Atlantic States Marine Fisheries Commission

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

James J. Gilmore, Jr. (NY), Chair *Patrick C. Keliher (ME), Vice-Chair* *Robert E. Beal, Executive Director*

Vision: Sustainably Managing Atlantic Coastal Fisheries

MEMORANDUM

January 29, 2019

TO: Commissioners; Proxies; American Lobster Management Board; ACCSP Coordinating Council; Atlantic Herring Management Board; Atlantic Menhaden Management Board; Atlantic Striped Bass Management Board; Executive Committee; ISFMP Policy Board; Shad and River Herring Management Board; South Atlantic State/Federal Fisheries Management Board; Summer Flounder, Scup, and Black Sea Bass Management Board; Winter Flounder Management Board

FROM: Robert E. Beal REB
Executive Director

RE: ASMFC Winter Meeting: February 5-7, 2019 (TA 19-019)

The Atlantic States Marine Fisheries Commission's Winter Meeting will be held February 5-7, 2019 at **The Westin Crystal City** (Telephone: 703.486.1111), located at 1800 South Eads Street, Arlington, VA. Meeting materials are available on the Commission website at http://www.asmfc.org/home/2019-winter-meeting. Supplemental materials will be posted to the website on Wednesday, January 30, 2019.

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. ***Due to the partial lapse in federal appropriations, some agenda items throughout the week may be impacted because they require products and/or actions by our federal partners. Board discussion may be limited or deferred until a subsequent meeting. As a result, the start and end times of meetings may change. Agendas for specific meetings may be further modified.***

For those submitting travel vouchers, please note the travel voucher has been revised to reflect the change in the mileage rate for privately owned vehicles to 58 cents/mile. The new voucher can be obtained at http://www.asmfc.org/files/Meetings/ASMFCElectronicTravelVoucher_Jan19.xlsx.

Board meeting proceedings will be broadcast daily via webinar beginning February 5th at 9:00 a.m. and continuing daily until the conclusion of the meeting (expected to be 2:15 p.m.) on Thursday, February 7th. The webinar will allow registrants to listen to board 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 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/4091497567943208451 to register.

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

Enclosures: Final Agenda, Hotel Directions, TA 19-019, and Travel Reimbursement Guidelines

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 immediately preceding the scheduled ASMFC Meeting (in this case, the Tuesday deadline will be ***January 29, 2019***) 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, ***January 29, 2019 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.

Due to the partial lapse in federal appropriations, some agenda items throughout the week may be impacted because they require products and/or actions by our federal partners. Board discussion may be limited or deferred until a subsequent meeting. As a result, the start and end times of meetings may change.

Tuesday, February 5

9:00 – 11:15 a.m. **Atlantic Herring Management Board**
Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey
Other Members: NEFMC, NMFS
Chair: Keliher
Other Participants: Zobel, Eastman, Kaelin
Staff: Ware

1. Welcome/Call to Order *(P. Keliher)*
2. Board Consent
   - Approval of Agenda
   - Approval of Proceedings from October 2018
3. Public Comment
4. Consider Approval of Draft Addendum II for Public Comment *(M. Ware)* **Action**
5. Advisory Panel Report *(J. Kaelin)*
   - Setting Quota Periods in Area 1A
6. Consider Postponed Motion from October 2018 Meeting *(P. Keliher)* **Action**
   Postponed Motion: "Move to initiate an Addendum which considers providing the Atlantic Herring Board greater flexibility to set annual quota period specifications for the Area 1A fishery. This issue can be included in the addendum initiated regarding the Gulf of Maine herring spawning protections, or it can be a separate document. Task the PDT to expand the quota period options to increase flexibility when distributing harvest during the months of July through September. However, in years of higher sub-annual catch limits, choose options that would allow for expansion of harvest to meet the needs of the market."
7. Set Sub-Annual Catch Limit Specifications for the 2019 Fishing Year *(M. Ware)* **Final Action***
8. Update on Draft Addendum III and New England Fishery Management Council 2019 Priorities *(M. Ware)*
9. Other Business/Adjourn

** Pending Release of Final Rule from NOAA Fisheries*

11:30 – Noon **Winter Flounder Management Board**

Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey
Other Members: NMFS, USFWS
Chair: Pierce
Other Participants: Nitschke, Blanchard
Staff: Ware

1. Welcome/Call to Order *(D. Pierce)*
2. Board Consent
   - Approval of Agenda
   - Approval of Proceedings from May 2018
3. Public Comment
4. Consider Specifications for the 2019 Fishing Year *(M. Ware)* **Final Action**
5. Consider Approval of 2019 Fishery Management Plan Review and State Compliance Reports *(J. Kuesel)* **Action**
6. Discussion of Bell et al. 2018 Paper "Rebuilding in the Face of Climate Change" *(D. Pierce)*
7. Other Business/Adjourn

Noon – 1:00 p.m. **Lunch** *(On Your Own)*

1:00 – 2:30 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
Chair: Ballou
Other Participants: Wojcik, Snellbaker, McNamee
Staff: Starks, Rootes-Murdy

1. Welcome/Call to Order *(B. Ballou)*
2. Board Consent
   - Approval of Agenda
   - Approval of Proceedings from October 2018
3. Public Comment
4. Consider Approval of Scup Proposals for 2019 Recreational Measures *(J. McNamee)* **Final Action**
5. 2019 Black Sea Bass Recreational Measures *(J. McNamee)*
   - Consider Approval of Status Quo Measures **Possible Final Action**
   - Consider Methodology for Adjusting 2019 Recreational Measures **Possible Action**
   - Consider Virginia and North Carolina Proposals for Wave 1 Recreational Fishery **Final Action**
6. Report from Black Sea Bass Commercial Working Group *(C. Starks*) **Possible Action**
7. Other Business/Adjourn

2:45 – 5:00 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
Staff: Ware

1. Welcome/Call to Order *(S. Train)*
2. Board Consent
   - Approval of Agenda
   - Approval of Proceedings from October 2018
3. Public Comment
4. Report from the Lobster-Whale Working Group *(M. Ware)* **Possible Action**
5. Report from the Lobster Enforcement Vessel Working Group *(R. Beal)* **Possible Action**
6. Review Implementation of the Jonah Crab Fishery Management Plan for Delaware and New York *(S. Train)* **Possible Action**
7. Progress Update on the 2020 American Lobster Benchmark Stock Assessment *(J. Kipp)*
8. Other Business/Adjourn

Wednesday, February 6

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

Breakfast 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 October 2018
3. Public Comment
4. Discuss Priorities for Use of Remaining Plus-up Funding *(R. Beal)* **Action**
5. Update on Aquaculture Activities *(R. Beal)*
6. Update on ACCSP Recreational Data Collection Activities *(M. Cahall)*
7. Update on Marine Recreational Information Program Outreach Efforts *(R. Beal)*
8. Discuss Use and Structure of Management Board Working Groups *(R. Beal)*
9. Finalize Awards Committee Standard Operating Policies and Procedures *(S. Woodward)* **Action**
10. Update on Primer for Legislators and Governors' Appointees *(D. Abbott)*
11. Other Business/Adjourn

10:00 – 11:00 a.m. **Atlantic Coastal Cooperative Statistics Program (ACCSP) 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 October 2018
3. Public Comment
4. Discuss Funding Status *(M. Cahall)*
5. Review Results of Partner Data Accountability Survey *(J. Simpson)*
6. Progress Update on eTrips/Mobile 2.0 *(M. Cahall)*
   - ACCSP Support for For-hire eVTRs in the South Atlantic and Gulf of Mexico
   - Smartphone Version
7. Recreational Data Updates
   - Progress Update on Deployment of Dockside Interceptor APAIS Tablet *(A. DiJohnson)*
   - Announce New Computer-aided Telephone Interview (CATI) *(G. White)*
8. Review Improvements to Data Warehouse Confidentiality Management Process *(J. Simpson)*
9. Other Business/Adjourn

11:15 a.m. – 12:15 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, NMFS, PRFC, SAFMC, USFWS
Chair: Geer
Other Participants: McDonough, Rickabaugh, Lynn
Staff: Schmidtke

1. Welcome/Call to Order *(P. Geer)*
2. Board Consent
   - Approval of Agenda
   - Approval of Proceedings from October 2018
3. Public Comment
4. Draft Amendment 1 to the Cobia Fishery Management Plan
   - Progress Update *(M. Schmidtke)*
   - Provide Additional Guidance to the Plan Development Team to Develop Management Options *(P. Geer)*
5. Consider Approval of 2018 Fishery Management Plan Review and State Compliance Reports for Spot *(M. Schmidtke)* **Action**
6. Other Business/Adjourn

12:15 – 1:15 p.m. **Legislators and Governors' Appointees (LGAs) Lunch Meeting**

1. Introductions
2. General Comments/Discussion
3. Discuss Noncompliance, If Necessary

12:15 – 1:15 p.m. **Lunch will be provided for Commissioners, other members, participants and staff. LGAs should pick up lunch and continue to their meeting.**

1:15 – 2:15 p.m. **Shad and River Herring Management Board**
Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida
Other Members: DC, NMFS, PRFC, USFWS
Chair: Clark
Other Participants: Sprankle, Furlong
Staff: Starks

1. Welcome/Call to Order *(J. Clark)*
2. Board Consent
   - Approval of Agenda
   - Approval of Proceedings from October 2017
3. Public Comment
4. Progress Update on Shad Benchmark Stock Assessment *(J. Kipp*)
5. Consider Approval of Massachusetts Shad Sustainable Fishery Management Plan (SFMP) **Final Action**
   - Review SFMP and Technical Committee Memo *(K. Sprankle*)
6. Update on Technical Committee Review of Inconsistencies with Harvest and Monitoring Requirements of Amendments 2 and 3 *(K. Sprankle*)
7. Other Business/Adjourn

2:30 – 5:00 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, Celestino
Staff: Appelman

1. Welcome/Call to Order *(M. Armstrong)*
2. Board Consent
   - Approval of Agenda
   - Approval of Proceedings from October 2018
3. Public Comment
4. Review Preliminary ASMFC Stock Assessment Summary *(M. Celestino)**
5. Discuss Next Steps for Striped Bass Management *(M. Armstrong)* **Possible Action**

6. Consider Providing Comment to NOAA Fisheries Regarding Proposed Measures to Lift the Ban on Recreational Fishing in the Federal Block Island Sound Transit Zone *(M. Armstrong)*
7. Review Maryland's Conservation Equivalency Effectiveness Report of 2018 Recreational Measures for the Chesapeake Bay Summer and Fall Fishery *(M. Luisi*)
8. Review Changes to Virginia's Striped Bass Monitoring Program *(N. Lengyel)* **Action**
9. Other Business/Adjourn

**Due to a partial lapse in federal appropriations, the final Benchmark Assessment and the SARC Review of the Assessment will likely be unavailable for Board consideration at this meeting. Board review of those reports will be conducted once they have been released.*

Thursday, February 7

8:00 – 10:00 a.m. **Atlantic Menhaden Management Board**
Member States: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida
Other Members: NMFS, PRFC, USFWS
Chair: Meserve
Other Participants: Ballenger, Kersey
Staff: Appelman

1. Welcome/Call to Order *(N. Meserve)*
2. Board Consent
   - Approval of Agenda
   - Approval of Proceedings from August 2018
3. Public Comment
4. Progress Update on the Menhaden Single-Species and Ecological Reference Point Benchmark Stock Assessments
5. Review Synthesis of Scientific Findings of Atlantic Menhaden's Role in the Chesapeake Bay Ecosystem *(K. Drew)*
6. Consider Postponed Motion from the August 2018 Board Meeting *(N. Meserve)* **Action**
   Postponed Motion: "Move the Atlantic Menhaden Board recommend to the ISFMP Policy Board that the Commonwealth of Virginia be found out of compliance for not fully and effectively implementing and enforcing Amendment 3 to the Atlantic Menhaden Fishery Management Plan if the State does not implement the following measure from section 4.3.7 (Chesapeake Bay Reduction Fishery Cap) of Amendment 3: The annual total allowable harvest from the Chesapeake Bay by the reduction fishery is limited to no more than 51,000 mt."
7. Other Business/Adjourn

10:15 – 11:30 a.m. **Strategic Planning Workshop for Commissioners**

1. Welcome/Call to Order *(J. Gilmore)*
2. Public Comment
3. Review and Discuss 2018 Commissioner Survey Results *(D. Tompkins)*
4. Review Draft Strategic Plan for 2019-2023 *(R. Beal)*
5. Adjourn

11:30 a.m. – 1:45 p.m. **Interstate Fisheries Management Program Policy Board *(lunch will be provided)***

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
Staff: Kerns

1. Welcome/Call to Order *(J. Gilmore)*
2. Board Consent
   - Approval of Agenda
   - Approval of Proceedings from October 2018
3. Public Comment
4. Update from the Executive Committee *(J. Gilmore)*
5. Review and Consider Revisions to the Appeals Policy Guidance Document *(T. Kerns)* **Final Action**
6. Discuss Benchmark Stock Assessment Timeline *(T. Kerns/K. Drew)*
7. Atlantic Coastal Fish Habitat Partnership Report *(L. Havel)*
8. Discuss the Modernizing Recreational Fisheries Management Act of 2017 *(R. Beal)*
9. Review Noncompliance Findings, If Necessary **Action**
10. Other Business/Adjourn

1:45 – 2:15 p.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 2018
3. Public Comment
4. Review and Consider Approval of 2019-2023 Strategic Plan **Final Action**
5. Consider Noncompliance Recommendations, If Necessary **Final Action**
6. Other Business/Adjourn

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MEMORANDUM

January 28, 2019

To: **Summer Flounder, Scup, and Black Sea Bass Management Board**

From: **Summer Flounder, Scup, and Black Sea Bass Technical Committee**

RE: **Technical Committee Recommendations for 2019 Recreational Black Sea Bass Measures**

Technical Committee Members: Greg Wojcik (Chair, CT), Robert Glenn* (MA), Jason McNamee (RI), John Maniscalco (NY), Peter Clarke** (NJ), Steve Doctor (MD), Alex Aspinwall (VA), Richard Wong (DE), T.D. VanMiddlesworth (NC)

**Attended the call in place of Tiffany Vidal*
***Unable to attend call but submitted written comments*

Staff: Caitlin Starks (ASMFC), Kiley Dancy (MAFMC), Julia Beaty (MAFMC)

Additional Attendees: Nichola Meserve (MA)

The Summer Flounder, Scup, Black Sea Bass Technical Committee (TC) met via conference call on Monday, January 14, 2019 to review the available 2018 recreational black sea bass harvest estimates through wave 5, determine the methodology for projecting wave 6 harvest, and discuss recommendations for 2019 recreational measures. Additionally, the TC evaluated proposals from Virginia and North Carolina to account for their expected harvest during the February 2019 federal waters black sea bass recreational fishery.

Review of Recreational Harvest Estimates

In 2018 the Marine Recreational Information Program (MRIP) released a new time series of harvest estimates calibrated to account for changes in intercept survey sampling design and the new Fishing Effort Survey (FES). However, this information has not yet been incorporated into a stock assessment for black sea bass, and the recreational harvest limit (RHL) for 2019 is still based on a stock assessment that used pre-calibrated MRIP data. Therefore, the TC reviewed MRIP harvest estimates for 2018 (Waves 1-5) that are back-calibrated in order to be consistent with the MRIP data derived using methodology prior to 2018 (i.e. effort information from the Coastal Household Telephone Survey instead of the new Fishing Effort Survey). This is necessary in order to allow the establishment of potential recreational measures for 2019.

Projection of 2018 Wave 6 Harvest

The TC discussed methodologies for projecting 2018 black sea bass harvest in wave 6 (November-December). First, the TC agreed the projection should be based on average harvest estimates for the most recent three years (2015-2017) to account for variability in MRIP estimates. Then, the TC agreed to calculate the projected 2018 wave 6 harvest using the ratio of the sum of coastwide landings in Waves 1-5 to the sum of coastwide landings in Wave 6 across the most recent three years. The TC noted that using coastwide landings rather than state-by-state landings to calculate the harvest ratio for Waves 1-5

to Wave 6 was preferable because MRIP data should be used at as large a scale as possible to utilize estimates with the smallest level of uncertainty.

The TC also agreed that for the purposes of this projection, smoothing should be applied to New York's harvest estimate in 2016 Wave 6, and New Jersey's harvest estimate in 2017 Wave 3. When developing recreational measures for 2018 the TC evaluated these estimates and found them to be outliers using a modified Thompson's Tau analysis. The TC then applied the previously approved smoothed values to develop 2018 recreational measures. The TC recommends continuing to use these values for the development of recreational measures as the MRIP estimates are not representative of the actual harvest.

Using the above methodology, the TC developed a Wave 6 harvest projection of 192,304 pounds, and a projected 2018 harvest of 3.92 million pounds.

Recommendations for 2019 Recreational Measures

Although the projected 2018 harvest point estimate exceeds the 2019 RHL of 3.66 million pounds by 7%, the TC recommends maintaining status quo recreational management measures in 2019. Justification to recommend maintaining status quo recreational measures include:

1. The percent standard error (PSE) of harvest estimates should be considered when compared with the RHL instead of using the point estimate. The PSE for the final coastwide recreational harvest (MA-VA) in 2017 was 8.4. This is typical of MRIP harvest estimates for black sea bass produced using the Coastal Household Telephone Survey (CHTS) to estimate effort. NC is not included in this estimate due to the need for post-stratification of the harvest estimate at Cape Hatteras.
2. The TC expressed concern about using back-calibrated MRIP estimates to develop recreational measures. Effort estimates from CHTS using random digit dialing has been reported to produce much lower harvest estimates then the new FES. The use of this data was not well accepted by the full TC.
3. The contribution of different state and wave combinations to the total harvest under back-calibrated and the newer FES based MRIP estimates are not equal (± ~20%). Therefore, regulatory changes based upon back calibrated estimates that impact angler access may not actually be appropriate or result in the intended effect, especially when compared to FES based estimates in the near future.
4. TC also expressed concern with using the current RHL of 3.66 million pounds. The RHL was developed based on the past stock assessment and doesn't incorporate important changes to the stock including a strong 2015 cohort and the integration of new MRIP catch and harvest estimates.

The 2018 projected harvest estimate is within a single PSE of the 2019 RHL. The black sea bass stock is robust, was last assessed using data from 2015, and is expected to be above the biomass target. The continued use of CHTS based estimates, which have been found to be incorrect, to manage and potentially further restrict fisheries is concerning to the technical committee. The Technical Committee recommends that status quo recreational management be continued in 2019 and that those measures are not likely to exceed the 2019 RHL.

Virginia Proposal for February 2019 Recreational Fishery

Alex Aspinwall presented the Virginia (VA) proposal for participation in the February 2019 black sea bass recreational fishery in federal waters. The Virginia Marine Resources Commission (VMRC) will open the recreational black sea bass fishery on February 1- 28, 2019 with a 12.5" minimum size limit and a 15 fish bag limit in response to the National Maine Fisheries Service opening Federal waters in February 2019. VMRC will make season adjustments to account for landings during Wave 1 using either of the following options: 1) close 14 days in Wave 3, or 2) close 14 days in Wave 5.

Based on average daily landings rates from the most recent two years (2017-2018) of MRIP landings, a closure of 14 days in Wave 3 would results in savings of 6,802 pounds and a closure of 14 days in Wave 5 would result in savings of 6,755 pounds. Both options would account for landings that occurred in February 2018 (6,459 pounds). Mandatory reporting of landings and biological data collection will continue in 2019 to ensure the characterization of the February fishery.

The TC evaluated VA's proposal and found the methods to be technically sound. The TC recommends approval of VA's proposal for adjusting 2019 measures to account for February harvest.

North Carolina for February 2019 Recreational Fishery

T.D. VanMiddlesworth presented the North Carolina (NC) proposal for participation in the February 2019 black sea bass recreational fishery in federal waters. NC's expected harvest in Wave 1 is estimated at 62 pounds, based on Wave 1 landings data from 1996-2009 and 2013. To account for this harvest by adjusting measures in the rest of the season, NC proposed two options: 1) Close 1 day in Wave 3 (May 15), or 2) close 2 days in Wave 3 (May 15-16).

Based on daily harvest rates in Wave 3 in 2017 and 2018, these two options would provide savings of either 84 pounds or 168 pounds, respectively. The NC Division of Marine Fisheries (DMF) recommends Option 2 to mitigate against harvest in February that is higher than expected.

The NCDMF will rely on MRIP intercepts for length and weight data on black sea bass harvested in February, as well as information on reported releases, catch/harvest per angler, and fishing locations. In addition, NCDMF staff will work with charter boat captains to collect black sea bass carcasses for age and growth samples.

The TC evaluated NC's proposal and found the methods to be technically sound. The TC recommends approval of NC's proposal for adjusting 2019 measures to account for February harvest, but recommended requiring Vessel Trip Reports (VTRs) for all charter boats targeting black sea bass in February. VTRs are already required for party and charter boats fishing in federal waters, and should therefore capture most of NC's black sea bass harvest in February. VTR data could be used to validate MRIP for-hire harvest and effort estimates.

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MEMORANDUM

TO: American Lobster Management Board

FROM: Lobster-Whale Work Group

DATE: January 29, 2019

SUBJECT: Recommendations for Board Consideration

At its October 2018 meeting, the American Lobster Management Board (Board) reviewed a Technical Memo by the Northeast Fisheries Science Center on factors contributing to North Atlantic right whale population declines and received an update on recent discussions of the Atlantic Large Whale Take Reduction Team (ALWTRT). Given the potential for impacts to the lobster fishery, the Board created a Work Group to discuss the measures being considered by the ALWTRT and provide recommendations to the Board regarding future action. The Work Group met in-person on November 29th to begin drafting a recommendation to the Board. Because federal representatives were unable to participate on a conference call in early 2019, a January 11th webinar was cancelled and discussion between state representatives continued via email.

