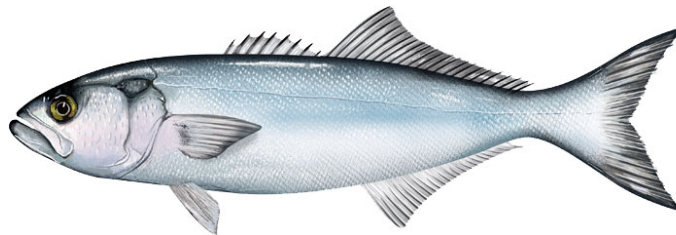




Supplemental Scoping and Public Information Document

Bluefish Allocation and Rebuilding Amendment to the Bluefish Fishery Management Plan

December 2019



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

What is scoping?

Scoping is the process of identifying issues, potential impacts, and a reasonable range of alternatives associated with fisheries management actions being developed by the Council. **Scoping provides the first and best opportunity for the public to make suggestions and raise concerns about new Council actions.** Your comments early in the development of this action will help the Council identify effective management alternatives and issues of concern.

The regulatory actions outlined in this document are not a list of preferred alternatives, nor will they necessarily be included in this action. The Council has not yet analyzed any management measures for their effectiveness or impacts. At this early stage, the Council will consider all reasonable options.

Please comment on which management measures may or may not be useful or practical for meeting the goal of this action (including measures not described in this document) and explain your reasoning. Please also comment on any other relevant issues the Council should consider as part of this action.

Public Comment Opportunities and Instructions

In December 2017, the Mid-Atlantic Fishery Management Council initiated development of an amendment to the Bluefish Fishery Management Plan (FMP). An initial round of scoping was conducted in the summer of 2018 to gauge public interest on the development of an amendment. Since then, recalibrated Marine Recreational Information Program (MRIP) estimates became available and were incorporated into the 2019 bluefish operational assessment. The results of the operational assessment declared bluefish overfished with overfishing not occurring based on the updated biological reference points. Following the overfished designation, the Council and Commission recommended including the rebuilding plan into this ongoing amendment. The amendment process will now include a review and potential update of the FMP's sector-based allocations, commercial allocations to the states, transfer processes, goals & objectives and rebuilding plan for the overfished stock. 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 Daylight Time, on March 17, 2020** per the notice of intent and notice of public scoping, as published in the Federal Register. Hearings will be held during January and February in coastal states from Massachusetts to Florida followed by a webinar hearing.

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

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

Chris Moore, Ph.D., Executive Director
Mid-Atlantic Fishery Management Council
North State Street, Suite 201
Dover, DE 19901
FAX: 302.674.5399

Please include "Bluefish 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 into 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.

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

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Atlantic States Marine Fisheries Commission
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Public scoping hearings will be held on the following dates:

Date	Time	Address
February 13, 2020	7:30-9:00 PM	Massachusetts Maritime Academy, Admiral's Hall, 101 Academy Drive, Buzzards Bay, MA 02532
February 18, 2020	6:00-8:00 PM	Ocean County Administration Building, Room 119, 101 Hooper Avenue, Toms River, New Jersey 08753
February 19, 2020	7:00-8:00 PM	Delaware Dept. of Natural Resources & Environmental Control Auditorium, Richardson & Robbins Building, 89 Kings Highway, Dover, Delaware 19901
February 25, 2020	4:45-6:00 PM	Berlin Library, 13 Harrison Ave. Berlin, MD 21811
February 26, 2020	7:30-9:00 PM	Rhode Island Division of Marine Fisheries, University of Rhode Island Bay Campus, Corless Auditorium, South Ferry Road, Narragansett, Rhode Island 02882
February 26, 2020	8:00-9:00 PM	Connecticut Department of Energy and Environmental Protection Marine Headquarters Boating Education Center (Rear Building), 333 Ferry Road, Old Lyme, CT 06371
February 27, 2020	6:00-7:30 PM	NC Division of Marine Fisheries Central District Office, 5285 Highway 70 West, Morehead City, North Carolina 28557
February 27, 2020	7:30-9:00 PM	Stony Brook University, School of Marine and Atmospheric Sciences (SOMAS), Room 120 Endeavour Hall; Stony Brook, NY 11794
March 2, 2020	6:00-8:00 PM	Merritt Island Service Center Complex, 2575 N. Courtenay Pkwy #205, Merritt Island, FL 32953
March 2, 2020	6:00-7:00 PM	Virginia Marine Resources Commission, 380 Fenwick Road Bldg 96 Fort Monroe, VA 23651
March 4, 2020	6:00-7:30 PM	Internet webinar: http://mafmc.adobeconnect.com/bf_allocation_rebuilding_scoping/ For audio-only access, dial 800-832-0736 and enter room number 5068609.

