommittee.

- ***Ventless Trap Survey***- Calibration work is needed to determine how catch in ventless trap surveys relates to catch in the bottom trawl surveys. It is likely that at low densities, when trawl survey indices have dropped to near zero, ventless trap surveys will still catch lobsters due to the attractive nature of the gear and the ability to fish the gear over all habitat types. Conversely, it is possible that trawl surveys may be able to detect very high levels of lobster abundance, if trap saturation limits the capacity of the ventless traps. Ventless traps may be limited in their ability to differentiate between moderately high and extremely high abundance, and calibration with bottom trawl surveys may help to clarify how catchability might change with changes in lobster density.
- ***Maturation and Growth*** **-** Increases in water temperatures over the past several decades have likely resulted in changes to size at maturity and growth patterns. Maturity data currently used are more than 20 years old. Changes in size at maturity will subsequently affect growth, since female molting frequency decreases after reaching sexual maturity. It is critical to collect updated information on maturity and growth in order to appropriately assign molt probabilities to lobsters.
- ***Stock Connectivity*** **-** There is need for a comprehensive large scale tagging study to examine stock connectivity between the GOM and GBK. Historical tagging studies demonstrate movement from the inshore GOM to locations east of Cape Cod in the inshore portions of GBK, and from inshore areas east of Cape Cod to inshore GOM. What is lacking is a tagging study of lobsters in the fall/winter on GBK proper, prior to seasonal migrations which occur in the spring. This information would be extremely valuable to help complement other data used to justify the combination of the GOM and GBK stock and to confirm the connectivity of the GOM and GBK.
- ***Temperature*** **–** Given the importance of temperature in the life history of lobster, techniques should be developed to incorporate environmental data into population modeling.
- ***Post-Larval Settlement*** **–** There is a need to examine post-larval settlement dynamics in relation to the movement and re-distribution of spawning stock. Habitat suitability models for spawning stock and settling post-larvae should be developed.
- ***Natural Mortality*** **–** Methods should be explored to determine age or length-varying natural mortality, as well as looking at more rigorous ways of determining time-varying

natural mortality for lobster. These may be driven by climactic shifts and changing predator fields.

- ***Shell Disease*** **-** With the high prevalence of shell disease in the SNE stock, particularly in ovigerous females, some exploration of the potential sub-lethal effects of disease should be examined. These effects could include negative impacts to larval quality, fecundity issues in females who need to re-direct physiological resources to dealing with the disease, and male sperm quality

13.0 Plan Review Team Recommendations

The following are recommendations the Plan Review Team would like to raise to the Board:

- The PRT recommends the Board approve the *de minimis* requests of DE, MD, and VA.
- Given expected changes in bait availability, the PRT recommends the Board consider bait sources, protocols to evaluate potential bio-hazards, and appropriateness of different species as bait. This could lead to identifying common standards across jurisdictions.
- The PRT recommends the Board consider reviewing the monitoring requirements in SNE given the status of the stock and the difficulty obtaining sea sampling trips in a fishery with reduced effort.
- The PRT recommends the Board investigate the best way to quantify effort in the lobster fishery. Through Amendment 3 and subsequent addenda, the Board has largely managed effort in the lobster fishery through trap allocations. However, the effectiveness of trap allocations to reduce effort is confounded by their ambiguous relationship to trap hauls and the expansion of the Jonah crab fishery. Monitoring the true level of effort in the lobster fishery (whether than be through the number of permits, trap allocations, or trap hauls) will provide the Board with much needed information regarding fishery trends, particularly as stock conditions change in the GOM/GBK and SNE.
- The PRT recommends research is conducted on lobster growth, maturity, and connectivity. Given the increase in water temperature over the last several decades, the TC believes it is likely that there have been changes to size at maturity and growth patterns which are not captured in the current data.
- The PRT recommends continued research to understand dynamics between settlement and larval dynamics.
- The PRT recommends coastwide consideration be given to the transfer of tags between traps to eliminate the issuance of exchange tags (similar to current Maine regulations).

14.0 Tables

Table 1. Landings (in pounds) of American Lobster by the states of Maine through Virginia. Source: ACCSP Data Warehouse for 1981-2016 landings; state compliance reports for 2017 landings. *C= confidential data.*

	ME	NH	MA	RI	CT	NY	NJ	DE	MD	VA	Total
1981	22,631,614	793,400	11,420,638	1,871,067	807,911	890,218	593,801	55,700	63,108	2,173	39,129,630
1982	22,730,253	807,400	11,265,840	3,173,650	880,636	1,121,644	846,215	90,700	64,788	4,713	40,985,839
1983	21,976,555	1,310,560	12,867,378	5,114,486	1,654,163	1,207,442	769,913	56,700	76,192	20,619	45,054,008
1984	19,545,682	1,570,724	12,446,198	5,259,821	1,796,794	1,308,023	927,474	103,800	98,876	37,479	43,094,871
1985	20,125,177	1,193,881	13,702,702	5,140,131	1,381,029	1,240,928	1,079,723	118,500	82,295	42,881	44,107,247
1986	19,704,317	941,100	12,496,125	5,667,940	1,253,687	1,416,929	1,123,008	109,000	57,593	93,105	42,862,804
1987	19,747,766	1,256,170	12,856,301	5,317,302	1,571,811	1,146,613	1,397,138	84,100	49,820	60,241	43,487,262
1988	21,739,067	1,118,900	12,977,313	4,758,990	1,923,283	1,779,908	1,557,222	66,200	22,966	53,696	45,997,545
1989	23,368,719	1,430,347	15,645,964	5,786,810	2,076,851	2,344,932	2,059,800	76,500	17,502	45,107	52,852,532
1990	28,068,238	1,658,200	16,572,172	7,258,175	2,645,951	3,431,111	2,198,867	68,300	24,941	58,260	61,984,215
1991	30,788,646	1,802,035	15,998,463	7,445,172	2,673,674	3,128,246	1,673,031	54,700	26,445	7,914	63,598,326
1992	26,830,448	1,529,292	14,969,350	6,763,087	2,534,161	2,651,067	1,213,255	21,000	27,279	753	56,539,692
1993	29,926,464	1,693,347	14,350,595	6,228,470	2,177,022	2,667,107	906,498	24,000	46,650	2,940	58,023,093
1994	38,948,867	1,650,751	16,176,551	6,474,399	2,146,339	3,954,634	581,396	8,400	7,992	460	69,949,789
1995	37,208,324	1,834,794	15,903,241	5,362,084	2,541,140	6,653,780	606,011	25,100	26,955	5,210	70,166,639
1996	36,083,443	1,632,829	15,312,826	5,295,797	2,888,683	9,408,519	640,198	C	C	C	71,312,769
1997	47,023,271	1,414,133	15,010,532	5,798,529	3,468,051	8,878,395	858,426	C	C	C	82,488,433
1998	47,036,836	1,194,653	13,167,803	5,617,873	3,715,310	7,896,803	721,811	1,359	19,266	1,306	79,373,020
1999	53,494,418	1,380,360	15,875,031	8,155,947	2,595,764	6,452,472	931,064	C	C	C	88,939,919
2000	57,215,406	1,709,746	14,988,031	6,907,504	1,393,565	2,883,468	891,183	C	C	C	86,052,553
2001	48,617,693	2,027,725	11,976,487	4,452,358	1,329,707	2,052,741	579,753	C	C	C	71,096,271
2002	63,625,745	2,029,887	13,437,109	3,835,050	1,067,121	1,440,483	264,425	C	C	C	85,728,716
2003	54,970,948	1,958,817	11,321,324	3,561,391	C	946,449	209,956	C	22,778	C	73,680,057
2004	71,574,344	2,097,396	11,675,852	3,059,319	646,994	996,109	370,536	13,322	14,931	27,039	90,475,842
2005	68,729,623	C	11,291,145	3,174,852	713,901	1,154,470	369,003	C	39,173	C	88,056,471
2006	75,419,802	2,612,389	12,077,140	C	806,135	1,252,146	470,878	C	26,349	C	96,452,365
2007	63,987,073	2,468,811	10,046,120	2,299,744	568,696	911,761	334,097	C	C	C	80,676,223
2008	69,908,847	2,568,088	10,606,534	2,782,000	427,168	712,075	304,479	C	C	C	87,364,845
2009	81,124,201	2,986,981	11,789,536	2,842,088	412,468	731,811	C	C	30,988	C	100,306,327
2010	96,244,299	3,648,004	12,772,159	2,928,688	441,622	813,513	C	C	29,989	C	116,903,774
2011	104,953,822	3,919,195	13,385,393	2,754,067	198,928	344,232	C	C	41,077	C	125,627,299
2012	127,461,553	4,229,227	14,486,344	2,706,384	247,857	550,441	919,351	C	C	C	150,691,644
2013	128,016,485	3,817,707	15,158,509	2,155,762	127,420	496,535	660,367	C	C	C	150,528,929
2014	124,925,606	4,374,656	15,322,852	2,412,875	127,409	222,843	526,368	C	C	C	148,007,452
2015	122,667,346	4,721,826	16,450,414	2,315,708	205,099	147,414	445,060	C	C	C	147,014,519
2016	132,555,453	5,782,098	17,785,502	2,260,335	254,346	218,846	349,880	C	C	C	159,256,657
2017	111,743,827	5,633,939	16,896,409	2,058,227	99,383	138,946	419,402	C	C	C	137,044,941

Table 2. Estimated lobster landings (in pounds) by lobster conservation management area (LCMA)*. Source: ASMFC Lobster Data Warehouse. This table is only updated in years when stock assessment reports are conducted.

Coastwide Estimated Lobster Landings (lbs) by Lobster Conservation Management Area (LCMA)*								
Year	LCMA 1	LCMA 2	LCMA 3	LCMA 4	LCMA 5	LCMA 6	LCMA OCC	Grand Total
1981	32,369,320	527,284	4,321,500	441,478	115,653	1,220,159	134,327	39,129,721
1982	32,123,750	1,656,479	4,961,680	622,674	99,093	1,359,058	163,105	40,985,839
1983	32,826,685	2,958,366	5,645,179	633,254	71,804	2,428,633	198,448	44,762,369
1984	29,862,411	2,978,985	6,409,741	795,180	135,652	2,704,070	208,832	43,094,871
1985	31,590,759	2,992,330	5,853,851	964,043	170,998	2,273,337	261,929	44,107,247
1986	30,080,507	3,081,903	5,829,275	1,084,282	125,969	2,362,128	298,747	42,862,811
1987	30,682,754	3,219,900	5,357,273	1,473,841	98,486	2,378,765	276,250	43,487,269
1988	32,362,492	3,259,336	5,132,943	1,666,439	85,142	3,195,208	295,985	45,997,545
1989	36,800,166	4,175,114	5,450,786	2,232,935	106,126	3,735,250	352,155	52,852,532
1990	41,720,481	4,374,062	8,783,629	2,431,198	237,410	4,250,654	581,447	62,378,881
1991	43,648,773	4,140,145	8,537,053	2,096,138	115,020	4,393,986	740,267	63,671,382
1992	39,055,380	3,795,367	7,124,248	1,448,866	77,854	4,362,551	738,026	56,602,292
1993	40,962,969	3,772,494	6,773,992	1,597,447	89,495	3,968,663	938,486	58,103,546
1994	51,597,880	5,602,507	5,684,252	554,367	26,013	5,738,398	848,181	70,051,598
1995	49,771,715	4,960,453	5,008,551	962,077	45,054	8,564,325	1,000,609	70,312,784
1996	47,992,628	4,880,328	4,896,782	978,376	52,758	11,705,439	852,532	71,358,843
1997	58,016,197	5,324,775	5,549,295	1,162,862	36,623	11,650,701	849,126	82,589,579
1998	56,187,841	5,273,463	5,043,939	1,534,067	41,963	10,575,143	797,019	79,453,435
1999	65,375,535	6,938,658	6,166,601	1,346,509	77,621	8,331,142	739,904	88,975,970
2000	69,265,611	5,651,160	5,436,618	1,123,486	53,364	3,802,880	765,801	86,098,920
2001	57,531,942	3,862,054	5,525,209	762,408	55,537	3,013,551	611,242	71,361,943
2002	73,607,600	3,445,004	5,483,983	442,425	14,838	2,230,869	786,137	86,010,856
2003	63,005,041	1,110,534	6,978,808	423,583	17,394	1,448,011	804,355	73,787,725
2004	80,448,651	1,184,942	6,722,671	480,203	93,270	1,534,130	993,689	91,457,556
2005	76,240,627	1,464,433	7,442,771	457,275	54,181	1,673,396	966,787	88,299,470
2006	80,846,400	1,853,505	7,588,539	516,130	59,928	1,840,308	1,048,051	93,752,862
2007	70,862,089	1,430,836	6,375,646	617,978	56,866	1,263,648	1,132,991	81,740,055
2008	78,914,865	1,168,921	6,124,979	440,108	322,916	920,951	1,127,422	89,020,163
2009	91,133,844	1,051,241	6,960,119	488,792	308,212	896,594	1,256,201	102,095,002
2010	106,458,701	1,022,528	7,955,472	522,037	184,409	966,505	1,209,482	118,319,134
2011	116,042,515	730,889	7,890,340	488,977	148,587	306,079	1,244,299	126,851,685
2012	138,762,843	627,051	8,111,396	782,684	154,455	286,215	1,223,279	149,947,922
Grand Total	1,886,148,973	98,515,048	201,127,121	31,572,119	3,332,690	115,380,746	23,445,109	2,359,521,806

*Landings data are not collected by LCMA in all states. To separate landings by LCMA, NMFS statistical areas are placed into a single LCMA. For a complete description of how estimates are completed contact Megan Ware, at mware@asmfc.org

Table 3. Threshold reference points with stock status variables for lobsters in each stock area. (Source: 2015 Benchmark Stock Assessment).

Variable	GOM	GBK	GOM/GBK	SNE
Effective Exploitation				
Effective exploitation threshold	0.54	1.83	0.5	0.41
Recent effective exploitation (2011-2013)	0.48	1.54	0.48	0.27
Effective exploitation below threshold?	YES	YES	YES	YES
Reference Abundance (millions)				
Abundance threshold	52	0.8	66	24
Recent abundance (2011-2013)	247	1.57	248	10
Abundance above threshold?	YES	YES	YES	NO

Table 4. 2017 LCMA specific management measures

Mgmt Measure	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	OCC
Min Gauge Size	3 1/4"	3 3/8"	3 17/32"	3 3/8"	3 3/8"	3 3/8"	3 3/8"
Vent Rect.	1 15/16 x 5 3/4"	2 x 5 3/4"	2 1/16 x 5 3/4"	2 x 5 3/4"	2 x 5 3/4"	2 x 5 3/4"	2 x 5 3/4"
Vent Cir.	2 7/16"	2 5/8"	2 11/16"	2 5/8"	2 5/8"	2 5/8"	2 5/8"
V-notch requirement	Mandatory for all eggers	Mandatory for all legal size eggers	Mandatory for all eggers above 42°30'	Mandatory for all eggers in federal waters. No v-notching in state waters.	Mandatory for all eggers	None	None
V-Notch Definition[1] (possession)	Zero Tolerance	1/8" with or w/out setal hairs[1]	1/8" with or w/out setal hairs[1]	1/8" with or w/out setal hairs[1]	1/8" with or w/out setal hairs[1]	1/8" with or w/out setal hairs[1]	State Permitted fisherman in state waters 1/4" without setal hairs Federal Permit holders 1/8" with or w/out setal hairs[1]
Max. Gauge (male & female)	5"	5 ¼"	6 3/4"	5 ¼"	5 ¼"	5 ¼"	State Waters none Federal Waters 6 3/4"
Season Closure				April 30-May 31[2]	February 1-March 31[3]	Sept 8-Nov 28[4]	February 1-April 30

[1] A v-notched lobster is defined as any female lobster that bears a notch or indentation in the base of the flipper that is at least as deep as 1/8", with or without setal hairs. It also means any female which is mutilated in a manner that could hide, obscure, or obliterate such a mark.

[2] Pots must be removed from the water by April 30 and un-baited lobster traps may be set one week prior to the season reopening.

[3] During the February 1 – March 31 closure, trap fishermen will have a two week period to remove lobster traps from the water and may set lobster traps one week prior to the end of the closed season.

[4] Two week gear removal and a 2 week grace period for gear removal at beginning of closure. No lobster traps may be baited more than 1 week prior to season reopening.

Table 5: Trap allocation reductions as required by Addendum XVIII for LCMA 2 and 3 fishermen. This table only represents trap allocation reductions reported ahead of the 2018 fishing year and does not represent aggregate trap reductions over multiple years. Traps can also be retired due to the 10% conservation tax on trap transfers. Sources of the trap allocations come from state compliance reports and GARFO 2018 trap allocations published for the trap transfer program.

	Jurisdiction	# of Trap Allocated (For 2018 Fishing Year)	# of Traps Retired (from 2017 to 2018 Fishing Year)	Comments on Trap Transfers
LCMA 2	**MA**	32,116	1,629	73 traps lost to 10% transfer tax; 88 traps added due to federal transfers
	RI	79,570	3,689	1,147 traps transferred
	CT	3,742	193	
	NOAA (ME, NH, NY, NJ)	2,834	511	
LCMA 3	**NOAA**	121,795	7,115	

Table 6. 2017 sampling requirements and state implementation. All states have 100% active harvester reporting except for Maine which has 10% harvester reporting. Sufficient sea sampling can replace port sampling. *De minimis* states (denoted by *) are not required to conduct biological sampling of their lobster fishery.

State	100% Dealer Reporting	10% Harvester Reporting	Sea Sampling	Port Sampling	Ventless Trap Survey	Settlement Survey	Trawl Survey
ME	✓	✓ (10%)	✓		✓	✓	✓
NH	✓	✓	✓	✓	✓	✓	✓ (w/ ME)
MA	✓	✓	✓	✓	✓	✓	✓
RI	✓	✓	None in 2017	✓	✓	✓	✓
CT	✓	✓	None in 2017			✓	✓
NY	✓	✓	✓	✓			✓ (w/ CT)
NJ	✓	✓	✓				✓
DE*	✓	✓	None in 2017				✓ (no lobsters encountered)
MD*	✓	✓	None in 2017				
VA*	✓	✓	None in 2017				

15.0 Figures

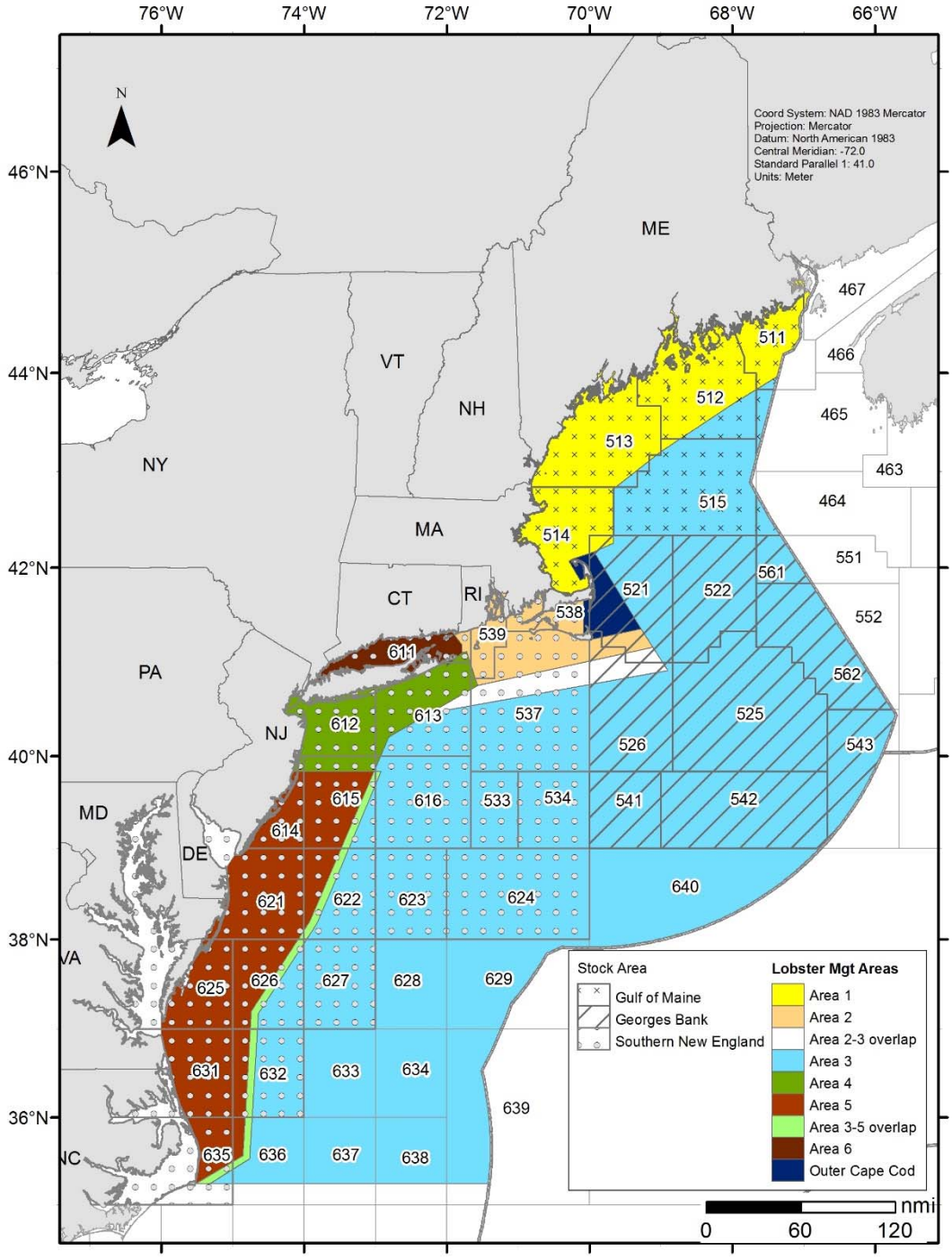


Figure 1: Lobster Conservation Management Areas (LCMAs) and stock boundaries for American lobster.

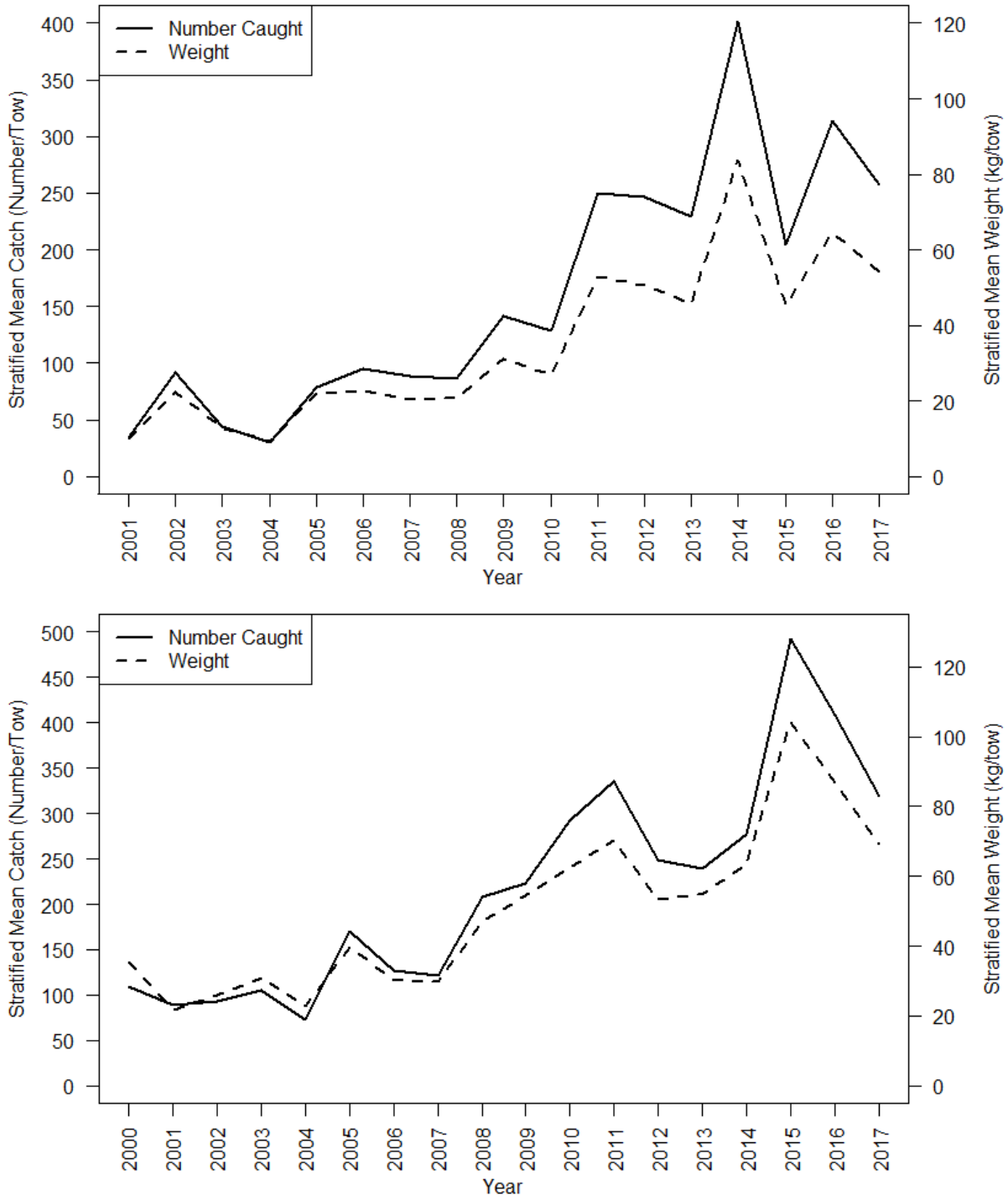


Figure 2: Maine-New Hampshire survey stratified mean abundance indices for lobster, 2001-2017. Results of the spring survey are on the top and results from the fall survey are on the bottom.

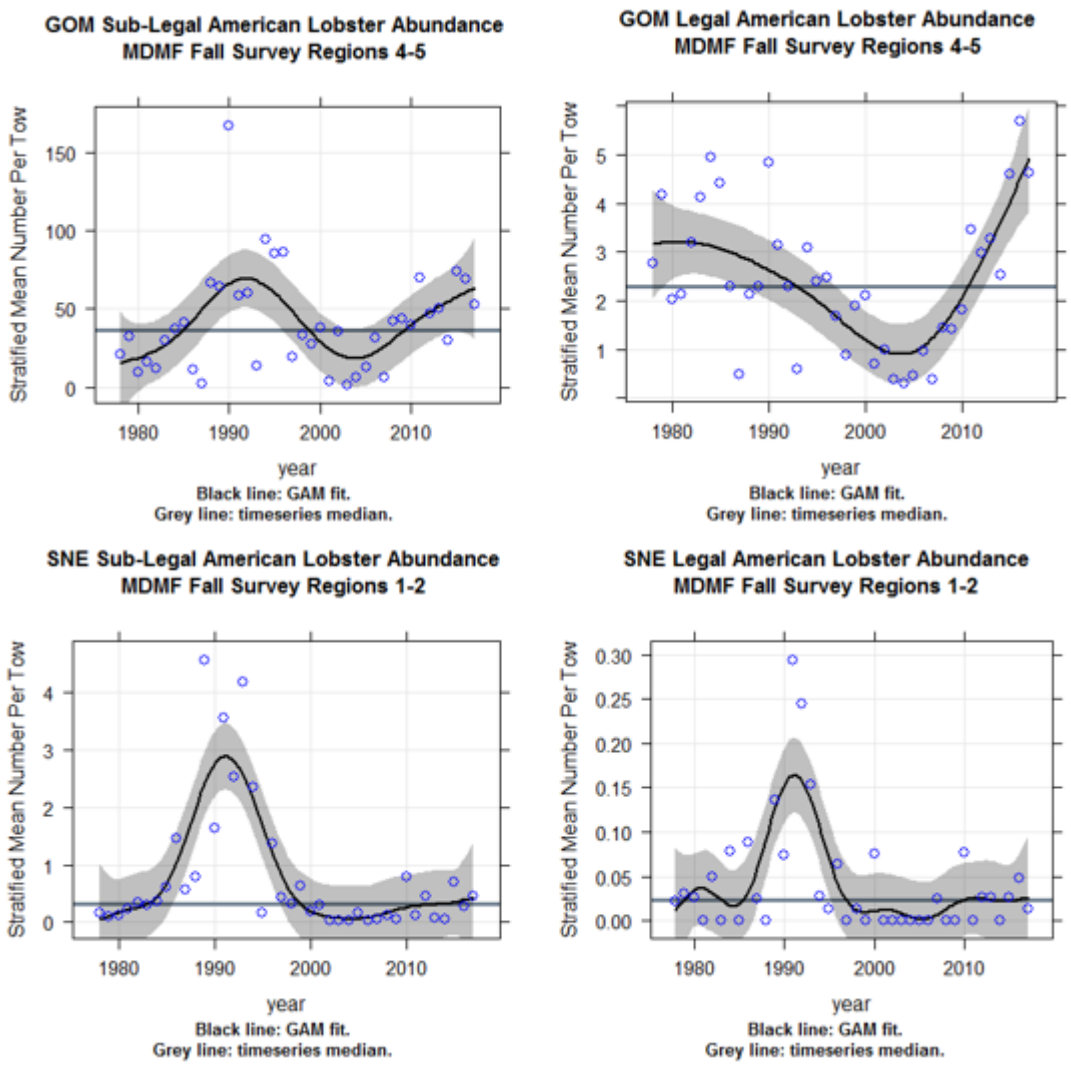


Figure 3: MADMF Fall Trawl Survey sub-legal and legal indices from 1978-2017. The top charts are from Gulf of Maine and the bottom charts are from Southern New England.

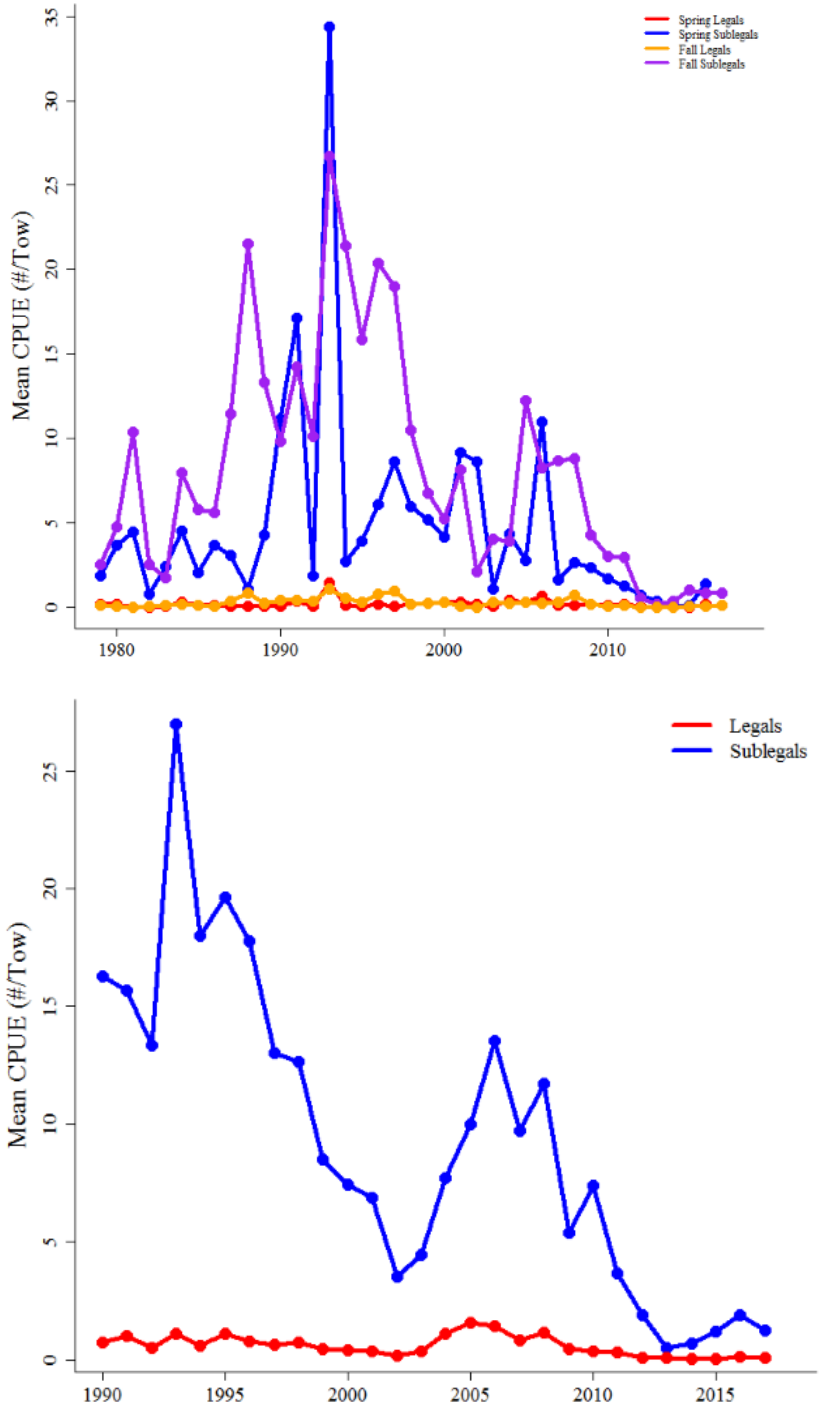


Figure 4: RIDFW Seasonal (Spring and Fall) Trawl lobster abundances (top) and Monthly Trawl lobster abundances (bottom). CPUE is expressed as the annual mean number per tow for sub-legal (<85.725mm CL) and legal sized (>=85.725mm CL) lobsters.

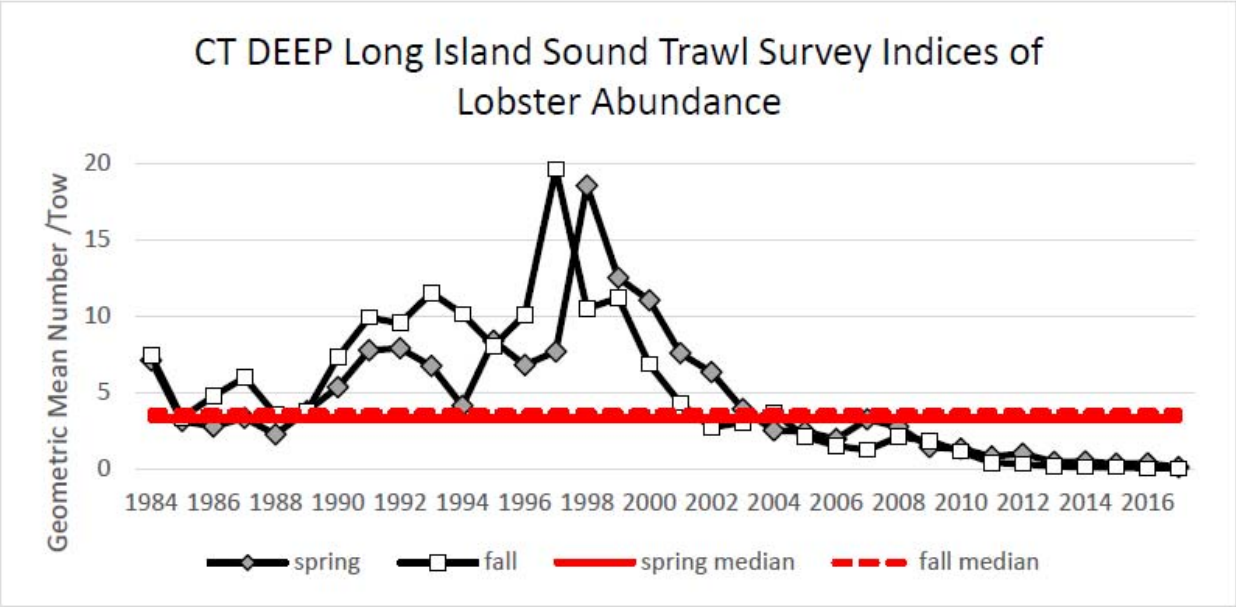


Figure 5: Results of the Long Island Sound Trawl Survey during spring (April-June) and fall (September-October) within NMFS statistical area 611.

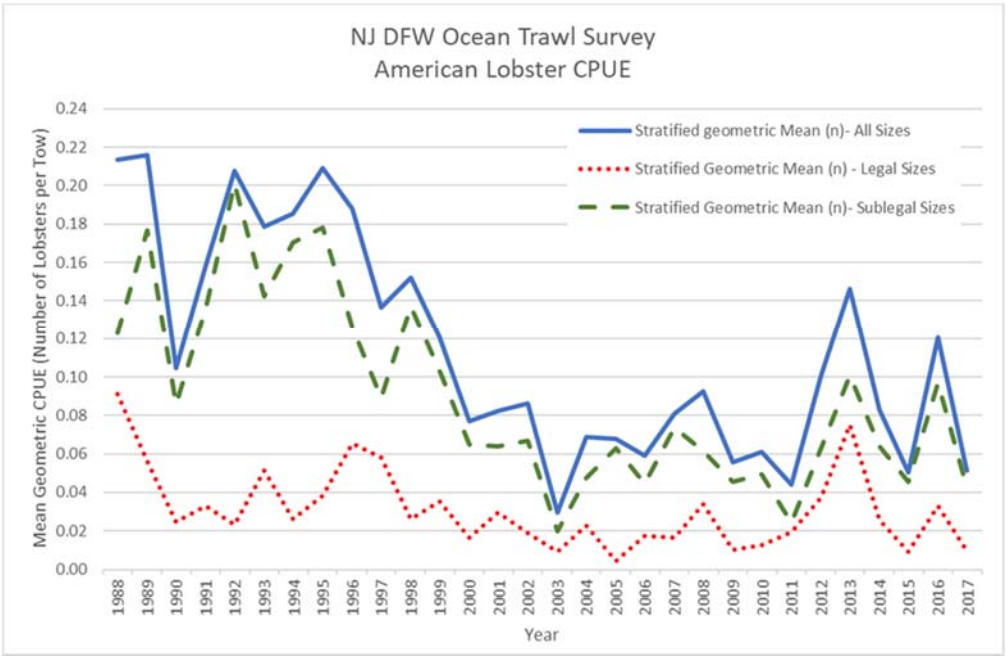


Figure 6: Stratified mean CPUE of all lobsters collected aboard the NJDFW Ocean Trawl Survey. The survey stratifies sampling in three depth gradients, inshore (18'-30'), mid-shore (30'-60'), offshore (60'-90'). The mean CPUE was calculated as the sum of the mean number of lobsters per size class collected in each sampling area weighted by the stratum area.

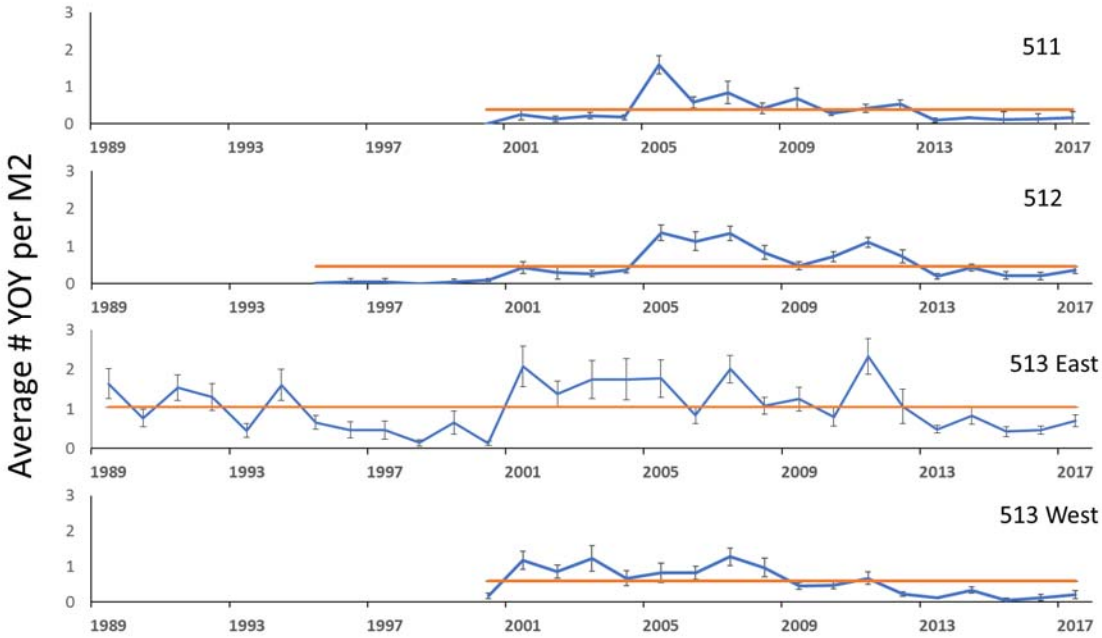
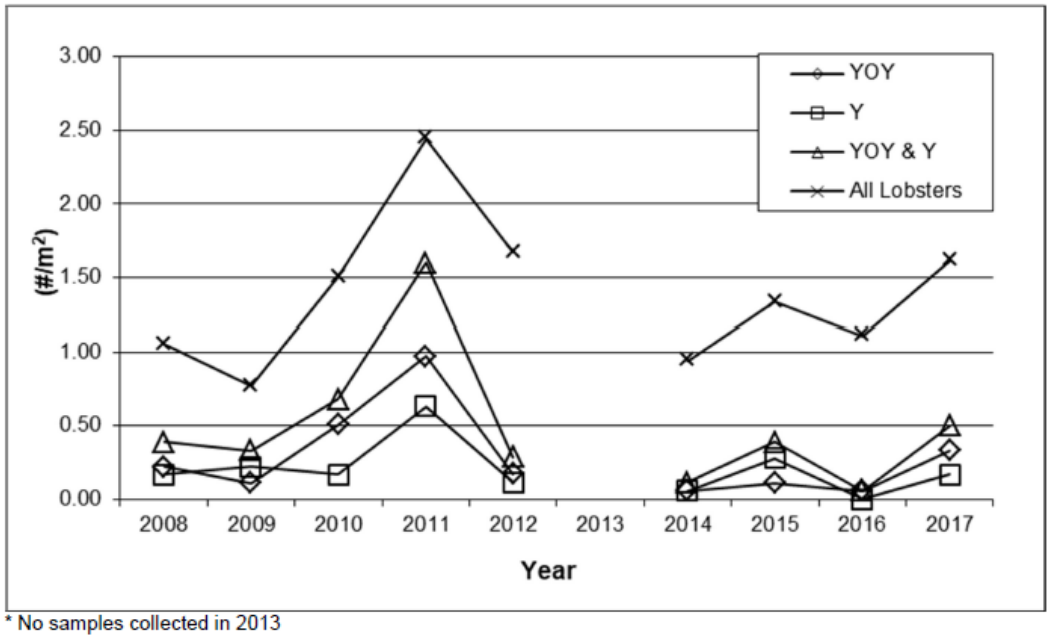


Figure 7: Settlement survey index (blue line) for each statistical area in Maine (1989-2017). The series average for each region is represented by the red line.



* No samples collected in 2013

Figure 8: Catch per unit effort (#/m2) of young-of-year (YOY), one-year-olds (Y+), YOY and Y+ combined, and all lobsters during the American Lobster Settlement Index, by location, in New Hampshire, from 2008 through 2017. There were no settlement survey samples collected in NH in 2013.

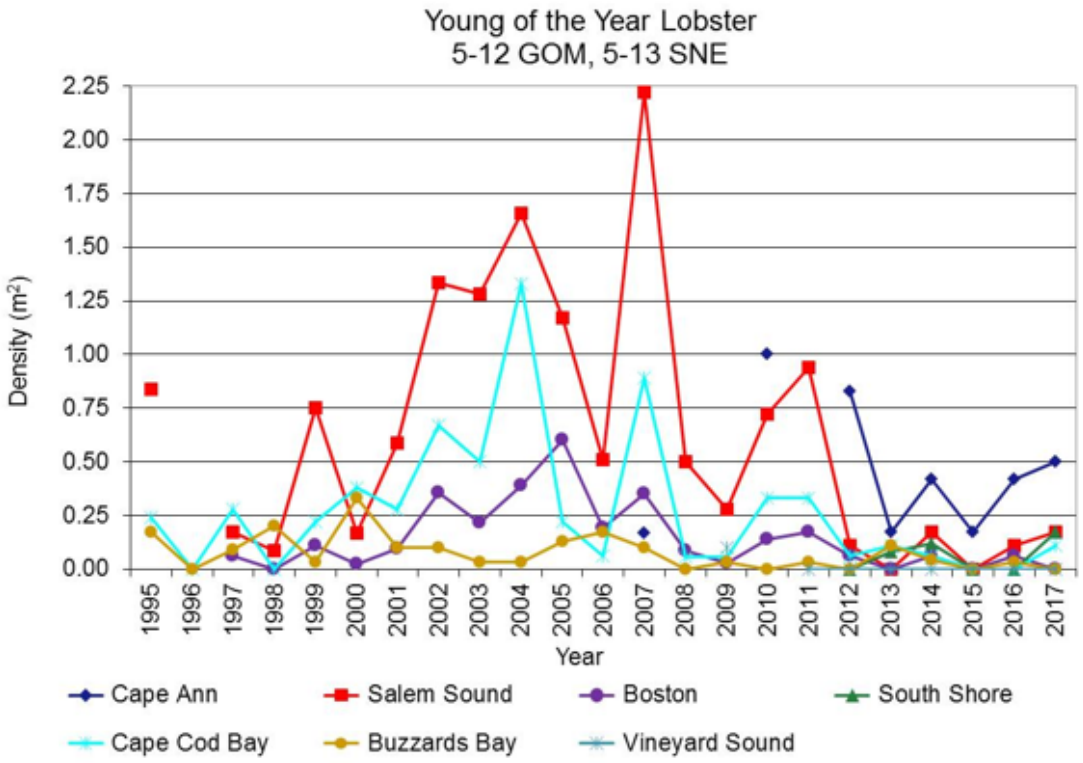


Figure 9: Young-of-year lobster density in seven Massachusetts regions; LCMA 1 – Cape Ann, Salem Sound, Boston, South Shore, Cape Cod Bay, LCMA 2 - Buzzards Bay, Vineyard Sound.

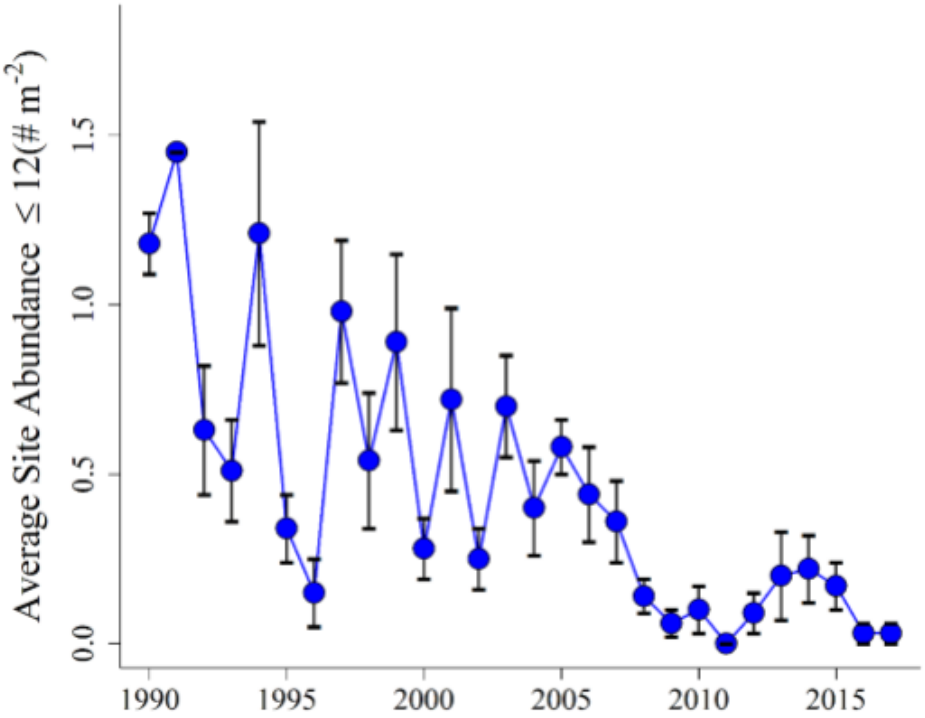


Figure 10: Average abundance of American lobster in Rhode Island suction sampling sites. Abundances are presented for lobsters 12mm and smaller, with deviations presented.

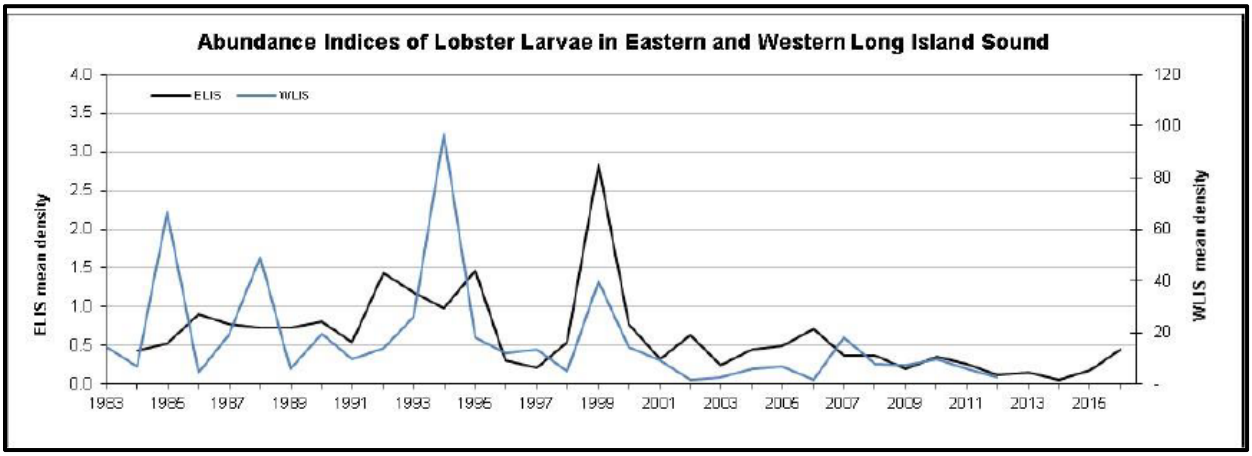


Figure 11: Abundance indices of lobster larvae from the Connecticut DEEP Larval Lobster Survey in western Long Island Sound and from the Millstone Power Station entrainment estimates in eastern Long Island Sound. The Connecticut DEEP survey was discontinued in 2013.

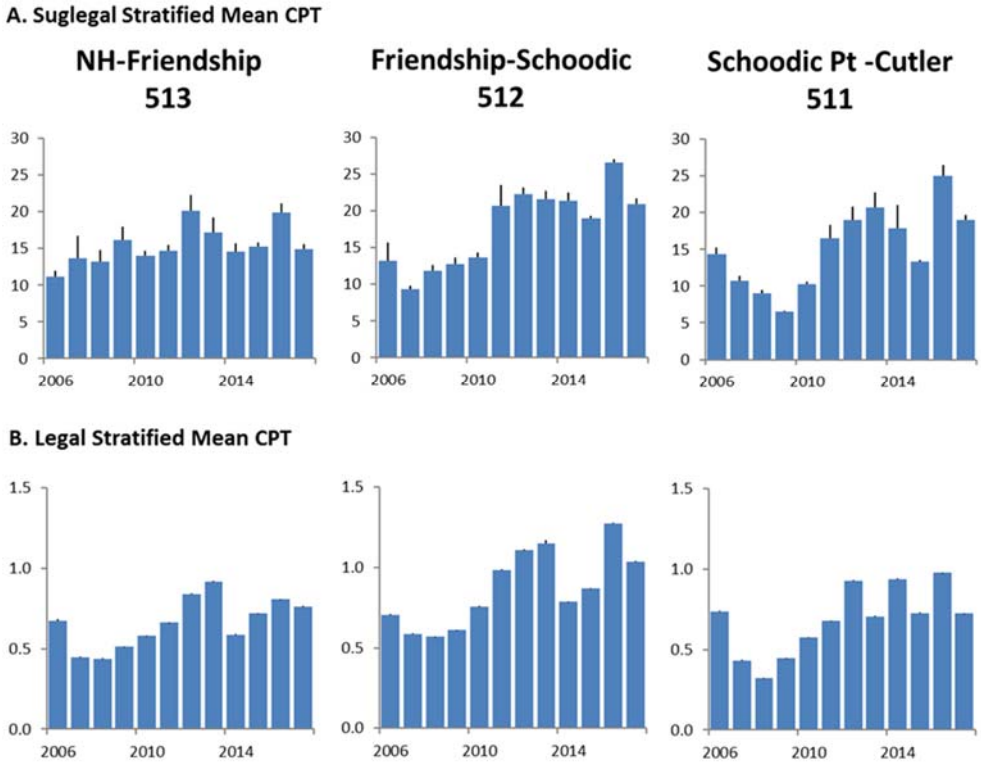


Figure 12: CPUE stratified mean for both sublegal and legal lobsters from Maine's Ventless Trap survey, 2006-2017, by statistical area. Only ventless traps were included in the analysis.

