



## DECEMBER 2019 MEETING AGENDA

**December 9-12, 2019**

Westin Annapolis  
100 Westgate Circle  
Annapolis, MD 21401  
Telephone 410-972-4300

### Monday, December 9<sup>th</sup>

---

- 9:00 a.m. - 9:30 a.m.**                      **Executive Committee - (CLOSED) (Tab 1)**  
- Ricks E Savage Award
- 9:30 a.m.**                                      **Council Convenes**
- 9:30 a.m. - 11:00 a.m.**                      **2020-2024 Strategic Plan (Tab 2)**  
- Review public comments and approve 2020-2024 Strategic Plan
- 11:00 a.m. - 12:00 p.m.**                      **2020-2024 Research Priorities (Tab 3)**  
- Review and approve research priorities document
- 12:00 p.m. - 1:00 p.m.**                      **Lunch**
- 1:00 p.m. - 3:00 p.m.**                      **Risk Policy Framework - Meeting #2 (Tab 4)**  
*Dr. Wiedenmann, Rutgers University and Dr. Teng, University of Maryland*  
- Review results of biological and economic management strategy evaluations  
- Select preferred alternative(s)
- 3:00 p.m. - 5:30 p.m.**                      **Surfclam and Ocean Quahog Excessive Share Amendment (Tab 5)**  
- Review public hearing comments and Committee recommendations  
- Select preferred alternatives and take final action
- 5:30 p.m.**                                      **Council Adjourns**

### Tuesday, December 10<sup>th</sup>

---

- 9:00 a.m.**                                      **Council Convenes**
- 9:00 a.m. - 9:10 a.m.**                      **Council Photo**

<b>9:10 a.m. – 10:00 a.m.</b>	<b>Habitat Update (Tab 6)</b> <ul style="list-style-type: none"> <li>- Update on NRHA Assessment</li> <li>- Presentation on CCC Habitat Workshop</li> <li>- Update of Projects of Interest in the Region</li> </ul>
<b>10:00 a.m. - 11:15 a.m.</b>	<b>EAFM Summer Flounder Conceptual Model (Tab 7)</b> <i>Dr. Gaichas and Dr. DePiper, NEFSC</i>
<b>11:15 a.m. - 11:30 a.m.</b>	<b>Presentation of Oscar E. Sette Award (American Fisheries Society) (Tab 8)</b>
<b>11:30 a.m. - 12:00 p.m.</b>	<b>SSC Membership White Paper (Tab 9)</b> <ul style="list-style-type: none"> <li>- Review and determine future SSC membership needs and expertise</li> </ul>
<b>12:00 p.m. – 1:00 p.m.</b>	<b>Lunch</b>
<b>1:00 p.m.</b>	<b>Council Meeting with the Atlantic States Marine Fisheries Commission's Summer Flounder, Scup, and Black Sea Bass and Bluefish Boards</b>
<b>1:00 p.m. – 2:30 p.m.</b>	<b>Bluefish 2020 Recreational Specifications (Tab 10)</b> <ul style="list-style-type: none"> <li>- Review recent fishery performance, Monitoring Committee, and Advisory Panel recommendations</li> <li>- Adopt recommendations for 2020 federal waters recreational management measures</li> </ul>
<b>2:30 p.m. – 3:30 p.m.</b>	<b>Bluefish Allocation and Rebuilding Amendment (Tab 11)</b> <ul style="list-style-type: none"> <li>- Review and approve supplemental scoping document for additional scoping hearings</li> </ul>
<b>3:30 p.m. - 5:00 p.m.</b>	<b>Summer Flounder 2020 Recreational Specifications (Tab 12)</b> <ul style="list-style-type: none"> <li>- Review recent fishery performance, Monitoring Committee, and Advisory Panel recommendations</li> <li>- Recommend Conservation Equivalency or coastwide management and associated measures for 2020</li> </ul>
<b>5:00 p.m.</b>	<b>Council and Board Adjourn</b>

