

Atlantic States Marine Fisheries Commission

Bluefish Management Board and Mid-Atlantic Fishery Management Council

*April 30, 2018
3:15 – 4:45 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 (*M. Luisi/R. O'Reilly*) 3:15 p.m.
2. Board Consent 3:15 p.m.
 - Approval of Agenda
 - Approval of Proceedings from February 2012
3. Public Comment 3:20 p.m.
4. Consider Approval of Draft Scoping and Public Information Document for Allocation Amendment (*M. Seeley/C. Starks*) **Action** 3:30 p.m.
 - Overview of Draft Scoping and Public Information Document
5. Other Business/Adjourn 4:45 p.m.

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

MEETING OVERVIEW

Bluefish Management Board and Mid-Atlantic Fishery Management Council Joint Meeting

April 30, 2018

3:15 – 4:45 p.m.

Arlington, Virginia

Chair: Mike Luisi (MD) Assumed Chairmanship: 1/14	Technical Committee Chair: Mike Celestino (NJ)	Law Enforcement Committee Representative: Rob Kersey (MD)
Vice Chair: Vacant	Advisory Panel Chair: Vacant	Previous Board Meeting: December 13, 2017
Voting Members: ME, NH, MA, RI, CT, NY, NJ, DE, MD, PRFC, VA, NC, SC, GA, FL, NMFS, USFWS (17)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from February 2012

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

4. Consider Approval of Scoping and Public Information Document for Allocation Amendment (3:30-4:45 p.m.) Action
<p>Background</p> <ul style="list-style-type: none"> • In December 2017 the Board and Council initiated a joint Amendment to the Bluefish FMP to review and possibly revise commercial/recreational allocation of the resource, as well as the distribution of the commercial quota among the states. • The Council’s Fishery Management Action Team (FMAT) has developed a Draft Scoping and Public Information Document for Board review. (Briefing Materials)
<p>Presentations</p> <ul style="list-style-type: none"> • Overview of Draft Scoping and Public Information Document by M. Seeley & C. Starks
<p>Board actions for consideration at this meeting</p> <ul style="list-style-type: none"> • Consider Approval of Draft Scoping and Public Information Document

5. Other Business/Adjourn

DRAFT

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

**Crowne Plaza Hotel Old Town
Alexandria, Virginia
February 8, 2012**

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

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1. **Approval of agenda by consent** (Page 1).
2. **Approval of proceedings of February, 2010 by consent** (Page 1).
3. **Move to approve Addendum 1 which includes Option 2 with an effective date of March 1, 2012** (Page 2). Motion by Pat Augustine; second by Dr. David Pierce. Motion carries (Page 2).
4. **Adjourn by consent** (Page 2).

ATTENDANCE**Board Members**

Sen. Brian Langley, ME (LA)
 Steve Train, ME (GA)
 Terry Stockwell, ME, proxy for P. Keliher (AA)
 Doug Grout, NH (AA)
 Dennis Abbott, NH, proxy for Rep. Watters (LA)
 G. Ritchie White, NH (GA)
 William Adler, MA (GA)
 Jocelyn Carey, MA, proxy for Rep. Peake (LA)
 Mark Gibson, RI, proxy for B. Ballou (AA)
 Rick Bellavance, RI, proxy for Rep. Martin (LA)
 Bill McElroy, RI (GA)
 David Simpson, CT (AA)
 Rep. Craig Miner, CT (LA)
 James Gilmore, NY (AA)
 Brian Culhane, NY, proxy for Sen. Johnson (LA)
 Pat Augustine, NY (GA)
 Tom Fote, NJ (GA)
 Peter Himchak, NJ, proxy for David Chanda (AA)

Adam Nowalsky, NJ, proxy for Asm. Albano (LA)
 Bernie Pankowski, DE, proxy for Sen. Venables (LA)
 John Clark, DE, proxy for D. Saveikis (AA)
 Roy Miller, DE (GA)
 Tom O'Connell, MD DNR (AA)
 Bill Goldsborough, MD (GA)
 Russell Dize, MD, proxy for Sen. Colburn (LA)
 Jack Travelstead, VA, proxy for S. Bowman (AA)
 Louis Daniel, NC (AA)
 Mike Johnson, NC, proxy for Rep. Wainwright (LA)
 Robert Boyles, SC (LA)
 John Frampton, SC (AA)
 John Duren, GA (GA)
 Pat Geer, GA, proxy for S. Woodward (LA)
 Aaron Podey, FL (AA)
 Jaime Geiger, USFWS
 A.C. Carpenter, PRFC
 Steve Meyers, NMFS

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

Ex-Officio Members**Staff**

Vince O'Shea
 Robert Beal
 Mike Waine

Chris Vonderweidt
 Mark Robson

Guests

David Pierce, MA DMF

The Bluefish Management Board of the Atlantic States Marine Fisheries Commission convened in the Presidential Ballroom of the Crowne Plaza Hotel, Alexandria, Virginia, February 8, 2012, and was called to order at 8:30 o'clock a.m. by Chairman Jack Travelstead.

CALL TO ORDER

CHAIRMAN JACK TRAVELSTEAD: Good morning, everyone. This is the Bluefish Management Board. We have a relatively short agenda today. Are there any additions or changes to the agenda from the board members? Seeing none, the agenda stands.

APPROVAL OF PROCEEDINGS

CHAIRMAN TRAVELSTEAD: You have seen the proceedings from the February 2010 board meeting. Are there any changes to those minutes? Seeing none, they're approved.

PUBLIC COMMENT

CHAIRMAN TRAVELSTEAD: Is there any member of the public that wishes to make comment at this time on any item that is not on today's agenda? Okay, moving right along, Draft Amendment 1 for final approval. Mike, you're going to take us through the document?

REVIEW OF DRAFT AMENDMENT 1 FOR FINAL APPROVAL

MR. MICHAEL WAINE: Staff first brought this draft addendum to the joint board meeting at the Mid-Atlantic Fishery Management Council Meeting in August of 2011. The board approved the document for public comment at that time. I will review the document right now. The SARC approved an age-structured assessment program in 2005, and in 2009 the bluefish stock was declared rebuilt.

However, the peer review stated that results should be used with caution because of assessment uncertainties. More specifically, there was aging difficulty in the assessment. Scales were used for the early part of the time series and otoliths for the latter part. SARC was concerned about discrepancies between scale and otolith ages and the general difficulties of aging bluefish.

The assessment was further hampered by gaps in age-length keys resulting from a lack of samples from certain age and size classes. These gaps were filled by pooling samples across years, which increased uncertainty. Also, age samples were graphically limited coming from only Virginia and North Carolina.

This figure shows the length frequency of the fishery in the dashed line and the age samples collected in the solid line for 2004. You can see that there are gaps in the age samples from several length classes, particularly for larger fish. In response to the SARC recommendations for the bluefish assessment, the 2011 Action Plan included a task to work with states on developing a cooperative program to collect otoliths to improve the age data for assessments for several species, including bluefish.

Additionally, under this task the Bluefish Aging Workshop was conducted in May of 2011 to assess the need for bluefish monitoring and ensure the optimal and consistent sampling methods be established coastwide. The recommendations from the SARC and the Bluefish Aging Workshop are the premise for the development of the addendum to review the sampling protocols.

Out of that aging workshop the technical committee, with the help of the Quantitative Ecology Lab at Old Dominion University, established a protocol to age bluefish using otoliths and also established that Massachusetts, New Jersey, North Carolina, Florida, NEAMAP and SEAMAP all have aging capability currently set up.

A final result of that workshop was a recommendation for a coast-wide sampling program to determine the optimal sample size for a coast-wide age-length key and test the feasibility of state-level sampling. The addendum has two options. The first is status quo, sampling is not part of state compliance.

The second option is that sampling is part of state compliance, and that states that account for 5 percent of the coast-wide bluefish landings from '98 to 2008 would be required to collect a hundred bluefish ages. That would be fifty from the first half of the year and fifty from the second half. The states are Massachusetts, Rhode Island, Connecticut, New York, New Jersey,

North Carolina and Virginia that currently does all the sampling for bluefish itself.