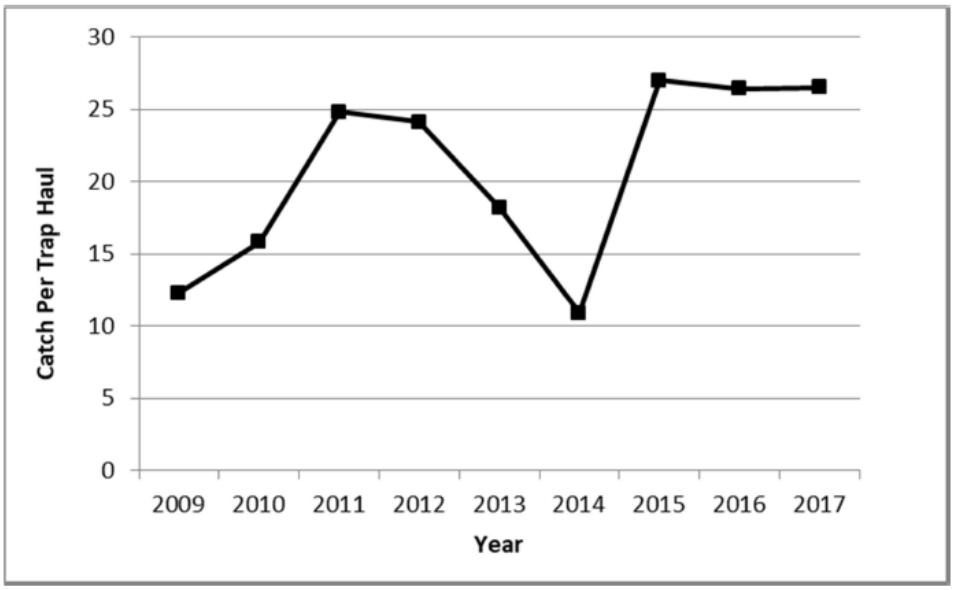


Figure 13: Stratified mean catch per trap haul, for all lobsters captured during the coast-wide random stratified Ventless Trap Survey in New Hampshire state waters from 2009 through 2017.

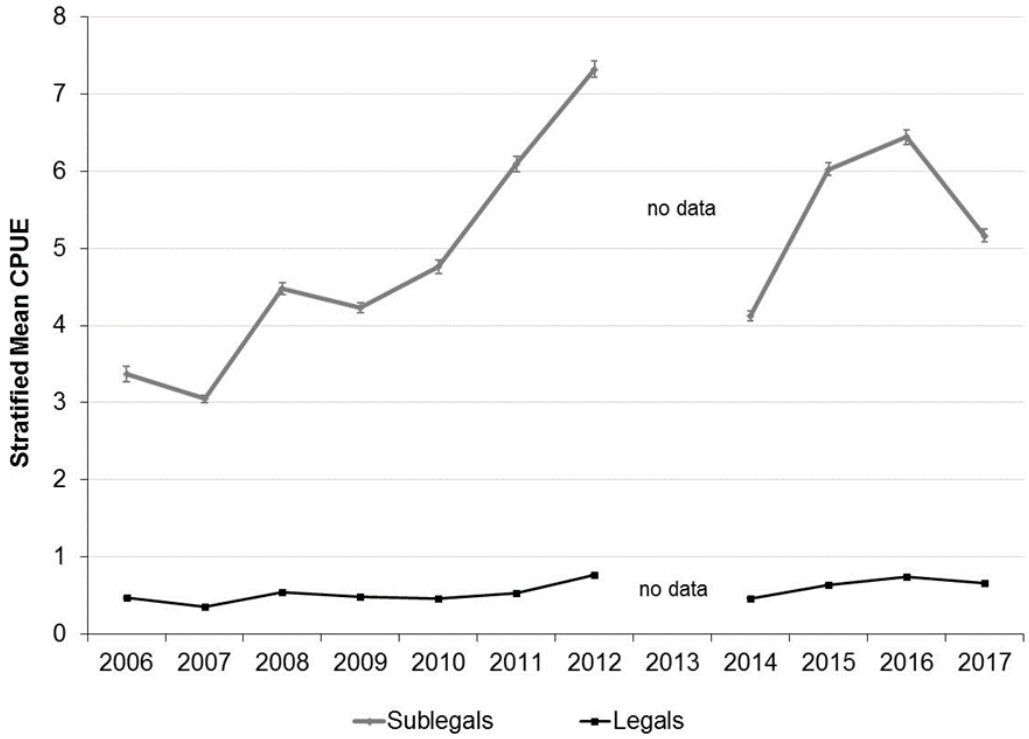


Figure 14: Stratified mean catch per trap haul (±S.E.) of sublegal (< 83 mm, grey line) and legal (≥ 83 mm, black line) lobsters in NMFS Area 514 from MADMF ventless trap survey.

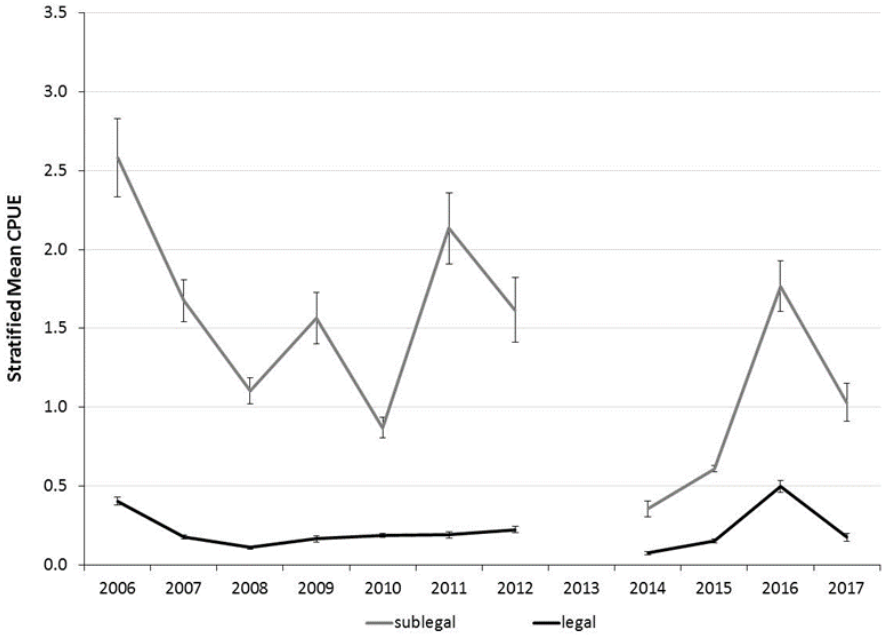


Figure 15: Stratified mean catch per trap haul (±S.E.) from MADMF ventless trap survey of sublegal (< 86 mm, grey line) and legal (≥ 86 mm, black line) lobsters in the original MA SNE survey area (within state waters), Area 538.

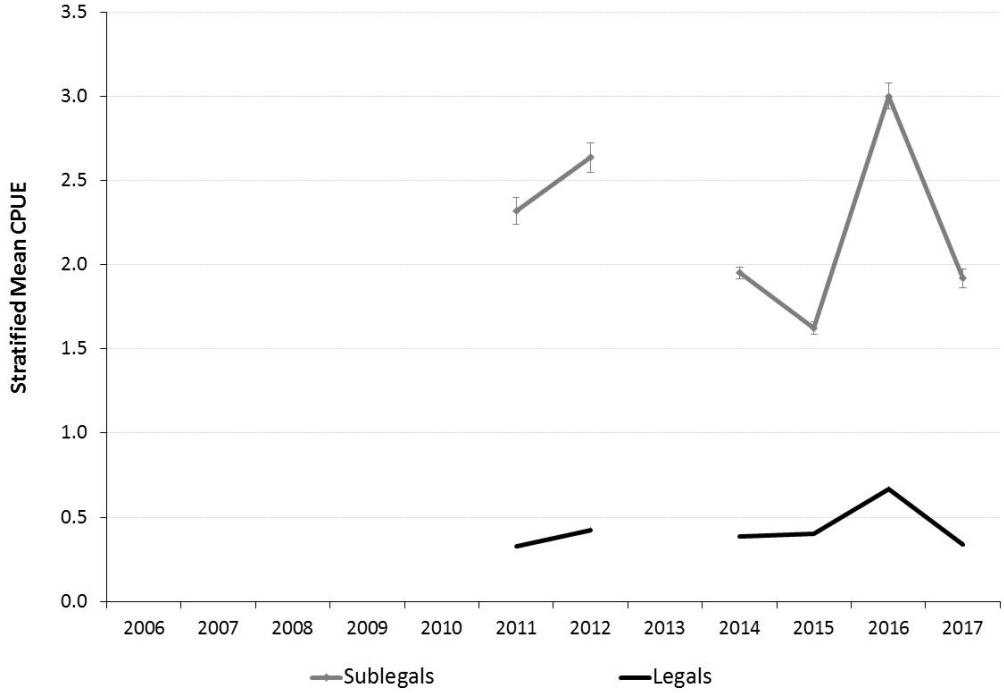


Figure 16: Stratified mean catch per trap haul (+/- S. E) of sublegal (<86 mm, grey line) and legal (>=86 mm, black line) lobsters in the expanded MA SNE VTS survey area, which includes NMFS Area 538 and the northern portion of Area 537.

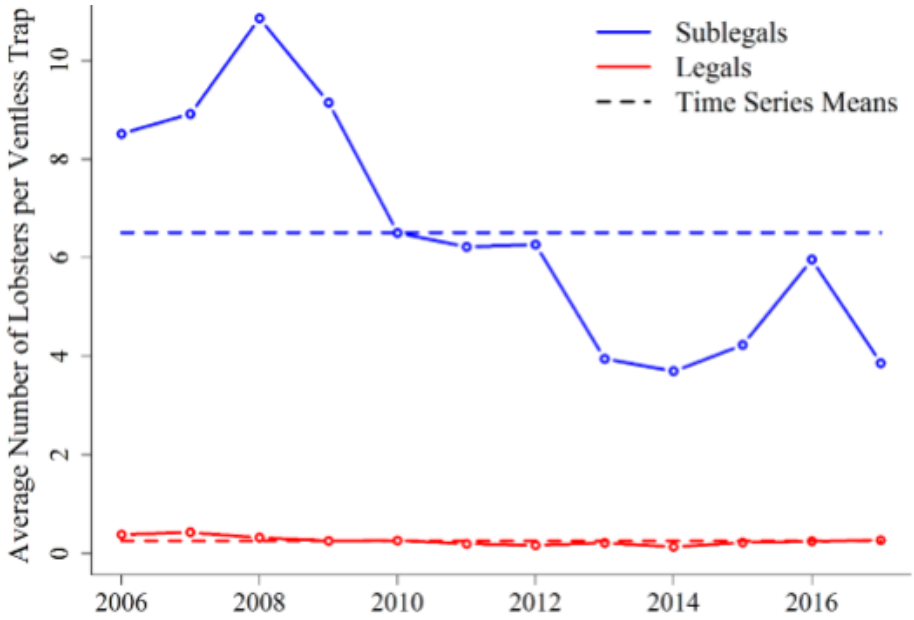


Figure 17: Stratified mean catch (#) per ventless trap for sublegal (<85.725 mm CL) and legal-sized (>=85.725mm CL) lobsters from RIDEM ventless trap survey. The dashed lines indicate time series means for the two indices. The figure includes lobsters from both the vented and ventless traps in the survey. Note, this calculation differs from previous years' reports, with the index excluding catches of vented pots to better reflect how VTS data is used in the lobster stock assessment to date.

Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: American Lobster Management Board

FROM: Electronic Reporting Subcommittee

DATE: October 5, 2018

SUBJECT: Update on Discussions of Subcommittee

In February 2018, the American Lobster Management Board (Board) approved Addendum XXVI, which established a deadline that within 5 years, there is a requirement for 100% harvester reporting in the lobster fishery. To achieve this goal, the Board indicated an interest in pursuing electronic reporting and, to this end, established the Electronic Reporting Subcommittee (Subcommittee). The purpose of the Subcommittee is to guide the development and implementation of electronic harvester reporting in the lobster and Jonah crab fisheries. This memo seeks to provide an update on the discussions and progress of the Electronic Reporting Subcommittee.

Over the course of the year, the Subcommittee has met six times via conference call. The first two calls focused on identifying a common set of goals, identifying steps to achieve these goals, and brainstorming a suite of desired features that would be included in an electronic reporting form. The Subcommittee then had a series of calls with several reporting software developers to understand what software are available, how they differ, and how they compare with the set of desired features previously outlined by the group.

On the Subcommittee's most recent call (September 21st), the Subcommittee debriefed on the conversations with the various software developers and discussed potential paths forward. The primary point of discussion was whether a single, preferred software provider should be identified or if specifications for the desired electronic reporting form should be written and distributed, allowing multiple companies the opportunity to develop compatible software. Several Subcommittee members expressed concerns about selecting a single software provider as they didn't want to be pigeonholed into one solution; if a jurisdiction wants to pursue another option, they should be allowed to do so, as long as it meets specified criteria. Others noted that selecting a single reporting form can lead to complacency and cost increases.

Subcommittee members also highlighted concerns about allowing for multiple software developers. Specifically, it was noted that if there are multiple software providers, they each need to be verified to ensure they meet reporting standards. In addition, it was highlighted that there needs to be a financial incentive for a software company to develop an electronic reporting form. Moreover, if there is no upfront compensation from jurisdictions or management bodies to develop the software, developers will likely have to recover costs through a paid fishermen subscription service. An exception to this is eTrips, whose software development is included in the budget of ACCSP. The Subcommittee discussed the possibility of developing a written list of specifications to distribute to software developers in order to assess interest and response levels; however, the Subcommittee suspected that responses may be low given software companies will have to be confident that fishermen are willing to pay for an alternative reporting service, or that it will be funded by a jurisdiction. Moreover, the

Subcommittee commented that compiling a list of written specifications could present a large workload for an answer that can be largely predicted.

Overall, the Subcommittee continues to discuss a recommended path forward for lobster electronic reporting, including how to balance the desire for flexibility with the reality that some electronic reporting software may present large costs to states and/or industry. Updates will continue to be provided to the Board at future ASMFC meetings.

Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: Atlantic Herring Management Board

FROM: Megan Ware, FMP Coordinator

DATE: October 15, 2018

SUBJECT: 2019 Specifications for Area 1A

At each Annual Meeting, the Atlantic Herring Management Board (Board) considers setting specifications for the Area 1A fishery. A primary component of this specification process is determining which quota periods will be used and whether quota from January 1-May 31 will be allocated to later in the fishing season. Per Amendment 3, the Board can consider distributing the Area 1A sub-ACL using bi-monthly, trimester, or seasonal quota periods to meet the needs of the fishery. Recently, the Board has chosen to use seasons in which 0% of the Area 1A sub-ACL is allocated from January 1 – May 31, 72.8% is allocated from June 1 – September 30, and 27.2% is allocated from October 1 – December 31.

Given the results of the 2018 Atlantic Herring Benchmark Stock Assessment (SAW 65), it is expected that there will be significant reductions in the 2019 Atlantic Herring ACL, and subsequently in the Area 1A sub-ACL. As a result, the Board may want to consider whether the current quota periods meet the needs of the fishery. Attached to this memo is an excerpt from Amendment 3 which outlines the quota periods which can be considered via the specification process. It is important to note that the percentages shown in Tables 5 and 6 are fixed and can only be changed through a subsequent addendum or amendment.

Atlantic States Marine Fisheries Commission

Amendment 3 to the Interstate Fishery Management Plan for Atlantic Herring

February 2016
Updated June 2018 to Reflect Revised Definition of a Sample in the Spawning Re-Closure Protocol

ASMFC Vision: Sustainably Managing Atlantic Coastal Fisheries

4.2.3.2 Quota Periods

Quota periods shall be determined annually, as specified in *Section 4.2.3.1*. The Area 1A sub-ACL shall be distributed using bi-monthly, trimester, or seasonal quota periods whichever meets the needs of the fishery. If a quota period is closed early due to the full allocation being harvested, vessels are prohibited from landing more than 2,000 lbs. of Atlantic herring per trip until the next quota period begins.

Bi-monthly periods are established as follows:
Period 1: January 1 – February 28 (29)
Period 2: March 1 – April 30
Period 3: May 1 – June 30
Period 4: July 1- August 31
Period 5: September 1 – October 31
Period 6: November 1 – December 31

Trimesters are established as follows:
Trimester 1: January 1 – May 31
Trimester 2: June 1 – September 30
Trimester 3: October 1 – December 31

Seasons are established as follows:
Season 1: January 1 – September 30
Season 2: October 1 – December 31

In addition to having flexibility to choose between bi-monthly, trimester, or seasonal quotas, quota from the January 1 – May 31 period may be allocated to later in the fishing season in response to conditions in the fishery. The January 1 – May 31 period quota may be distributed to each remaining period proportional to the quota share of the remaining periods. If the bi-monthly periods with no landings before June 1 option is selected, the Section has the option to count June as its own period, or December as its own period (Table 5).

The allocations percentages for each quota period system were derived from Vessel Trip Reports from 2000 – 2007 and represent historical fishing effort that was driven by market demand for herring (Table 5 and 6). These allocation percentages are fixed and can only be changed through a subsequent addendum or amendment.

For reference, the 2016-2018 specifications allocate Area 1A's sub-ACL through seasonal quotas with no landings before June 1; 72.8% will be available from June 1 – September 30 and 27.2% will be available from October 1 – December 31.

Table 5. Bi-monthly quota percent allocations. Percentages were calculated using vessel trip reports from 2000 – 2007

Bi-Monthly Quotas								
January – December			No Landings Prior to June 1 (with June as a one-month period)			No Landings Prior to June 1 (with December as a one-month period)		
Period	**Months**	**%**	**Period**	**Months**	**%**	**Period**	**Months**	**%**
1	Jan/Feb	1.5%	1	June	16.4%	1	June/July	36.8%
2	Mar/Apr	2.3%	2	July/Aug	40.1%	2	Aug/Sep	36.0%
3	May/June	24.0%	3	Sep/Oct	34.0%	3	Oct/Nov	27.1%
4	July/Aug	34.6%	4	Nov/Dec	9.5%	4	Dec	0.2%
5	Sep/Oct	29.4%						
6	Nov/Dec	8.2%						

Table 6. Trimester and seasonal quota percent allocations. Percentages were calculated using vessel trip reports from 2000 – 2007

Trimesters			Seasonal Quotas					
January – December			January - December			No Landings Prior to June 1		
Trimester	**Months**	**%**	**Season**	**Months**	**%**	**Season**	**Season**	**%**
1	Jan - May	13.7%	1	Jan - Sep	76.5%	1	Jun - Sep	72.8%
2	Jun - Sept	62.8%	2	Oct - Dec	23.5%	2	Oct - Dec	27.2%
3	Oct - Dec	23.5%						

4.2.3.3 Seasonal Splitting of Quota for Areas 1B, 2, and 3

States are allowed to seasonally split the sub-ACLs in all management areas to maximize value to the Atlantic herring fisheries. The actual splits (amounts or percentages by months, trimesters, or seasons) would be set as part of the specifications process.

4.2.3.4 Quota Rollover for All Management Areas

For each management area, up to 10% of quota may be carried over to the first fishing year after final landings data are available, within that same management area, provided that the ACL is not exceeded for the entire fishery. The stock-wide ACL cannot be changed from the annual specification. The intent of a quota rollover is to provide some flexibility to the fishing industry. Furthermore, unused quota in one period may be rolled over to the next period within the same fishing year.

Under management measure 4.2.3.4, the following provisions apply:

- All harvest control measures continue to apply to stockwide and sub-ACLs.
- All carryovers are based on initial sub-ACL allocations for the fishery year.
- Sub-ACL underages are determined based on the same methodology used to determine sub-ACL overages.
- Sub-ACL carryovers are only authorized if the total ACL for the fishing year is not exceeded.

- Provisions for carryovers, including percentages/amounts, can be modified in the future through the herring fishery specifications process (in addition to framework adjustments and amendments).
- Unused quota may be rolled from one period to the next within the same year.

4.2.3.5 ACL/Sub-ACL Overage Deduction (Accountability Measures)

This measure establishes annual paybacks for ACL/Sub-ACL overages.

Once a final total catch for a fishing year is determined during the subsequent fishing year using the best available information (including VTR reports to account for incidental catch in other fisheries), ACL/Sub-ACL overage would result in a reduction of the corresponding ACL/sub-ACL for the fishing year after the final total catch is tallied. The deduction will be equal to the amount exceeded.

NEFMC is required to implement AMs as part of MSRA. NMFS' Guidelines state accountability measures are management controls implemented for stocks such that exceeding the ACL is prevented, where possible, and corrected or mitigated if it occurs. NMFS suggests that three kinds of AMs that could be considered: (1) those that can be applied in-season, designed to prevent the ACL from being reached; and (2) those that are applied after the fishing year, designed to address the operational issue that caused the ACL overage and ensure that it does not happen in subsequent fishing years, and, as necessary, address any biological harm to the stock; and (3) those that are based on multiyear average data which are reviewed and applied annually. AMs should address and minimize the frequency and magnitude of overages and should be designed so that if an ACL is exceeded, specific adjustments are effective in the next fishing year or as soon as possible. Multi-year specifications (like those for the Atlantic herring fishery) should include AMs that provide for automatic adjustments in the subsequent year's harvest if an ACL is exceeded in one year.

Several of the management measures in the Atlantic herring fishery function as AMs as described above. These measures are designed primarily to prevent the management area sub-ACL from being exceeded during the fishing year, as well as improve the likelihood that OY can be caught on a continuing basis while preventing overfishing.

Specifically, NMFS and ASMFC will close the directed fishery when 92% of a management area's sub-ACL is projected to be harvested, as specified in *Section 4.2.3.6*. This precautionary closure helps ensure that an area's sub-ACL is not exceeded.

4.2.3.6 Harvest Control Measures: Sub-ACL Trip Limit Triggers

For all management areas, directed fisheries in a management area will close when 92% of the sub-ACL is projected to be reached, and then the stock-wide fishery will close when 95% of the total ACL is projected to be reached. A 2,000 pound bycatch allowance will continue when the directed fishery is closed.

4.2.3.7 Specification Process for Sub-ACL Triggers

Sub-ACL triggers will be set using the annual specification process.

F/V PROWLER (Prowler Fisheries, Inc.)
Harbor Bait, Inc.
(207)633-2214

Atlantic Herring Management Board

Dear Committee Members,

Our family operates Harbor Bait and the herring seiner Prowler out of Boothbay Harbor, ME. We would like to offer our comments in regard to the proposed quota cuts (specifically Area 1A).

1. We question the validity of the TAC that these cuts were based on. Part of the decision-making process was based on the lack of juvenile herring. Our fishing experience this summer proved just the opposite. The majority of the over one million pounds of herring the Prowler has caught to date this year are in the 5" to 8" size range. There were no observers assigned to us until this week and due to weather, our 47' boat was unable to fish. There has not been sufficient sampling over wide areas of the fishery to allow science to accurately determine a TAC.

2. Another concern is that the special interest groups (sport, recreational fishing and environmental) are applying pressure to make these extreme quota cuts.

3. The recommendations to NMFS for the 2019 sub-ACL seem impractical and unrealistic. The revised 2018 quota was based on 2017 actual landing totals for each area. The area where the fish are currently most plentiful, (1A) is being hit with the biggest cut. With the newly proposed 12- mile trawl buffer, landings in Area 2 will undoubtedly decline dramatically or become non-existent. Perhaps the Area 2 quota should be reallocated? Why are Areas 2 & 3 quotas being increased percentage wise? Please see the table below which compares the percentage distribution of the total quota for all Areas.

Revised 2018 Quota (mt)		Proposed 2019 (mt)	
Area 1A – 27,743	(56%)	4,208	(29%)
Area 1B - 2,639	(6%)	626	(5%)
Area 2 - 8,200	(17%)	4,047	(28%)
Area 3 - 11,318	(23%)	5,678	(39%)
Totals - 49,900		14,588	

4. In 2017 and likely in 2018 the Area 1A quota will not be fully utilized. One reason that purse seine landings in 1A may have been less than projected, is that some vessels that originally declared into the purse seine fishery rigged over to trawl fish in other areas. Between spawning closures, mandatory days out, weather restrictions, and trimester closures, it will always be difficult to catch the entire quota. Fishing days are set to spread the quota over the entire trimesters and there are always unforeseen complications resulting in less than full utilization.

5. Because the weather is typically unfavorable, and fish migration patterns change rapidly after the first of October, more fish should be allocated to the 2nd trimester when the demand for fresh herring is higher.

Instead of huge cuts to the quota, there should better and more sampling.

Sincerely,
Jeanne, Samuel, and Chuck Fuller

Atlantic States Marine Fisheries Commission

Strategic Planning Workshop

October 23, 2018
8 - 10:15 a.m.
New York, New York

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

1. Overview of Workshop Format and Goals *(J. Gilmore)*	8:00 a.m.
2. Public Comment	8:10 a.m.
3. Review Content and Format of 2014-2018 Strategic Plan *(R. Beal)*	8:20 a.m.
4. Summary of Strategic Planning Workgroup Meeting *(R. Beal)*	8:25 a.m.
5. Commissioner Discussion on Driving Forces *(J. Gilmore)*	8:35 a.m.
• Workgroup Recommendations *(R. Beal)*	
• Commissioner Input	
6. Commissioner Discussion on Priority Planning *(J. Gilmore)*	8:55 a.m.
• Workgroup Recommendations *(R. Beal)*	
• Commissioner Input	
7. Commissioner Discussion on Strategic Planning and Action Planning	9:15 a.m.
• Workgroup Recommendations *(R. Beal)*	
• Commissioner Input	
8. Commissioner Discussion on New Commissioner Orientation	9:30 a.m.
• Workgroup Recommendations *(R. Beal)*	
• Commissioner Input	
9. Commissioner Discussion on Use of Proxies *(R. Beal)*	9:45 a.m.
10. Commissioner Discussion on Public Input to Commission Decisions	9:55 a.m.
11. Develop Timeline for 2019-2023 Strategic Plan Approval	10:05 a.m.
12. Adjourn	10:15 a.m.

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

Strategic Planning Workgroup Meeting

July 25-26, 2018
Burnt Island, Maine

Workgroup Members:

Jim Gilmore
Pat Keliher
Doug Grout
Robert Boyles
David Borden
Robert Beal

At the Commission's Spring Meeting, the Executive Committee appointed the Strategic Planning Workgroup to develop initial ideas on how to address the Commission's expiring Strategic Plan as well as ideas on improving cooperation and collaboration between the states.

Underlying Premise

The Workgroup based its conversation principle that "The states are better off working together than individually".

Driving Forces of Change

As we enter the next stanza of interstate fisheries management, the Workgroup identified four driving forces that will shape the future strategic direction of interstate management.

- Changing Ocean Conditions – Changes in ocean temperature, currents, and acidity are forcing changes to nearly every facet of fisheries management at the state, interstate, and federal levels. The distribution and productivity of fishery stocks are often changing at a rate faster than fisheries science and management can keep pace with.
- Reallocation – Many of the Commission FMPs make allocations to states, regions, seasons, and gear types. The changing distribution of many species has brought about discussions on modifying existing allocation schemes included in the interstate FMPs.
- State Cooperation – There is a growing sentiment that state cooperation needs to be improved within the Commission process.
- Secretarial Involvement – There is considerable uncertainty on how the Secretary will react to non-compliance recommendation forwarded by the Commission.

These driving forces are not acting independently. Changing Ocean Conditions drive interest in reallocation. Reallocation requires greater state cooperation. Diminished state cooperation may require additional Secretarial involvement. There is also a concern that some "control" over fisheries status and decisions has been diminished due to political intervention and changing ocean conditions.

Priority Planning

The Commission has many competing demands for its limited resources (i.e. Commissioner time, staff time, and funding). Resources do not allow the Commission to address all issues in the short-term. Tasks must be prioritized to reflect Commissioner and stakeholder preferences. The Workgroup suggested the Commission should focus more on high priority issues and address lower priority issues only as resources allow. The Workgroup suggested the following actions:

- The 2019 Annual Action Plan should focus on addressing priority issues and identify lower priority issues that will receive less attention.
- Prioritization should occur at three levels: Near-term (1-2 years), Mid-term (2-3 Years), and Long-term (5-10 years).
- Staff will develop a prioritized list of species that will benefit from near-term, significant management changes and those that should utilize multi-year measures (receive less staff and board attention).
- States and stakeholders often request increased stability/predictability in fisheries management. One approach would be to establish a minimum threshold for management changes (e.g. Changes need to result in greater than 5% harvest change).
- To improve working relationships with the Councils, a meeting should be scheduled with leadership of the three Councils to discuss efficiency, species allocation, division of responsibilities, etc. (possibly through the NRCC).
- Two additional observations made by the Workgroup: Focusing only on short-term gains creates long-term problems; and without improved state cooperation there is the potential for Magnuson National Standards to be applied to the Atlantic Coastal Act.

Strategic Planning and Action Planning

The Commission maintains a Five-year Strategic Plan and Annual Action Plans to describe the overall vision of the Commission and the specific annual tasks to achieve the vision. The documents contain important detailed information, however the Workgroup feels they are seldom referenced by Commissioners or stakeholders. The Annual Action Plans are lengthy (~35 pages) and contain many tasks that are recurring, which makes it hard to determine the Commission's priorities.

The Workgroup agreed:

- The Annual Action Plan should be shortened to focus on the new, priority tasks rather than recurring activities. It will also highlight tasks that will extend into future years.
- The next Five-year Strategic Plan (2019-2023) will be similar to previous Plans but shortened to make it more user friendly. It will also likely not be approved until early 2019.
- The new Five-year Strategic Plan can consider a new Commission Vision: "Cooperatively Managing Atlantic Coastal Fisheries".
- A Strategic Planning Workshop will be planned for the Commission's Annual Meeting.
- New allocation concept: "Fish for you – fish for me"

Orientation of New Commissioners

The Atlantic Coastal Act was passed 25 years ago and since that time, a complex management process and suite of management measures have evolved. The Commission has also been experiencing a higher rate of turnover on Commissioners in recent years. Getting these new Commissioners up to speed is important to foster improved collaboration and cooperation. The Workgroup suggested the following steps:

- Commission leadership (Chair, Vice-Chair, and Executive Director) will take time to meet with new Commissioners during each quarterly meeting. This meeting will preferably happen over dinner or lunch.
- Staff will meet with new Commissioners to explain the Commission logistics (e.g. travel planning, reimbursement, board structure, etc.)
- New Commission orientation will focus on Commission culture, peer to peer mentoring, fostering interstate relationships, and understanding staff roles.

ATLANTIC STATES MARINE FISHERIES COMMISSION

Draft 2019 Action Plan

For Review by the Business Session

October 23, 2018

Goal 1 – Rebuild, maintain and fairly allocate Atlantic coastal fisheries

Goal 1 focuses on the responsibility of the states to conserve and manage Atlantic coastal fishery resources for sustainable use. Commission members will advocate decisions to achieve the long-term benefits of conservation, while balancing the socio-economic interests of coastal communities. Inherent in this is the recognition that healthy and vibrant resources mean more jobs and more opportunity for those that live along the coast. The states are committed to proactive management, with a focus on integrating ecosystem services, socioeconomic impacts, habitat issues, bycatch and discard reduction measures, and protected species interactions into well-defined fishery management plans (FMPs). FMPs will also address fair (equitable) allocation of fishery resources among the states. Understanding global climate change and its impact on fishery productivity and distribution is an elevated priority. Improving cooperation and coordination with federal partners and stakeholders can streamline efficiency, transparency, and, ultimately, success. In the next five years, the Commission is committed to making significant progress on rebuilding overfished or depleted Atlantic fish stocks.

Fisheries management and stock assessment activities anticipated for 2019 and into 2020 are outlined below. Activities are divided into high priority species (those with significant management action, stock assessment activity, or are of critical importance to the states and their stakeholders) and medium-low priority species. For most species, there are several activities that occur on an annual or ongoing basis, including specification setting; FMP review and state compliance reports; and ensuring cooperation and consistent management programs among the states, regional councils, and NOAA Fisheries for shared resources. While ongoing activities are not listed below, they continue to be conducted. The focus of the Action Plan is to highlight new and high profile activities where the Commission will focus its resources and energies for the next two years.

HIGH PRIORITY SPECIES FOR 2019

American Lobster

New Tasks

- Develop a strategy for management of the Gulf of Maine/Georges Bank (GOM/GBK) stock that acknowledges the effects of climate change (Addendum XXVII)
    - Monitor and respond if necessary to GOM research on impacts of changing ocean conditions
- Implement Addendum XXVI data elements to improve data collection and characterization of the fishery
- Develop a strategy to address large whale issues; work will likely continue into 2020
- Continue to work with the Law Enforcement Subcommittee and states to improve enforcement of management measures and develop a strategy for offshore enforcement
- Continue the development of Benchmark Stock Assessment for peer review in 2020

- August 2020: Board review of Benchmark Assessment and Peer Review Report. Consider management response.
- Prior to delivery of assessment, establish management scenarios for GOM/GBK and Southern New England stocks based on different findings through a Board working group

- Work with NOAA Fisheries to ensure consistency in state and federal regulations (e.g trap cap in Area 3, trap banking, data collection)

Atlantic Herring

New Tasks

- In conjunction with New England Fishery Management Council (NEFMC), consider management response to the 2018 Benchmark Assessment findings and the outcome of NEFMC's Amendment 8
    - Set specifications for 2020 and 2021
- Evaluate the efficacy of the management goals and objectives of the spawning closures and consider expanding to offshore areas
- Continue to improve coordination and collaboration with the NEFMC through new committee and board roles
- Conduct meetings as necessary to establish state effort control (days-out) programs for Areas 1A and 1B

Atlantic Menhaden

New Tasks

- Complete Atlantic Menhaden-specific and ERP Benchmark Stock Assessments for SouthEast Data, Assessment, and Review (SEDAR) peer review in 2019
    - February 2020: Board review of Benchmarks Assessments and Peer Review Reports. Consider management response.
- Resolve implementation of Chesapeake Bay cap
- Set specifications for 2020

Atlantic Striped Bass

New Tasks

- Work cooperatively with NOAA Fisheries to consider changes to Atlantic striped bass fishing in the EEZ (including Block Island Transit Zone)
- Develop long-term strategy for collecting striped bass tagging data including funding, administration and at-sea support
- February 2019: Board review of Benchmark Stock Assessment and Peer Review Report. Consider management response
    - Explore development of region-specific management

Black Sea Bass

New Tasks

- Complete Operational Assessment, which will include calibrated Marine Recreational Information Program (MRIP) estimates.
    - April/May 2019: Board/Council review of Operational Assessment. Consider management response and changes to 2019 specifications in conjunction with the Mid-Atlantic Fishery Management Council (MAFMC).
        - Set 2020-2022 specifications
- Develop, in coordination with MAFMC, addendum/amendment on reforming recreational management and commercial/recreational allocation; this activity will likely extend into 2020
- Consider changes to the commercial management program
- Implement Addenda XXXI and XXXII
- Develop a strategy to address large whale issues; work will likely continue into 2020

Cobia

New Tasks

- 2019/2010: Finalize and implement Amendment 1 to the Cobia FMP
    - Work with the South Atlantic Fishery Management Council (SAFMC) and NOAA Fisheries to ensure complementary regulations in federal waters
- Work through SEDAR to finalize Benchmark Stock Assessment
    - October 2019/February 2020: Board review of Benchmark Assessment and Peer Review Report. Consider management response.

Horseshoe Crab

New Tasks

- Complete Benchmark Stock Assessment for External Peer Review in March 2019
    - May 2019: Board review of Benchmark Assessment and Peer Review Report. Consider management response.
        - Set 2020 specifications for Delaware Bay
- Secure long-term funding for the Horseshoe Crab Benthic Trawl Survey for use in the Adaptive Resource Management (ARM) Framework
- Seek alternatives with the biomedical community in order to more transparently communicate annual mortality and assessment results

Red Drum

New Tasks

- Continue to work with the Assessment Science Committee (ASC) to develop a roadmap for the next benchmark stock assessment, including consideration of calibrated MRIP data

Summer Flounder

New Tasks

- February 2019: In coordination with MAFMC, review of Benchmark Assessment and Peer Review Report. Consider management response and changes to 2019 specifications.
    - Set specifications for 2020-2022
- In coordination with MAFMC, finalize the Comprehensive Summer Flounder Amendment (commercial management) for implementation in 2020
- Request an ASMFC working group meet with MAFMC's Research Steering Committee to examine the possibility of reestablishing the Research Set Aside program
- Implement Addenda XXXI and XXXII

MEDIUM-LOW PRIORITY SPECIES

American Eel

New Tasks

- Monitor and respond, if necessary, to the classification of American eel under the Convention on the International Trade of Endangered Species (CITES)
- Implement Addendum V
- Increase scientific collaborations with Canada Department of Fisheries and Oceans
- Work with Law Enforcement Committee to monitor poaching and illegal sale of glass eels

Atlantic Croaker

New Tasks

- Consider management alternatives to address stock condition based on the updated Traffic Light Analysis (TLA)

Atlantic Sturgeon

New Tasks

- Monitor state and federal activities in response to an Endangered Species Act (ESA) listing of Atlantic sturgeon, including 5-year status review and recovery plan

Black Drum

New Tasks

- Work with the Technical Committee and Plan Review Team to develop recommendations on the need for and timing of the next stock assessment

Bluefish

New Tasks

- Continue development of allocation amendment in collaboration with MAFMC
- Complete Operational Assessment, which will include calibrated MRIP estimates.
    - April/May 2019: Board/Council review of Operational Assessment. Consider management response and set 2020-2022 specifications

Coastal Sharks

Ongoing Tasks

- Monitor activities of NOAA Fisheries Highly Migratory Species Division with regards to coastal shark management actions and consider development of complementary management actions as needed for consistency

Jonah Crab

New Tasks

- Develop a strategy to address large whale issues; work will likely continue into 2020

Northern Shrimp

New Tasks

- Develop a strategy to address large whale issues, if fishery re-opens
- Conduct stock assessment update
    - Set specifications for the 2020/2021 season. Consider industry test tows to collect biological data, if necessary and as resources allow.
- Implement Amendment 3 and Addendum I as appropriate given the stock status

Scup

New Tasks

- Complete Operational Assessment, which will include calibrated MRIP estimates.
    - April/May 2019: Board/Council review of Operational Assessment. Consider management response and set 2020-2022 specifications.
- Develop a strategy to address large whale issues; work will likely continue into 2020

Shad and River Herring

New Tasks

- Complete American Shad Benchmark Stock Assessment for External Peer Review in 2019
    - February 2020: Board review of Benchmark Assessment and Peer Review Report. Consider management response.
- Monitor management activities of the NEFMC and the MAFMC including, but not limited to, shad and river herring catch caps and bycatch avoidance programs
- Address disconnect between monitoring requirements of Amendments 2 and 3 and Sustainable FMPs
- Co-Chair the Technical Expert Working Group for River Herring
- Monitor ESA status reviews for river herring.

Spanish Mackerel

New Tasks

- Work through SEDAR to prepare Benchmark Stock Assessment for peer review in 2020
    - 2020: Board review of Benchmark Assessment and Peer Review Report. Consider management response in conjunction with SAMFC.

Spiny Dogfish
New Tasks

- Review and respond to data update, if necessary

Spot
New Tasks

- Consider management alternatives to address stock condition based on the updated TLA

Spotted Seatrout
No new tasks

Tautog
New Tasks

- Finalize commercial harvest tagging program as required by Amendment 1 for implementation in 2020

Weakfish
New Tasks

- Complete Stock Assessment Update
    - August/October 2019: Board review of Stock Assessment Update. Consider management response and set 2020 specifications
- Board review of Stock Assessment Update and consider management response.

Winter Flounder
No new tasks

CROSS-CUTTING ISSUES

- Monitor developments related to changing ocean conditions, ocean acidification, stock distributions, ecosystem services, ocean planning and potential fisheries reallocations
- Work with NOAA leadership to better understand the impacts to state management programs given the movement toward increased recreational flexibility. Seek ways to address the concerns of the recreational community with regard to Commission-managed and jointly-managed species.
- Respond to new MRIP estimates as needed across Commission species management plans
- Examine allocation strategies and provide recommendations to management boards as necessary

Goal 2 – Provide the scientific foundation for stock assessments to support informed management actions

Sustainable management of fisheries relies on accurate and timely scientific advice. The Commission strives to produce sound, actionable science through a technically rigorous, independently peer-reviewed stock assessment process. Assessments are developed using a broad suite of fishery-independent surveys and fishery-dependent monitoring, as well as research products developed by a coastwide network of fisheries scientists at state, federal, and academic institutions. The goal encompasses the development of new, innovative scientific research and methodology, and the enhancement of the states' stock assessment capabilities. It provides for the administration, coordination, and expansion of collaborative research and data collection programs. Achieving the goal will ensure sound science is available to serve as the foundation for the Commission's evaluation of stock status and adaptive management actions.

Several fisheries science activities occur on an annual or ongoing basis, including development of stock assessments and conducting peer reviews; stock assessment scheduling and evaluation of scientists' workloads; updating Commission research priorities and distributing to funding agencies; external research proposal reviews; development of ecological reference points models; supporting multispecies/diet data collection; fish ageing and tagging programs; gear technology research; and participation in MRIP catch estimation calibrations and ACCSP committees. While ongoing activities are not listed below, they continue to be conducted.

SCIENCE COMMITTEE ACTIVITIES

New Tasks

- Through the Management and Science Committee (MSC) and ASC, develop a long-term vision for scientific initiatives within the Commission's next 5-year Strategic Plan.
    - Seek guidance and review procedures from other stock assessment centers (NWFSC, ICES) to consider for streamlining ASMFC assessment operations
    - Conduct a workshop on management strategy evaluation methods, examples, and potential applications to Commission stocks
- Through the ASC, establish best practices protocols for compiling and selecting data, and common analyses, in order to gain efficiencies in completing stock assessments.
- Through the Committee on Economics and Social Sciences (CESS), develop socioeconomic indicators to include in FMPs. Finalize ACCSP socioeconomic data collection standards.
- Finalize a Commission policy regarding risk and uncertainty for consideration and approval by the ISFMP Policy Board.

DATA COLLECTION

New Tasks

- Collect new data to address data deficiencies
    - Collect new fishery-dependent data using black sea bass research fleet
    - Collect new data elements from lobster fisheries (effort and spatial details) to improve stock assessments;
    - Assess fixed gear and right whale interactions in the Gulf of Maine
    - Increase bycatch monitoring of sturgeon, shad and river herring, and sciaenids in state waters, as resources allow
- Coordinate the Southeast Area Monitoring and Assessment Program (SEAMAP) South Atlantic component; implement activities in the SEAMAP 5-Year Plan
- Coordinate the Northeast Area Monitoring and Assessment Program (NEAMAP); implement action items stemming from the 2018 NEAMAP Summit
    - Develop criteria and minimum standards for NEAMAP surveys
    - Conduct Fish Maturity Stage Classification Workshop
    - Evaluate trawl catchability for individual species across NEAMAP surveys
- Promote the collection of acoustic tagging information and work with the Atlantic Coastal Telemetry network to integrate tagging studies along the coast; secure telemetry tagging data for use in stock assessments

FISHERIES RESEARCH

- Conduct a Fish Ageing Quality Assurance Workshop among Atlantic coast state and university laboratories to ensure consistency between new and historical age data
- Collaborate with SUNY-Oneonta to develop new growth model and VA Tech's Bayesian index-based methods for shad stock assessment
- Collaborate with UMaine to develop next iteration of lobster length-structured assessment model; will likely continue into 2020
- Seek opportunities to collaborate with academic institutions to advance population dynamic models for use in stock assessments
- Partner with the U.S. Geological Survey to identify shared research priorities and opportunities for enhanced scientific support to the Commission

ECOSYSTEM-BASED MANAGEMENT & CHANGING OCEAN CONDITIONS

- Collaborate with the NOAA Fisheries Northeast and Southeast Fisheries Science Centers to include Commission interests in Ecosystem Status Reports
- Through the MSC, track the development of state and federal activities related to changing ocean conditions and impacts to fisheries

COMPETING OCEAN USES

- Determine the Commission's role in identifying and evaluating impacts to fisheries resources from offshore energy development
- Form an Aquaculture Committee to determine the Commission's role in aquaculture activities, including policy development and interstate shellfish seed tracking

Goal 3 – Promote compliance with fishery management plans to ensure sustainable use of Atlantic coast fisheries

Fisheries managers, law enforcement personnel, and stakeholders have a shared responsibility to promote compliance with fisheries management measures. Activities under the goal seek to increase and improve compliance with FMPs. This requires the successful coordination of both management and enforcement activities among state and federal agencies. Commission members recognize that adequate and consistent enforcement of fisheries rules is required to keep pace with increasingly complex management activity and emerging technologies. Achieving the goal will improve the effectiveness of the Commission's FMPs.

The Commission's Law Enforcement Committee (LEC) carries out much of Goal 3. Most of these activities occur on an annual basis or as part of the FMP development process. Proposed changes in management are evaluated to determine enforceability and effectiveness. The LEC provides managers with feedback on the practicality of regulations to foster stakeholder buy-in and compliance.

COMPLIANCE

- Incorporate and reference the revised "Guidelines for Resource Managers" in reviews and evaluations of proposed changes to management programs
- Annually review and comment on (as needed) NOAA Fisheries enforcement priorities to ensure they support the enforceability and effectiveness of Commission management programs
- Aquaculture: Review and provide input on enforcement issues associated with American eel or other aquaculture proposals, including offshore aquaculture proposals
- Evaluate interagency measures to enhance traceability of fishery products across jurisdictional boundaries

PARTNERSHIPS

- Engage and support NOAA Fisheries and U.S. Fish and Wildlife Service (USFWS) Offices of Law Enforcement, U.S. Department of Justice, and U.S. Coast Guard to facilitate the enforceability of Commission FMPs
- Work to sustain financial support for Joint Enforcement Agreements (JEAs)

STAKEHOLDER AWARENESS

- Use emerging communication platforms and tools to deliver real time information regarding regulations and the outcomes of law enforcement investigations
    - Explore the use of electronic tools to communicate real-time commercial and recreational regulations

Goal 4 – Protect and enhance fish habitat and ecosystem health through partnerships and education

Goal 4 aims to conserve and improve coastal, marine, and riverine habitat to enhance the benefits of sustainable Atlantic coastal fisheries and resilient coastal communities in the face of changing ecosystems. Habitat loss and degradation have been identified as significant factors affecting the long-term sustainability and productivity of our nation's fisheries. The Commission's Habitat Program develops objectives, sets priorities, and produces tools to guide fisheries habitat conservation efforts directed towards ecosystem-based management.

The challenge for the Commission and its state members is maintaining fish habitat in the absence of specific regulatory authority for habitat protection or enhancement. Therefore, the Commission will work cooperatively with state, federal, and stakeholder partnerships to achieve this goal. Much of the work to address habitat is conducted through the Commission's Habitat and Artificial Reef Committees. In order to identify critical habitat for Commission managed species, each year the committee reviews existing reference documents for Commission-managed species to identify gaps or updates needed to describe important habitat types and review and revise species habitat factsheets. The Habitat Committee also publishes an annual issue of the *Habitat Hotline Atlantic*, highlighting topical issues that affect all the states.

The Commission and its Habitat Program endorses the National Fish Habitat Partnership, and will continue to work cooperatively with the program to improve aquatic habitat along the Atlantic coast. Since 2008, the Commission has invested considerable resources, as both a partner and administrative home, to the Atlantic Coastal Fish Habitat Partnership (ACFHP), a coastwide collaborative effort to accelerate the conservation and restoration of habitat for native Atlantic coastal, estuarine-dependent, and diadromous fishes. As part of this goal, the Commission will continue to provide support for ACFHP, under the direction of the National Fish Habitat Partnership Board.

EDUCATE

- Educate Commissioners, stakeholders, and the general public about the importance of habitat to healthy fisheries and ecosystems
- Publish a Habitat Management Series document on acoustics affecting fish habitat for ISFMP Policy Board review and acceptance
- Identify mechanisms to evaluate ecosystem health for consideration by Technical Committees and Boards

INTERGRATE

- Complete Fish Habitats of Concern descriptions to be considered for integration into Commission FMPs

- Increase communication on ecosystem-based management with Commission committees to find overlap with fish habitat related issues
- Explore opportunities to integrate habitat data into stock assessments where possible

LEVERAGE PARTNERSHIP

- Engage local, state, and regional governments in mutually beneficial habitat protection and enhancement programs through partnerships
- Foster partnerships with management agencies, researchers, and habitat stakeholders to leverage regulatory, political, and financial support
- Engage in state and federal agency efforts to ensure response strategies to changing ocean conditions are included in habitat conservation efforts
- Work with ACFHP to foster partnerships with like-minded organizations at local levels to further common habitat goals
- Coordinate the activities of the Fish Passage Working Group to carry out priority tasks as defined by the ISFMP Policy Board
- Promote development of effective fish passage approaches and projects through state and federal collaboration

ATLANTIC COASTAL FISH HABITAT PARTNERSHIP (ACFHP)

- Determine data gaps in the Southeast Fish Habitat Mapping project; initiate the Northeast Fish Habitat Mapping project and complete by 2020
- Redesign outreach materials for consistency with the redesigned website to optimize our messaging and facilitate partner and stakeholder engagement
- Adopt a Business Plan and implement action items to network with new partners and solicit donations from the private sector (foundations, corporations)
- Work with partners to protect, restore, or maintain resilient Regional Priority Habitats to optimize ecosystem functions and services to benefit fish and wildlife
- Restore habitats by funding fish passage and non-fish passage projects (SAV, oyster reefs, salt marshes)

Goal 5 – Strengthen stakeholder and public support for the Commission

Stakeholder and public acceptance of Commission decisions are critical to our ultimate success. For the Commission to be effective, these groups must have a clear understanding of our mission, vision, and decision-making process, as well as the opportunities that stakeholders have to participate in our process through advisory panels and public comment. The goal seeks to do so through expanded outreach and education efforts about Commission programs, decision-making processes, and its management successes and challenges. It aims to engage stakeholders in the process of fisheries management, and promote the activities and accomplishments of the Commission. Achieving the goal will increase stakeholder participation, understanding, and acceptance of Commission activities.

On a continuing basis, the Commission conducts outreach and stakeholder engagement though a number of products and activities. These include publications (e.g., bi-monthly Fisheries Focus, Annual Report to Congress), press releases, meeting summaries, stock assessment overviews, website and social media platforms, industry tradeshows and state festivals, and stakeholder engagement through the advisory panel process. Building strong relationships with local, regional and national media contacts, and networking/collaborating with our management partners from the Councils, states and federal agencies are also critical components of our outreach program, which occur on an ongoing basis.