### **Wednesday, December 11<sup>th</sup>**

---

<b>9:00 a.m.</b>	<b>Council Meeting with the Atlantic States Marine Fisheries Commission's Summer Flounder, Scup, and Black Sea Bass and Bluefish Boards</b>
<b>9:00 a.m. – 10:30 a.m.</b>	<b>Scup 2020 Recreational Specifications (Tab 13)</b> <ul style="list-style-type: none"> <li>- Review recent fishery performance, Monitoring Committee, and Advisory Panel recommendations</li> <li>- Adopt recommendations for 2020 federal waters recreational management measures</li> </ul>

<b>10:30 a.m. – 12:00 p.m.</b>	<b>Black Sea Bass 2020 Recreational Specifications (Tab 14)</b> <ul style="list-style-type: none"> <li>- Review recent fishery performance, Monitoring Committee, and Advisory Panel recommendations</li> <li>- Adopt recommendations for 2020 federal waters recreational management measures</li> </ul>
<b>12:00 p.m. – 1:00 p.m.</b>	<b>Lunch</b>
<b>1:00 p.m. - 2:00 p.m.</b>	<b>Seized Commercial Catch and the Quota Monitoring/Accountability Process (Tab 15)</b> <i>Toni Kerns, ASMFC and GARFO Staff</i>
<b>2:00 p.m. – 3:00 p.m.</b>	<b>Summer Flounder, Scup, and Black Sea Bass Commercial/Recreational Allocation Amendment (Tab 16)</b> <ul style="list-style-type: none"> <li>- Review and approve draft scoping document</li> </ul>
<b>3:00 p.m. – 3:30 p.m.</b>	<b>Black Sea Bass Commercial Allocation Addendum/Amendment (Tab 17)</b> <ul style="list-style-type: none"> <li>- Discuss options for addressing potential impacts of coastwide quota management in federal waters on states</li> </ul>
<b>3:30 p.m.</b>	<b>Board Adjourns/Council Convenes</b>
<b>3:30 p.m. -5:30 p.m.</b>	<b>Commercial eVTR Omnibus Framework - Meeting #2 (Tab 18)</b> <ul style="list-style-type: none"> <li>- Select preferred alternatives and take final action</li> </ul>
<b>5:30 p.m.</b>	<b>Council Adjourns</b>

**Thursday, December 12<sup>th</sup>**

---

<b>9:00 a.m.</b>	<b>Council Convenes</b>
<b>9:00 a.m. - 10:00 a.m.</b>	<b>2020 Implementation Plan (Tab 19)</b> <ul style="list-style-type: none"> <li>- Review and approve 2020 Implementation Plan</li> </ul>
<b>10:00 a.m. – 1:00 p.m.</b>	<b>Business Session</b>  <b>Committee Reports</b> <ul style="list-style-type: none"> <li>- SSC</li> <li>- Executive Committee</li> </ul> <b>Executive Director's Report (Tab 20)</b> <i>Chris Moore</i>  <b>Organization Reports (Tab 21)</b> <ul style="list-style-type: none"> <li>- NMFS Greater Atlantic Regional Office</li> <li>- NMFS Northeast Fisheries Science Center</li> <li>- NOAA Office of General Counsel</li> <li>- NOAA Office of Law Enforcement</li> <li>- US Coast Guard</li> </ul> <b>Liaison Reports</b> <ul style="list-style-type: none"> <li>- New England Council</li> <li>- South Atlantic Council</li> </ul>

## Continuing and New Business

### Council Adjourns

#### **MAFMC October 2019 Council Motions**

**October 7-10, 2019**

**Durham NC**

#### **Monkfish**

Move that the Council approve the same FY2020-FY2022 monkfish specifications as the New England Council, Alternatives 2 and 3 in the October 2019 briefing materials.

Nolan/Heins

Motion carries by consent

#### **Illex Permitting and MSB Goals and Objectives Amendment**

Move that ITQs not be included in this Amendment.

Hughes for Committee

Motion carries by consent with one abstention

Move to remove all the options that use a 10,000-pound single trip threshold (under any time period).

Hughes for Committee

Motion carries by consent

Move to remove qualification dates that extend through 2019.

Hughes for Committee (2/16/0)

Motion fails

Move to direct the staff and FMAT to develop a tiered approach.