The idea here is to cover the full range of bluefish sizes and that states may help each other with the aging as this would be new for some states and would be getting stuff set up and off and running. After the first year, the TC will review the sampling design to assess and make any changes at that point; and then ten was for an implement date of this season in 2012. I'll move into the public comment summary, which is pretty lengthy. We received on public comments on this document. That concludes my presentation. Thank you, Mr. Chairman.

CHAIRMAN TRAVELSTEAD: That set some kind of record, I guess. I don't know what you did; you scared them off. Comments on the addendum; questions of Mike? David.

DR. DAVID PIERCE: Regarding the sampling design, the technical committee will review the sampling design after we collect the samples in 2012, so is there any guidance beforehand regarding what the sampling design should be?

MR. WAINE: Yes, it's actually detailed in the addendum that the states will collect 50 ages from the first half of the year and fifty ages from the second half of the year. The intent is to collect ages from the widest lengths of bluefish possible so that we can fill in gaps in the age-length key.

DR. PIERCE: Okay, I didn't realize that was called the sampling design. The TC will review the sampling design; that means that the TC will see if the states collected fifty in one part of the year and fifty in another part of the year; it's just simple as that, right? Okay, I get it.

CHAIRMAN TRAVELSTEAD: Other questions or comments? Okay, I guess we're ready for a motion. Pat.

MR. PATRICK AUGUSTINE: **Mr. Chairman, I move that we approve sending this Draft Addendum I to Amendment 2 to the Bluefish Plan out to the public.**

CHAIRMAN TRAVELSTEAD: We're beyond that.

MR. AUGUSTINE: I'm sorry, that we approve the document as presented.

CHAIRMAN TRAVELSTEAD: Let me suggest something. **We're looking for a motion to approve the addendum and I would suggest that you approve Option 2 in the addendum on Page 5 and that you include an effective date of March 1, 2012,** so that we can start collecting these samples as soon as possible.

MR. AUGUSTINE: Thank you, Mr. Chairman. Joe, did you get all that?

CHAIRMAN TRAVELSTEAD: Is there a second to that motion; David, thank you. Comments on the motion? Do we need to caucus before we vote? The motion is move to approve Option 2 with an effective date of March 1, 2012. I would just suggest a slight change to that to say move to approve the addendum with Option 2 just so it's clear we're approving the entire document. Any objection to that? Seeing none, is there any objection to the motion? **The motion carries and the addendum is approved.**

We're moving to Item 5, elect a vice-chair. I'm informed we already have a vice-chair, A.C. Carpenter. This is my last meeting as Chair so, A.C., you'll be taking over as Chair at the next meeting and we'll put that back on the agenda for the next meeting to find a new vice-chair. Is there any other business? Pete.

MR. PETER HIMCHAK: Mr. Chairman, I'm not committing to anything, but perhaps New York and New Jersey can work out some kind of a sharing arrangement whereby we may be able to process and age bluefish samples should they be able to take over the monitoring of our research set-aside quota.

CHAIRMAN TRAVELSTEAD: All right, good luck.

MR. JAMES GILMORE: We would be very interested in pursuing that; and, Pete, if we don't get enough fish, it was my masters thesis and I still have some otoliths in the basement.

ADJOURNMENT

CHAIRMAN TRAVELSTEAD: Is there a motion to adjourn? We're adjourned; thank you.

(Whereupon, the meeting was adjourned at 8:41 o'clock a.m., February 8, 2012.)



**Bluefish Allocation Amendment
Draft Action Plan**

(Updated as of February 2018 and subject to change)

Amendment Goal

The goal of this amendment is to review and possibly revise the allocation between the commercial and recreational fisheries and the commercial allocations to the states. This action may be needed to avoid overages, achieve optimum yield, prevent overfishing, and reduce the need for quota transfers off the U.S. east coast.

Fishery Management Action Team

The Council will form a team of technical experts, known as a Fishery Management Action Team (FMAT) to develop and analyze management alternatives for this amendment. The FMAT is led by Council staff and includes management partners from the National Marine Fisheries Service (NMFS) Greater Atlantic Regional Fisheries Office (GARFO), the Northeast Fisheries Science Center (NEFSC), the New England Fishery Management Council (NEFMC), the Southeast Fishery Management Council (SAFMC), and the Atlantic States Marine Fisheries Commission (ASMFC). The FMAT will work with other experts to address specific issues, as needed.

FMAT Membership

Name	Role/Expertise	Agency
Matthew Seeley	FMAT Chair	MAFMC
Danielle Palmer	Protected Resources	NMFS GARFO
David Stevenson	Habitat Conservation	NMFS GARFO
Cynthia Hanson	Sustainable Fisheries	NMFS GARFO
Sarah Gurtman	NEPA	NMFS GARFO
Tony Wood	Population Dynamics	NEFSC
Trish Clay	Social Sciences	NEFSC
Caitlin Starks	Plan Coordinator	ASMFC
Mike Celestino	Bluefish Technical Committee	NJDFW

Applicable Laws

Magnuson-Stevens Act	Yes
National Environmental Policy Act	Yes – will require an Environmental Assessment or Environmental Impact Statement
Administrative Procedure Act	Yes
Regulatory Flexibility Act	Yes
Paperwork Reduction Act	Possibly; depends on data collection needs
Coastal Zone Management Act	Possibly; depends on effects of the action on the resources of the coastal states in the management unit
Endangered Species Act	Possibly; level of consultation will depend on the actions taken
E.O. 12866 (Regulatory Planning and Review)	Yes
E.O. 12630 (Takings)	Possibly; legal review will confirm
E.O. 13123 (Federalism)	Possibly; legal review will confirm
Essential Fish Habitat	Possibly
Social Impact Analysis	Possibly
Information Quality Act	Yes

Expected Document

Acronym	NEPA Analysis	Requirements
EA	Environmental Assessment	NEPA applies, no scoping required, public hearings required under MSA
EIS	Environmental Impact Statement	NEPA applies, scoping required, public hearings required

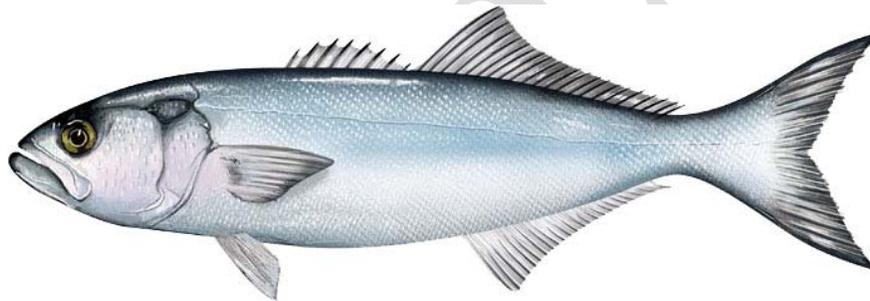
Draft Timeline for Amendment Development and Implementation

Task Description	Date (all are subject to change)
Initiation and request of FMAT participants	December 2017
Formation of FMAT	January 2018
Initial FMAT discussion	March 2018
Council (or ASMFC) meeting - review scoping plan and document	April 2018 (May 2018)
Scoping hearings/scoping comment period	June-July 2018
Advisory Panel (AP) meeting - review amendment goals and objectives, FMAT recommendations, develop recommendations for alternatives; any amendment issues?	June or 2018
Council meeting - review scoping comments and FMAT, AP, and MC recommendations; discuss management alternatives	August 2018
FMAT Meeting – review comments and develop recommendations for alternatives	September 2018
Demersal Committee Meeting - review comments and develop recommendations for alternatives	November 2018
Council meeting - approve range of alternatives for public hearings	February 2019
FMAT Meeting	February/March 2019
Public hearing document and EIS - draft approval	April 2019
Public hearings	Spring-Summer 2019
AP meeting - recommendations for final action	Summer 2019
MC meeting - recommendations for final action	Summer 2019
Council meeting - final action	Fall 2019
Submission of draft EA/EIS to GARFO	Fall 2019
Draft EA/EIS revisions and resubmission	Winter 2020
Rulemaking (proposed rule)	Spring 2020
Rulemaking (final rule)	Summer 2020

DRAFT SCOPING AND PUBLIC INFORMATION DOCUMENT

BLUEFISH ALLOCATION AMENDMENT TO THE BLUEFISH MANAGEMENT PLAN

April 2018



Prepared by the
Mid-Atlantic Fishery Management Council (MAFMC or Council)
and the
Atlantic States Marine Fisheries Commission (ASMFC or Commission)

Public Comment Opportunities and Instructions



In December 2017, the Mid-Atlantic Fishery Management Council (Council) initiated the development of an amendment to the Bluefish Fishery Management Plan (FMP). In April/May 2018, the Council and the Atlantic States Marine Fisheries Commission (Commission)'s Bluefish Board jointly approved this public scoping document to solicit information during the public scoping process. The amendment process will involve a review and potential update of the FMP's sector based allocations, commercial allocations to the states, transfer processes, and goals & objectives. This scoping document presents background on bluefish management, the amendment process and timeline, and issues that may be addressed in the amendment.