During the meeting, a key focus of the Work Group was the intersection of lobster management and conservation of endangered marine species. While the Atlantic States Marine Fisheries Commission (Commission) is primarily a forum for the Atlantic coast states to cooperatively manage fish and shellfish species, the Work Group noted several factors associated with North Atlantic right whale conservation which could substantially impact the economic and cultural future of the lobster fishing industry. These included future recommendations of the ALWTRT to NOAA Fisheries and the Biological Opinion being developed on the lobster fishery and interactions with right whales. Given the high economic value of the lobster fishery, as well as its social significance to coastal communities, the Work Group agreed it is important to ensure that implementation of measures to conserve endangered North Atlantic right whales takes place, to the extent possible, in a way that maintains the viability and culture of the lobster fishery.

The Commission is the managing authority for the American Lobster Fishery Management Plan (FMP). Goals and objectives of this FMP include: 1) promoting economic efficiency; 2) maintaining opportunities for participation; and 3) preserving cultural features of the industry. As a result, the Work Group concluded that action by the Board to consider modifications to the lobster fishery management plan is warranted at this time. By initiating action via the Commission's Lobster Board, states can continue to cooperatively participate in the management of this species. In addition, those who are most familiar with the intricacies of the lobster fishery, including states with substantial lobster fisheries and representatives of the lobster industry, can provide input on future regulations. While the Work Group notes additional regulatory changes to the fishery may occur via modifications the Take Reduction Plan or as a result of the Biological Opinion, the Work Group acknowledged the need to respond proactively to the growing challenges facing this fishery in order to ensure that effective conservation measures can occur in a manner that preserves, to the extent practicable, the lobster fishery and its culture.

The Work Group is recommending the Board initiate an Addendum to consider reducing the amount of traps and/or vertical lines in the water and requiring vessel tracking systems for federal permit holders.

1) Management tools the Plan Development Team (PDT) should evaluate are listed below.
    A. Reductions of vertical lines using trap limits, gear configurations, seasonal closures, and/or other measures to achieve, a rate of 20% and 40% by each LCMA (exclusive of LCMA 6). Trap reductions should consider on-going state and federal management actions by LCMA and future trap reduction plans already set in rule (e.g., Area 3 Trap Cap phased reductions).

    B. Elimination of the 10% replacement trap tag provision. Some states issue the additional 10% annual allotment automatically and other states issue when requested, therefore there may be the "potential" for some to fish above their trap limits.
    C. Accelerate planned trap reductions

2) Lobster Vessel Tracking:

    A. Vessel tracking system - Require 100% of federal lobster permit holders to have advanced vessel monitoring/tracking systems (e.g., fast ping rate, haul recognition, etc.) that could not only track movement but also identify where gear is hauled or how many traps are fished. These systems will help identify where lobster gear is fished and improve enforcement efforts.

3) Reporting:

    A. The PDT should develop a method for reporting vertical line and trap use by individual in each jurisdiction until 100% harvester reporting is implemented in state and federal waters

4) In addition, the PDT may want to consider the list of management tools below if they are not included in the final ALWTRT recommendation to NMFS.

    A. Weak link placement on rope.

    B. Other innovations to breaking rope during entanglements (e.g., sleeves).
    C. Reduced rope strength on one or both of end lines.

Logistic Support – Offshore Lobster Enforcement Vessel

December 20, 2018 Meeting Summary (Durham, NH)

Working Group Attendance

Pat Keliher (ME)
David Borden (RI)
Ritchie White (NH)
Kurt Blanchard, Deputy Chief (RI)
James Benvenuti (NH – for LT Mike Eastman)
Rene Cloutier, Major (ME)
Jay Carrol (ME)
Jeff Ray, Deputy Special Agent in Charge (NOAA- for Tim Donovan)
Greg Deyoung, Lieutenant (USCG)

Other Participants

Dennis Abbott, Commissioner Proxy, NH
Cheri Patterson, New Hampshire Fish and Game, Atlantic Large Whale Take Reduction Team
Heidi Henninger, Atlantic Offshore Lobstermen's Association

Introduction

The ASMFC Law Enforcement Committee have been discussing ways to improve enforcement capabilities of the offshore lobster fishery and current efforts to evaluate tracking systems to better monitor movement and fishing activity in the lobster fishery. Because of these discussions, an Offshore Lobster Enforcement Vessel Working Group was formed to develop a plan for logistic support and staffing of an offshore enforcement vessel.

The Offshore Lobster Enforcement Vessel Working Group (Working Group) held its initial meeting on December 20, 2018 in Durham, NH. The meeting began with a general overview of little to no enforcement of regulations in the offshore lobster fishery. Law enforcement representatives noted that in a recent targeted enforcement detail in Lobster Management Area 3, which focused on two vessels with federal lobster permits, that 80% of the lobster gear hauled had violations pertaining to a variety of tag and gear configuration issues. State lobster fishery enforcement efforts are usually limited to no further than 20-25 miles offshore with current state enforcement vessels. Since the offshore lobster fishery uses different gear and gear configurations (e.g., larger rope, up to 40 trap trawls, etc.) they require larger vessels and

different expertise to haul traps in this area. The optics of a larger vessel capable of hauling offshore gear would serve as a "credible deterrence" to illegal operations. The lobster industry has approached the states and asked for additional enforcement resources in the offshore areas.

Vessel Monitoring

The Working Group explored multiple options for improving monitoring and enforcement in the offshore fishery. The Working Group agreed the first step is to implement mandatory vessel monitoring for all participants in the offshore lobster fishery. The Working Group moved forward the following recommendation for consideration by the ASMFC's American Lobster Board at the Winter Meeting.

Recommendation: *The Offshore Lobster Enforcement Vessel Working Group recommends the American Lobster Board initiate management action to require all federally permitted vessels to use an electronic tracking system (such as VMS or other designed systems) that will provide frequent location reports that will additionally link to trap hauler to identify fishing location. This should be implemented within one year.*

The Working Group noted that detailed fishing location information would be valuable in the effort to better understand where the offshore fishery is fishing and reduce Atlantic right whale interactions with lobster gear. The Group discussed the possibility of utilizing marine mammal protection funding to maintain and support an offshore enforcement vessel. ASMFC staff will ask NOAA Fisheries staff about the potential to use marine mammal protection funds to support offshore enforcement.

Vessel Support Details

The Working Group discussed the details of construction, ownership, staffing, and maintenance of the vessel. The Working Group recommends two potential paths to obtaining a vessel, vessel ownership, operation and maintenance responsibilities, and staffing support:

Option A: 60-70 foot steel-hulled vessel

- Constructed with funds from the NOAA Asset Forfeiture Fund
- Vessel could independently travel offshore for multi-day enforcement trips
- Owned by the Federal Government (possibly to become a USCG asset)
- Staffed by NOAA Corps (possibly shifted to USCG staffing)

- NOAA OLE and state enforcement officers would help staff the vessel during enforcement operations
- Funding for operations and maintenance would come from an increase in JEA funding or other source of federal funding.

Option B: ~55 foot fiberglass vessel

- Constructed with funds from the NOAA Asset Forfeiture Fund
- Vessel could travel for multi-day middle distance trips (weather permitting). Longer trips farther from shore would require the support of a USCG vessel.
- Vessel would be owned by the state of Maine and would replace an existing smaller, older enforcement vessel.
- Staffed by Maine Marine Patrol
- NOAA OLE and state enforcement officers would help staff the vessel during enforcement operations when operating offshore of other states.
- Funding for operations and maintenance would come partially from Maine and the remainder would come from an increase in JEA funding or other source of federal funding.

Penalties for Violations

The Working Group noted there are significant differences during the penalty phase for state and federal violations of lobster regulations. For example, the State of Maine frequently suspends fishing permits while the federal government seldom does. Also, the speed of processing violations is not consistent. States process cases much quicker. This issue should be raised at the next ALWTRT, as well as revise penalties to provide a deterrence to illegal fishing actions.

Follow-Up Activities

- ASMFC staff will work with NOAA staff to explore the potential to utilize marine mammal protection funds to support the operations and maintenance of an offshore lobster fisheries enforcement vessel.
- ASMFC Staff will initiate a meeting with Sam Rauch, NOAA Fisheries Deputy Assistant Administrator, prior to the ASMFC winter meeting (February 2019), to discuss the timing of vessel construction and the details needed in a support plan to allow construction/purchase of a vessel.
- Lt. Greg Deyoung (USCG) will research the process and timing for an offshore lobster fisheries enforcement vessel to become a Coast Guard Asset.

- NOAA OLE, Jeff Ray - Deputy Special Agent in Charge, will explore the potential for NOAA Corp to own and operate an offshore fisheries enforcement vessel.
- The issue of higher penalties (such as revocation of permit, etc.) for offshore lobster fishing violations to create more of a deterrent for fisheries violations will be presented at the next ALWTRT meeting by state managers and the ASMFC Staff.
- The ASMFC American Lobster Management Board will consider initiating a vessel monitoring tracking requirement at the Winter Meeting.

Data Coordination Committee

Problem: A lack of coordination among relevant bodies at the outset of regional initiatives to modernize fisheries data collection has revealed a variety of issues. These include duplication of effort, delays in data availability, competing priorities and a general lack of communication on technical issues and requirements of other agencies. For example, there was not universal understanding of the MAFMC and SAFMC for-hire reporting requirements and definition of "most stringent".

Solution: Establish a Fisheries Data Coordination Committee as a coast wide platform for the various fisheries data groups to discuss (at the outset) activities that may affect one another and identify opportunities for collaboration.

Membership:

- Science Centers
- Regional Offices
- Fishery Management Councils
- NOAA HQ
- State Agencies
- Regional Commissions
- Other FINs

Format:

- Frequency of meetings: routinely, quarterly or as needed
- Meeting venue: always webinar/teleconference
- Meeting lead: ACCSP
- Meetings coordinator: ACCSP
- Partner obligation: participation in the discussion. There will be no work products per se.

Direction to Commercial Technical Committee

Problem: Data validation and accountability issues can compromise data quality and reduce their utility for stock assessments, compliance reports, and other management activities.

1. Data validation – How are Partners validating data? Are there potential impacts for data use?
2. Data accountability- Does ACCSP receive data in a timely way? Are there gaps that could be closed by better coordination?

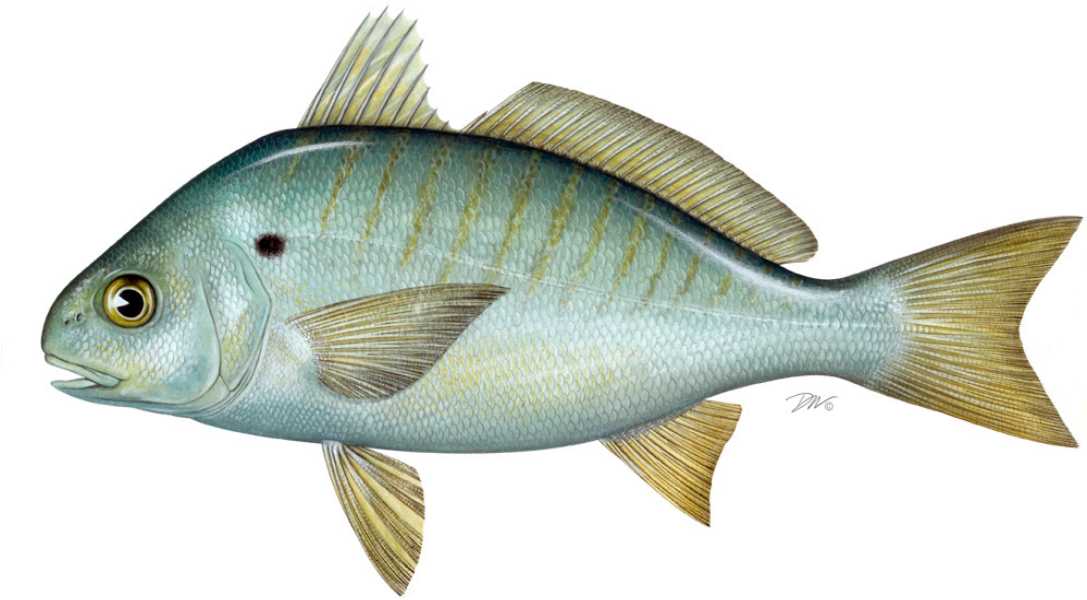
Solution: direct Commercial Technical committee to…

1. Evaluate current validation practices used by the Program Partners.
2. Evaluate current procedures for providing/updating data for various uses (stock assessments/compliance reports/FMPs)
3. Review Atlantic Coast Data Standards and updated as needed to reflect current best practices for both data validation and provisioning.

Membership: Commercial Technical Committee members to begin with. May eventually need to incorporate a recreational component as well…

2018 REVIEW OF THE ATLANTIC STATES MARINE FISHERIES COMMISSION FISHERY MANAGEMENT PLAN FOR SPOT (*Leiostomus xanthurus*)

2017 FISHING YEAR



The Spot Plan Review Team

Michael Schmidtke, Atlantic States Marine Fisheries Commission, Chair
Harry Rickabaugh, Maryland Department of Natural Resources
Adam Kenyon, Virginia Marine Resources Commission
Dan Zapf, North Carolina Division of Marine Fisheries
Chris McDonough, South Carolina Department of Natural Resources
Dawn Franco, Georgia Department of Natural Resources

Table of Contents

I. Status of the Fishery Management Plan

Date of FMP Approval: October 1987; Omnibus Amendment August 2011

Management Area: The Atlantic coast distribution of the resource from Delaware through Florida

Active Boards/Committees: South Atlantic State/Federal Fisheries Management Board; Spot Plan Review Team; South Atlantic Species Advisory Panel; Omnibus Amendment Plan Development Team

The Fishery Management Plan (FMP) for Spot was adopted in 1987 and includes the states from Delaware through Florida (ASMFC 1987). In reviewing the early plans created under the Interstate Fisheries Management Plan process, the ASMFC found the Spot FMP to be in need of evaluation and possible revision. A Wallop-Breaux grant from the U.S. Fish and Wildlife Service was provided to conduct a comprehensive data collection workshop for spot. The October 1993 workshop at the Virginia Institute of Marine Science was attended by university and state agency representatives from six states. Presentations on fishery-dependent and fishery-independent data, population dynamics, and bycatch reduction devices were made and discussed. All state reports and a set of recommendations were included in the workshop report (Kline and Speir 1993).

Subsequent to the workshop and independent of it, the South Atlantic State/Federal Fisheries Management Board (Management Board) reviewed the status of several plans in order to define the compliance issues to be enforced under the Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA). The Management Board found recommendations in the plan to be vague and perhaps no longer valid, and recommended that an amendment be prepared to the Spot FMP to define the management measures necessary to achieve the goals of the FMP. In their final schedule for compliance under the ACFCMA, the ISFMP Policy Board adopted the finding that the FMP does not contain any management measures that states are required to implement. In August 2009, the Management Board expanded the initiated amendment to the Spanish Mackerel FMP to include Spot and Spotted Seatrout, creating the Omnibus Amendment for Spot, Spotted Seatrout and Spanish Mackerel. The goal of the Omnibus Amendment was to update all three plans with requirements specified under the Atlantic Coastal Fisheries Cooperative Management Act (1993) and the Interstate Fishery Management Program Charter (1995). In August 2011, the Management Board approved the Omnibus Amendment for Spot, Spotted Seatrout, and Spanish Mackerel. This Amendment did not set specific management measures for Spot but it did align management of the species with the requirements of ACFCMA.

In August 2014, the Board approved Addendum I to the Omnibus Amendment. The Addendum establishes use of a Traffic Light Analysis (TLA) to evaluate fisheries trends and develop state-

specified management actions (e.g., bag limits, size restrictions, time and area closures, and gear restrictions) when harvest and abundance thresholds are exceeded for two consecutive years.

II. Status of the Stock

A benchmark stock assessment for spot was completed in 2017 but was not recommended for management use by the Peer Review Panel (ASMFC 2017). Therefore, stock status is unknown. The stock is monitored annually using the Traffic Light Analysis, described below.

Traffic Light Approach

As part of the requirements under the 2011 Omnibus Amendment, for years in-between benchmark stock assessments, the Spot PRT was tasked with conducting annual monitoring analyses. These trigger exercises compared five data sources to the 10^{th} percentile of the data sets' time series. If two terminal values of the five data sources (at least one of which must be fishery independent) fell below the 10^{th} percentile, the Management Board would be prompted to consider management action.

In August 2014, the Board approved Addendum I to the Omnibus Amendment. The Addendum established the Traffic Light Approach (TLA) as the new precautionary management framework to evaluate fishery trends and develop management actions. The TLA framework replaces the management trigger stipulated in the Omnibus Amendment after concern that the triggers were limited in their ability to illustrate long-term declines or increases in stock abundance. In contrast, the TLA is a statistically-robust way to incorporate multiple data sources (both fishery-independent and -dependent) into a single, easily understood metric for management advice. It is an effective method to illustrate long-term trends in the fishery.

The TLA was originally developed as a management tool for data poor fisheries. The name comes from assigning a color (red, yellow, or green) to categorize relative levels of population indicators. When a population characteristic improves, the proportion of green in the given year increases. Harvest and abundances thresholds of 30% and 60% red were established in Addendum I, representing moderate and significant concern for the fishery. If thresholds for both adult population characteristics achieve or exceed a threshold for a two year period, then management action is enacted.

Analysis of the harvest composite index showed a general decline beginning in 2005 (Figure 1). This decline was driven mostly by the decline in commercial landings rather than the recreational

harvest. The composite harvest index tripped in 2016-2017 with a 2-year red proportion greater than 30%.

The TLA abundance composite index for adult spot (NMFS and SEAMAP surveys) was run using the 1989-2017 time period since that was when the two surveys overlapped (Figure 1). The TLA composite characteristic did not trigger in 2017 and has not triggered since 2004.

The TLA juvenile index, based on the Maryland seine survey, did trip in 2017 (30% threshold), which does not impact potential management action (ASMFC 2018). However, this does indicate some concern with recruitment, as this index has tripped in each of the last four years.

Because the harvest index and adult composite index did not both trip for 2016-2017, management action is not triggered by the TLA. With the benchmark stock assessment now complete, further refinement of the TLA for spot is under consideration. The PRT and Atlantic Croaker TC have submitted several adjustments to the TLA for Board consideration, which include incorporation of additional indices and alterations to the TLA metrics and triggering mechanism.

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 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 landings of spot from NY to FL in 2017 are estimated at 10 million pounds, an increase of approximately 6 million pounds from 2016 and 317 thousand pounds less than the average of the last 10 years (Tables 1 and 3). The recreational fishery harvested more than the commercial fishery (76% and 24% respectively, by pounds). Although historical harvests were more evenly split between sectors, over the last 10 years, harvests have been more heavily recreational (30% commercial and 70% recreational, by pounds).

Commercial spot landings have ranged between 627,000 and 14.52 million pounds from 1950-2017 (Figure 3). In 2017, 2.36 million pounds were harvested commercially. Coastwide, gill nets were used to capture 77% of commercially harvested spot (Table 2). Virginia landed approximately 74% of the commercial harvest (by pounds) in 2017, followed by North Carolina with 18% of the harvest. Spot are a major component of Atlantic coast scrap landings (NCDMF 2001). A scrap fishery is one in which fish species that are unmarketable as food, due to size or

palatability, are sold unsorted, usually as bait. The majority of removals for spot come from the South Atlantic shrimp trawl fishery (ASMFC 2017).

The recreational harvest of spot along the Atlantic coast from 1981 to 2017 has varied between 13.0 and 54.4 million fish (or 3.6 and 17.3 million pounds; Figures 3 and 4). Recreational harvest has fluctuated widely throughout the time series. Harvest has generally declined from the most recent peak in 2007, with the time series low harvest occurring in 2016. In 2017, recreational landings were 23.7 million fish (10 million pounds), an increase of 10 million fish (4 million pounds) from 2016 (Tables 3 and 4). Anglers in Virginia were responsible for 67% of the total number of fish harvested in 2017, followed by anglers in Maryland (14%) and North Carolina (10%). Many anglers are known to catch spot to use as bait, as well as for other recreational purposes. The estimated number of spot released annually by recreational anglers has varied between 4.8 and 30.3 million fish, with 2017 releases estimated at 8.1 million fish, a 2.5 million fish decline from 2016 (Figure 4, Table 5).

IV. Status of Assessment Advice

A benchmark stock assessment for spot was completed in 2017 but was not recommended by the Peer Review Panel for management use due to uncertainty in biomass estimates due to conflicting signals among abundance indices and catch time series, as well as sensitivity of model results to assumptions and model inputs (ASMFC 2017). The Review Panel recommended continued annual monitoring of spot through the TLA, with incorporation of shrimp trawl discard estimates, and another benchmark assessment in 5 years.

V. Status of Research and Monitoring

Catch and effort data are collected by the commercial and recreational statistics programs conducted by the states and the National Marine Fisheries Service (NMFS). Biological characterization data from fishery landings are also available from several states. Specifically, age data are now available from Maryland, Virginia, North Carolina, and South Carolina. Recruitment indices are available from surveys in Delaware, Maryland, Virginia, North Carolina, and South Carolina. Adult or aggregate (mix of juvenile and older spot) relative abundance indices are available from New Jersey, Delaware, North Carolina, South Carolina, Georgia, and SEAMAP (covering North Carolina through Florida). These surveys, in addition to the Northeast Fisheries Science Center Bottom Trawl Survey, the Northeast Area Monitoring and Assessment Program (NEAMAP), the Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP), and the Chesapeake Bay Fishery-Independent Multispecies Survey (CHESFIMS), collect a variety of biological data elements.

Fishery-Dependent Sampling

Maryland: Maryland conducted an onboard commercial pound net survey on the Potomac River and the Chesapeake Bay, sampling once per week from May 23, 2017 through September 11, 2017. The spot mean length of 200 millimeters TL from 2017 onboard pound net sampling was near the time series mean of 202 millimeters, and increased from the lowest value of the 25 year

time series in 2016. Sixty-five percent of spot encountered in the onboard pound net survey in 2017 were between 190 and 229 millimeters TL, a shift to larger sizes and an overall expansion of the length frequency distribution. Seafood dealer sampling was also conducted in 2017, with 425 spot sampled from the pound net harvest. The mean length, 213 millimeters TL, and length frequency distribution of the seafood deal sampling indicated harvested spot were larger than those seen during onboard sampling. This indicates some smaller spot are discarded, which is not unexpected, as smaller spot have a very low market value. In 2017 80.5% of spot sampled from the onboard pound net survey were age one, 19.1% were age zero, and 0.3% were age two (228 ages and 1,063 lengths). Age two spot were not encountered in 2016 and remained rare in 2017.