Nolan/DiLernia (17/1/0)

Motion carries

#### **Bluefish Specifications with Board**

Move that the average ABC approach, no reduction for management uncertainty, terminal year estimate be used for expected recreational landings, and NEFSC estimated discards be used for 2020 and 2021 specifications. This results in an ABC of 16.2 mil lbs., a recreational harvest limit of 3.62 mil lbs., and a commercial quota of 2.77 mil lbs.

Board: Ballou/Hart

Council:

Motion fails for lack of like motion by the Council

Move that the average ABC approach, no reduction for management uncertainty, terminal year estimate for expected recreational landings, and MRIP terminal year estimated discards be used for 2020 and 2021 specifications. This results in an ABC of 16.28 mil lbs., a recreational harvest limit of 9.48 mil lbs., and a commercial quota of 2.77 mil lbs.

Board: Batsavage/Davis (Roll call vote: 10/1/0/0)

Council: DiLernia/Heins (20/0/0)

Motion carries

#### **Bluefish FMP Review (Board Only)**

Move to approve the Bluefish Fishery Management Plan Review of the 2018 fishing year, state compliance reports, and de minimis requests for Maine, South Carolina and Georgia's commercial fisheries.

Board: Ballou/Gary

Motion carries by consent

#### **Scup Specifications with Board**

Move that, based on the averaged ABCs recommended by the SSC, in 2020 and 2021 the recreational ACL = ACT = 7.31 M lb. and the commercial ACL = ACT = 25.91 M lb.

Board: Borden/Meserve

Council: DiLernia/Davidson

Move to substitute that, based on the varying ABCs recommended by the SSC, the 2020 recreational ACL = ACT = 7.87 M lb. and commercial ACL = ACT = 27.90 M lb. For 2021, the recreational ACL = ACT = 6.75 M lb. and commercial ACL = ACT = 23.92 M lb.

Board: Nowalsky/Davis (7/3/1/0)

Council: Nowalsky/Cimino (14/4/1)

Motion carries

Substitute motion becomes main motion:

Move that, based on the varying ABCs recommended by the SSC, the 2020 recreational ACL = ACT = 7.87 mil lb. and commercial ACL = ACT = 27.90 mil lb. For 2021, the recreational ACL = ACT = 6.75 mil lb. and commercial ACL = ACT = 23.92 mil lb.

Board: (Roll call vote: 8/1/2/0)

Council: (15/1/3)

Motion carries

Move that for 2020, using the 3-year average method for sector discards, the recreational harvest limit is 6.51 mil lb. and commercial quota of 22.23 mil lb. For 2021, the recreational harvest limit is 5.34 mil lb. and commercial quota of 18.06 mil lb.

Council: Nowalsky/Cimino (17/0/2)

Board: Nowalsky/Davis (Roll call vote: 9/0/2/0)

Motion carries

#### **Black Sea Bass Specifications**

Move that, based on the averaged ABCs recommended by the SSC and the previous MC methodology for discards, in each year 2020-2021, the recreational ACL = ACT = 8.09 mil lb. and the commercial ACL = ACT = 6.98 mil lb. This results in an RHL of 5.81 mil lb. and a commercial quota of 5.58 mil lb. in each year.

Council: Nowalsky/Cimino (16/1/1)

Board: Nowalsky/Reid (Roll call vote: 9/1/1/0)

Motion carries

Move to substitute that based on the averaged ABCs recommended by the SSC and the new MC methodology for discards, in each year 2020-2021, the recreational ACL = ACT = 6.85 mil lb. and the commercial ACL = ACT = 8.22 mil lb. This results in an RHL of 5.48 mil lb. and a commercial quota of 5.26 mil lb. in each year.

Council: Batsavage/deFur

Board: Batsavage/

Motion fails for lack of a second by the Board

#### **Summer Flounder, Scup, Black Sea Bass Sector Allocation**

Move to initiate an amendment to consider modifications to the commercial/recreational sector allocations for summer flounder, scup, and black sea bass.