The public is encouraged to submit comments regarding the range of potential issues to be addressed in the amendment. In addition to providing comments at any of the scheduled scoping hearings listed below, you may submit written comments by **11:59 p.m., Eastern Standard Time, on Day, Date** per the notice of intent and notice of public scoping, as published in the Federal Register.

Written comments may be sent by any of the following methods:

1. **Online** at <http://www.mafmc.org/actions/bluefish-allocation-amendment>
2. **Email** to the following address: mseeley@mafmc.org
3. **Mail or Fax** to either:

Chris Moore, Ph.D., Executive Director	Bob Beal, Executive Director
Mid-Atlantic Fishery Management Council	Atlantic States Marine Fisheries Commission
North State Street, Suite 201	1050 North Highland Street, Suite 200A-N
Dover, DE 19901	Arlington, VA 22201
FAX: 302.674.5399	FAX: 703.842.0741

Please include "Bluefish Allocation Amendment Scoping Comments" in the subject line if using email or fax or on the outside of the envelope if submitting written comments.

All comments, regardless of submission method, will be compiled in one document for review and consideration by both the Council and Commission. Please do not send separate comments or the same comments by multiple submission methods to the Council and Commission.

The public will be notified via the Federal Register of additional opportunities to comment later in the process, however, **this is the first and best opportunity for members of the public to raise concerns related to the scope of issues that will be considered in the amendment.**

For information and updates, please visit: <http://www.mafmc.org/actions/bluefish-allocation-amendment>. If you have any questions, please contact either:

Matthew Seeley, FMP Coordinator
Mid-Atlantic Fishery Management Council
mseeley@mafmc.org
(302) 526-5262

Caitlin Starks, FMP Coordinator
Atlantic States Marine Fisheries Commission
cstarks@asmfc.org
(703) 842-0717

Public scoping hearings will be held on the following dates:

Date and Time	Location
TBD	TBD
TBD	Webinar

Draft Timeline for Completion of Proposed Bluefish Allocation Amendment:

	December 2017	Council initiates amendment
	February-May 2018	Draft action plan developed; Fishery Management Action Team (FMAT) formed; Council's Demersal Committee meets to discuss scoping process
	April-May 2018	Joint Council and Commission draft scoping document developed; Council and Commission review and approve draft document for public comment
Current Step →	Summer 2018	Scoping hearings and public comment period
	Fall 2018	Council and Commission identify priority issues for inclusion in the amendment; Issue-specific working groups established; FMAT and working group meetings; FMAT begins development of options
	Spring/Summer 2019	FMAT continues development of options (with working group input); meetings of the FMAT, working groups, Council and Commission, and Advisory Panel
	Fall 2019/Spring 2020	Council and Commission review FMAT and working group recommendations for options; Draft Environmental Impact Statement (DEIS) development begins
	Spring 2020	Range of options refined and approved; DEIS development continues
	Summer 2020	DEIS finalized; Council and Commission select preferred options; public hearings
	Fall/Winter 2020	Council and Commission consider public comments; final action; rulemaking and comment periods (5-7 months)

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Introduction

The bluefish fishery is managed cooperatively by the Council and NOAA Fisheries in Federal waters (3-200 miles) and the Commission in state waters (0-3 miles). The management unit for bluefish in US waters is the western Atlantic Ocean from the east coast of Florida northward to the US-Canadian border.

The Council and Commission are seeking public input for the development of a “Bluefish Amendment” to the Bluefish Fishery Management Plan (FMP). This amendment will review and potentially revise allocations between the commercial and recreational fisheries, the commercial allocations to the states, the goals and objectives, and the transfer processes.

This action was identified as a priority in the Council’s 2017 Implementation Plan (<http://www.mafmc.org/strategic-plan/>), and the Council is now seeking public input to inform development of an amendment. The Council and Commission would like your comments on the range of issues and information that should be considered, including comments related to allocations as well as any other issues that might be of concern to you regarding management of the bluefish fishery.

Why is this action being proposed?

The Council and Commission have proposed this action in order to:

- 1) Perform a comprehensive review of the bluefish sector allocations, commercial allocations to the states, and transfer processes within the Bluefish FMP
- 2) Update the FMP goals and objectives for bluefish management

Several issues and concerns relative to bluefish management were raised by Council and Commission members, advisors, and other interested stakeholders in recent years. Many of these concerns are related to the catch histories that current allocations are based on. Amendment 1 to the Bluefish FMP was published in 1998 to set sector and state allocations. These allocations were developed using catch data from 1981-1989 (the years prior to regulations that may have affected both recreational and commercial landings) and are still the basis for the current bluefish allocations. Stakeholders would like to see allocations reviewed using more recent catch histories.

In addition, the Council and Commission have proposed this action to evaluate the need for management response to changing conditions in the bluefish fishery. This includes addressing apparent shifts in bluefish distribution (potentially related to the effects of climate change), as well as possible changes to social and economic drivers for these fisheries. This action was also proposed so that the FMP goals, objectives, and management strategies can be assessed in light of possible changing fishery conditions.

Issues for consideration

The amendment is likely to consider a variety of approaches for reviewing bluefish allocations. These could include (a combination of), *but would not be limited to*:

- Analyses of recent catch histories
- Analyses of overages/underages in recent history
- Recent trends in sector-based or state transfers
- Shifts in temporal and spatial distributions

A draft Environmental Impact Statement (DEIS) will be developed for public comment and used by the Council to evaluate any proposed measures. The Council will consider the biological and socio-economic impacts of any management measure before making a final decision.

Amendment Process and Timeline

The Council and Commission will first gather information during the scoping period. The scoping process is the first and best opportunity for members of the public to raise concerns related to the scope of issues that will be considered in the bluefish allocation amendment. The Council and Commission need your input both to identify management issues and to develop effective alternatives. Your comments early in the amendment development process will help us address issues of public concern in a thorough and appropriate manner.

Following the initial phase of information gathering and public comment, the Council and Commission will evaluate potential management alternatives and the impacts of those alternatives. The Council and Commission will then develop a draft amendment, incorporating the identified management alternatives, for public review.

As required by the National Environmental Policy Act (NEPA), the Council will develop an environmental analysis document to evaluate the impacts of the management measures considered. This can be either an environmental assessment (EA) or environmental impact statement (EIS), depending on the results of the scoping process. The public will have several opportunities to review and comment on any environmental analysis document that is prepared as part of the bluefish allocation amendment process.

This is the public's opportunity to inform the Council and Commission about changes observed in the fishery, actions the public feels should or should not be taken in terms of management, regulation, enforcement, research, development, enhancement, and any other concerns the public has about the resource or the fishery. The measures outlined in this document are not a list of "preferred alternatives" or measures that the Council and Commission will necessarily include in the amendment. No management measures have yet been analyzed for their effectiveness or impacts. **Please comment on any bluefish management measures or strategies you think may or may not be useful or practical and explain your rationale. Please also comment on any other issues that should be addressed in the amendment.** The list of relevant issues may be expanded as suggestions are offered during the scoping process.

A tentative schedule for the completion of the amendment is included at the beginning of this document. Please note that this timeline is subject to change.

Background on Bluefish Management

The Council and Commission implemented the first Bluefish FMP in 1990. Since then, six amendments and one framework have been developed and approved for the Bluefish FMP, all of which made changes to bluefish management measures. These documents can be found here: <http://www.mafmc.org/bluefish/>.