INCREASE PUBLIC UNDERSTANDING AND SUPPORT OF ASMFC

- Increase public understanding and support of activities through expanded outreach at the local, state, and federal levels
- Promote high profile species and stock assessment results through various outreach tools and platforms
    - 2019: Atlantic herring, Atlantic striped bass, black sea bass, cobia, horseshoe crab, shad, summer flounder
    - 2020: American lobster, Atlantic menhaden, ecological reference points

MAXIMIZE USE OF CURRENT AND NEW TECHNOLOGIES

- Use new technologies and communication platforms to more fully engage the broader public in the Commission's activities and actions
- Explore use of story mapping and photo journaling to better communicate science and management activities
- Solicit outside sources to develop short video clips of fisheries management and science activities
- Explore the use of topical webinars to engage and inform public about current activities (management, science, habitat, and data collection and management)
- Use website capabilities (e.g., video clips) to promote Fisheries Science 101 webinars, videos of fisheries surveys and state on-the-ground projects
- Monitor the success of website and social media platforms in reaching broader constituency and effectively communicating ASMFC mission, programs and activities

FACILITATE STAKEHOLDER PARTICIPATION

- Clearly define Commission processes to facilitate stakeholder participation, as well as transparency and accountability.
    - Develop outreach materials that highlight opportunities for public engagement in the Commission's fisheries management and stock assessment processes
- Enhance engagement in advisory panels through solicitation of new members, increased participation of existing members, and improved communication from staff
    - 2019: Atlantic herring, Atlantic striped bass, black sea bass, cobia, horseshoe crab, shad, summer flounder
    - 2020: American lobster, Atlantic menhaden

MEDIA RELATIONS AND NETWORKING

- Strengthen national, regional, and local media relations to increase coverage of Commission actions.
- Track media communications and coverage through ASMFC-related news clippings and media tracking sheet.
- Work with Atlantic Coast Fisheries Communication Group, comprised of Public Information Officers from the Councils, states and federal agencies, to share successful tools, identify key media contacts and work cooperatively on joint projects.
    - Explore mechanisms to better inform fishing blogs and other external communication platforms about Commission assessment results and management actions.

Goal 6 – Advance Commission and member states' priorities through a proactive legislative policy agenda

State input is critical for a coherent national fisheries policy. The Commission recognizes the need to work with Congress, the Administration and partner organizations in policy formulation, and will be vigilant in advocating state interests to Congress. The Commission will pursue federal resources for states to implement and comply with the Atlantic Coastal Act and to improve or maintain fisheries data collection. The importance of habitat restoration, research on the impacts of changing ocean conditions, and the need for effective marine enforcement will also be communicated to Congress and our management partners.

DEVELOP AND STRENGTHEN RELATIONSHIPS WITH MEMBERS OF CONGRESS AND STAFF

- Provide opportunities for Commissioner and the Executive Director to interact with Members and staff during Winter and Spring Meeting Weeks
- Provide opportunities for the Executive Director to meet with Congressional staff on a regular basis
- Make connections (via correspondence and in-person meetings) with newly elected Atlantic coast members of the 116th Congress and appropriate Committee Chairs and members

ENGAGE CONGRESS AND ADMINISTRATION ON FISHERY-RELATED LEGISLATION AND ISSUES

- Monitor federal legislation affecting the Commission, including policy and annual appropriations bills and develop Commission positions on pending federal legislation, including the *Atlantic Coastal Act,* Interjurisdictional Fisheries Act, Anadromous Fish Conservation Act, MSA, Federal Aid in Fish Restoration Act, in addition to new legislation addressing emerging issues such as marine national monuments and alternative energy initiatives.

PURSUE FEDERAL RESOURCES TO SUPPORT MANAGEMENT ACTIVITIES

- Communicate the Commission's federal funding needs to Congress and advocate for sufficient appropriations
    - Priority line items include the Atlantic Coastal Act, Interjurisdictional Fisheries Act, Fisheries Data Collections, Surveys and Assessments, ACFHP, and Fisheries Information Networks)
    - Restore the Atlantic Coastal Act proportion of the "Regional Councils and Fishery Commissions" appropriation to its historic share
    - Seek federal funding support for long-term monitoring surveys and species-specific initiatives
        - NEAMAP and SEAMAP
        - Gulf of Maine lobster research to characterize impacts of environmental changes
        - Mid-Atlantic Horseshoe Crab Trawl Survey to support ARM Framework
- Engage the Administration (Commerce and Interior Departments) on funding and policy issues, including Secretarial implementation of the Atlantic Coastal Act
- Communicate state and Commission funding needs to NOAA Fisheries and U. S. Fish and Wildlife Service

PARTNERSHIPS

- Coordinate with the Gulf, Pacific, and Great Lakes Commissions on policy items of mutual interest including federal funding for fisheries programs. Executive Directors should continue to provide unified positions on funding and legislative priorities to lawmakers and federal agencies, where appropriate.
- Continue participation on Marine Fisheries Advisory Committee, the Marine Fisheries Initiative and Association of Fish and Wildlife Agencies

Goal 7 – Ensure the fiscal stability and efficient administration of the Commission

Goal 7 will ensure that the business affairs of the Commission are managed effectively and efficiently, including workload balancing through the development of annual action plans to support the Commission's management process. It also highlights the need for the Commission to efficiently manage its resources. The goal promotes the efficient use of legal advice to proactively review policies and react to litigation as necessary. It also promotes human resource policies that attract talented and committed individuals to conduct the work of the Commission. The goal highlights the need for the Commission as an organization to continually expand its skill set through training and educational opportunities. It calls for Commissioners and Commission staff to maintain and increase the institutional knowledge of the Commission through periods of transition. Achieving this goal will build core strengths, enabling the Commission to respond to increasingly difficult and complex fisheries management issues.

On a continuing basis, the Commission staff conservatively manages fiscal resources to achieve the proper balance between allocating funds to coastwide priorities and ensuring fiscal stability. Tasks performed to accomplish this balance include monitoring expenditures on a monthly basis; managing the reserve fund; fine-tuning meeting and travel policies; and preparing and participating in the annual audit and indirect cost proposal.

Human resources management is an ongoing process of recruitment and selection of employees; thoroughly orienting and introducing new employees to the culture of the Commission; maintaining good working conditions for all employees; managing employee relations; and training to enhance and increase their current skills. Ongoing tasks to accomplish this are annual review and revision of position descriptions; facilitating staff participation at national and regional conferences; and providing professional training opportunities. Additionally, human resource support is provided to cooperative programs such as APAIS and ACFHP. All human resources documents are reviewed at least annually to ensure compliance with federal regulations and consistency with current practices.

Further, Commission staff keeps abreast of changes in technology and evaluates the need for updating the Commission's hardware and software. Ensuring consistency of resources and training across the Commission as well as documenting processes and verifying database information are ongoing tasks conducted by the staff.

The Commission process can be overwhelming to new Commissioners. The staff is committed to providing a thorough introduction and orientation to new Commissioners. Tasks conducted throughout the year include documenting institutional knowledge and updating on a regular basis the Commissioner Manual. Staff also provides this service to new members of Commission committees.

MANAGE OPERATIONS AND BUDGETS

- Develop Commission compensation plan with updated job classifications and salaries based on location
- Manage the "Fisheries Management, Science, Administration and Logistical Support" cooperative agreement

UTILIZE CURRENT INFORMATION TECHNOLOGY

- Document standards for electronic record retention and develop site map of Commission electronic filing system for internal use, including protocols for document archiving
- Explore the use of available software packages to digitize review and approval of bills received by the Commission
- Develop a contracts database to track details of multiple Commission contracts

MANAGE HUMAN RESOURCES

- Promote Commission's mission and programs, and recruit new talent through outreach meetings with various marine policy and marine science graduate programs

- Provide training opportunities for ASMFC staff on commonly used software
- Conduct annual meeting with financial advisor to review retirement program performance with staff and provide opportunities for staff to meet individually with financial advisor to match financial goals with investment choices for retirement
- Implement staff culture playbook developed in 2018

ENGAGE AND SUPPORT NEW COMMISSIONERS

- Respond to recommendations from Strategic Planning discussions related to new Commissioner orientation

ENSURE THE LEGAL COMPLIANCE OF COMMISSION ACTIONS

- Utilize legal advice on new management strategies and policies, and respond to litigation as necessary, whether it be regarding challenges to Commission FMPs, a human resource issue, or access to confidential data

Goal 8 - Produce dependable and timely marine fishery statistics for Atlantic coast fisheries

Effective management depends on quality fishery-dependent data and fishery-independent data to inform stock assessments and fisheries management decisions. While Goal 2 of this Action Plan focuses on providing sound, actionable science and fishery-independent data to support fisheries management, Goal 8 focuses on providing timely, accurate catch and effort data on Atlantic coast recreational, for-hire, and commercial fisheries.

Goal 8 seeks to accomplish this through the activities of the Atlantic Coastal Cooperative Statistics Program (ACCSP), a cooperative state-federal program that designs, implements, and conducts marine fisheries statistics data collection programs and integrates those data into data management systems that will meet the needs of fishery managers, scientists, and fishermen. ACCSP partners include the 15 Atlantic coast state fishery agencies, the three Atlantic Fishery Management Councils, the Potomac River Fisheries Commission, NOAA Fisheries, and the U.S. Fish and Wildlife Service.

On a continuing basis, ACCSP (1) conducts routine reviews of standard codes and processes, and promulgates new standards as needed; (2) operates and maintains commercial dealer landing and fisherman catch reporting through the Standard Atlantic Fisheries Information System (SAFIS); maintains the operations of the Data Warehouse, Angler Point Access Intercept Survey (APAIS), and for-hire survey; and (4) provides funding to its Program Partners to improve data collection and management through a competitive process. ACCSP staff is also responsible for ensuring that all hardware and software related to ASMFC and ACCSP systems and the network components (e.g., routers, firewalls) are maintained in accordance with established processes and procedures.

PROGRAM MANAGEMENT

New Task

- Review and select funded projects for 2019 and 2020; these years represent the first targeted reductions in funding for ongoing or maintenance projects

FISHERIES-DEPENDENT REPORTING

SAFIS

New Tasks

- Support the efforts of federal and state agencies to expand mandatory trip reporting
- Conduct major redesign of the SAFIS database, incorporating dealer landing and harvester catch reporting (SAFIS eDR and eTrips), as well as the addition of an integrated reporting solution to streamline reporting, reduce duplication, and share data between more easily

APAIS

New Tasks

- Transition Program from paper-based to electronic intercept software, which will to verify and analyze incoming data resulting in fewer errors and greater efficiencies
- Develop and approve for-hire survey validation methodology

DATA DISTRIBUTION AND USE

Data Warehouse

New Tasks

- Continue to expand data warehouse, including the addition of biological data
- Implement processes designed to improve data integrity of data
- Develop data use requirements for bycatch

DATA INFRASTRUCTURE AND SECURITY

New Task

- Complete Federal Information Security Management Act security audit and adjust security protocols as needed

2019 – 2020 Anticipated Board Activities for High Priority Species

Species	2019				2020			
	WINTER	SPRING	SUMMER	ANNUAL	WINTER	SPRING	SUMMER	ANNUAL
American Lobster	GOM/GBK Addendum for Public Comment	Final approval of Addendum; Initiate response to ALWTRT process	Consider initiating response to ALWTRT process (may go through to December 2019)				Benchmark Assessment & Peer Review; Consider management response	
Atlantic Menhaden	Tabled compliance motion				Benchmark Assessments & Peer Reviews; set 2020 specs	Consider initiation of management response to assessment		
Atlantic Striped Bass	Benchmark Assessment & Peer Review; Consider management response	Consider initiation of management response to assessment						
Black Sea Bass	Set 2019 recreational measures	Operational assessment & peer review	Set 2020-2022 specs	Start process of setting rec. measures (will begin in Dec. 2019 and extend through March 2020)				
		Consider initiating Am. to address comm./rec. allocation & rec. spec. process	Consider initiating addendum to address comm. issues (may go through to December 2019)					
Cobia		Draft Amendment for Public Comment	Final approval of Amendment	Benchmark Assessment & Peer Review; Consider management response				
Horseshoe Crab		Benchmark Assessment & Peer Review; Consider management response		Set 2020 specs				
Summer Flounder	Benchmark Assessment & Peer Review; Consider management response	Consider initiating Am. to address comm./rec. allocation & rec. spec. process	Set specifications for 2020-2022	Start process of setting recreational measures (will begin in December 2019 and extend through March)				
	Revise 2019 specifications & set 2019 recreational measures							

Atlantic States Marine Fisheries Commission

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Coastal Sharks Advisory Panel
Conference Call on Draft Addendum V
October 11, 2018
5:00 – 5:30 p.m.

Advisory Panel Members: Katie Westfall, Mark Sampson, Charles Witek

ASMFC: Kirby Rootes-Murdy

The Coastal Sharks Advisory Panel met via conference call on October 11, 2018 to review Draft Addendum V to the Coastal Sharks FMP. The draft addendum proposes changes to the FMP that would provide the Management Board the flexibility to change or adjust management measures through Board action without an addendum or emergency action. Staff presented the options in the draft addendum and took comments from the group.

Two AP members indicated their preference for **Option 3: Adjust Measures on an Ad Hoc Basis as needed**. Reasons cited focused on the increased flexibility the option would give the Board in responding to changes in the condition of shark species. Additionally, one AP member noted they did not see downside or drawback from the flexibility the Board would have if Option 3 were adopted.

Submitted via email.

October 12, 2018

Mr. Max Appleman
Fishery Management Plan Coordinator
Atlantic States Marine Fisheries Commission
1050 N. Highland Street
Suite 200 A-N
Arlington, VA 22201
mappelman@asmfc.org

Re: Comments on Proposed Rulemaking Regarding Lifting the Ban on Atlantic Striped Bass Fishing in the Federal Block Island Sound Transit Zone

Dear Mr. Clapp and ASMFC Commissioners:

Please accept the following comments on behalf of Friends of the Earth regarding the Atlantic State Marine Fisheries Commission's (ASMFC) review of the National Oceanic and Atmospheric Administration's (NOAA) proposed rulemaking regarding lifting the ban on Atlantic striped bass fishing in the federal Block Island Sound Transit Zone.[1] These comments specifically request that ASMFC recommend that NOAA unequivocally indicate that its proposed changes will not allow any person to fish for, possess, harvest, transport, or retain any farmed Atlantic striped bass in the EEZ.

Friends of the Earth fights to protect our environment and create a healthy and just world by promoting clean energy and solutions to climate change, keeping toxic and risky technologies out of the food we eat and products we use, and protecting marine ecosystems and the people who live and work near them. Friends of the Earth's sustainable aquaculture campaign specifically focuses on highlighting the dangers of industrial ocean fish farming and supporting sustainable seafood production alternatives. We are more than 1.6 million members and activists across all 50 states working to make these visions a reality. We are also part of the Friends of the Earth International federation, a network in 74 countries working for social and environmental justice.

Industrial ocean fish farming – also known as open-ocean or marine finfish aquaculture – is the mass cultivation of finned fish in the ocean, in net pens, pods, and cages. These are essentially floating feedlots in our ocean, which can have devastating environmental and socio-economic impacts. We have been closely tracking – and are opposed to – a proposed aquaculture facility to cultivate Atlantic striped bass in the EEZ off the coast of Long Island, New York: Manna Fish

[1] *See* National Oceanic and Atmospheric Administration, Fisheries of the United States; Regulations for Striped Bass Fishing in the Block Island Transit Zone, 83 Fed. Reg. 193 (Oct. 4, 2018).

Farms. We are deeply concerned about the significant risk this facility will pose to nearby public waterways and native wildlife, including direct harm to our wild Atlantic striped bass stocks.

It is currently unlawful for any person to fish for, harvest, possess, or retain any Atlantic striped bass in the federal Exclusive Economic Zone (EEZ). *See* 50 C.F.R. § 697.7(b). As it stands, this regulation prevents Manna Fish Farms from implementing its plans to cultivate Atlantic striped bass in federal waters. NOAA has indicated in its public notice of the proposed rulemaking that these changes would "allow recreational fishermen to harvest, retain, and transport striped bass within the Block island Transit Zone." We understand that these proposed changes are not intended to lift any prohibitions as to farming Atlantic striped bass; however, out of an abundance of caution, and to showcase continued support for our wild stocks, we urge the ASMFC to recommend that NOAA unequivocally state in its final rulemaking notice that it is maintaining all prohibitions as to farmed Atlantic striped bass in the EEZ.

An industrial ocean fish farm for Atlantic striped bass would place wild striped bass stocks at significant risk. It is no secret that marine finfish aquaculture facilities regularly result in massive farmed fish escapes that adversely affect wild fish stocks. In just the last year, there have been a frightening number of farmed fish spills from industrial facilities viewed by some as leaders in the industry:

- Here in the United States, in August 2017, more than 263,000 farmed, non-native Atlantic salmon spilled into Puget Sound from an industrial ocean fish farm in Washington State owned by Cooke Aquaculture Pacific, LLC. The cause: poor maintenance and cleaning of the nets.
- In August 2018, an industrial ocean fish farm in Chile reported the escape of 930,000 salmon – of which approximately 680,000 went uncaptured. The cause: a wind storm with high waves.
- In July 2018, an industrial ocean fish farm in Norway spilled up to 10,000 fish into nearby waters. The cause: a fire at the facility.
- In July 2018, a salmon hatchery plant in Norway allowed for the escape of approximately 20,000 smolt. The cause: complications during routine vaccination procedures.
- In December 2017, an industrial ocean fish farm owned by Bakkafrost located off Faroe Islands spilled more than 109,000 Atlantic salmon. The cause: extreme weather conditions.[2]

Research confirms that escaped, farmed fish can establish in the wild, placing wild stocks at significant risk. An October 2018 study published by the U.S. National Academy of Sciences suggests that farmed fish have great potential to navigate and invade wild fish habitats after a fish spill, suggesting that fugitive farmed fish survive and travel, increasing competition and risk to our susceptible wild stocks.[3] In August 2017, an industrial ocean fish farm in Washington

[2] These figures represent leaders in the Atlantic salmon farming industry, which is the primary species of farmed fish in ocean-based facilities. Lola Navarro, INTRAFISH, Here are the largest recorded farmed Atlantic salmon escapes in history (Aug. 2, 2018), https://www.intrafish.com/aquaculture/1543294/here-are-the-largest-recorded-farmed-atlantic-salmon-escapes-in-history.

[3] Michelle M. Scanlan el al., "Magnetic map in nonanadromous salmon," Nat'l Academy of Sciencecs (2018), *available at* www.pnas.org/cgi/doi/10.1073/pnas.1807705115.

State spilled more than 263,000 farmed Atlantic salmon into Puget Sound. *Many of these non-native, farmed fish are still thriving and swimming free* – some have even been documented at least as far as 100 miles from the farm.[4] Scientists for Canada's Department of Fisheries and Oceans recently studied Newfoundland's wild salmon, reporting that more than 25% of fish examined were hybrid species, which was caused by years of interbreeding between farmed and wild stocks. Such interbreeding between wild and cultivated, farmed species can lead to genetic modification and degradation, forever impacting wild species.

Escaped, farmed fish impact wild species by increasing competition with wild fish stocks for food, habitat and spawning areas. These fugitive fish can also spread disease and parasites, such as sea lice. For highly susceptible stocks, such as the Atlantic striped bass, these risks are dire. Oftentimes, rather than attempt to prevent the escapes – which would remove the threat of new diseases and parasites – industrial fish farmers simply administer antibiotics and other veterinary drugs to their farmed fish in an attempt to kill pathogens. These drugs are nothing but harmful to the surrounding environment, wildlife, and consumers' health.

Another vital concern for Atlantic striped bass and other wild fish populations is poor water quality due to the discharge of excess food, untreated fish waste, veterinary drugs, and anti-foulants associated with industrial ocean fish farms. A salmon farm of 200,000 fish releases an amount of nitrogen, phosphorus, and fecal matter roughly equivalent to the nutrient waste in the untreated sewage from 20,000, 25,000, and 65,000 people, respectively.[5] Releasing such excess nutrients can result in eutrophication triggering algal blooms and subsequent deleterious anoxic conditions that can degrade nearby environmental conditions.

Finally, marine finfish aquaculture operations interrupt natural behaviors of wildlife and their habitats. Facilities can physically impact the seafloor by creating dead zones, and they frequently adulterate marine food webs by attracting predators and other species to congregate around fish cages. These predators – such as small and large schooling fishes, birds, seals, and sharks – can easily become entangled in net pens, harassed by acoustic deterrents, or otherwise harmed. Finfish aquaculture pens can act as 'fish aggregating devices,' interrupting migratory patterns and subjecting fish stocks to excessive fishing pressure from recreational fisheries.[6]

Conclusion

The laundry list of harms above shows that lifting any restrictions as to farmed Atlantic striped bass in the EEZ would harm to their wild counterparts. Industrial ocean fish farms devastate

[4] Lynda V. Mapes, SEATTLE TIMES, Despite agency assurances, tribes catch more escaped Atlantic salmon in Skagit River (Dec. 1, 2017), *available at* https://www.seattletimes.com/seattle-news/environment/despite-agency-assurances-tribes-catch-more-escaped-atlantic-salmon-in-skagit-river/.

[5] Pew Oceans Commission, AMERICA'S LIVING OCEANS: CHARTING A COURSE FOR SEA CHANGE 77 (2003), *available at* http://www.pewtrusts.org/~/media/assets/2003/06/02/poc_summary.pdf.

[6] These are just a few of the serious problems posed by industrial ocean fish farms. Others include socio-economic harms such as increased competition for marine waters, occupational hazards, and damage to coastal communities, such as wild-capture fisheries and tribal nations. There is no way to avoid and minimize these adverse environmental, social, and economic impacts when industrial ocean fish farming is permitted. As described above, these facilities inherently harm the environment, society, and the economy – harms that simply cannot be avoided or minimized.

waterways with harmful pollution and direct discharge, massive farmed fish spills, and destruction of native wildlife. We therefore urge the ASMFC to give due consideration to these impacts as part of its consideration, and recommend that NOAA unequivocally indicate that its proposed regulatory changes will not allow any person to fish for, possess, harvest, transport, or retain any farmed Atlantic striped bass in the EEZ.[7]

Thank you for the opportunity to submit these comments.

Sincerely,

Hallie Templeton
Senior Oceans Campaigner
Friends of the Earth

[7] We would not be opposed to a narrow exception allowing any person to fish for, possess, harvest, transport, or retain escaped farmed Atlantic striped bass. However, we strongly urge decisionmakers to prevent such disasters by simply continuing to prohibit the farming of Atlantic striped bass altogether.

Atlantic States Marine Fisheries Commission

DRAFT RECOMMENDATIONS FOR REVISING THE APPEALS PROCESS

A few members of the Executive Committee (EC) reviewed the Appeals Process. Below you will find recommended revisions to the Appeals Process for the EC to discuss. Recommended additions to the document are highlighted in yellow and deletions are indicted with a ~~strikethrough~~. The revisions to the document are intended to provide greater clarity to the process.

Background

The Atlantic States Marine Fisheries Commission's interstate management process is based on the voluntary commitment and cooperation of the states. The involved states have frequently demonstrated their willingness to compromise and the overall process has proven to be very successful. However, there have been instances where a state/jurisdiction has expressed concern that the Board decisions have not been consistent with language of an FMP, resulted in unforeseen circumstances or impacts, did not follow established processes, or were based on flawed technical information. In order to address these concerns, the ISFMP Policy Board charged the Administrative Oversight Committee with "exploring and further developing an appeals process".

Under the current management process the primary policy development responsibility lies with species management boards. And, in the case of development of new fishery management plans or amendments the full Commission has final approval authority prior to implementation. The purpose of the appeals process is to provide a mechanism for a state/jurisdiction to petition for a management decision to be reconsidered, repealed or altered. The appeals process is intended to only be used in extraordinary circumstances where all other options have been exhausted. The management boards have the ability to go back and correct errors or address additional technical information through the recently clarified process on "amending or rescinding previous board actions".

During the December 2003 ISFMP Policy Board meeting, the decision was made to continue to have the Policy Board serve as the deliberative body that will consider valid appeals. This decision is consistent with the language that is included in the ISFMP Charter. However, the Charter does not provide detailed guidance on how an appeal is to be addressed.

This paper details for the Commission appeals process.

Appeal Criteria –The intent of the appeals process is to provide a state with the opportunity to have a decision made by a species management board or section reconsidered by the Policy Board. The following criteria will be used to guide what type of decisions can be appealed. In general, management measures established through the FMP/amendment/addendum process can be appealed. However, the appellant must use one of the following criteria to justify an appeal:

1. Decision not consistent with, or is contrary to, the stated goal and objectives of the current FMP (Goal and Objective Section of FMPs/Amendments or Statement of the

Problem Section of Addenda).

2. Failure to follow process as identified in the ISFMP Charter, Rules and Regulations or other ASMFC guiding documents (e.g. conservation equivalency guidance).

3. Insufficient/inaccurate/incorrect application of technical information. Examples can include:
   a. If for any calculations used in the decision, an error which changes the results was identified after the decision was rendered;
   b. If any data used as the basis for a decision, undergoes a modification which impacts results after the decision was rendered (i.e. a landings dataset is adjusted significantly due to a recalibration or application of a control rule adjustment);
   c. If data is incorrectly identified and therefore incorrectly applied, such as a misidentification of "landings" information as "catch" information, or incorrectly assigned landings/catch to a jurisdiction;
   d. If information used as the basis for the decision lacked scientific or statistical rigor, thereby calling in to question the sound basis for the decision;
   e. If the historical landings, catch, or abundance time series used as a basis for a decision is found to be incorrect.

Any appeal based on criteria 3 may be verified independently by a technical body as appointed by the Chair, as needed.

~~4. Historical landings period not adequately addressed~~

5. Management actions resulting in unforeseen circumstances/impacts that were not considered by the Board as the management document was developed.

The following issues could not be appealed:

1. Management measures established via emergency action
2. Out-of-compliance findings (this can be appealed but, through a separate, established process)
3. Changes to the ISFMP Charter

Appeal Initiation – The ISFMP Charter provides that a state aggrieved by a management board action can appeal to the ISFMP Policy Board. Any state can request to initiate an appeal; also a group of states can submit a unified request for an appeal. The states are represented on the Commission by three representatives that have the responsibility of acting on behalf of the states' Executive and Legislative branches of government. Therefore, in order to initiate an appeal all seated Commissioners (not proxies) of a state's caucus must agree that an appeal is warranted and must sign the letter submitted to the Commission. If a multi-state appeal is requested all the Commissioners from the requesting states must sign the letter submitted to the Commission. During meetings where an appeal is discussed proxies will be able to participate in the deliberations. Meeting specific proxies will not be permitted to vote on the final appeal determination, consistent with Commission policy.

A state (or group of states) can request and appeal on behalf of the Potomac River

Fisheries Commission, District of Columbia, National Marine Fisheries Service, or the United States Fish and Wildlife Service.

The letter requesting an appeal will be submitted to the Chair of the Commission and include the measure(s) or issue(s) being appealed, the justification for the appeal, and the commitment to comply with the finding of the Policy Board. This letter must also include a demonstration that all other options to gain relief at the management board level have been exhausted. This letter must be submitted via certified mail at least **45 days** prior to a scheduled ASMFC Meeting Week. The Commission Chair, Vice-Chair and immediate past Chair will determine if the appeal meets the qualifying guidelines and notify the Policy Board of their decision. If the immediate past chair is no longer a commissioner the Chair will select an alternate from a state that is not affected by the appeal.

Convene a "Fact Finding" Committee (optional) -- Upon review of the appeal documentation, the Commission Chair, Vice-Chair and immediate past Chair (or alternate if necessary, as described above) may establish a "Fact Finding" Committee to conduct analyses and/or compile additional information if necessary. This group will be made up of individuals with the technical expertise (including legal, administrative, social, economic, or habitat expertise if necessary) and familiarity with the fishery to conduct the necessary analysis. If such a committee is convened the schedule included in the last section of this document may need to be adjusted to provide time for the Committee to conduct analyses. The Commission Chair, Vice-Chair and immediate past Chair (or alternate if necessary, as described above) may set a deadline for the Committee to complete its work to ensure the appeal is addressed in a timely manner.

ISFMP Policy Board Meeting –Following the determination that an appeal has met the qualifying guidelines, a meeting of the Policy Board will be convened at a scheduled ASMFC meeting week. The agenda of this meeting will be set to allow sufficient time for all necessary presentations and discussions. The Chair of the Commission will serve as the facilitator of the meeting. If the Chair is unable to attend the meeting or would like to more fully participate in the deliberations, the Vice-Chair of the Commission will facilitate the meeting. The ISFMP Director will provide the background on the development of the management program as well as a summary of the justification provided in the record for the management board's action. The ISFMP Director will also present the potential impacts of the appeal on other affected states. The appellant Commissioners will present their rationale for appealing the decision and provide a suggested solution. The Policy Board will then discuss the presentations and ask any necessary questions. The Board will vote to determine if the management board's action was justified. A simple majority of the Policy Board is required to forward a recommendation to a management board for corrective action. If the Policy Board determines that the existing management program should be modified, it will issue a finding to that effect as well as any guidance regarding corrective action to the appropriate species management board. The referral may be worded to allow the management board flexibility in determining the details of the corrective action.

Upon receipt of the Policy Board's recommendation the management board will discuss the findings and make the necessary changes to address the appeal. The management board is obligated to make changes that respond to the findings of the Policy Board. A

simple majority of the management board will be necessary to approve the changes.

Appeal Products and Policy Board Authority – Following the Policy Board meeting a summary of the meeting will be developed. This summary will include a detailed description of the findings and will be forwarded to the appropriate management board and Policy Board upon completion. If the Policy Board determines that changes to the management program are necessary, the summary may include guidance to the management board for corrective action. The report of the Policy Board will be presented to the management board for action at the next scheduled meeting.

Considerations to Prevent Abuse of the Appeals Process – The appeals process is intended to be used only in extraordinary situations and is in no way intended to provide a potential avenue to preempt the established board process. The initiation of an appeal will not delay the Commission process for finding a state out of compliance nor delay or impede the imposition of penalties for delayed compliance.

Limiting Impacts of Appeal Findings – If a state is successful in an appeal and the management program is altered, another state may be negatively impacted by the appeals decision. In order to prevent an appeals "chain reaction," the Policy Board's recommendation and the resulting management board's decision will be binding on all states. All states with an interest in the fishery will be obligated to implement the changes as approved by the management board. Upon completion of the appeals process, a state is not precluded from taking further action beyond the Commission process to seek relief.

If the Policy Board supports the appeal and determines that corrective action is warranted, the potential for management changes to negatively impact other states will be evaluated by the Policy Board and the species management board.

Appeals Process Timeline

1. Within **15 working days** of receipt of a complete appeal request the Commission Chair, Vice-Chair, and immediate past chair (or alternate) will determine if the state has an appeal which meets the qualifying guidelines.

2. Upon a finding that the appeal meets the qualifying guidelines, the appeal will be included on the agenda of the ISFMP Policy Board meeting scheduled during the next ASMFC Meeting Week (provided an adequate time period is available for preparation of the necessary documentation).

3. Following the finding that an appeal meets the qualifying guidelines, Commission staff and the appellant commissioners will have a minimum of **15 working days** to prepare the necessary background documents.

4. The background documents will be distributed at least **15 days** prior to the Policy Board meeting.

5. A summary of the Policy Board meeting will be developed and distributed to all Commissioners within **15 working days** of the conclusion of the meeting.

ATLANTIC STATES MARINE FISHERIES COMMISSION
AWARDS COMMITTEE SOPPS

The Commission, through the work of the Awards Committee, annually recognizes outstanding individuals in the field of interstate fisheries management and conservation. The Awards Committee is charged with the important responsibility of soliciting nominations and selecting recipients annually for the Captain David H. Hart Award (Hart) and the Annual Awards of Excellence (AAE).

COMMITTEE COMPOSITION: The Awards Committee is comprised of, at a minimum, an Administrative Commissioner, a Legislative Commissioner, a Governor's Appointee Commissioner, representatives of the Management & Science Committee and the Law Enforcement Committee, and two additional Commissioners. This Committee and its Chair are appointed annually by the Commission Chair.

CHAIRMAN RESPONSIBILITIES: The chair of the Awards Committee is responsible for the following: working with Commission staff to assure issuance of the call for nominations; conducting meetings of the committee; presenting the awards; and assuring dissemination of information about recipients of awards.

COMMITTEE RESPONSIBILITIES: The members of the Awards Committee are responsible for the following: participating in conference calls and meetings; reviewing nomination materials thoroughly and without prejudice; and working collaboratively during deliberations to reach a consensus when deciding which nominees are to be recipients of awards.

WHEN ARE THE AWARDS PRESENTED? The David H. Hart Award is presented at the Commission's Annual Meeting to an individual who has contributed to the betterment of the fisheries of the Atlantic coast through significant biological, legislative, enforcement and/or management activities. The Annual Awards of Excellence are presented at the Commission's Spring Meeting to individuals who have made highly significant contributions to the management and conservation of Atlantic coastal fisheries in one of the following areas: Scientific/Technical/Advisory; Congressional/Legislative; Law Enforcement; Management/Policy and Outreach/Advocacy. Such contributions must be for activities conducted in support of interstate fishery management through the Commission.

WHAT IS THE SELECTION PROCESS? Nominations will be solicited by the Awards Committee in late February (two months prior to the Spring Meeting) for the AAEs and in early – mid June (four months prior to the Annual Meeting) for the Hart Award. The staff member assigned to the Awards Committee will receive the nominations and prepare the package for distribution to the committee. The AAEs will be selected during an Awards Committee conference call in late March – early April. The Hart Award will be selected during an in-person meeting of the Awards Committee at the Summer Meeting of the Commission. If a meeting is not possible at the Summer Meeting a conference call will be held.

CRITERIA: Following is the criteria used to evaluate nominees:

1. Did the individual(s) participate in an activity that had direct positive impact on a species or group of species managed by ASMFC?
2. Did the actions of the individual(s) improve public awareness of ASMFC?
3. Did the actions of the individual(s) improve the credibility of ASMFC?
4. Did the actions of the individual(s) contribute to improved cooperation amongst the stakeholders of ASMFC?
5. Did the individual(s) demonstrate efficient use of time and fiscal resources when conducting the activity described in the nomination?
6. Did the individual(s) exhibit innovation, ingenuity, and creativity when conducting the activity described in the nomination?
7. Did the individual(s) work outside of their routine duties and responsibilities when conducting the activity described in the nomination?
8. Did the individual(s) foster collaboration with others when conducting the activity described in the nomination?
9. Did the individual(s) fundamentally change an approach or method used in the interstate fishery management process?

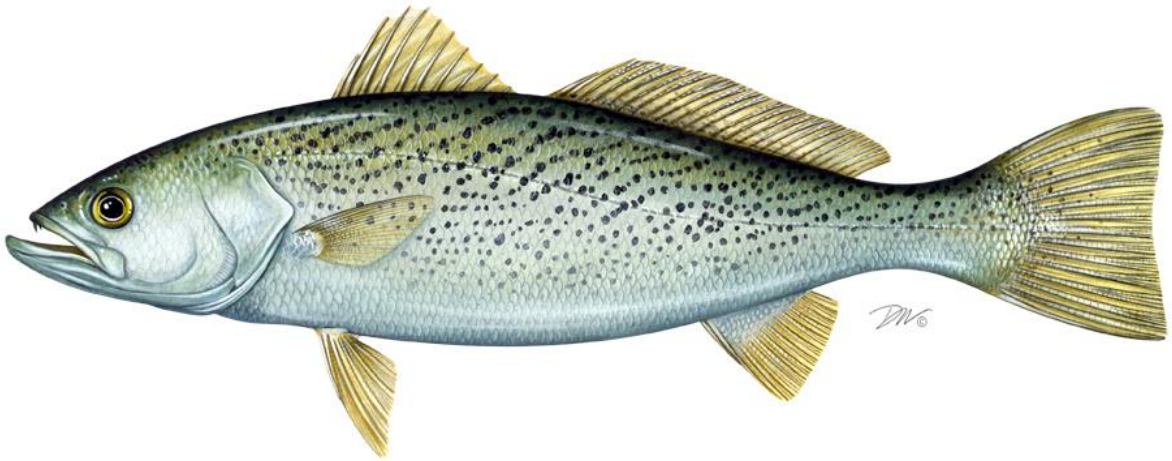
OTHER: It is preferred that the award recipients remain confidential until the presentations at the meetings. However, the nominator(s) will be notified and can be asked to provide assistance in getting the recipients to the meeting at which they would be presented the award.

Nominees not selected for an award will be considerable eligible for the same award the following year. Nominees not selected during this second year of eligibility must be re-nominated to be considered for an award during future deliberations of the Awards Committee.

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

WEAKFISH
(Cynoscion regalis)

2017 FISHING YEAR



Weakfish Plan Review Team
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2018 WEAKFISH FMP REVIEW

I. Status of the Fishery Management Plan

The Atlantic States Marine Fisheries Commission (Commission) adopted its first Fishery Management Plan (FMP) for Weakfish in 1985. Amendment 1 to the FMP (1992) unsuccessfully aimed to improve the status of Weakfish. Amendment 2 (1995) resulted in some improvement to the stock, but several signs indicated that further improvement was necessary. Thus, Amendment 3 (1996) was implemented to increase the sustainability of the fishery. Addendum I to Amendment 3 was approved in 2000 in order to extend the management program until the next amendment was implemented.

Amendment 4, approved in 2002, strives to establish two goals. One is the utilization of interstate management so that Atlantic coastal weakfish recover to healthy levels that will maintain commercial and recreational harvest consistent with a self-sustaining spawning stock. The second goal is to provide for restoration and maintenance of essential habitat (ASMFC 2002). The management objectives are to:

1) establish and maintain an overfishing definition which includes target and threshold fishing mortality rates and a threshold spawning stock biomass in order to prevent overfishing and to maintain a sustainable weakfish population;
2) restore the weakfish age and size structure to that necessary for the restoration of the fishery;
3) return weakfish to their previous geographic range;
4) achieve compatible and equitable management measures among jurisdictions throughout the fishery management unit, including states' waters and the federal EEZ;
5) promote cooperative interstate research, monitoring, and law enforcement necessary to support management of weakfish;
6) promote identification and conservation of habitat essential for the long term stability in the weakfish population; and
7) establish standards and procedures for both the implementation of Amendment 4 and for determination of states' compliance with provisions of the management plan.

Amendment 4 established target and threshold fishing mortality rates and a threshold spawning stock biomass level to determine overfishing and overfished stock status. The amendment requires states to implement recreational and commercial management measures to achieve annual fishing mortality targets. Some management measures are specified (e.g., minimum size limit, minimum mesh size, bycatch limit), while the Amendment provides the states flexibility in implementing other regulations (e.g., trip limits, area or season closures). States may request implementation of alternative management plans with conservationally equivalent measures. States deemed to have insignificant landings were exempt from the recreational and commercial requirements, with the exception of the bycatch reduction device requirements.

The Commission adopted Addendum I to Amendment 4 (2005) to replace the biological sampling program in Section 3.0 of Amendment 4. In response to a significant decline in stock abundance and increasing total mortality since 1999, the Commission approved Addendum II to Amendment 4 (2007) to reduce the recreational creel limit and commercial bycatch limit, and set landings levels that when met will trigger a re-evaluation of management measures. Addendum III to

Amendment 4 (2007) altered the bycatch reduction device certification requirements in Section 4.2.8 of Amendment 4 for consistency with the South Atlantic Fishery Management Council's Shrimp FMP. The Commission approved Addendum IV to Amendment 4 in 2009 to respond to the results of the 2009 benchmark stock assessment (additional information is provided in Section VI. Status of Management Measures and Issues).

Weakfish are managed under this plan as a single stock throughout their coastal range. All Atlantic coast states from Massachusetts through Florida and the Potomac River Fisheries Commission have a declared interest in weakfish, as do the US Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS). See Table 1 for a summary of state-by-state regulations in 2015.

II. Status of the Stock

According to the last stock assessment, completed in 2016, the weakfish stock is depleted and overfishing is not occurring (ASMFC 2016). While overfishing has not occurred in recent years, harvest was reduced by an estimated 60% in Addendum IV to reduce additional mortality from fishing and poise the stock for a quicker recovery should natural mortality decline.

Between 1986 and 1993, spawning stock biomass (SSB) declined drastically from 48.5 million pounds (the time series maximum) to 16.0 million pounds (Figure 1). Overfishing was the main cause of this decline, with fishing mortality (F) accounting for about 90% of total mortality (fishing plus natural mortality) during the period (Figure 1). With the implementation of management measures in the early to mid-1990s, F declined to 0.60 in 1996 and biomass responded favorably by increasing to a peak of 38.1 million pounds in 1997 (Figure 1). Despite low and declining harvests since the early 2000s, SSB continued to decline, reaching a time-series low of 4.2 million pounds in 2009. However, the contribution of fishing mortality to total mortality was substantially reduced during this period; from 2001-2010, 60-75% of total mortality is attributed to fishing mortality. After the 2009 stock assessment (48th SAW), harvest quotas were reduced, further reducing the contribution of fishing mortality to less than 25% of total mortality from 2011-2014. SSB increased slightly at the end of the assessment time series, but further monitoring is necessary to determine whether this increase is sustainable. Conversely, natural mortality has risen substantially since the mid-1990s (Figure 1). Annual natural mortality estimates did not exceed 0.17 from 1982-1997 but had an average of 0.93 from 2007-2014. Factors such as predation, competition, and changes in the environment are believed to be having a stronger influence on recent weakfish stock dynamics than fishing mortality.

III. Status of the Fishery

This report includes updated recreational estimates from the Marine Recreational Information Program's transition to the mail-based Fishing Effort Survey (FES) on July 1, 2018. Therefore, recreational estimates will likely be different from those shown in past FMP Reviews and state compliance reports (due annually on September 1) through 2018. Figure 2 shows coastwide recreational landings including estimates using both the previous Coastal Household Telephone Survey (CHTS) and FES calibration for comparison, but other figures, tables, and text will only show data based on the FES calibration. Data based on either survey can be referenced at: https://www.st.nmfs.noaa.gov/st1/recreational/queries/.

At 602,713 pounds in 2017, the total coastwide landings of weakfish have increased from 2016 (380,878 pounds) and are below the previous ten-year (2007-2016) average of 818,764 pounds. The commercial fishery (166,671 lbs) accounted for 28% of the total 2017 landings, and the recreational fishery (436,042 lbs) for 72% (Table 2).

Commercial Fishery

Commercial data are cooperatively collected and compiled by the Atlantic Coastal Cooperative Statistics Program (ACCSP) and state fishery agencies from state mandated trip-tickets, landing weigh-out reports from seafood dealers, federal logbooks, shipboard and portside interviews, and biological sampling of catches. In this report, commercial landings from 2016 and earlier are from ACCSP and landings from 2017 are from state compliance reports, unless otherwise stated (see notes for Table 3).

Between 1982 and 2017, coastwide commercial weakfish landings have ranged from the high of 21.1 million pounds in 1986 to the low of 132,261 pounds in 2011 (Figure 3). Commercial landings have generally declined throughout the time series. Landings in 2017 were the third-lowest on record at 166,671 pounds, and decreased from 176,527 pounds in 2016. North Carolina (51%), New York (17%) and Virginia (16%) landed the largest shares of the 2017 coastwide commercial weakfish harvest (Table 3).

The dominant commercial gears were gill nets (about 59% of commercial landings). There has been a shift in the dominant source of landings from trawls in the 1950s-1980s to gill nets in the 1990s-present. The majority of commercial landings tend to occur in the fall and winter months, presumably as the fish congregate to migrate to over-wintering grounds in the South Atlantic (Hogarth et al. 1995).

Recreational Fishery

Recreational catch statistics are collected by the NMFS. Effort data are collected through telephone interviews. Catch expansions are based on angler interviews and biological sampling conducted by trained interviewers stationed at fishing access sites. Recreational data from 2016 and earlier in this report are from the NMFS Fisheries Statistics Division queried from the Marine Recreational Information Program (MRIP; 2018), except as noted in Section VI of this report for Florida's estimates. Some states also monitor and report recreational landings through their own sampling and estimation efforts. Recreational landings for 2017 are calculated from landings reported in state compliance reports.

Since 1982, coastwide recreational landings have ranged from the high of 20 million pounds in 1987 to the low of 102,754 pounds in 2011 (Figure 3). Landings averaged 13.7 million pounds from 1982-1988, before falling to between one and nine million pounds from 1989-2008. In 2009, recreational landings dropped below one million pounds. Landings have averaged 360 thousand pounds from 2013-2017, and are estimated at 436,042 pounds (276,140 fish) in 2017 (Tables 4 and 5). The number of fish released alive by anglers has remained above 1 million fish from 1991 through the present, except for 2013 (Figure 4). In 2017, 1.5 million fish were released (Table 6).

In 2010, all states implemented a one fish bag limit, which impacted landings and discards from that point on.

New Jersey anglers regularly harvested the most recreational weakfish by pounds along the coast until 2009. In the 1980s and 1990s, anglers in Delaware, Maryland, and Virginia often took the next largest shares of the recreational total amount. In the 2000s, New Jersey anglers led in the harvest, whereas anglers in Virginia and North Carolina tended to take the second and third largest amounts (Tables 4 and 5). However, since 2009, New Jersey and North Carolina have switched off in harvesting the largest recreational proportions, with the next greatest proportions coming from Virginia or South Carolina. New Jersey harvested the greatest proportion in 2017, with 225,225 pounds (52% of recreational harvest).

The size of fish sampled to provide the MRIP weight estimates has historically varied in a latitudinal fashion, with larger fish caught in the north and smaller fish caught in the south. The mean weight per fish sampled throughout the recreational time series (1982-2016) is less than 1.5 pounds for all states from Florida through Maryland and over 1.5 pounds for all states north of Maryland. In 2017, the mean weights for fish caught in New Jersey, Delaware, North Carolina, and South Carolina (2.86, 1.75, 1.08, and 1.28 lbs, respectively) were greater than each state's time series mean, and the mean weights for fish caught in Massachusetts, New York, Maryland, Virginia, and the east coast of Florida (1.65, 1.27, 0.65, 1.09, and 0.66 lbs, respectively) were less than each state's time series mean.

The recreational fishery catches weakfish using live or cut bait, jigging, trolling, and chumming. The majority of recreationally harvested weakfish are caught in state waters (95% in 2017 by pounds).

IV. Status of Assessment Advice

The 2016 assessment was completed by the ASMFC Weakfish Stock Assessment Subcommittee (SAS) (ASMFC 2016) and peer reviewed by the ASMFC Weakfish Stock Assessment Review Panel (ASMFC 2016). The assessment includes fishery data and survey indices through 2014.

As a result of this assessment, the Weakfish TC recommends new Z and SSB reference points along with a two-stage control rule for evaluating weakfish stock status and management response.

Under conditions of time-varying natural mortality, there is no long-term stable equilibrium population size, so an SSB target is not informative for management. The Weakfish TC recommends an SSB threshold of $SSB_{30\%}$ = 6,880 MT that is equivalent to 30% of the projected SSB under average natural mortality and no fishing. When SSB is below that threshold, the stock is considered depleted.

SSB in 2014 was 2,548 MT, below the SSB threshold, indicating the stock is depleted (Table 9.2.1, Figure 9.2.1). SSB has been below the threshold for the last 13 years.

The TC recommends the use of total mortality benchmarks to prevent an increase in fishing pressure when F is low but M is high. When Z is below the Z target, F reference points can be used to assess overfishing status.

Z in 2014 was 1.11, above the Z target, but below the Z threshold, indicating total mortality is still high but within acceptable limits (Table 9.2.1, Figure 9.2.2). Z was above the threshold from 2002-2013.

V. Status of Research and Monitoring

Fishery-Independent Data

Young-of-year indices of relative abundance are provided by Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Florida. Massachusetts, Connecticut, New Jersey, Delaware, North Carolina, Georgia, and Florida provide age- 0+ or 1+ indices of relative abundance. The Northeast Fisheries Science Center Groundfish Trawl Survey also produces an age-structured index for the Mid-Atlantic coast, while the Southeast Area Monitoring and Assessment Program (SEAMAP) survey produces another index for the South Atlantic Coast. The Northeast Area Monitoring and Assessment Program (NEAMAP) began spring and fall surveys between Martha's Vineyard and Cape Hatteras in the fall of 2007, and provided an Age 1+ index which is included in the 2016 assessment. Stomach content analysis was also done to assess food habit changes and investigate the possible decrease in preferred food availability as a driver of natural mortality, however results were inconclusive. The Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP), which began in 2002, collects data on relative abundance, length, weight, age, sex, and trophic interactions in the Bay. See Table 7 for the indices provided in the 2018 compliance reports. While only the most recent years of data are shown, full data sets for each survey are available upon request to the state or Commission.

Fishery-Dependent Data

The coastal states and the NMFS collect data on commercial and recreational landings. Addendum I to Amendment 4 requires the collection of otoliths and lengths to characterize the catch; the number of samples required is based on the magnitude of each state's fisheries. Each spring, the states are required to submit biological sampling plans, and each fall, through the compliance reports, the states are required to provide the actual sampling levels completed. See Section VII for more information.

VI. Status of Management Measures and Issues

Fishery Management Plan

Addendum IV to Amendment 4 was approved in November 2009, and was implemented in May 2010. In response to the 2009 stock assessment results, the addendum implements more appropriate biological reference points in response to recent stock dynamics and reduces harvest while attempting to minimize unnecessary bycatch waste. Addendum IV requires all states in the management unit (including those that are *de minimis*) to implement a recreational creel limit no greater than 1 fish, commercial trip and bycatch limits no greater than 100 pounds, and a

finfish trawl fishery allowance for up to 100 undersized fish. The addendum adopted percentage based biological reference points with an overfished/depleted threshold of 20% SSB and a target of 30% SSB. Results of the 2016 assessment support continued use of these reference points. The biological sampling requirements under Addendum I are unchanged, and all regulations previously enacted to protect weakfish and reduce bycatch are to remain effective.

No additional amendments or addenda are under development.

Florida Management Area and Landings Data

In November 2009, the Management Board approved a proposal from Florida to reduce the state's weakfish management area to a small area in northeast Florida where pure weakfish are known to occur based on genetics data. The revision is intended to address the misidentification of weakfish, sand seatrout, silver seatrout, and their hybrids, and the consequential law enforcement issue. Inside the newly established weakfish management area (St. Mary's River only), any fish that resembles weakfish will be considered weakfish for enforcement purposes, both for commercial and recreational limits. Outside the weakfish management area, all fish that resemble weakfish will be considered sand seatrout.

As a result of the approved proposal, the commercial and recreational landings data provided in Florida's 2018 compliance report represent the best estimate of pure weakfish landings in the state. Commercial landings data from Florida's trip ticket program and recreational landings from the NMFS's Marine Recreational Fisheries Statistics Survey include only weakfish landed in Nassau and Duval counties, as revised on the basis of the genome proportions within the *Cynoscion*-complex found in the counties (48% weakfish in Nassau County and 17% in Duval County). The landings, tables, and figures in this report use the landings as reported by Florida.

De Minimis Status

Amendment 4 permits states to request *de minimis* status if, for the last two years, their combined average commercial and recreational landings (by weight) constitute less than 1% of the coastwide commercial and recreational landings for the same two year period. The *de minimis* threshold for the 2017 fishing year, calculated with 2016 and 2017 harvest data, is 5,096 pounds.

Three states requested *de minimis* status in their 2016 compliance reports: Massachusetts, Connecticut, and Florida. Massachusetts and Florida qualify for *de minimis* status (Massachusetts 0.66% and Florida 0.34%). Connecticut's 2016-2017 average landings are 1.07% of the coastwide total, exceeding the *de minimis* threshold by 0.07%.

Addendum II Management Triggers

In 2010, the recreational and commercial management measures in Addendum IV replaced those in Addendum II. However, the Plan Review Team (PRT) will continue to include an evaluation of the two management triggers as they provide perspective on the magnitude of fishery landings (but hitting a trigger will not require Board reconsideration of the management measures).

Addendum II established two management triggers that would require the Board to consider modifying management measures if reached. First, commercial management measures are to be re-evaluated if coastwide commercial landings exceed 80% of the mean commercial landings from 2000-2004, or 2.99 million pounds. Second, commercial and recreational management measures are to be re-evaluated if any single state's landings exceed its five-year mean by more than 25% in any single year.

The 2016 coastwide commercial landings are 166,671 pounds, thus the first trigger has not been exceeded. The second trigger was met in Massachusetts, New Jersey, Georgia, and Florida because their total estimated landings in 2017 were 129%, 81%, 282%, and 46% greater than their average total landings from 2013-2017 (Table 8). Massachusetts and Florida landings, while relatively high, each constitute less than 1% of total coastwide landings. Thus, the PRT does not find the 2017 harvests for these states to be a cause for concern.

New Jersey's increase in landings follows three of their five lowest harvests on record, and is their third-highest harvest since 2010. The recent trend of landings to shift north or south between New Jersey and North Carolina may be indicative of environmental components impacting annual availability by location.

Georgia's 2017 harvest also follows one of their lowest periods of harvest, with a 2013-2016 average of 3,675 pounds. Sporadic increases above 10 thousand pounds have occurred in the past for Georgia, but have never lasted more than three years and have been interspersed among harvests typically less than 7 thousand pounds. The most recent harvest above 10 thousand pounds was in 2009 (14,449 pounds).