Virginia: Virginia's Marine Resources Commission collects biological data from Virginia's commercial and recreational fisheries, with total length, weight, sex, and age measured whenever possible. The fish are aged by examining otoliths, which is done by Old Dominion University's Center for Quantitative Fisheries Ecology.

North Carolina: Commercial fishing activity is monitored through fishery-dependent sampling conducted under Title III of the Interjurisdictional Fisheries Act and has been ongoing since 1982. Data collected in this program allows the size distribution of spot to be characterized by gear/fishery. Further sub-sampling is conducted to procure samples for age determination (whole otoliths), sex ratio, reproductive condition, and weight.

South Carolina: South Carolina's Spot fishery is generally recreational in nature. Fishery dependent data related to Spot has been available primarily through the SCDNR State Finfish Survey (SFS), the National Marine Fisheries Service's Marine Recreational Information Program (MRIP), and a SCDNR managed mandatory trip reporting system for licensed charterboat operators. Beginning in 2013, the SCDNR took over the MRIP data collection in South Carolina. Since the data previously coming from the SC-SFS is now incorporated into the MRIP data set they will not be reported separately. The one exception to this occurs during wave 1 (Jan-Feb) sampling. The MRIP survey had not sampled during this wave in the past and so the SC-SFS will still be used to cover this time period.

Georgia: The Marine Sportfish Carcass Recovery Project, a partnership with recreational anglers along the Georgia coast, was used to collect biological data from finfish. In 2017, a total of 3,744 fish carcasses were donated through this program. Spot are not on the list of requested species and none were donated in 2017.

Fishery-Independent Sampling

New Jersey: The New Jersey Bureau of Marine Fisheries conducts an Ocean Trawl Survey, Delaware River Seine Survey, and Delaware Bay Trawl Survey. Respective indices of abundance (GM) for the three surveys in 2017 were: 2.12, 0.01, and 0.06 (2016 values were: 0.12, 0.01, and 0.06, respectively).

Delaware: Annual relative abundance estimates (number/nautical mile) of spot in Delaware are monitored through the Division's adult ground fish bottom trawl survey. The relative abundance

of spot increased to 5.82 (#/nm). The Division monitors juvenile fish abundance through a 16-ft bottom trawl survey which has been conducted annually since 1980. Separate spot young of the year (YOY) indices are generated for the Delaware Estuary (Bay and River) and Delaware's "Inland Bays" (Indian River and Rehoboth Bays). YOY spot recruitment, 0.39 per tow (geometric mean), decreased in 2017 relative to 2016 for the Delaware Estuary and was below the time series mean and median. The Inland Bays YOY index decreased to 0.77 per tow, and remained below the time series mean in 2017.

Maryland: Maryland conducted a fisheries independent gill net survey on the Choptank River once per week from June 7, 2017 to August 31, 2017, with the exception of one set in set being missed on one day in June and one day in August, due to mechanical problems with the sampling vessel. Experimental monofilament gill nets with stretched mesh sizes of 63.5, 76.2, 88.9 and 101.6 millimeters were set at four randomly selected locations within the sampling area each sampling day. Spot catch in the Choptank River gill net survey was highest in 2014 (749 fish) and similar in 2013, 2015 and 2017 (272, 222 and 298 fish, respectively), and lowest in 2016 (109 fish). The 6.4 centimeter mesh captured the majority of spot each year, accounting for over 95% of catch in 2013, 2014 and 2016, and accounted for 73% and 78% of the catch in 2015 and 2017 respectively. The length distribution shifted to smaller fish in 2016 with 74% of captured spot being less than 200 millimeters TL, but returned to a broader distribution in 2017.

Four juvenile indices were calculated, two from the Maryland portion of Chesapeake Bay and two from the Maryland coastal bays. Finfish collected by Maryland's Chesapeake Bay Blue Crab Trawl Survey have been enumerated since 1980. However, since some data entry inconsistencies make electronic data files prior to 1989 incomplete for finfish species, only data from 1989 through 2017 were used to generate a Chesapeake Bay spot juvenile index. Spot juvenile trawl index values from 1989-2017 were quite variable. The 2010 GM value of 104.5 spot per tow was the highest value of the time series, the 2011 value declined to the second lowest of the 29 year time series, and the 2012 value increased to nearly the time series mean. The index values declined from 2012 to the time series low in 2015 (0.29 fish per tow). The 2016 and 2017 values increased (2.02 fish per tow in 2017), but were still below the 29 year time series mean.

The second JI was derived from the Striped Bass Juvenile Seine Survey (JSS). The JSS has permanent and auxiliary sites, only permanent sites were used in index calculations for this report, and sampling frequency was standardized in 1967, so that was the first year used to

calculate the JI time series. The 2017 GM catch per haul of 0.40 was the 13th lowest value of the 51 year time series, and well below the mean value of 1.42 fish per haul.

A 4.9-meter semi-balloon otter trawl has been used to sample Maryland's Atlantic coastal bays since 1972. The 2017 GM of 1.7 spot per hectare decreased from 2016, and was below the 29 year time series mean of 8.9 fish per hectare.

The final juvenile index was derived from the coastal bays seine survey, which utilized a 1.8 meter by 30.5 meter seine with a single central bag. The coastal bays seine survey also decreased in 2017 to 4.4 spot per haul, and was below the time series mean of 7.4 spot per haul.

Virginia: The Virginia Institute of Marine Science (VIMS) has been conducting a monthly juvenile trawl survey since 1955 to monitor the abundance and seasonal distribution of finfish and invertebrates in the Chesapeake Bay and its tributaries. An index of age-0 spot abundance is available from 1988 up to 2016, with sampling coming from tributaries of the Chesapeake Bay (fixed and random sites) as well as the bay itself (random sites). The average index value from 1988 through 2016 is 13.43, and the geometric mean value for 2017 was 4.46. This represents an increase from 2.39 in 2016, but is still one of the lowest values in the time series.

North Carolina: North Carolina has no current fishery-independent monitoring programs specifically for spot. However, the NCDMF has conducted a stratified random trawl survey in Pamlico Sound (Pamlico Sound Survey, Program 195) since 1987 to obtain juvenile abundance indices (JAI) for several economically important species, including spot. Spot less than 120 mm from the June portion of the Pamlico Sound Survey are considered in calculating the JAI. The 2017 spot JAI (mean number of individuals/tow) was 720.6, an increase from the 2016 JAI of 291.0 and the sixth highest value in the time series. From 1987-2017 the average JAI was 423.0 with many large fluctuations.

South Carolina: While Spot are not necessarily a specifically targeted species for SCDNR monitoring programs or projects, they are a common component species of four fishery independent monitoring efforts conducted by the SCDNR. The Southeast Area Monitoring and Assessment – South Atlantic Program (SEAMAP-SA) is a shallow water (15 to 30 ft depth) trawl survey that monitors status and trends of numerous coastal species within the South Atlantic Bight seasonally (spring, summer and fall) from Cape Canaveral, FL to Cape Hatteras, NC. The annual stratified mean catch per tow in weight for the entire survey in 2017 declined by 48.2% (5.72 kg/tow) over 2016 (11.1 kg/tow). The second survey is an inshore estuarine trammel net survey conducted by the SCDNR. In 2017, CPUE increased (224%) from 2016 but still remained below the long term mean for the eighth year. It should be noted that the index value for 2016 was the lowest in the time series. The overall trend for Spot in the trammel survey has been in decline since 1999, with only 7 years exceeding the long term mean catch since 2000. The third survey was an electroshock survey conducted in low salinity brackish and tidal freshwater portions of different South Carolina estuaries. The CPUE in 2017 (5.95 ± 1.3 fish per set) increased from 2016 by 100% (2.97 fish per set). The fourth survey is the South Carolina Estuarine and Coastal Assessment Program (SCECAP). The CPUE increased (8.62%) in 2017 from 2016, although

both years represent some of the lowest values in the time series (7.6 and 7.0 fish per hectare, respectively) and remained well below the series long term mean.

Georgia: Spot are occasionally observed during the red drum gillnet survey and the trammel net survey. Lengths of captured spot were recorded and then fish were released. During 2017, 150 trammel and 216 gill net sets captured 115 and 206 spot, respectively. Average fork length of spot in trammel nets was 206 mm and in the gillnet survey was 197 mm. The 2017 geometric mean (#/net set) from trammel nets (0.4) and the mean from gillnets (0.4) were less than those of 2016 (0.81 and 0.59, respectively).

The monthly Ecological Monitoring Survey (EMS) samples estuarine finfish from a total of 42 stations, distributed amongst 6 estuaries, from January to December. In 2017, a total of 321 tows were completed with an estimated 4,908 Spot captured. Lengths ranged from 58 to 215 millimeters FL with a mean of 144.1 millimeters FL.

Florida: The FWC-FWRI's FIM program initiated surveys on estuarine, bay and coastal systems of the Florida Atlantic at northern Indian River Lagoon in 1990, southern Indian River Lagoon in 1997, and northeast Florida (Jacksonville study area) in 2001. Indices of abundance (IOAs) data for juvenile (YOY) spot (<30 mm standard length, SL) were available from 21.3-m seine and 6.1-m trawl samples. IOAs for YOY and sub-adult/adult spot have been low and showed little variations; except in 2010 and 2011.

VI. Status of Management Measures and Issues

The FMP for Spot identified two management measures for implementation: 1) promote the development and use of bycatch reduction devices through demonstration and application in trawl fisheries, and 2) promote increases in yield per recruit through delaying entry to spot fisheries to age one and older.

Considerable progress has been made in developing bycatch reduction devices (BRDs) and evaluating their effectiveness. Proceedings from a 1993 spot and croaker workshop summarized much of the experimental work on bycatch reduction, and many states have conducted subsequent testing. For example, North Carolina Division of Marine Fisheries (NCDMF) conducted research on the four main gear types (shrimp trawl, flynet, long haul seine, and pound net) responsible for the bulk of the scrap fish landings in order to reduce the catch of small fish. State testing of shrimp trawl BRDs achieved finfish reductions of 50-70% with little loss of shrimp, although total bycatch numbers relative to shrimp fishery effort are still unknown. The Virginia Marine Resources Commission investigated the use of culling panels in pound nets and long haul seines to release small croaker, spot, and weakfish. The Potomac River Fisheries Commission (PRFC) also investigated the use of culling panels in pound nets, finding that the panels allowed the release of 28% of captured spot less than six inches in length.

Following favorable testing, devices have been made mandatory or recommended in several state fisheries. The use of BRDs is required in all penaeid shrimp trawl fisheries in the South Atlantic. The PRFC recommends the use of culling panels in pound nets and allows those nets

with panels to keep one bushel of bycatch of flounder and weakfish. In North Carolina, escapement panels have been required in the bunt nets of long haul seines in an area south and west of Bluff Shoals in the Pamlico Sound since April 1999. However, evaluation of the beneficial effects of BRDs to spot stocks continues to need further study.

General gear restrictions, such as minimum mesh sizes or area trawling bans, have helped protect some age classes of spot. Georgia has implemented a spot creel limit (25 fish, both recreational and commercial, except for shrimp trawlers). South Carolina has also implemented an aggregate bag limit (50 fish) for hook and line fishing of spot, Atlantic croaker, and kingfish/whiting (*Menticirrhus* sp.).

Omnibus Amendment (Interstate)

In August 2011, the Management Board approved the development of an amendment to the Spot FMP to address three issues: compliance measures, consistency with federal management in the exclusive economic zone, and alignment with Commission standards. The updated FMP's objectives are to: (1.) Increase the level of research and monitoring on spot bycatch in other fisheries, in order to complete a coastwide stock assessment (2.) Manage the Spot fishery stock to maintain the spawning stock biomass above the target biomass levels. (3.) Develop research priorities that will further refine the spot management program to maximize the biological, social, and economic benefits derived from the spot population. The Omnibus Amendment does not require specific fishery management measures in either the recreational or commercial fisheries for states within the management unit.

Addendum I

In August 2014, the Board approved Addendum I which establishes a new management framework (i.e., Traffic Light Approach) to evaluate fisheries trends and develop state-specified management actions (i.e., bag limits, size restrictions, time & area closures, and gear restrictions) when harvest and abundance thresholds are exceeded over two years. Management measures would remain in place for two years.

Recent Changes in State Regulations

North Carolina: There are no direct restrictions on the commercial harvest of spot within coastal, joint, or inland waters of North Carolina. There are however numerous indirect restrictions that affect the commercial harvest and bycatch of spot in North Carolina. Changes to such restrictions for 2017 include: Gill net restrictions for Internal Coastal Waters pertaining to area closures/openings, gear modifications and attendance rules to avoid interactions with endangered species, or bycatch species.

Georgia: Through 2017, Georgia had a general commercial fishing license. License applications had a voluntary survey asking purchasers to check off the species or species groupings they planned to pursue. The check-off was non-binding and the associated participation data was not useful for determining reporting requirements. In 2013, GADNR began issuing Letters of

Authorization (LOAs) for several target species to improve the participation data. In 2017, the Georgia General Assembly approved the addition of species endorsements to commercial fishing licenses to replace LOAs. (O.C.G.A. 27-4-110 and Regulation 391-2-4-.17) The Board of Natural Resources then approved the proposed endorsement species with an effective date of April 1, 2018.

A new seafood dealer license was also implemented April 1, 2018. Seafood dealers are defined as "any person or entity, other than the end-consumer, who purchases seafood products from a harvester unless the harvester is a licensed seafood dealer." Georgia requires seafood dealers and commercial fishermen to be properly licensed as described by O.C.G.A Sections 27-4-118, 27-4-136, and Board of Natural Resources Rule 391-2-4-.09. Commercial harvesters fishing in Georgia waters and/or unloading seafood products must possess a commercial fishing license and the appropriate species endorsements. A harvester is required to have a dealer's license if he is selling his catch to end consumers.

De minimis Guidelines

A state qualifies for *de minimis* status if its past 3-years' average of the combined commercial and recreational catch is less than 1% of the past 3-years' average of the coastwide combined commercial and recreational catch. Those states that qualify for *de minimis* are not required to implement any monitoring requirements, none of which are included in the plan.

VII. De Minimis Requests

New Jersey and Georgia request *de minimis* status. The PRT notes that both states meet the requirements of *de minimis*.

VIII. Implementation of FMP Compliance Requirements for 2017

All states within the management unit have submitted compliance reports for the 2017 fishing year. The PRT found no compliance issues.

IX. Recommendations of the Plan Review Team

Management and Regulatory Recommendation

The Spot PRT will continue to monitor the fishery through the Traffic Light Approach. The Spot PRT recommends that the Board consider incorporation of adjustments to the TLA, including additional indices, regions-specific metrics, age-partitioned indices, and alteration of the management-triggering mechanism, submitted in their collaborative memo with the Atlantic Croaker Technical Committee.

Research and Monitoring Recommendations

High Priority

- Expand collection of life history data for examination of lengths and age, especially fishery-dependent data sources.
- Organize an otolith exchange and develop an ageing protocol between ageing labs.
- Increase observer coverage for commercial discards, particularly the shrimp trawl fishery. Develop a standardized, representative sampling protocol and pursue collection of individual lengths and ages of discarded finfish.
- Continue state and multi-state fisheries-independent surveys throughout the species range and subsample for individual lengths and ages. Ensure NEFSC trawl survey continues to take lengths and ages. Examine potential factors affecting catchability in long-term fishery independent surveys.
- Continue to develop estimates of length-at-maturity and year-round reproductive dynamics throughout the species range. Assess whether temporal and/or density-dependent shifts in reproductive dynamics have occurred.
- Re-examine historical ichthyoplankton studies for an indication of the magnitude of estuarine and coastal spawning, as well as for potential inclusion as indices of spawning stock biomass in future assessments. Pursue specific estuarine data sets from the states (NJ, VA, NC, SC, DE, ME) and coastal data sets (MARMAP, EcoMon).

Medium Priority

- Develop and implement sampling programs for state-specific commercial scrap and bait fisheries in order to monitor the relative importance of Spot. Incorporate biological data collection into program.
- Conduct studies of discard mortality for commercial fisheries. Ask commercial fishermen about catch processing behavior for spot when trawl/gillnets brought over the rail to determine if the discard mortality rate used in the assessment is reasonable.
- Conduct studies of discard mortality for recreational fisheries.
- Collect data to develop gear-specific fishing effort estimates and investigate methods to develop historical estimates of effort.
- Identify stocks and determine coastal movements and the extent of stock mixing, via genetic and tagging studies.
- Investigate environmental and recruitment/ natural mortality covariates and develop a time series of potential covariates to be used in stock assessment models.
- Investigate environmental covariates in stock assessment models, including climate cycles (e.g., Atlantic Multi-decadal Oscillation, AMO, and El Nino Southern Oscillation, El Nino) and

recruitment and/or year class strength, spawning stock biomass, stock distribution, maturity schedules, and habitat degradation.

- Investigate the effects of environmental changes (especially climate change) on maturity schedules for spot, particularly because this is an early-maturing species, and because the sSPR estimates are sensitive to changes in the proportion mature.
- Investigate environmental and oceanic processes in order to develop better understanding of larval migration patterns into nursery grounds.
- Investigate the relationship between estuarine nursery areas and their proportional contribution to adult biomass. I.e., are select nursery areas along Atlantic coast contributing more to SSB than others, reflecting better juvenile habitat quality?
- Develop estimates of gear-specific selectivity.

X. References

Atlantic States Marine Fisheries Commission (ASMFC). 1987. Fishery Management Plan for Spot. Washington (DC): ASMFC. Fisheries Management Report #11. 90 p.

ASMFC. 2017. Spot Stock Assessment Peer Review Report. ASMFC, Stock Assessment Peer Review Report, 12 p.

ASMFC. 2018. 2018 Traffic Light Analysis of Spot (*Leiostomus xanthurus*) for the Atlantic States Marine Fisheries Commission Fishery Management Plan Review: 2017 Fishing Year & Proposed Changes to TLA Mangement Scheme. 16 p.

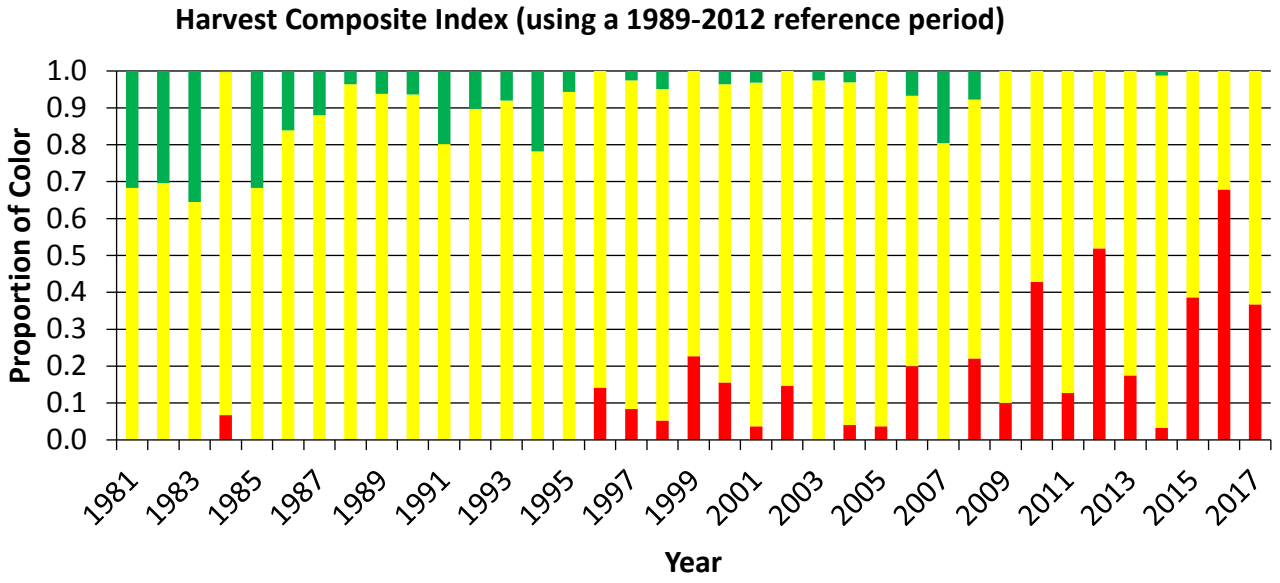
Kline LL, Speir H (editors). 1993. Proceedings of a Workshop on Spot (*Leiostomus xanthurus*) and Atlantic Croaker (*Micropogonias undulatus*). Washington (DC): Atlantic States Marine Fisheries Commission. Special Report #25. 175 p.

NCDMF. 2001. Assessment of North Carolina commercial finfisheries, 1997–2000. Final Report, North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries, Award Number NA 76 FI 0286, 1-3.

Spot Plan Review Team (PRT). 2012. Spot Data Availability and Stock Monitoring Report, 2009. Washington (DC): Atlantic States Marine Fisheries Commission. Report to the South Atlantic State-Federal Fisheries Management Board. 85 p.

X. Figures

Figure 1. Traffic Light Approach for spot, 2017. Top figure shows the harvest composite index and the bottom figure shows the abundance composite index.