Council: deFur/Heins (13/4/0)

Board: Davis/Kane (10/1/0/0)

Motion carries

#### **Black Sea Bass Commercial Issues**

Board only motion:

Move to initiate an addendum to consider adjustments to the commercial black sea bass allocations consistent with the goal statement and options developed by the Board.

Meserve/Davis (10/0/1/0)

Motion carries

Council only motions:

I move to activate the black sea bass commercial amendment in a joint action with ASMFC.

Nolan/Hughes

Move to postpone motion until December joint meeting.

Nowalsky/DiLernia

Motion carries by consent

Board only motion:

Move to nominate Justin Davis for vice chair of the Summer Flounder, Scup, and Black Sea Bass Management Board.









Cimino/Reid








Motion carries by consent

The above agenda items may not be taken in the order in which they appear and are subject to change as necessary. Other items may be added, but the Council cannot take action on such items even if the item requires emergency action without additional public notice. Non-emergency matters not contained in this agenda may come before the Council and / or its Committees for discussion, but these matters may not be the subject of formal Council or Committee action during this meeting. Council and Committee actions will be restricted to the issues specifically listed in this agenda. Any issues requiring emergency action under section 305(c) of the Magnuson-Stevens Act that arise after publication of the Federal Register Notice for this meeting may be acted upon provided that the public has been notified of the Council's intent to take final action to address the emergency. The meeting may be closed to discuss employment or other internal administrative matters.

## Stock Status of MAFMC-Managed Species

(as of 11/20/19)

SPECIES	STATUS DETERMINATION CRITERIA		Stock Status	Most Recent Assessment
	Overfishing $F_{\text{threshold}}$	Overfished $\frac{1}{2} B_{\text{MSY}}$		
 <b>Summer Flounder</b>	$F_{35\%MSP}=0.448$	63 million lbs	No overfishing Not overfished	Most recent benchmark assessment was 2018.
 <b>Scup</b>	$F_{40\%MSP}=0.215$	103.64 million lbs	No overfishing Not overfished	Most recent operational assessment was 2019.
 <b>Black Sea Bass</b>	$F_{40\%MSP}=0.46$	15.53 million lbs	No overfishing Not overfished	Most recent operational assessment was 2019.
 <b>Bluefish</b>	$F_{35\%SPR}=0.183$	219.05 million lbs	No overfishing Overfished	Most recent operational assessment was 2019.
 <b>Illex Squid (short finned)</b>	Unknown	Unknown	Unknown Unknown	Most recent benchmark assessment was 2006; not able to determine current exploitation rates or stock biomass.
 <b>Longfin Squid</b>	Unknown	46.7 million lbs	Unknown Not overfished	Most recent assessment update was 2017; not able to determine current exploitation rates.
 <b>Atlantic Mackerel</b>	$F_{40\%}=0.26$	217.0 million pounds	Overfishing Overfished	Most recent benchmark assessment was 2017
 <b>Butterfish</b>	$F_{\text{Proxy}}=2/3M=0.81$	50.3 million lbs	No overfishing Not overfished	Most recent assessment update was 2017.

SPECIES	STATUS DETERMINATION CRITERIA		Stock Status	Most Recent Assessment
	Overfishing $F_{\text{threshold}}$	Overfished $\frac{1}{2} B_{\text{MSY}}$		
<b>Surfclam</b> 	$F/F_{\text{threshold}} = 1^{\text{a}}$	$SSB/SSB_{\text{threshold}} = 1^{\text{b}}$	No overfishing Not overfished	Most recent benchmark assessment was 2016.
<b>Ocean Quahog</b> 	$F/F_{\text{threshold}} = 1^{\text{c}}$	$SSB/SSB_{\text{threshold}} = 1^{\text{d}}$	No overfishing Not overfished	Most recent benchmark assessment was 2017.
<b>Golden Tilefish</b> 	$F_{38\%MSP} = 0.310$	10.46 million lbs	No overfishing Not overfished	Most recent assessment update was 2017.
<b>Blueline Tilefish</b> 	Unknown	Unknown	South of Cape Hatteras: No overfishing Not overfished  North of Cape Hatteras: No overfishing Not overfished	Most recent benchmark assessment was 2017.
<b>Spiny Dogfish</b> (Joint mgmt with NEFMC) 	$F_{\text{MSY}} = 0.2439$	175.6 million lbs Female SSB	No overfishing Not overfished	Most recent assessment update was 2018.
<b>Monkfish</b> (Joint mgmt with NEFMC) 	NFMA & SFMA $F_{\text{MAX}} = 0.2$	NFMA - 1.25 kg/tow  SFMA - 0.93 kg/tow (autumn trawl survey)	Unknown Unknown	Recent benchmark failed peer review and invalidated previous 2010 benchmark assessment results. Operational assessment in 2019 used survey data to scale earlier ABC.
<b>Chub Mackerel</b> 	At least 3,026 MT of catch per year <sup>e</sup>	At least 3,026 MT of catch three years in a row <sup>e</sup>	No overfishing Not overfished	No stock assessment.