The PRT does not recommend management action for these New Jersey and Georgia at this time, but does recommend monitoring harvests in these states next year to see if high levels are sustained. Preliminary 2018 data for both states indicate more typical harvests.

VII. Implementation of FMP Compliance Requirements for 2017

Mandatory compliance elements for 2017 were provided by Amendment 4 and its four addenda.

Regulatory Requirements

The management program includes regulatory requirements for non *de minimis* states as follows:

- Recreational management measures including minimum size limits and a maximum creel limit of one fish(see Addenda II and IV to Amendment 4)
- Commercial management measures including minimum size limits, minimum mesh size limits, landings limits, trip limits, bycatch limits, closed seasons and areas, and bycatch reduction device requirements (see Section 4.2 of Amendment 4, and Addendum IV)

The PRT finds all states to have implemented the plan's compliance requirements.

See Table 1 for a summary of state commercial and recreational regulations in 2015.

Monitoring Requirements

Addendum I implemented monitoring requirements for non *de minimis* states as follows:

- Maintenance of at least the 2005 level of recreational sampling of individual lengths through the Marine Recreational Fisheries Statistics Survey;
- Collection of six individual fish lengths for each metric ton of weakfish landed commercially;
- Collection of three individual fish ages for each metric ton of total weakfish landed, with a maximum of 1000 ages annually per state [Samples may come from commercial and/or recreational fishery as long as they come from the same general area (inshore versus offshore) that those fisheries are prosecuted in.].

Table 9 provides the otolith and length collection requirements for 2017. These are based on the best available 2016 landings data provided to the Commission by the ACCSP, NMFS, and the states. To accommodate the MRIP transition to the FES, requirements listed in Table 9 are based on recreational estimates made with the previously used Coastal Household Telephone Survey (CHTS). Future sampling efforts (2019 and beyond) should be based on recreational harvests estimated using the FES. Table 9 also provides the number of otoliths and lengths collected by the states in 2017. All states except New York met the biological sampling requirements in 2017, as reported in state compliance reports. New York collected an adequate number of ages but collected 36 lengths less than their required 84 lengths. This is the second consecutive year that New York has not fulfilled sampling requirements for commercial lengths. Although New York did not meet their sampling requirements, the PRT recognizes the difficulty in acquiring weakfish samples and has no reason to believe that this state did not make a good faith effort to fulfill the requirements of the FMP.

VIII. Recommendations of the Plan Review Team

Management Recommendations

- That the Board approve the *de minimis* requests from Massachusetts, Connecticut, and Florida.
- That the Board consider for management the use of biological reference points from the 2016 stock assessment.
- That the Board consider updating management triggers established in Addendum II to Amendment 4.
- That the Board clarify the use of fishery-independent samples in fulfilling biological sampling requirements as set forth in Addendum I to Amendment 4.

Research Recommendations

Fishery-Dependent Priorities

High

- Increase observer coverage to identify the magnitude of discards for all commercial gear types from both directed and non-directed fisheries.[1]

Moderate

[1] Some Mid-Atlantic trawl fleet observer coverage has been implemented under ACCSP funding.

- Continue studies on temperature, size, and depth specific recreational hook and release mortality rates, particularly catches from warm, deep waters. Investigate methods to increase survival of released fish.
- Continue studies on mesh size selectivity, particularly trawl fisheries.[2]
- Improve methods to estimate commercial bycatch. Refine estimates of discard mortality based on factors such as distance from shore and other geographical differences for all sizes including below minimum size.

Low

- Determine the onshore versus offshore components of the weakfish fishery.
- Collect catch and effort data including size and age composition of the catch, determine stock mortality throughout the range, and define gear characteristics. In particular, increase length frequency sampling in fisheries from Maryland and further north.
- Develop latitudinal, seasonal, and gear-specific age-length keys coast wide. Increase sample sizes for gear specific keys.

Modeling / Quantitative Priorities

High

- Evaluate predation of weakfish with a more advanced multispecies model (e.g., the ASMFC MSVPA or Ecopath with Ecosim); consider an expanded suite of predators (e.g., marine mammals) and include weakfish as predator and prey.
- Develop a bioenergetics model that encompasses a broader range of ages than Hartman and Brandt (1995) and use it to evaluate diet and growth data.

Life History, Biological, and Habitat Priorities

High

- Develop a coastwide tagging program to identify stocks and determine migration, stock mixing, and characteristics of stocks in over wintering grounds. Determine the relationship between migratory aspects and the observed trend in weight at age.[3]
- Estimate weakfish mortality through independent approaches (e.g., alternative models, tagging) to corroborate trends in mortality from the assessment model.
- Determine the impact of scientific monitoring surveys on juvenile weakfish mortality. Calculate the resulting impact on adult stock size.
- Monitor weakfish diets over a broad regional and spatial scale, with emphasis on new studies within estuaries.
- Continue to investigate the geographical extent of weakfish hybridization.

Moderate

[2] Gillnet selectivity has been investigated by Swihart et al (2000). Some gear selectivity information in Amendment 3 to the ASMFC Weakfish FMP. Information can also be obtained from the North Carolina Pamlico Sound Independent Gill Net Survey.

[3] A university led weakfish tagging study has been ongoing in North Carolina and Delaware since 2014. The objective of the study is to evaluate movement and stock mixing of weakfish along the U.S. east coast and to estimate seasonal and annual rates of fishing and natural mortality. The study is slated to be completed in late 2017 with results available to the weakfish TC in early 2018.

- Identify and delineate weakfish spawning habitat locations and environmental preferences to quantify spawning habitat.
- Compile data on larval and juvenile distribution from existing databases to obtain indications of spawning and nursery habitat location and extant.
- Examine geographical and temporal differences in growth rate (length and weight at age).
- Determine the impact of power plants and other water intakes on larval, post larval, and juvenile weakfish mortality in spawning and nursery areas. Calculate the resulting impact on adult stock size.[4]
- Monitor predation on weakfish from bird, fish, and marine mammal species.

Management, Law Enforcement, and Socioeconomic Priorities

Moderate

- Assemble socioeconomic data as it becomes available from ACCSP.

Low

- Define restrictions necessary for implementation of projects in spawning and over wintering areas and develop policies on limiting development projects seasonally or spatially.

[4] Data are available for power plants in the Delaware Bay area and North Carolina. Also see Heimbuch et al. 2007. Assessing coastwide effects of power plant entrainment and impingement on fish populations: Atlantic menhaden example. *North American Journal of Fisheries Management*. 27: 569-577.

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X. Tables

Table 1. Summary of state regulations for weakfish in 2017.

State	Commercial	Recreational	Implementation Date
MA	16", open 1/1-12/31, 100 lb possession limit.	16", 1 fish	June 2010
RI	16"; open 6/1-6/30 & 8/7-11/8, 100 lb possession limit. Other times of year: 100 pound bycatch limit with at least an equal poundage of other species as weakfish. Trawl codend mesh size >=4.5" diamond or 4.0" square.	16", 1 fish	April 28, 2010
CT	16"; open 1/1-12/31, 100 lb possession limit.	16", 1 fish	April 25, 2010
NY	16" (12" dressed & 10" filleted); Hook and line open 4/1-6/24 & 8/28-11/15; 0 lb bycatch limit. All other gears open 4/1-6/24 and 8/28-11/15; 100 lb bycatch limit.	16" (12" dressed, 10" fillet), 1 fish	By May 1, 2010
NJ	Gill net: 13"; open 1/1-5/20 & 9/3-10/19 & 10/27-12/31, 100 lb possession limit; mesh ≥ 3.25" stretched except 2.75 - 3.25" allowed within 2nm for permitted fishermen doing monthly reporting. Otter trawl: 13"; open 1/1-7/31 & 10/13-12/31, 100 lb possession limit; mesh ≥ 3.75" diamond or 3.375 square. Pound net: 13"; open 1/1/-6/6 & 7/1-12/31, 100 lb possession limit. 100 lb bycatch limit & 50% rule. Hook & line: 13", 1 fish, open 1/1-12/31.	13", 1 fish	March 25, 2010
DE	Gill net: 12"; only nets with stretch mesh ≥ 3.125" allowed in water 4/1-6/30, none permitted weekends and legal holidays 5/10-9/30, 100 lb possession limit. Drift gill net: open 1/1-12/31 except 34 specified days of gear out of water in May and June. Anchor gill net: open 1/1-5/9 and 10/1-12/31, otherwise gear out of water. Hook & line: 13"; 100 lb possession limit 4 days/week during 5/1-10/31, 1 fish creel limit all other times.	13", 1 fish	April 11, 2010
MD	12". Ocean all gears: 100 lb bycatch limit & 50% rule. Chesapeake Bay hook & line: open 8/1-9/30, 50 lb possession limit, 0 lb bycatch. Chesapeake Bay all other gears: 50 lb bycatch limit & 50% rule. Gillnet: mesh ≥ 3.0" stretched. Trawl: mesh ≥ 3.375" square or 3.75" diamond.	13", 1 fish	June 28, 2010
PRFC	12"; open 7/28-12/31, 50 lb possession limit; 50 lb bycatch limit & 50% rule for certified pound nets with approved cull panels, and 0 lb bycatch for all other gears. Pound net: limited entry.	12", 1 fish	January 1, 2010

VA	Gill net: 12"; open 3/16-5/13 & 10/21-12/30, 100 lb possession limit. Pound net: no minimum size; limited entry; open 4/1-4/30 & 5/23-9/12 unless exempted by license forfeit, 100 lb possession limit. Haul seine: no minimum size; open 4/16-6/10 & 8/21-9/24, 100 lb possession limit. Out of state trawl: 12" except 100 undersized fish allowed; open 4/1-9/25, 100 lb possession limit; codend mesh ≥ 3.0". Hook & line: 12”; open 1/1-12/31, 100 lb possession limit. 100 lb bycatch limit (per vessel), 50% rule for all gears during closed seasons.	12”, 1 fish	May 1, 2010
NC	12", except 10" for long haul seines & pound nets in internal waters 4/1-11/15; open 1/1-12/31, 100 lbs trip limit. Gill net: mesh ≥ 2.875” stretch. Gill nets and flynets that do not meet mesh requirements can only take weakfish as bycatch provided the weight of weakfish doesn’t exceed 50% of catch up to 100lbs, 100lb limit in shrimp or crab trawl. BRDs in shrimp trawls.	12”, 1 fish	August 20, 2010
SC	12", 1 fish. BRDs in shrimp trawls.	12", 1 fish	July 1, 2010
GA	13", 1 fish. BRDs in shrimp trawls.	13", 1 fish	June 3, 2010
FL	12", 100 lb possession limit. BRDs in shrimp trawls.	12", 1 fish	July 27, 2010

Table 2. Commercial and recreational Atlantic coast weakfish landings from 2000 to 2017 (see Tables 3 and 4 for source information and state-specific landings).

Year	Recreational Landings (lbs)	Commercial Landings (lbs)	Total Landings (lbs)	% Com
2000	8,393,984	5,062,705	13,456,689	38%
2001	4,687,016	4,802,221	9,489,237	51%
2002	4,316,228	4,594,956	8,911,184	52%
2003	1,946,795	1,999,040	3,945,835	51%
2004	2,223,528	1,538,517	3,762,045	41%
2005	2,580,901	1,264,102	3,845,003	33%
2006	1,814,676	1,081,396	2,896,072	37%
2007	1,202,671	900,958	2,103,629	43%
2008	1,074,487	456,793	1,531,280	30%
2009	429,684	372,985	802,669	46%
2010	173,352	202,626	375,978	54%
2011	102,754	132,261	235,015	56%
2012	671,631	246,765	918,396	27%
2013	466,930	343,899	810,829	42%
2014	218,581	192,009	410,590	47%
2015	451,266	142,609	593,875	24%
2016	228,857	176,527	405,384	44%
2017	436,042	166,671	602,713	28%

Table 3. Commercial landings (pounds) of weakfish by state, 2000-2017 (Source: ACCSP for 2016 and earlier and state compliance reports for 2017, except as noted below). Starred values are confidential.

Year	MA	RI	CT	NY	NJ	DE	MD	PRFC	VA	NC	SC	GA	FL	Total
2000	527	189,362	7,920	352,832	1,071,428	*	200,299	68,574	1,302,271	1,869,044			448	5,062,705
2001	231	109,568	6,774	578,797	837,550	*	181,188	44,219	1,082,369	1,960,324		*	1,201	4,802,221
2002	842	122,781	10,223	513,977	863,088	*	108,318	57,818	1,089,323	1,828,150	42		394	4,594,956
2003	519	63,337	*	144,416	340,269	*	46,427	5,273	455,094	848,822		*	288	1,999,040
2004	59	34,209	6,206	150,046	204,585	51,276	55,100	1,986	349,395	685,463	*	*	192	1,538,517
2005	2,840	41,558	6,118	90,238	208,232	70,669	35,527	1,004	385,584	421,779		*	553	1,264,102
2006	*	47,474	7,012	152,922	236,521	34,434	51,081	689	187,849	363,078		*	337	1,081,396
2007	*	20,586	1,910	86,723	164,506	24,579	22,284	20	403,873	175,589			888	900,958
2008	73	9,703	1,024	42,621	57,013	11,186	6,364	74	165,223	162,516		*	996	456,793
2009	*	6,286	506	101,561	30,196	*	5,230	17	65,589	163,146			453	372,985
2010	58	5,400	960	13,102	12,053	*	2,930	80	61,651	106,319			73	202,626
2011	615	5,766	2,105	17,136	13,324	*	646	45	26,119	65,897		*	608	132,261
2012	616	17,908	4,723	63,119	19,291	*	2,078	98	45,551	91,383			1,999	246,765
2013	3,400	31,826	5,960	108,656	14,829	*	3,344	24	54,607	120,188		*	1,065	343,899
2014	918	15,583	3,343	33,303	8,415	*	2,126	10	22,508	105,246			557	192,009
2015	473	6,327	1,666	24,238	9,655	*	1,394	3	17,882	80,230			741	142,609
2016	882	12,022	2,731	30,703	6,596	*	914		42,419	79,640	0	0	621	176,527
2017	2,175	17,243	3,956	27,731	*	1,334	760	5	26,347	85,440	0	0	1,680	166,671

N**otes:** FL: state-reported landings (NMFS-reported landings limited to Nassau and Duval Counties and adjusted on the basis of the genome proportions of weakfish within the Cynoscion-complex in those counties' waters). VA: ACCSP-reported landings minus the PRFC-reported harvest landed in VA for 2016 and earlier; state-reported landings minus the PRFC-reported harvest landed in VA for 2017. PRFC: agency-reported landings (fish caught in Potomac River and landed in MD and VA). MD: ACCSP-reported landings minus the PRFC-reported harvest landed in MD for 2016 and earlier; state-reported landings minus the PRFC-reported harvest landed in MD for 2017.

Table 4. Recreational landings (pounds) of weakfish by state, 2000-2017 (Source: MRIP FES-calibrated estimates, except as noted below).

Year	MA	RI	CT	NY	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2000		5,532	66,881	287,367	4,783,294	1,116,710	1,193,891	732,768	179,599	12,931	12,068	2,943	8,393,984
2001		28,607	5,227	226,328	2,253,931	269,108	925,019	645,708	325,447		6,319	1,322	4,687,016
2002		20,066	33,399	145,900	2,499,634	437,650	393,128	515,434	215,402	51,424	2,614	1,577	4,316,228
2003	2,444	4,716	6,755	83,971	940,448	154,933	180,700	250,558	309,412	9,937	2,341	580	1,946,795
2004		0	0	116,570	509,032	11,164	53,937	791,329	428,627	295,781	16,151	937	2,223,528
2005		81,034		408	1,859,330	58,485	50,713	47,412	281,710	187,324	12,920	1,565	2,580,901
2006		55,665		109,822	1,220,494	46,096	768	69,978	302,775	3,959	3,599	1,520	1,814,676
2007		0		7,790	635,442	4,761	26,953	259,522	202,583	49,541	7,633	8,446	1,202,671
2008				100,594	658,574	11,123	3,543	46,378	209,470	33,200	10,408	1,197	1,074,487
2009				0	51,251	16,812	5,611	71,511	245,358	22,740	14,449	1,952	429,684
2010	0			6,526	8,435	121	6,476	11,416	103,903	29,554	6,466	455	173,352
2011				164	6,845	27	241	14,185	62,543	17,028	1,191	530	102,754
2012				43,385	373,328	11,621	42,885	51,999	95,952	45,528	6,265	668	671,631
2013		4,063		85,934	226,756	21,522	7,539	4,657	66,720	45,031	3,771	937	466,930
2014			0	14,916	61,426	7,118	2,808	26,220	70,988	28,773	5,570	762	218,581
2015				5,852	53,485	2,293	68,225	66,528	157,269	96,416	1,096	102	451,266
2016	571		4,240	29,573	26,616	3,601	1,947	44,242	83,702	29,448	4,264	653	228,857
2017	3,108	0	0	20,962	225,225	2,385	5,926	15,649	55,944	58,510	47,776	557	436,042

Notes: FL: state-reported landings 1983-present (NMFS-reported, FES-calibrated estimates limited to Nassau and Duval Counties and adjusted on the basis of the genome proportions of weakfish within the Cynoscion-complex found in those counties' waters.

Table 5. Recreational landings (numbers) of weakfish by state, 2000-2017 (Source: MRIP FES-calibrated estimates, except as noted below).

Year	MA	RI	CT	NY	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2000		3,086	14,699	82,577	1,597,735	477,368	743,823	348,774	147,397	11,335	14,201	3,276	3,444,271
2001		5,393	765	46,457	1,271,032	112,581	496,617	299,300	317,974		6,619	1,542	2,558,280
2002		4,134	4,312	46,635	1,012,299	201,345	219,223	297,768	214,040	85,133	2,598	1,842	2,089,329
2003	318	540	774	17,012	305,550	44,322	175,974	112,349	291,168	12,760	2,923	774	964,464
2004		0	0	31,764	320,078	10,496	39,093	462,198	395,268	539,811	13,178	1,114	1,813,000
2005		9,673		242	1,657,442	36,263	59,293	68,103	297,605	273,231	11,505	1,539	2,414,896
2006		4,764		13,620	1,036,819	18,683	763	55,368	343,092	5,936	5,137	1,578	1,485,760
2007		0		4,880	394,338	4,895	13,183	174,463	191,192	77,822	8,294	961	870,028
2008				59,151	536,830	10,086	3,220	49,829	203,779	46,853	11,187	1,470	922,405
2009				0	23,217	9,417	9,655	59,169	204,814	28,583	27,325	2,028	364,208
2010	0			7,894	3,943	144	12,532	12,745	110,770	33,968	6,752	589	189,337
2011				106	8,393	34	284	18,999	48,727	17,834	1,796	471	96,644
2012				12,895	276,856	11,077	38,598	46,275	96,947	51,947	7,436	988	543,019
2013		737		20,659	89,805	16,325	3,736	4,336	63,090	28,117	4,407	2,086	233,298
2014			0	1,838	16,146	6,624	1,542	32,380	71,912	24,733	7,896	905	163,976
2015				2,123	73,062	1,511	12,567	10,286	143,543	74,085	1,673	143	318,993
2016	327		1,601	4,626	12,344	1,440	2,100	37,664	77,341	22,843	5,328	1,251	166,865
2017	1,880	0	0	16,534	78,831	1,365	9,175	14,405	51,795	45,836	55,471	848	276,140

Notes: FL: state-reported landings 1983-present (NMFS-reported, FES-calibrated estimates limited to Nassau and Duval Counties and adjusted on the basis of the genome proportions of weakfish within the Cynoscion-complex found in those counties' waters).

Table 6. Recreational releases (numbers) of weakfish by state, 2000-2016 (Source: MRIP FES-calibrated estimates, except as noted below).

Year	MA	RI	CT	NY	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2000		2,347	3,475	156,756	2,179,903	752,695	1,869,740	1,426,215	751,197	41,740	41,705	5,551	7,231,324
2001		721	0	172,938	1,819,337	355,303	1,040,416	1,156,622	2,363,650		28,483	2,541	6,940,011
2002		3,865	0	284,942	872,703	174,843	563,215	2,027,187	793,989	9,082	23,782	2,113	4,755,721
2003	0	0	5,022	11,624	1,746,615	77,404	698,889	815,442	313,626	2,110	29,588	2,556	3,702,876
2004		355	17,591	114,926	752,199	123,960	498,052	1,487,334	443,048	198,217	20,562	3,395	3,659,639
2005		0		136,640	2,204,518	203,543	121,069	617,330	416,023	112,246	82,671	2,007	3,896,047
2006		0		42,308	2,733,503	202,726	100,299	824,155	855,488	35,082	13,727	5,132	4,812,420
2007		2,185		372,675	1,085,227	46,461	123,815	366,773	355,375	105,524	46,784	949	2,505,768
2008				59,763	3,708,364	152,662	86,259	634,046	236,165	370,319	31,492	711	5,279,781
2009				6,702	205,284	10,106	29,705	168,214	494,626	112,183	29,232	285	1,056,337
2010	1,853			6,799	240,108	42,070	417,219	532,657	739,955	123,236	18,048	38	2,121,983
2011				118,616	288,439	13,584	50,974	743,528	374,910	19,138	21,044	520	1,630,753
2012				29,613	1,383,894	212,573	72,092	273,507	381,441	332,241	85,553	0	2,770,914
2013		32,344		18,652	330,665	51,611	19,847	205,203	252,362	23,534	21,012	561	955,791
2014			724	794	193,962	55,077	27,392	374,944	1,067,230	568,787	7,640	614	2,297,164
2015				14,459	598,126	33,522	340,850	232,363	1,608,036	215,117	48,052	0	3,090,525
2016	4,130		1,932	8,767	278,043	62,864	161,159	1,467,470	1,091,422	118,374	16,152	0	3,210,313
2017	557	0	791	138,156	146,036	38,219	41,674	454,456	351,433	186,547	95,061	0	1,452,930

Notes: FL: state-reported landings 1983-present (NMFS-reported, FES-calibrated estimates limited to Nassau and Duval Counties and adjusted on the basis of the genome proportions of weakfish within the Cynoscion-complex found in those counties' waters).

Table 7. Indices of relative weakfish abundance from 2000 to 2017. (Source: State compliance reports)

Year	MA Tr BB & VS YOY	MA Tr BB & VS 1+	RI Tr Coast YOY	CT Tr LIS YOY	CT Tr LIS 1+	NY Tr Coast YOY	NJ Tr DE Bay YOY	NJ Tr Ocean 1+	DE Tr DE Bay YOY	DE Tr Inland YOY	DE Tr DE Bay 1+
	mean#/ tow	mean#/ tow	mean #/ tow	GM#/ tow	GM#/ tow	AM#/ tow	GM#/ tow	GM#/ tow	GM#/ tow	GM#/ tow	#/ nm
2000			9.38	63.31	0.30	167.10	0.59	2.36	14.14	1.64	179.12
2001			19.33	40.09	0.52	113.70	15.03	0.68	7.56	1.53	80.70
2002			8.40	41.35	0.16	145.20	19.70	1.59	5.96	1.31	144.98
2003			198.00	49.41	0.07	69.80	3.11	0.08	10.44	2.44	65.78
2004			1.88	58.98	0.21	43.90	8.48	1.79	8.39	3.32	48.88
2005			128.93	25.86	0.12	226.50	20.60	0.46	16.82	3.84	29.00
2006			0.36	1.05	0.29	55.10	12.24	0.19	5.35	1.60	106.31
2007			36.10	63.93	0.06	92.12	25.53	0.83	13.70	2.98	43.16
2008			0.55	9.07	0.08	51.50	7.86	0.35	6.74	1.02	45.94
2009			7.29	6.48	0.30	13.30	7.29	0.33	8.56	5.91	35.83
2010			7.95	-	-	15.30	10.51	0.69	11.98	3.49	43.57
2011			70.63	11.64	0.68	34.50	15.80	22.32	7.89	3.30	89.22
2012			122.30	21.96	0.73	9.40	1.26	0.23	7.55	3.44	106.43
2013			13.20	7.01	0.52	22.60	15.55	0.39	13.49	4.47	71.78
2014			1.27	41.53	0.08	97.70	4.87	0.98	13.67	4.71	38.01
2015	0.21		46.47	30.91	0.46	56.00	2.27	1.44	10.22	3.88	76.46
2016	23.00	0.29	4.14	5.87	0.81	57.60	2.34	1.34	7.47	3.00	154.40
2017	0.30	0.00	32.25	8.20	0.43	59.20	4.13	3.74	5.18	1.44	101.98

Table 7 (continued). Indices of relative weakfish abundance from 2000 to 2017. (Source: State compliance reports)

Year	MD Tr ChesBay YOY	MD Tr Coast YOY	VA Tr ChesBay YOY	NC Tr Pamlico YOY	NC Tr Pamlico YOY	NC Gn Pamlico 1+	SC Tr Inshore YOY	SC SEAMAP Summer 0+/1+	SC SEAMAP Fall 0+/1+	GA Tr Coast 0+	FL Tr Jax YOY	FL Tr IR & Jax 1+
	GM#/ tow	GM#/ ha	GM#/ tow	#/ tow	#/ tow	#/ set	#/ tow	#/ tow	#/ tow	#/ obs hr	med/ tow	med/ tow
2000	6.54	2.34	8.35	62.99				20.30	5.10			
2001	8.10	2.56	5.09	30.30		1.42		19.20	5.40		0.79	0.23
2002	3.92	0.61	6.93	22.00		1.40		16.20	2.80		1.45	0.52
2003	4.89	5.64	9.23	23.93		1.22		14.20	3.90	105.44	4.35	0.34
2004	1.62	3.39	6.66	28.75		1.32		3.10	3.40	94.42	4.04	0.19
2005	3.55	4.98	5.69	28.76		1.24		1.80	9.40	32.08	1.83	0.73
2006	2.41	1.50	6.34	39.09		0.92		4.10	3.10	79.96	1.78	0.44
2007	1.60	2.32	5.35	56.80		0.43		11.40	18.40	159.64	1.68	0.46
2008	0.79	0.23	5.77	50.30		0.49		11.30	17.70	75.55	1.66	0.39
2009	1.42	1.33	6.18	58.89		0.31		15.30	11.90	104.76	2.12	1.17
2010	1.68	2.16	14.11	32.45		0.48		14.80	14.60	128.48	0.74	0.70
2011	2.04	1.90	5.23	33.69		0.36		74.10	13.90	104.20	0.74	0.52
2012	0.46	0.46	3.02	40.66		0.92		18.80	9.80	91.64	1.79	0.65
2013	2.15	1.02	9.41	58.53		0.69		25.50	0.20	131.52	0.69	0.12
2014	2.95	1.28	3.77	32.83		0.50		12.00	7.60	64.16	0.62	0.19
2015	2.23	0.88	3.77	43.30		0.30	19.30	18.20	257.80	89.84	1.08	0.03
2016	0.71	1.69	1.44	43.00	34.50	0.30	22.60	14.50	24.30	62.40	0.69	0.21
2017	0.65	0.54		41.90	19.10	0.31	26.60	1.46	5.73	44.30	0.49	0.27

Table 8. Evaluation of the Coastwide Management Trigger (Section 3.3.1 of Addendum II to Amendment 4): percent change of each state's 2017 total landings (lbs) to its five-year (2013-2017) mean total landings.

	MA	RI	CT	NY	NJ	DE	MD	PRFC	VA	NC	SC	GA	FL
2013-2017	2,305	17,413	4,379	76,373	127,776	11,774	19,009	11	64,212	181,073	51,636	12,503	1,535
2017	5,283	17,243	3,956	48,693	231,100	3,719	6,686	5	41,996	141,384	58,510	47,776	2,237
% change	129%	-1%	-10%	-36%	81%	-68%	-65%	-52%	-35%	-22%	13%	282%	46%

Table 9. Biological sampling of weakfish in 2017, Massachusetts-Florida (Sampling requirements are based on Addendum I to Amendment 4 and 2017 landings data and are reported in state compliance reports. Requirements are based on recreational harvest estimates using the CHTS. Values highlighted with red bold font do not meet sampling requirements).

	Samples Required		Samples Completed		Fisheries Sampled
	Ages	Lengths	Ages	Lengths	
MA*	0	0	0	0	NA
RI	16	33	68	248	commercial, RIDFW Trawl Survey (legal/non-legal size reported)
CT*	0	0	0	0	NA
NY	42	84	48	**48**	commercial
NJ	27	18	57	116	NJ Ocean Trawl Survey/ research surveys
DE	8	14	15	16	commercial (GN)
MD	2	2	27	27	commercial (PN)
PRFC	0	0	0	0	NA
VA	74	115	253	2,813	commercial (GN, H&L, PN, HS)
NC	156	217	359	1,248	commercial (SN, GN, PN, HS, others), recreational
SC	12	0	107	727	fishery independent, recreational
GA*	0	0	0	0	NA
FL*	0	0	0	0	NA

* *de minimis* in 2017; not required to conduct sampling; sample numbers provided to show from what states were exempt
NA=not applicable, GN= gill net, PN=pound net, H&L=hook and line, HS=haul seine, SN=sink net

XI. Figures

Figure 1. Estimated weakfish age 1+ biomass, fishing mortality, and natural mortality from 1982 to 2014 (ASMFC 2016).

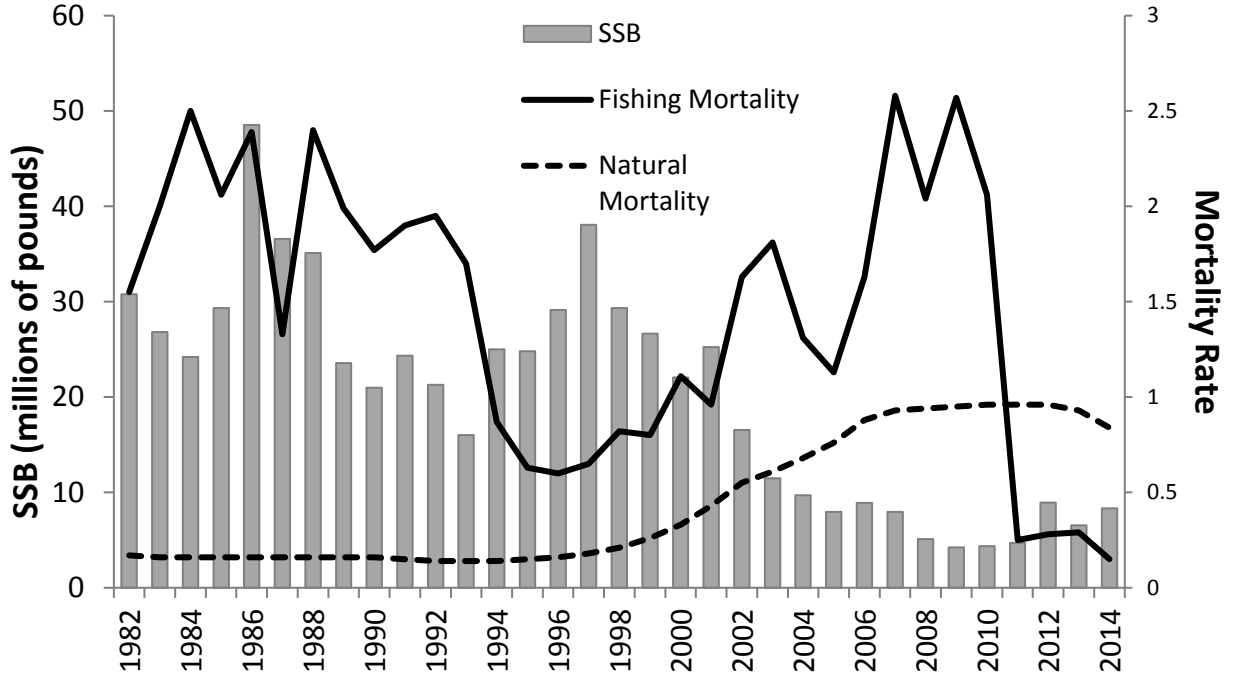


Figure 2. Recreational harvest estimated using the Coastal Household Telephone Survey (CHTS) and the mail-based Fishing Effort Survey (FES). (Source: personal communication with NOAA Fisheries, Fisheries Statistics Division. [10/06/2018])

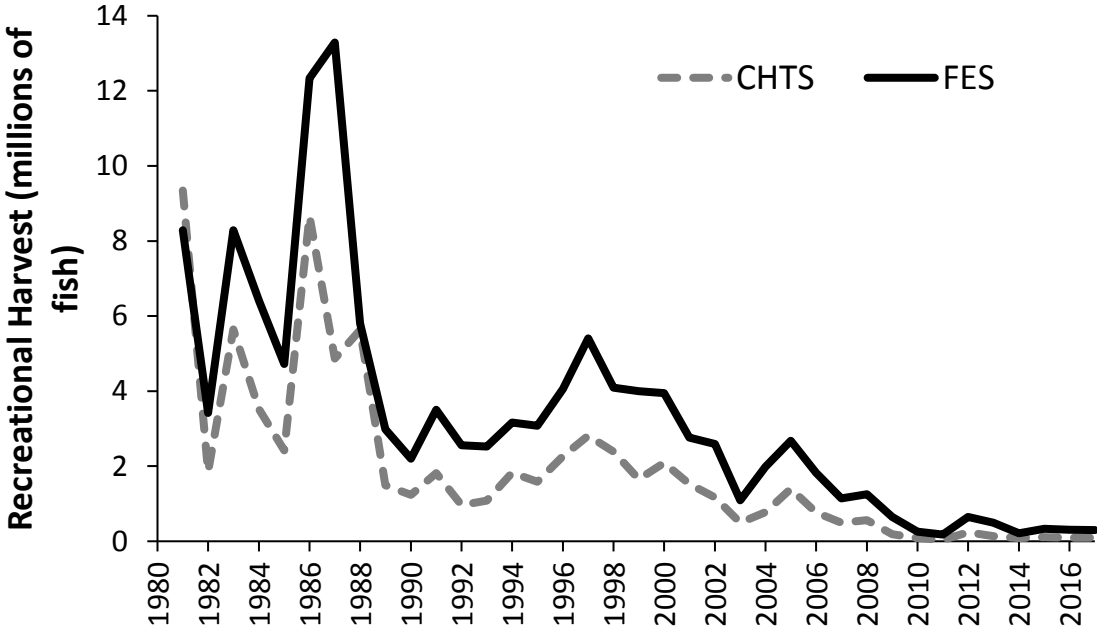


Figure 3. Commercial and recreational weakfish harvest (pounds), from 1982 to 2017 (see Tables 3 and 4 for source information and values).

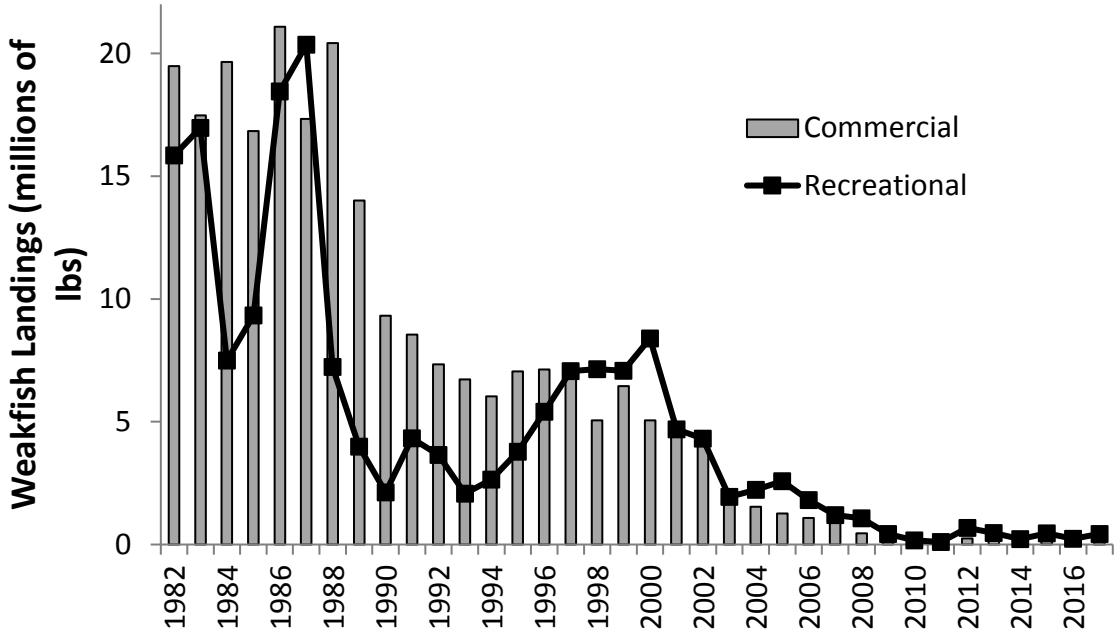
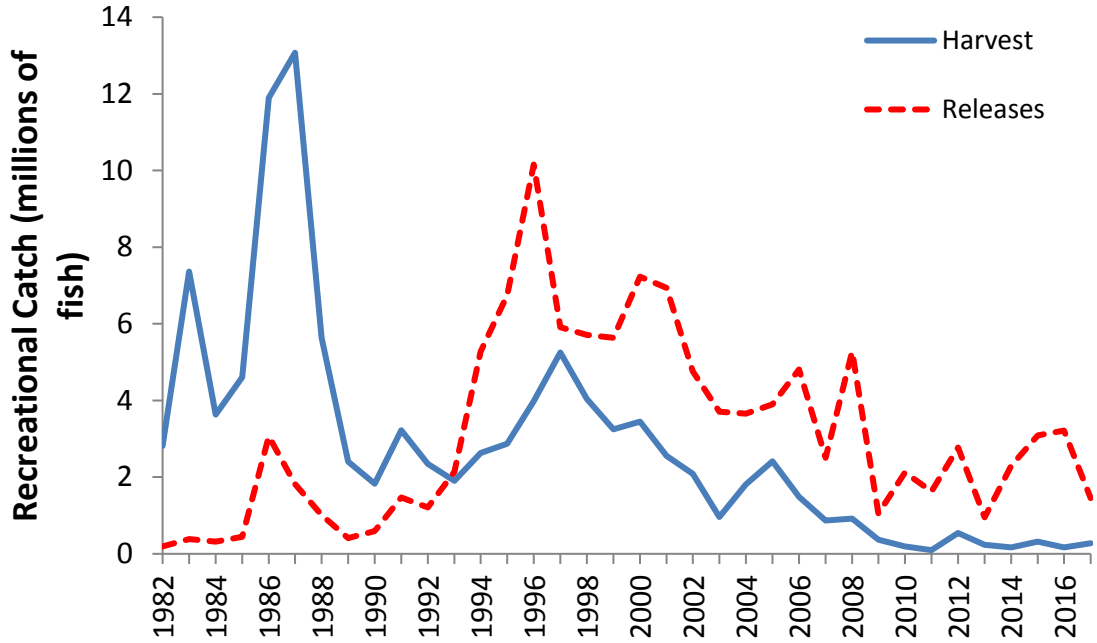


Figure 4. Recreational weakfish harvest and releases (number of fish), from 1982 to 2017 (see Tables 5 and 6 for source information and values).



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

HORSESHOE CRAB

(*Limulus polyphemus)*

2017 Fishing Year

Horseshoe Crab Plan Review Team:

Dr. Mike Schmidtke, Chair, Atlantic States Marine Fisheries Commission

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I. Status of the Fishery Management Plan

Date of FMP Approval:	December 1998
Amendments	None
Addenda	Addendum I (April 2000) Addendum II (May 2001) Addendum III (May 2004) Addendum IV (June 2006) Addendum V (September 2008) Addendum VI (August 2010) Addendum VII (February 2012)
Management Unit:	Entire coastwide distribution of the resource from the estuaries eastward to the inshore boundary of the EEZ
States With Declared Interest:	Massachusetts - Florida
Active Boards/Committees:	Horseshoe Crab Management Board, Advisory Panel, Technical Committee, and Plan Review Team; Delaware Bay Ecosystem Technical Committee

a) Goals and Objectives

The Interstate Fishery Management Plan for Horseshoe Crabs (FMP) established the following goals and objectives.

2.0. Goals and Objectives

The goal of this Plan is to conserve and protect the horseshoe crab resource to maintain sustainable levels of spawning stock biomass to ensure its continued role in the ecology of the coastal ecosystem, while providing for continued use over time. Specifically, the goal includes management of horseshoe crab populations for continued use by:

1) *current and future generations of the fishing and non-fishing public (including the biomedical industry, scientific and educational research);*
2) *migrating shorebirds; and,*
3) *other dependent fish and wildlife, including federally listed (threatened) sea turtles.*

To achieve this goal, the following objectives must be met:

(a) prevent overfishing and establish a sustainable population;

(b) achieve compatible and equitable management measures among jurisdictions throughout the fishery management unit;

(c) establish the appropriate target mortality rates that prevent overfishing and maintain adequate spawning stocks to supply the needs of migratory shorebirds;

(d) coordinate and promote cooperative interstate research, monitoring, and law enforcement;

(e) identify and protect, to the extent practicable, critical habitats and environmental factors that limit long-term productivity of horseshoe crabs;

(f) adopt and promote standards of environmental quality necessary for the long-term maintenance and productivity of horseshoe crabs throughout their range; and,

(g) establish standards and procedures for implementing the Plan and criteria for determining compliance with Plan provisions.

b) Fishery Management Plan Summary

The framework for managing horseshoe crabs along the Atlantic coast was approved in October 1998 with the adoption of the Interstate Fishery Management Plan for Horseshoe Crabs (FMP). The goal of this plan is to conserve and protect the horseshoe crab resource to maintain sustainable levels of spawning stock biomass to ensure its continued role in the ecology of coastal ecosystems, while providing for continued use over time.

In 2000, the Horseshoe Crab Management Board approved Addendum I to the FMP. Addendum I established a state-by-state cap on horseshoe crab bait landings at 25 percent below the reference period landings (RPL's), and *de minimis* criteria for those states with a limited horseshoe crab fishery. Those states with more restrictive harvest levels (Maryland and New Jersey) were encouraged to maintain those restrictions to provide further protection to the Delaware Bay horseshoe crab population, recognizing its importance to migratory shorebirds. Addendum I also recommended that the National Marine Fisheries Service (NMFS) prohibit the harvest of horseshoe crabs in federal waters (3-200 miles offshore) within a 30 nautical mile radius of the mouth of Delaware Bay, as well as prohibit the transfer of horseshoe crabs in federal waters. A horseshoe crab reserve was established on March 7, 2001 by NMFS in the area recommended by ASMFC. This area is now known as the Carl N. Shuster Jr. Horseshoe Crab Reserve.

In 2001, the Horseshoe Crab Management Board approved Addendum II to the FMP. The purpose of Addendum II was to provide for the voluntary transfer of harvest quotas between states to alleviate concerns over potential bait shortages on a biologically responsible basis. Voluntary quota transfers require Technical Committee review and Management Board approval.

In 2004, the Board approved Addendum III to the FMP. The addendum sought to further the conservation of horseshoe crab and migratory shorebird populations in and around the Delaware Bay. It reduced harvest quotas and implemented seasonal bait harvest closures in New Jersey, Delaware, and Maryland, and revised monitoring components for all jurisdictions.

Addendum IV was approved in 2006. It further limited bait harvest in New Jersey and Delaware to 100,000 crabs (male only) and required a delayed harvest in Maryland and Virginia. Addendum V, adopted in 2008, extends the provisions of Addendum IV through October 31, 2010. In early 2010, the Board initiated Draft Addendum VI to consider management options

that would follow expiration of Addendum V. The Board voted in August 2010 to extend the Addendum V provisions, via Addendum VI, through April 30, 2013. The Board also chose to include language, allowing them to replace Addendum VI with another Addendum during that time, in anticipation of implementing an adaptive resource management (ARM) framework.

The Board approved Addendum VII in February 2012. This addendum implemented an ARM framework for use during the 2013 fishing season. The framework considers the abundance levels of horseshoe crabs and shorebirds in determining the optimized bait harvest level for the Delaware Bay states of New Jersey, Delaware, Maryland, and Virginia (east of the COLREGS).

II. Status of the Stock and Assessment Advice

No definitions for overfishing or overfished status have been adopted by the Management Board. However, the majority of evidence in the most recent stock assessment, the 2013 Stock Assessment Update (available at http://www.asmfc.org/species/horseshoe-crab#stock), indicates abundance has increased in the Southeast region. In the Delaware Bay Region, increasing trends were most evident in juvenile indices, followed by indices of adult males. Over the time series of the survey, no trend in the abundance of female crabs is evident.

In contrast, continued declines in abundance were evident in the New York and New England regions. Decreased harvest quotas in Delaware Bay have potentially redirected harvest to nearby regions. Current harvest within the New England and New York Regions may not be sustainable. Continued precautionary management is therefore recommended coastwide to anticipate effects of redirecting harvest from Delaware Bay to outlying populations.

A benchmark stock assessment is in progress and scheduled for completion in 2019. New components of this assessment include data on mortality resulting from biomedical use of horseshoe crabs and a catch-survey analysis model for the Delaware Bay region, based on population estimates derived primarily from the Virginia Tech Horseshoe Crab Trawl Survey (VT Survey).

III. Status of the Fishery

Bait Fishery

For most states, the bait fishery is open year round. However, because of seasonal horseshoe crab movements (to the beaches in the spring; deeper waters and offshore in the winter), the fishery operates at different times. New Jersey has prohibited commercial harvest of horseshoe crabs in state waters since 2006. State waters of Delaware are closed to horseshoe crab harvest and landing from January 1st through June 7th each year, and other state horseshoe crab fisheries are regulated with various seasonal/area closures.

Reported coastwide bait landings in 2017 remained well below the coastwide quota (Table 1, Figure 1). Bait landings increased 26% from the previous year, due primarily to landings increases in Maryland (43% increase from 2017), Delaware (26%), Massachusetts (33%), and

Virginia (20%). North Carolina harvested 1,125 crabs over their 24,036 crab quota, and received a 1,200 crab quota transfer from Georgia, approved in March 2018. Delaware harvested 38,996 crabs above their quota over a two-week period in 2017, and will reduce their quota for 2019 to 123,140 male crabs.

Table 1. Reported commercial horseshoe crab bait landings by jurisdiction.

Jurisdiction	ASMFC Quota 2017	State Quota 2017	2017	2016	2015	2014	2013
MA	330,377	165,000	134,707	101,642	108,054	106,645	128,774
RI	26,053	8,398	3,358	20,917	6,255	13,319	18,030
CT	48,689	48,689	19,778	12,135	19,632	20,634	21,503
NY	366,272	150,000	195,717	176,632	145,324	134,370	169,739
NJ*	162,136	0	0	0	0	0	0
DE*	162,136	162,136	201,132	159,545	151,262	168,044	163,582
MD*	255,980	255,980	224,832	157,013	27,494	148,269	240,688
PRFC	0	-	0	0	0	0	0
DC	0	-	0	0	0	0	0
VA**	172,828	172,828	160,331	133,453	102,235	145,266	156,761
NC***	24,036	25,236	25,161	25,197	24,948	21,196	26,559
SC	0	0	0	0	0	0	0
GA	29,312	28,112	0	0	0	0	5,745
FL****	9,455	9,455	1,394	689	264	2,046	0
TOTAL	1,587,274	1,028,280	994,491	787,223	585,468	759,789	931,381

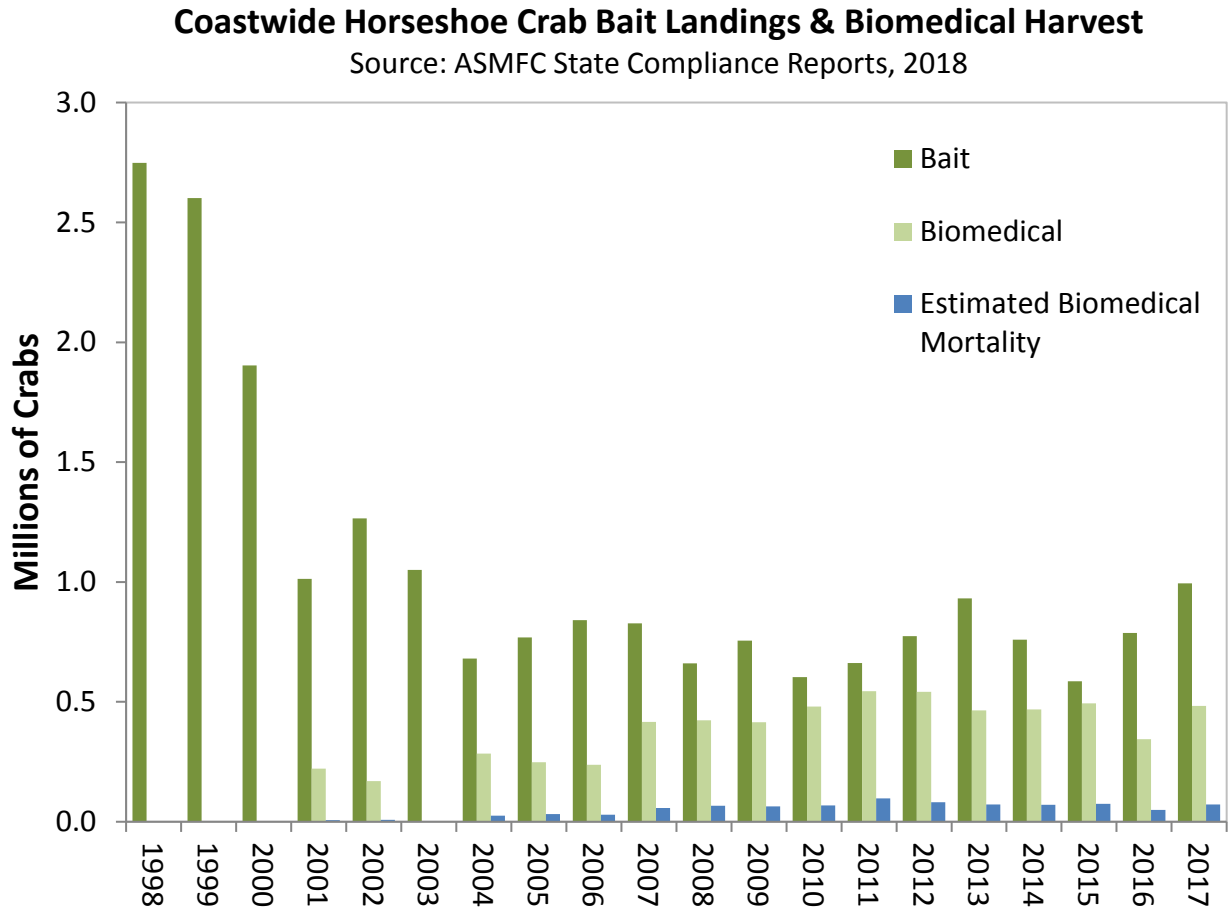
***Male-only harvest**

****Virginia harvest east of the COLREGS line is limited to 81,331 male-only crabs under the ARM harvest package #3. Virginia data shown are preliminary. Virginia harvest east of the COLREGS in 2017 was 52,657 crabs. The total above represents harvest on both sides of the COLREGS line.**

*****A quota transfer of 1,200 crabs from Georgia to North Carolina was approved in March 2018 to cover their quota overage of 1,125 horseshoe crabs in 2017.**

******Bait landings do not include 976 marine life landings in 2017.**

Figure 1: Number of horseshoe crabs harvested for bait and biomedical purposes, 1998-2017.



*** Biomedical collection numbers, which are annually reported to the Commission, include all horseshoe crabs brought to bleeding facilities except those that were harvested as bait and counted against state quotas.**

*** Most of the biomedical crabs collected are returned to the water after bleeding; a 15% mortality rate is assumed for all bled crabs that are released. This number plus observed mortality reported annually by bleeding facilities via state compliance reports is noted in the above graph as 'Estimated Biomedical Mortality.'**

Reported coastwide landings since 1998 show more male than female horseshoe crabs were harvested annually. Several states presently have sex-specific restrictions in place which limit or ban the harvest of females. The American eel pot fishery prefers egg-laden female horseshoe crabs as bait, while the whelk (conch) pot fishery is less dependent on females. States with greater than 5% of coastal landings are required to report sex for at least a portion of their bait harvest, and within these states, 7.5% of landings were unclassified.

The hand, trawl, and dredge fisheries typically account for the majority of reported commercial horseshoe crab bait landings. Other methods that account for the remainder of the harvest include gill nets, pound nets, and traps.