Amendment 1 (1999) introduced the updated allocations to the recreational and commercial fisheries as 87% and 13%, respectively. This amendment also implemented the state-by-state commercial allocations from Maine to Florida (FL east coast) using catch histories from 1981-1989. States manage their own commercial quotas and are subject to accountability measures if they exceed their individual quota. Additionally, Amendment 1 allows for a transfer of up to 10.5 million pounds of quota from the recreational to the commercial fishery as long as the recreational sector is not projected to take their share of the quota.

To further allow for the successful utilization of state quotas, Amendment 1 allows for quota to be transferred between two or more states under mutual agreement and with the approval of the NMFS Regional Administrator. The ability to transfer or combine quota allows states the flexibility to respond to variations in the resource, short term emergency situations, or other factors affecting the distribution of catch. The transferring of quota does not affect the share of quota each state receives annually.

Approved quota transfers are published in the Federal Register. To allow for these in-season adjustments, commercial state landings for bluefish are monitored by the states and NOAA via the Dealer Electronic Reporting to the Standard Atlantic Fisheries Information System (SAFIS), as well as state agencies.

Description of the Bluefish Resource

Status of the Stock

The bluefish benchmark stock assessment was peer reviewed in June 2015 and approved for use by management at the 60th Stock Assessment Workshop/Stock Assessment Review Committee.

Results from the most recent benchmark stock assessment indicate that the bluefish stock is not overfished and overfishing was not occurring in 2014 relative to the biological reference points from the 2015 SAW/SARC 60. Modeling results indicated that the estimated spawning stock biomass (SSB) was 190.77 million pounds (86,534 mt) in 2014 (85 percent of the accepted reference point $SSB_{MSY\ proxy} = SSB_{35\%SPR} = 223.42$ million pounds or 101,343 mt, which was updated by the SSC from $F_{40\%SPR} = 0.17$ in 2015). SSB declined since the beginning of the time series, from a high of 340.90 million pounds (154,633 mt) in 1985 to a low of 116.34 million pounds (52,774 mt) in 1997, before increasing again (Figure 1). The stock spawning biomass average for the 1985-2014 time series is 175.15 million pounds (79,449 mt). Fully-selected fishing mortality in 2014 was estimated to be 0.157, below the F threshold ($F_{MSY\ proxy} = F_{35\%SPR} = 0.19$). Fully selected F peaked in 1987 at 0.477 and then declined gradually since then, with a time series average of 0.284 (Figure 2.).

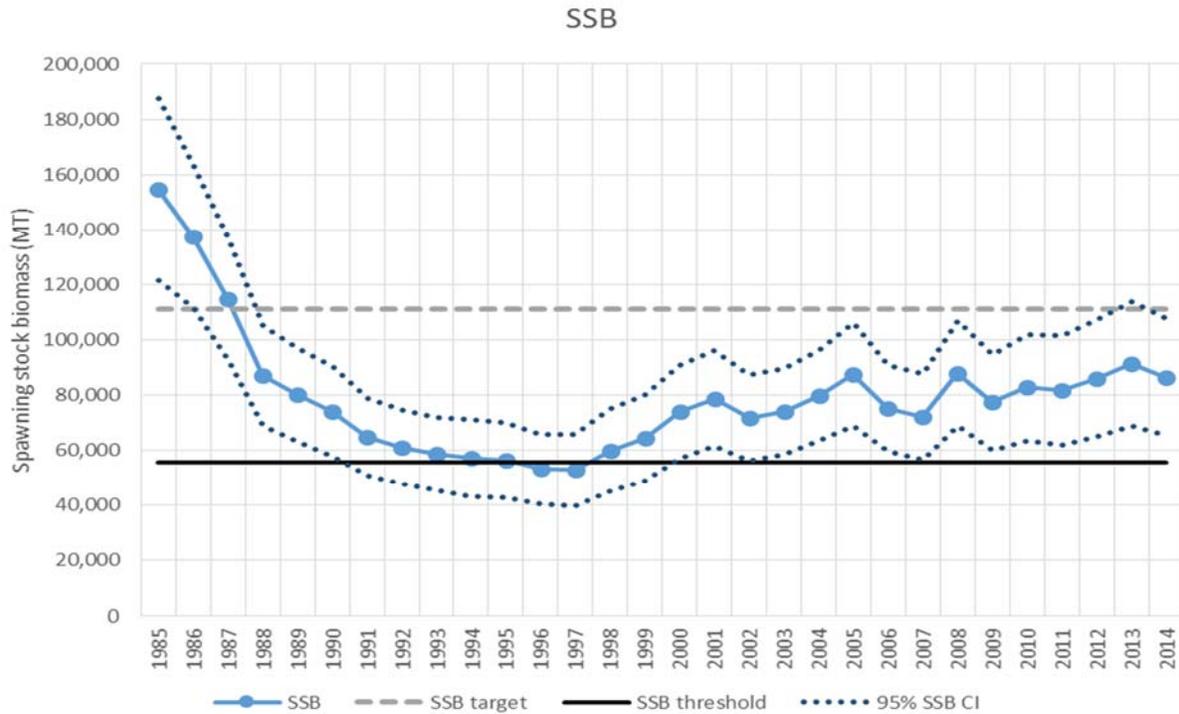


Figure 1. Fully selected spawning stock biomass of bluefish plotted with thresholds and 95% confidence intervals identified in SAW 60.

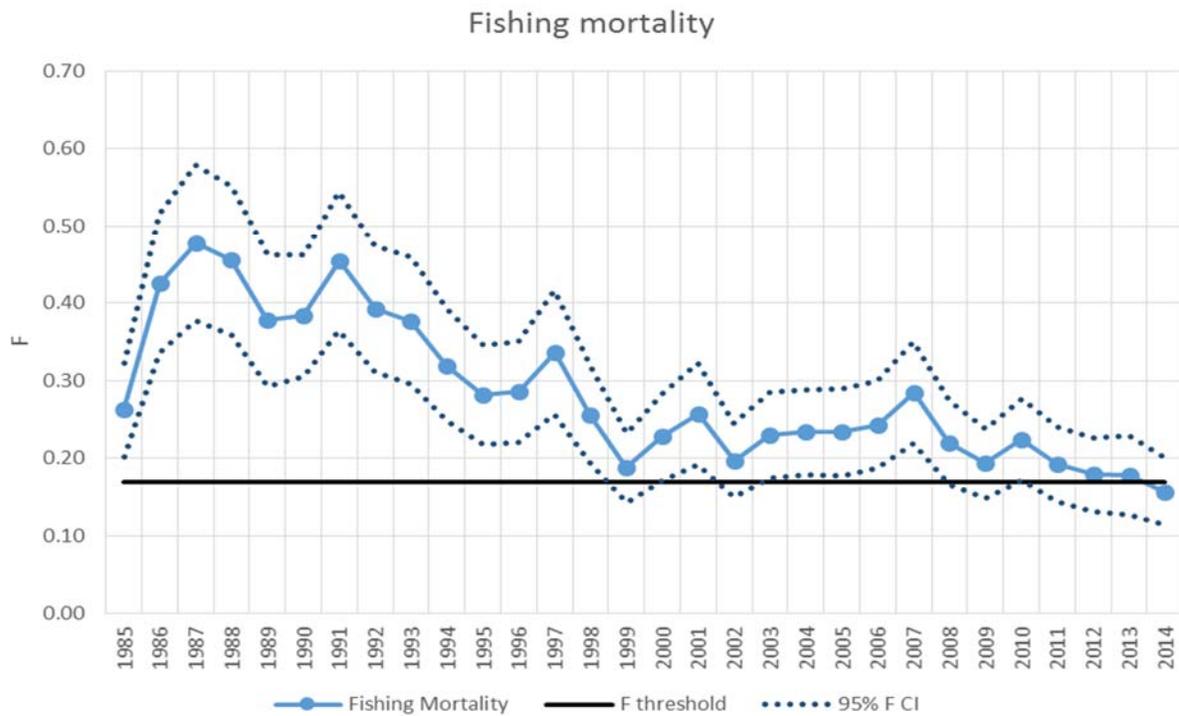


Figure 2. Fully selected fishing mortality of bluefish plotted with thresholds and 95% confidence intervals identified in SAW 60. The F threshold ($F_{MSY\ PROXY} = F_{35\%SPR} = 0.19$) was changed by the MAFMC SSC from $F_{40\%SPR} = 0.17$.