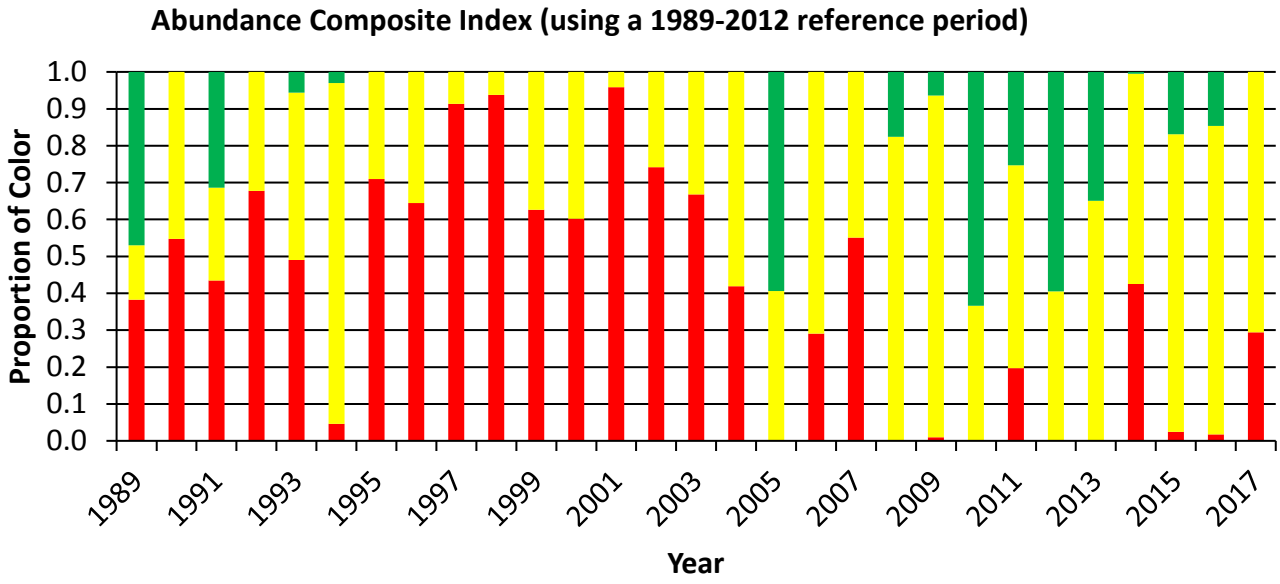


Figure 2. Recreational harvest in pounds, estimated using the Coastal Household Telephone Survey (CHTS) and the mail-based Fishing Effort Survey (FES). (Source: personal communication with NOAA Fisheries, Fisheries Statistics Division. [01/23/2019])

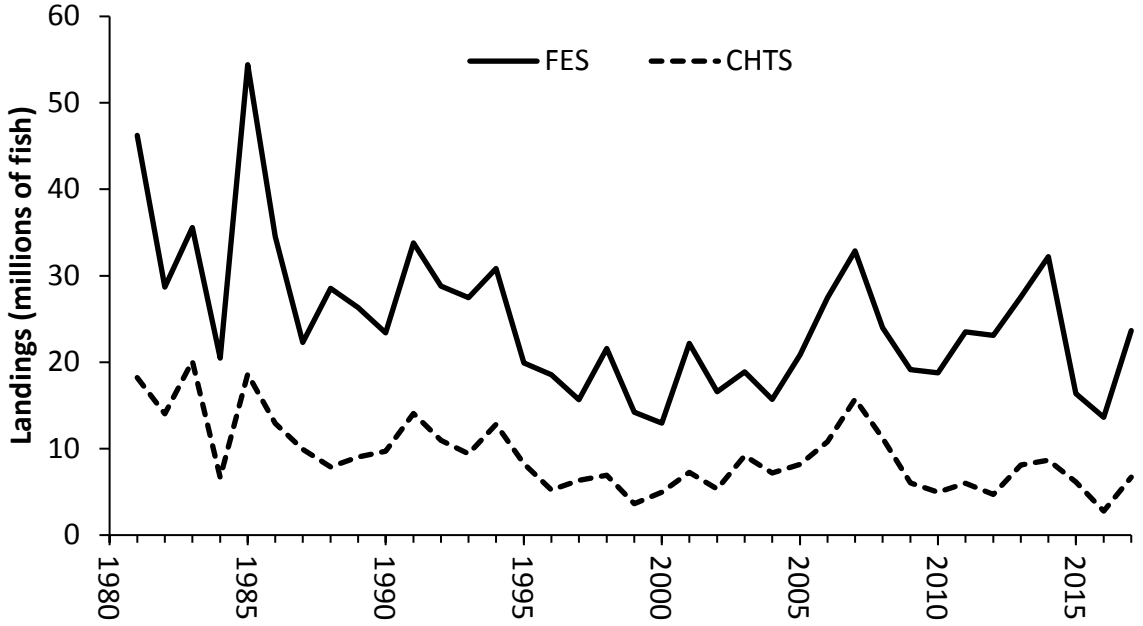


Figure 3. Spot commercial and recreational landings (pounds), 1950-2017. (Recreational landings available from 1981-present; see Tables 1 and 3 for state-by-state values and data sources)

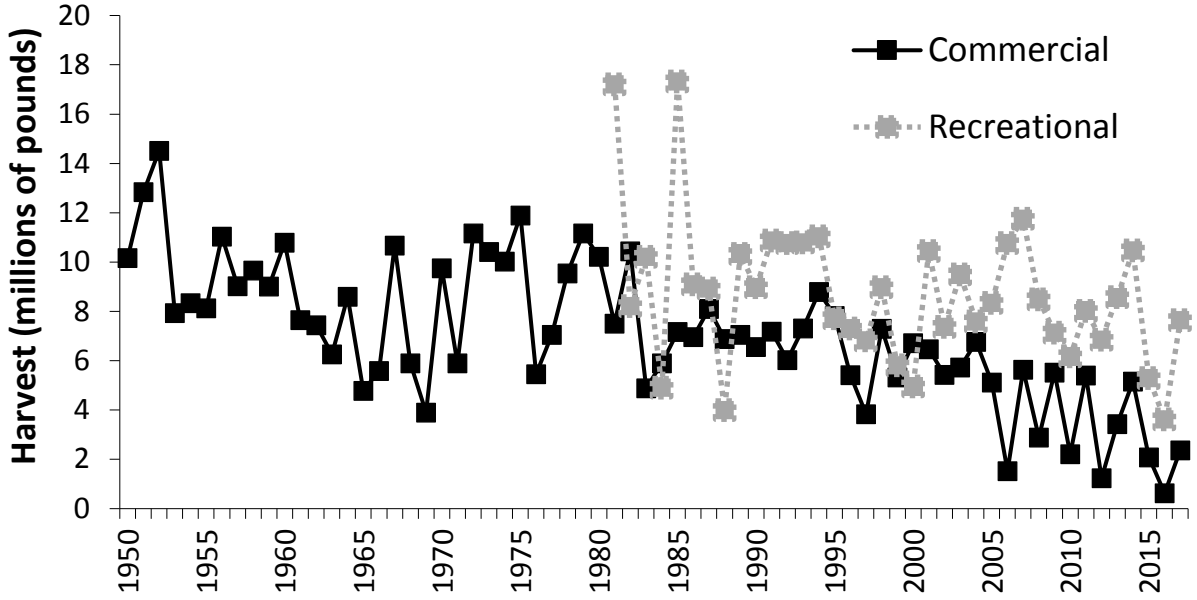
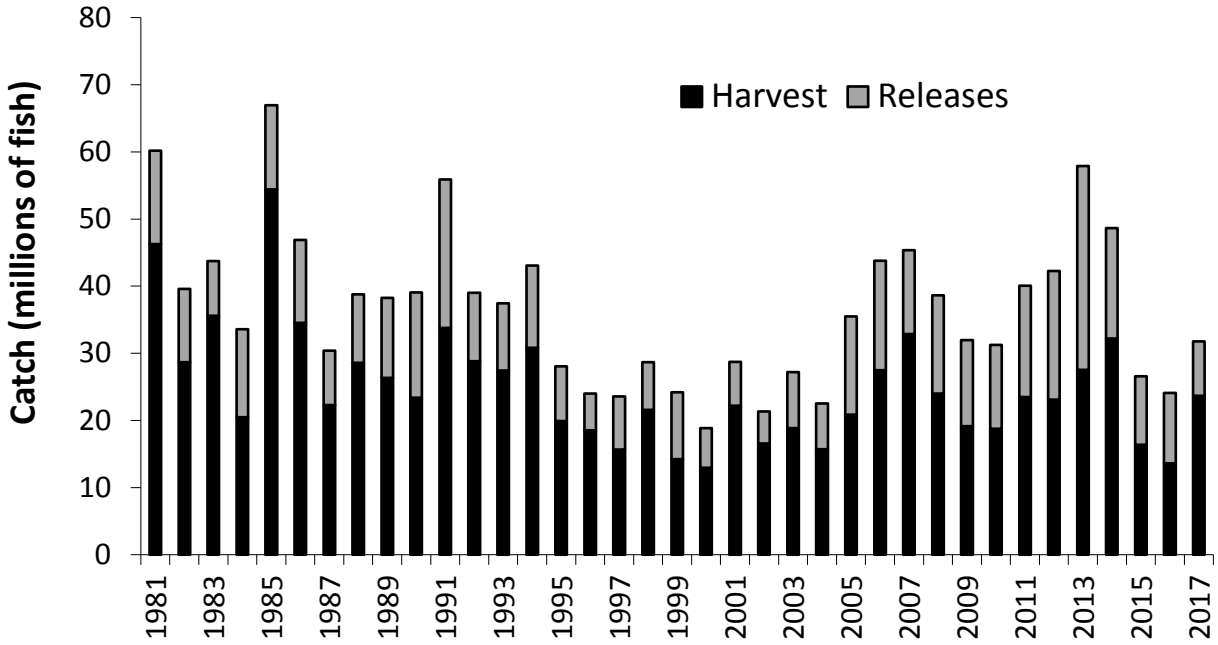


Figure 4. Spot recreational harvest and releases (numbers of fish), 1981-2017. (See Tables 4 and 5 for state-by-state values and data source)



XI. Tables

Table 1. Commercial landings (pounds) of spot by state 1998-2017. (Source: ACCSP for 2016 and earlier for all jurisdictions, except PRFC; annual compliance reports for 2017 and for all PRFC years. "C" 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	NC	SC	GA	FL	Total
1998	C	27,582	140,363		117,580	4,170,072	2,396,979	C	C	161,205	7,293,814
1999		7,822	C		108,326	2,860,784	2,262,175	9,393	C	73,018	5,321,517
2000	939	13,852	C		120,642	3,677,628	2,829,843	8,519		57,957	6,709,380
2001	160	20,034	C		176,546	3,131,044	3,093,872	12,950	C	33,029	6,467,635
2002	5,737	1,326	C	132,346	140,776	2,927,729	2,184,032	22,628	C	21,258	5,435,832
2003	35	6,003	C	170,009	227,430	3,258,482	2,043,387	17,059		9,260	5,731,665
2004	C	1,652	58,502	27,131	131,605	4,223,075	2,317,169	2,649	C	C	6,762,028
2005	435	769	157,563	84,841	95,350	3,037,612	1,714,485	10,468		21,154	5,122,676
2006	3,099	C	62,934	27,908	40,777		1,364,743	5,691	C	22,501	1,527,653
2007	1,080	4,474	128,207	387,420	70,514	4,259,469	879,082	6,357		14,334	5,637,154
2008	650	1,942	32,650	121,201	29,835	1,949,319	736,484	1,492	C	9,177	2,882,748
2009	317	34,065	C	522,659	63,470	3,852,408	1,006,500	22,557		22,057	5,524,033
2010	447	6,048	C	587,028	44,025	984,892	572,315	3,957	C	13,420	2,212,132
2011	C	54,890	C	618,569	60,106	3,687,377	936,970	12,162		33,889	5,403,962
2012	90,141	9,935	C		14,563	600,351	489,676	541		36,744	1,241,950
2013	156,751	48,324	C	335,462	41,286	2,044,538	768,592	2,446		31,368	3,428,766
2014	2,112	29,683	C	348,435	148,908	3,843,869	765,824	5,917	C	16,742	5,161,490
2015	901	86	C	96,102	86,972	1,490,127	377,135	1,619		27,969	2,080,911
2016	1,895	131	C	18,105	8,480	276,824	238,003	1,059		82,875	627,373
2017	12,025	132	C	98,551	41,748	1,747,832	413,995	3,200		47,304	2,364,787

Table 2. Commercial landings (pounds) by gear, 2017. (Source: ACCSP, queried 1/23/2019)

Gear	Percent of Total
Gill Nets	76.9%
Haul Seines	11.6%
Fixed Nets	4.9%
Trawls	0.7%
Other	5.9%

Table 3. Recreational harvest (pounds) of spot by state, 1998-2017. (Source: MRIP for 2016 and earlier and annual compliance reports for 2017. Data dating back to 1981 are available upon request to the NMFS Fisheries Statistics Division via MRIP.)

Year	NY	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1998		0	61,241	1,038,494	2,230,087	4,596,119	717,907	10,399	331,113	8,985,360
1999			29,383	433,664	672,145	2,565,546	1,330,640	11,777	767,601	5,810,756
2000	422,177	185,292	57,676	855,429	453,246	2,598,813	263,349	2,011	118,129	4,956,122
2001		0	40,570	631,885	1,106,945	4,519,545	1,031,321	2,056	3,108,708	10,441,030
2002	0	0	14,249	580,663	3,078,818	3,017,466	598,474	7,034	76,717	7,373,421
2003		0	31,512	2,578,935	2,252,373	4,220,534	268,262	11,808	130,752	9,494,176
2004			23,836	645,783	2,276,505	3,682,623	947,770	525	14,051	7,591,093
2005		37,344	157,173	916,127	2,912,952	3,652,186	611,583	1,612	49,310	8,338,287
2006		97,424	83,553	1,880,202	3,607,819	3,995,432	1,077,811	2,945	20,406	10,765,592
2007	1,520	0	135,688	2,037,427	6,358,913	2,737,144	361,821	4,857	121,437	11,758,807
2008		76,291	88,933	1,282,864	3,554,676	1,382,428	1,967,213	6,924	121,834	8,481,163
2009		20,108	85,965	1,753,560	2,806,172	1,427,956	931,316	24,810	87,161	7,137,048
2010		748,219	249,186	1,053,775	1,964,995	1,173,173	654,184	1,011	333,254	6,177,797
2011		532	169,341	732,588	3,437,094	2,201,947	1,118,599	790	358,943	8,019,834
2012	121,071	544,509	80,962	755,265	3,091,344	760,276	1,332,541	305	165,523	6,851,796
2013	18,889	423,887	244,253	720,315	3,443,742	1,789,251	1,708,520	10,525	213,949	8,573,331
2014		27,847	352,714	1,465,861	4,322,812	2,877,483	415,937	15,371	992,221	10,470,246
2015	0	0	30,693	469,462	551,389	833,390	2,539,187	2,573	861,523	5,288,217
2016		678	9,606	278,994	1,211,694	558,799	1,437,534	20,727	102,356	3,620,388
2017	0	1,064	340	1,098,356	5,019,930	909,796	522,645	8,282	76,502	7,636,915

Table 4. Recreational harvest (numbers) of spot by state, 1998-2017. (Source: MRIP for 2016 and earlier and annual compliance reports for 2017. Data dating back to 1981 are available upon request to the NMFS Fisheries Statistics Division via MRIP.)

Year	NY	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1998		0	156,683	2,190,170	5,120,746	11,797,824	1,488,584	35,201	803,642	21,592,850
1999			47,211	1,096,359	1,592,928	5,736,185	3,006,232	33,442	2,717,275	14,229,632
2000	1,633,073	1,109,999	130,952	2,052,259	918,817	6,121,384	642,862	4,890	338,598	12,952,834
2001		0	98,110	1,118,350	2,206,841	10,043,845	2,419,178	4,490	6,292,578	22,183,392
2002	0	0	31,936	1,198,228	5,042,005	8,456,981	1,675,042	16,899	151,200	16,572,291
2003		0	60,290	4,366,894	3,514,148	9,717,824	798,661	26,092	392,575	18,876,484
2004			57,546	1,361,315	3,655,963	7,845,322	2,722,181	2,008	58,797	15,703,132
2005		111,944	355,750	2,580,015	5,896,357	10,105,205	1,663,021	5,506	142,688	20,860,486
2006		269,557	231,384	5,551,380	7,302,441	11,109,551	2,953,296	6,679	57,993	27,482,281
2007	6,894	0	325,832	5,844,870	16,436,803	8,728,295	1,222,271	16,189	283,313	32,864,467
2008		229,692	293,420	3,837,694	8,679,389	3,970,431	6,583,104	20,841	364,584	23,979,155
2009		49,494	251,487	4,588,207	6,906,344	4,197,640	2,826,219	76,258	244,347	19,139,996
2010		2,312,612	727,390	2,839,870	5,630,976	3,830,384	2,521,398	4,584	912,677	18,779,891
2011		1,206	486,289	2,125,025	10,128,581	6,480,714	3,174,678	1,792	1,096,887	23,495,172
2012	168,109	2,189,239	213,687	2,120,554	10,147,723	2,677,082	5,003,162	1,230	590,701	23,111,487
2013	51,903	1,177,944	581,699	2,456,346	11,733,669	6,120,985	4,704,723	41,546	660,760	27,529,575
2014		54,853	590,613	4,396,291	13,652,625	8,343,467	1,258,300	68,852	3,847,994	32,212,995
2015	0	0	90,796	1,352,278	1,731,063	2,572,738	7,538,334	8,489	3,081,786	16,375,484
2016		2,052	29,700	1,145,272	5,279,153	1,928,716	4,974,300	61,252	203,651	13,624,096
2017	0	2,412	1,057	3,287,230	15,944,527	2,418,331	1,897,506	19,789	100,975	23,671,827

Table 5. Recreational releases (numbers) of spot by state, 1998-2017. (Source: MRIP for 2016 and earlier and annual compliance reports for 2017. Data dating back to 1981 are available upon request to the NMFS Fisheries Statistics Division via MRIP.)

Year	NY	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1998		9,905	124,970	1,118,745	2,284,628	2,379,578	828,822	44,821	292,699	7,084,168
1999			42,925	1,029,318	797,043	2,343,795	266,536	57,178	5,433,838	9,970,633
2000	795,301	37,424	75,596	2,129,721	849,286	1,366,746	307,071	33,777	322,453	5,917,375
2001		2,214	29,615	621,743	1,969,205	2,804,349	692,825	31,050	385,697	6,536,698
2002	3,597	5,045	50,479	857,559	1,349,517	1,569,579	520,173	47,684	366,827	4,770,460
2003		181,033	21,340	979,680	2,433,771	2,970,990	529,793	96,655	1,128,260	8,341,522
2004			151,827	967,728	1,942,985	2,899,319	782,477	28,539	57,718	6,830,593
2005		8,039	508,063	4,280,279	4,717,643	4,407,100	369,368	64,607	287,628	14,642,727
2006		242,916	298,640	2,856,990	2,713,689	8,196,592	1,844,278	6,809	157,267	16,317,181
2007	620	246,548	102,551	3,140,908	4,196,638	4,049,250	496,592	41,191	197,640	12,471,938
2008		2,079,566	296,918	3,272,517	3,334,567	3,817,529	828,122	52,261	960,110	14,641,590
2009		55,363	484,590	1,901,445	4,014,169	4,847,202	1,108,458	29,470	367,919	12,808,616
2010		562,172	289,178	2,772,655	4,080,918	3,615,808	577,998	1,193	545,687	12,445,609
2011		1,206	190,002	783,417	7,290,971	4,993,544	1,289,038	23,411	1,989,115	16,560,704
2012	237028	1810472	184,949	3,291,874	6,371,367	2,995,879	673,292	10,110	3,571,066	19,146,037
2013	1,308	2,737,742	537,632	7,620,695	7,549,286	5,513,732	5,891,165	32,719	466,583	30,350,862
2014		34,941	237,395	2,206,814	4,125,116	4,043,710	1,908,552	74,795	3,781,382	16,412,705
2015	1,585	167,129	38,523	642,459	1,896,698	2,984,629	2,818,378	220,253	1,409,895	10,179,549
2016		2,705	16,620	713,418	2,858,405	1,831,415	3,421,589	335,695	1,296,190	10,476,037
2017	72	15,321	11,768	2,287,532	3,335,783	1,902,281	368,988	86,668	79,660	8,088,073

Atlantic States Marine Fisheries Commission

Shad and River Herring Management Board

February 6, 2019
1:15 p.m. – 2:15 p.m.
Arlington, Virginia

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. Clark)*	1:15 p.m.
2.	Board Consent • Approval of Agenda • Approval of Proceedings from October 2017	1:15 p.m.
3.	Public Comment	1:15 p.m.
4.	Progress Update on Shad Benchmark Stock Assessment (*J. Kipp*)	1:25 p.m.
5.	Consider Approval of Massachusetts Shad Sustainable Fishery Management Plan (SFMP) **Final Action** • Review SFMP and Technical Committee Memo (*K. Sprankle*)	1:35 p.m.
6.	Update on Technical Committee Review of Inconsistencies with Harvest and Monitoring Requirements of Amendments 2 and 3 (*K. Sprankle*)	1:50 p.m.
7.	Other Business/Adjourn	2:15 p.m.

The meeting will be held at the Westin Crystal City; 1800 S. Eads Street, Arlington, Virginia 22202; 703.486.1111

MEETING OVERVIEW

Shad and River Herring Management Board Meeting
Wednesday, February 6, 2019
1:15 – 2:15 p.m.
Arlington, Virginia

Chair: John Clark (DE) Assumed Chairmanship: 2/17	Technical Committee Chair: Ken Sprankle (FWS)	Law Enforcement Committee Representative: Furlong (PA)
Vice Chair: Mike Armstrong	Advisory Panel Chair: Pam Lyons Gromen	Previous Board Meeting: October 17, 2017
Voting Members: ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, DC, PRFC, VA, NC, SC, GA, FL, NMFS, USFWS (19 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from October 2017

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

4. Update on Shad Stock Assessment Progress (1:25 – 1:35 p.m.)

Background

- The American shad benchmark stock assessment was initiated in October 2017, with a scheduled completion date in late 2019.
- In March 2018 the Stock Assessment Subcommittee (SAS) and TC met for the Data Workshop, and in November 2018 the SAS met for the Methods Workshop.
- At the Methods Workshop, the SAS recommended a revised assessment timeline with the completion date moved from Annual Meeting 2019 to Summer Meeting 2020. (**Briefing Materials**)

Presentations

- Update on Shad Stock Assessment Progress by J. Kipp

5. Consider Approval of Massachusetts Shad Sustainable Fishery Management Plan (SFMP) (1:35 – 1:50 p.m.) Final Action

Background

- The Massachusetts Division of Marine Fisheries submitted an updated SFMP for recreational and commercial harvest of American shad in the Merrimack and Connecticut Rivers. The plan includes recent data and requests to maintain the existing management measures from the 2012 SFMP. Commercial shad fishing will remain prohibited in all rivers in the state. (**Briefing Materials**)

Presentations

- Overview of the Massachusetts SFMP and Technical Committee Recommendations by K. Sprankle

Board actions for consideration at this meeting

- Approve the Massachusetts Sustainable Fishery Management Plan Update

6. Update on Technical Committee Review of Inconsistencies with Harvest and Monitoring Requirements of Amendments 2 and 3 (1:50 – 2:15 p.m.)