Biomedical Use

The horseshoe crab is an important resource for research and manufacture of materials used for human health. There are five companies along the Atlantic Coast that process horseshoe crab blood for use in manufacturing Limulus Amebocyte Lysate (LAL): Associates of Cape Cod, Massachusetts; Lonza (formerly Cambrex Bioscience), Limuli Laboratories, New Jersey; Wako Chemicals, Virginia; and Charles River Endosafe, South Carolina. Addendum III requires states where horseshoe crabs are collected for biomedical bleeding to collect and report total collection numbers, crabs rejected, crabs bled (by sex) and to characterize mortality.

The Plan Review Team annually calculates total coastwide collections and estimates mortality associated with biomedical use. In 2017, 575,760 crabs (including crabs harvested as bait) coastwide were brought to biomedical companies for bleeding (Table 2). This represents an increase from the average of the previous five years (534,477 crabs). Of this total, 95,231 crabs were reported as harvested for bait and counted against state quotas, representing a 33% increase from the average of the previous five years (Table 2: row B). These crabs were not included in the mortality estimates (Rows D, F, and G) below. In 2017, 483,245 crabs were collected solely for biomedical use. Males accounted for 55% of total biomedical collections, females comprised 34%, and 11% of collections were of unknown sex. Crabs were rejected prior to bleeding due to mortality, injuries, slow movement, and size (mortality observed while crabs were going through the biomedical process is included in Row D below). Approximately 1% of crabs collected solely for biomedical purposes were observed and reported as dead from the time of collection up to the point of bleeding. Several studies have investigated mortality rates attributable to the biomedical collection and bleeding process after release, with a wide range of estimated values. An approximate midpoint of these values, 15%, is applied to bled individuals to estimate post-bleeding mortality and added to the number of crabs reported as dead during the process to estimate total biomedical mortality. The currently assumed mortality rate is being further evaluated by the ongoing benchmark stock assessment. Total mortality of biomedical crabs for 2017 was estimated as 72,674 crabs. This represents approximately 7% of coastwide removals from both bait and biomedical uses of horseshoe crabs.

Table 2. Numbers of horseshoe crabs collected, bled, and estimated mortality for the biomedical industry.

	2013	*2014*	*2015*	*2016**	*2017*
A. Number of crabs brought to biomedical facilities (bait and biomedical crabs)	525,667	534,702	563,631	426,286	575,760
B. Number of bait crabs bled	61,297	67,143	69,731	77,946	95,231
C. Number of biomedical-only crabs collected (not counted against state bait quotas)	464,657	467,897	494,123	344,495	483,245
D. Reported observed mortality of biomedical-only crabs from collection to release	5,447	5,658	5,362	1,004	6,057
E. Number of biomedical-only crabs bled	440,402	432,340	464,506	318,523	444,115
F. Estimated post-bleeding mortality of bled biomedical-only crabs (15% est. mortality)	66,060	64,851	69,676	47,778	66,617
G. Total estimated mortality on biomedical crabs not counted against state bait quotas (15% est. mortality)	71,507	70,509	75,038	48,782	72,674

***Some biomedical collections were reduced in 2016 due to temporary changes in production.**

The 1998 FMP establishes a mortality threshold of 57,500 crabs that, if exceeded, requires the Board to consider management action. Based on an estimated total mortality of 72,674 crabs, this threshold was exceeded in 2017. The PRT notes that estimated mortality from biomedical use is approximately 7% of the total horseshoe crab mortality (bait and biomedical) coastwide for 2016, up from approximately 6% in 2015 but below the previous 5-year average of 8%. Biomedical mortality is being incorporated into the ongoing benchmark stock assessment.

IV. Status of Research and Monitoring

The Horseshoe Crab FMP set forth an ambitious research and monitoring strategy in 1999 and again in 2004 to facilitate future management decisions. Despite limited time and funding there are many accomplishments since 1999. These accomplishments were largely made possible by forming partnerships between state, federal and private organizations, and the support of hundreds of public volunteers.

Addendum III Monitoring Program

Addendum III requires affected states to carry out three monitoring components:

All states who do not qualify for *de minimis* status report monthly harvest numbers and subsample a portion of the catch for sex and harvest method. In addition, those states with annual landings above 5% of the coastwide harvest report all landings by sex and harvest method. Although states with annual landings less than 5% of annual coastwide harvest are not required to report landings by sex, the PRT recommends all states require gender reporting for horseshoe crab harvest.

States with biomedical collections are required to monitor and report collection numbers and mortality associated with the transportation and bleeding of the crabs.

States must identify spawning and nursery habitat along their coasts. All states have completed this requirement, and a few continue active monitoring programs**.**

Virginia Tech Research Projects

The Virginia Tech Horseshoe Crab Trawl Survey (VT Survey) was not conducted in 2013 - 2015, due to a lack of funding, but was conducted in 2016 and 2017, and is in progress for 2018. The 2017 survey results indicate increases in mature females (to the highest level since the survey began) but decreases to immature, newly mature, mature male, and overall population levels from 2016. No long-term trends in abundance of immature, newly mature, or mature female crabs are evident, but mature male crabs have shown an increasing trend across the time series (2002-2017). The Adaptive Resource Management (ARM) Working Group will use the indices from this survey to estimate horseshoe crab abundance for the ARM model, which specifies harvest limits for the upcoming year. The VT Survey for 2018 is currently in progress and is funded for 2019. Funding sources beyond 2019 continue to be explored.

Spawning Surveys

The redesigned Delaware Bay spawning survey was completed for the 19th year in 2017. No trend was detected in the baywide indices of spawning activity (both male and female) for the time series. No trends were detected in male spawning activity for Delaware or New Jersey. A significant decrease in female spawning activity was detected for Delaware, but no trend was detected for female activity in New Jersey. Female spawning activity in 2017 peaked between June 7 and June 11, later than the timeframe of previous years. The annual baywide sex ratio was 5.2:1 (Male: Female) equaling the highest ratio in the time series. The range of annual observed sex ratios on the Delaware Bay spawning beaches over the time series has ranged as low as 3.1:1.

Tagging Studies

The USFWS continues to maintain a toll-free telephone number as well as a website for reporting horseshoe crab tag returns and assists interested parties in obtaining tags. Tagging work continues to be conducted by biomedical companies, research organizations, and other parties involved in outreach and spawning surveys. Beginning with the 2013 tagging season, additional efforts were implemented to ensure that current tagging programs are providing data that benefits the management of the coast-wide horseshoe crab population. All existing and new tagging programs are required to submit an annual application to be considered for the tagging program and all participants must submit an annual report along with their tagging and resight data to indicate how their tagging program addresses at least one of the following objectives: determine horseshoe crab sub-population structure, estimate horseshoe crab movement and migration rates, and/or estimate survival and mortality of horseshoe crabs. The PRT recommends all tagging programs approved by the states coordinate with the USFWS tagging program, in order to ensure a consistent coastwide program for providing management input.

Since 1999, over 300,000 crabs have been tagged and released through the USFWS tagging program along the Atlantic coast. Crabs have been tagged and released from every state on the Atlantic Coast from Florida to New Hampshire. In the early years of the program, tagging was centered around Delaware Bay; however, in recent years, tagging has expanded and increased in the Long Island Sound and Southeast. The Technical Committee noted that recapture rates inside and outside Delaware Bay are likely not directly comparable due to increased re-sighting effort and spawning concentration in Delaware Bay compared to other areas along the coast. There may be data in the USFWS tagging database to determine differences in effort and recapture rates. This tagging information is being incorporated into the ongoing benchmark stock assessment.

V. Status of Management Measures and Issues

ASMFC

Initial state-by-state harvest quotas were established through Addendum I. Addendum III outlined the monitoring requirements and recommendations for the states. Addendum IV set harvest closures and quotas, and other restrictions for New Jersey, Delaware, Maryland, and Virginia, which were continued in Addendums V and VI.

The Board approved Addendum VII, implementation of the ARM Framework, in February 2012 for implementation in 2013. Addendum VII includes an allocation mechanism to divide the Delaware Bay optimized harvest output from the ARM Framework among the four Delaware Bay states (New Jersey, Delaware, Maryland, and Virginia east of the COLREGS). Season closures and restrictions, present within Addendum VI, remain in effect as part of Addendum VII.

Included in this report are state-by-state charts outlining compliance and monitoring measures. The PRT recommends all jurisdictions were in compliance with the FMP and subsequent Addenda in 2017.

MASSACHUSETTS		
	2018 Compliance Report	**2019 Management Proposal**
***De minimis* status**	Did not qualify for *de miminis*	Does not qualify for *de miminis*
Bait Harvest Restrictions and Landings		
- ASMFC Quota (Voluntary State Quota)	330,377 (165,000)	330,377 (165,000)
- Other Restrictions	Bait: 300 crab daily limit year round; limited entry; Biomedical: 1,000 crab daily limit; Conch pot and eel fishermen: no possession limit All: May and June 5-day lunar closures; No mobile gear harvest Fri-Sat during summer flounder season; 7" PW minimum size; Pleasant Bay Closed Area	Bait: 300 crab daily limit year round; Biomedical: 1,000 crab daily limit; Conch pot and eel fishermen: no possession limit All: May and June 5-day lunar closures; No mobile gear harvest Fri-Sat during summer flounder season; 7" PW minimum size; Pleasant Bay Closed Area
- Landings	134,707	--
Monitoring Component A_1		
- Mandatory monthly reporting	Yes, plus weekly dealer reporting through SAFIS	Yes, plus weekly dealer reporting through SAFIS
- Characterize commercial bait fishery	Yes	Yes
Monitoring Component A_2		
- Biomedical harvest reporting	Yes	Yes
- Required information for biomedical use of crabs	Yes	Yes
Monitoring Component A_3 Identify spawning and nursery habitat	Yes	Yes
Monitoring Component B_1 Coastwide benthic trawl survey	Yes, VT Trawl Survey was conducted in 2017	Yes, VT Trawl Survey will be conducted in 2018 & 2019; future years and spatial scope unknown at this time
Monitoring Component B_2 Continue existing benthic sampling programs	Yes	Yes
Monitoring Component B_3 Implement spawning survey	Yes	Yes
Monitoring Component B_4 Tagging program	Yes – w/NPS and USFWS; Pleasant Bay, Monomy NWR, Waquoit Bay	Yes – w/NPS and USFWS; Pleasant Bay, Monomy NWR, Waquoit Bay

RHODE ISLAND		
	2018 Compliance Report	**2019 Management Proposal**
***De minimis* status**	Did not qualify for *de minimis*	Does not qualify for *de minimis*
Bait Harvest Restrictions and Landings		
- ASMFC Quota (Voluntary State Quota)	26,053 (8,398)	26,053 (8,398)
- Other Restrictions	State Restrictions: - Bait Fishery Closure: 48 hours prior to and 48 hours following new and full moons during May, June, and July - Biomedical Fishery Closure: 48 hours prior to and 48 hours following new and full moons during May, June, and July	State Restrictions: - Daily possession limit: 60 crabs per permit - Bait Fishery Closure: May 1-May 31 - Biomedical Fishery Closure: 48 hours prior to and 48 hours following new and full moons during May
- Landings	3,358	--
Monitoring Component A_1		
- Mandatory monthly reporting	Yes, weekly call in and monthly on paper	Yes, weekly call in and monthly on paper
- Characterize commercial bait fishery	Yes	Yes
Monitoring Component A_2		
- Biomedical harvest reporting	Yes	Yes
- Required information for biomedical use of crabs	Yes, details within Massachusetts' reports	Captured in Massachusetts' reports
Monitoring Component A_3 Identify spawning and nursery habitat	Yes	Yes
Monitoring Component B_1 Coastwide benthic trawl survey	Yes, VT Trawl Survey was conducted in 2017	Yes, VT Trawl Survey will be conducted in 2018 & 2019; future years and spatial scope unknown at this time
Monitoring Component B_2 Continue existing benthic sampling programs	Yes	Yes
Monitoring Component B_3 Implement spawning survey	Yes, since 2000 (methods unspecified)	Yes
Monitoring Component B_4 Tagging program	RI DEM 2001-2004 only, No current state program	No

CONNECTICUT		
	2018 Compliance Report	**2019 Management Proposal**
***De minimis* status**	Did not qualify for *de miminis*	Does not qualify for *de miminis*
Bait Harvest Restrictions and Landings		
- ASMFC Quota	48,689	48,689
- Other Restrictions	Limited entry program, possession limits, and seasonal and area closures	Limited entry program, possession limits, and seasonal and area closures
- Landings	19,778	--
Monitoring Component A_1		
- Mandatory monthly reporting	Yes	Yes
- Characterize commercial bait fishery	No – exempt under Addendum III because landings are < 5% of coastwide total	No – exempt under Addendum III because landings are < 5% of coastwide total
Monitoring Component A_2		
- Biomedical harvest reporting	Not Applicable	Not Applicable
- Required information for biomedical use of crabs	Not Applicable	Not Applicable
Monitoring Component A_3 Identify spawning and nursery habitat	Yes	Yes
Monitoring Component B_1 Coastwide benthic trawl survey	Yes, VT Trawl Survey was conducted in 2017	Yes, VT Trawl Survey will be conducted in 2018 & 2019; future years and spatial scope unknown at this time
Monitoring Component B_2 Continue existing benthic sampling programs	Yes	Yes
Monitoring Component B_3 Implement spawning survey	Yes, since 1999 (methods differ from DE Bay survey)	Yes
Monitoring Component B_4 Tagging program	Yes, in collaboration with local universities (Sacred Heart University since 2015)	Yes

NEW YORK		
	2018 Compliance Report	**2019 Management Proposal**
***De minimis* status**	Did not qualify for *de miminis*	Does not qualify for *de miminis*
Bait Harvest Restrictions and Landings		
- ASMFC Quota (Voluntary State Quota)	366,272 (150,000)	366,272 (150,000)
- Other Restrictions	Ability to close areas to harvest; seasonal quotas and daily harvest limits	Ability to close areas to harvest; seasonal quotas and daily harvest limits
- Landings	195,717	--
Monitoring Component A_1		
- Mandatory monthly reporting	Yes	Yes
- Characterize commercial bait fishery	Yes	Yes
Monitoring Component A_2		
- Biomedical harvest reporting	Not Applicable	Not Applicable
- Required information for biomedical use of crabs	Not Applicable	Not Applicable
Monitoring Component A_3 Identify spawning and nursery habitat	Yes	Yes
Monitoring Component B_1 Coastwide benthic trawl survey	Yes, VT Trawl Survey was conducted in 2017	Yes, VT Trawl Survey will be conducted in 2018 & 2019; future years and spatial scope unknown at this time
Monitoring Component B_2 Continue existing benthic sampling programs	Yes	Yes
Monitoring Component B_3 Implement spawning survey	Yes – adapted from DE Bay survey	Yes
Monitoring Component B_4 Tagging program	Yes, since 2007	Yes

NEW JERSEY		
	2018 Compliance Report	**2019 Management Proposal**
***De minimis* status**	Qualified for *de miminis*	Qualifies but not requesting *de miminis*
Bait Harvest Restrictions and Landings		
- ASMFC Quota (Voluntary state quota)	162,136 [male only] (0)	162,136 [male only] (0)
- Other Restrictions	Bait harvest moratorium	Bait harvest moratorium
- Landings	0	--
Monitoring Component A_1		
- Mandatory monthly reporting	N/A	N/A
- Characterize commercial bait fishery	N/A	N/A
Monitoring Component A_2		
- Biomedical harvest reporting	Yes	Yes
- Required information for biomedical use of crabs	Yes	Yes
Monitoring Component A_3 Identify spawning and nursery habitat	Yes	Yes
Monitoring Component B_1 Coastwide benthic trawl survey	Yes, VT Trawl Survey was conducted in 2017	Yes, VT Trawl Survey will be conducted in 2018 & 2019; future years and spatial scope unknown at this time
Monitoring Component B_2 Continue existing benthic sampling programs	Yes –NJ Ocean Trawl Survey, DE Bay Trawl Survey, and Surf Clam Survey (see note below).	Yes, though funding for Surf Clam Survey uncertain past 2018
Monitoring Component B_3 Implement spawning survey	Yes – since 1999	Yes
Monitoring Component B_4 Tagging program	Outside, independent groups currently	No
Monitoring Component B_5 Egg abundance survey	Yes, but removed as a mandatory component	Yes
Monitoring Component B_6 Shorebird monitoring program	Yes	Yes

Note: the Surf Clam Dredge survey lost its funding source in 2012. The state has since continued the survey with available funds, but full implementation is not consistent across years. There appears to be sufficient funding in 2018 for a full survey, but there is no guarantee this funding will remain.

DELAWARE		
	2018 Compliance Report	**2019 Management Proposal**
***De minimis* status**	Did not qualify for *de miminis*	Does not qualify for *de miminis*
Bait Harvest Restrictions and Landings		
- ASMFC Quota	162,136 [male only]	123,140 [male only]
- Other Restrictions	Closed season (January 1 – June 7); Open season closed on June 22	Closed season (January 1 – June 7)
- Landings	201,132 males	--
Monitoring Component A_1		
- Mandatory monthly reporting	Yes (daily call-in reports & monthly logbooks)	Yes
- Characterize commercial bait fishery	Yes	Yes
Monitoring Component A_2		
- Biomedical harvest reporting	Not Applicable	Not Applicable
- Required information for biomedical use of crabs	Not Applicable	Not Applicable
Monitoring Component A_3 Identify spawning and nursery habitat	Yes –updates once every 5 years or as needed	Yes – updates once every 5 years or as needed
Monitoring Component B_1 Coastwide benthic trawl survey	Yes, VT Trawl Survey was conducted in 2017	Yes, VT Trawl Survey will be conducted in 2018 & 2019; future years and spatial scope unknown at this time
Monitoring Component B_2 Continue existing benthic sampling programs	Yes	Yes
Monitoring Component B_3 Implement spawning survey	Yes	Yes
Monitoring Component B_4 Tagging program	No state program but has assisted in the past with various Delaware Bay horseshoe crab tagging initiatives	No
Monitoring Component B_5 Egg abundance survey	Removed as component	Removed as component
Monitoring Component B_6 Shorebird monitoring program	Yes	Yes

Note: The egg abundance survey has been discontinued as a mandatory monitoring element. Delaware will include information on the survey if it continues, but is no longer required to perform the survey.

MARYLAND		
	2018 Compliance Report	**2019 Management Proposal**
***De minimis* status**	Did not qualify for *de miminis*	Does not qualify for *de miminis*
Bait Harvest Restrictions and Landings		
- ASMFC Quota	255,980 (male only)	255,980 (male only)
- Other Restrictions	Delayed harvest and closed season/area combinations	Delayed harvest and closed season/area combinations; shore harvest prohibited
- Landings	224,832	--
Monitoring Component A_1		
- Mandatory monthly reporting	Yes (weekly reports for permit holders; monthly for non-permit holders)	Yes (weekly reports for permit holders; monthly for non-permit holders)
- Characterize commercial bait fishery	Yes	Yes
Monitoring Component A_2		
- Biomedical harvest reporting	Yes	Yes
- Required information for biomedical use of crabs	Yes	Yes
Monitoring Component A_3 Identify spawning and nursery habitat	Yes	Yes
Monitoring Component B_1 Coastwide benthic trawl survey	Yes, VT Trawl Survey was conducted in 2017	Yes, VT Trawl Survey will be conducted in 2018 & 2019; future years and spatial scope unknown at this time
Monitoring Component B_2 Continue existing benthic sampling programs	Yes	Yes
Monitoring Component B_3 Implement spawning survey	Yes	Yes
Monitoring Component B_4 Tagging program	Yes – through biomedical harvest	Yes – through biomedical harvest

POTOMAC RIVER FISHERIES COMMISSION		
	2018 Compliance Report	**2019 Management Proposal**
***De minimis* status**	*De minimis* status granted for 2017.	*De minimis* requested and meets criteria.
- Ability to close fishery if *de minimis* threshold is reached	No horseshoe crab fishery	No horseshoe crab fishery
- Daily possession limit <25 for *de minimis* state		
- HSC landing permit		
Bait Harvest Restrictions and Landings		
- ASMFC Quota	0	0
- Other Restrictions	None	None
- Landings	0	0
Monitoring Component A_1		
- Mandatory monthly reporting	Yes - weekly	Yes - weekly
- Characterize commercial bait fishery	Not Applicable	Not Applicable
Monitoring Component A_2		
- Biomedical harvest reporting	Not Applicable	Not Applicable
- Required information for biomedical use of crabs	Not Applicable	Not Applicable
Monitoring Component A_3 Identify spawning and nursery habitat	Not Applicable	Not Applicable
Monitoring Component B_1 Coastwide benthic trawl survey	Yes, VT Trawl Survey was conducted in 2017	Yes, VT Trawl Survey will be conducted in 2018 & 2019; future years and spatial scope unknown at this time
Monitoring Component B_2 Continue existing benthic sampling programs	Not Applicable	Not Applicable
Monitoring Component B_3 Implement spawning survey	Not Applicable	Not Applicable
Monitoring Component B_4 Tagging program	Not Applicable	Not Applicable

VIRGINIA		
	2018 Compliance Report	**2019 Management Proposal**
***De minimis* status**	Did not qualify for *de miminis*	Does not qualify for *de miminis*
Bait Harvest Restrictions and Landings		
- ASMFC Quota (State-reduced quota for overage)	172,828 (81,331 male-only east of COLREGS line)	172,828 (81,331 male-only east of COLREGS line)
- Other Restrictions	Closed season (January 1 – June 7) for federal waters. Effective January 1, 2013 harvest of horseshoe crabs, from east of the COLREGS line, is limited to trawl gear and dredge gear only.	Closed season (January 1 – June 7) for federal waters. Effective January 1, 2013 harvest of horseshoe crabs, from east of the COLREGS line, is limited to trawl gear and dredge gear only.
- Landings	160,331 (52,657)	--
Monitoring Component A_1		
- Mandatory monthly reporting	Yes – new permit system; limited entry to fishery and individual quotas established	Yes
- Characterize commercial bait fishery	Yes	Yes
Monitoring Component A_2		
- Biomedical harvest reporting	Yes	Yes
- Required information for biomedical use of crabs	Yes	Yes
Monitoring Component A_3 Identify spawning and nursery habitat	Yes – completed	No
Monitoring Component B_1 Coastwide benthic trawl survey	Yes, VT Trawl Survey was conducted in 2017	Yes, VT Trawl Survey will be conducted in 2018 & 2019; future years and spatial scope unknown at this time
Monitoring Component B_2 Continue existing benthic sampling programs	No	No
Monitoring Component B_3 Implement spawning survey	No	No
Monitoring Component B_4 Tagging program	No	No

NORTH CAROLINA		
	2018 Compliance Report	**2019 Management Proposal**
***De minimis* status**	Did not qualify for *de miminis*	Does not qualify for *de minimis*
Bait Harvest Restrictions and Landings		
- ASMFC Quota	24,036	24,036
- Adjusted Quota	25,236*	--
- Other Restrictions	Trip limit of 50 crabs; Proclamation authority to adjust trip limits, seasons, etc.	Trip limit of 50 crabs; Proclamation authority to adjust trip limits, seasons, etc.
- Landings	25,161	--
Monitoring Component A_1		
- Mandatory monthly reporting	Yes – trip level reporting each month	Yes – trip level reporting each month
- Characterize commercial bait fishery	Yes	Yes
Monitoring Component A_2		
- Biomedical harvest reporting	Not Applicable	Not Applicable
- Required information for biomedical use of crabs	Not Applicable	Not Applicable
Monitoring Component A_3 Identify spawning and nursery habitat	Little information available Survey discontinued after 2002 and 2003 due to low levels of crabs recorded	Not specified
Monitoring Component B_1 Coastwide benthic trawl survey	Yes, VT Trawl Survey was conducted in 2017	Yes, VT Trawl Survey will be conducted in 2018 & 2019; future years and spatial scope unknown at this time
Monitoring Component B_2 Continue existing benthic sampling programs	Yes	Yes
Monitoring Component B_3 Implement spawning survey	No	No
Monitoring Component B_4 Tagging program	No	No

*Note: there was quota transfer of 1,200 crabs from Georgia to North Carolina to cover their quota overage of 1,125 horseshoe crabs in 2017.

SOUTH CAROLINA		
	2018 Compliance Report	**2019 Management Proposal**
***De minimis* status**	*De minimis* status granted in 2017.	*De minimis* requested for 2019 and meets criteria.
- Ability to close fishery if *de minimis* threshold is reached	No horseshoe crab bait fishery	No horseshoe crab bait fishery
- Daily possession limit <25 for *de minimis* state		
- HSC landing permit		
Bait Harvest Restrictions and Landings		
- ASMFC Quota	0	0
- Other Restrictions	None	None
- Landings	0	--
Monitoring Component A_1		
- Mandatory monthly reporting	Yes (Biomedical)	Yes (Biomedical)
- Characterize commercial bait fishery	Not Applicable	Not Applicable
Monitoring Component A_2		
- Biomedical harvest reporting	Yes	Yes
- Required information for biomedical use of crabs	Yes	Yes
Monitoring Component A_3 Identify spawning and nursery habitat	Completed	No
Monitoring Component B_1 Coastwide benthic trawl survey	Yes, VT Trawl Survey was conducted in 2017	Yes, VT Trawl Survey will be conducted in 2018 & 2019; future years and spatial scope unknown at this time
Monitoring Component B_2 Continue existing benthic sampling programs	Yes	Yes
Monitoring Component B_3 Implement spawning survey	Yes	Yes
Monitoring Component B_4 Tagging program	Yes	Yes

GEORGIA		
	2018 Compliance Report	**2019 Management Proposal**
***De minimis* status**	*De minimis* status granted in 2017.	*De minimis* requested for 2019 and meets criteria.
- Ability to close fishery if *de minimis* threshold is reached	Yes	Yes
- Daily possession limit <25 for *de minimis* state	25/person; 75/vessel with 3 licensees	25/person; 75/vessel with 3 licensees
- HSC landing permit	Must have commercial shrimp, crab, or whelk license; LOA permit required	Must have commercial shrimp, crab, or whelk license; LOA permit required
Bait Harvest Restrictions and Landings		
- ASMFC Quota	29,312	29,312
(State Quota)	28,112*	29,312
- Other Restrictions	None	None
- Landings	0	--
Monitoring Component A_1		
- Mandatory monthly reporting	Yes	Yes
- Characterize commercial bait fishery	No bait landings	Yes
Monitoring Component A_2		
- Biomedical harvest reporting	Not Applicable	Not Applicable
- Required information for biomedical use of crabs	Not Applicable	Not Applicable
Monitoring Component A_3 Identify spawning and nursery habitat	Completed	Not Applicable
Monitoring Component B_1 Coastwide benthic trawl survey	Yes, VT Trawl Survey was conducted in 2017	Yes, VT Trawl Survey will be conducted in 2018 & 2019; future years and spatial scope unknown at this time
Monitoring Component B_2 Continue existing benthic sampling programs	Yes	Yes
Monitoring Component B_3 Implement spawning survey	No	No
Monitoring Component B_4 Tagging program	No	No

*Note there was quota transfer of 1,200 crabs from Georgia to North Carolina to cover their quota overage of 1,161 horseshoe crabs in 2016.

FLORIDA		
	2018 Compliance Report	**2019 Management Proposal**
***De minimis* status**	*De minimis* status granted in 2017.	*De minimis* requested for 2019 and meets criteria.
- Ability to close fishery if *de minimis* threshold is reached	Yes	Yes
- Daily possession limit <25 for *de minimis* state	25/person w/ valid saltwater products license; 100/person with marine life endorsement	25/person w/ valid saltwater products license; 100/person with marine life endorsement
- HSC landing permit	See above	See above
Bait Harvest Restrictions and Landings		
- ASMFC Quota	9,455	9,455
- Other Restrictions	None	None
- Landings	1,394	--
Monitoring Component A_1		
- Mandatory monthly reporting	Yes	Yes
- Characterize commercial bait fishery	No	Yes
Monitoring Component A_2		
- Biomedical harvest reporting	Not Applicable	Not Applicable
- Required information for biomedical use of crabs	Not Applicable	Not Applicable
Monitoring Component A_3 Identify spawning and nursery habitat	Yes	Yes
Monitoring Component B_1 Coastwide benthic trawl survey	Yes, VT Trawl Survey was conducted in 2017	Yes, VT Trawl Survey will be conducted in 2018 & 2019; future years and spatial scope unknown at this time
Monitoring Component B_2 Continue existing benthic sampling programs	No	No
Monitoring Component B_3 Implement spawning survey	No	Yes
Monitoring Component B_4 Tagging program	No	Yes

Note: Florida reported an additional 976 crabs harvested along the east coast for 'marine life' use in 2017.

Alternative Baits

Delaware, Connecticut, Rhode Island and Massachusetts attempted to participate in field trials with Ecobait, available from LaMonica Fine Foods in New Jersey. Massachusetts and Delaware were unable to conduct the trials due to difficulties in securing the Ecobait samples from LaMonica; Connecticut and Rhode Island were able to conduct trials in fall 2014. The results of the study were presented to the Horseshoe Crab Technical Committee and Delaware Bay Ecosystem Technical Committee in October 2015. The results demonstrated that the Ecobait produced by LaMonica Fine Foods performed comparable to conventional bait used by conch fishermen in Rhode Island and Connecticut. The results were presented to Board at the 2016 ASMFC Winter Meeting. Subsequently, the Board requested that a survey of current bait usage in the eel and whelk fisheries be conducted. This survey is available at: http://www.asmfc.org/uploads/file/5a04b785HSC_BaitSurveyTCReport_Oct2017.pdf.

Shorebird

The USFWS received petitions in 2004 and 2005 to emergency list the red knot under the Endangered Species Act. In fall 2005, it determined that emergency listing was not warranted at the time. As part of a court settlement, the USFWS agreed to initiate proposed listings of over 200 species, including the red knot. In fall 2013, the USFWS released a proposal for listing the red knot as threatened. In January 2015 the USFWS determined that red knot be designated as threatened under the Endangered Species Act.

The red knot remains listed as an endangered species in the state of New Jersey (since 2012).

VI. Research Needs/PRT Recommendations

De Minimis

States may apply for *de minimis* status if, for the last two years, their combined average horseshoe crab bait landings (by numbers) constitute less than one percent of coastwide horseshoe crab bait landings for the same two-year period. States may petition the Board at any time for *de minimis* status, if their fishery falls below the threshold level. Once *de minimis* status is granted, designated States must submit annual reports to the Board justifying the continuance of *de minimis* status.

States that qualify for *de minimis* status are not required to implement any horseshoe crab harvest restriction measures, but are required to implement components A, B, E and F of the monitoring program (Section 3.5 of the FMP; further modified by Addendum III). Since *de minimis* states are exempt from a harvest cap, there is potential for horseshoe crab landings to shift to *de minimis* states and become substantial, before adequate action can be taken. To control shifts in horseshoe crab landings, *de minimis* states are encouraged to implement one of the following management measures:

1. Close their respective horseshoe crab bait fishery when landings exceed the *de minimis* threshold;

2. Establish a state horseshoe crab landing permit, making it only available to individuals with a history of landing horseshoe crabs in that state; or

3. Establish a maximum daily harvest limit of up to 25 horseshoe crabs per person per day. States which implement this measure can be relieved of mandatory monthly reporting, but must report all horseshoe crabs harvests on an annual basis.

The following states have been removed from the Management Board in recent years: Pennsylvania (2007), Maine (2011), and New Hampshire (2014). The Potomac River Fisheries Commission, South Carolina, Georgia, and Florida are requesting *de minimis* status for the 2018 fishing season based on the 2016-17 season landings and meet the FMP requirements for being granted this status (Table 1). The PRT recommends granting these jurisdictions *de minimis* status with the provision that marine life landings from Florida be considered in determining future *de minimis* status. Regarding the transfer requests from Georgia to North Carolina, the PRT finds that the quota transfer does not pose concerns for the regional horseshoe crab population or migratory shorebirds at this time, due to the size of the transfer.

Funding for Research and Monitoring Activities

The PRT strongly recommends the funding and continuation of the VT benthic trawl survey. This effort provides a statistically reliable estimate of horseshoe crab relative abundance that is essential to continued ARM implementation and use of more advanced stock assessment models, such as catch-survey analysis, than the data-poor trend analyses of previous assessments.

Limuli Laboratories
5 Bay Avenue
Cape May Court House, NJ 08210

Atlantic States Marine Fisheries Commission
Robert Beal, Executive Director, ASMFC Staff and Horseshoe Crab Management Board
1050 N. Highland Street, Suite 200 A-N
Arlington, VA 22201 July 16, 2018

Dear Executive Director Beal, ASMFC Staff and Horseshoe Crab Board Members,

Last year, biomedical use of horseshoe crabs was discussed at great length by the Atlantic States Marine Fisheries Commission (ASMFC). The ASMFC staff pushed to eliminate biomedical confidentiality and to incorporate our estimated mortality into the Adaptive Resource Management (ARM) model. Although, the biomedical companies voiced their concerns regarding both issues, the ASMFC continued to press forward. After much discussion, the Board decided to revisit these issues after completion of the 2018 Horseshoe Crab Stock Assessment. Recently, I read two articles in local newspapers (Atlantic City Press May 12, 2018 and Cape May Star and Wave June 6, 2018) that provided the answers as to why the ASMFC pushed these policies so hard; it wasn't due to the science, the facts or a legitimate concern for horseshoe crabs.

A Deal was made between the ASMFC and the "Red Knot" Group. The one article contained a quote from Larry Niles, "We made an agreement with the fisheries and state agencies to control the harvest down to 500,000 male crabs every year." With this policy, the "Red Knot" group would have limited my collection of horseshoe crabs to males only. This would have affected the quality and quantity of the lysate that is produced at my New Jersey facility and drive my company out of business.

Confidentiality. The other article is a prime example of why biomedical confidentiality is so important. Larry Niles singles out a "New Jersey lab" and cites the number of horseshoe crabs that are taken. The article encourages the readers to rally against the one company and to support limitations on their collection. His message is that biomedical collection in the Delaware Bay is adversely affecting the Red Knots. However, the fact is that even if all the biomedical collection occurred in Delaware Bay, which is not the case, only 1.5% of the Delaware Bay horseshoe crabs (estimated to be 34 million) would be blood donors. And of the 1.5 %, a much smaller percentage may die.

Forcing the Use of Synthetic Lysate. The latest scheme involves shaming pharmaceutical companies into using an inferior product that is not sanctioned by the United States Food and Drug Administration (FDA). Synthetic lysate is not equivalent to LAL nor is its use a proven replacement for LAL. And although synthetic lysate is discussed, the development of a technique that reduces the amount of LAL needed for a test by 1/20th is not mentioned nor is credit given to the biomedical industry for its development.

Last year's meetings were a prelude to this scheming. Without biomedical's continued insistence, the ASMFC would have followed this path and I would have been put out of business. The ASMFC should manage the fishery relying on the valuable data that they acquire and as part of their mission, they should distribute material that educates fisheries stakeholders and the general public, and most of all, use its standing to promote sustainable fishing practices for all.

Sincerely,
Benjie Swan

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 — 9:15 a.m.

4. Update from Executive Committee (*J. Gilmore*) — 9:20 a.m.

5. Update on the Risk and Uncertainty Policy *(J. McNamee)* — 9:30 a.m.

6. Update on the Northeast Area Monitoring and Assessment Program *(N. Lengyel)* **Action** — 9:40 a.m.

7. Update on River Herring Technical Expert Working Group *(C. Starks*) — 9:55 a.m.

8. Standing Committee Reports — 10:10 a.m.
   - Update from the 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 **Action** (*S. Murray*)
     - Consider Approval Stock Assessment Schedule

9. Progress Update on Benchmark Stock Assessments — 10:35 a.m.
   - Shad (*K. Drew*)
   - Menhaden and Ecological Reference Points (*K. Drew*)

10. Review Noncompliance Findings, If Necessary **Action** — 10:45 a.m.

11. Other Business — 10:50 a.m.

12. 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 Risk and Uncertainty Policy (9:30-9:40 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

6. Update on the Northeast Area Monitoring and Assessment Program (9:40-9:55a.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

7. Update on River Herring Technical Expert Working Group (TEWG) (9:55-10:10 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

8. Standing Committee Reports (10:10-10:35 a.m.) Action

Background

- 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

Presentations

- 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**)

Board action for consideration at this meeting

- Approve the Living Shorelines Factsheet
- Approve the revised stock assessment schedule

9. Progress Update on Benchmark Stock Assessments (10:35- 10:45 a.m.)

Background

- 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

Presentations

- Dr. Drew will provide a progress report on the shad, Atlantic menhaden and ecological reference points benchmark stock assessments

Board action for consideration at this meeting

- None

10. Review Non-Compliance Findings, if Necessary Action

11. Other Business

12. Adjourn

Tina Berger

From: Comments
Subject: FW: Some Comments for Upcoming ASMFC Meeting in New York City

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From: Robert Beal
Sent: Wednesday, September 26, 2018 10:58 AM
To: 'David Dow' <ddow420@comcast.net>
Cc: Sarah.Peake@mahouse.gov; Raymond Kane <ray@capecodfishermen.org>
Subject: RE: Some Comments for Upcoming ASMFC Meeting in New York City

Good Morning Dr. Dow,

Thank you for the comments and the included article. I will share your comments with our Commissioners as part of the briefing materials for the Commission's Annual Meeting in New York City.

The effects of climate change, both to the distribution and productivity, on species managed by the Commission and the three east coast councils will be at the forefront of Commission's strategic planning session at the Annual Meeting. The need for improved coordination and collaboration between the Commission and Councils will likely be a significant part of the Commission's Strategic Plan moving forward.

Best,
Bob

Bob Beal
Executive Director
Atlantic States Marine Fisheries Commission
1050 N. Highland Street, Suite 200A-N
Arlington, VA 22201
703.842.0740

From: David Dow [mailto:ddow420@comcast.net]
Sent: Tuesday, September 25, 2018 10:44 AM
To: Robert Beal <Rbeal@asmfc.org>
Cc: David Dow <ddow420@comcast.net>; Sarah.Peake@mahouse.gov; Raymond Kane <ray@capecodfishermen.org>
Subject: Some Comments for Upcoming ASMFC Meeting in New York City

I am a retired marine scientist and grassroots environmental activist living on Cape, Ma. I have concerns about the Mid-Atlantic FMC species migrating into the waters in **Nantucket Sound** and effects on ocean warming in the Gulf of Maine on cod and sea herring stocks. Since the Atlantic States Marine Fisheries Management Council works closely with the state marine fishery agencies/MAFMC in managing these migrating fish stocks, I would like to see some type of agreement reached with the NEFMC to develop an integrated approach for both catch quotas and pelagic Essential Fish Habitat **(EFH)**. I favor an adaptive, ecosystems based approach **(a,ebm)** to help address the effects on climate change/eutrophication on the **"productive capacity**" of pelagic EFH; increased human uses (US Navy training; wind farms; potential seismic surveys for oil/gas explorations; etc.) and natural variability of fish stocks in space/time.

Summer flounder might be a good case study, since the MAFMC is holding regional hearing along the US Atlantic coast and this stock is targeted by both commercial fishermen/women and saltwater anglers. Before retiring I served on the NEFMC's Habitat Plan Development Team which helped the NEFMC's Habitat/MPA/Ecosystems Committee develop **Omnibus Habitat Amendment 2**. OHA 2 didn't address either eutrophication effects within state jurisdictional waters (0-3 miles) or climate change effects in the Gulf of Maine. Here on Cape Cod $4-7 billion will be spent over the next 20-30 years to reduce "N" loading from septic systems which has impacted water quality and EFH in coastal embayments (eelgrass beds; salt marshes ; oyster reefs; etc.).

Warming waters in the Summer have
attracted great white sharks to our beaches to feed on seals and increased forage fish near shore which has attracted minke and humpback whales which are subject to **"unnatural mortality event"** studies by the Northeast Fisheries Science Center and academic marine scientists. Numerous research papers have focused on the rapid warming in the **Gulf of Maine (GoM)** and its effects on living marine resources (fish and shellfish). One consequence of this warming is that Winter flounder are migrating into the GoM which will pose management challenges for the NEFMC. The sea herring quota has been cut from 240 to 110 million pounds which may result in bait challenges for the lobster fishery. I gather that the ASMFC is doing a menhaden stock assessment and perhaps this forage fish could fill the lobster trap bait gap.

Since I used to be the Recreational Fisheries Coordinator at the Fisheries Lab in Woods Hole, I would urge you to explore the **"economic multiplier effect" (eme)** of commercial and recreational fishing on the economy of Barnstable County and similar tourist based New England communities. We are losing our working waterfront to non-water related development which will constrain commercial fishing recovery and diminish the role of recreational fishing in our tourist based economy. In 2003/2004 I lead a **"Fisheries & Aquaculture Working Group"** for the Gulf of Maine **Council on the Marine Environment** which lead to "eme" indicators for both recreational and commercial fishing. This concept is discussed in more detail in the attached Op-ed piece that was published in CapeCod Today and reprinted in the Rhode Island Saltwater Anglers Association (RISAA) newsletter.

Thanks for your consideration of these comments

Dr. David D. Dow
East Falmouth, Ma.

Letter: Alternative Ways to Manage Fish in New England Waters

from Dr. David D. Dow of East Falmouth

ARTICLE | **LETTERS TO THE EDITOR** | JULY 20, 2018 09:25 AM |
BY **CAPECODTODAY STAFF**

<letter-to-the-editor_17_144.jpg>

Letter to the Editor:
As a retired marine scientist from the Fisheries Lab in Woods Hole and former recreational fisheries coordinator in the Northeast, I have been interested in the different ways that the Mid-Atlantic Fishery Management Council/Atlantic States Marine Fisheries Commission and the New England Fishery Management Council manage

fish stocks under their jurisdiction. This will likely have an effect on saltwater anglers as Summer flounder, black sea bass and scup move into Nantucket Sound, since these species are managed by MAFMC/ASMFC.

The NEFMC is in the process of developing Amendment 8 for the Atlantic herring Fishery Management Plan which is an important forage fish used as bait in lobster traps; part of a directed fishery which includes paired vessel midwater trawls; serve as food for target species of saltwater anglers (tuna; swordfish; striped bass; bluefish; etc.) and are key parts of the pelagic marine food chain linking plankton to whales; seabirds; various non-commercial fish/shellfish; etc. In 2016 the MAFMC developed a Forage Fish Plan which had a much wider focus than Amendment 8 of the Atlantic herring FMP which is under development by the NEFMC.

Part of the reason for this is that the MAFMC/ASMFC try to integrate fishing regulations between state/federal jurisdictional waters (0-200 miles off of the coast), while the NEFMC focuses on federal jurisdictional waters (3-200 miles). Fish species obviously don't recognize this artificial jurisdictional boundary. The Atlantic States Marine Fisheries Commission attempts to coordinate fishing regulations and catch quotas in state jurisdictional waters (0-3 miles) with state fishery agencies along the Atlantic seaboard. As our coastal waters warm fish species are moving northwards which complicates the inshore quotas for species from tuna/swordfish (Apex Predators) to black sea bass/Summer flounder/scup (predators) in New England waters. The other big difference is that the NEFMC is focused on commercial fishing as evidenced in their approach to Amendment 8 of the Atlantic herring FMP, while the MAFMC/ASMFC main constituents are recreational fishermen/women (saltwater anglers) which is reflected in the MAFMC Forage Fish Plan.

Under the Magnuson-Stevens Sustainable Fisheries Act, the Essential Fish Habitat (EFH) provision applies to the managed stocks of the federal fishery management councils in both state and federal jurisdictional waters. EFH in Cape Cod embayments include salt marshes' oyster reefs; eelgrass beds which are under threat from "nitrogen enrichment from septic systems" which is subject to an EPA/Ma. DEP cleanup under section 208 of the Clean Water Act. These coastal habitats are also threatened by warming waters and increased ocean acidity. In the open ocean the NEFMC EFH is focused on groundfish (cod; haddock; skates; etc.) and scallops, while the MAFMC is developing EFH for pelagic species like forage fish; squid and mackerel. Changes in EFH can influence growth/reproduction in managed species; natural mortality rates; changes in distribution in time and space; and the wider marine food chains that support the natural capital/ecosystem services in the ocean (which are undergoing shifts).

Since the MAFMC and NEFMC both manage federal fish stocks throughout their range, it is important that they coordinate efforts and include the ASMFC/state fishery

agencies in this dialog. Consider river herring and sea run brook trout which are the subject of rivershed restoration efforts here on Cape Cod (i.e. Coonamesset River Trust efforts in Falmouth) where harvests are banned inshore; while these species are caught in the offshore Atlantic herring fishery (especially by paired trawl fishery).
For both commercial and recreational fishing one needs to consider the economic multiplier effect **(eme)** which compares the expenditures in relationship to direct/indirect/induced economic benefits to coastal communities. Fisheries economists have software that can compute the economic multiplier effect at the county level. It would be interesting to compare the commercial and recreational fishing **eme** on Cape Cod & the Islands with other states in New England. Recreational fishing includes head and charter vessels along with individuals which fish on their own for pleasure.
Dr. David D. Dow
East Falmouth, Ma.

This letter was submitted by 617 individuals.

Tina Berger

From: Lynn Funkhouser <lynnfunkhouser@cs.com>
Sent: Sunday, October 14, 2018 2:36 AM
To: Comments; hq@omegaprotein.com
Subject: Request to refrain from fishing in the waters of the Western New York Bight

Dear Owners and Directors of Omega Protein And Commissioners of ASMFC

While we recognize that the Omega Fleet is operating under the current Total Allowable Catch and in waters beyond the NY or NJ State jurisdictions, we would like to request certain restraints on the fishing activity that would conflict with the whales we have been documenting feeding in this area.

The Atlantic States Marine Fisheries Commission is often cited as determining that there is no local impact on this conflict. A timely survey has yet to be done in this area and we are totally opposed to finding out, by learning after the fact, that there are no more whales in the area.

We therefore request, representing the undersigned, that the Omega Fleet maintain a 20 mile “no fish zone” from the entrance to NY harbor. This would allow a reasonable fishing area while protecting the specific local area where we have been documenting humpback feeding increasingly since 2011. A voluntary exclusion would be, we think, a demonstration of the company’s willingness to respect other interests.

Please consider this message and let the management know that there is an opportunity to work with groups like ours in a cooperative rather than an adversarial manner. We believe, and hope the company agrees, that positive public relations have a beneficial effect on the bottom line.

Thank you for the consideration and hope that whales, menhaden, and our common interest of a sustainable fishery can be ensured.

--
Ms Lynn Funkhouser
lynnfunkhouser@cs.com

An Update to *Living Shorelines: Impacts of Erosion Control Strategies on Coastal Habitats*

In 2010, the Atlantic States Marine Fisheries Commission published Living Shorelines: Impacts of Erosion Control Strategies on Coastal Habitats (Thomas-Blate 2010). Since then, there has been a growing body of literature and lessons learned, that this factsheet highlights. This is not an exhaustive list, but rather features selected case studies, websites, and references in support of the application of best practices moving forward.

Living shorelines (LSLs) are adopted with increasing frequently to address coastal shoreline erosion issues along both public and private shoreline properties. This type of shoreline protection is mostly used along shorelines fronting bays, sounds, and in other estuarine settings, as beach and inlet systems experience energy levels that are higher than those for which natural materials can successfully be employed.

The National Oceanic and Atmospheric Administration defines LSLs as: "*A shoreline management practice that provides erosion control benefits; protects, restores, or enhances natural shoreline habitat; and maintains coastal processes through the strategic placement of plants, stone, sand fill, and other structural organic materials.*" These "green" erosion control installations are often compared to "gray" infrastructure like seawalls and revetments. Unlike their gray alternatives, LSLs integrate habitats across the shoreline landscape, by promoting the land-water continuum, provide enhanced habitat for fish and wildlife, naturally adapt to changing sea levels in the face of climate change, and enhance the natural beauty of their adjacent properties.

As sea level rise continues, armoring shorelines against wave energy and erosion will continue to be important to those living along coastal waters. Using LSLs to accomplish this will ensure connections remain established between the uplands and estuaries to maintain or even improve the health of the important fish habitats they sustain.

In 2017, the U.S. Army Corps of Engineers established a Nationwide Permit for Living Shorelines to streamline permitting processes for living shorelines structures. The permit can be accessed here: http://www.nao.usace.army.mil/Portals/31/docs/regulatory/nationwidepermits/Nationwide%20Permit%2054.pdf.

For more information

Practical applications training for resources managers and practitioners of living shorelines projects nationally https://www.livingshorelinesacademy.org

Systems Approach to Geomorphic Engineering (SAGE) http://www.sagecoast.org/

Why Living Shorelines are Better than Bulkheads https://www.coastalreview.org/2016/02/12896/

Restore America's Estuaries Living Shorelines Initiatives https://www.estuaries.org/living-shorelines

Naturally Resilient Communities: Living Shorelines http://nrcsolutions.org/living-shorelines/

NOAA's Guidance for the Successful Use of Living Shorelines
https://coastalscience.noaa.gov/project/guidance-living-shorelines/

InTeGrate's Advantages and Disadvantages of Soft Shoreline Stabilization https://www.e-education.psu.edu/earth107/node/1073

Virginia Institute of Marine Science's Living Shorelines Decision Tools http://www.vims.edu/ccrm/outreach/living_shorelines/index.php

Case Study on Designing Living Shorelines for New England Coasts (via NOAA Office for Coastal Management): https://coast.noaa.gov/digitalcoast/training/orleans.html

Hudson River National Estuarine Research Reserve's Sustainable Shorelines Guidance: https://www.hrnerr.org/hudson-river-sustainable-shorelines

New Jersey's Living Shorelines Information https://www.state.nj.us/dep/opi/living-shorelines.html

Delaware Living Shorelines Committee Information https://www.delawarelivingshorelines.org/

Delaware's Living Shorelines Information: http://www.dnrec.delaware.gov/Admin/DelawareWetlands/Pages/LivingShoreline.aspx

Partnership for the Delaware Estuary's Living Shorelines Information: http://www.delawareestuary.org/science-and-research/living-shorelines/

North Carolina's Shoreline Stabilization Options https://deq.nc.gov/about/divisions/coastal-management/coastal-management-estuarine-shorelines/stabilization/stabilization-options

Georgia's Living Shorelines Information https://coastalgadnr.org/LivingShorelines and Storyboard http://gcmp.maps.arcgis.com/apps/MapTour/index.html?appid=fa83fbc0786542ff99dbf12b509ffbc5&webmap=b5e08e21085a403faec4086381edcb34

Information regarding applications of living shorelines for private property owners of estuarine shorelines in Florida https://floridalivingshorelines.com

Sidebar: Lessons Learned

- Each state has different Coastal Zone Management (CZM) regulations. Contact your state CZM program as well as the appropriate Army Corps of Engineers District to discuss your proposed project.
- Some states (e.g. North Carolina) are drafting regional general permits for living shorelines. These regional permits align with their state general permit more specifically, improving the efficacy of the interagency process overall. Contact your state agency to learn more.
- Every site should be evaluated on a case-by-case basis. Local ecological parameters should be considered so that each project thrives under the local conditions (see NOAA guidance on physical site conditions).
- An interdisciplinary approach to understand coastal ecology and site design is important. Projects are most successful when ecologists and geotechnical engineers work together.
- Use local knowledge and anecdotes to augment scientific information. People who have watched the shoreline for years understand local conditions and challenges.
- LSLs take time to establish. Monitor the site, assess functionality, and adaptively manage (Delaware Estuary Living Shoreline Initiative).
- The number of acres restored is not always the best measure of success. Quality, persistence, and resilience matter. Consider functionality over time.

- Viewshed and contractor, homeowner, and local government education is important for LSL buy-in and promotion.

For Case Studies and Further Reading, visit (link).

[This appendix will be linked to the sentence above]

Case Studies

Florida Fish and Wildlife Conservation Commission Living Shoreline Demonstration Area
520 Barracuda Blvd.
New Smyrna Beach, FL 32169

Project Footprint

5 acres of restored saltmarsh, 300 linear ft of shoreline demonstration area

Want to Visit?

The site is maintained by the Marine Discovery Center, which is open daily.

Coordinating Organization

Florida Fish and Wildlife Conservation Commission (FWC) Marine Discovery Center

Project Description

During summer and fall of 2014, five acres of FWC property (the Mosquito Lagoon Marine Enhancement Center) were restored to saltmarsh through a grant-funded partnership. The Shoreline Demonstration Area was added to the project to showcase various techniques used to stabilize eroding shorelines, including those with mostly natural materials. This showcase site has signs along a publicly accessible walking trail highlighting the various living shoreline implementation techniques from fully green (oyster reef sloping to high marsh) to rehabilitated seawall (oyster reef and mangroves in front of a seawall) applications. Contracted businesses installed terracing, a retaining wall, and seawall. Native plants came from a local nursery. Oyster shell came from a local restaurant recycling program, Shuck and Share, housed on the property.