Biology and Stock Definition

Bluefish are found worldwide in tropical and subtropical waters, but in the western North Atlantic range from Nova Scotia and Bermuda to Argentina. The Council and Commission FMP for bluefish defines the management unit as all bluefish from the east coast of Florida northeast to the US-Canada border. Bluefish travel in schools of like-sized individuals and undertake seasonal migrations, moving into the Middle Atlantic Bight (MAB) during spring and then south or farther offshore during fall. Within the MAB they occur in large bays and estuaries as well as across the entire continental shelf. Juvenile stages have been recorded in all estuaries within the MAB, but eggs and larvae occur in oceanic waters (Able and Fahay 1998). Growth rates are fast, and they may reach a length of 3.5 ft and a weight of 27 pounds (Bigelow and Schroeder 1953). Bluefish live to age 12 and greater (Salerno et al. 2001).

Bluefish eat a wide variety of prey items. The species has been described by Bigelow and Schroeder (1953) as “perhaps the most ferocious and bloodthirsty fish in the sea, leaving in its wake a trail of dead and mangled mackerel, menhaden, herring, alewives, and other species on which it preys.”

Bluefish born in a given year (young of the year) typically fall into two distinct size classes suggesting that there are two spawning events along the east coast. Literature supports the existence of a small third spawn in the fall as well (Juanes et al. 2013). As a result of the bimodal size distribution, young are referred to as spring-spawned or summer-spawned. In the MAB, spring-spawned bluefish appear to be the dominant component of the stock.

Description of the Fishery

Recreational Fishery

All recreational data presented in this document for 2017 are listed as preliminary. Recreational data is now collected and reported through the Marine Recreational Information Program (MRIP). Prior to MRIP was the Marine Recreational Fisheries Statistics Survey (MRFSS), which ran for two decades until 2006. Data collection and reporting transitioned from MRFSS to MRIP due to increasing demand for better precision, accuracy, timeliness, and coverage. The majority of data collection occurred through a telephone survey that used a random-digit dialing method to target households in coastal counties. Over time, this method has become less effective as more people are abandoning landlines for cell phones. Now, MRIP is transitioning to a mail survey design that utilizes the National Saltwater Angler Registry. New survey designs may produce very different results than those from older surveys. Preliminary MRIP calibration work suggests all effort estimations will increase ~3-5 times. This increase has the potential to drastically alter bluefish catch/landings/effort data for the shore and private angler modes. No change will occur for party/charter as vessel operators either submit VTRs or report through a separate telephone survey.

The current recreational bluefish allocation is 83% of the overall annual catch limit (ACL), resulting in a 2018 post-sector transfer recreational harvest limit of 11.58 million pounds. Bluefish are targeted as a recreational fishery from Maine to Florida. The Council has management jurisdiction in federal waters and the Commission within state waters.

A coastwide time series of recreational harvest and catch in numbers of fish is provided in Figure 3. To calculate landings in pounds, the average weight of a harvested bluefish (2016 - 2.22

pounds) can be multiplied by the number of fish harvested. Additionally, a recent time series (2013-2017) of landings by state is provided in Table 1.

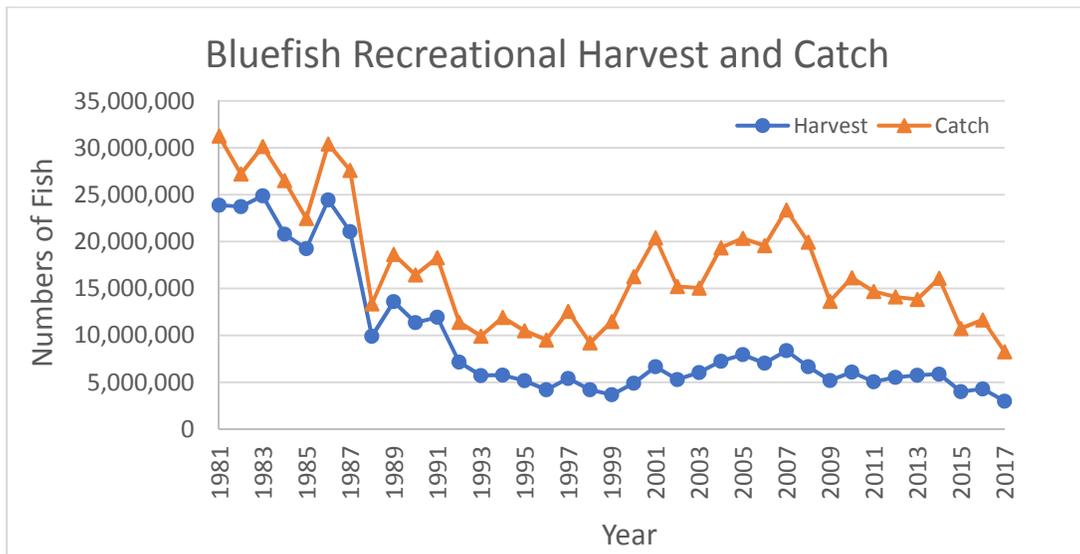


Figure 3. Bluefish recreational harvest and catch spanning ME to FL (east coast) from 1981-2017.

In 2017, the greatest harvest (retained catch) of bluefish by weight occurred in New Jersey with 3.33 million pounds, followed by Florida (1.38 million pounds), New York (1.06 million pounds), and Delaware (831,000 pounds). According to MRIP, only 27 and 0 bluefish were caught in Maine and New Hampshire, respectively. Average weights, based on dividing MRIP landings in weight by landings in number for each state, suggest that bluefish size tends to increase toward the north along the Atlantic coast. Discards in the recreational fishery remain relatively high throughout the time series (Figure 4).

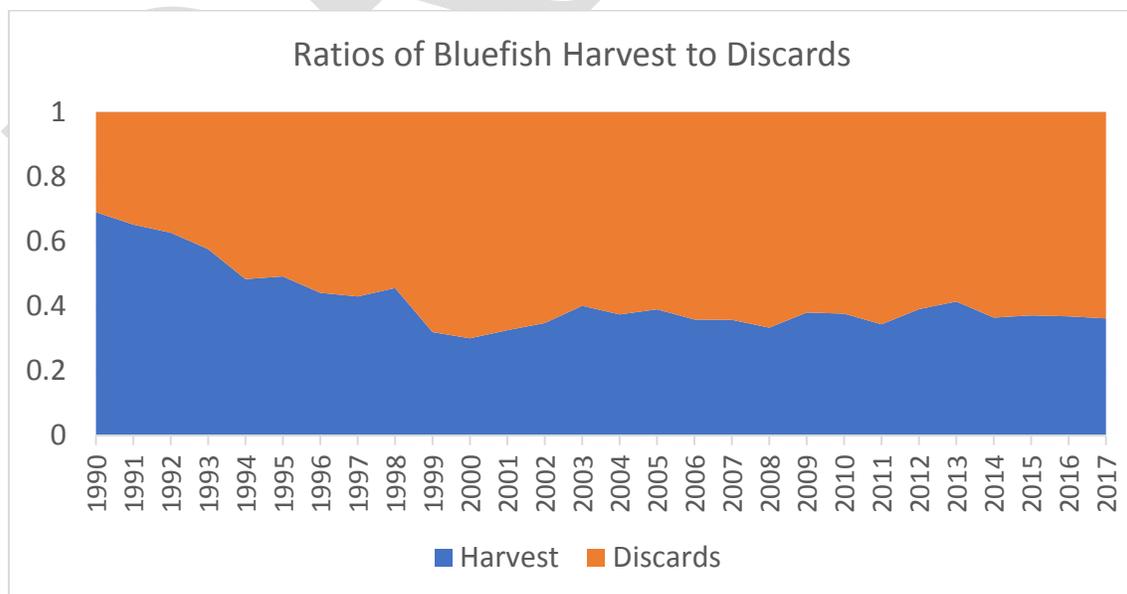


Figure 4. Ratio of bluefish harvest (A+B1) to discards (based on numbers of fish); 2017 estimate is preliminary.