Background

- In October 2017 the TC identified several inconsistencies between state SFMPs and the requirements of Amendments 2 and 3. Subsequently, the Board tasked the TC to develop proposed improvements to the Amendments with regard to several items: 1) Management and monitoring of rivers with low abundance and harvest of shad and river herring; 2) Standardization of Sustainable Fishery Management Plan (SFMP) requirements; 3) Incorporation of stock assessment information into SFMPs and discussion on the timeline for renewing plans; 4) Clarification of *de minimis* requirements as they pertain to SFMPs; and 5) Review of the number of years of data are required before developing a SFMP. (**Briefing Materials**)
- The TC has met several times to develop this task, though work has focused primarily on the first item. The TC has noted that items 2, 3, and 5 could be addressed in concurrently with the ongoing Benchmark Assessment for American shad. A subset of the TC has formed a task group to address this task. (**Briefing Materials**)

Presentations

- Update on Technical Committee Review of Inconsistencies with Harvest and Monitoring Requirements by K. Sprankle

7. Other Business/Adjourn

Maryland's Conservation Equivalency Effectiveness Report
January 2019

Introduction

At the February 2018 Atlantic Striped Bass Management Board meeting, Maryland presented a conservation equivalency plan to lower the minimum size during the Chesapeake Bay summer/fall season with the primary goal of reducing dead discards. The proposal would increase harvest, but decrease dead discards and therefore have an estimated zero or minimal impact on total removals. Anglers were reporting a high number of discards in recent years as a result of the increase in minimum size from 18 to 20 inches during the 2015-2017 fishing seasons, and the availability of several strong year classes. The plan (Option B in proposal) reduced the minimum size from 20 to 19 inches and required the use of non-offset circle hooks when fishing with bait during the summer/fall fishery.

The motion read as follows:
"*Move to approve Option B, in Maryland's conservation equivalency proposal for its summer/fall recreational striped bass fishery in the Chesapeake Bay. Season, May 16 to December 15. Size and bag, 2 fish at 19 inch minimum, with only 1 fish allowed greater than 28 inches. Non-offset circle hooks required when fishing with bait, non-artificial lures. Additionally, Maryland will collect enforcement, compliance and other relevant information during 2018, and will report back to the Board with a conservation equivalency effectiveness review in February, 2019.*" The motion passed, with 15 in favor and 1 abstention.

Maryland was able to pass emergency regulations in time for the entire 2018 summer/fall fishery, May 16 – December 15. During the public scoping process following the board meeting, it was determined that requiring circle hooks for all bait fishing would negatively impact tackle shops and anglers targeting species other than striped bass. As the majority of striped bass are targeted using chumming and live-living, the final regulation required the use of non-offset circle hooks while chumming and live-lining, but J-hooks or circle hooks could be used when fishing with dead bait. The regulations were written with a two year sunset provision and they will expire on Dec. 15, 2019. Maryland intends to maintain these recreational measures for the 2019 summer/fall fishery.

Maryland took several steps to educate anglers and assess compliance with the new regulations. This conservation equivalency effectiveness report serves to present that information as required by the board.

Outreach and Education

The Maryland Department of Natural Resources (DNR) developed a multifaceted approach to support implementation of the conservation measure. This involved educating the fishing public on the new requirements and the benefits of circle hooks through all platforms at the unit's disposal including:

- Distribution of printed outreach material via department service centers, parks, outdoor retail outlets, recreational fishing survey crews and stakeholder events like the Maryland State Fair: 21,000 business cards, 700 index cards, 100 posters and 500 stickers.
- Five separate emails, distributed to approximately 100,000 email addresses.
- Eight seminars devoted to the topic and seven industry shows covering 30 days.
- 15 postings on Facebook and Twitter before and during the fishing season, soliciting over 174,000 views by the public.
- Two 2-hour radio interviews on the Outdoorsman Radio Show.
- Website developed and launched, dedicated to the regulation and proper use of circle hooks.
- Two full press releases distributed to all state news outlets, one to announce the regulation and the second to encourage proper use of circle hooks and handling of fish.
- Multiple 5-minute weekly fishing reports on a local radio show to highlight the new regulation and use of circle hooks.

During 2019, the department plans to continue educating the public on the regulation and the benefits of circle hooks, utilizing many of the same outlets listed above. Staff plan to engage the public at fishing shows and give presentations to additional fishing clubs. To date, staff are scheduled to present at two fishing clubs and work at a booth during two winter outdoors shows (covering 12 days). Another initiative planned for 2019 is the distribution of 2,000 non-offset circle hooks while engaging the public on the topic.

Enforcement and Compliance

Natural Resources Police
Saturation patrols were conducted over the summer by the police. In total, 40 boats (charter and recreational) were boarded and gear was checked for compliance with the circle hook regulation. One warning was issued to a charter boat using J-hooks indicating nearly 100 percent compliance.

Access Point Angler Intercept Survey (APAIS)
The survey is part of the National Oceanic & Atmospheric Administration's (NOAA) Marine Recreational Information Program (MRIP) and has been conducted for over 26 years. MRIP staff are responsible for survey design, recreational catch and effort estimation, and public data dissemination. As part of MRIP, DNR APAIS staff conduct interviews and collect data using protocols designed by NOAA Fisheries. The survey takes place at beaches, piers, marinas, docks and other marine access sites throughout Maryland and collects data on the catch, participation and effort of recreational anglers. The table below summarizes the number of intercepts for 2018.

Wave	Number of Charter Angler Interviews	Number of Private Angler Interviews	Number of Shore Angler Interviews	Number of All Interviews Obtained
3 (May/Jun)	360	1,012	281	1,653
4 (Jul/Aug)	285	556	352	1,193
5 (Sept/Oct)	137	445	136	718
6 (Nov/Dec)	37	198	123	358
2018 TOTAL	**900**	**2,485**	**1,009**	**4,394**

During summer/fall 2018, DNR staff included two additional circle hook questions, separate from the APAIS questionnaire, in order to assess compliance with the new circle hook regulations. When interviewers had time available with zero impact to the regular conduct of APAIS, staff asked these two additional questions of

saltwater, recreational, finfish anglers who had completed their fishing for the day and were fishing using hook and line from either shore or private/rental boats in Chesapeake Bay waters. Charter anglers were not asked these questions. The two questions were:

- Q1: Were you primarily chumming or live lining or fishing with bait today? (IF no/don't know/refused then end survey)
- Q2: Were you using circle hooks while using [fishing method from Q1] today?

After interviews, staff distributed circle hook information cards and notes on handling fish during the summer heat. We plan to continue the circle hook questionnaire during 2019 sampling and will distribute circle hooks and other outreach material as a thank you for participating.

Analyses

Summary of APAIS Circle Hook Questionnaire

Between May 16 and Dec. 16, 2018, APAIS staff asked 887 anglers to participate in the circle hook interviews. Of these interviews, 1 angler refused the interview, 10 anglers didn't know what fishing method they were using, and 4 interviews did not have fishing method entered. The majority of the interviews (61 percent) were conducted in June, July and November.

As the circle hook gear regulations were not striped bass specific, these interviews included anyone fishing using hook and line from shore or private/rental boats in Chesapeake Bay. Of the 872 interviews completed with known fishing method, 400 anglers (45.9 percent) were not chumming, live lining, or using bait and were therefore exempt from the new circle regulations. These anglers were likely trolling or using artificial lures. Of the anglers that were subject to the new circle hook regulations:

- 48 (5.5 percent) anglers reported that they were chumming and 45 of the 48 (94 percent) reported using circle hooks.
- 34 (3.9 percent) anglers reported that they were live lining and 33 of the 34 (97 percent) reported using circle hooks.
- 390 (44.7 percent) anglers reported that they were fishing with baited hooks. Of these 390 anglers, 119 (30.5 percent) reported using circle hooks. As the use of treble hooks was banned when using bait, the remaining anglers were likely using J-hooks.

Overall, compliance with the use of circle hooks when chumming and live lining among shore or private/rental boat anglers was high (>90 percent), suggesting that outreach efforts on the new regulations were successful in making anglers aware of the new requirements. Live lining was a smaller proportion of the Chesapeake Bay summer/fall fishery than expected, which may be due to the following: 1) the additional APAIS questions were asked of all hook and line anglers, not just those targeting striped bass; 2) live lining may be more popular with the charter boat fleet than the private fleet; 3) the scarcity of small spot in recent years may have lowered the prevalence of live lining; and 4) a lower number of circle hook interviews were conducted in August and September when live lining is popular, likely due to APAIS interviewers not having time to ask the additional circle hook questions of anglers.

Quantitative Analyses of Regulatory Changes

The minimum size limit for striped bass was 20 inches for the 2015-2017 fishing seasons and was decreased to 19 inches for 2018. It was expected that reducing the minimum size limit would result in fewer discards while increasing harvest. The reduction in discards was expected to come not only from discarded fish being harvested, but from anglers limiting out more quickly and not discarding as many fish.

First, the 2018 MRIP harvest and discard estimates were examined. The 2018 wave 6 estimates of harvest and live releases from MRIP have not yet been released, so the comparisons of the harvest and live releases will focus on preliminary data from waves 3-5 (May-October). The results of this comparison suggest that some, but not all, waves in 2018 had higher harvest and lower discards compared to 2015-2017 (Figure 1). Analysis of this nature is complicated by the fact that other factors can affect harvest and discards year to year, regardless of regulatory changes. These factors include year class strength, such as the large 2011 and 2015 year classes moving into and through the fishery, as well as weather, fish distribution patterns, and changes in angler behavior. In addition to this straightforward comparison of 2018 with 2015-2017 estimates of harvest and discards, another attempt to quantify the success of the regulation was made and is explained below.

Updated Analysis of Original Proposal

The original conservation equivalency proposal submitted by Maryland in December 2017 used data from 2000-2014 to estimate the expected total removals when reducing from a 20 inch minimum size limit to a 19 inch minimum size limit. These years were used in the analysis as regulations were constant and they reflected a variety of fishing conditions (strong and poor year classes, various weather conditions, etc). While specific years were estimated to have a net increase or decrease in total removals when going from a 20 inch minimum size to a 19 inch minimum size, the average percent change in total removals over those years was zero. This means that on average, we would expect a 0 percent change in total removals when going from a 20 to 19 inch minimum size limit. Several assumptions were made regarding fishing methods and circle hook use in the original analysis. Specifically, the proportions of anglers using artificial lures (i.e. trolling) and bait (i.e. chumming and live lining) were estimated by month based on general knowledge of the striped bass fishery. Additionally, it was assumed that all anglers using bait (i.e. chumming, live lining, or using other cut bait) would be using circle hooks, an assumption that did not ultimately align with the final regulations. Through the circle hooks questions asked by APAIS interviewers, we were able to quantify these two assumptions and adjust our calculations to reflect the observed 2018 values of fishing method and circle hook usage. In addition, we updated the analysis to use the new estimates of harvest and live releases following the MRIP update in 2018.

The estimates of fishing method (bait vs. artificials) were fairly similar between the original and updated analyses, differing by less than 15 percent in all waves (Table 1). However, the observed proportion of bait fishermen (e.g. chumming, live lining, or using cut bait) using circle hooks ranged from 26-63 percent depending on wave and was lower than the 100 percent circle hook usage assumed in the original analysis (Table 1). While almost all anglers chumming or live lining used circle hooks as required by the regulation, a lower proportion of anglers fishing with cut bait used circle hooks. This is unsurprising as anglers fishing with cut bait were allowed to use either circle hooks or J-hooks. Based on the wave 3-5 private and shore MRIP interviews in 2018, and assuming that these circle hook interviews are representative of the overall private and shore based MRIP sample, approximately 50 percent of the anglers fishing in Chesapeake Bay said they were targeting striped bass.

Similar to the original conservation equivalency proposal, analyses were conducted two ways: 1) assuming a 9 percent discard mortality rate across all waves and 2) a 27 percent discard mortality rate in waves 3-4 and a 9 percent discard mortality rate in waves 5-6 (Table 2). This higher mortality rate was based on a study by Lukacovic and Uphoff (2007), which documented higher release mortality in June and July due to high water and air temperatures. In both scenarios, an adjusted (lower) discard mortality was also applied to account for the lower mortality associated with circle hook use, as described in the original proposal.

In the updated analysis under scenario 1 (9 percent discard mortality and decreasing from a 20 to 19 inch minimum size), the dead discards are expected to decrease 10-14 percent (average=12 percent), harvest is expected to increase 11-38 percent (average=21 percent), and total removals are expected to range from a 1

percent decrease to a 13 percent increase (average=6 percent increase). In the updated analysis under scenario 2 (27 percent mortality in waves 3-4 and decreasing from a 20 to 19 inch minimum size), the dead discards are expected to decrease between 10-13 percent (average=11 percent), harvest is expected to increase between 11-38 percent (average=21 percent), and total removals are expected to range from a decrease of 4 percent to an increase of 7 percent (average=1 percent increase). The results of this analysis align with Option B approved in the original conservation equivalency proposal. In the original proposal, we estimated that there would be a 0 percent change in total removals ± 2.5 percent; however, estimated changes in total removals ranged from -8 percent to +7 percent. While the final circle hook regulations did not result in as many dead discards being saved as originally anticipated, the 6 percent average calculated in the updated analysis is still within the range calculated in the original proposal.

Conclusion

Maryland was successful in implementing new regulations (19 inch minimum size, mandatory use of non-offset circle hooks while chumming or live-living) prior to the start of the 2018 summer/fall fishery through the use of emergency regulations. An extensive public outreach campaign educated anglers on the new regulations and benefits of circle hooks through a variety of sources including distribution of printed materials, emails, social media, presentations, radio shows and press releases. Data collected by the Maryland Natural Resources Police showed high compliance with the new regulations for both charter boat and recreational anglers. Additionally, APAIS staff on the ground helped get the word out and questioned almost 900 shore and private boat anglers about their compliance with the new regulation. The APAIS interviews showed >90 percent compliance with the use of circle hooks when chumming and live lining. Lastly, while the final circle hook regulations did not result in as many dead discards being saved as originally anticipated, the 6 percent average calculated in the updated analysis is still within the range calculated in the original conservation equivalency proposal.

Overall, Maryland feels the public was adequately informed and complied with the new regulations. Maryland will be using these same regulations in the 2019 fishing season. Outreach on circle hook usage and proper fish handling, particularly in summer when discard mortality is highest, will continue throughout 2019.

Table 1. Estimated proportion of anglers by fishing method used in the original analysis compared to the observed proportions of fishing method and circle hook usage by bait anglers from the APAIS circle hook interviews. Bait anglers in this analysis include any anglers chumming, live lining, or fishing with cut bait.

	Original Analysis		**Updated Analysis**		
Wave	**Artificials**	**Bait**	**Artificials**	**Bait**	**Proportion Bait Anglers Using Circle Hooks**
3	0.42	0.58	0.41	0.59	0.49
4	0.25	0.75	0.39	0.61	0.26
5	0.50	0.50	0.56	0.44	0.63
6	0.75	0.25	0.70	0.30	0.32

Table 2. Method 1 estimates of the proportion change in dead discards, harvest and total removals using the updated circle hook data. The top table assumes a 9 percent mortality rate for the entire fishing season. The bottom table assumes a 27 percent mortality rate in waves 3-4.

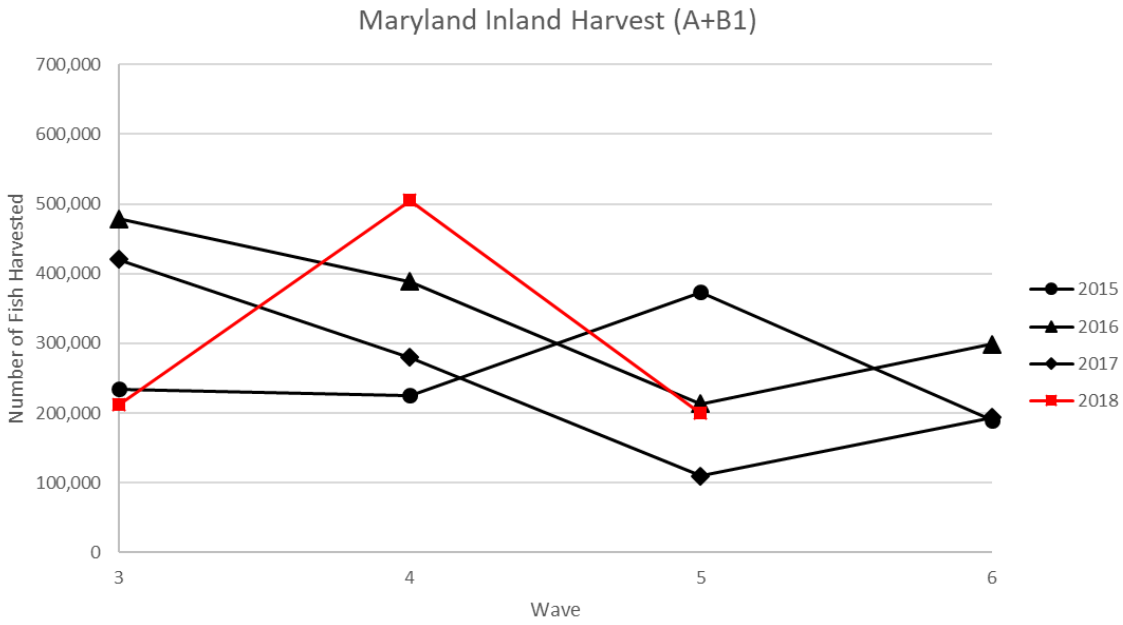
Assuming 9 percent Discard Mortality in All Waves

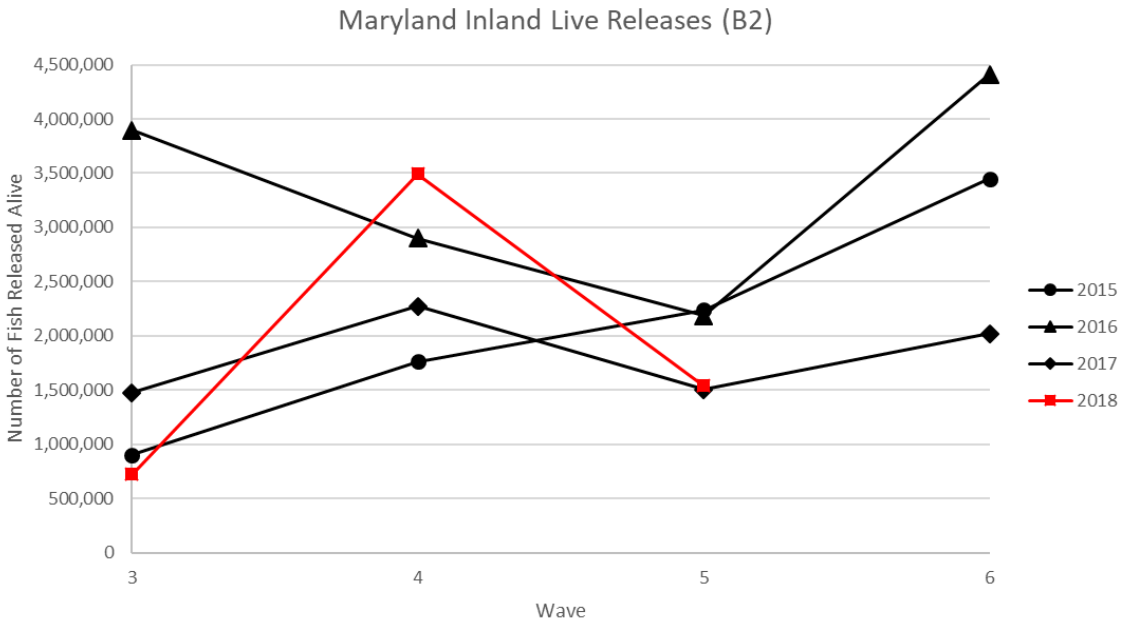
Year	Reduction 20”->19" Proportion Change Dead Discards	Reduction 20”->19" Proportion Change Harvest	Reduction 20”->19" Proportion Change Total Removals
2000	-0.12	0.38	0.13
2001	-0.11	0.22	0.05
2002	-0.11	0.17	0.01
2003	-0.11	0.20	0.02
2004	-0.11	0.20	-0.01
2005	-0.10	0.25	0.03
2006	-0.11	0.24	0.07
2007	-0.13	0.27	0.10
2008	-0.11	0.13	0.05
2009	-0.12	0.11	0.05
2010	-0.13	0.22	0.10
2011	-0.14	0.14	0.07
2012	-0.11	0.19	0.01
2013	-0.12	0.23	0.08
2014	-0.11	0.23	0.09
Average	**-0.12**	**0.21**	**0.06**

Assuming 27 percent Discard Mortality Waves 3 & 4 and 9 percent Discard Mortality in Waves 5-6

Year	Reduction 20”->19" Proportion Change Dead Discards	Reduction 20”->19" Proportion Change Harvest	Reduction 20”->19" Proportion Change Total Removals
2000	-0.12	0.38	0.07
2001	-0.11	0.22	0.02
2002	-0.10	0.17	-0.02
2003	-0.11	0.20	-0.02
2004	-0.10	0.20	-0.04
2005	-0.10	0.25	-0.02
2006	-0.12	0.24	0.02
2007	-0.13	0.27	0.05
2008	-0.11	0.13	0.01
2009	-0.12	0.11	0.01
2010	-0.12	0.22	0.04
2011	-0.13	0.14	0.04
2012	-0.10	0.19	-0.03
2013	-0.11	0.23	0.01
2014	-0.11	0.23	0.03
Average	**-0.11**	**0.21**	**0.01**

Figure 1. Estimates of harvest and live released from the MRIP program. 2018 estimates are preliminary and incomplete. Personal communication from the National Marine Fisheries Service, Fisheries Statistics Division, Dec. 18, 2018.