SOURCES: Office of Sustainable Fisheries - Status Report of U.S. Fisheries; SAW/SARC, SEDAR, and TRAC Assessment Reports.

<sup>a</sup>  $F_{\text{threshold}}$  is calculated as 4.136 times the mean F during 1982 - 2015

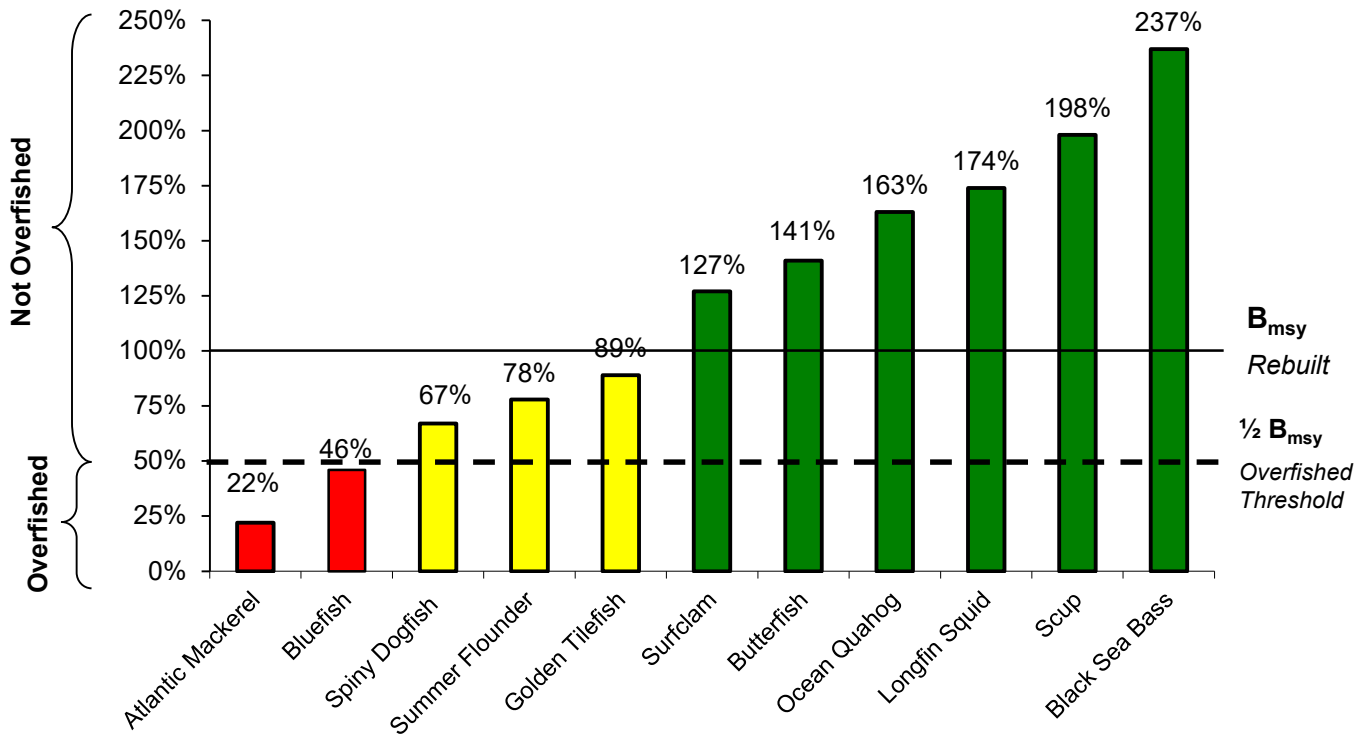
<sup>b</sup>  $SSB_{\text{threshold}}$  is calculated as  $SSB_0/4$