Table 1. Bluefish recreational landings (pounds) by state from 2013-2017.

State	2013	2014	2015	2016	2017
Maine	62,654	636	3,780	57	27
New Hampshire	0	5,310	24,942	16	0
Massachusetts	2,562,308	1,968,114	1,837,308	697,834	537,297
Rhode Island	1,431,880	347,030	338,087	421,797	362,589
Connecticut	4,281,939	1,018,115	2,650,562	966,241	594,817
New York	4,266,712	1,877,864	2,095,307	2,025,744	1,055,014
New Jersey	1,877,196	3,002,699	2,566,738	3,493,997	3,333,175
Delaware	26,760	121,972	84,781	93,402	830,999
Maryland	63,249	227,618	147,595	157,161	223,604
Virginia	273,735	83,104	147,363	156,836	31,207
North Carolina	988,664	966,004	868,868	855,631	700,724
South Carolina	109,218	104,495	140,155	145,961	83,816
Georgia	3,646	12,261	3,717	2,880	1,227
Florida	516,404	720,464	764,037	520,365	1,377,636
Grand Total	16,464,365	10,455,686	11,673,240	9,537,922	9,132,132

Figure 5 reflects MRFSS/MRIP-based estimates of landings by mode (1991 through 2017) and indicates that the primary landing modes for bluefish are private boats followed by the for-hire mode. About 53 percent of the landings of bluefish on a coastwide basis came from private/rental boats, followed by for-hire boats (25 percent) for the 1991 to 2016 period. Shore mode contributes about 22 percent of the total landings. For the last six years (2012-2017), 40 percent of the total bluefish landings came from private/rental boats, 37 percent from shore mode, and 23 percent from for-hire boats.

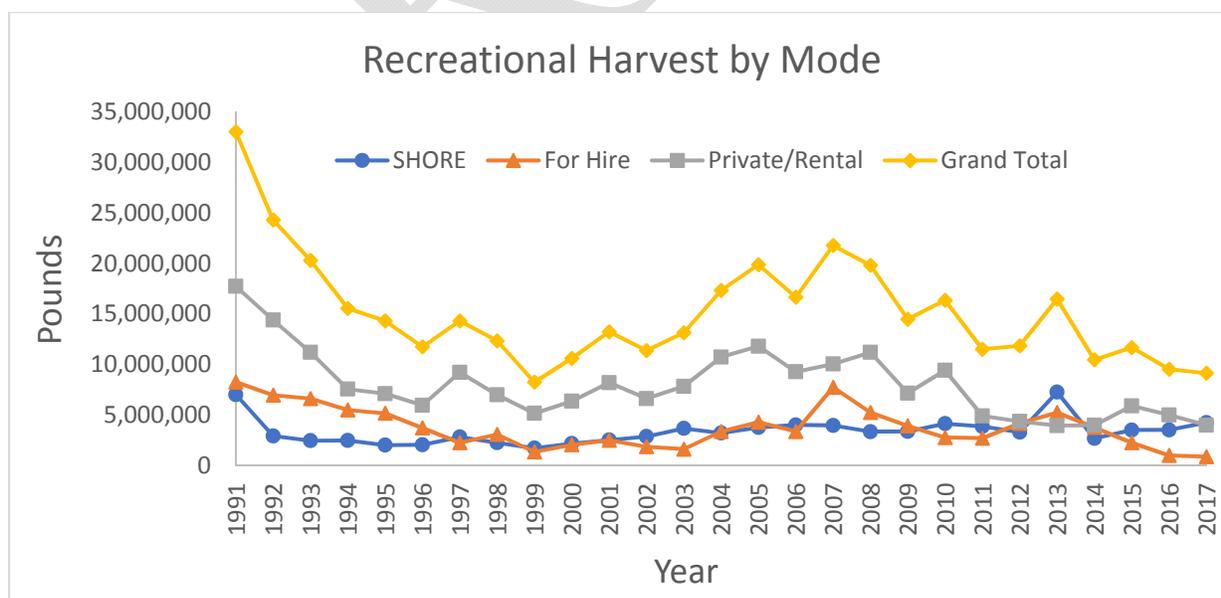


Figure 5. Bluefish landings (pounds) by recreational fishermen by mode, Atlantic Coast, 1991-2017.

Trends in recreational trips associated with targeting or harvesting bluefish from 1991 to 2017 have been slowly declining since 2007. The lowest annual estimate of bluefish trips was 1.61 million trips in 2017, a decrease from 2.17 million trips in 2016. The highest annual estimate of bluefish trips in this timeframe was 5.95 million trips in 1991. For the last five years (2013-2017), bluefish trips have ranged from 1.61 million trips in 2017 to 2.40 million trips in 2014. Number of trips is further broken down by state (last five years) in Table 2. Relative to total angler effort in 2017, bluefish were either the primary target and/or harvested in 5.7 percent of all recreational angler trips.

Table 2. Number of recreational trips by state from 2013-2017 where bluefish were the primary target and/or where bluefish were harvested regardless of target.

	2013	2014	2015	2016	2017
Maine	10,493	4,157	2,846	4,058	212
New Hampshire	6,761	1,026	3,777	3,004	98
Massachusetts	288,852	493,501	185,421	167,855	106,786
Rhode Island	105,070	121,231	57,285	44,275	42,855
Connecticut	193,270	238,880	191,390	209,317	191,189
New York	468,625	541,966	406,297	651,045	291,135
New Jersey	248,338	429,928	336,354	442,673	497,680
Delaware	21,197	51,989	25,783	53,948	68,176
Maryland	6,053	44,392	26,596	33,938	24,014
Virginia	59,201	36,136	44,952	69,583	10,191
North Carolina	275,868	272,732	226,333	356,635	245,656
South Carolina	35,758	34,879	89,359	46,614	35,019
Georgia	98	4,670	1,813	1,390	2,970
Florida	91,505	126,334	121,220	82,640	96,983
Total	1,811,089	2,401,821	1,719,426	2,166,975	1,612,964

MRIP classifies catch into three fishing areas, inland, nearshore ocean (< 3 mi), and offshore ocean (> 3 mi). About 51 percent of the harvest of bluefish on a coastwide basis came from inland waters, followed by nearshore ocean (33 percent) for the 1991 to 2017 period. Therefore, 84% of harvest is within state waters. Only about 16% of the total harvest occur offshore. For the last six years (2012-2017), 58% of the total bluefish harvest came from inland waters, 9% from offshore ocean, and nearshore ocean was 33 % of the total. These results are grouped by state or federal waters to present where the majority of the harvest is taking place.

Commercial Fishery

The presented data is representative of recent fishery performance (2012-2016, 2013-2017, or 2017) depending on data availability.

The current commercial bluefish allocation is 17% of the overall ACL, resulting in a 2018 commercial quota of 7.24 million pounds (Figure 6). Current state allocations were partitioned using catch histories from 1981 to 1989, as that period represents the years prior to the regulations that may have affected both recreational and commercial landings. Quotas were distributed to the states based on their percentage share of commercial landings during that period. The current commercial allocations to the states are presented in Table 3. State quota allocations have generally kept the proportion of total landings among states stable over time, though state-specific landings vary (e.g., Table 3).

Dealer data for 2017 indicate that the bulk of the bluefish landings were taken by gillnet (47 percent), followed by unknown gear (29 percent), handline (7 percent), bottom trawl (10 percent), and pound net (3 percent).

VTR data were used to identify all NMFS statistical areas that accounted for 5 percent or more of the Atlantic bluefish catch. Seven statistical areas accounted for approximately 78 percent of the VTR-reported catch from 2013-2017. Statistical area 612 was responsible for the highest percentage of the catch. These seven statistical areas have accounted for the majority of bluefish commercial landings since the mid-1990s. A map of the statistical areas that accounted for 5 percent or more of the Atlantic bluefish catch is shown in Figure 7.



Figure 6. Total coastwide commercial quotas from 2000-2018 (after any transfer from the recreational sector).

Table 3. Commercial state allocations (percent share) and 2013-2017 initial quotas (pre-transfer) and landings (pounds).