November 19, 2018

Ms. Kelly Denit
Division Chief
Office of Sustainable Fisheries, National Marine Fisheries Service
1315 East-West Highway, SSMC3
Silver Spring, MD 20910

Dear Ms. Denit:

The American Sportfishing Association (ASA), the trade association representing the recreational fishing industry, does not support removing the current prohibition on recreational Atlantic striped bass fishing in the Block Island Transit Zone (BITZ) and asks that the National Marine Fisheries Service not move forward with rulemaking.

While we understand the motivations behind this proposal are focused simply on allowing recreational harvest in this geographical anomaly so as to reduce regulatory confusion and spread out fishing effort, we are concerned about potential unintended consequences. If allowed in this instance, it is likely that proposals to reopen other parts of the Exclusive Economic Zone (EEZ) to striped bass harvest, including for commercial harvest (citing "non-discrimination" under National Standard 4 of the Magnuson-Stevens Act), will emerge. The cumulative impacts of expanding striped bass harvest into areas of the EEZ may threaten the sustainability of the stock.

Many anglers and fisheries managers are concerned with trends in the condition of the striped bass population. Given that a new benchmark stock assessment will not be ready until 2019, and that no analysis has been conducted to determine the potential impacts of opening the BITZ to harvest, moving forward with this proposal could risk the future health of the striped bass stock.

The prohibition on striped bass harvest in the EEZ has unquestionably been an extremely valuable conservation measure. The "slippery slope" that could be created by allowing harvest in the BITZ is too great of a risk. We therefore request that the National Marine Fisheries Service safeguard the EEZ closure and maintain the existing prohibition on striped bass harvest in the BITZ.

Sincerely,

Mike Leonard
Vice President, Government Affairs

AMERICAN SPORTFISHING ASSOCIATION
1001 N. Fairfax Street, Suite 501, Alexandria, VA 22314 • 703-519-9691 • Fax: 703-519-1872
Web: www.ASAFishing.org • Email: info@ASAFishing.org

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

A Synthesis of Scientific Findings on Menhaden's Role in the Chesapeake Bay Ecosystem and Their Relevance to the Chesapeake Bay Reduction Fishery Cap

Prepared by Dr. Katie Drew

Introduction

The Atlantic States Marine Fisheries Commission (ASMFC) requested a synthesis of existing scientific evidence on the importance of Atlantic menhaden in the Chesapeake ecosystem to help inform management decisions about harvest levels in the Chesapeake Bay. This review was conducted by ASMFC staff and is not a product of ASMFC's Menhaden Technical Committee (TC) or Ecological Reference Point Working Group (ERP WG).

This synthesis reviews the literature that informed the 2015 Atlantic menhaden benchmark stock assessment (SEDAR 2015) and Amendment 3 (ASMFC 2017) to the Atlantic Menhaden Fishery Management Plan (FMP). It does not reflect the most recent and ongoing work of the Stock Assessment Subcommittee (SAS) or the ERP WG, which will be completed as part of the 2019 single-species and ecological-based benchmark assessments.

History of the Chesapeake Bay Cap

In the years leading up to Amendment I (2001) to the Atlantic Menhaden FMP, the number of reduction plants and vessels in the reduction fleet had declined along the coast, with effort concentrating in Virginia and North Carolina. As a result, total landings along the coast and from Chesapeake Bay (Bay) also declined, but the proportion of removals from the Bay increased (ASMFC 2005a). The higher proportion of effort in the Chesapeake Bay and the lower levels of recruitment to the Bay raised concerns about the possibility of localized depletion, defined as a reduction in menhaden population size/density below the level of abundance that is sufficient to maintain its basic ecological (e.g. forage base, grazer of plankton), economic, and social/cultural functions, as a result of fishing pressure, environmental conditions, and predation pressures that occur on a small spatial or temporal scale.

In response to these concerns, ASMFC implemented a harvest cap on the reduction fishery in Chesapeake Bay through Addendum II (ASMFC 2005), limiting removals of Atlantic menhaden from the Bay for reduction purposes to the average of 2000-2004 landings to be implemented in the 2006 fishing year. Before its first year of use, the cap was revised through Addendum III (ASMFC 2006) to be the average landings from 2001-2005, or 109,020 mt. The cap was reduced by 20% in 2013 to 87,216 mt with the concurrent implementation of a coastwide quota which also represented a 20% reduction from recent average landings (ASMFC 2012). Amendment 3 further reduced the Bay cap to 51,000 metric tons, approximately equal to the five-year average of reduction harvest from the Chesapeake Bay between 2012 and 2016 (ASMFC 2017). Reduction landings from Chesapeake Bay have not exceeded 51,000 mt since 2012, even under the higher historical caps.

In response to the concerns raised in Addendum II, the NOAA Chesapeake Bay Office coordinated funding for a series of research projects to address the question of whether localized depletion was occurring in Chesapeake Bay. These projects were reviewed in 2009 by a panel appointed by the Center for Independent Experts. The panel determined that the individual research projects were relevant and well-designed, and the results of many of them informed this synthesis. However, the panel noted that without an operational definition of depletion, it could not be determined whether localized depletion was occurring or how well the ongoing research could address that question (Maguire 2009).

Atlantic Menhaden Life History

Genetic studies indicate Atlantic menhaden are a single stock on the Atlantic coast (Anderson 2007; Lynch et al. 2010). Juvenile and adult menhaden make seasonal migrations along the Atlantic coast, moving inshore and north in the spring and offshore and south in fall (Nicholson 1978). Larger, older individuals migrate further north. This results in different size and age classes being available to the fishery in different regions; fisheries operating in the Chesapeake Bay and further south harvest a higher proportion of age-1 and age-2 fish compared to fisheries operating further north (SEDAR 2015).

Adults spawn on the continental shelf throughout the year as they migrate, with the peak of spawning generally occurring from December through March (Nicholson 1978; Lewis et al. 1987). Larvae are then carried into bays and estuaries where they settle as age-0 recruits. The Chesapeake Bay is one of the important nursery grounds for Atlantic menhaden. Otolith microchemistry analysis showed that from 2010 – 2012, individuals from Chesapeake Bay made up about 30% of the exploitable Atlantic menhaden (ages 2-4) on the coast (Anstead et al. 2017).

The abundance of age-0 menhaden within Chesapeake Bay in any given year is influenced by a combination of offshore and inshore factors. This includes things such as large scale climatic regimes like the Atlantic Multidecadal Oscillation (Bucheister et al. 2016) and annual variability in the abundance of phytoplankton and zooplankton within the Bay (Houde et al. 2016). Total spawning stock biomass (SSB) along the coast may also play a role, although the relationship between coastwide SSB and recruitment stock-wide is weak (SEDAR 2015). The TC was unable to detect a relationship between abundance of age-2 and age-3 menhaden in the Bay and recruitment to the Bay the following year (ASMFC 2005b).

Atlantic Menhaden's Role in the Ecosystem

As larvae, Atlantic menhaden feed on zooplankton, but as juveniles and adults, they consume primarily phytoplankton by filtering seawater through specialized gill rakers (June and Carlson 1971, Friedland 1985, Friedland et al. 2006). Modeling work suggests that Atlantic menhaden may have a dampening effect on large algal blooms in Chesapeake Bay through their feeding (Dalyander and Cerco 2010), but are likely not reducing the total nitrogen load in the Bay (Lynch et al. 2010, Friedland et al 2011).

Atlantic menhaden are also an important forage species. Numerous studies have been conducted on the food habits of fish species within the Chesapeake Bay; however, it is difficult to compare the results directly because studies often occurred in different seasons, sampled different size ranges of predators, and use different methods of calculating the species composition in a diet. In addition, the proportion of Atlantic menhaden in species' diets can change across years, depending on the relative abundance of Atlantic menhaden and other prey species. For example, Overton (2015) found that striped bass in the Chesapeake Bay had a higher proportion of Atlantic menhaden in their diet in the 1950s, when menhaden abundance along the coast and recruitment of menhaden to Chesapeake Bay were high, than during the mid-1990s to early 2000s when menhaden abundance along the coast and recruitment of menhaden to Chesapeake Bay were both low.

During the 2010 and 2015 benchmark stock assessment for Atlantic menhaden, the ASMFC Multispecies Technical Committee did a thorough review of published studies and food habits databases from fishery independent sources such as the NEFSC Food Habits Database, NEAMAP, ChesMMAP, and CHESFIMS in order to parameterize the MSVPA-X model (SEDAR 2015). They synthesized average diet composition information by season and size class for several important predator species (Table 1). The prevalence of menhaden in predators' diets varied across seasons and size or age classes. For example, the percent by weight of Atlantic menhaden in striped bass stomach contents ranged from over 90% for age 8+ striped bass in the winter to less than 10% of age 1-2 striped bass in the spring. Similarly, the percent by weight of Atlantic menhaden in bluefish stomachs ranged from 3.5% to 50.4%, depending on the season and size class of bluefish.

Atlantic menhaden are also consumed by other predators such as piscivorous birds. The prevalence of Atlantic menhaden in bald eagles' diets in the Bay also showed seasonal patterns. Mersmann (1989) found that bald eagles consumed fish almost exclusively during the summer, the majority of which were gizzard shad and Atlantic menhaden; during the winter, bald eagles' diets were predominantly comprised of carrion from birds and mammals. McLean and Byrd (1991a) found that Atlantic menhaden made up 75% of the diet by number of nesting ospreys in the Chesapeake Bay in 1985. Glass and Watts (2009) found that the proportion of Atlantic menhaden in osprey diets depended on the location of the osprey nests: ospreys nesting in higher salinity regions of the Bay consumed a higher proportion of Atlantic menhaden (24% by number) than ospreys nesting in lower salinity regions (1.5% by number). However, overall, the diets of non-fish predators within the Chesapeake Bay are not well studied. For example, cormorant and heron abundance within the Bay has increased over time and both species are known to consume tidal freshwater fish like menhaden from studies in other regions, but there are no studies of their diet in Chesapeake Bay (Viverette 2007).

The body of diet work shows that Atlantic menhaden can make up a significant proportion of many predators diets' for specific seasons, size/age classes, and locations within the Bay, and that the prevalence of Atlantic menhaden in predators' diets changes with changing menhaden abundance. However, understanding the impact of reduced menhaden abundance on predator population health is much more difficult, and the evidence is less clear.

Some work has been done to estimate the predatory demand of individual species within the Bay (e.g., Hartman and Brandt 1995, Uphoff 2003), but whether there is enough menhaden biomass in the Bay to support this demand cannot be determined from the current coastwide stock assessment.

Lower levels of Atlantic menhaden abundance along the coast and lower levels of menhaden recruitment in Chesapeake Bay have been correlated with negative population metrics for some species. For example, striped bass reached coastwide highs in abundance during the late 1990s to early 2000s during a period of low menhaden abundance. However, within the Chesapeake Bay, the prevalence of mycobacteriosis in striped bass increased sharply (Uphoff 2003, Overton et al. 2003) while migratory striped bass outside the Bay had lower levels of infection (Matsche et al. 2010). Jacobs et al (2009) found that poor diet worsened the progression and severity of mycobacteriosis in striped bass in the lab. The weakfish population has continued to decline, even with greatly reduced fishing pressure, and an increase in natural mortality has been implicated (ASMFC 2014). As the population declined, recruitment indices remained relatively stable for weakfish, and the mortality bottleneck appears to be at around age 1-2, when weakfish switch over to consuming fish; one hypothesis is that the increase in natural mortality is linked to reduced prey availability including menhaden (NEFSC 2009). Osprey population growth rates in Chesapeake Bay were higher during the late 1970s and early 1980s, a period of high menhaden abundance and high recruitment to the Bay, than they were during the late 1980s and in 2006 (Watts 2007); McLean and Byrd (1991b) observed behavioral signs of food limitations such as sibling aggression in osprey in Chesapeake Bay in 1985 and noted that a similar study in 1975-1976 had not observed any sibling aggression.

However, all of these correlations come with many caveats. The increased prevalence of mycobacteriosis in striped bass in Chesapeake Bay has also been linked to environmental factors such as increased eutrophication and warming water temperatures in the Bay (Gauthier and Rhodes 2009). Cycles in weakfish landings are correlated with the Atlantic Multidecadal Oscillation, and age-0 weakfish are a major component of shrimp trawl bycatch (ASMFC 2014). Osprey showed higher population growth rates in low salinity areas where menhaden made up a lower proportion of their diet (Glass and Watts 2009). All of these populations are driven by many factors, including environmental conditions, habitat availability, overall forage abundance, and anthropogenic impacts, and parsing out the importance of menhaden abundance alone is difficult.

Conclusions

- There is currently no estimate of Atlantic menhaden abundance specifically within Chesapeake Bay and there is no quantitative determination of an appropriate depletion threshold, therefore there is no quantitative determination of whether localized depletion is or is not occurring.
- Recruitment to Chesapeake Bay does not appear to be correlated with abundance of age-2 and age-3 Atlantic menhaden within the Bay; as long as environmental conditions and total coastwide fecundity are favorable, recruitment to the Bay can occur.

- From a single-species perspective, the projections used to set the coastwide quota were conducted with the assumption that selectivity in the future would be equal to the selectivity of the most recent year of the model. The Bay fishery harvests a higher proportion of age-1 and age-2 fish than the more northern fisheries. Therefore, if the proportion of removals from the Bay changes, the impact of those removals on the total population will change even if the coastwide quota is not exceeded, because the overall selectivity pattern will be different.
- Demand for forage in Chesapeake Bay from fish and bird predators has increased since the early to mid-1980s, the last period of strong recruitment to Chesapeake Bay (Uphoff 2003, Viverette 2007).
- Atlantic menhaden can make up a significant proportion of many predators diets' for specific seasons, age classes, and locations within the Bay, particularly when menhaden are abundant.
- Lower levels of Atlantic menhaden abundance and recruitment have been linked to negative population metrics for several species within the Bay, but the overall complexity of the Chesapeake Bay food web, changing environment, and population dynamics makes it difficult to prove causation.

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Table 1. Average percent of menhaden by weight in the stomachs of key predators within the Chesapeake Bay by season and age or size class. (-- indicates no samples available.) Data from published studies and fishery independent surveys synthesized by the ASMFC Multispecies TC (SEDAR 2015).

Striped Bass														
	Age													
	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Jan-Mar	--	0.0	10.0	33.3	54.2	63.4	75.4	82.9	89.3	93.7	91.6	94.0	94.3	93.0
Apr - Jun	0.0	0.2	7.8	15.4	16.8	17.6	22.5	30.2	24.6	29.3	46.0	34.3	36.3	36.3
Jul - Sep	0.0	16.2	14.2	23.8	27.4	29.2	24.7	13.7	28.7	43.8	30.6	43.4	76.5	36.4
Oct - Dec	0.0	7.8	66.1	71.1	73.0	73.1	74.2	74.3	75.0	74.9	75.0	75.0	75.0	75.0

Weakfish							
	Age						
	0	1	2	3	4	5	6+
Jan-Mar	--	0.0	0.0	0.0	0.0	0.0	--
Apr - Jun	0.0	0.0	0.0	0.0	6.9	--	--
Jul - Sep	1.7	2.4	5.7	3.3	3.4	--	--
Oct - Dec	0.9	6.7	22.8	16.8	39.2	69.4	61.2

Bluefish			
	Size Class		
	<34 cm	34-55 cm	>55 cm
Jan-Mar	--	--	--
Apr - Jun	3.5	20.4	16.7
Jul - Sep	8.7	50.8	40.8
Oct - Dec	4.4	32.9	32.9

Spiny Dogfish			
	Size Class		
	<34 cm	34-55 cm	>55 cm
Jan-Mar	0.0	37.3	19.1
Apr - Jun	--	0.0	--
Jul - Sep	--	--	--
Oct - Dec	--	25.6	--

Public Comment

From: Stephen Oksienik [mailto:stephenoksienik@gmail.com]
Sent: Tuesday, September 11, 2018 12:36 PM
To: Comments <comments@asmfc.org>
Subject: menhaden

As an avid bay fisherman I would like to see limits set on the industrial harvesting of menhaden for their oil. The rest of the food chain needs the forage for their very lives, while we use the oil as a supplement to our diets. If the menhaden were not so heavily harvested, there would be many more, and larger stripers in the bay for anglers to catch and to consume.

That way we still get the oils for our diets and the bass get to have rich lives in the bay.

Thank you.

Stephen Oksienik
Crofton, Md.

Tina Berger

From: info
Sent: Monday, January 14, 2019 1:39 PM
To: Comments
Subject: FW: Menhaden management

From: Walter Zadan [mailto:walterzadan@cox.net]
Sent: Sunday, January 13, 2019 4:46 PM
To: info <info@asmfc.org>
Subject: Menhaden management

Reject Omega's menhaden certification on fishery sustainability until it comes into compliance with ASMFC's plan.

Walter Zadan
221 Wingate Dr.
williamsburg, VA

757 564 6805

The following public comment has been submitted by 940 individuals.

Tina Berger

From: Frank Walsh <squidder329@gmail.com>
Sent: Tuesday, January 29, 2019 4:26 PM
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.

--
Mr Frank Walsh
squidder329@gmail.com

Atlantic States Marine Fisheries Commission

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

James J. Gilmore, Jr. (NY), Chair *Patrick C. Keliher (ME), Vice-Chair* *Robert E. Beal, Executive Director*

Vision: Sustainably Managing Atlantic Coastal Fisheries

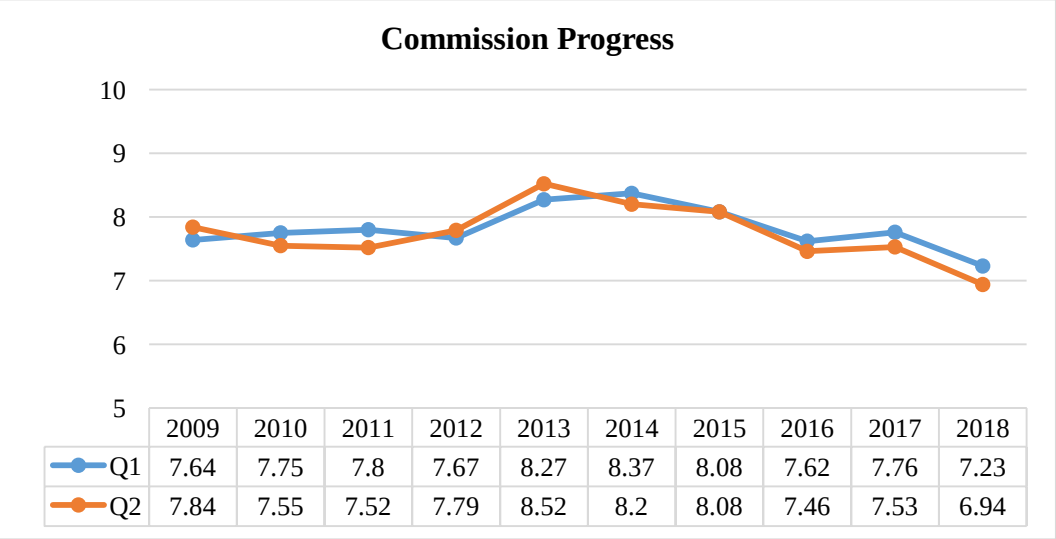
TO: ASMFC Commissioners and Proxies
DATE: January 29, 2019
SUBJECT: 2018 Commissioner Survey Results

31 Commissioners or Proxies completed the 2018 ASMFC Commissioner Survey. The survey reflects our Commissioners' commitment to measure their progress in meeting Commission goals. This is the tenth year a survey has been conducted. Where possible the results are compared to previous years' findings to identify trends (the survey was shortened in 2015). Responses are based on the progress and work completed during 2018.

Questions 1-15 prompted respondents to rate their answer on a scale of 1 to 10. The higher the average, the more positive the response. For each question, the average score by year is presented. The 2009 results were based on a response ranging from 1 through 5, so the value was doubled for comparison to future responses. Questions 7, 8, 14 and 15 were new to the 2014 survey, as the survey was simplified to increase participation.

Commission Progress

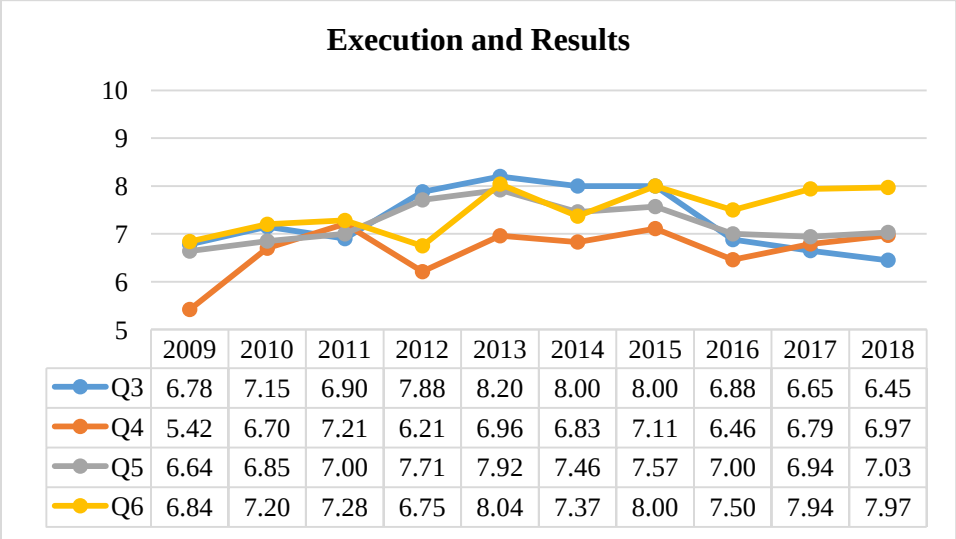
1. How comfortable are you that the Commission has a clear and achievable plan to reach the Vision (Sustainably managing Atlantic Coastal Fisheries)?
2. How confident are you that the Commission's actions reflect progress toward its Vision?