Draft Timeline for Completion of Proposed Bluefish Allocation Amendment:

Date	Task Description
December 2017	Council initiates amendment
March 2018	Draft action plan developed; Fishery Management Action Team (FMAT) formed
Summer 2018	Initial scoping hearings and public comment period
Summer/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
August 2019	FMAT continues development of options (with working group input); meetings of the FMAT, working groups, Council and Commission, and Advisory Panel
December 2019	Council and Commission approve supplemental scoping document for additional scoping hearings
February/March 2020	Supplemental scoping hearings and public comment period
March/April 2020	Staff summarize scoping comments; FMAT reviews scoping comments and provides recommendations to Council and Board on scope of action and possible approaches
May 2020	Council and Board review scoping comments and FMAT recommendations; identify scope of action
May 2020	FMAT meeting to develop draft alternatives
June 2020	Bluefish Committee/subset of Board meeting to refine draft alternatives
June/July 2020	Continued FMAT development and analysis of alternatives
August 2020	Council and Board approve a range of alternatives for inclusion in a public hearing document
Fall 2020	Development of public hearing document and hearing schedule
December 2020	Council and Board approve public hearing document
January/February 2021	Public hearings
Spring 2021	Final action
Summer 2021	EA finalized and submitted; NMFS and other agencies review; final edits completed
Summer/Fall 2021	Rulemaking and comment periods (4-7 months from after EA finalized)
Late 2021	Final rule effective

Table of Contents

<i>Introduction</i>	6
<i>Why is this action being proposed?</i>	6
<i>Issues for consideration</i>	7
<i>Amendment Process and Timeline</i>	7
<i>Background on Bluefish Management</i>	8
<i>Description of the Bluefish Resource</i>	8
<i>The Magnuson-Stephens Fishery Conservation and Management Act (MSA) on Ending Overfishing and Rebuilding</i>	10
<i>Issues for Public Comment</i>	10
ISSUE 1: FMP GOALS AND OBJECTIVES	10
ISSUE 2: COMMERCIAL AND RECREATIONAL ALLOCATIONS	11
ISSUE 3: COMMERCIAL ALLOCATIONS TO THE STATES.....	11
ISSUE 4: QUOTA TRANSFERS	12
ISSUE 5: REBUILDING PLAN.....	12
ISSUE 6: OTHER ISSUES	13
Biology and Stock Definition	13
<i>Description of the Fishery</i>	14

This supplemental scoping document was developed for additional scoping hearings to provide the public ample opportunities to comment on the expanded scope of the amendment, which now includes the new MRIP estimates and a rebuilding plan.

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 an amendment to the Bluefish Fishery Management Plan (FMP). This amendment will review and potentially revise allocations between the commercial and recreational sectors, the commercial allocations to the states, the goals and objectives, the transfer processes, and initiate a rebuilding plan for the overfished stock.

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 a second time to inform development of an amendment with the inclusion of a rebuilding plan for the overfished stock. 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 using updated MRIP estimates
- 2) Update the FMP goals and objectives for bluefish management
- 3) Initiate a rebuilding plan for the overfished bluefish stock as of August 2019

Several issues and concerns relative to bluefish management have been 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 landings 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, specifically considering the need for a rebuilding plan. This includes addressing apparent shifts in bluefish distribution, as well as possible changes to social and economic drivers for these fisheries. This action was also

proposed so the FMP goals, objectives, and management strategies can be assessed in light of possibly changing fishery conditions.

Issues for consideration

The amendment is likely to consider a variety of approaches for reviewing bluefish allocations (using re-calibrated MRIP estimates). 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
- Rebuilding projections

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 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 83% and 17%, respectively. This amendment also implemented the state-by-state commercial allocations from Maine to Florida (FL east coast) using landings data 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, state commercial 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

In August 2019, a bluefish operational assessment, which included revised bluefish MRIP estimates through 2018 changed the stock status and biological reference points previously identified in SAW 60, which utilized data through 2014.