State	Percent Share	2013 Initial Quota	2013 Landings	2014 Initial Quota	2014 Landings	2015 Initial Quota	2015 Landings	2016 Initial Quota	2016 Landings	2017 Initial Quota	2017 Landings
Maine	0.67	60,673	28	49,861	0	35,037	0	32,655	20	57,105	0
New Hampshire	0.41	37,620	161	30,916	3,048	21,725	1,192	20,247	10	35,408	0
Massachusetts	6.72	609,606	591,743	500,970	471,443	352,036	601,400	328,096	500,562	573,755	364,810
Rhode Island	6.81	617,902	457,382	507,786	504,863	356,826	514,278	332,561	463,513	581,563	647,112
Connecticut	1.27	114,929	31,755	94,448	31,513	66,369	40,310	61,856	68,673	108,170	33,088
New York	10.38	942,548	1,261,364	774,579	943,191	544,304	958,734	507,289	913,996	887,118	690,675
New Jersey	14.82	1,344,713	346,251	1,105,075	509,103	776,547	710,612	723,739	669,113	1,265,633	304,710
Delaware	1.88	170,465	10,074	140,087	8,592	98,440	77,223	91,746	16,690	160,440	5,679
Maryland	3.00	272,443	45,726	223,891	83,507	157,330	94,667	146,631	68,000	256,420	25,147
Virginia	11.88	1,078,179	315,954	886,040	239,295	622,629	196,125	580,287	205,564	1,014,773	36,251
North Carolina	32.06	2,909,829	952,307	2,391,274	1,864,168	1,680,371	645,952	1,566,100	981,454	2,738,704	1,319,384
South Carolina	0.04	3,195	0	2,625	0	1845	0	1,719	0	3,007	0
Georgia	0.01	862	0	709	0	498	0	464	0	812	0
Florida	10.06	913,016	110,489	750,309	113,045	527,249	183,460	491,394	186,598	859,322	209,864
Total	100.01	9,075,976	4,123,234	7,458,570	4,771,768	5,241,202	4,023,953	4,884,784	4,074,193	8,542,230	3,636,720

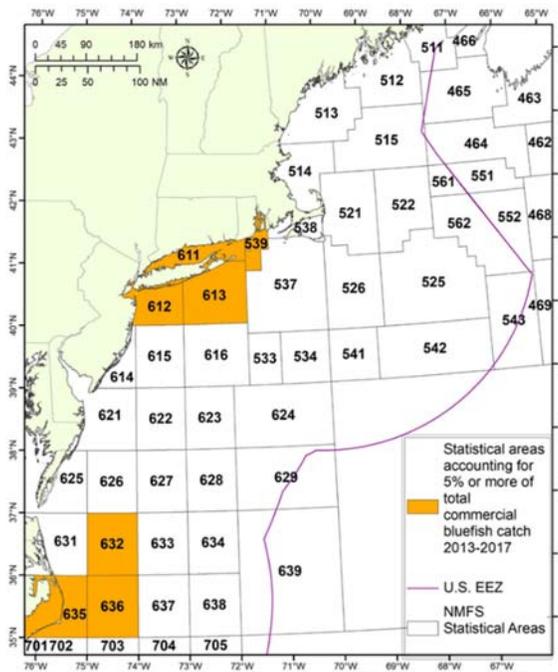


Figure 7. Statistical areas that accounted for 5 percent or more of the Atlantic bluefish catch from 2013-2017.

According to dealer data, commercial vessels landed about 4.13 million pounds of bluefish valued at approximately \$2.88 million ex-vessel value from 2013-2017. Average coastwide ex-vessel price of bluefish was \$0.71 per pound from 2013-2017. The relative value of bluefish is very low among commercially landed species, less than 1% of the total value of all finfish and shellfish landed along the U.S. Atlantic coast in 2017. A time series of bluefish landings, revenue, and price is provided in Figure 8.

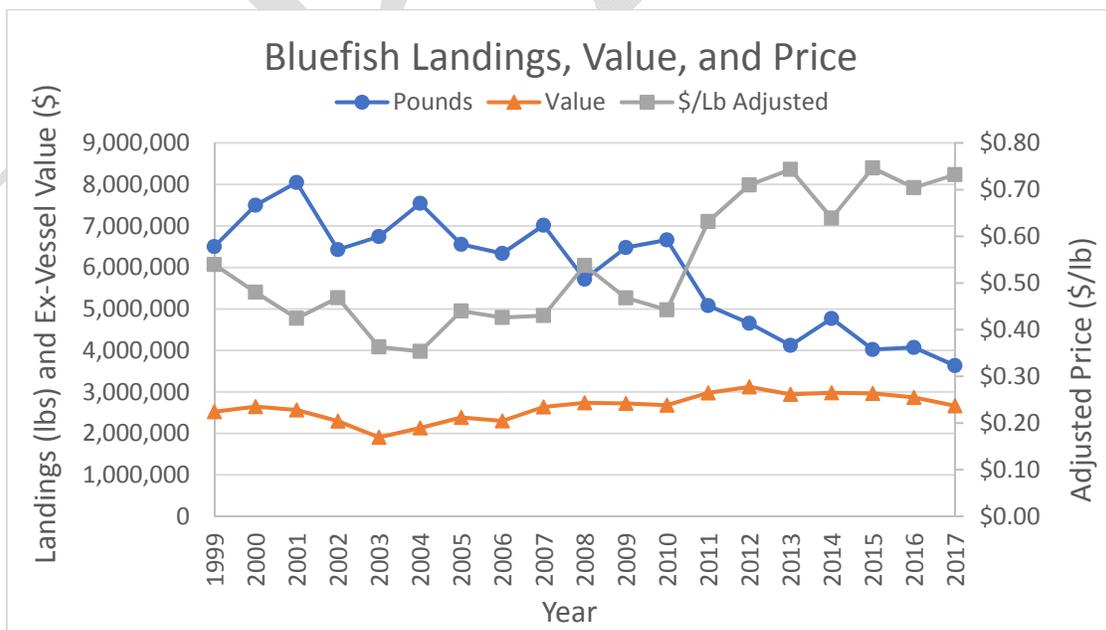


Figure 8. Landings, ex-vessel value, and price (adjusted to 2016 real dollars; 2017-unadjusted) for bluefish, 1999-2017.

According to dealer data when a state or federal permit could be associated with an individual trip (which is ~90%, except for SC, GA, FL ~0%), Massachusetts, Rhode Island, New York, New Jersey, Virginia, and North Carolina all accounted for greater than 5% of bluefish trips, which represents 94% of all bluefish trips from 2013-2017.

Transfers

Transfers of quota from the recreational to the commercial fishery occur almost on a yearly basis (Table 4). Typically, this transfer of quota is written into the specifications, and then adjusted as needed when recreational landings from the previous year become available. However, these in-season adjustments have only begun in recent years. This represents quota that would otherwise go unused if not transferred to the commercial sector. These transfers occur once confirmation has been made by the Greater Atlantic Regional Fisheries Office that the recreational sector will not meet their bluefish quota.

Transfers of bluefish quota also occur within the commercial fishery between states. Quota transfers occur on a year to year basis, as needed. As a state nears its commercial quota, that state can request a poundage quota transfer from another state that is not on track to land their quota. See Table 3 for the pounds of commercial quota landed by each state (before and after any state transfers). Based on recent fishery performance (2013-2017), only MA, RI, and NY have received quota transfers. Of the eleven states that did not receive any transfer, nine of them transferred quota to other states in one or more years (Table 5). Transfers during this time frame (2013-2017) occurred largely during a period of declining coastwide commercial quota (Figure 6). Past reduced quota periods (2006-2008) resulted in different patterns of transfers than seen in recent years. Over longer periods of time (2005-2016), New York has received quota from other states in 10 of 12 years.

Table 4. Final bluefish quota transfers from the recreational to commercial sector.