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q1	7.64	7.75	7.8	7.67	8.27	8.37	8.08	7.62	7.76	7.23
Q2	7.84	7.55	7.52	7.79	8.52	8.2	8.08	7.46	7.53	6.94

Commission Execution and Results

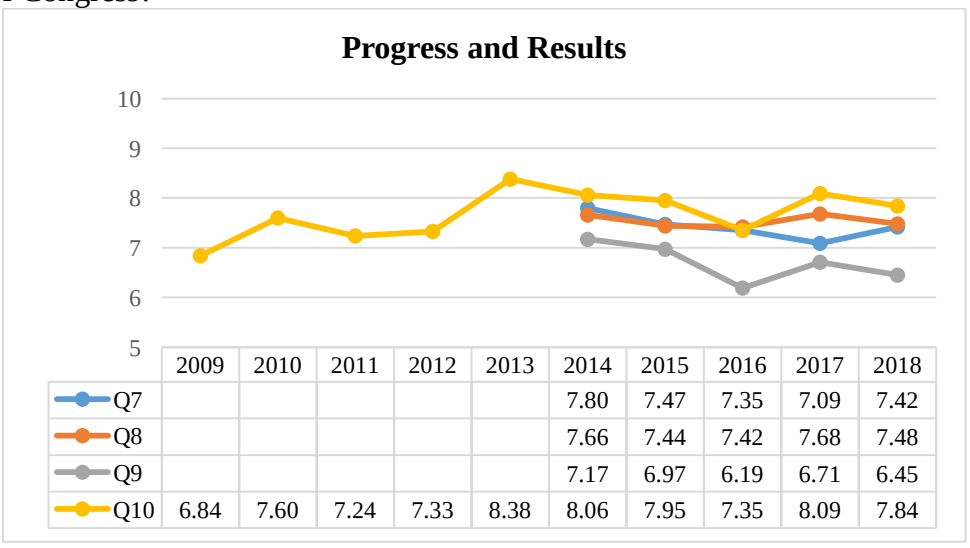
3. How satisfied are you with the cooperation between Commissioners to achieve the Commission's Vision?
4. How satisfied are you that the Commission has an appropriate level of cooperation with federal partners?
5. How satisfied are you with the Commission's working relationship with our constituent partners (commercial, recreational, and environmental)?
6. How satisfied are you with the Commission's effort and success in securing adequate fiscal resources to support management and science needs?



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q3	6.78	7.15	6.90	7.88	8.20	8.00	8.00	6.88	6.65	6.45
Q4	5.42	6.70	7.21	6.21	6.96	6.83	7.11	6.46	6.79	6.97
Q5	6.64	6.85	7.00	7.71	7.92	7.46	7.57	7.00	6.94	7.03
Q6	6.84	7.20	7.28	6.75	8.04	7.37	8.00	7.50	7.94	7.97

Measuring the Commission's Progress and Results

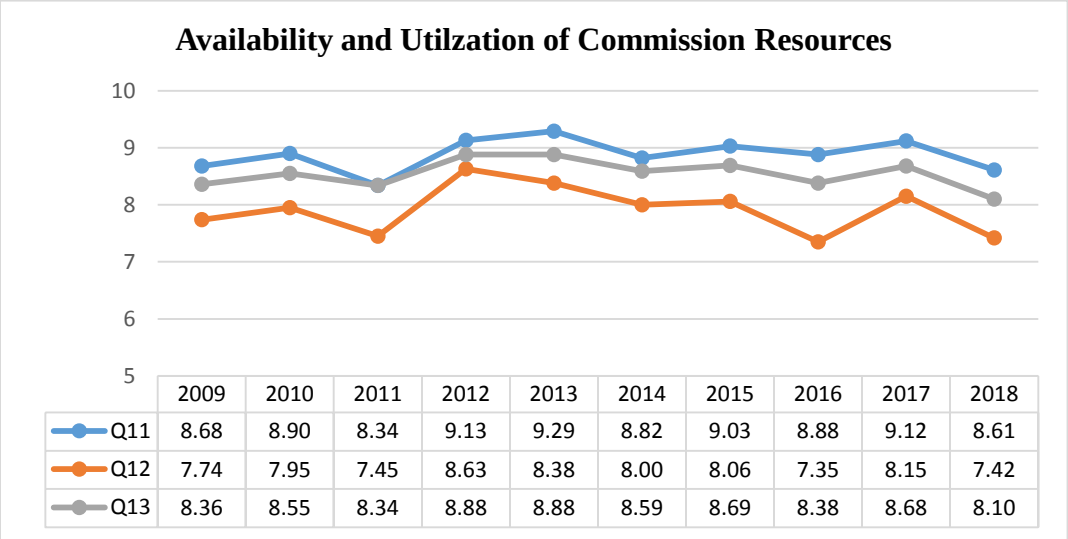
7. One of the metrics the Commission uses to measure progress is tracking the number of stocks where overfishing is no longer occurring. Is this a clear metric to measure progress?
8. How satisfied are you with the Commission's progress to end overfishing?
9. Are you satisfied with the Commission's ability to manage rebuilt stocks?
10. How satisfied are you with the Commission's efforts to engage with state legislators and members of Congress?



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q7						7.80	7.47	7.35	7.09	7.42
Q8						7.66	7.44	7.42	7.68	7.48
Q9						7.17	6.97	6.19	6.71	6.45
Q10	6.84	7.60	7.24	7.33	8.38	8.06	7.95	7.35	8.09	7.84

Measuring the Availability and Utilization of Commission Resources

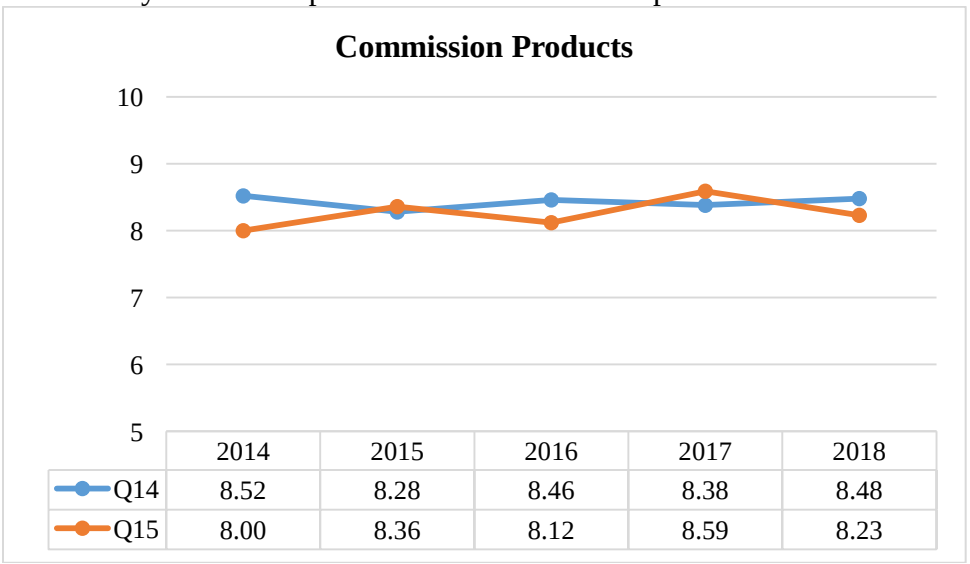
11. How satisfied are you that the Commission efficiently and effectively utilizes available fiscal and human resources?
12. How comfortable are you with the Commission's performance in reacting to new information and adapting accordingly to achieve Commission Goals?
13. The Commission has a limited scope of authority. How comfortable are you that the Commission spends the appropriate amount of resources on issues within its control?



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Q11	8.68	8.90	8.34	9.13	9.29	8.82	9.03	8.88	9.12	8.61
Q12	7.74	7.95	7.45	8.63	8.38	8.00	8.06	7.35	8.15	7.42
Q13	8.36	8.55	8.34	8.88	8.88	8.59	8.69	8.38	8.68	8.10

Commission Products

14. How satisfied are you with the products of the ISFMP Department?
15. How satisfied are you with the products of the Science Department?



	2014	2015	2016	2017	2018
Q14	8.52	8.28	8.46	8.38	8.48
Q15	8.00	8.36	8.12	8.59	8.23

Discussion Questions

Q16 What is the single biggest obstacle to the Commission's success in rebuilding stocks?

1. Commitment to make difficult decisions
2. Environment or competing state's interests

3. Holding on to the past and not managing based upon the current status of a fishery
4. Environmental factors such as warming waters and uncertain data regarding magnitude of discards and misreporting in commercial fisheries. MRIP estimates of recreational catch are still uncertain and changing with our not knowing consequences to mortality and stock size.
5. Joint Council-ASMFC management of key stocks is an impediment to the rebuilding time. In these cases Magnuson authority complicates the ASMFC process
6. Local state politics
7. Cooperation
8. Competition for allocation among jurisdictions and user groups.
9. Public resistance to making the sometimes hard choices needed to manage stocks in need of re-building. Recently there have been examples of federal administrative resistance to ASMFC management decisions.
10. climate change
11. Changing environmental conditions
12. cooperation and climate change
13. The desire and efforts of each state to obtain beneficial measures for its own fishing community. 2. Balancing the needs of the fishing community with the need to constrain fishing effort. (I realize these are not a single obstacle, but they loom large for me.)
14. allocation of fishery resources, both commercial and recreational
15. stakeholder buy in
16. As quotas decline and state concerns about their individual state quotas increase, it becomes more difficult to make common sense coast-wide decisions. Unfortunately, under the pressure of declining quotas and a vociferous fishing public, much management seems to be seen as 'zero sum game' in which states are afraid to change any allocation formula, no matter how outdated, because state delegations don't want to be seen as having 'lost' any part of their state's quota.
17. There are many factors other than fishing mortality that affect stock rebuilding such as changing ocean conditions. Many cannot be directly affected by Commission action.
18. Challenge of cooperatively addressing shifts in resource distribution and attendant need to re-visit long-standing resource allocations. Quota allocations should not be viewed as permanent or inflexible.
19. Political pressure that usurps science
20. POOR DATA PROVIDES POOR SCIENCE
21. I think one of the biggest obstacles is actually knowing the true status of our marine resources. We need to do a better job of using multiple sources of information and risk assessment to understand what the true status of our resources are.
22. Lack of will to make difficult decisions
23. The unwillingness to reallocate stocks. Some species are still based on 1970's data. Hard to say the ASMFC has moved into the 21st century to our shareholders.
24. Cooperation between Commissioners
25. Developing and implementing effective Ecological Reference Points to analyze fish populations
26. Climate change, antiquated systems of allocations
27. Lack of cooperation among-st the states, "the haves and have no's"

28. Non-fishing factors, i.e. - changing environmental conditions, pollution, offshore development

Q17 What are the most useful products the Commission produces for you?

1. Meeting week and opportunities to problem-solve
2. Statistics for populations and crafting the development of FMP's
3. Briefing materials for preparation for quarterly meetings.
4. Very detailed summaries of meetings and very timely news releases (detailed and accurate)
5. The technical and stock assessment subcommittees are a major component of the management board process.
6. Science data
7. Stick assessment
8. Updates and analysis on FMP progress and stock assessments
9. Annual status of the stocks reports and stock assessment summaries.
10. scientific information
11. FMP reviews
12. meeting materials
13. ISFMP; Providing opportunities to confer with other states on fishing issues (useful and valuable, not always successful);
14. stock assessments and associated information
15. stock assessments, FMP's
16. Must commend ASMFC again on a very useful website. The species pages do a great job of summarizing status and management. The FMP archives are useful for tracking mgmt. history and having the Assessment Reports handy is a big help.
17. Stock assessments and fishery management plans (and amendments and addenda). Fisheries Focus and legislative updates.
18. FMP Reviews, meeting summaries
19. data summaries and outreach to commissioners
20. PRESS RELEASES
21. Science program training opportunities are extremely valuable and will help bolster the ranks of the state folks who can help with technical analyses.
22. Annual fishery report
23. travel info.
24. Science products
25. FMP's news clippings and fisheries focus
26. Quarterly meetings, public hearings and publications; also, the availability of staff to answer questions by either phone or email.
27. Stock status reports

Q18 What additional products could the Commission create to make your job easier?

1. None come to mind
2. No comment
3. Staff presentations are often provided in too hasty a manner. That is a reflection of meeting agendas that are too extensive.
4. Gear information and by catch

5. Produce graphs and tables in Commission reports that can be copied and incorporated easily into other Power Point talks by just clicking on them. Define all acronyms and scientific jargon repeatedly if necessary.
6. More on performance review of past measures enacted
7. Can't say at this time.
8. primer on newer stock assessment modeling.
9. not sure
10. I wish I could get to the Meeting Archives page through a single link on the home page. The Archives are a great help as there is often material presented at the meetings that isn't readily available elsewhere.
11. Products (documents, webpages, presentations) that could aid in describing the Commission management process to the public. Geared towards a layperson with no experience/familiarity with policy, fisheries management, or fisheries science.
12. none at the moment
13. CONDENSED READERS DIGEST VERSIONS OF MATERIALS
14. Looking for more opportunities to use the Commissions position to push for more research money being sent to the states would be a valuable area to help with. Things such as support for modernizing licensing and data collection systems, and for collecting and updating fundamental biological information for Commission species would be helpful.
15. How large or small actual fish sample sizes are that may be taken to be used when modeling. Where did they come from and when were they taken. Or is the model just a numeric equation lacking actual catch data.
16. Provide information regarding options used by our counterparts (Gulf of Mexico and Pacific Coast) that may have validity for Atlantic coast stocks. - Provide economic and ecological results from various reasonable proposals from ASMFC and cooperating agencies (e.g. Chesapeake Bay Foundation).
17. ??

Q19 What issue(s) should the Commission focus more attention/time on?

1. Re-allocation Getting Administration to better support ACFCMA
2. Reallocation of state quotas based on fish distribution changes in response to warming waters. Need effective ways to change allocations resisted by those states not wanting to give up quota regardless of evidence of redistribution.
3. The pace of the ASMFC meetings could be slowed down. There is always a large volume of material that never is highlighted during the meetings because of time elements.
4. Highest dollar value fisheries should be stock assessed more frequently than lesser.
5. Migratory patterns and shifts in spawning
6. What can be done to restore depleted stocks where overfishing has not been identified as the cause.
7. how to address allocation so states do not go out of compliance
8. Focus more on the fisheries, better outreach to the commercial and recreational sectors
9. changes in management to address impacts from changing ocean conditions
10. Not sure at this time.
11. Coordination of Law Enforcement with management strategies.
12. maintain and keep improving science based information

13. How do we get away from state by state allocations? Our regionalization has been a good start, but it still much more difficult on the commercial side than the recreational. How do we manage stocks that will not likely recover? For example, do we restrict harvest on the SNE Lobster population to almost nothing in the hope it will recover, which is looking increasingly unlikely, or do we allow it to be fished until the population hits a low that makes it economically infeasible.
14. Improvement in recreational catch and effort data.
15. Developing management frameworks for ecosystem management (hard to do in context of single species management boards and FMPs), strategic planning geared towards making management more adaptive (to deal with things like species distribution shifts and resulting need to re-allocate resource amongst states)
16. maintain and create outcomes that are useable and enforceable
17. BEING MORE CREATIVE IN FINDING NEW MANAGEMENT MEASURES
18. We need to make a full court press on developing dynamic allocation systems. Without an ability to allow access to resources as they move hurts our credibility and exacerbates the disconnect between on the water observations and management. A second important topic is offshore energy development. This is severely impacting New England and will make its way in to the Mid Atlantic soon. We need scientific information with which to make good informed decisions, but there is a strong push to get these developments constructed. We need to be vigilant and use our leverage to make sure we can get the science done to protect our resources and our fishermen. The cumulative effects of all of the projects could have the potential to severely impact our marine resources and no one is investigating this yet. There are like-minded developers out there, we need to support and work with them and push back against developers that are looking to steamroll forward without information.
19. We have poor working relationship with COUNCILS witness winter flounder rebuilding program. We should develop a new way of working with COUNCIL partners that involves fewer participants and a more efficient process
20. Each and every State has a set of it's own challenges. What is fleshed out to be a State's primary issue should be recognized and dealt with in order to create a cohesive connection within the ASFMC. If the primary issues are not recognized then the chain of connectivity is then and always broken.
21. Finding a way to link habitat improvement to management
22. Ecological Reference points - Rebuild Menhaden populations to approximate 1950 level - Rebuild the Striped Bass population to the level experienced in the year 2000
23. ?
24. Reallocation of coastal species in a fair and equitable management plan!

Q20 Additional comments?

1. Need to put more effort into new Commissioner orientation so there is better understanding of roles and responsibilities.
2. thank you for the opportunity to respond.
3. Strategic Goal #6 might include a specific strategy to collaborate/communicate closely with AFWA. AFWA represents the broad fish & wildlife interests of the states and, I believe, they have resources and the ability to deploy them in ways that the ASMFC can not.

4. Not at this time.
5. Maintain a high-level approach for aquaculture. State public trust doctrine may not be well suited for cooperative management through the Commission as these issues fall clearly with state legislatures outside of federal CSMA consistency . Research and involvement should be focused on wild stock impacts, disease threats, etc. and not on the use of state public trust waters.
6. ASMFC does a good job and I appreciate all the efforts.
7. ASMFC faces serious management problems, but I want to again commend ASMFC leadership and staff for doing a great job in difficult times. Executive Director Bob Beal continues to impress with his low-key but firm leadership. The ASMFC staff are unfailingly helpful and polite, and unflagging in their efforts to get the job done on time.
8. The federal management councils have a "New Council Member" training that is excellent. Consider developing something similar for the Commission.
9. The commission and its commissioners do their best to use the information available to them to create educated outcomes. Increasing stakeholder engagement with outside entities has caused undo influences that tend to hamstring our actions. Engaged commissioners feel that, in order to maintain their seats, politics and not science must drive the final outcomes to the advantage of individual stakeholders and ignore the greater good. This is counterproductive but perhaps a fact of (commission) life. Other than setting terms for appointment length, this is a hurdle that will be hard to overcome. Commissioners should not fear being removed should one outcome be ill received "at home".
10. STAFF IS GREAT
11. Understanding that there is a balance in this comment between not giving enough and giving too much, I feel that we are overwhelming Board members with too much information, and I have a sense that due to this many are coming to meetings unprepared as they do not know which material to focus on for the meeting. Perhaps partitioning the material into "Need to read for the meeting" and "Background" would be a way to let the Board members know what they need to read and if they have time they could dig in to the background material. This issue is not unique to the ASMFC but is also a problem with the regional councils.
12. None

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Introduction

Each state has a fundamental responsibility to safeguard the public trust with respect to its natural resources. Fishery managers are faced with many challenges in carrying out that responsibility. Living marine resources inhabit ecosystems that cross state and federal jurisdictions. Thus, no state, by itself, can effectively protect the interests of its citizens. Each state must work with its sister states and the federal government to conserve and manage natural resources.

Beginning in the late 1930s, the 15 Atlantic coastal states from Maine to Florida took steps to develop cooperative mechanisms to define and achieve their mutual interests in coastal fisheries. The most notable of these was their commitment to form the Atlantic States Marine Fisheries Commission (Commission) in 1942, and to work together through the Commission to promote the conservation and management of shared marine fishery resources. Over the years, the Commission has remained an effective forum for fishery managers to pursue concerted management actions. Through the Commission, states cooperate in a broad range of programs including interstate fisheries management, fisheries science, habitat conservation, and law enforcement.

Congress has long recognized the critical role of the states and the need to support their mutual efforts. Most notably, it enacted the Atlantic Coastal Fisheries Cooperative Management Act (Atlantic Coastal Act) in 1993, which built on the success of the Atlantic Striped Bass Conservation Act of 1984. Acknowledging that no single governmental entity has exclusive management authority for Atlantic coastal fishery resources, the Atlantic Coastal Act recognizes the states' responsibility for cooperative fisheries management through the Commission. The Atlantic Coastal Act charges all Atlantic states with implementing coastal fishery management plans that will safeguard the future of Atlantic coastal fisheries in the interest of both fishermen and the nation.

Accepting these challenges and maintaining their mutual commitment to success, the Atlantic coastal states have adopted this five-year Strategic Plan. The states recognize circumstances today make the work of the Commission more important than ever before. The Strategic Plan articulates the mission, vision, goals, and strategies needed to accomplish the Commission's mission. It serves as the basis for annual action planning, whereby Commissioners identify the highest priority issues and activities to be addressed in the upcoming year. With 27 species currently managed by the Commission, finite staff time, Commissioner time and funding, as well as a myriad of other factors impacting marine resources (e.g., changing ocean conditions, protected species interactions, offshore energy, and aquaculture), Commissioners recognize the absolute need to prioritize activities, dedicating staff time and resources where they are needed most and addressing less pressing issues as resources allow. Efforts will be made to streamline management by using multi-year specifications where possible and increase stability/predictability in fisheries management through less frequent regulatory changes. A

key to prioritizing issues and maximizing efficiencies will be working closely with the three East Coast Regional Management Councils and NOAA Fisheries.