<sup>c</sup>  $F_{\text{threshold}}$  is 0.019

<sup>d</sup>  $SSB_{\text{threshold}}$  is calculated as  $0.4 * SSB_0$

<sup>e</sup> The Council approved these chub mackerel status determination criteria in March 2019; however, they have not yet been approved by NOAA Fisheries.

## Stock Size Relative to Biological Reference Points (as of 11/20/19)



### Notes:

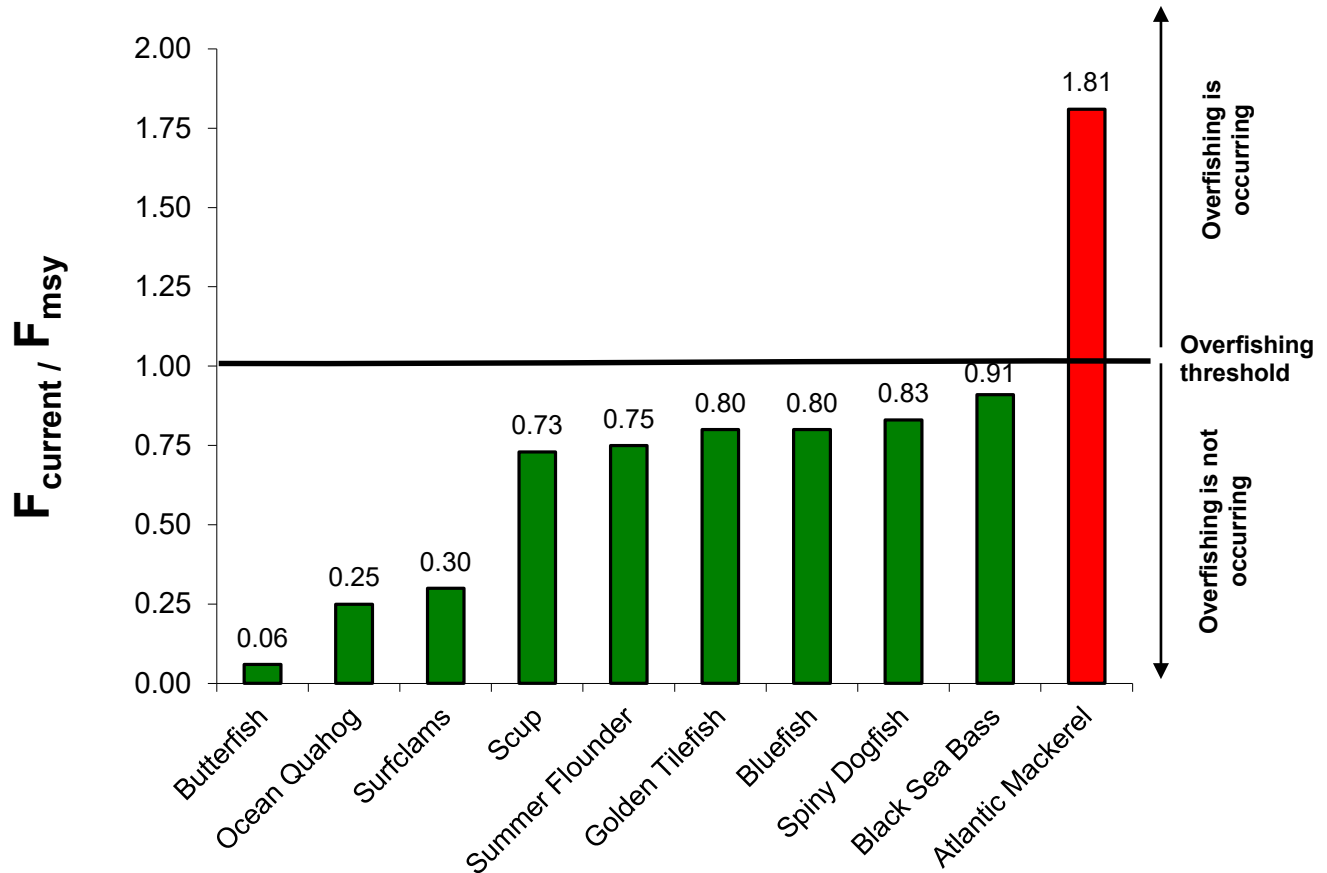
- Unknown  $B_{msy}$  - *Illex* squid, monkfish (NFMA & SFMA), blueline tilefish (North of Cape Hatteras)
- Of the 14 stocks managed by the Council, 6 are above  $B_{msy}$ , 5 are below  $B_{msy}$ , and 3 are unknown.
- In March 2019, the Council approved an amendment with management measures for Atlantic chub mackerel. These measures have not yet been approved by NOAA Fisheries. Chub mackerel  $B_{msy}$  is unknown.