For more Information

Contact Jeff Beal, FWC, jeff.beal@myfwc.com
http://floridalivingshorelines.com/project/marine-discovery-center/

South Carolina Demonstration Site
310 Okatie Highway
Okatie, SC 29909

Project Footprint

41 linear ft of oyster reef, 50 linear ft of oyster castle, 45 linear ft of crab trap reef, 122 linear ft of modified crab trap reef

Want to Visit?

The demonstration site is located along an intertidal shoreline of the Chechessee River, at the Port Royal Sound Maritime Center

Coordinating Organization

South Carolina Department of Natural Resources (SC DNR)

Project Description

The SC DNR has been constructing oyster-reef based living shorelines since 2001. The success of these living shoreline projects has sparked the interest of nearby property owners to pursue similar projects. Consequently, the South Carolina Department of Health and Environmental Control (SC DHEC) has sought to develop a regulatory process to guide the design and permitting of living shorelines. SC DNR, working in partnership with National Estuarine Research Reserve System (NERRS) and SC DHEC, is conducting a multi-year research program to inform living shoreline regulations. The program seeks to evaluate historic sites, analyze existing data, create and monitor new sites, and conduct case studies. Materials being tested are both oyster-based and natural fiber-based. Data on rates of elevation change from historic sites, such as the Chechessee River site (an oyster based site), provide science-based information on how living shorelines protect South Carolina's marshes from erosion and habitat loss. Preliminary results, from historical analysis, indicate an average vertical accumulation rate of 2.3 cm/yr behind reefs relative to controls.

For more Information

Contact Dr. Peter Kingsley-Smith, SC DNR, kingsleysmithp@dnr.sc.gov

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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	Operational*	Update	
Bluefish	Update	Update	Update	SARC-Spring	Update	Update		Update	Operational*	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	Operational*		
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					

Note all species scheduled for review must be prioritized by management boards and Policy Board.

Additional Notes:

BSB, Bluefish, Scup	*Spring 2019 operational assessments with new MRIP data (April 2019)
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

Summary of Public Comment on the Cobia Draft Amendment I Public Information Document

The Public Comment period for the Cobia Draft Amendment I Public Information Document (PID) closed on October 10, 2018 and 39 comments were received.

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.

The majority of comments submitted were from members of the Virginia Saltwater Sportfishing Association. Most comments supported continuation of current recreational minimum size and bag limits, 3-year average methods for evaluation of compliance with recreational targets, a coastwide commercial quota, and state-specific season and vessel limits to adhere to state recreational harvest targets. Additionally, most comments supported use of multi-year commercial regulatory periods, recreational management by numbers of fish rather than pounds, stable regulations that would not allow for in-season regulatory changes, commercial permitting through individual states, and biological sampling only if conducting on a voluntary basis.

While most comments from throughout the management area supported continuation of several current coastwide recreational measures, recreational management based on numbers of fish, and voluntary biological sampling programs, some comments varied by region. In general, public comments from the southern portion of the management area (provided at the joint Georgia-South Carolina hearing) expressed more support for lowering the coastwide vessel limit to 3 fish and managing in federal waters by implementing regulations of adjacent state waters (essentially extending state boundaries by latitude into federal waters). Public comments from further north (Virginia and North Carolina via written and spoken comments) expressed more support for maintaining the current coastwide recreational vessel limit of 6 fish and managing federal waters according to regulations of the landing state.

Comments provided in writing and at public hearings are summarized and written comments are provided below.

Written Comment Summary

Issue 1: Recommended Management for Federal Waters

Thirty-six (36) comments support federal regulations based on state of landing.

Issue 2: Harvest Specification Process

Thirty-six (36) comments support a recreational per person limit of 1 fish.

Thirty-six (36) comments support using 3-year time periods to evaluate the recreational fishery.

Thirty-six (36) comments support management of the recreational fishery by numbers of fish rather than pounds.

Thirty-five (35) comments support a recreational minimum size of 36 inches fork length (40 inches total length).

Thirty-five (35) comments support maintaining a coastwide commercial quota.

Thirty-five (35) comments support the states' abilities to set season and [vessel][1] limits to adhere to allocated harvest targets.

Thirty-five (35) comments support recreational state allocations based on historical landings.

Thirty-five (35) comments expressed desire for stability and do not support management options that would allow in-season changes to regulations.

Thirty-four (34) comments support a recreational vessel limit of 6 fish.

Thirty-four (34) comments support commercial permitting through individual states, but not through a federal process.

Thirty-four (34) comments support the use of multi-year periods for the commercial fishery.

One (1) comment supports keeping regulations the same as in 2018.

One (1) comments support a recreational minimum size of 37 inches total length, with one fish over 50 inches.

One (1) comment supports a recreational vessel limit of 3 fish.

One (1) comment supports the current allocation strategy used for the recreational fishery.

One (1) comment supports payback or a one-year moratorium in the case of overfishing.

[1] Comments from the Virginia Saltwater Sportfishing Association state "bag limit", but later correspondence with President, Mike Avery, confirmed that "vessel limit" was intended.

One (1) comment does not support consideration of management without a coastwide harvest limit.

One (1) comment does not support the use of multi-year periods for the commercial fishery.

One (1) comment supports management using soft annual catch targets.

One (1) comment states that current Virginia regulations seem fair.

Issue 3: Biological Sampling Requirements

Thirty-five (35) comments support voluntary, but not required, state biological sampling of the recreational fishery.

Thirty-four (34) comments state that states should establish their own sampling programs based on available resources.

Thirty-four (34) comments support biological monitoring of both the recreational and commercial sectors but only if conducted on a voluntary basis.

One (1) commenter stated they would participate in a freezer donation program.

One (1) commenter stated they would participate in a weigh-in station program.

Other Comments

Thirty-five (35) comments support establishment of cobia regulations in all states throughout the management area (New York – Georgia).

Thirty-five (35) comments state that some of the cobia quota from the Atlantic coast of Florida should be shifted to the ISFMP's management area (New York – Georgia).

Thirty-four (34) comments support changing the commercial per license holder limit to a per person limit.

Two (2) comments stated that the management jurisdiction of the Cobia Interstate FMP and any associated annual quota should include cobia from the Atlantic coast of Florida.

One (1) comment supported fishery monitoring through a mandatory reporting program in the fashion of the Virginia Marine Resources Commission.

One (1) comment supported use of smoothing methods on MRIP catch estimates for evaluating compliance with the FMP in the fashion of those being used for black sea bass.

One (1) comment supported fair and equitable access in the form of equivalent regulations across states.

One (1) comment stated that Rudee Inlet in Virginia Beach, VA, had a great season. This comment also stated that while improvements could be made to the Virginia reporting system, the technology of the current system is useful.

One (1) comment stated concern with the depletion of menhaden as a forage fish for cobia and other species and requested lower quotas for the reduction fishery.

One (1) comment stated hearing of significant commercial dead discards of cobia by the menhaden reduction fishery and asked if this will be investigated.

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

Atlantic States Marine Fisheries Commission
September 24, 2018
Georgia/South Carolina

-- PLEASE PRINT CLEARLY --

Name	Company/Organization	City, State
Michael Schmidtke	ASMFC	Arlington, VA
Frank Gibson	Rec. & Member DNR MAC	Beaufort SC
David Atkins	Fishing Guide, charter	Bluffton SC
Collins Doughtie	recreational	Bluffton SC
Dawn Franco	GADNR	Brunswick, GA
Al Stokes	fishermen	Bluffton, SC

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.

Date: 9/26/18 Location: Manteo, NC

Public Information Document on Amendment to the Cobia Fishery Management Plan for Public Comment

Atlantic States Marine Fisheries Commission

PLEASE PRINT CLEARLY --

Name	Organization/Sector	City, State
Travis Kemp	ReC	Moyock, NC
Bill Graham	Industry	Duck, NC

Tina Berger

From: LG Shaw <lg@waveridingvehicles.com>
Sent: Friday, September 07, 2018 6:32 PM
To: Comments
Subject: Cobia PID

Aloha,
Sorry for the response after the posted deadline via email but I thought I'd share my thoughts anyway.
It seemed like a great season out of Rudee Inlet in Virginia Beach. Most of the folks I know that targeted Cobia had at least one keeper this year and some of the more experienced fishermen I know had one every few weeks.
The regulations seemed fair. Both the quantity and sizing rules were straight forward and easy to follow.
The VA permit website was easy enough to operate but the user interface could be improved. I'm sure that's no short order on the budget side. It was nice being able to log trips and catches via your cell phone browser, it reduced the odds of forgetting by the time you got home and relaxed (read; beer in hand).
Thank you for doing your best to maintain a healthy fishery for us and generations to come.

LG Shaw

Operations Manager
Wave Riding Vehicles
1900 Cypress Ave
Virginia Beach VA 23451
757-422-0423 office
757-428-6328 fax

RESPONSE TO COBIA PID, SEPT, 2018

1. What types of regulations should the Commission recommend be implemented into federal waters, e.g. quota, bag limits, seasons, size limits? We should retain the 36-inch fork length or 40-inch total length size limits for the coast-wide areas. We believe the federal coast-wide recreational bag limit should remain at one cobia per person per day, or six cobia per vessel per day, whichever is more restrictive. The issue of bag limits and seasons should be left to the individual states based on the allocation as cobia migrate differently for each state. Should vessels fishing in federal waters be subject to cobia regulations of their state of landing? For simplicity and clarity to avoid confusion there should only be one set of regulations (for each state) that cover both state and federal waters. While fishing for cobia it is not uncommon to -cross both state and federal waters. Having a single regulation for each state would make management and enforcement less confusing. Should state jurisdictional boundaries be extended by latitude to apply federal regulations in sectioned areas of federal waters? We believe the best management option should simply be the port of departure and return. Sometimes a boat may not be targeting cobia but find themselves geographically just over a state line and catch a cobia but will return to the port they departed from. Where ever the port the cobia is landed should be the regulation that applies to that trip. Should a separate set of regulations be developed specifically for fishing in federal waters? No (see above). Should the Commission consider some other strategy? See responses above.
2. Harvest Specification Process for both Commercial and Recreational Fisheries… If a coast wide limit continues to be considered, how should it be set? The commercial quota is so small we recommend that management continue as a coast-wide stock. Attempting to divide the small commercial quota among the states would result in very small individual quotas and management would be difficult. For recreational management, we should retain the 36 inch fork length or 40 inch total length size limits for the coast-wide areas. We believe the federal coast-wide recreational bag limit should remain at one cobia per person per day, or six cobia per vessel per day, whichever is more restrictive. The issue of bag limits and seasons should be left to the individual states as cobia migrate differently for each state. There should be a fair allocation for each state and each state should determine how it stays within that allocation with seasons and bag limits. Please note, the current allocation of 620,000 lbs. for GA-NY is unfair and the process used to determine that is deeply flawed. Even if ASMFC accepts the results of SEDAR 58 to continue management separation at the GA/FL line, the allocations given to East Florida compared to the rest of the Atlantic coast is completely unfair and biased. We strongly recommend ASMFC work with SAFMC and the Gulf Council to ensure the allocation remains fair, balanced, and unbiased. Allowing a single state (Florida) to have an unfair, larger allocation for both their Atlantic Coast and Gulf Coasts is simply not right and unfair. We ask for fair allocations with no advantages and biases given to any single state or coast. As such, we would expect to see the Atlantic allocation increase to reflect fair allocations. How should it be allocated? Percentages to states based on historical landings. To the commercial and recreational sectors? See above and below. To the states? See above and below. What options should be considered if the stock status is overfished or overfishing is occurring or if harvest limits/quotas/targets are exceeded? Stability is what is desired by anglers and charter captains. We strongly believe we should not put management options in place that allow the commission to make in season changes. Sticking with the 3-year averages should be enough to manage the stocks. Stability is what is desired the most.
3. Should management regimes without coast wide harvest limits be considered? If so, what could those look like? Every year the cobia seem to migrate farther north. We believe every state from GA to NY should have regulations in place to manage cobia. For the Recreational Fishery What recreational management options should be allowed for consideration in the specification process? We should retain the 36-inch fork length or 40-inch total length size limits for the coast-wide areas. We believe the recreational bag limit should remain at one cobia per person per day, or six cobia per vessel per day, whichever is more restrictive. The issue of bag limits and seasons should be left to the individual states as cobia migrate differently for each state. There should be a fair allocation for each state and each state should determine how it stays within that allocation with seasons and bag limits. As such, we should expect to see the Atlantic allocation increase to reflect fair allocations. The state allocation should be based on a fair percentage based on historical landing.

4. Should the current 3-year time period for evaluating recreational harvests against management targets be reduced? No!!!! Should recreational harvests be evaluated in numbers of fish or pounds? We would like to see numbers of fish used to estimate overall catch. The MRIP estimate process is flawed as all it takes is one large fish that gets intercepted to grossly overstate the catch estimates. Allocation by poundage would be awkward at best.

Finally, I want to add that recreational anglers are deeply concerned about the continued depletion of menhaden bait fish in many areas such as the Chesapeake Bay. These fish are critical forage for Cobia and other species. We urge you or other bodies to protect Menhaden by significantly lowering the quotas for the reduction industry.

Thank you for the opportunity to respond to this important fisheries matter.

Sincerely,

Steve Atkinson

Midlothian, VA

Tina Berger

From: Virginia Saltwater Sportfishing Association VSSA [ifishva@gmail.com] <mike@averys.net>
Sent: Monday, October 01, 2018 6:34 PM
To: Comments
Cc: Mike Avery
Subject: VSSA - Cobia PID

Name	Mike Wills
Street Address	3841 Jefferson Blvd
City, State, Zip Code	23455
Text	mwills98@yahoo.com
Phone Number	7574986276
My Comments to the Atlantic Cobia Amendment 1 PID	ISSUE 1: Recommended Management for Federal Waters What types of regulations should the Commission recommend be implemented into federal waters, e.g. quota, bag limits, seasons, size limits? We should go back to 37” total length size limits for the coast-wide areas. We believe the recreational bag limit should remain at one cobia per person per day, or 3 cobia per vessel per day, whichever is more restrictive, with only one fish over 50”. The issue of bag limits and seasons should be left to the individual states based on the allocation as cobia migrate differently for each state. Should vessels fishing in federal waters be subject to cobia regulations of their state of landing? For simplicity and clarity to avoid confusion there should only be one set of regulations (for each state) that cover both state and federal waters. While fishing for cobia it is not uncommon to criss-cross both state and federal waters. Having a single regulation for each state would make management and enforcement less confusing. Should state jurisdictional boundaries be extended by latitude to apply federal regulations in sectioned areas of federal waters? We believe the best management option should simply be the port of departure and return. Sometimes a boat may not be targeting cobia but find themselves geographically just over a state line and catch a cobia but will return to the port they departed from. Where ever the port the cobia is landed should be the regulation that applies to that trip.

Should a separate set of regulations be developed specifically for fishing in federal waters?

No (see above).

Should the Commission consider some other strategy?

See responses above.

ISSUE 2: Harvest Specification Process

For Both Commercial and Recreational Fisheries

If a coastwide limit continues to be considered, how should it be set?

The commercial quota is so small we recommend that management continue as a coast-wide stock. Attempting to divide the small commercial quota among the states would result very small individual quotas and management would be difficult.

For recreational management, we should use 37” inch total length size limits for the coast-wide areas. We believe the overall coast-wide Atlantic recreational bag limit should remain at one cobia per person per day, or 3 cobia per vessel per day, whichever is more restrictive, with only one over 50. The issue of bag limits and seasons should be left to the individual states as cobia migrate differently for each state. There should be a fair allocation for each state and each state should determine how it stays within that allocation with seasons and bag limits.

Please note, the current allocation of 620,000 lbs. for GA-NY is unfair and the process used to determine that is deeply flawed. Even if ASMFC accepts the results of SEDAR 58 to continue management separation at the GA/FL line, the allocations given to East Florida compared to the rest of the Atlantic coast is completely unfair and biased. We strongly recommend ASMFC work with SAFMC and the Gulf Council to ensure the allocation remains fair, balanced, and unbiased. Allowing a single state (Florida) to have an unfair, larger allocations for both their Atlantic Coast and Gulf Coasts is simply not right and unfair. We ask for fair allocations with no advantages and biases given to any single state or coast. As such, we should expect to see the Atlantic allocation increase to reflect fair allocations.

How should it be allocated?

Percentages to states based on historical landings.

To the commercial and recreational sectors?

See above and below.

To the states?

See above and below.

What options should be considered if the stock status is overfished or overfishing is occurring or if harvest limits/quotas/targets are exceeded?

Stability is what is desired by anglers and charter captains. Once a season is established there should be no changes to that current season. Charter captains plan out the year for expenses, bills, etc. and if seasons change or shut down could result in such disruptions in income it could shut them down completely as small business operator. We strongly believe we should not put management options in place that allow the commission to make in season changes. Sticking with the 3-year averages should be enough to manage the stocks. Stability is what is desired the most.

Should management regimes without coastwide harvest limits be considered? If so, what could those look like?

Every year the cobia seem to migrate farther north. We believe every state from GA to NY should have regulations in place to manage cobia.

For the Recreational Fishery

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Should commercial measures be set to remain in place for multi-year periods? Yes.

Should a coastwide landings permitting mechanism be established through the states for commercial harvest of Atlantic cobia in federal waters?

The mechanism for state landings should be the same for federal landings. There is no need to make the distinctions between state and federal waters. One set of limits should be applied to both state and federal waters.

Should the Commission recommend that NOAA fisheries require a federal permit to harvest cobia commercially in federal waters?

We don’t believe a federal permit should be required as long as the state has a process to manage commercial permits.

ISSUE 3: Biological Monitoring

Should states be required by the FMP to collect biological data on cobia?

States should have programs for voluntary contributions like Virginia. Many anglers have a strong desire to contribute to such a program that you have more data that needed. We would not support any mandatory program that requires anglers to participate because the sampling stations are sometime too far away.

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)?

Let the states establish their own program based on resources available.

Should biological monitoring be conducted for the commercial sector, recreational sector, or both?

Both but voluntary in nature.

What types of biological monitoring programs would you participate in? Examples include freezer donation or weigh-in stations.

Let the states establish their own program based on resources available.

Thank you for the opportunity to review the PID. I look forward to seeing the draft Amendment for Cobia.

Signed, Virginia Saltwater Sportfishing Association (VSSA) member or supporter.

IP Address	108.17.132.158
User-Agent (Browser/OS)	Apple Safari 11.0 / OS X
Referrer	http://joinvssa.org/action-plan/cobia/

Tina Berger

From: Virginia Saltwater Sportfishing Association VSSA [ifishva@gmail.com] <mike@averys.net>
Sent: Wednesday, September 26, 2018 9:25 AM
To: Comments
Cc: Mike Avery
Subject: VSSA - Cobia PID

Name	Corey Skay
Street Address	102 Thornrose Dr.
City, State, Zip Code	Yorktown, Va. 23692
Text	cskay@imiallc.com
Phone Number	251-348-1443
My Comments to the Atlantic Cobia Amendment 1 PID	ISSUE 1: Recommended Management for Federal Waters What types of regulations should the Commission recommend be implemented into federal waters, e.g. quota, bag limits, seasons, size limits? The regulations should stay the same as the 2018 Cobia season. Should vessels fishing in federal waters be subject to cobia regulations of their state of landing? For simplicity and clarity to avoid confusion there should only be one set of regulations (for each state) that cover both state and federal waters. While fishing for cobia it is not uncommon to criss-cross both state and federal waters. Having a single regulation for each state would make management and enforcement less confusing. Should state jurisdictional boundaries be extended by latitude to apply federal regulations in sectioned areas of federal waters? We believe the best management option should simply be the port of departure and return. Sometimes a boat may not be targeting cobia but find themselves geographically just over a state line and catch a cobia but will return to the port they departed from. Where ever the port the cobia is landed should be the regulation that applies to that trip. Should a separate set of regulations be developed specifically for fishing in federal waters? No (see above).

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IP Address	70.188.92.231
User-Agent (Browser/OS)	Mozilla Firefox 62.0 / Windows
Referrer	http://joinvssa.org/action-plan/cobia/

Tina Berger

From: Craig Freeman <gradingscalessportfishing@gmail.com>
Sent: Tuesday, September 25, 2018 1:14 PM
To: Comments
Subject: COBIA PID

Hello,

It was good meeting you at the VMRC building for the Cobia meeting last

week. After reflecting on what was said and re reading the draft, I would like to add the following comments.

First and foremost, it is not right that the Atlantic coast of Florida gets to have its own quota and the rest of the coast have to share a quota. Florida is an Atlantic state and should be grouped with the other states. If Florida's ASMFC Cobia quota was added to the total from GA-VA, we would not be having any of these discussions as the ACL will have never been exceeded. Florida's east coast should be included with the other states. I understand that this year's draft will still separate the cobia based on the Fla/Ga line, but that is a travesty that should have never happened. (end rant)

Issue one - Federal water management - The commission should recommend the following regs for federal waters. 1. Whatever the state of landing decides should be the federal regs. Ex - If I leave from and return to a VA port. The cobia regs for VA should be applied. Same thing NC, GA, and SC. The way it is currently, I could get a ticket in VA for having over the limit. Federal regs - 6 Fish per vessel, VA 3 fish per vessel recreational and 2 fish per card holder commercially. If come back to the dock with 6 fish and the marine patrol is doing inspections I would get a ticket even though I legal in federal waters.
The regs should be based on the port the fisherman leaves from and returns to.

Issue 2 - Harvest Process -For both comms and recs. Question 1 - I like the current allocations for both comms, and the recs. Question 2 - If overfishing occurs then it should be a payback situation or even a complete shutdown of the fishery. (if cobia are truly in danger of overfishing, a shut down of a year or two should solve that) QUESTION 3 - NO.

For the recreational fishery - question 1 - 36 inch fork length one per person or 6 per vessel whatever is more restrictive. Question 2 - No, leave it at three years.
Question 3 - I'm still not sure about this. Poundage is what is currently being used and what has brought us into this mess. My gut says change it to numbers, but I'm just not sure. We need more data.

For the commercial fishery - Question 1 - Current regs are fine, except they should match the state of where the fisherman leaves from and returns to. In federal waters a comm fisherman can keep 6 cobia per day. My state(VA) says only two per card holder up to 6 cobia a day. Federally I can keep 6, state says I can keep 2. Thats isn't right. I could potentially lose my commercial license by keeping 6 legal federally caught cobia when I return to port and get inspected by the marine patrol officers. The Marine patrol would say I was 4 over my limit and give a ticket even though I caught the fish in federal waters.
Question 2 - NO the current system is good, although I think reporting could be a little faster.
Question 3 - Either way. A permit isn't a big deal. Hopefully it will be free if implemented.

Issue 3 Biological Monitoring - Question 1 - Required? No, but I do think they should have a voluntary program, like the one VA has. Question 2 - Again not required but voluntary. Question 3 - definitely for the

rec sector. For the commercial sector the state already collects data through the mandatory reporting required of Comm fisherman. Question 4 - Yes, freezer donations and weigh stations.

I do have a question though. If nothing changes and ASFMC has a federal regulation and the states has a different one, which regs do I follow?

Thanks,

Craig

--
Capt. Craig Freeman
Grading Scales Sportfishing
Poquoson, VA
http://www.gradingscalessportfishing.com/

Tina Berger

From: ncpierrat1 <ncpierrat@gmail.com>
Sent: Monday, September 17, 2018 3:59 PM
To: Comments
Subject: Cobia Comment

Dear ASMFC I am Jon Worthington and I am a Recreational and Commercial Fisherman as well as Past President of the OBX Anglers Club from Camden and Southern Shores NC. Thank you for the opportunity to comment on cobia management in the Atlantic Ocean.
I am writing to the South Atlantic Board of the ASMFC to make recommendations for Amendment 1 of the ASMFC Cobia Fisheries Management Plan (FMP.) The federal management of cobia in the South Atlantic has featured numerous violations of the National Standards of the Magnuson Stevens Act, starting with the splitting of management zones, the unfair and inequitable allocation of catch quota to management zones, and the utilization of catch data estimates which do not fall within scientific standards for variation and efficacy. In order to appropriately manage this species, the issues associated with the SEDAR28 allocation must be addressed.
Cobia are a low encounter species, and their range is extending further north every single year. A large biomass of cobia winters off of the Carolina capes. Cobia are a primary charter boat catch in the Chesapeake Bay for nearly three waves (May through the middle of September each year.) None of these facts were referenced or factored into the SEDAR28 consideration.
We are hopeful that the cobia stock identification workshop will address these issues. Until those issues can be resolved, I would like to recommend the following management strategies:
1) Cobia should be managed using soft catch targets, using total number of fish instead of poundage of catch.

MRIP catch estimates, based on tiny samples, with a high level of catch data variance, and estimates of effort that can't be explained which have been rejected by every state fisheries manager, must not be utilized. the data that showed a single week (June 8-14, 2016) in a single state (Virginia) extrapolated nine interactions and two reported harvested fish into 479,000 pounds of recreational harvest. That 479,000 pounds represented 37% catch of the total harvest. When the week by week data was put into a scientific control chart (used to evaluate data quality) that single week was three sigmas outside of the standard deviation, which is a clear indication that the data collection had an error or was manipulated. There is not a single industry in the United States that would make a management decision based on data that included such significant outliers without conducting some kind of root-cause analysis to determine the cause of the outlier. Again, 2 reported harvested fish (a decent day for a good boat in Virginia waters) was turned into 479,000 pounds of catch by NOAA analysts, and we initially were told that data was good enough for management. This does not meet National Academy of Sciences standards for data quality.

The 2015 MRIP annual catch data is an even larger outlier. The 2015 MRIP annual catch (862,281 pounds in Virginia) represented a 349% increase in catch in Virginia over the average catch over the previous 7 years (192,007 pound average from 2008-2014) and a 402% increase over the previous year.

In North Carolina, the 2015 MRIP data also represented a significant outlier. The 2015 MRIP North Carolina harvest was 675,859 pounds, a 170% increase over the average harvest (250,099) from 2008-2014 and a 173% increase over the 2014 catch (247,386.)
The week to week 2015 data has not been made public to determine if their were individual outlier weeks with small sample sizes. However, the only justification for the catch increase by NOAA was an huge increase in the number of directed trips. No justification has been provided by NOAA to indicate how they determined the increase in directed trips as sampling or success rates did not significantly increase.

A different catch data measurement mechanism must be utilized.

2) Catch estimates should utilize the high sampling associated with mandated reporting. Mandates reporting should follow the Virginia Marine Resources program. A free license ensures compliance. Using this reporting mechanism, ASMFC should set catch totals based on numbers of fish.

With a low encounter species featuring small catch samples, the number of fish, rather than estimated weight, produces a much more effective measure size of the annual harvest of a species like cobia. Other species currently under complimentary management use this approach, rather than relying on total poundage which can be significantly altered based on a small number of large samples. Given the significant range of size for harvestable

cobia (a keeper fish can range from 25 pounds up to well over 100 pounds,) we ask for the Board to approve using the number of fish caught rather than poundage estimates for cobia.

3) For the first year of the FMP, ASFMC should utilize smoothing methods on MRIP catch estimates are being done for other fisheries like black seabass. To date, low encounter species with low sampling rates like cobia have not been subjected to smoothing methods for evaluation. Given the significant statistical variance in recent MRIP data, any decisions which do not leverage smoothing methods equate to not using best available science and scientific methods for making management decisions. We ask that you instruct NOAA staff to incorporate these methods for future review of state management plans and allocation.
4) Any and all decisions made by this board should ensure that fair and equitable access to the fishery is ensured, as required by federal law. The current proposals (where North Carolina recreational anglers can only harvest one fish per boat while South Carolina and Georgia will receive six per boat) do not reflect fair and equitable access to the harvest.
I am happy to provide additional data as needed.
Thank You for Your Consideration,

--
Jon Worthington
405 Japonica Drive
Camden NC 27921
252-562-2914

228th Session Graduate


Tina Berger

From: Alan Cochran <annalan50@gmail.com>
Sent: Wednesday, September 05, 2018 9:55 AM
To: Comments
Subject: cobia

Follow Up Flag: Follow up
Flag Status: Flagged

Menhaden fleet cobia bycatch has not been addressed. According to commercial fishermen on the eastern shore, a large number of cobia are caught with the menhaden by the Omega fleet catch boats. I have not seen it for myself, but the word is that they are dumped back in the water quite dead. Will there be an inquiry to this problem?

Virginia Saltwater Sportfishing Association (VSSA)
PO Box 28898
Henrico, VA 23228
www.ifishva.org

Dr. Michael Schmidtke
Atlantic States Marine Fisheries Commission
1050 N. Highland Street, Suite 200 A-N
Arlington VA, 22201

Subject: Cobia Amendment 1 PID October 1, 2018

Thank you for the opportunity to comment on the ASMFC Cobia Amendment 1 Public Information Document (PID). We appreciate you coming to Virginia to hear our concerns in person. Our comments to individual questions are enclosed. Our main concerns are:

- Have one set of regulations that are the same for both federal and state waters.
- Let the port of departure and return determine which state regulation is followed.
- Give us a fair allocation of the resource for the entire Atlantic coast from Key West to New York.
- Give us stability in regulations with no in season changes and no closures once a season starts.
- Use numbers of fish (not pounds) to estimate overall catches.
- Let the states determine their own bag limits and seasons based on the allocation using historical 3-year catch estimates.

We look forward to reviewing the draft Amendment 1 once released for comment.

Sincerely,

Mike Avery
Mike Avery
President

VSSA Comments to questions for the Atlantic Cobia Amendment 1 PID

http://www.mrc.state.va.us/Notices/2018/2018-08-Cobia-PID-Hearings-Memo.pdf

ISSUE 1: Recommended Management for Federal Waters

What types of regulations should the Commission recommend be implemented into federal waters, e.g. quota, bag limits, seasons, size limits? *We should retain the 36-inch fork length or 40-inch total length size limits for the coast-wide areas. We believe the federal coast-wide recreational bag limit should remain at one cobia per person per day, or six cobia per vessel per day, whichever is more restrictive. The issue of bag limits and seasons should be left to the individual states based on the allocation as cobia migrate differently for each state.*

Should vessels fishing in federal waters be subject to cobia regulations of their state of landing?

For simplicity and clarity to avoid confusion there should only be one set of regulations (for each state) that cover both state and federal waters. While fishing for cobia it is not uncommon to criss-cross both state and federal waters. Having a single regulation for each state would make management and enforcement less confusing.

Should state jurisdictional boundaries be extended by latitude to apply federal regulations in sectioned areas of federal waters?

We believe the best management option should simply be the port of departure and return. Sometimes a boat may not be targeting cobia but find themselves geographically just over a state line and catch a cobia but will return to the port they departed from. Where ever the port the cobia is landed should be the regulation that applies to that trip.

Should a separate set of regulations be developed specifically for fishing in federal waters? *No (see above).*

Should the Commission consider some other strategy? *See responses above.*

ISSUE 2: Harvest Specification Process

For Both Commercial and Recreational Fisheries

VSSA Comments to questions for the Atlantic Cobia Amendment 1 PID

http://www.mrc.state.va.us/Notices/2018/2018-08-Cobia-PID-Hearings-Memo.pdf

If a coastwide limit continues to be considered, how should it be set? *The commercial quota is so small we recommend that management continue as a coast-wide stock. Attempting to divide the small commercial quota among the states would result very small individual quotas and management would be difficult.*

For recreational management, we should retain the 36 inch fork length or 40 inch total length size limits for the coast-wide areas. We believe the federal coast-wide recreational bag limit should remain at one cobia per person per day, or six cobia per vessel per day, whichever is more restrictive. The issue of bag limits and seasons should be left to the individual states as cobia migrate differently for each state. There should be a fair allocation for each state and each state should determine how is stays within that allocation with seasons and bag limits.

Please note, the current allocation of 620,000 lbs. for GA-NY is unfair and the process used to determine that is deeply flawed. Even if ASMFC accepts the results of SEDAR 58 to continue management separation at the GA/FL line, the allocations given to East Florida compared to the rest of the Atlantic coast is completely unfair and biased. We strongly recommend ASMFC work with SAFMC and the Gulf Council to ensure the allocation remains fair, balanced, and unbiased. Allowing a single state (Florida) to have an unfair, larger allocation for both their Atlantic Coast and Gulf Coasts is simply not right and unfair. We ask for fair allocations with no advantages and biases given to any single state or coast. As such, we would expect to see the Atlantic allocation increase to reflect fair allocations.

How should it be allocated? *Percentages to states based on historical landings.*

To the commercial and recreational sectors? *See above and below.*

To the states? *See above and below.*

What options should be considered if the stock status is overfished or overfishing is occurring or if harvest limits/quotas/targets are exceeded? *Stability is what is desired by anglers and charter captains. Once a season is established there should be no changes to that current season. Charter captains plan out the year for expenses, bills, etc. and if seasons change or shut down could result in such disruptions in income it could shut them down completely as small business operators. We strongly believe we should not put management options in place that allow the commission to make in season changes. Sticking with the 3-year averages should be enough to manage the stocks. Stability is what is desired the most.*

VSSA Comments to questions for the Atlantic Cobia Amendment 1 PID

http://www.mrc.state.va.us/Notices/2018/2018-08-Cobia-PID-Hearings-Memo.pdf

Should management regimes without coastwide harvest limits be considered? If so, what could those look like? *Every year the cobia seem to migrate farther north. We believe every state from GA to NY should have regulations in place to manage cobia.*

For the Recreational Fishery

What recreational management options should be allowed for consideration in the specification process? *We should retain the 36-inch fork length or 40-inch total length size limits for the coast-wide areas. We believe the recreational bag limit should remain at one cobia per person per day, or six cobia per vessel per day, whichever is more restrictive. The issue of bag limits and seasons should be left to the individual states as cobia migrate differently for each state. There should be a fair allocation for each state and each state should determine how is stays within that allocation with seasons and bag limits.*

Please note, the current allocation of 620,000 lbs. for GA-NY is unfair and the process used to determine that is deeply flawed. Even if ASMFC accepts the results of SEDAR 58 to continue management separation at the GA/FL line, the allocations given to East Florida compared to the rest of the Atlantic coast is completely unfair and biased. We strongly recommend ASMFC work with SAFMC and the Gulf Council to ensure the allocation remains fair, balanced, and unbiased. Allowing a single state (Florida) to have an unfair, larger allocations for both their Atlantic Coast and Gulf Coasts is simply not right and unfair. We ask for fair allocations with no advantages and biases given to any single state or coast. As such, we should expect to see the Atlantic allocation increase to reflect fair allocations.

The state allocation should be based a fair percentage based on historical landing.

Should the current 3-year time period for evaluating recreational harvests against management targets be reduced? *No!!!!*

Should recreational harvests be evaluated in numbers of fish or pounds? *We would like to see numbers of fish used to estimate overall catch. The MRIP estimate process is deeply flawed as all it takes one large fish that get intercepted to grossly over estimate the overall estimates.*

VSSA Comments to questions for the Atlantic Cobia Amendment 1 PID

http://www.mrc.state.va.us/Notices/2018/2018-08-Cobia-PID-Hearings-Memo.pdf

For the Commercial Fishery

What commercial management options should be allowed for consideration in the specification process? *The commercial quota is so small we recommend that management continue as a coast-wide stock. Attempting to divide the small commercial quota among the states would result very small individual quotas.*

We recommend Amendment 1 be clarified to allow commercial crews to have only 1 commercial permit holder on the vessel with 2 per person as the limit. The current interpretation of the regulation that limits the per person limit to only 2 cobia per permit holder severely puts the commercial permit holder at such an extreme disadvantage that fishing for cobia commercially is not economically viable. A commercial operator that can only bring in 2 cobia would barely cover the trip expenses. The quota is so small that the effects on the overall stock is inconsequential.

Should commercial measures be set to remain in place for multi-year periods? *Yes.*

Should a coastwide landings permitting mechanism be established through the states for commercial harvest of Atlantic cobia in federal waters?

The mechanism for state landings should be the same for federal landings. There is no need to make the distinctions between state and federal waters. One set of limits should be applied to both state and federal waters.

Or, should the Commission recommend that NOAA fisheries require a federal permit to harvest cobia commercially in federal waters?

We don't believe a federal permit should be required as long as the state has a process to manage commercial permits.

ISSUE 3: Biological Monitoring

Should states be required by the FMP to collect biological data on cobia? *States should have programs for voluntary contributions like Virginia. Many anglers have a strong desire to contribute to such a program that you have more data that needed. We would not support any*

VSSA Comments to questions for the Atlantic Cobia Amendment 1 PID

http://www.mrc.state.va.us/Notices/2018/2018-08-Cobia-PID-Hearings-Memo.pdf

mandatory program that requires anglers to participate because the sampling stations are sometime too far away.

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)? *Let the states establish their own program based on resources available.*

Should biological monitoring be conducted for the commercial sector, recreational sector, or both? *Both but voluntary in nature.*

What types of biological monitoring programs would you participate in? Examples include freezer donation or weigh-in stations. *Let the states establish their own program based on resources available.*

Letter submitted by 31 individuals.

Tina Berger

From: Virginia Saltwater Sportfishing Association VSSA [ifishva@gmail.com] <mike@averys.net>
Sent: Wednesday, September 26, 2018 8:06 PM
To: Comments
Cc: Mike Avery
Subject: VSSA - Cobia PID

Name	Michael Avery
Street Address	32 Mizzen Circle
City, State, Zip Code	Hampton
Text	Email Address
Phone Number	7578502149
My Comments to the Atlantic Cobia Amendment 1 PID	ISSUE 1: Recommended Management for Federal Waters What types of regulations should the Commission recommend be implemented into federal waters, e.g. quota, bag limits, seasons, size limits? We should retain the 36-inch fork length or 40-inch total length size limits for the coast-wide areas. We believe the recreational bag limit should remain at one cobia per person per day, or six cobia per vessel per day, whichever is more restrictive. The issue of bag limits and seasons should be left to the individual states based on the allocation as cobia migrate differently for each state. Should vessels fishing in federal waters be subject to cobia regulations of their state of landing? For simplicity and clarity to avoid confusion there should only be one set of regulations (for each state) that cover both state and federal waters. While fishing for cobia it is not uncommon to criss-cross both state and federal waters. Having a single regulation for each state would make management and enforcement less confusing. Should state jurisdictional boundaries be extended by latitude to apply federal regulations in sectioned areas of federal waters? We believe the best management option should simply be the port of departure and return. Sometimes a boat may not be targeting cobia but find themselves geographically just over a state line and catch a cobia but will return to the port they departed from. Where ever the port the cobia is landed should be the regulation that applies to that trip.

Should a separate set of regulations be developed specifically for fishing in federal waters?

No (see above).

Should the Commission consider some other strategy?

See responses above.

ISSUE 2: Harvest Specification Process

For Both Commercial and Recreational Fisheries

If a coastwide limit continues to be considered, how should it be set?

The commercial quota is so small we recommend that management continue as a coast-wide stock. Attempting to divide the small commercial quota among the states would result very small individual quotas and management would be difficult.

For recreational management, we should retain the 36 inch fork length or 40 inch total length size limits for the coast-wide areas. We believe the overall coast-wide Atlantic recreational bag limit should remain at one cobia per person per day, or six cobia per vessel per day, whichever is more restrictive. The issue of bag limits and seasons should be left to the individual states as cobia migrate differently for each state. There should be a fair allocation for each state and each state should determine how it stays within that allocation with seasons and bag limits.

Please note, the current allocation of 620,000 lbs. for GA-NY is unfair and the process used to determine that is deeply flawed. Even if ASMFC accepts the results of SEDAR 58 to continue management separation at the GA/FL line, the allocations given to East Florida compared to the rest of the Atlantic coast is completely unfair and biased. We strongly recommend ASMFC work with SAFMC and the Gulf Council to ensure the allocation remains fair, balanced, and unbiased. Allowing a single state (Florida) to have an unfair, larger allocations for both their Atlantic Coast and Gulf Coasts is simply not right and unfair. We ask for fair allocations with no advantages and biases given to any single state or coast. As such, we should expect to see the Atlantic allocation increase to reflect fair allocations.

How should it be allocated?

Percentages to states based on historical landings.

To the commercial and recreational sectors?

See above and below.

To the states?

See above and below.

What options should be considered if the stock status is overfished or overfishing is occurring or if harvest limits/quotas/targets are exceeded?

Stability is what is desired by anglers and charter captains. Once a season is established there should be no changes to that current season. Charter captains plan out the year for expenses, bills, etc. and if seasons change or shut down could result in such disruptions in income it could shut them down completely as small business operator. We strongly believe we should not put management options in place that allow the commission to make in season changes. Sticking with the 3-year averages should be enough to manage the stocks. Stability is what is desired the most.

Should management regimes without coastwide harvest limits be considered? If so, what could those look like?

Every year the cobia seem to migrate farther north. We believe every state from GA to NY should have regulations in place to manage cobia.

For the Recreational Fishery

What recreational management options should be allowed for consideration in the specification process?

We should retain the 36-inch fork length or 40-inch total length size limits for the coast-wide areas. We believe the recreational bag limit should remain at one cobia per person per day, or six cobia per vessel per day, whichever is more restrictive. The issue of bag limits and seasons should be left to the individual states as cobia migrate differently for each state. There should be a fair allocation for each state and each state should determine how is stays within that allocation with seasons and bag limits.

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The state allocation should be based a fair percentage based on historical landing.

Should the current 3-year time period for evaluating recreational harvests against management targets be reduced? No!!!!!!!

Should recreational harvests be evaluated in numbers of fish or pounds?

We would like to see numbers of fish used to estimate overall catch. The MRIP estimate process is deeply flawed as all it takes one large fish that get intercepted to grossly over estimate the overall estimates.

For the Commercial Fishery

What commercial management options should be allowed for consideration in the specification process?

The commercial quota is so small we recommend that management continue as a coast-wide stock. Attempting to divide the small commercial quota among the states would result very small individual quotas. We recommend Amendment 1 be clarified to allow commercial crews to have only 1 commercial permit holder on the vessel with 2 per person as the limit. The current interpretation of the regulation that limits the per person limit to only 2 cobia per permit holder severely puts the commercial permit holder at such an extreme disadvantage that fishing for cobia commercially is not economically viable. If only 2 cobia are caught that barely pays the expenses for the trip. The quota is so small that the effects on the overall stocks is inconsequential.

Should commercial measures be set to remain in place for multi-year periods? Yes.

Should a coastwide landings permitting mechanism be established through the states for commercial harvest of Atlantic cobia in federal waters?

The mechanism for state landings should be the same for federal landings. There is no need to make the distinctions between state and federal waters. One set of limits should be applied to both state and federal waters.

Should the Commission recommend that NOAA fisheries require a federal permit to harvest cobia commercially in federal waters?

We don’t believe a federal permit should be required as long as the state has a process to manage commercial permits.

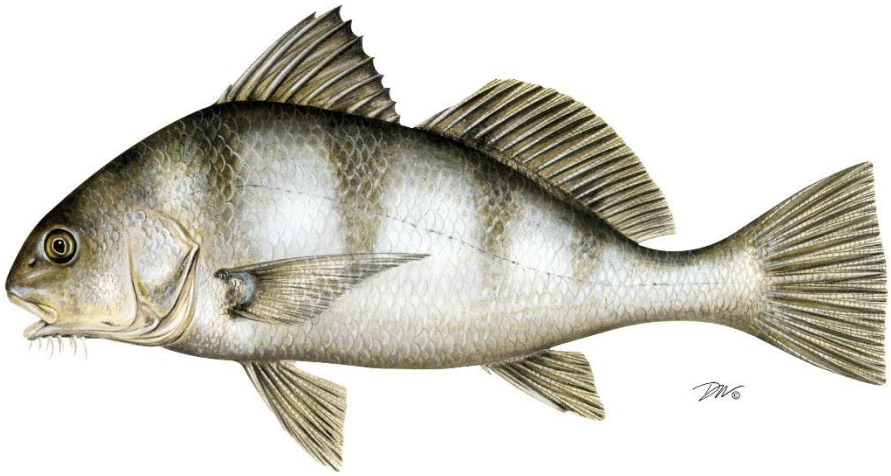
ISSUE 3: Biological Monitoring

	Should states be required by the FMP to collect biological data on cobia? States should have programs for voluntary contributions like Virginia. Many anglers have a strong desire to contribute to such a program that you have more data that needed. We would not support any mandatory program that requires anglers to participate because the sampling stations are sometime too far away. 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)? Let the states establish their own program based on resources available. Should biological monitoring be conducted for the commercial sector, recreational sector, or both? Both but voluntary in nature. What types of biological monitoring programs would you participate in? Examples include freezer donation or weigh-in stations. Let the states establish their own program based on resources available. Thank you for the opportunity to review the PID. I look forward to seeing the draft Amendment for Cobia. Signed, Virginia Saltwater Sportfishing Association (VSSA) member or supporter.
IP Address	98.166.175.200
User-Agent (Browser/OS)	Google Chrome 64.0.3282.140 / Windows
Referrer	http://joinvssa.org/action-plan/cobia/

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

BLACK DRUM (*Pogonias cromis*)

2017 FISHING YEAR



The Black Drum Plan Review Team

Dr. Michael Schmidtke, Chair, Atlantic States Marine Fisheries Commission
Jordan Zimmerman, Delaware Division of Fish and Wildlife
Chris Stewart, North Carolina Division of Marine Fisheries
Chris McDonough, South Carolina Department of Natural Resources

Table of Contents

I. Status of the Fishery Management Plan

Date of FMP Approval:	Original FMP – June 2013
Management Areas:	The entire Atlantic coast distribution of the resource from New Jersey through the east coast of Florida
Active Boards/Committees:	South Atlantic State/Federal Fisheries Management Board; Black Drum Technical Committee, Stock Assessment Subcommittee, Plan Review Team; South Atlantic Species Advisory Panel

The Atlantic States Marine Fisheries Commission (ASMFC) adopted an interstate Fishery Management Plan (FMP) for Black Drum in 2013. Prior to the FMP, management was state-specific, from no regulations in North Carolina to various combinations of size limits, possession limits, commercial trip limits, and/or annual commercial quotas from New Jersey to Florida. The Maryland portion of the Chesapeake Bay was closed to commercial fishing in 1998.

The FMP requires all states with a declared interest in the species to have established a maximum possession limit and minimum size limit of at least 12 inches by January 1, 2014, and to have increased the minimum size limit to at least 14 inches by January 1, 2016. The FMP also includes a management framework to adaptively respond to future concerns or changes in the fishery or population.

There are four plan objectives:

- Provide a flexible management system to address future changes in resource abundance, scientific information, and fishing patterns among user groups or area.
- Promote cooperative collection of biological, economic, and sociological data required to effectively monitor and assess the status of the black drum resource and evaluate management efforts.
- Manage the black drum fishery to protect both young individuals and established breeding stock.
- Develop research priorities that will further refine the black drum management program to maximize the biological, social, and economic benefits derived from the black drum population.

The management unit for black drum under the FMP is defined as the range of the species within U.S. waters of the northwest Atlantic Ocean, from the estuaries eastward to the offshore boundaries of the Exclusive Economic Zone (EEZ).

In 2018, Addendum I allowed Maryland to reopen their commercial fishery in the Chesapeake Bay, starting in the 2019 fishing year (ASMFC 2018). Prior to this addendum, a commercial moratorium was in place for these waters due to the FMP's requirement that states maintain measures in place at the time of the FMP's approval.

II. Status of the Stocks

In the 2015 Black Drum Benchmark Stock Assessment, the Stock Assessment Subcommittee (SAS) selected the Depletion-Based Stock Reduction Analysis (DB-SRA; Dick and McCall 2011) as the preferred method for estimating catch reference points. The SAS considered the Depletion-Corrected Average Catch (DCAC; McCall 2009) analysis, but ultimately rejected this method. DCAC did not incorporate removals into a population dynamics process, and uncertainty existed over how changes in the exploitation rate time series may impact the sustainable yield relative to the current stock condition.

Based on the DB-SRA results, black drum life history, indices of abundance, and history of exploitation, the black drum stock is not overfished and not experiencing overfishing (ASMFC 2015). Median biomass exhibited slow and steady decline from 135.2 million pounds in 1900 to 90.78 million pounds in 2012, though the median biomass estimate in 2012 is still well above the necessary level to produce maximum sustainable yield (B_{MSY}; 47.26 million pounds) (Figure 1). The median maximum sustainable yield (MSY) estimate is 2.12 million pounds and provides an annual catch target that can be used to sustainably manage the fishery. The median overfishing limit (OFL) estimate is 4.12 million pounds and provides a catch threshold that indicates overfishing when exceeded. The OFL is the maximum exploitation rate at the current biomass that does not lead to overfishing.

III. Status of the Fishery

This report includes updated recreational estimates from the Marine Recreational Information Program's transition to the mail-based Fishing Effort Survey (FES) on July 1, 2018. Therefore, recreational estimates will likely be different from those shown in past FMP Reviews and state compliance reports (due annually on July 1) through 2018. Figure 2 shows coastwide recreational landings including estimates using both the previous Coastal Household Telephone Survey (CHTS) and FES calibration for comparison, but other figures, tables, and text will only show data based on the FES calibration. Data based on either survey can be referenced at: https://www.st.nmfs.noaa.gov/st1/recreational/queries/.

Total black drum landings from New Jersey through the east coast of Florida are estimated at 6.6 million pounds in 2017, a 5% decrease from total harvest in 2016 (Tables 2 and 3, Figure 3). 2017 harvest is 1.7% below the previous ten-year (2007-2016) average. The commercial and recreational fisheries harvested 4.4% and 95.6% of the 2017 total, respectively.

Commercial landings of black drum span from New Jersey through Florida, excluding the Maryland portion of the Chesapeake Bay (Table 2). Coastwide commercial landings show no particular temporal trends, ranging from approximately 120,000 to 400,000 pounds annually over the last 13 years (Figure 3). Black drum commercial landings in 2017 were estimated at 294,396 pounds, a 35% decrease from those of 2016. North Carolina led commercial harvest with 62% of the landings, followed by Virginia and Florida with 15% and 14%, respectively (Table 2).

Recreational harvest of black drum peaked by weight in 2008 at 10.7 million pounds (Table 3) and by numbers of fish in 2003 at 2.3 million (Table 4). Since 2000, weight has fluctuated without trend between 3.3 and 10.7 million pounds, and numbers of fish have fluctuated between 890 thousand and 2.9 million fish (Figures 3 and 4).

Average weight (recreational harvest in pounds divided by recreational harvest in numbers) in 2017 was 3.64 pounds per fish, an 11% increase from 2016. Years that have shown large increases in coastwide average weight (i.e. increases to recreational harvest in pounds without proportional increase to recreational harvest in numbers) have typically occurred during years when Mid-Atlantic states (Virginia-New Jersey) have caught increased percentages of the coastwide recreational harvest (Tables 3 and 4).

The 2017 recreational harvest (1.7 million fish or 6.3 million pounds) represents an 8% decrease in numbers and a 2% decrease in pounds from the previous ten year (2007-2016) average. Florida anglers landed the largest share of the coastwide recreational harvest in numbers (60%), followed by North Carolina (20%) and South Carolina (14%). Since the beginning of the recreational time series (1981) anglers have released increasing percentages of caught fish, with percentages of recreational fish released exceeding 70% in each of the past 4 years. In 2017, 78% (6.1 million fish) of the recreational catch was released (Figure 4, Table 5). It is worth noting that release rates seemingly plateaued around 50% from the late 1990s through 2013, when the FMP took effect, establishing minimum sizes in every state and requiring that undersized drum be released for the first time. Recent high release rates can be attributed to these measures, as well as encouragement of catch and release practices.

IV. Status of Assessment Advice

Current stock status information comes from the 2015 benchmark stock assessment (ASMFC 2015) completed by the ASMFC Black Drum Stock Assessment Subcommittee and Technical Committee, peer reviewed by an independent panel of experts, and approved by the South Atlantic State-Federal Fisheries Management Board for use in management decisions.

The stock assessment could be improved by applying a more complex, data-rich assessment method such as a statistical catch-at-age model. Data limitations that need to be addressed to successfully make this transition are biological sampling (length and age) of recreational and commercial fisheries and a fishery-independent survey to track abundance and age structure of the mature stock. Additionally, information about commercial discards and movement of fish along coast and between water depths would improve the assessment.