The new biological reference points for bluefish revised through the 2019 operational assessment include a fishing mortality threshold of $F_{MSY} = F_{35\%}$ (as the F_{MSY} proxy) = 0.183, and a biomass reference point of $SSB_{MSY} = SSB_{35\%}$ (as the SSB_{MSY} proxy) = 438.10 million lbs (198,717 mt). The minimum stock size threshold ($1/2 SSB_{MSY}$), is estimated to be 219.05 million lbs (99,359 mt). SSB in 2018 was 200.71 million lbs (91,041 mt) (Figure 1).

Operational assessment results indicated that **the bluefish stock was overfished and overfishing was not occurring in 2018 relative to the biological reference points**. Fishing mortality on the fully selected age 2 fish was 0.146 in 2018, 80% of the updated fishing mortality threshold reference point F_{MSY} proxy = $F_{35\%}$ = 0.183 (Figure 2). There is a 90% probability that the fishing mortality rate in 2018 was between 0.119 and 0.205.

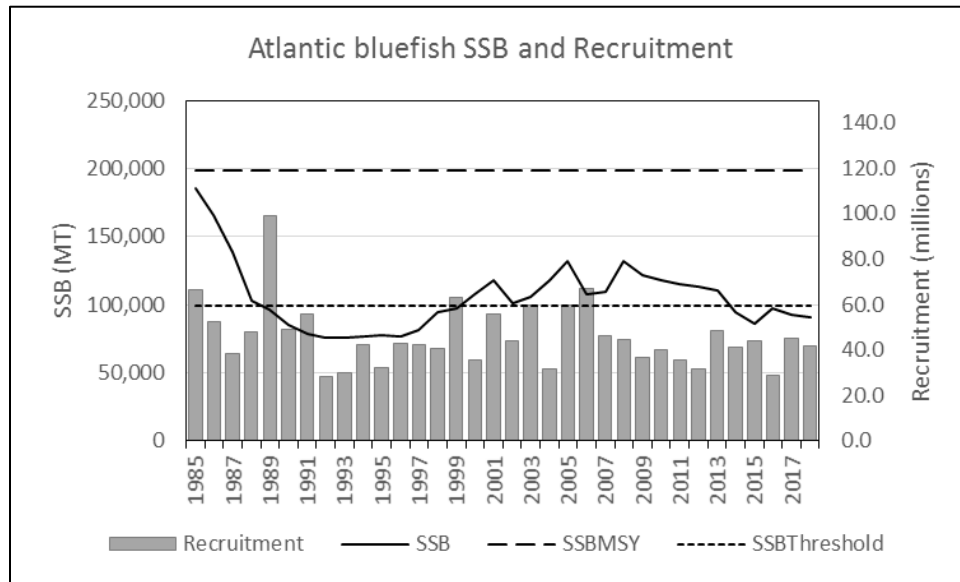


Figure 1. Atlantic bluefish spawning stock biomass (SSB; solid black line) and recruitment at age 0 (R; gray vertical bars) by calendar year. The horizontal dashed line is the updated SSB_{MSY} proxy = $SSB_{40\%}$ = 198,717 mt, and the dotted black line is the $SSB_{Threshold}$ = 99,359 mt.