Year of data used to determine stock size	
Atlantic Mackerel	2016
Black Sea Bass	2018
Bluefish	2018
Butterfish	2016
Golden Tilefish	2016
Longfin Squid	2016
Ocean Quahog	2016
Spiny Dogfish	2018
Surfclam	2015
Scup	2018
Summer Flounder	2017



## Fishing Mortality Ratios for MAFMC-Managed Species

(as of 11/20/19)



### Notes:

- Unknown fishing mortality: *Illex* squid, Longfin squid, monkfish (NFMA and SFMA), and blueline tilefish (North of Cape Hatteras).
- In March 2019, the Council approved an amendment with management measures for Atlantic chub mackerel. These measures have not yet been approved by NOAA Fisheries. The chub mackerel fishing mortality rate is unknown.

Year of data used to determine stock size	
Atlantic Mackerel	2016
Black Sea Bass	2018
Bluefish	2018
Butterfish	2016
Golden Tilefish	2016
Ocean Quahog	2016
Spiny Dogfish	2017
Surfclam	2015
Scup	2018
Summer Flounder	2017

## **Guidelines for the Ricks E Savage Award**

### **Eligibility:**

A person who has added value to the MAFMC process and management goals through significant scientific, legislative, enforcement or management activities is eligible.

### **Award**

The award will be presented during the February meeting.

### **Selection Process**

1. Written nominations will be solicited and received by the end of November each year by the Executive Committee.
2. Initially, nominations may only be made by Mid-Atlantic Council members.
3. The Executive Committee will select the recipient by consensus.
4. The recipient's identity will remain confidential if possible, until announced during the award presentation.

### **Other Award Rules**

1. Candidates must be nominated each year: no nominations will carry over.
2. Recipients can be reimbursed for travel expenses to receive the award.
3. The recipient will receive a plaque. A permanent plaque will be placed in the Headquarters office in Dover with a list of all the recipients.

### **Past Recipients**

2006 - Jim Ruhle  
2007 - Jim Gilford  
2008 - Phil Ruhle  
2009 - Laurie Nolan  
2010 - Dennis Spitsbergen  
2011 - John Boreman  
2012 - Jack Travelstead  
2013 - Red Munden  
2014 - George Darcy  
2015 - Pres Pate  
2016 - Lee Anderson  
2017 - Howard King  
2018 - Rich Seagraves

## **Guidelines for Award of Excellence**

The Mid-Atlantic Fishery Management Council Award of Excellence recognizes an individual's outstanding contribution to fisheries management, legislation, science, or law enforcement in the mid-Atlantic region.

### **Award**

The award will be made on a periodic basis subject to the identification and selection of outstanding individuals.

### **Selection process:**

Council members will send written nominations to the Executive Director at any time during the year.

The Executive Director will present nominations to the Executive Committee as they become available.