Year	Final Sector Transfer Amount	FR Citation
2000	0	65 FR 45844
2001	3.15 million lbs	66 FR 23625
2002	5.933 million lbs	67 FR 38909
2003	4.161 million lbs	68 FR 25305
2004	5.085 million lbs	69 FR 47798
2005	5.254 million lbs	70 FR 13402
2006	5.367 million lbs	71 FR 9471
2007	4.780 million lbs	72 FR 4458
2008	4.088 million lbs	73 FR 9957
2009	4.838 million lbs	74 FR 20423
2010	5.387 million lbs	75 FR 27221
2011	4.772 million lbs	76 FR 17789
2012	5.052 million lbs	77 FR 25100
2013	4.686 million lbs	78 FR 26523
2014	3.340 million lbs	79 FR 35293
2015	1.579 million lbs	80 FR 46848
2016	1.577 million lbs	81 FR 51370
2017	5.033 million lbs	82 FR 13402

Table 5. Commercial state-to-state transfers from 2005-2017 (light grey indicates quota received and dark grey indicates quota transferred).

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average
ME	0	-52,000	-25,000	-45,000	0	0	0	0	0	-45,000	-30,000	-32,000	0	-17,615
NH	0	0	0	0	0	0	0	100,000	0	0	0	-20,000	0	6,154
MA	0	0	0	0	0	0	0	0	200,000	45,000	250,000	225,000	0	55,385
RI	0	60,000	155,000	-50,000	0	0	0	0	0	100,000	180,000	132,000	150,338	55,949
CT	0	0	0	-20,000	-75,000	0	0	0	0	0	0	0	0	-7,308
NY	0	250,000	450,000	455,000	425,000	0	200,000	50,000	300,000	250,000	550,000	420,000	0	257,692
NJ	0	0	309,125	0	0	0	0	0	-300,000	-50,000	0	-40,000	-50,000	-10,067
DE	0	-15,000	-80,000	-90,000	0	0	0	0	0	0	0	-50,000	0	-18,077
MD	0	-45,000	-50,000	-50,000	0	0	0	0	0	-50,000	0	-50,000	0	-18,846
VA	0	-525,000	-350,000	0	-150,000	0	0	0	0	0	-250,000	-210,000	-338	-114,257
NC	0	652,000	0	-100,000	0	0	0	-100,000	-200,000	0	-550,000	-225,000	-100,000	-47,923
SC	0	0	0	0	0	0	0	0	0	0	0	-150,000	0	-11,538
GA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FL	0	-325,000	-409,125	-100,000	-200,000	0	-200,000	-50,000	0	-250,000	-150,000	0	0	-129,548

Issues for Public Comment

Public comment is sought on a range of issues that may be considered in the amendment. The issues listed below are not necessarily exhaustive, but are intended to focus the public comment and provide the Council and Commission input necessary to develop the amendment. **The public is encouraged to submit comments on the issues listed below as well as any other issues that should be addressed in the amendment.**

ISSUE 1: FMP GOALS AND OBJECTIVES

Background

The original FMP (1990) contains the first set of goals and objectives. The five goals of the FMP are the following:

1. Increase understanding of the stock and of the fishery
2. Provide the highest availability of bluefish to U.S. fishermen while maintaining, within limits, traditional uses of bluefish (defined as the commercial fishery not exceeding 20% of the total catch).
3. Provide for cooperation among the coastal states, the various regional marine fishery management councils, and federal agencies involved along the coast to enhance the management of bluefish throughout its range.
4. Promote compatible management regulations between State and Federal jurisdictions.
5. Prevent recruitment overfishing.
6. Reduce the waste in both the commercial and recreational fisheries.

Description of the Issue

As the management of bluefish over the last 20 years has changed through amendments, framework adjustments, and addendums, the management objectives in the FMP have remained the same. During this period, the status of the stock has changed, as well as potential changes in availability, effort, and fishery productivity. Given these changes, do the management objectives still capture the needs and goals of the FMP?

Management Questions

- Are the existing objectives appropriate for managing the bluefish fishery?
- If these are not appropriate, what should the goals and objectives be?
- What else should the Council and Commission consider with regard to goals and objectives in the bluefish fishery management plan?

**ISSUE 2:
COMMERCIAL AND
RECREATIONAL
ALLOCATIONS**

Background

The original FMP (1990) contains the first set of allocations at 80% recreational and 20% commercial of the ACL. This was adjusted to 83% recreational and 17% commercial of the ACL in Amendment 1 (1999).

Description of the Issue

While the designation of the 83/17% split in 1999 was determined based on the historical significance (1981-1989) of the bluefish fishery, the characteristics and participation in both the commercial and recreational fisheries might have changed over the last 20 years.

Management Questions

- Is the existing allocation between the commercial and recreational sectors based on the annual ACL appropriate for managing the bluefish fishery?
- If not, how should the current allocations be revised?
- What else should the Council and Commission consider with regard to quota allocation between the commercial and recreational bluefish fisheries?

**ISSUE 3:
COMMERCIAL
ALLOCATIONS TO
THE STATES**

Background

Amendment 1 (1999) set the commercial allocations to the states using catch histories from 1981-1989.

Description of the Issue

Trends in state harvest have shifted, especially with yearly state-to-state transfers in recent years. See Tables 3 and 5.

Management Questions

- Are the existing commercial state allocations appropriate for managing the bluefish fishery?
- If not, how should current measures and requirements be revised?
- What else should the Council and Commission consider with regard to commercial state allocations for bluefish?

ISSUE 4: QUOTA TRANSFERS

Background

The original FMP (1990) contained alternatives regarding quota transfers. Quota transfers can occur from state-to-state within the commercial fishery and from the recreational to commercial fishery once deemed the recreational fishery will not meet the quota.

Description of the Issue

Commercial state-to-state quota transfers occur on a yearly basis and become repetitive amongst a few states, especially in recent years. Transfers from the recreational to commercial sector have occurred in every year since 2001, inclusive (Table 4).

Management Questions

- Are the existing transfer processes appropriate for managing the bluefish fishery?
- If not, what are appropriate requirements for managing the transfers within the commercial fishery?
- When and why do state transfers occur?
- What else should the Council and Commission consider with regard to quota transfers in the bluefish fishery?

ISSUE 5: OTHER ISSUES

Background

As stated earlier in this document, the goal of the Public Information Document is to solicit comments on a broad range of issues for consideration in this amendment. This “Issue” is in place to allow the public to identify any other associated issues with the fishery. Comments do not need to be limited to issues included in this document.

Management Considerations

- Fishery productivity
- Ecosystem considerations
- Changes in the fishery
- Changes in distribution of bait fish
- Average fish size
- Changes in availability, effort, and marketability
- Impacts of changes observed over time

References

Able, K.W. and M.P. Fahay. 1998. The first year in the life of estuarine fishes in the Middle Atlantic Bight. Rutgers University Press, New Brunswick, NJ. 342 p.

Bigelow, H.B. and W.C. Schroeder. 1953. Fishes of the Gulf of Maine. U.S. Fish Wildl. Serv., Fish. Bull. 53. 577 p.

Juanes, F., P. J. Clarke, and J. Murt. 2013. Fall and winter estuarine recruitment of bluefish *Pomatomus saltatrix*: selectivity for large lipid-rich prey increases depleted energy levels. Marine Ecology Progress Series (492):235-252.

MAFMC. 1989. Fishery Management Plan for the Bluefish Fishery. Dover, DE: MAFMC.

MAFMC. 1998. Amendment 1 to the Fishery Management Plan for the Bluefish Fishery. Dover, DE: MAFMC.

NEFSC (Northeast Fisheries Science Center). 2015. 60th Northeast Regional Stock Assessment Workshop (60th SAW) Assessment Report. NEFSC Reference Document 15-08; 870 pp.

Wood, T. 2014. Bluefish 2014 Stock Assessment Update Data and Model Update Through 2013. Coastal/Pelagic Working Group, Northeast Fisheries Science Center, National Marine Fisheries Service, Woods Hole, MA. 37 p.

Salerno, D.J., J. Burnett, and R.M. Ibara. 2001. Age, growth, maturity and spatial distribution of bluefish, *Pomatomus saltatrix* (Linnaeus), off the northeast coast of the United States, 1985-96. J. Northwest Atl. Fish. Sci., 29: 31-39.

Wood, A. 2017. Personal communication. Atlantic bluefish assessment lead. NMFS/NEFSC/READ/PDB. Woods Hole, MA.