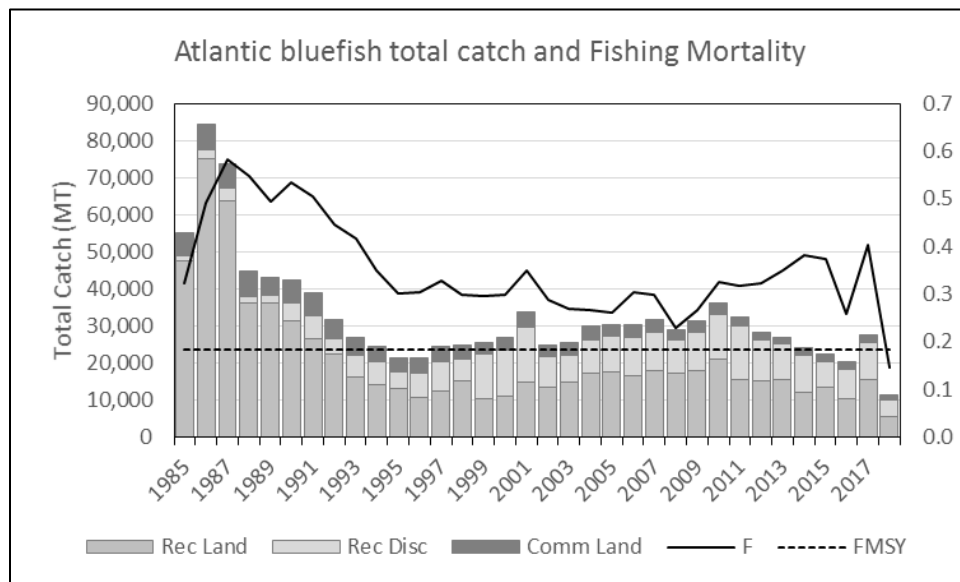


Figure 2. Total fishery catch (metric tons; mt; solid line) and fishing mortality (F, peak at age 3; squares) for Atlantic bluefish. The horizontal dashed line is the updated F_{MSY} proxy = $F_{35\%}$ = 0.183.

The Magnuson-Stephens Fishery Conservation and Management Act (MSA) on Ending Overfishing and Rebuilding

Section 304(e)(3) of the MSA states:

“Within 2 years after...notification...the appropriate Council...shall prepare and implement a fishery management plan, plan amendment, or proposed regulations...to end overfishing immediately in the fishery and to rebuild affected stocks of fish...”

All options to be developed would increase biomass to the target according to the best available scientific information (i.e. the 2019 bluefish operational assessment) in 2019 and beyond. The Council will be notified of bluefish’s overfished status by the end of the 2019, so such regulations would technically need to be completed by December 31, 2021.

Section 304(e)(4) of the MSA also states:

“For a fishery that is overfished, any fishery management plan, amendment, or proposed regulations...shall...specify a time period for rebuilding the fishery that shall—

(i) be as short as possible, taking into account the status and biology of any overfished stocks of fish, the needs of fishing communities,...and the interaction of the overfished stock of fish within the marine ecosystem; and

(ii) not exceed 10 years, except in cases where the biology of the stock of fish, other environmental conditions...dictate otherwise;

...allocate both overfishing restrictions and recovery benefits fairly and equitably among sectors of the fishery...”

The primary considerations are that the stock should be rebuilt in a time period as short as possible, taking into account 1) the status and biology of any overfished stocks, 2) the needs of fishing communities, and 3) the interaction of bluefish within the marine ecosystem

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 with 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 sector allocations of the ACL at 80% recreational and 20% commercial. This was adjusted to 83% recreational and 17% commercial in Amendment 1 (1999).

Description of the Issue

While the designation of the 83/17% split in 1999 was determined based on 1981-1989 landings in the bluefish fishery, the characteristics and participation in both the commercial and recreational fisheries may 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 landings data from 1981-1989.

Description of the Issue

Trends in state harvest have shifted, especially with yearly state-to-state transfers in recent years.

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 between a few states, especially in recent years. Transfers from the recreational to commercial sector have occurred in every year since 2001.

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: REBUILDING PLAN

Background

The bluefish stock was deemed overfished as a result of the 2019 operational assessment. Upon receiving notice from GARFO, the Council will have two years to finalize a rebuilding plan.

Description of the Issue

The Council needs to initiate a rebuilding plan using updated biological reference point projections through development of alternatives on how the stock will be rebuilt as soon as possible in less than ten years.

Management Questions

- What is the fastest the stock can be rebuilt?
- How can we limit catch coastwide in a fair and equitable manner?
- How many approaches can we take to rebuilding the overfished stock?
- What else should the Council consider with regard to a bluefish rebuilding plan?

ISSUE 6: 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 “Other Issue” is in place to allow the public to identify any other issues associated 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
- Economic and intrinsic value of recreationally released fish
- Value of unharvested quota
- Management uncertainty

Biology and Stock Definition

Bluefish are found worldwide in tropical and subtropical waters, but in the western North Atlantic they range from Nova Scotia 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 also supports the existence of a small third spawn in the fall (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

The MRIP transitioned to a mail survey design that utilizes the National Saltwater Angler Registry. New survey designs produced very different results than those from older surveys. MRIP re-calibration work showed many effort estimations increased by ~3 times. This increase significantly altered bluefish catch, landings, and effort data for the shore and private angler modes. No change occurred for the party/charter mode as vessel operators either submit vessel trip reports (VTRs) or report through a separate telephone survey.