V. Status of Research and Monitoring

There are no monitoring or research programs required annually of the states except for the submission of a compliance report. The following fishery-dependent (other than catch and effort data) and fishery-independent monitoring programs were reported in the 2017 reports.

Fishery Dependent Monitoring

- Delaware DFW – Black Drum were sampled from the commercial fishery for total length, weight, sex, and age (2017: 63 fish).
- Maryland DNR – Conducted commercial pound net survey from late spring through summer. (2017: 0 fish).
- Virginia MRC –
    - Conducted a biological monitoring program to sample commercial and recreational harvest (2017 – commercial: 76 samples for length and weight, 45 for sex and age; recreational: 37 samples for length, 9 for weight, 36 for sex, and 34 for age).
    - Conducted Virginia Game Fish Tagging Program with volunteer anglers (2017: 115 fish tagged and 8 recaptured).
- North Carolina DMF – Conducted commercial sampling of black drum bycatch (2017: n=549; mean total length=18 in).
- South Carolina DNR – Terminated the state finfish survey and took over MRIP intercept sampling in 2013 (information reported through MRIP). Commercially reported black drum are captured through commercial monitoring program.
- Georgia CRD – Collected age, length, and sex data through the Marine Sportfish Carcass Recovery Project (2017: 100 black drum, mean length 416 mm centerline length).
- Florida FWC – Conducted Florida trip ticket program monitoring commercial catch and effort. Numbers of fish per trip in 2017 decreased from 2016, but were above the long-term average of the time series (1986-2017).
- NMFS – Collected recreational catch, harvest, release, and effort data, as well as length measurements via MRIP.

Fishery Independent Monitoring

- New Jersey DEP –
    - Ocean Trawl Survey: 30-year time series average is 0.16 (2017: 0.14).
    - Delaware Bay Trawl: 27-year time series average is 0.16 (2017: 0.31)
    - Delaware River Seine: 38-year time series average is 0.07 (2017: 0.23).
- Delaware DFW – Conducted two finfish trawl surveys (16ft for juveniles; 30ft for adults). Older than young-of-year (YOY) black drum are rarely captured, and no long term trend is evident.
- Maryland DNR – Conducted the Coastal Bays Fisheries Seine Survey in Maryland's coastal bay and generally catches juvenile fish. Annual mean catch per haul exhibits no trend and high variation. Annual mean catch per haul in 2017 was near the time series mean and increased for the second year following a low 2015 value.
- North Carolina DMF – Conducted a gill net survey in Pamlico Sound to characterize size and age distribution, and to produce an abundance index (2017: CPUE=1.17, above the time series average of 1.01).
- South Carolina DNR – Conducted an estuarine trammel net survey for subadult abundance (2017: CPUE=0.199, decrease from 2016).
- Georgia CRD –

  - Conducted an estuarine trammel net survey for subadult biological data and abundance index (2017 – Altamaha: n=22, CPUE=0.22; Wassaw: n=14, CPUE=0.09).
  - Conducted an estuarine gill net survey for YOY biological data and abundance index (2017 – Altamaha: n=11, CPUE=0.06; Wassaw: n=1, CPUE=0.01).
- Florida FWC-FWRI – Conducted two seine surveys monthly in northeast and central southeast Florida to develop annual estimates of adult relative abundance. Declining trend is seen in the northeast, while the southeast exhibits an increasing trend.

VI. Status of Management Measures and Issues

Fishery Management Plan
The Black Drum FMP requires all states with a declared interest in the species to have established a maximum possession limit and minimum size limit of at least 12 inches by January 1, 2014, and to have increased the minimum size limit to no less than 14 inches by January 1, 2016.

De Minimis
The black drum FMP allows states to request *de minimis* status if, for the preceding three years for which data are available, their average combined commercial and recreational landings (by weight) constitute less than 1% of the average coastwide commercial and recreational landings for the same three-year period. A state that qualifies for *de minimis* will qualify for exemption in both their commercial and recreational fisheries.

De Minimis Requests
No state requested *de minimis* status through the annual reporting process.

VII. Implementation of FMP Compliance Requirements for 2014 and 2015

The PRT finds that all states have implemented the requirements of the Fishery Management Plan.

VIII. Recommendations of the Plan Review Team

<u>Management and Regulatory Recommendations</u> (H) =High, (M) =Medium, (L) =Low

- Develop management mechanism (e.g., traffic light analysis) to evaluate annual fishery independent and dependent indices to assess stock status and recommend management action if needed. (H)

<u>Prioritized Research and Monitoring Recommendations</u> (H) =High, (M) =Medium, (L) =Low

Stock Assessment and Population Dynamics

- Update the 2015 stock assessment or conduct a new benchmark stock assessment that includes the recalibrated MRIP recreational harvest estimates based on the new, mail-based FES. (H)
- Age otoliths that have been collected and archived. (H)

- Collect information to characterize the size composition of fish discarded in recreational fisheries. (H)
- Collect information on the magnitude and sizes of commercial discards. Obtain better estimates of black drum bycatch in other fisheries, especially juvenile fish in south Atlantic states. (H)
- Increase biological sampling in commercial fisheries to better characterize the size and age composition of commercial fisheries by state and gear. (H)
- Increase biological sampling in recreational fisheries to better characterize the size and age composition by state and wave. (H)
- Obtain estimates of selectivity-at-age for commercial fisheries by gear, recreational harvest, and recreational discards. (H)
- Continue all current fishery-independent surveys and collect biological samples for black drum on all surveys. (H)
- Develop fishery-independent adult surveys. Consider long line and purse seine surveys. (H)
- Collect age samples, especially in states where maximum size regulations preclude the collection of adequate adult ages. (H)
- Conduct a high reward tagging program to obtain improved return rate estimates. Continue and expand current tagging programs to obtain mortality and growth information and movement at size data. (H)
- Conduct tagging studies using implanted radio tracking tags that are compatible with coastal tracking arrays along the Atlantic coast in order to track movement and migration of adults. (H)
- Conduct studies to estimate catch and release mortality rates in recreational fisheries. (H)
- Conduct reproductive studies, including: age and size-specific fecundity, spawning frequency, spawning behaviors by region, and movement and site fidelity of spawning adults. (H)
- Improve sampling of night time fisheries. (M)
- Collect genetic material (i.e., create “genetic tags”) over a long time span to obtain information on movement and population structure, and potentially estimate population size. (M)
- Obtain better estimates of harvest from the black drum recreational fishery, especially in states with short seasons. (M)

IX. References

ASMFC. 2013. Interstate Fishery Management Plan for Black Drum. Arlington, VA.

ASMFC. 2015. Black Drum Stock Assessment for Peer Review. Atlantic States Marine Fisheries Commission, Stock Assessment Report. 352 p.

ASMFC. 2018. Addendum I to the Black Drum Interstate Fishery Management Plan. Arlington, VA.

Dick, E.J. and MacCall, A.D. 2011. Depletion-Based Stock Reduction Analysis: A catch-based method for determining sustainable yields for data-poor fish stocks. Fisheries Research, 110: 331-341

MacCall, A.D. 2009. Depletion-Corrected Average Catch: a simple formula for estimating sustainable yields in data-poor situations. ICES Journal of Marine Science, 66: 2267-2271.

X. Figures

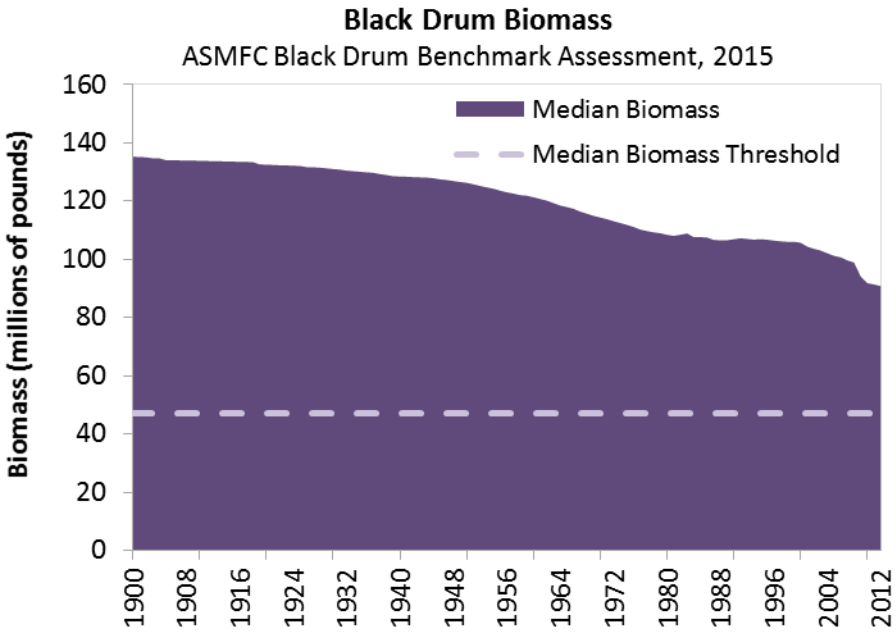


Figure 1. DB-SRA estimates of Median biomass and threshold 1900-2012 (Source: ASMFC 2015).

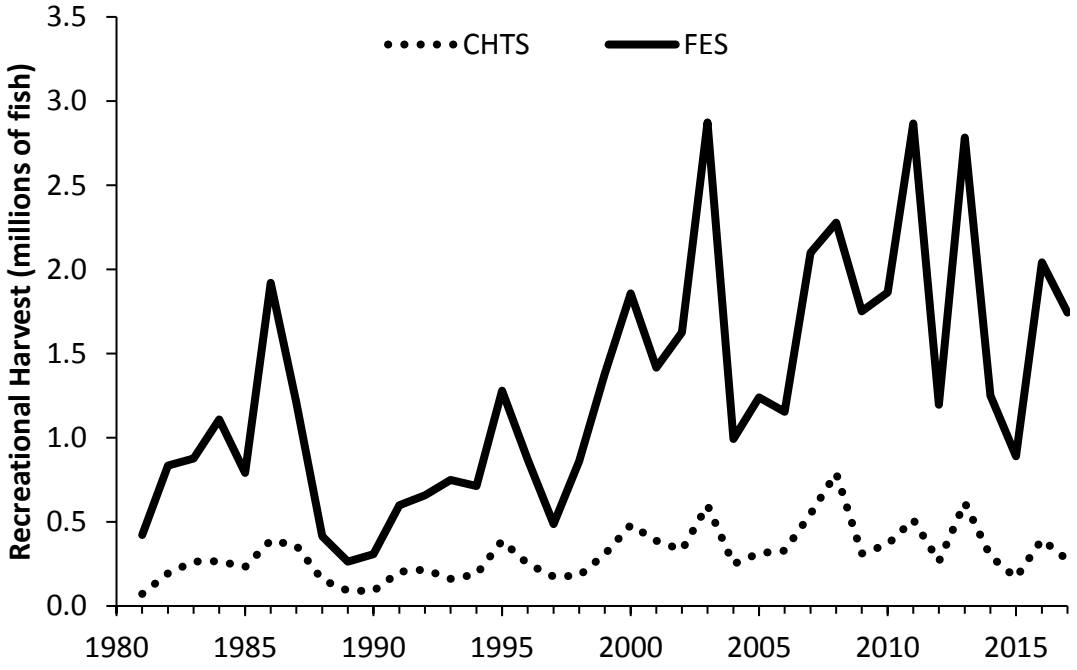


Figure 2. Recreational harvest estimated using the Coastal Household Telephone Survey (CHTS) and the mail-based Fishing Effort Survey (FES). (Source: personal communication with NOAA Fisheries, Fisheries Statistics Division. [10/06/2018])

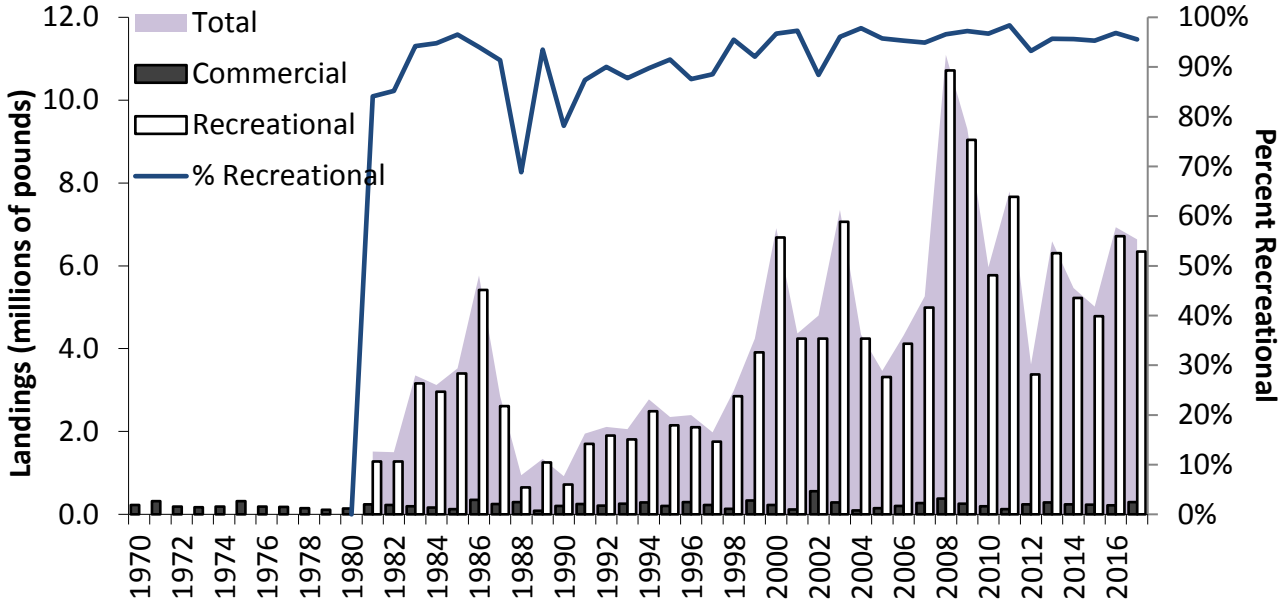


Figure 3. Commercial and recreational landings (pounds) of black drum. Recreational data not available prior to 1981. See Tables 2 and 3 for values and data sources.

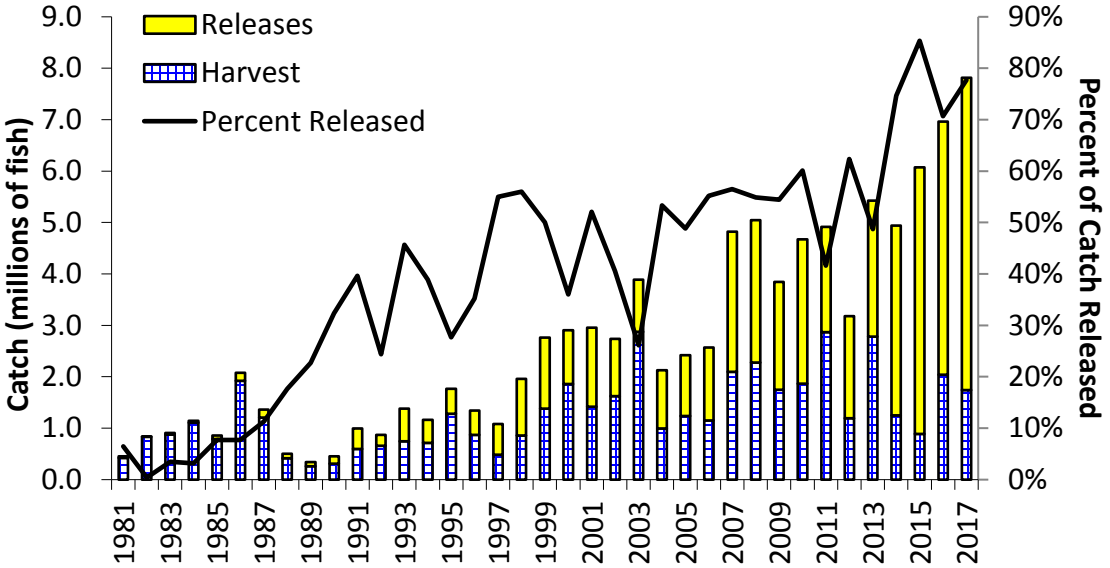


Figure 4. Recreational catch (harvest and alive releases) of black drum (numbers) and the proportion of catch that is released. See Tables 4 and 5 for values and data sources.

XI. Tables

Table 1. Black drum regulations for 2017. The states of New Jersey through Florida are required to meet the requirements in the FMP. All size limits are total length.

State	Recreational		Commercial			Notes
	Size limit	Bag limit	Size limit	Trip Limit	Annual Quota	
ME - NY	-	-	-	-	-	
NJ	16” min	3/person/day	16” min	10,000 lbs	65,000 lbs	
DE	16” min	3/person/day	16” min	10,000 lbs	65,000 lbs	
MD	16” min	1/person/day 6/vessel (Bay)	16” min		1,500 lbs Atlantic Coast	Chesapeake Bay closed to commercial harvest. May reopen in the future due to Addendum I.
VA	16” min	1/person/ day	16” min	1/person/ day*	120,000 lbs	*without Black Drum Harvesting and Selling Permit
NC	14” min - 25” max; 1 fish > 25” may be retained	10/person/ day	14” min - 25” max	500 lbs		
SC	14” min - 27” max	5/person/day	14” min - 27” max	5/person/day		Commercial fishery primarily bycatch
GA	14” min	15/person/ day	14” min	15/person/ day		
FL	14” min - 24” max; 1 fish >24” may be retained	5/person/day	14” min - 24” max	500 lbs/day		

Table 2. Commercial landings (pounds) of black drum by state, 2003-2017. (Sources: 2018 state compliance reports for 2017 fishing year; for years prior to 2017, personal communication with ACCSP, Arlington, VA [10/06/2018])

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2003	12,624	1,686	904	113,858	148,785		*	9,511	287,368
2004	15,708	4,200	1,082	*	62,445		*	12,653	96,088
2005	1,970	*	270	95,233	44,989		*	5,249	147,710
2006	19,657	*	2,319	52,322	125,214		*	3,998	203,510
2007	1,518	37,711	318	67,730	148,231		*	12,770	268,279
2008	1,487	9,724	*	44,040	301,998	*	*	19,348	376,597
2009	6,408	30,563	198	57,249	148,994		*	15,710	259,122
2010	3,079	49,744	*	58,150	69,194		*	15,684	195,851
2011	3,130	*	*	44,620	56,083		*	22,295	126,128
2012	19,017	10,943	571	104,237	94,352	*		14,302	243,422
2013	16,251	24,640	2,145	87,235	127,170	*	*	28,460	285,901
2014	9,270	*	*	88,402	51,217			91,587	240,476
2015	6,478	39,282	*	86,947	51,073			50,477	234,257
2016	2,210	49,109	*	49,859	89,886	*		26,978	218,042
2017	21,248	3,800	510	44,579	182,979	*	0	41,280	294,396

*indicates confidential landings because less than three dealers reported.

Table 3. Recreational harvest (pounds) of black drum by state, 2003-2017. Values shown are mail-based Fishing Effort Survey (FES)-calibrated estimates. (Sources: 2018 state compliance reports for 2017 fishing year; for years prior to 2017, personal communication with NOAA Fisheries, Fisheries Statistics Division. [10/06/2018])

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2003	553,944	0	70,067	108,859	1,926,671	608,714	277,998	3,517,231	7,063,484
2004	1,086,448	12,888	7,011	25,189	566,484	73,179	207,176	2,264,948	4,243,323
2005	410,302	8,254	0	63,400	509,328	157,399	107,037	2,060,267	3,315,987
2006	1,280,815	70,267	17,936	14,214	431,212	202,124	100,233	1,998,802	4,115,603
2007	446,699	51,069	0	494,671	697,822	212,103	174,273	2,918,399	4,995,036
2008	4,162,735	52,291		885,718	1,232,589	164,007	461,085	3,757,877	10,716,302
2009	2,950,869	39,864		1,704,514	421,788	103,384	83,749	3,739,378	9,043,546
2010	350,673	172,861	105,096	49,732	812,699	203,796	364,352	3,712,810	5,772,019
2011	373,639	38,043	0	1,243,692	823,423	89,482	56,361	5,043,573	7,668,213
2012	37,076	2,844	0	36,195	879,401	321,734	211,618	1,885,164	3,374,032
2013	94,636	15,668	0	112,139	2,709,269	413,455	149,094	2,813,673	6,307,934
2014	11,476	22,070	18,684	97,043	230,834	238,616	249,118	4,353,686	5,221,527
2015	443,907	16,992	16,575	25,216	780,876	82,484	88,698	3,325,410	4,780,158
2016	159,589	2,180	8,924	77,672	1,322,547	623,449	226,558	4,292,398	6,713,317
2017	406,068	22,998	3,001	81,275	856,081	681,976	187,698	4,105,686	6,344,783

Table 4. Recreational harvest (numbers) of black drum by state, 2003-2017. Values shown are mail-based Fishing Effort Survey (FES)-calibrated estimates. (Sources: 2018 state compliance reports for 2017 fishing year; for years prior to 2017, personal communication with NOAA Fisheries, Fisheries Statistics Division. [10/06/2018])

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2003	33,273	0	2,747	16,977	1,265,995	613,785	76,186	863,997	2,872,960
2004	20,450	1,280	1,450	4,044	296,531	71,386	61,295	536,462	992,898
2005	21,427	2,413	0	8,929	465,076	278,081	37,150	425,765	1,238,841
2006	64,963	37,951	512	1,192	276,257	272,995	54,937	444,474	1,153,281
2007	42,198	8,659	0	45,672	876,178	239,939	98,878	787,403	2,098,927
2008	117,112	20,731		71,301	925,963	97,143	168,499	877,090	2,277,839
2009	69,140	1,112		41,986	449,901	45,752	41,853	1,100,618	1,750,362
2010	13,421	3,609	6,556	4,846	650,010	85,152	138,328	961,627	1,863,549
2011	22,882	1,196	0	126,964	1,259,216	29,909	25,803	1,401,636	2,867,606
2012	1,368	110	0	7,555	556,482	91,318	42,826	496,537	1,196,196
2013	11,083	1,851	0	6,170	1,511,995	143,662	64,533	1,044,490	2,783,784
2014	482	1,052	1,690	10,676	109,307	96,967	47,807	983,582	1,251,563
2015	10,793	462	1,091	1,600	276,126	37,186	48,229	514,606	890,093
2016	6,008	138	250	5,807	459,078	256,158	96,351	1,217,913	2,041,703
2017	18,435	1,214	828	16,700	355,544	241,832	64,240	1,044,752	1,743,545

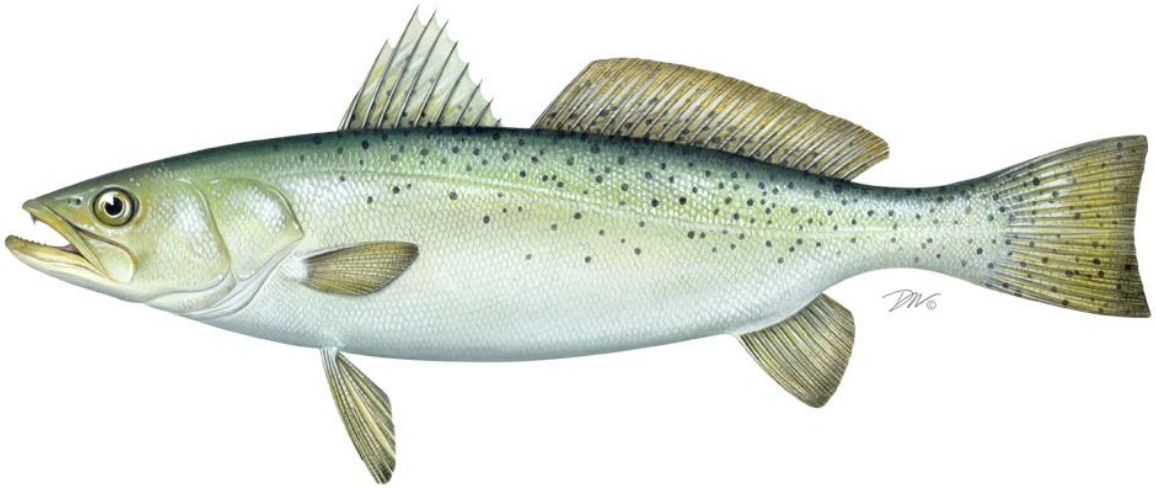
Table 5. Recreational alive releases (numbers) of black drum by state, 2003-2017. Values shown are mail-based Fishing Effort Survey (FES)-calibrated estimates. (Sources: 2018 state compliance reports for 2017 fishing year; for years prior to 2017, personal communication with NOAA Fisheries, Fisheries Statistics Division. [10/06/2018])

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2003	1,840	8,485	0	40,373	481,742	6,116	80,472	397,726	1,016,754
2004	0	1,658	0	27,311	255,753	37,006	56,382	757,438	1,135,548
2005	61,287	28,305	4,451	33,250	376,363	77,959	33,031	569,203	1,183,849
2006	44,606	3,275	0	202,749	265,369	76,481	83,715	742,521	1,418,716
2007	63,726	7,921	275	75,767	832,132	96,356	90,422	1,556,818	2,723,417
2008	370,945	21,115		14,161	548,931	273,001	132,787	1,409,845	2,770,785
2009	316,471	2,310		41,215	411,358	81,423	60,290	1,180,223	2,093,290
2010	47,508	4,251	9,613	64,320	427,577	66,635	72,870	2,113,308	2,806,082
2011	4,799	4	9,595	319,622	711,755	66,748	20,355	913,567	2,046,445
2012	17,092	1,653	89,193	22,236	397,155	153,799	52,722	1,246,585	1,980,435
2013	0	57,091	15,868	52,417	497,334	330,528	35,034	1,654,129	2,642,401
2014	37,364	11,243	0	269,648	1,964,749	335,600	21,581	1,047,833	3,688,018
2015	545,613	17,109	25,115	164,322	1,791,758	1,483,956	55,773	1,096,185	5,179,831
2016	9,399	361	114	46,494	2,530,596	1,268,667	54,266	1,012,670	4,922,567
2017	111,739	3,689	2,809	137,987	2,336,352	692,616	85,365	1,648,030	6,069,924

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

SPOTTED SEATROUT
(Cynoscion nebulosus)

2017 FISHING YEAR



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Chris Kalinowsky, Georgia Coastal Resources Division
Douglas Lipton, NOAA Fisheries

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I. Status of the Fishery Management Plan

Date of FMP Approval:	Original FMP – October 1984
Amendments:	Amendment 1 – November 1991 Omnibus Amendment to Spanish Mackerel, Spot, and Spotted Seatrout -- August 2011
Management Area:	The Atlantic coast distribution of the resource from Maryland through the east coast of Florida
Active Boards/Committees:	South Atlantic State/Federal Fisheries Management Board; Spotted Seatrout Plan Review Team; South Atlantic Species Advisory Panel

The Atlantic States Marine Fisheries Commission (ASMFC) adopted the Fishery Management Plan (FMP) for spotted seatrout in 1984. The ISFMP Policy Board approved Amendment 1 to the FMP in November 1991. In August 2011, the South Atlantic State/Federal Management Board approved the Omnibus Amendment to the Spanish Mackerel, Spot, and Spotted Seatrout FMPs, bringing the Spotted Seatrout FMP under the authority of the Atlantic Coastal Fisheries Cooperative Management Act (Act, 1993) and the ASMFC Interstate Fishery Management Plan Charter (1995). The states of Maryland through Florida have a declared interest in the species.

The goal of the management plan is "to perpetuate the spotted seatrout resource in fishable abundance throughout its range and generate the greatest possible economic and social benefits from its harvest and utilization over time." Plan objectives include:

1. Attain optimum yield over time.
2. Maintain a spawning potential ratio of at least 20% to minimize the possibility of recruitment failure.
3. Promote conservation of the stocks to reduce inter-annual variation in availability and to increase yield per recruit.
4. Promote collection of economic, social, and biological data required to effectively monitor and assess management efforts relative to the overall goal.
5. Promote research that improves understanding of the biology and fisheries of spotted seatrout.
6. Promote harmonious use of the resource among various components of the fishery through coordination of management efforts among the various political entities having jurisdiction over the spotted seatrout resource.
7. Promote determination and adoption of standards of environmental quality and provide habitat protection necessary for the maximum natural protection of spotted seatrout.

The Omnibus Amendment added the following objectives to support compliance under the Act:

1. Manage the spotted seatrout fishery by restricting catch to mature individuals.
2. Manage the spotted seatrout stock to maintain sufficiently high spawning stock biomass.
3. Develop research priorities that will further refine the spotted seatrout management program to maximize the biological, social, and economic benefits derived from the population.

Management measures include a minimum size limit of 12 inches in total length (TL), with comparable mesh size regulations in directed fisheries, and data collection for stock assessments and monitoring of the fishery. All states with a declared interest in spotted seatrout (NJ-FL) have implemented, at a minimum, the recommended minimum size limit. In addition, each state has either initiated spotted seatrout data collection programs or modified other programs to collect improved catch and effort data. Table 1 provides the states' recreational and commercial regulations for spotted seatrout through 2017.

II. Status of the Stock

A coastwide stock assessment of spotted seatrout has not been conducted, given the largely non-migratory nature of the species and the lack of data on migration where it does occur. Instead, state-specific age-structured analyses of local stocks have been performed by several states. These stock assessments provide estimates of static spawning potential ratio (SPR), a measure of the effect of fishing pressure on the relative spawning power of the female stock. The FMP recommends a goal of 20% SPR. South Carolina and Georgia have adopted this goal while North Carolina and Florida have established a 30% and 35% SPR goal, respectively.

Spotted seatrout stock assessments have been conducted in individual states. Assessments in North Carolina, which included data from 1981-1997, and Georgia, which included data from 1986-1995, both indicated that female SPR was below the 20% goal in the terminal year (Zhao and Burns 2001, Zhao *et al.* 2001). A more recent assessment was performed in Georgia in 2002; however, it remains unpublished due to questionable results attributed to data deficiencies and changing methodologies.

North Carolina completed a peer reviewed stock assessment, which included data from 1991-2008 and included all spotted seatrout caught in North Carolina and Virginia (Jensen 2009). The assessment indicated that SPR has been below 20% in recent years. Jensen (2009) recommended management measures be implemented to account for recent increases of recreational fishing and discard mortality and to maintain a sufficiently large spotted seatrout population to buffer against future cold stun events. Based on this assessment, North Carolina approved a state FMP for spotted seatrout in April 2012.

A peer-reviewed stock assessment of spotted seatrout in Virginia and North Carolina waters was completed in 2014, incorporating data from 1991-2013 (NCDMF 2014). Results suggest

that the age structure of this stock expanded during the last decade; however, there was a sharp decline in recruitment after 2010. Similarly, spawning stock biomass (SSB) declined after a peak in 2007. These declines may be attributed to cold stun events. In 2012, SSB exceeded the currently defined threshold, suggesting the stock is not overfished. Additionally, fishing mortality is below the threshold, suggesting the stock is not experiencing overfishing.

The South Carolina Department of Natural Resources packaged several state-specific assessments into a report in 2001, though these were not peer reviewed. The initial assessment covering 1986-1992 indicated that female SPR was just above the 20% goal in the terminal year (Zhao and Wenner 2001), leading to a minimum size limit increase and a creel limit reduction. A more recent assessment was conducted for the period 1981-2004 (de Silva, Draft 2005). Two modeling approaches were used, and both models indicated that the current SSB is below the requirement to maintain 20% SPR.

Florida conducted separate stock assessments for the northern and southern populations on their Atlantic coast. Average transitional SPR estimates during 2007-2009 were 0.67 in the northern region and 0.45 in the southern region (Murphy et al. 2011), leading to some relaxation in Florida's management of the resource (Table 1). A new statewide assessment was completed in 2018 (http://www.myfwc.com/media/4500170/sst-assessment-2016.pdf) (Addis et al. 2018). This assessment includes stock synthesis models constructed for each of Florida's four management regions (NW, SW, NE, and SE). The results indicate that the spotted seatrout stock in northeast Florida is above the biomass threshold but below the biomass target and overfishing is not likely occurring. They also indicate that the stock in southeast Florida is above the biomass threshold but below the biomass target and overfishing is not likely occurring.

III. Status of the Fishery

This report includes updated recreational estimates from the Marine Recreational Information Program's transition to the mail-based Fishing Effort Survey (FES) on July 1, 2018. Therefore, recreational estimates will likely be different from those shown in past FMP Reviews and state compliance reports (due annually on September 1) through 2018. Figure 1 shows coastwide recreational landings including estimates using both the previous Coastal Household Telephone Survey (CHTS) and FES calibration for comparison, but other figures, tables, and text will only show data based on the FES calibration. Data based on either survey can be referenced at: https://www.st.nmfs.noaa.gov/st1/recreational/queries/.

Spotted seatrout is regularly caught both commercially and recreationally from Maryland through the east coast of Florida. In South Carolina, spotted seatrout has been declared a gamefish and can only be taken by recreational means. Landings from states north of Maryland are minimal and/or inconsistent from year to year. All catch estimates in this section include those in the management area only (MD-FL). Total recreational landings have surpassed total commercial landings every year since recreational landings were first recorded in 1981 (Figure 2). A coastwide (VA, NC, and SC) winter mortality event in 2000/2001 likely contributed to the sudden decline in commercial and recreational landings in 2001 and 2002.

Commercial Fishery

Commercial harvest statistics were obtained from the Atlantic Coastal Cooperative Statistics Program (ACCSP) for years prior to 2017 and from state compliance reports for 2017. Atlantic coast commercial landings of spotted seatrout (1960-2017) have ranged from 156,000 pounds to 1.38 million pounds (Figure 2). Historically, commercial landings primarily came from North Carolina and Florida, with Virginia, South Carolina, and Georgia accounting for a small portion of the total. From 1960 to 1976, annual commercial landings of spotted seatrout averaged 1.07 million pounds, followed by a decline due to increased regulation and possible declines in abundance. Significant changes to regulations include the 1987 designation of spotted seatrout as a gamefish in South Carolina, and the 1995 prohibition on the use of entangling nets in Florida's coastal waters. From 2007 to 2016, commercial landings averaged approximately 340 thousand pounds. In 2017, commercial landings totaled 371,279 pounds, a 25% increase from 2016. North Carolina, Virginia, and Florida accounted for 81%, 15%, and 4% of the total commercial landings, respectively.

Recreational Fishery

Recreational harvest statistics were obtained from the Marine Recreational Information Program (MRIP) for years prior to 2017 and from state compliance reports for 2016. Over the last 33 years, recreational catch of spotted seatrout (kept and released) has shown an upward trend, increasing from 4.3 million fish in 1981 to over 26 million fish in 2010. In 2017, recreational catch totaled 22.7 million fish, nearly identical to the catch in 2016 (Figure 3). Recreational harvest has remained relatively stable throughout the time series with an average of 3.5 million fish. Recreational harvest in 2017 was 4.1 million fish (a 10% increase from 2016), with North Carolina (30%), Georgia (26%), and Florida (24%) responsible for the largest shares. Due in part to recreational size and creel limits and closed seasons, as well as the encouragement of catch and release practices, the percentage of caught fish being released has increased throughout the time series, with the most recent 10-year average (2008-2017) at 82%. In 2017, the release percentage declined slightly from the 2016 value (84%) to 82%. Rod and reel is the primary recreational gear, but some spotted seatrout are taken by recreational nets and by gigging, where these methods are permitted. Most recreational fishing is conducted from private boats and the majority of the catch is taken from nearshore waters.

IV. Status of Assessment Advice

A coastwide stock assessment of spotted seatrout has not been conducted and the Plan Review Team (PRT) does not recommend that one be completed due to the life history of the fish and the availability of data. Several states have performed age-structured analyses on local stocks, and recent stock assessments provide divergent trends on the status of the species. The 2005 stock assessment in South Carolina indicated an increasing population trend but a status level that is still below target spawning stock biomass levels (de Silva 2005). The 2014 North Carolina and Virginia stock assessment showed declines in recruitment since 2010. The 2016 Florida stock assessment indicated that the spotted seatrout stock in northeast Florida is above the biomass threshold but below the biomass target and overfishing is not likely occurring (Addis et

al. 2018). It also indicated that the stock in southeast Florida is above the biomass threshold but below the biomass target and overfishing is not likely occurring. The PRT supports the continuation of state-specific assessments, yet recognizes the difficulty most states face to attain sufficient data of assessment quality and personnel who can perform the necessary modeling exercises.

The lack of biological and fisheries data for effective assessment and management of the resource was recognized in the 1984 FMP and continues to be a hindrance. Some states are increasing their collection of biological and fisheries data, which will provide insight on stock status over time.

V. Status of Research and Monitoring

In addition to commercial and recreational fishery-dependent data collected and/or compiled through the NMFS Fisheries Statistics Division, some states have implemented fishery-independent or additional fishery-dependent monitoring programs.

Maryland
MD DNR samples commercial pound nets weekly in the Potomac River and Chesapeake Bay from May through September (2017 n=3, 464 mm TL).

A few juvenile spotted seatrout are encountered in the coastal bays seine survey and the Chesapeake Bay blue crab trawl survey, indicating seatrout utilize these areas as nursery habitat (2017 seine n=6, trawl n=53).

Virginia
The VMRC Biological Sampling Program collects commercial and recreational fishery-dependent biological data. In 2017, the VMRC collected 1,389 commercial lengths and weights, determined the sex of 303 individuals, and aged 222 individuals. In 2017, the VMRC collected lengths of 105 and sex of 35 recreationally caught seatrout.

North Carolina
Commercial fish houses are sampled monthly for fishery-dependent length, weight, and age data. Very little variation is seen throughout sampling years. In 2017, gill nets were responsible for 93% of the catch and gigs for 5.5%.

A fishery-independent Estuarine Trawl Survey is conducted to measure annual juvenile recruitment for many species. The Catch per Unit Effort (CPUE) index for the current 10-year time series has not shown significant trends in CPUE over that time span, although CPUE has shown a declining trend since the most recent peak in 2012. The CPUE of age-0 spotted seatrout for 2017 was 0.79 fish per tow, below the most recent 10-year average but above the 2016 value.

A fishery-independent gill net survey is conducted to measure age composition and develop indices of age 1+ abundance for many species. Seatrout age 1+ abundance index varies very little annually, averaging 0.56±0.06 seatrout per set, but low CPUEs in 2011 and 2015

correspond to known cold stun mortality events. The CPUE of adult spotted seatrout for 2017 was 1.05 fish per set, above both the most recent 10-year mean and the 2016 value.

The NCDMF Age Lab ages otoliths collected from several fishery-dependent and independent sources. A total of 870 spotted seatrout were aged by otoliths in 2017 with a maximum age of 7 and a modal age of 1.

South Carolina

The State Finfish Survey collects fishery-dependent catch, effort, and length data from private boat anglers in January and February. In 2017, 22% of 198 interviewed parties primarily targeted spotted seatrout (2017 n=183, mean catch rate of 1 fish per targeted fishing hour).

A mandatory trip reporting system for the charter boat fishery has been in place since 1993. In 2017, 990 (6%) interviewed trips targeted seatrout (2017 mean catch rate of 1.52 fish per targeted fishing hour).

The Freezer Drop-Off and the Fishing Tournament programs gather biological information like size, sex, maturity, and age. In 2017, these programs gathered biological information from 81 spotted seatrout.

South Carolina conducts two fishery-independent data collection programs. The Trammel Net Survey covers 7 monthly and 2 quarterly strata. Spotted seatrout is consistently one of the top three most abundance species encountered. The 2017 statewide mean CPUE was similar to 2016 and above the long-term average. The Electrofishing survey covers 5 monthly strata, and catches relatively low numbers of mostly YOY seatrout. Statewide catch rate by the electrofishing survey have been low since 2010.

Georgia

A Marine Sportfish Carcass Recovery Program collects recreational fishery-dependent size and age data (2017 n=2,431 spotted seatrout, average length of 387 mm, 315-521 mm range).

The Marine Sportfish Population Health Study trammel net survey samples monthly from September to November since 2003 in the Wassaw and Altamaha Sounds to collect fishery-independent age- and sex-specific estimates of relative abundance (2017: Wassaw CPUE (geometric mean): 0.67; Altamaha CPUE: 1.40). Gillnet sampling also occurs through this study, often encountering seatrout (2017: Wassaw CPUE: 0.29; Altamaha CPUE: 0.45).

Florida

Fishery-dependent sampling includes commercial trip-ticket information and biostatistical sampling of commercial and recreational catch. A voluntary angler logbook program was implemented in 2002 to record lengths of spotted seatrout released alive by anglers. In 2011, this program changed to a ‘postcard’ program, enlisting anglers encountered during MRIP angler intercept interviews.

A juvenile finfish monitoring program is conducted in the northern Indian River Lagoon (since 1990) and in the estuarine St. Johns, St. Marys, and Nassau Rivers (since 2001). Florida also conducts a 183-m haul seine survey in the Indian River (since 1997) and northeast Florida (Jacksonville/St. John's River) (since 2001). Southeast (Indian River/Tequesta) coast YOY abundance in 2017 declined from 2016. Northeast coast YOY abundance in 2017 increased slightly from 2016. Adult abundance (>200 mm SL) decreased in the southeast but increased slightly in the northeast from 2016 values.

VI. Status of Management Measures and Issues

Changes to State Regulations
None.

De Minimis Requests
A state qualifies for *de minimis* status if its previous three-year average combined commercial and recreational catch is less than 1% of the previous three-year average coastwide combined commercial and recreational catch. Those states that qualify for *de minimis* are not required to implement any monitoring requirements, as none are included in the plan.

The states of New Jersey and Delaware request continuation of *de minimis* status. The PRT notes these states meet the requirements of *de minimis*.

VII. Implementation of FMP Compliance Requirements for 2017

The PRT notes that all states have met the compliance requirements.

VIII. Recommendations of Plan Review Team

Management and Regulatory Recommendations

- Consider approval of *de minimis* requests by New Jersey and Delaware.
- Maintain observer coverage in states that have a commercial fishery for spotted seatrout.

Prioritized Research Recommendations

High Priority

- Conduct state-specific stock assessments to determine stock status relative to the plan objective of maintaining a spawning potential of at least 20%.
- Collect data on the size or age of spotted seatrout released alive by anglers and the size or age of commercial discards.
- Research release mortality and how this changes with factors such as season, habitat (e.g., depth, temperature, salinity), fish life history (e.g., size, age) and fishing methods (e.g., gear types).
- Monitor the size, age and reproductive condition of recreationally harvested fish (e.g. freezer drop off and tournament monitoring programs).
- Research into links between spawning activity, environmental conditions, trophic interactions and recruitment.

- Continue work to examine the stock structure of spotted seatrout on a regional basis (e.g., genetics, use of advanced tagging techniques).
- Research effects of winter severity on the population.
- Utilize telemetry technology to better understand life history characteristics.
- Conduct additional research on the significance of age-specific fecundity changes (i.e., environmental impacts on spawning output of population)
- Develop state-specific juvenile abundance indices.

Medium Priority

- Identify essential habitat requirements.
- Initiate collection of social and economic aspects of the spotted seatrout fishery.

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X. Figures

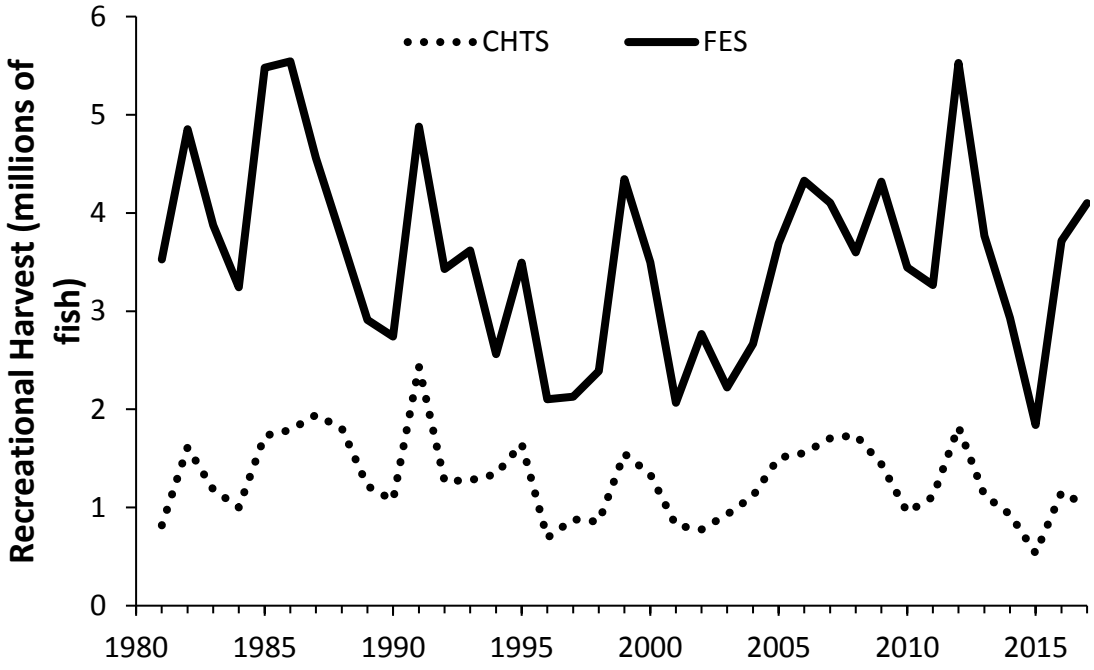


Figure 1. Recreational harvest estimated using the Coastal Household Telephone Survey (CHTS) and the mail-based Fishing Effort Survey (FES). (Source: personal communication with NOAA Fisheries, Fisheries Statistics Division. [10/06/2018])

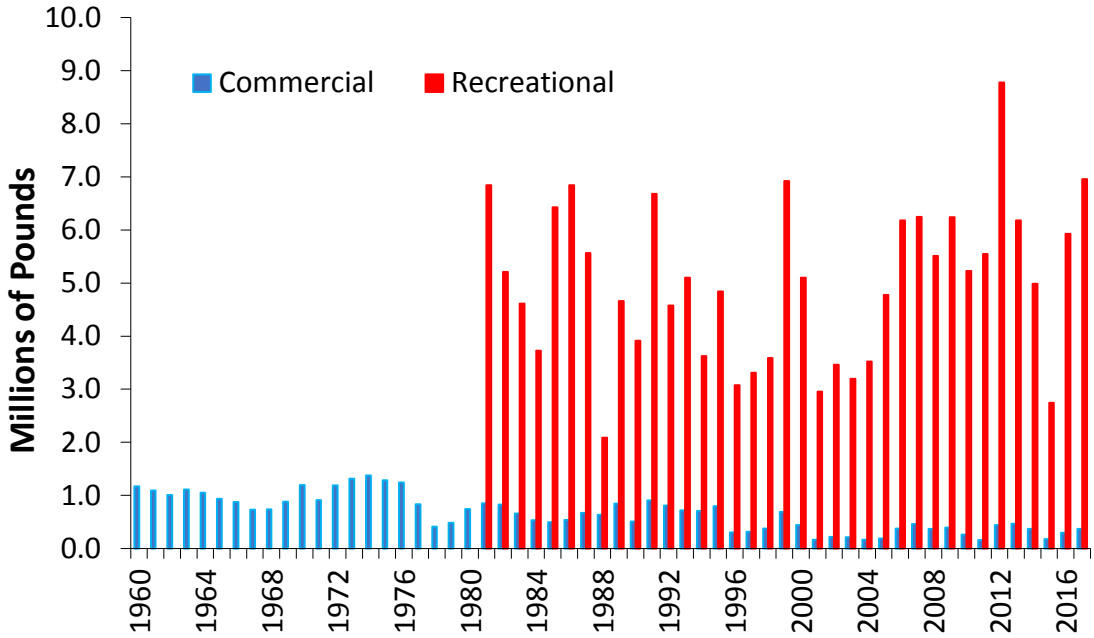


Figure 2. Commercial landings (1960-2017) and recreational landings (1981-2017), in pounds, from Maryland to Florida (See Tables 2 and 4 for values and sources). Recreational data not available prior to 1981.

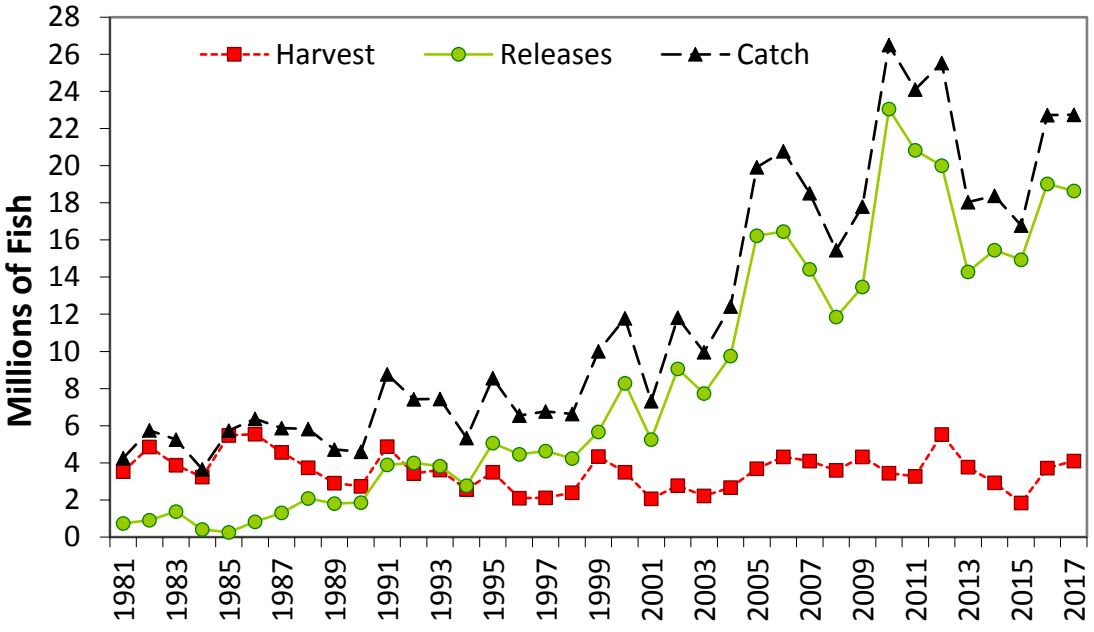


Figure 3. Recreational catch, harvest, and releases (numbers), 1981-2017, from Maryland to Florida (See Tables 3 and 5 for values and sources).

XI. Tables

Table 1. Summary of state regulations for spotted seatrout in 2017.

State	Recreational	Commercial
New Jersey	13" TL; 1 fish	Gill net, trawl, and pound net: 13"; 100 lb/vessel/day possession and bycatch limit; seasonal closures; monthly reporting. Trawl and gill net mesh size restrictions. Hook & line fishermen must follow rec limits.
Delaware	12" TL	12" TL
Maryland	14" TL; 4 fish	14" TL. 150 lb limit per day or trip (whichever is longer). Trawl and gill net mesh size restrictions.
PRFC	14" TL; 10 fish	14" TL
Virginia	14-24" TL; 1 fish >24" allowed; 5 fish; closed season March-July.	14" TL; pound nets/seines allowed 5% by weight less than 14". Hook & line fishermen must follow rec limits. Quota: 51,104 lbs (Sept-Aug). After 80% reached, 100 lb/vessel/day possession and bycatch limit.
North Carolina	14" TL; 4 fish	14" TL; 75 fish limit. Unlawful to possess or sell Friday 12:00am-Sunday 12:00am.
South Carolina	14" TL; 10 fish. Gig March-Nov.	Gamefish status since 1987; native caught fish may not be sold.
Georgia	14" TL; 15 fish	14" TL; 15 fish. BRD requirement for trawl; gear mesh regulations.
Florida	15-20" TL slot; 1 fish >20" allowed; northeast 6 fish; northwest 5 fish; south 4 fish; hook & line/cast net only.	15-24" TL; Season varies by region; 75 fish limit or 150 fish limit with two or more licensed fishermen on board; hook & line/cast net only.

Note: A commercial fishing license is required to possess spotted seatrout for sale in all states with a fishery.

Table 2. Commercial landings (pounds) of spotted seatrout by state, 2008-2017 (Source: ACCSP for years prior to 2016 and State Compliance Reports for 2016). Starred boxes represent confidential data.