Mission

The Commission's mission, as stated in its 1942 Compact, is:

> *To promote the better utilization of the fisheries, marine, shell and anadromous, of the Atlantic seaboard by the development of a joint program for the promotion and protection of such fisheries, and by the prevention of physical waste of the fisheries from any cause.*

The mission grounds the Commission in history. It reminds every one of the Commission's sense of purpose that has been in place for over 77 years. The constantly changing physical, political, social, and economic environments led the Commission to restate the mission in more modern terms:

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The mission and nature of the Commission as a mutual interstate body incorporate several guiding principles. They include:

- States are sovereign entities, each having its own laws and responsibilities for managing fishery resources within its jurisdiction
- States serve the broad public interest and represent the common good
- Multi-state resource management is complex and dependent upon cooperative efforts by all states involved
- The Commission provides a critical sounding board on issues requiring cross-jurisdictional action, coordinating cooperation, and collaboration among the states and federal government

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The long-term vision of the Commission is:

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Cooperative Management of Sustainable Atlantic Coastal Fisheries

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The Commission and its actions are influenced by a multitude of factors. These factors are constantly evolving and will most likely change over the time period of this Strategic Plan. However, the most pressing factors affecting the Commission today are changing ocean conditions, resource allocation, the quality and quantity of scientific information, competing ocean uses, a growing demand to address ecosystem functions, and interactions between fisheries and protected species. The Strategic Plan, through its goals and broad objectives, will seek to address each of these issues over the next five years.

Changing Ocean Conditions

Changes in ocean temperature, currents, acidification, and sea level rise are affecting nearly every facet of fisheries resources and management at the state, interstate, and federal levels. Potential impacts to marine species include prey and habitat availability, water quality, susceptibility to disease, and spawning and reproductive potential. The distribution and productivity of fishery stocks are often changing at a rate faster than fisheries science and management can keep pace with. Several Commission species, such as northern shrimp, Southern New England lobster, Atlantic cobia, black sea bass, and summer flounder are already responding to changes in the ocean. In the case of northern shrimp and Southern New England lobster, warming ocean waters have created inhospitable environments for species reproduction and survivability. For cobia, black sea bass, and summer flounder, changing ocean conditions have shifted species distributions, with the species moving into deeper and/or more northern waters to stay within preferred temperature ranges. Where shifts are occurring, the Commission will need to reconsider state-by-state allocation schemes and make adjustments to our fishery management plans. For other species depleted due to factors other than fishing mortality (e.g., habitat degradation and availability, predation), the states will need to explore steps that can be taken to aid in species recovery. And, if a stock's viability is compromised, Commission resources and efforts should be shifted to other species that can be recovered or maintained as a rebuilt stock.

Allocation

As noted above, resource allocation among the states and between various user groups will continue to be an important issue over the next five years. Many of the Commission FMPs divvy up the available harvestable resource through various types of allocation schemes, such as by state, region, season, or gear type. The changing distribution of many species has further complicated the issue of resource allocation with traditional allocation schemes being challenged and a finite amount of fishery resources to be shared. Discussion may be difficult and divisive, with some states (and their stakeholders) wanting to maintain their historic (traditional) allocations, while others are seeking a greater share of the resource given increased abundance and availability in their waters. States will need to seek innovative ways to reallocate species so that collectively all states feel their needs are met. What will be required to successfully navigate these discussions and decisions is the commitment of the states to work through the issues with honesty, integrity, and fairness, seeking outcomes that balance

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Accurate and timely scientific information form the basis of the Commission's fisheries management decision-making. Continued investments in the collection and management of fishery-dependent and -independent data remain a high priority for the Commission and its member states. The challenge will be to maintain and expand data collection efforts in the face of shrinking state and federal budgets. Past and current investments by state, regional and federal partners of the Atlantic Coastal Cooperative Statistics Program (ACCSP) have established the program as the principal source of marine fishery statistics for the Atlantic coast. State and regional fishery-independent data collection programs, in combination with fishery statistics, provide the scientific foundation for stock assessments. Many data collection programs will continue to be strained by budget restrictions, scientists' workload capacities, and competing priorities. The Commission remains committed to pursuing long-term support for research surveys and monitoring programs that are critical to informing management decisions and resource sustainability.

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Competing Ocean Uses

Marine spatial planning has become an increasingly popular method of balancing the growing demands on valuable ocean resources. More specifically, the competing interests of commercial and recreational fishing, renewable energy development, aquaculture, marine transportation, offshore oil exploration and drilling, military needs, and habitat restoration are all components that must be integrated into successful ocean use policies. The Commission has always emphasized cooperative management with our federal partners; however, the states' authorities in their marine jurisdictions must be preserved and respected. The Commission will continue to prioritize the successful operation of its fisheries, but it will be imperative to work closely with federal, state, and local governments on emerging ocean use conflicts as they diversify into the future.

Protected Species

Like coastal fishery resources, protected species, such as marine mammals, sea turtles, and listed and candidate fish species, traverse both state and federal waters. The protections

afforded these species under the Marine Mammal Protection Act and Endangered Species Act can play a significant role in the management and prosecution of Atlantic coastal fisheries. The Commission and the states have a long history of supporting our federal partners to minimize interactions with and bycatch of marine mammals and sea turtles. The listing of Atlantic sturgeon under the Endangered Species Act has added a whole new level of complexity in the ability of the Commission and its member states to carry out their stewardship responsibilities for these important diadromous species. The species spends the majority of its life in state waters and depend on estuarine and riverine habitat for their survival. Listing has the potential to jeopardize the states' ability to effectively monitor and assess stock condition, as well as impact fisheries that may encounter listed species. It is incumbent upon the Commission and its federal partners to work jointly to assess stock health, identify threats, and implement effective rebuilding programs for listed and candidate species.

More recently, the depleted status of the Northern right whale population and the potential impacts to this population by entanglement in fishing gear, particularly lobster and crab gear, has heighted concern for both whales and the lobster industry.

Increased Cooperation and Collaboration among the States and between the States and Our Federal Partners

Demands for ecosystem-based fisheries management, competing and often conflicting ocean uses, and legislative mandates to protect marine mammals and other protected species, further complicate fisheries management and require quality scientific information to help guide management decisions. There is a growing concern among fishery managers that some "control" over fisheries decisions and status has been diminished due to political intervention and our inability to effect changing ocean conditions and other environmental factors that impact marine resources. Fisheries management has never been more complex or politically charged. State members are pulled between what is best for their stakeholders versus what is best for the resource and the states as a whole.

While the issues may seem daunting, they are not insurmountable. In order for the Commission to be successful, the states must recommit to their collective vision of "Sustainable and Cooperative Management of Atlantic Coastal Fisheries," recognizing that their strength lies in working together to address the fisheries issues that lie ahead. Given today's political and environmental realities, the need for cooperation among the states has never been more important. It is also critical the states and their federal partners seek to strengthen their cooperation and working relationships, providing for efficient and effective fisheries management across all agencies. No one state or federal agency has the resources, authority, or ability to do it alone.

GOALS & OBJECTIVES

The Commission will pursue the following eight goals and their related strategies during the five-year planning period, from 2019 through 2023. It will pursue these goals through specific

objectives, targets, and milestones outlined in an annual Action Plan, which is adopted each year at the Commission's Annual Meeting to guide the subsequent year's activities. Throughout the year, the Commission and its staff will monitor progress in meeting the Commission's goals, and evaluate the effectiveness of the strategies. While committed to the objectives included in this plan, the Commission is ready to adopt additional objectives to take advantage of new opportunities and address emerging issues as they arise.

Goal 1 - Rebuild, maintain, fairly allocate, and promote 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 and needs of coastal communities. Inherent in this is the recognition that healthy and vibrant resources benefit stakeholders. The states are committed to proactive management, with a focus on integrating ecosystem services, socio-economic impacts, habitat issues, bycatch and discard reduction measures, and protected species interactions into well-defined fishery management plans. Fishery management plans will also address fair allocation of fishery resources among the states. Understanding changing ocean conditions and their impact on fishery productivity and distribution is an elevated priority. Successful management under changing ocean conditions will depend not only on adjusting management strategies, but also in reevaluating and revising, as necessary, the underlying conservation goals and objectives of fishery management plans. 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 ending overfishing and working to rebuild overfished or depleted Atlantic coast fish stocks, while promoting sustainable harvest of and access to rebuilt fisheries.

Annual action planning will be guided by the following objectives:

- Manage interstate resources that provide for productive, sustainable fisheries using sound science
- Strengthen state and federal partnerships to improve comprehensive management of shared fishery resources
- Adapt management to address emerging issues
- Practice efficient, transparent, and accountable management processes
- Evaluate progress towards rebuilding fisheries
- Strengthen interactions and input among stakeholders, technical, advisory, and management groups

Goal 2 – Provide sound, actionable science 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 broad network of fisheries scientists at state, federal, and academic institutions along the coast. 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.

Annual action planning will be guided by the following objectives:

- Conduct stock assessments based on comprehensive data sources and rigorous technical analysis
- Provide training to enhance the expertise and involvement of state and staff scientists in the development of stock assessments
- Streamline data assimilation within individual states, and among states and ASMFC
- Proactively address research priorities through cooperative state and regional data collection programs and collaborative research projects, including stakeholder involvement
- Explore the use of new technologies to improve surveys, monitoring, and the timeliness of scientific products
- Promote effective communication with stakeholders to ensure on-the-water observations and science are consistent
- Utilize ecosystem and climate science products to inform fisheries management decisions

Goal 3 - 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 3 focuses on providing timely, accurate catch and effort data on Atlantic coast recreational, for-hire, and commercial fisheries.

Goal 3 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.

Annual action planning will be guided by the following objectives:

- Focus on activities that maximize benefits, are responsive and accountable to partner and end-user needs, and are based on available resources.
- Cooperatively develop, implement, and maintain coastwide data standards through cooperation with all program partners
- Provide electronic applications that improve partner data collection
- Integrate and provide access to partner data via a coastwide repository
- Facilitate fisheries data access through an on-line, user-friendly, system while protecting confidentiality
- Support technological innovation

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 under limited 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 fish habitats of concern for Commission managed species, each year the Habitat 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 partnership 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.

Annual action planning will be guided by the following objectives:

- Identify fish habitats of concerns through fisheries management programs and partnerships
- Educate Commissioners, stakeholders, and the general public about the importance of habitat to healthy fisheries and ecosystems
- Better integrate habitat information and data into fishery management plans and stock assessments
- Engage local state, and regional governments in mutually beneficial habitat protection and enhancement programs
- Foster partnerships with management agencies, researchers, and habitat stakeholders to leverage scientific, regulatory, political, and financial support
- Work with ACFHP to foster partnerships with like-minded organizations at local levels to further common habitat goals

Goal 5 – 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 fishery management plans. 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 fishery management plans.

Annual action planning will be guided by the following objectives:

- Develop practical compliance requirements that foster stakeholder buy-in
- Evaluate the enforceability of management measures and the effectiveness of law enforcement programs
- Promote coordination and expand existing partnerships with state and federal natural resource law enforcement agencies
- Enhance stakeholder awareness of management measures through education and outreach
- Use emerging communication platforms to deliver real time information regarding regulations and the outcomes of law enforcement investigations

Goal 6 – 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 processes. 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.

Annual action planning will be guided by the following objectives:

- Increase public understanding and support of activities through expanded outreach at the local, state, and federal levels
- Clearly define Commission processes to facilitate stakeholder participation, as well as transparency and accountability
- Strengthen national, regional, and local media relations to increase coverage of Commission actions
- Use new technologies and communication platforms to more fully engage the broader public in the Commission's activities and actions

Goal 7 – Advance Commission and member states' priorities through a proactive legislative policy agenda

Although states are positioned to achieve many of the national goals for marine fisheries through cooperative efforts, state fisheries interests are often underrepresented at the national level. This is due, in part, to the fact that policy formulation is often disconnected from the processes that provide the support, organization, and resources necessary to implement the policies. The capabilities and input of the states are an important aspect of developing national fisheries policy, and the goal seeks to increase the states' role in national policy formulation. Additionally, the goal emphasizes the importance of achieving management goals consistent with productive commercial and recreational fisheries and healthy ecosystems.

The Commission recognizes the need to work with Congress in all phases of policy formulation. Several important fishery-related laws will be reauthorized over the next couple of years (i.e., Atlantic Coastal Act, Magnuson-Stevens Fishery Conservation and Management Act, Interjurisdictional Fisheries Act, Atlantic Striped Bass Conservation Act, and Anadromous Fish Conservation Act). The Commission will be vigilant in advancing the states' interests to Congress as these laws are reauthorized and other fishery-related pieces of legislation are considered.

Annual action planning will be guided by the following objectives:

- Increase the Commission's profile and support in the U.S. Congress by developing relationships between Members and their staff and Commissioners, the Executive Director, and Commission staff
- Maintain or increase long term funding for Commission programs through the federal appropriations process and other available sources.
- Engage Congress on fishery-related legislation affecting the Atlantic coast

- Promote member states' collective interests at the regional and national levels
- Promote economic benefits of the Commission's actions (return on investment)

Goal 8 – Ensure the fiscal stability & efficient administration of the Commission

Goal 8 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.

Annual action planning will be guided by the following objectives:

- Conservatively manage the Commission's operations and budgets to ensure fiscal stability
- Utilize new information technology to improve meeting and workload efficiencies, and enhance communications
- Refine strategies to recruit professional staff, and enhance growth and learning opportunities for Commission and state personnel
- Fully engage new Commissioners in the Commission process and document institutional knowledge.
- Utilize legal advice on new management strategies and policies, and respond to litigation as necessary.

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Like coastal fishery resources, protected species, such as marine mammals, sea turtles, and listed and candidate fish species, traverse both state and federal waters. The protections

afforded these species under the Marine Mammal Protection Act and Endangered Species Act can play a significant role in the management and prosecution of Atlantic coastal fisheries. The Commission and the states have a long history of supporting our federal partners to minimize interactions with and bycatch of marine mammals and sea turtles. The listing of Atlantic sturgeon under the Endangered Species Act has added a whole new level of complexity in the ability of the Commission and its member states to carry out their stewardship responsibilities for these important diadromous species. The species spends the majority of its life in state waters and depend on estuarine and riverine habitat for their survival. Listing has the potential to jeopardize the states' ability to effectively monitor and assess stock condition, as well as impact fisheries that may encounter listed species. It is incumbent upon the Commission and its federal partners to work jointly to assess stock health, identify threats, and implement effective rebuilding programs for listed and candidate species.

More recently, the depleted status of the Northern right whale population and the potential impacts to this population by entanglement in fishing gear, particularly lobster and crab gear, has heighted concern for both whales and the lobster industry.

Increased Cooperation and Collaboration among the States and between the States and Our Federal Partners

Demands for ecosystem-based fisheries management, competing and often conflicting ocean uses, and legislative mandates to protect marine mammals and other protected species, further complicate fisheries management and require quality scientific information to help guide management decisions. There is a growing concern among fishery managers that some "control" over fisheries decisions and status has been diminished due to political intervention and our inability to effect changing ocean conditions and other environmental factors that impact marine resources. Fisheries management has never been more complex or politically charged. State members are pulled between what is best for their stakeholders versus what is best for the resource and the states as a whole.

While the issues may seem daunting, they are not insurmountable. In order for the Commission to be successful, the states must recommit to their collective vision of "Sustainable and Cooperative Management of Atlantic Coastal Fisheries," recognizing that their strength lies in working together to address the fisheries issues that lie ahead. Given today's political and environmental realities, the need for cooperation among the states has never been more important. It is also critical the states and their federal partners seek to strengthen their cooperation and working relationships, providing for efficient and effective fisheries management across all agencies. No one state or federal agency has the resources, authority, or ability to do it alone.

GOALS & OBJECTIVES

The Commission will pursue the following eight goals and their related strategies during the five-year planning period, from 2019 through 2023. It will pursue these goals through specific

objectives, targets, and milestones outlined in an annual Action Plan, which is adopted each year at the Commission's Annual Meeting to guide the subsequent year's activities. Throughout the year, the Commission and its staff will monitor progress in meeting the Commission's goals, and evaluate the effectiveness of the strategies. While committed to the objectives included in this plan, the Commission is ready to adopt additional objectives to take advantage of new opportunities and address emerging issues as they arise.

Goal 1 - Rebuild, maintain, fairly allocate, and promote 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 and needs of coastal communities. Inherent in this is the recognition that healthy and vibrant resources benefit stakeholders. The states are committed to proactive management, with a focus on integrating ecosystem services, socio-economic impacts, habitat issues, bycatch and discard reduction measures, and protected species interactions into well-defined fishery management plans. Fishery management plans will also address fair allocation of fishery resources among the states. Understanding changing ocean conditions and their impact on fishery productivity and distribution is an elevated priority. Successful management under changing ocean conditions will depend not only on adjusting management strategies, but also in reevaluating and revising, as necessary, the underlying conservation goals and objectives of fishery management plans. 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 ending overfishing and working to rebuild overfished or depleted Atlantic coast fish stocks, while promoting sustainable harvest of and access to rebuilt fisheries.

Annual action planning will be guided by the following objectives:

- Manage interstate resources that provide for productive, sustainable fisheries using sound science
- Strengthen state and federal partnerships to improve comprehensive management of shared fishery resources
- Adapt management to address emerging issues
- Practice efficient, transparent, and accountable management processes
- Evaluate progress towards rebuilding fisheries
- Strengthen interactions and input among stakeholders, technical, advisory, and management groups

Goal 2 – Provide sound, actionable science 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 broad network of fisheries scientists at state, federal, and academic institutions along the coast. 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.

Annual action planning will be guided by the following objectives:

- Conduct stock assessments based on comprehensive data sources and rigorous technical analysis
- Provide training to enhance the expertise and involvement of state and staff scientists in the development of stock assessments
- Streamline data assimilation within individual states, and among states and ASMFC
- Proactively address research priorities through cooperative state and regional data collection programs and collaborative research projects, including stakeholder involvement
- Explore the use of new technologies to improve surveys, monitoring, and the timeliness of scientific products
- Promote effective communication with stakeholders to ensure on-the-water observations and science are consistent
- Utilize ecosystem and climate science products to inform fisheries management decisions

Goal 3 - 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 3 focuses on providing timely, accurate catch and effort data on Atlantic coast recreational, for-hire, and commercial fisheries.

Goal 3 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.

Annual action planning will be guided by the following objectives:

- Focus on activities that maximize benefits, are responsive and accountable to partner and end-user needs, and are based on available resources.
- Cooperatively develop, implement, and maintain coastwide data standards through cooperation with all program partners
- Provide electronic applications that improve partner data collection
- Integrate and provide access to partner data via a coastwide repository
- Facilitate fisheries data access through an on-line, user-friendly, system while protecting confidentiality
- Support technological innovation

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 under limited 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 fish habitats of concern for Commission managed species, each year the Habitat 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 partnership 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.

Annual action planning will be guided by the following objectives:

- Identify fish habitats of concerns through fisheries management programs and partnerships
- Educate Commissioners, stakeholders, and the general public about the importance of habitat to healthy fisheries and ecosystems
- Better integrate habitat information and data into fishery management plans and stock assessments
- Engage local state, and regional governments in mutually beneficial habitat protection and enhancement programs
- Foster partnerships with management agencies, researchers, and habitat stakeholders to leverage scientific, regulatory, political, and financial support
- Work with ACFHP to foster partnerships with like-minded organizations at local levels to further common habitat goals

Goal 5 – 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 fishery management plans. 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 fishery management plans.

Annual action planning will be guided by the following objectives:

- Develop practical compliance requirements that foster stakeholder buy-in
- Evaluate the enforceability of management measures and the effectiveness of law enforcement programs
- Promote coordination and expand existing partnerships with state and federal natural resource law enforcement agencies
- Enhance stakeholder awareness of management measures through education and outreach
- Use emerging communication platforms to deliver real time information regarding regulations and the outcomes of law enforcement investigations

Goal 6 – 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 processes. 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.

Annual action planning will be guided by the following objectives:

- Increase public understanding and support of activities through expanded outreach at the local, state, and federal levels
- Clearly define Commission processes to facilitate stakeholder participation, as well as transparency and accountability
- Strengthen national, regional, and local media relations to increase coverage of Commission actions
- Use new technologies and communication platforms to more fully engage the broader public in the Commission's activities and actions

Goal 7 – Advance Commission and member states' priorities through a proactive legislative policy agenda

Although states are positioned to achieve many of the national goals for marine fisheries through cooperative efforts, state fisheries interests are often underrepresented at the national level. This is due, in part, to the fact that policy formulation is often disconnected from the processes that provide the support, organization, and resources necessary to implement the policies. The capabilities and input of the states are an important aspect of developing national fisheries policy, and the goal seeks to increase the states' role in national policy formulation. Additionally, the goal emphasizes the importance of achieving management goals consistent with productive commercial and recreational fisheries and healthy ecosystems.

The Commission recognizes the need to work with Congress in all phases of policy formulation. Several important fishery-related laws will be reauthorized over the next couple of years (i.e., Atlantic Coastal Act, Magnuson-Stevens Fishery Conservation and Management Act, Interjurisdictional Fisheries Act, Atlantic Striped Bass Conservation Act, and Anadromous Fish Conservation Act). The Commission will be vigilant in advancing the states' interests to Congress as these laws are reauthorized and other fishery-related pieces of legislation are considered.

Annual action planning will be guided by the following objectives:

- Increase the Commission's profile and support in the U.S. Congress by developing relationships between Members and their staff and Commissioners, the Executive Director, and Commission staff
- Maintain or increase long term funding for Commission programs through the federal appropriations process and other available sources.
- Engage Congress on fishery-related legislation affecting the Atlantic coast

- Promote member states' collective interests at the regional and national levels
- Promote economic benefits of the Commission's actions (return on investment)

Goal 8 – Ensure the fiscal stability & efficient administration of the Commission

Goal 8 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.

Annual action planning will be guided by the following objectives:

- Conservatively manage the Commission's operations and budgets to ensure fiscal stability
- Utilize new information technology to improve meeting and workload efficiencies, and enhance communications
- Refine strategies to recruit professional staff, and enhance growth and learning opportunities for Commission and state personnel
- Fully engage new Commissioners in the Commission process and document institutional knowledge.
- Utilize legal advice on new management strategies and policies, and respond to litigation as necessary.