The current recreational bluefish allocation is 83% of the overall annual catch limit (ACL). This applies in Council managed federal waters and Commission managed state waters. According to re-calibrated MRIP estimates, since 1981, recreational bluefish catch has fluctuated from a peak of 75.76 million fish in 1981 to a low of 24.87 million fish in 1988. Harvest fluctuated from a high of 169.63 million pounds in 1981 to a low of 13.27 million pounds in 2018. Thus, 2018 was the worst year for recreational harvest across the time series. A coastwide time series of recreational harvest is provided in Figure 3, which also compares the old and new recalibrated MRIP estimates.

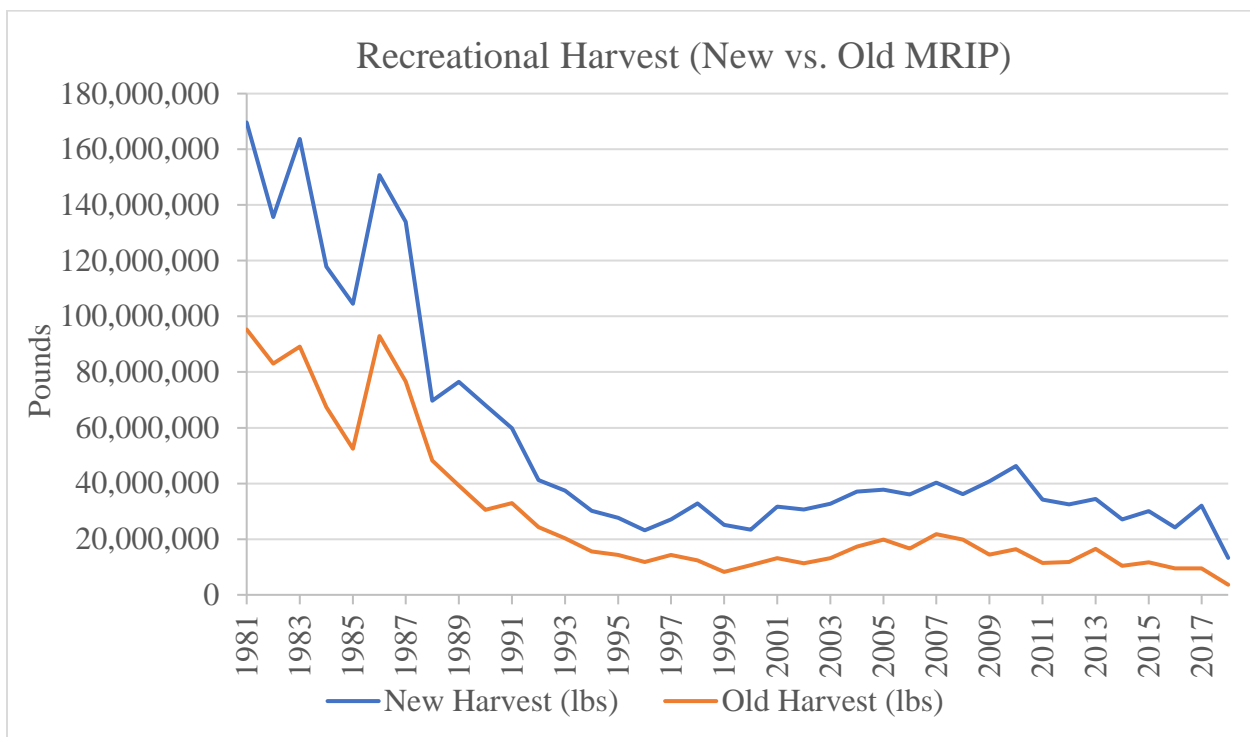


Figure 3. Recreational bluefish harvest from 1981-2018 comparing new and old MRIP estimates.

New MRIP recreational landings decreased by approximately 59% from 2017 to 2018 (32.02 million pounds to 13.27 million pounds) and reported the lowest recreational landings for the time series in 2018. This coincides with effort, as the number of recreational trips in 2018 (5,749,291) is the lowest reported in the time series.

In 2018, the greatest harvest of bluefish by weight occurred in Florida with 4.53 million pounds (Table 1). 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 for harvested fish. Furthermore, discards in the recreational fishery remain relatively high throughout the time series.

Table 1. Bluefish recreational landings (pounds) by state from 2014-2018.