Year	MD	VA	NC	SC	GA	FL	Total
2008	290	43,512	304,430		*	20,887	369,119
2009	*	26,350	320,247		*	46,297	392,894
2010	*	20,870	200,822		*	39,374	261,066
2011	640	17,315	75,239		*	63,592	156,787
2012	*	116,767	265,016			61,676	443,460
2013	*	42,086	367,610		*	58,288	467,984
2014	*	90,051	242,245		*	37,710	370,006
2015	*	7,942	128,752			39,226	175,920
2016	*	18,483	253,965	*		23,105	295,553
2017	23	55,224	299,875			16,157	371,279

Table 3. Recreational harvest (numbers of fish) of spotted seatrout using the FES effort calibration, by state, 2008-2017. (Source: MRIP for years prior to 2017 and State Compliance Reports for 2017)

Year	MD	VA	NC	SC	GA	FL	Total
2008		278,345	1,372,973	283,127	1,048,367	616,807	3,599,619
2009	20,285	67,687	1,857,890	370,370	1,363,056	639,102	4,318,390
2010	9,684	77,068	630,748	406,781	1,135,113	1,187,103	3,446,497
2011	11,042	644,074	723,502	193,487	762,304	931,353	3,265,762
2012	21,323	392,484	1,602,836	622,205	1,206,654	1,682,942	5,528,444
2013	0	153,706	1,107,957	440,751	937,046	1,122,151	3,761,611
2014	21,560	84,537	725,086	260,321	724,411	1,111,177	2,927,092
2015	11,619	23,062	249,260	311,106	740,932	504,137	1,840,116
2016	10,092	163,529	978,624	311,168	1,290,220	962,946	3,716,579
2017	24,255	172,288	1,217,834	647,679	1,060,493	977,797	4,100,346

Table 4. Recreational harvest (pounds of fish) of spotted seatrout using the FES effort calibration, by state, 2008-2017. (Source: MRIP for years prior to 2017 and State Compliance Reports for 2017)

Year	MD	VA	NC	SC	GA	FL	Total
2008		673,026	2,114,130	435,317	1,224,085	1,063,032	5,509,590
2009	23,031	132,635	2,878,160	508,657	1,576,285	1,121,118	6,239,886
2010	19,623	137,095	1,277,174	598,963	1,310,371	1,883,653	5,226,879
2011	11,181	1,450,980	1,353,388	327,349	894,796	1,509,893	5,547,587
2012	36,380	690,821	2,720,028	1,002,364	1,231,246	3,097,576	8,778,415
2013	0	379,399	1,881,881	717,402	1,125,802	2,075,929	6,180,413
2014	46,870	166,182	1,451,592	382,155	825,903	2,111,818	4,984,520
2015	23,546	48,477	430,579	462,498	794,861	984,940	2,744,901
2016	20,024	341,977	1,724,492	475,749	1,740,513	1,625,597	5,928,352
2017	48,624	342,463	2,157,198	992,938	1,403,646	2,011,777	6,956,646

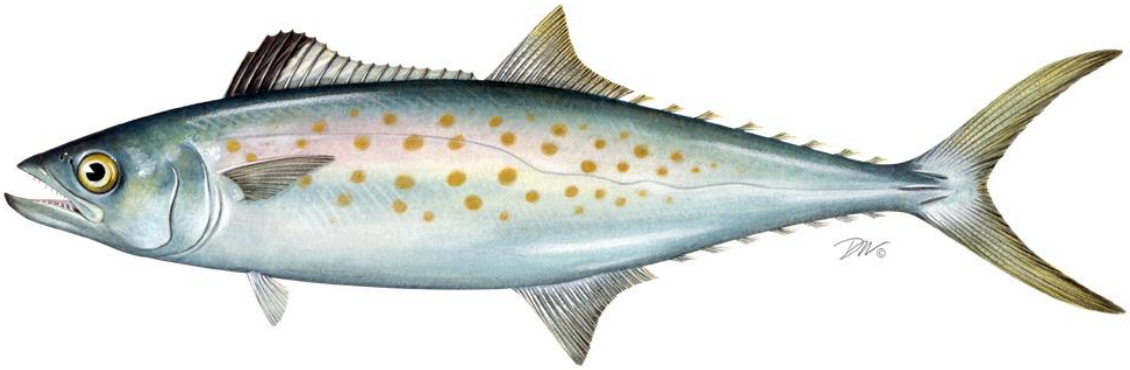
Table 5. Recreational releases (number of fish) of spotted seatrout using the FES effort calibration, by state, 2008-2017. (Source: MRIP for years prior to 2017 and State Compliance Reports for 2017).

Year	MD	VA	NC	SC	GA	FL	Total
2008		910,967	2,226,578	1,220,429	1,149,386	6,351,756	11,860,702
2009	160,644	549,846	4,462,890	1,001,740	2,125,707	5,177,671	13,480,869
2010	300,919	2,530,405	7,657,503	1,167,472	1,676,201	9,717,723	23,050,609
2011	21,353	3,462,963	7,420,553	743,581	1,348,499	7,839,264	20,836,213
2012	259,437	1,257,157	4,916,356	1,761,694	2,196,920	9,610,576	20,006,019
2013	22,780	738,474	4,278,671	2,190,796	1,320,699	5,722,715	14,282,174
2014	74,250	1,059,287	3,949,284	1,407,310	1,687,540	7,279,660	15,460,257
2015	242,150	834,028	4,824,088	1,147,982	1,763,638	6,131,007	14,943,497
2016	133,223	3,708,969	6,475,193	1,791,072	2,113,253	4,783,644	19,028,477
2017	107,611	3,154,997	5,147,567	1,949,554	2,436,867	5,845,559	18,642,226

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

SPANISH MACKEREL
(*Scomberomorus maculatus*)

2017 FISHING YEAR



Prepared by the
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Table of Contents

I. Status of the Plan

Date of FMP Approval: Original FMP – November 1990

Amendments: Omnibus Amendment to Spanish Mackerel, Spot, and Spotted Seatrout (Amendment 2)- August 2011

Addendum I- August 2013

Management Area: The Atlantic coast distribution of the resource from New York through the east coast of Florida

Active Boards/Committees: South Atlantic State/Federal Fisheries Management Board; Spanish Mackerel Plan Review Team; South Atlantic Species Advisory Panel

The Fishery Management Plan (FMP) for Coastal Migratory Pelagic Resources (1983 and subsequent amendments) and the Interstate Fishery Management Plan for Spanish Mackerel (1990) manage Atlantic group Spanish mackerel in federal and state Atlantic waters from New York through the east coast of Florida. All states in that range, excluding Pennsylvania, have a declared interest in the Interstate FMP for Spanish mackerel. The South Atlantic State/Federal Fisheries Management Board serves to manage Spanish mackerel for the Commission. The Interstate FMP for Spanish mackerel is a flexible document intended to track the federal FMP; thus, the South Atlantic Fishery Management Council (SAFMC) has the lead on Atlantic group Spanish mackerel management.

The SAFMC manages Atlantic group Spanish mackerel based on guidance from its Scientific and Statistical Committee (SSC). The SAFMC determines needed adjustments to regulatory measures, including allowable catch, bag limits, size limits, and trip limits. The SAFMC deliberations are assisted by a Mackerel Cobia Committee that includes representatives from the Mid-Atlantic Fishery Management Council, and an Advisory Panel with South Atlantic and Mid-Atlantic industry representation. Since the Coastal Migratory Pelagic Resources FMP is a joint plan with the Gulf of Mexico Fishery Management Council (GMFMC), any amendments to this FMP must be approved by both Councils.

The SAFMC and GMFMC approved Amendment 18 to the Coastal Migratory Pelagic Resources FMP in December 2011 which established a new Allowable Biological Catch (ABC) based on the SSC recommendation of using median landings of the last 10 years (2001-2011). With this change, the ABC was set equal to the Annual Catch Limit (ACL) and Optimum Yield (OY) [ABC=ACL=OY] at approximately 5.29 million lbs. With this the commercial ACL was 3.13 million lbs and the recreational ACL was 2.56 million lbs. For the 2015/2016 fishing season, the full quota was increased to 3.33 million pounds following CMP Framework Amendment 1 (See *Section VI*).

Under the federal FMP, the 2017-2018 fishing year ran from March 1, 2017 to February 28, 2018. The 2018-2019 fishing year began on March 1st, 2018. The federal FMP divides the commercial fishery into a quota system between the Atlantic and Gulf migratory groups. Within the Atlantic

migratory group, there are two zones- the Northern (consisting of the states from New York through North Carolina) and the Southern (South Carolina to Florida). For the Atlantic migratory group in the 2017/2018 year, in accordance with CMP Framework Amendment 1, the full quota was 3.33 million pounds with an adjusted Southern quota of 2,417,330 pounds. The adjusted quota was used to determine trip limit reductions off the Florida east coast.

The federal commercial trip limit was a year-round 3,500 pound daily possession/landings limit for the states from New York through Georgia, with Florida's commercial trip limit varying depending on the percent of quota remaining. Following the implementation of Amendment 20B and CMP Framework Amendment 2, the federal trip limit for the Southern zone (SC through FL) decreases as quota is caught. When 75% of the "adjusted" Southern Zone quota[1] (1,812,998 pounds ww) is caught, the trip limit is reduced from 3,500 pounds to 1,500 pounds. When 100% of the adjusted Southern Zone quota (2,417,330 pounds ww) is caught, the commercial trip limit is further reduced to 500 pounds. When 100% of the Southern Zone quota is met, harvest is prohibited for the remainder of the fishing year. In both the Northern and Southern zones, the recreational bag limit is set at 15 fish. The minimum size limit for both fisheries is 12" fork length or 14" total length. For the 2017-2018 fishing year, a transfer of 100,000 pounds from the Southern to the Northern zone was approved, lowering the full Southern quota to 2,567,330 pounds and increasing the Northern zone quota to 762,670 pounds (FB17-064).

The goals of the interstate FMP are to complement federal management in state waters, to conserve the Atlantic group Spanish mackerel resource throughout its range, and to achieve compatible management among the states that harvest Spanish mackerel. In accordance with the 2011 Omnibus Amendment, the updated FMP's objectives are to: (1.) Manage the Spanish mackerel fishery by restricting fishing mortality to rates below the threshold fishing mortality rates to provide adequate spawning potential to sustain long-term abundance of the Spanish mackerel populations. (2.) Manage the Spanish mackerel stock to maintain the spawning stock biomass above the target biomass levels. (3.) Minimize endangered species bycatch in the Spanish mackerel fishery. (4.) Provide a flexible management system that coordinates management activities between state and federal waters to promote complementary regulations throughout Spanish mackerel's range which minimizes regulatory delay while retaining substantial ASMFC, Council, and public input into management decisions; and which can adapt to changes in resource abundance, new scientific information and changes in fishing patterns among user groups or by area. (5.) Develop research priorities that will further refine the Spanish mackerel management program to maximize the biological, social, and economic benefits derived from the Spanish mackerel population. See Table 1 for state Spanish mackerel regulations in 2017-2018.

II. Status of the Stocks

The resource is not overfished, nor experiencing overfishing (SEDAR 2012). The SEDAR 28 Stock Assessment Report estimates current stock biomass at $SSB_{2011}/MSST=2.29$, and current fishing level (exploitation rate) at $F_{2009\text{-}2011}/F_{MSY}=0.526$, with $F_{2011}/F_{MSY}=0.521$. The overfished ratio (B/B_{MSY}) shows that high fishing mortality caused a decline in biomass, though biomass has increased in recent years and remains above B_{MSY} (Figure 1). The overfishing ratio (F/Fmsy) shows that

[1] The adjusted quota is the Southern Zone quota minus 250,000 lbs.

fishing mortality increased from the late 1970s through 1994 but has since declined (Figure 2). Fishery-dependent data also indicate increasing biomass, excepting the decline seen over the last four years. The current fishing mortality rate does not seem to be inhibiting stock growth.

III. Status of the Fishery

On July 1, 2018, the Marine Recreational Information Program recalibrated recreational harvest estimates from the Coastal Household Telephone Survey (CHTS) to the mail-based Fishing Effort Survey (FES). Estimates used in this report are those of the CHTS, but Figure 3 shows a comparison of CHTS and FES estimates. FES estimates will be incorporated into management after the next stock assessment. Data based on either survey can be referenced at: https://www.st.nmfs.noaa.gov/st1/recreational/queries/.

Spanish mackerel are an important recreational and commercial fishery in South Atlantic waters, with limited and sporadic recreational landings north of Maryland (Tables 2 and 4). Trip limits implemented in state and federal waters continue to prevent premature closure of the commercial fishery. Total landings of Spanish mackerel in 2017 are estimated at 4.2 million pounds (compared to the 6.057 million pound ACL). The commercial fishery harvested approximately 80% of the total, and the recreational fishery about 20%.

From 1950 to 2017, commercial landings of Atlantic coast Spanish mackerel have ranged between 1.8 and 11.1 million pounds, although only 4 years in that timespan have exceeded 6 million pounds. Since 1981, commercial landings have averaged 3.6 million pounds. Coastwide commercial landings have generally been below 4 million pounds since 1995 (exception of 2010 and 2011; landings of 4.52 and 4.35 million pounds, respectively); this coincided with the entanglement net ban in Florida. Gill nets were the dominant commercial gear in Florida prior to the ban. After the ban was instituted, the use of cast nets increased. The 2017 commercial landings were 3.45 million pounds (Figure 4), of which 2.61 million pounds (76% of coastwide commercial harvest) were landed in Florida and approximately 816,000 pounds (24%) were landed in North Carolina (Table 2).

Recreational anglers harvested 631,957 Spanish mackerel (751,053 pounds) in 2017, a decrease from the 966,419 fish caught in 2016 (Tables 3 and 4). The number of recreationally harvested fish appears to show a cyclical trend, with low harvests in the early to mid-80s and mid to late 90s, interspersed with higher harvests (Figure 5). Florida and North Carolina have historically accounted for the majority of recreational landings in both number and weight. In 2017, Florida harvested 22% and North Carolina harvested 70% of recreational fish. The number of recreational releases of Spanish mackerel has generally increased over time, reaching a peak of over 930,000 fish in 2008 (Table 5, Figure 5). Recreational releases in 2017 were 390,862 fish, decreased from 415,635 fish in 2016.

IV. Status of Assessment Advice

The most recent stock assessment was completed in 2012 through the Southeast Data, Assessment, and Review (SEDAR) process (SEDAR, 2012). The input data (through 2011) were applied to two assessment models, with the primary model being a statistical catch at age model called the Beaufort Assessment Model (BAM); while a secondary surplus-production model

(ASPIC) provided a comparison of model results. The Review Panel concluded that the statistical catch at age model was the most appropriate model to characterize the stock status for management purposes.

The SSC reviewed the assessment during its December 2012 meeting and accepted the SEDAR 28 Spanish mackerel stock assessment as best available science. The SSC concurred with the Review Panel's conclusion that the stock is not experiencing overfishing and the stock is not overfished.

The next stock assessment is currently scheduled to be conducted through the SEDAR process in 2020. This assessment will incorporate FES recreational harvest estimates.

V. Status of Research and Monitoring

The National Marine Fisheries Service (NMFS) Southeast Fisheries Science Center (SEFSC) continues to monitor length and weight at age and size frequencies, fishing mortality, and migration; collect age data and catch per unit effort by area, season, fishery, and gear; monitor shrimp trawl bycatch; investigate methods to predict year class strength; calculate estimates of recruitment, and develop conservation gear to reduce bycatch. The NMFS is also collecting discard data through a bycatch logbook in the mackerel and snapper-grouper fisheries. The Gulf and South Atlantic Fisheries Development Foundation and several states (North Carolina, South Carolina, Georgia, and Florida) have evaluated finfish bycatch in the southeastern shrimp trawl fishery, including bycatch of Spanish mackerel. The South Atlantic component of the Southeast Area Monitoring and Assessment Program (SEAMAP) collects Spanish mackerel data in its coastal trawl survey from Cape Hatteras to Cape Canaveral. Additionally, the Northeast Area Monitoring and Assessment Program (NEAMAP) began regular spring and fall surveys between Martha's Vineyard and Cape Hatteras in the fall of 2007.

Abundance trends continue to be monitored primarily through fishery-dependent sources. The states and the SEFSC monitor catch data through the cooperative commercial statistics collection program and the recreational fisheries survey. Commercial trip reports are tallied more frequently in the winter and early spring by the state of Florida and NMFS as the commercial quota is approached.

North Carolina also conducts fishery independent monitoring. Three fishery independent gill net surveys were initiated by the North Carolina Division of Marine Fisheries in May of 2001, 2003 and 2008, respectively. These surveys utilize a stratified random sampling scheme designed to characterize the size and age distribution for key estuarine species in Atlantic Ocean and Pamlico Sound as well as the Pamlico, Pungo, Neuse, Cape Fear and New rivers. The overall Spanish mackerel CPUE from these surveys was extremely low and therefore lacks the desired precision and confidence needed for the data to be used for management purposes.

VI. Status of Management Measures

2008 Framework Adjustment (Federal)

In February 2008, NOAA Fisheries finalized a framework adjustment to change the beginning date for trip limits in the Atlantic Spanish mackerel fishery off the east coast of Florida. The 3,500

pound trip limit begins March 1 each year to correspond with the beginning of the fishing year (as changed in Amendment 15).

Omnibus Amendment (Interstate)
In August 2011, the Management Board approved an amendment to the Spanish Mackerel FMP to address three issues: compliance measures, consistency with federal management in the exclusive economic zone, and alignment with Commission standards. Through the Omnibus Amendment, the following fisheries management measures are required for states within the management unit range;

Recreational Fishery

- 12" Fork Length (FL) or 14" Total Length (TL) minimum size limit
- 15 fish creel limit
- Must be landed with head and fins intact
- Calendar year season
- Prohibited gear: Drift gill nets prohibited south of Cape Lookout, NC
- Decrease in the recreational quota the following year via reduced bag limits if the Total Annual Catch Limit (ACL) is exceeded and stock is overfished.

Commercial Fishery

- Prohibited: purse seines; drift gill nets south of Cape Lookout, NC
- 12" FL or 14" TL minimum size limit
- March 1 – end of February season
- Trip limits (per vessel, per day)
  NY-GA: 3500 lbs
  FL: 3500 lbs, 3/1-11/30;
  3500 lbs Mon-Fri & 1500 lbs Sat-Sun, 12/1 until 75% adjusted quota taken;
  1500 lbs, when 75% adjusted quota taken until 100% adjusted quotas taken;
  500 lbs after 100% of adjusted quotas taken (the adjusted quota compensates for estimated catches of 500 lbs per vessel per day to the end of the season)
- Commercial quotas decreased the following year if Total ACL is exceeded and stock is overfished

Amendment 18 (Federal)
In August 2011, the Gulf of Mexico and South Atlantic, Fishery Management Councils approved Amendment 18 to the joint FMP for Coastal Migratory Pelagics. The primary action under consideration established Annual Catch Limits (ACLs) and Accountability Measures (AMs) for the cobia, king mackerel, and Spanish mackerel. The amendment designates ACLs and Annual Catch Targets (ACTs) for each of the two migratory groups of Spanish mackerel (Atlantic and Gulf). For the Atlantic migratory group, the commercial sector ACL is set equivalent to the commercial sector quota of 3.13 million pounds. The AM for the commercial sector is that the commercial sector will close when the commercial quota is reached or projected to be reached. In addition, current trip limit adjustments will remain in place. When the commercial sector closes, harvest and possession of Spanish mackerel would be prohibited for persons aboard a vessel for which a commercial permit for Spanish mackerel has been issued.

For the recreational sector, the ACT is set to 2.32 million pounds, while the ACL is set at 2.56 million pounds. Regarding the AM, if the stock ACL is exceeded in any year, the bag limit will be reduced the next fishing year by the amount necessary to ensure recreational landings achieve the recreational ACT, but do not exceed the recreational ACL in the following fishing year. A payback will be assessed if the Atlantic migratory group Spanish mackerel is determined to be overfished and the stock ACL is exceeded. The payback will include a reduction in the sector ACL for the following year by the amount of the overage by that sector in the prior fishing year.

Addendum I
In August 2013, the Commission's South Atlantic State-Federal Fisheries Management Board approved Addendum I to the Omnibus Amendment to for Spanish mackerel, Spot, and Spotted Seatrout.

Addendum I to the Omnibus Amendment establishes a pilot program that would allow states to reduce the Spanish mackerel minimum size limit for the commercial pound net fishery to 11 ½ inches during the summer months of July through September for the 2013 and 2014 fishing years only. The measure is intended to reduce waste of these shorter fish, which are discarded dead in the summer months, by converting them to landed fish that will be counted against the quota.

The Addendum responds to reports about the increased incidence of Spanish mackerel ¼ to ½ inch short of the 12 inch fork length minimum size limit in pound nets during the summer months. While the fish are alive in the pound, once the net is bunted and bailing commences, they die before being released. This may be due to a combination of temperature, stress and crowding. While individual fishermen have experimented with different wall or panel mesh sizes depending on the target species, there is no consistent use of cull panels. Those who have used cull panels have noted the difficulty and lack of success in being able to release the undersized fish quickly enough to prevent dead discards during this time of year.

The measures in Addendum I only applied for the 2013 and 2014 fishing seasons. In August 2015, the South Atlantic Board formally extended the provisions of Addendum I for the 2015 and 2016 fishing seasons. Reports by North Carolina, the only state to reduce their minimum size, will be reviewed annually.

Amendment 20A (Federal)
Effective July 2014, this Amendment addresses the sale of bag limit caught Spanish mackerel. The amendment rose from concerns that the recreational sales of bag limit caught fish, which are counted toward commercial quotas, are contributing to early closures of the commercial sector. In addition potential double counting of these fish could be causing erroneous landings estimates. In response, the Amendment prohibits bag limit sales with the exception of recreationally caught fish from state permitted tournaments in the South Atlantic region. This amendment also included an action to remove income requirements for federal CMP permits.

South Atlantic CMP Framework Action (Federal)
Effective December 2014, this action allows Spanish mackerel, harvested with gillnet gear in the South Atlantic EEZ off Florida (north of the Miami-Dade/Monroe County line) that is in excess of

the trip limit, to be transferred to another federally permitted vessel that has not yet harvested the trip limit. The Framework stipulates that the transfer can only occur if: 1) allowable gillnet gear was used to harvest Spanish mackerel; 2) the transfer takes place in federal waters between vessels with valid commercial permits; 3) the receiving vessel does not have more than 3 gillnets aboard after the transfer; 4) all fish remain entangled in the meshes of the net until the transfer; 5) the quantity of the fish transferred does not exceed the daily trip limit; and 6) there is only one transfer per vessel per day.

CMP Framework Amendment 1 (Federal)
This Framework Amendment, effective December 2014, increases the Atlantic Spanish mackerel ACL to 6.063 million pounds. The modification to the ACL followed the 2013 stock assessment which concluded that the stock is not overfished and overfishing is not occurring. The Amendment divides the ACL between the commercial sector (3.33 million pounds) and the recreational sector (2.727 million pounds).

Amendment 20B (Federal)
Effective March 2015, this Amendment separates commercial quotas of Atlantic Spanish mackerel between a Northern zone (north of NC/SC line) and a Southern zone (South of NC/SC line). The Amendment rose from concerns that the commercial quota could be filled by fishermen in one state before fish are available to fishermen in another state. In order to prevent this from happening, a zone is closed when its respective quota is met. Quota for each zones was based on landings from 2002/2003-2011/2012.

CMP Framework Amendment 2 (Federal)
Implemented July 2015, this Amendment modifies the commercial trip limit system in the Southern zone. The rule establishes a trip limit of 3,500 lbs for Spanish mackerel in Federal waters offshore of South Carolina, Georgia, and Florida. When 75% of the adjusted southern zone commercial quota is caught, the commercial trip limit is reduced to 1,500 lbs. When 100% of the adjusted southern zone commercial quota is met, the commercial trip limit is further reduced to 500 lbs. This limit remains until the end of the year or the quota is met.

CMP Framework Amendment 5 (Federal)
Implemented August 2017, this Framework Amendment allows commercially permitted vessels to operate as private recreational vessels when the commercial season is closed for Spanish or king mackerel.

VII. Implementation of FMP Compliance Requirements for 2016

All states must implement the requirements specified in section 5 (5.1 Mandatory Compliance Elements for States; 5.1.1 Mandatory Elements of State Programs; 5.1.1.1 Regulatory Requirements). The PRT finds all states in compliance.

De Minimis Requests

A state qualifies for *de minimis* status if its previous three-year average combined commercial and recreational catch is less than 1% of the previous three-year average coastwide combined

commercial and recreational catch. Those states that qualify for *de minimis* are not required to implement any monitoring requirements, as none are included in the plan.

The states of New Jersey, Delaware, and Georgia request *de minimis* status. The PRT notes that all three states meet the requirements of *de minimis*.

Regulation Changes

No state regulatory changes were reported for 2017. In 2017, Framework Amendment 5 to the Fishery Management Plan for Coastal Migratory Pelagics in the Gulf of Mexico and Atlantic Regions was approved by the SAFMC and GMFMC. This Framework Amendment allows commercially permitted vessels to operate as private recreational vessels when the commercial season is closed for Spanish or king mackerel.

VIII. Recommendations of the Plan Review Team

Research and Monitoring Recommendations

High Priority

- Length, sex, age, and CPUE data are needed for improved stock assessment accuracy. Simulations on CPUE trends should be explored and impacts on VPA and assessment results determined. Data collection is needed for all states, particularly from Virginia north.
- Evaluation of weight and especially length at age of Spanish mackerel.
- Development of fishery-independent methods to monitor stock size of Atlantic Spanish mackerel (consider aerial surveys used in south Florida waters).
- More timely reporting of mid-Atlantic catches for quota monitoring.
- Provide better estimates of recruitment, natural mortality rates, fishing mortality rates, and standing stock. Specific information should include an estimate of total amount caught and distribution of catch by area, season, and type of gear.
- Develop methodology for predicting year class strength and determination of the relationship between larval abundance and subsequent year class strength.
- Commission and member states should support and provide the identified data & input needed to improve the SAFMC's SEDAR process.
- The full implementation of ecosystem-based management and the implementation of monitoring/research efforts needed to support ecosystem-based management needs should be conducted.
- Consider extending management measures into the New England region as catches and anecdotal sightings of Spanish mackerel have increased in this area. Also determine whether more northerly fish are of the same stock as fish further south.

Medium Priority

- Yield per recruit analyses should be conducted relative to alternative selective fishing patterns.
- Determine the bycatch of Spanish mackerel in the directed shrimp fishery in Atlantic Coastal waters (partially met: Branstetter, 1997; Ottley et al., 1998; Gaddis et al., 2001; Page et al., 2004).
- Evaluate potential bias of the lack of appropriate stratification of the data used to generate age-length keys for Atlantic and Gulf Spanish mackerel.

- Evaluate CPUE indices related to standardization methods and management history, with emphasis on greater temporal and spatial resolution in estimates of CPUE.
- Consideration of MRFSS add-ons or other mechanisms for collection of socioeconomic data for recreational and commercial fisheries.
- Determine normal Spanish mackerel migration routes and changes therein, as well as the climatic or other factors responsible for changes in the environmental and habitat conditions which may affect the habitat and availability of stocks.
- Determine the relationship, if any, between migration of prey species (i.e., engraulids, clupeids, carangids), and migration patterns of the Spanish mackerel stock.

Low Priority

- Final identification of Spanish mackerel stocks through multiple research techniques.
- Complete research on the application of assessment and management models relative to dynamic species such as Spanish mackerel.
- Delineation of spawning areas and areas of larval abundance through temporal and spatial sampling.

IX. References

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X. Figures

Figure 1. Estimated total biomass (metric tons) at start of year. Horizontal dashed line indicates B_{MSY} (SEDAR, 2012).

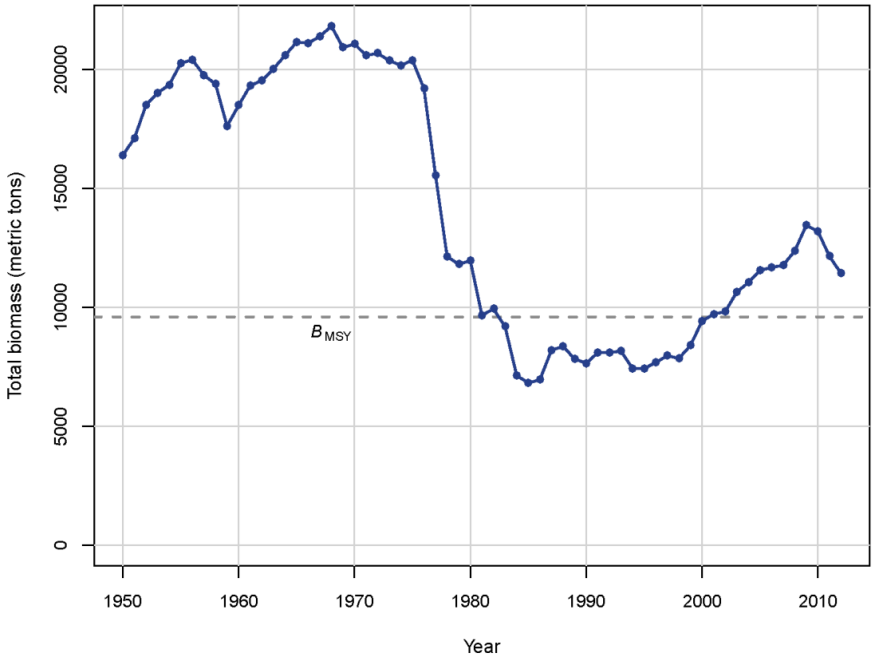


Figure 2. Estimated time series of Atlantic group Spanish mackerel fishing mortality rate (F) relative to F_{MSY} benchmark. Solid line indicates estimates from base run of the Beaufort Assessment Model; gray error bands indicate 5th and 95th percentiles of the Monte Carlo Bootstrap analysis trials (SEDAR, 2012).

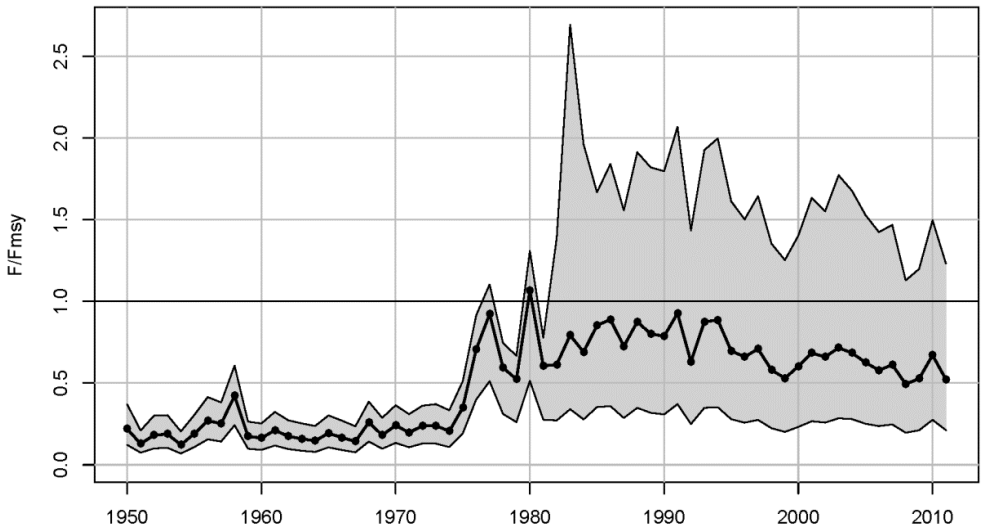


Figure 3. Recreational harvest in pounds, estimated using the Coastal Household Telephone Survey (CHTS) and the mail-based Fishing Effort Survey (FES). (Source: personal communication with NOAA Fisheries, Fisheries Statistics Division. [10/06/2018])

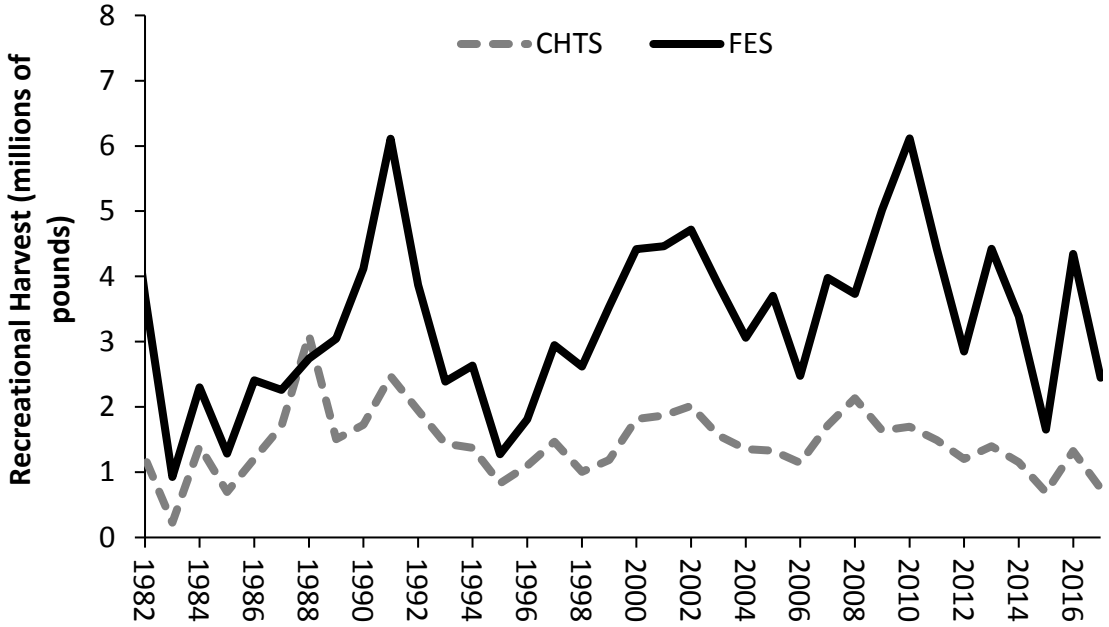


Figure 4. Commercial and recreational harvest (pounds) of Spanish mackerel, 1950-2017. (Recreational data available from 1981-present only; see Tables 2 and 4 for values and sources)

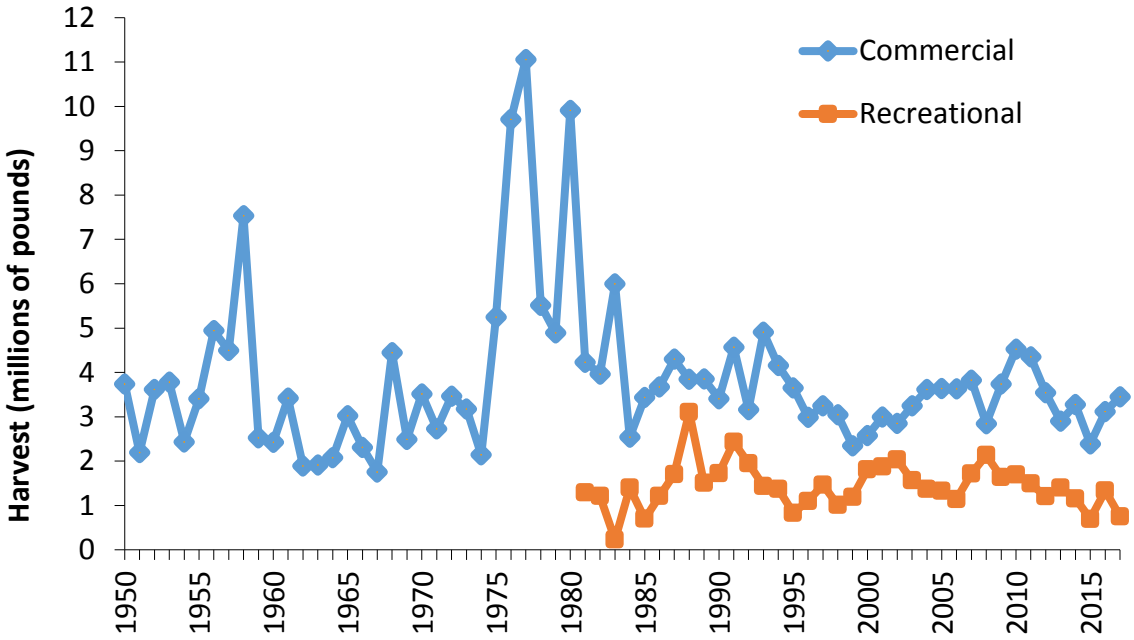
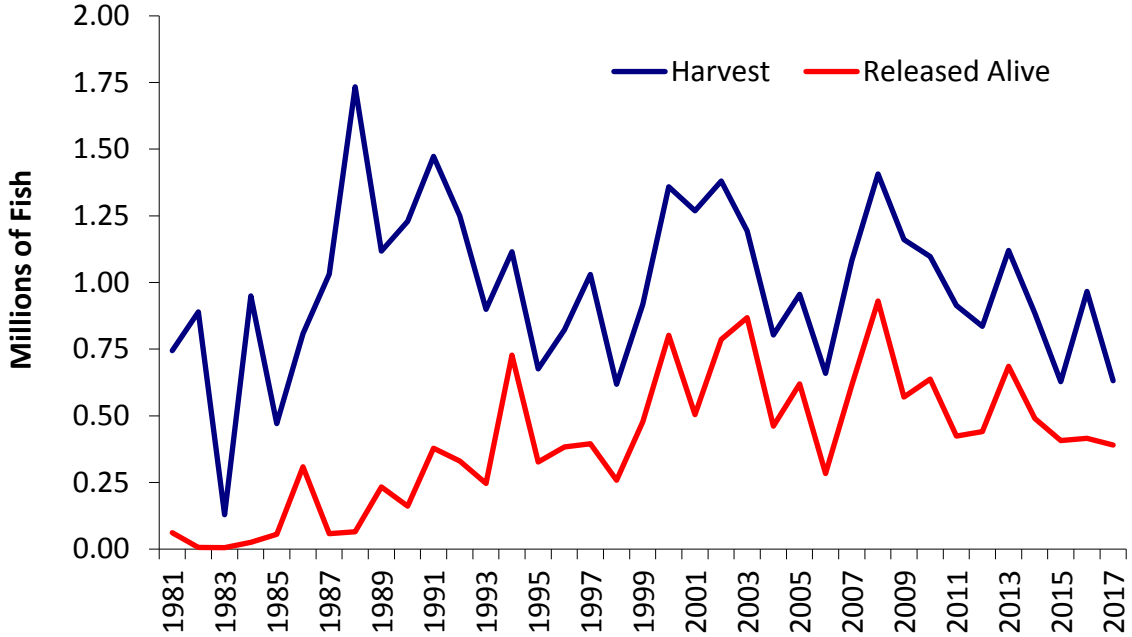


Figure 5. Recreational harvest and releases (numbers of fish) of Spanish mackerel, 1981-2017.
(See Tables 3 and 5 for values and sources)



XI. Tables

Table 1. Summary of state regulations for Spanish mackerel in 2016.
Notes: A commercial license is required to sell Spanish mackerel in all states; other general gear restrictions apply to the harvest of Spanish mackerel. Purse seines and drift gill nets are prohibited south of Cape Lookout, NC.

State	Recreational	Commercial
NY	14" TL, 15 fish	14" TL. 3,500 lb trip limit.
NJ	14" TL, 10 fish	14" TL. 3,500 lb trip limit.
DE	14" TL, 15 fish	14" TL. 3,500 lb trip limit.
MD	14" TL, 15 fish	14" TL. 3,500 lb trip limit. March-Feb.
PRFC	14" TL, 15 fish	14" TL. Closure if/when MD and VA fisheries close.
VA	14" TL, 15 fish	14" TL. 3,500 lb trip limit. Closure if/when federal waters close.
NC	12" FL, 15 fish	12" FL; 11.5" FL in pound net fishery July 4th – Sept 30th, 2016. 3,500 lb trip limit for combined Spanish and king mackerel landings.
SC	12" FL, 15 fish	12" FL. 15 fish. 3,500 lb trip limit. March-Feb. Closure if/when federal waters close.
GA	12" FL, 15 fish	12" FL. 3,500 lb trip limit.
FL	12" FL or 14" TL, 15 fish. Cast nets less than 14' and beach or haul seines within 2" stretched mesh allowed	12" FL or 14" TL. Trip limits: April 1 until Nov. 30 - 3500 lb; Dec. 1 until 75% of adjusted quota reached – 3500 lb Mon-Fri. & 1500 lb Sat-Sun; >75% adjusted quota until quota filled -1500 lb; > 100% of adjusted quota - 500 lb. Restricted Species Endorsement Required Allowed gear: beach or haul seine, cast net, hook and line, or spearing.

Table 2. Commercial landings (pounds, calendar year) of Spanish mackerel by state, 2008-2017. (Source: ACCSP for 2015 and earlier for all jurisdictions, except PRFC; annual compliance reports for 2016 and for all PRFC years. Starred values are confidential. Total values adhere to the ACCSP rule of 3, i.e. totals are reflective of the true total if 0 or at least 3 states' data are confidential in a given year. Otherwise, they are sums of non-confidential data. Data dating back to 1950 are available upon request to ACCSP.)

Year	NY	NJ	DE	MD	PRFC	VA
2008	2,512	1,210	*	6,912	3,253	150,547
2009	3,463	3,324	*	*	494	137,573
2010	3,712	829		4,939	68	47,373
2011	1,147	305		5,088	675	35,601
2012	2,293	2,806		3,634	270	18,047
2013	4,467	265		2,395	302	7,602
2014	2,550	292		1,632	12	7,859
2015	1,357	2,746		2,222	6	14,493
2016	813	1,997	*	16,205	548	32,682
2017	989	462	0	811	4,704	21,585

Year	NC	SC	GA	FL	Total
2008	415,405		*	2,262,504	2,842,342
2009	961,811			2,629,343	3,736,009
2010	911,866	*		3,551,357	4,520,144
2011	871,217			3,432,932	4,346,965
2012	916,439			2,596,917	3,540,407
2013	620,752			2,265,390	2,901,172
2014	673,974	*		2,585,281	3,271,599
2015	561,407	28		1,807,967	2,390,227
2016	601,515	133		2,461,178	3,115,071
2017	815,972	135	0	2,605,705	3,450,362

Table 3. Recreational harvest (numbers) of Spanish mackerel by state, state, 2008-2017. State values shown were estimated using effort information from the Coastal Household Telephone Survey (CHTS). Coastwide totals are also shown as recalibrated estimates using effort information from the mail-based Fishing Effort Survey (FES). (Source: personal communication with NOAA Fisheries, Fisheries Statistics Division. [10/06/2018])

Year	NY	NJ	DE	MD	VA	NC
2008	0	344	0	7,515	83,903	744,139
2009	0	215	0	19,901	16,451	677,787
2010	0	0	0	5,580	20,524	483,956
2011	0	0	0	10,554	35,054	367,086
2012	0	0	0	2,962	11,847	491,238
2013	0	0	31	2,905	61,260	497,329
2014	0	0	0	5,494	15,776	398,398
2015	0	0	0	11,366	12,072	388,157
2016	0	0	9	11,465	75,068	424,341
2017	0	3,188	27	14,613	12,609	439,654

Year	SC	GA	FL	CHTS Total	FES Total
2008	52,725	14,682	503,398	1,406,706	2,639,732
2009	73,611	4,476	368,615	1,161,056	3,261,707
2010	70,351	4,955	512,295	1,097,661	3,698,224
2011	87,109	7,486	406,068	913,357	2,757,220
2012	80,204	2,119	246,866	835,236	2,062,107
2013	22,414	1,299	534,923	1,120,161	3,897,654
2014	80,935	1,903	381,902	884,408	2,650,497
2015	133,446	527	82,064	627,632	1,491,591
2016	78,100	1,510	375,926	966,419	3,439,134
2017	16,300	8,007	137,559	631,957	1,778,721

Table 4. Recreational harvest (pounds) of Spanish mackerel by state, state, 2008-2017. State values shown were estimated using effort information from the Coastal Household Telephone Survey (CHTS). Coastwide totals are also shown as recalibrated estimates using effort information from the mail-based Fishing Effort Survey (FES). (Source: personal communication with NOAA Fisheries, Fisheries Statistics Division. [10/06/2018])

Year	NY	NJ	DE	MD	VA	NC
2008	0	513	0	11,558	113,127	968,108
2009	0	302	0	37,284	22,131	824,225
2010	0	0	0	11,383	27,503	565,830
2011	0	0	0	22,630	41,325	470,541
2012	0	0	0	5,223	17,806	665,201
2013	0	0	43	6,949	68,165	625,035
2014	0	0	0	12,440	17,597	449,709
2015	0	0	0	16,820	10,746	431,082
2016	0	0	8	18,995	71,869	411,353
2017	0	3,516	42	17,379	16,482	459,982

Year	SC	GA	FL	CHTS Total	FES Total
2008	84,244	36,154	919,711	2,133,414	3,731,878
2009	96,827	6,910	651,494	1,639,171	5,022,464
2010	103,956	5,383	983,764	1,697,818	6,115,450
2011	73,605	9,439	873,222	1,490,762	4,420,710
2012	98,316	4,536	411,935	1,203,016	2,847,807
2013	50,866	2,159	648,471	1,401,686	4,422,624
2014	126,345	2,356	544,883	1,153,330	3,386,462
2015	108,423	1,879	124,199	693,150	1,654,337
2016	74,475	2,853	752,475	1,332,026	4,342,763
2017	23,556	14,135	215,961	751,053	2,449,417

Table 5. Recreational releases (numbers) of Spanish mackerel by state, state, 2008-2017. State values shown were estimated using effort information from the Coastal Household Telephone Survey (CHTS). Coastwide totals are also shown as recalibrated estimates using effort information from the mail-based Fishing Effort Survey (FES). (Source: personal communication with NOAA Fisheries, Fisheries Statistics Division. [10/06/2018])

Year	NY	NJ	DE	MD	VA	NC
2008	0	0	0	6,951	37,850	449,095
2009	0	26,741	0	3,630	20,980	313,030
2010	0	0	0	0	33,103	294,350
2011	0	0	0	0	28,526	170,926
2012	0	0	0	0	17,150	234,905
2013	0	0	94	0	5,583	289,216
2014	0	0	0	881	3,450	240,731
2015	0	0	0	357	4,224	216,011
2016	0	0	213	0	14,072	187,878
2017	0	4,440	0	3,029	4,911	228,851

Year	SC	GA	FL	CHTS Total	FES Total
2008	67,686	5,300	363,542	930,424	2,255,086
2009	55,600	982	149,825	570,788	1,713,051
2010	28,200	65	282,252	637,970	2,285,503
2011	67,144	10,131	147,399	424,126	1,471,139
2012	98,371	1,724	88,592	440,742	1,196,851
2013	24,862	0	365,405	685,160	2,723,231
2014	36,082	851	208,529	490,524	1,899,889
2015	99,530	466	85,973	406,561	1,065,319
2016	69,882	137	143,453	415,635	2,129,707
2017	57,040	5,585	87,006	390,862	1,492,251

Atlantic States Marine Fisheries Commission

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703.842.0740 • 703.842.0741 (fax) • www.asmfc.org

MEMORANDUM

October 15, 2018

To: **South Atlantic State/Federal Fisheries Management Board**

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

RE: **Advisory Panel Nomination**

Please find attached a nomination to the South Atlantic Species Advisory Panel – Glenn Skinner, a commercial gillnetter and member of the North Carolina Fisheries Association. Please consider approval of this nomination at the next Board meeting.

SOUTH ATLANTIC SPECIES ADVISORY PANEL

Bolded names await approval by the South Atlantic State-Federal Fisheries Management Board
Bolded and italicized name denotes Advisory Panel Chair October 15, 2018

Delaware
Daniel T. Dugan (rec)
20 South Woodward Avenue
Wilmington, DE 19805
Phone: (302)636-9300
dtdugan@verizon.net
Appt. Confirmed 11/1/07
Appt Reconfirmed 10/18/16

New Jersey
Jeffrey Reichle (comm.)
PO Box 830
Cape May, NJ 08204
Phone: (day): (609)884-7600
Phone (eve): (609)884-0661
FAX: (609)884-0664
jreichle@lundsfish.com
Appt. Confirmed 11/1/07

Chris McCurdy (for-hire)
10 Birch Drive
Swainton, NJ 08210
Phone (day): (609)463-6760
Phone (cell): (609)374-4604
capt.curd@verizon.net
Appt. Confirmed 11/1/07
Expertise: Red drum, black drum, Atlantic croaker

Maryland
Vacancy (rec & comm)

Virginia
Vice-Chair, Thomas J. Powers (rec)
311 Hunts Neck Road
Poquoson, VA 23662
Phone: 757-269-7660
powers@jlab.org
Appt. Confirmed 11/1/07
Expertise: Atlantic croaker

Craig Freeman (rec/for-hire/comm)
118 Messick Road
Poquoson, VA 23662
Phone: (757)871-9246
Gradingscalessportfishing@gmail.com
Expertise: Cobia
Appt. Confirmed 8/9/18

North Carolina
Glenn Skinner (commercial gillnetter)
296 Cyprus Pollard Road
Newport, NC 28570
Phone: 252.646.7742
glennskinner@ncfish.org
Expertise: spot, spotted seatrout, Spanish mackerel

Charles Bernard (Bernie) McCants, Jr (rec)
2325 Windy Woods Drive
Raleigh, NC 27607
Phone (day): 919.602.4516
Phone (evening): 919.602.4516
FAX: 919.668.7064
bernie.mccants@duke.edu
Appt Confirmed 8/9/12
Expertise: Red drum, black drum

Aaron Kelly (for-hire)
112 Jimmy Court
Kill Devil Hills, NC 27948
Phone (day): 252.202.6046
Phone (eve): 252.441.6575
info@rocksolidfishing.com
Expertise: Cobia
Appt Confirmed 10/25/16

South Carolina
Captain Bill Parker (rec fishing guide)
28 Eagle Claw Dr.
Hilton Head, SC 29926
Phone: 843.384.6511
runfish1@roadrunner.com
Expertise: Cobia
Appt Confirmed 10/25/16

Glenn Ulrich (rec)
684 Ritter Drive
Charleston, SC 29412
843.793.8712
ulrichg@bellsouth.net
Expertise: Mixed species

SOUTH ATLANTIC SPECIES ADVISORY PANEL

Bolded names await approval by the South Atlantic State-Federal Fisheries Management Board
Bolded and italicized name denotes Advisory Panel Chair October 15, 2018

Appt Confirmed 10/25/16

Georgia
Lee Southard (rec fishing guide)
222 Crosswind Drive
Richmond Hill, GA 31324
Phone: 912.727.3402; 912.312.1210
leesouthard1801@comcast.net
Expertise: Mixed species
Appt Confirmed 10/25/16

Florida
James R. Stockton, Jr. (guideboat)
P.O. Box 1069
Ponte Vedra Beach, FL 32004
Phone: (904)285-4884
Appt. Confirmed 11/1/07
Expertise: Red drum

William R. Bird, Jr. (rec)
P.O. Box 2809
Orlando, FL 32802
Phone (day): 407-418-6237
Phone (eve): (407) 257-7480
Fax: 407-843-4444
bill.bird@lddkr.com and wbird2@cfl.rr.com
Appt. Confirmed 11/1/07
Expertise: Red drum and black drum

Tim Adams (Sp. Mackerel comm.)
426 S.W. Maple St.
Sebastian, FL 32958
Phone (eve): (772) 589-9846
Phone (cell): (772)473-6580
Appt. Confirmed 11/1/07
Expertise: Spanish Mackerel

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 (your name) State: N.C.

Name of Nominee: Glenn Skinner

Address: 296 Cyrus Pollard Rd.

City, State, Zip: Newport NC 28570

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

Phone (day): 252 646 7742 Phone (evening): _____

FAX: _____ Email: glennskinner@ncfish.org

. . . . . .

FOR ALL NOMINEES:

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

North Carolina Fisheries Association

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

Blue Crab
Spot
Striped Mullet
Southern Flounder
Spanish Mackerel
Spotted Seatrout

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

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? 30+
2. Is the nominee employed only in commercial fishing? ☐ yes ☒ no
3. What is the predominant gear type used by the nominee? gillnet

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? 45 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.

Aside from my commercial fishing experience I was also employed as a technician at the North Carolina Division of Marine Fisheries for 3 years and am currently the Executive Director of the North Carolina Fisheries Association.

Nominee Signature: John G Skinner Jr Date: 7 31 18

Name: John Glenn Skinner Jr.
(please print)

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

State Director – Ongoing Proxy

State Legislator

Governor's Appointee