State	2014	2015	2016	2017	2018
Maine	4,962	13,544	57	24	0
New Hampshire	9,114	88,463	22	0	0
Massachusetts	3,411,620	3,179,562	1,023,716	1,322,338	611,557
Rhode Island	1,086,980	512,535	379,803	518,919	210,033
Connecticut	2,301,212	2,902,404	1,085,131	745,586	340,666
New York	5,023,151	8,118,412	5,042,381	6,162,504	1,399,517
New Jersey	5,477,642	5,885,884	8,390,074	6,944,754	2,007,110
Delaware	299,981	386,857	596,893	1,797,940	315,105
Maryland	484,888	453,100	304,991	332,244	493,192
Virginia	220,540	557,462	417,901	337,750	264,534
North Carolina	3,764,005	3,754,577	3,356,049	3,634,502	2,630,685
South Carolina	462,518	465,556	706,355	489,745	403,141
Georgia	31,384	24,986	4,796	4,388	70,284
Florida	4,466,279	3,755,307	2,847,135	9,732,803	4,525,038
Grand Total	27,044,276	30,098,649	24,155,304	32,023,497	13,270,862

Commercial Fishery

The current commercial bluefish allocation is 17% of the overall ACL. Current state allocations were partitioned using landings data 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 and 2018 landings are presented in Table 2. Commercial landings in 2018 were 2.2 million pounds.

Dealer data for 2018 indicate that the majority of the bluefish landings were taken by gillnet (50%), followed by unknown gear (26%), otter trawl/bottom fish (9%), other (9%) and handline (6%).

VTR data were used to identify all NMFS statistical areas that accounted for 5 percent or more of the Atlantic bluefish catch in 2018. Seven statistical areas accounted for at least greater than 5% of bluefish catch. Statistical area 539 was responsible for the highest percentage of the catch, followed by statistical areas 611, 613, and 632. A map of the statistical areas that accounted for 5 percent or more of the Atlantic bluefish catch is shown in Figure 4.

Table 2. Commercial state allocations (percent share) and 2018 landings.

State	Percent Share	2018 Initial Quota	2018 Landings
Maine	0.67	48,424	29
New Hampshire	0.41	30,025	0
Massachusetts	6.72	486,539	195,402
Rhode Island	6.81	493,160	237,182
Connecticut	1.27	91,727	48,220
New York	10.38	752,268	539,345
New Jersey	14.82	1,073,245	56,210
Delaware	1.88	136,052	6,486
Maryland	3.00	217,442	27,353
Virginia	11.88	860,518	102,630
North Carolina	32.06	2,322,397	765,764
South Carolina	0.04	2,550	0
Georgia	0.01	688	0
Florida	10.06	728,697	224,999
Total	100.01	7,243,726	2,203,591

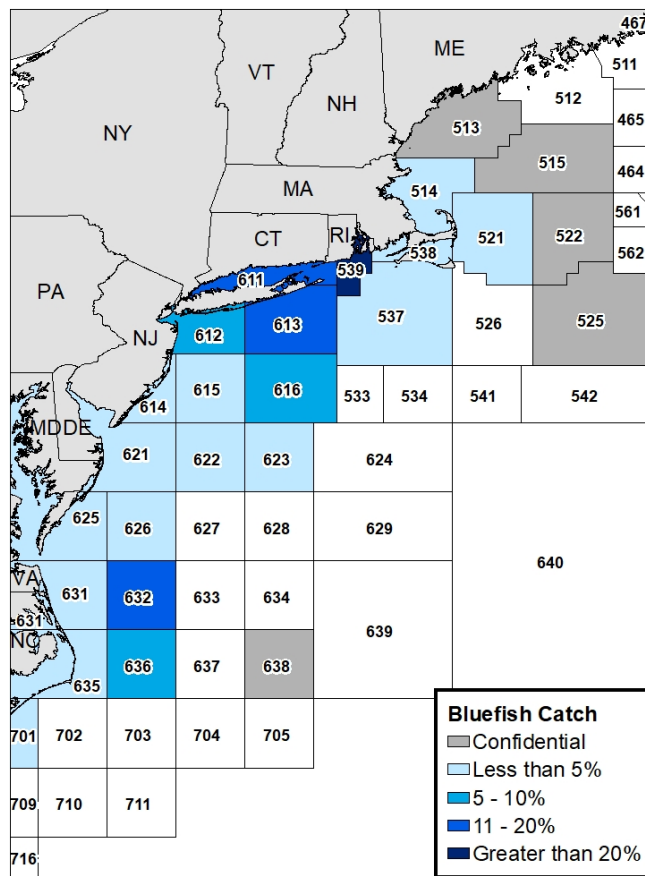


Figure 4. NMFS Statistical Areas, highlighting those that each accounted for a percentage of the commercial bluefish catch in 2018.

Transfers

Transfers of quota from the recreational to the commercial fishery occur almost on a yearly basis (Table 3). Typically, the quota transfer is written into the specifications, and then adjusted as needed when recreational landings from the previous year become available. However, in-season adjustments have only begun in recent years. This represents quota that would otherwise go unused if not transferred to the commercial sector and occurs 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 between states within the commercial fishery. State-to-state transfers can occur on a year to year basis, as needed. Once a state nears its commercial quota, that state can request a quota transfer from another state that is not anticipated to land their own quota. See Table 4 for the pounds of commercial quota landed by each state (before and after any state transfers). In recent years (2014-2018), only MA, RI, and NY have received quota transfers. No transfers occurred in 2018. Of the eleven states that did not receive any transfer, nine of them transferred quota to other states in one or more years. Transfers during this time frame (2014-2018) occurred largely during a period of declining coastwide commercial quota. Past reduced quota periods (2006-2008) resulted in different patterns of transfers than those seen in recent years. From 2005-2016, New York has received quota from other states in 10 of 12 years.

Table 3. Final bluefish quota transfers from the recreational to commercial sector.

Year	Final Sector Transfer Amount	FR Citation
2000	0	<u>65 FR 45844</u>
2001	3.15 million pounds	<u>66 FR 23625</u>
2002	5.933 million pounds	<u>67 FR 38909</u>
2003	4.161 million pounds	<u>68 FR 25305</u>
2004	5.085 million pounds	<u>69 FR 47798</u>
2005	5.254 million pounds	<u>70 FR 13402</u>
2006	5.367 million pounds	<u>71 FR 9471</u>
2007	4.780 million pounds	<u>72 FR 4458</u>
2008	4.088 million pounds	<u>73 FR 9957</u>
2009	4.838 million pounds	<u>74 FR 20423</u>
2010	5.387 million pounds	<u>75 FR 27221</u>
2011	4.772 million pounds	<u>76 FR 17789</u>
2012	5.052 million pounds	<u>77 FR 25100</u>
2013	4.686 million pounds	<u>78 FR 26523</u>
2014	3.340 million pounds	<u>79 FR 35293</u>
2015	1.579 million pounds	<u>80 FR 46848</u>
2016	1.577 million pounds	<u>81 FR 51370</u>
2017	5.033 million pounds	<u>82 FR 13402</u>
2018	3.535 million pounds	<u>81 FR 51370</u>

Table 4. Commercial state-to-state transfers from 2005-2018 (light grey indicates quota received and dark grey indicates quota transferred).

State	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average
ME	0	-52,000	-25,000	-45,000	0	0	0	0	0	-45,000	-30,000	-32,000	0	0	-16,357
NH	0	0	0	0	0	0	0	100,000	0	0	0	-20,000	0	0	5,714
MA	0	0	0	0	0	0	0	0	200,000	45,000	250,000	225,000	0	0	51,429
RI	0	60,000	155,000	-50,000	0	0	0	0	0	100,000	180,000	132,000	150,338	0	51,953
CT	0	0	0	-20,000	-75,000	0	0	0	0	0	0	0	0	0	-6,786
NY	0	250,000	450,000	455,000	425,000	0	200,000	50,000	300,000	250,000	550,000	420,000	0	0	239,286
NJ	0	0	309,125	0	0	0	0	0	-300,000	-50,000	0	-40,000	-50,000	0	-9,348
DE	0	-15,000	-80,000	-90,000	0	0	0	0	0	0	0	-50,000	0	0	-16,786
MD	0	-45,000	-50,000	-50,000	0	0	0	0	0	-50,000	0	-50,000	0	0	-17,500
VA	0	-525,000	-350,000	0	-150,000	0	0	0	0	0	-250,000	-210,000	-338	0	-106,096
NC	0	652,000	0	-100,000	0	0	0	-100,000	-200,000	0	-550,000	-225,000	-100,000	0	-44,500
SC	0	0	0	0	0	0	0	0	0	0	0	-150,000	0	0	-10,714
GA	0	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	0	-120,295