The Executive Committee will meet to discuss the nominee's achievements and select the recipient by consensus.

The award presentation will occur at an award ceremony in association with a Mid-Atlantic Council meeting.

The recipient will receive an award trophy at the ceremony and a permanent plaque will be placed in the Council office in Dover, DE with a list of all the recipients.

### **Past Recipients:**

August, 2016 - Richard B. Robins, Jr.



Mid-Atlantic Fishery Management Council  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | [www.mafmc.org](http://www.mafmc.org)  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 20, 2019  
**To:** Council  
**From:** Mary Clark Sabo and Michelle Duval  
**Subject:** Revised Draft 2020-2024 Strategic Plan

At the December 2019 Meeting, the Council will review and consider approval of a revised version of the 2020-2024 Strategic Plan. The Council previously reviewed and provided feedback on the Draft 2020-2024 Strategic Plan at the October 2019 meeting. The draft plan was subsequently made available for public comment from October 15, 2019 through November 15, 2019. During this period, two public input webinars were held, and written comments were accepted via an online comment form, email, regular mail, and fax. A total of 15 individuals attended the two webinars, and seven written comments were received from five individuals.

The following attachments are included behind this memo:

1. Revised Draft 2020-2024 Strategic Plan
2. Draft Evaluation Plan
3. Webinar comment summaries
4. Written public comment summary
5. Compiled written comments

### Strategic Plan Revisions

Council staff reviewed and provided edits to improve the clarity of language throughout the document. Stakeholders and the public also suggested edits to clarify and enhance the language in the draft. Several modifications are noted for the Council's attention:

- The draft Mission statement now includes the word "fishing" in front of "communities."
- The last strategy under Objective 2 (Communication) incorporates "conference lines and other technologies" as methods of remote access and participation.
- The final bullet under Objective 3 (Communication) is a new strategy that reads "Use plain language in Council documents to improve public understanding."
- The phrase "consider the interests of fisheries, fishing communities, and the public" replaces the previous Governance goal statement language "consider fishery, community, and public interests."

The revised version of the Draft 2020-2024 Strategic Plan incorporates the wording and content changes described here. A version of the plan with all edits visible in track changes will be available as a supplemental material under this agenda item at <http://www.mafmc.org/briefing/december-2019>.

Final formatting of the 2020-2024 Strategic Plan, including numbering of strategies according to associated objectives, will be completed once the Council has approved any changes.

# Mid-Atlantic Fishery Management Council DRAFT 2020-2024 Strategic Plan

---

December 2019

## Table of Contents

<b>Introduction</b> .....	<b>2</b>
<b>The Strategic Landscape</b> .....	<b>3</b>
<b>Vision, Mission, Core Values, and Goals</b> .....	<b>4</b>
<b>Vision</b> .....	<b>4</b>
<b>Mission</b> .....	<b>4</b>
<b>Core Values</b> .....	<b>4</b>
<b>Strategic Goals</b> .....	<b>4</b>
<b>Communication</b> .....	<b>5</b>
<b>Science</b> .....	<b>6</b>
<b>Management</b> .....	<b>8</b>
<b>Ecosystem</b> .....	<b>9</b>
<b>Governance</b> .....	<b>11</b>

### Acronyms

ASMFC	Atlantic States Marine Fisheries Commission
ACCSP	Atlantic Coastal Cooperative Statistics Program
ACFHP	Atlantic Coastal Fish Habitat Partnership
BREP	Bycatch Reduction Engineering Program
EAFM	Ecosystem Approach to Fisheries Management
EFH	Essential Fish Habitat
EEZ	Exclusive Economic Zone
FMP	Fishery Management Plan
HAPC	Habitat Area of Particular Concern
GARFO	Greater Atlantic Regional Fisheries Office
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSE	Management Strategy Evaluation
NCRP	Northeast Cooperative Research Program
NEAMAP	Northeast Area Monitoring and Assessment Program
NEFMC	New England Fishery Management Council
NEFSC	Northeast Fisheries Science Center
NOAA	National Oceanic and Atmospheric Administration
NRCC	Northeast Region Coordinating Council
OLE	Office of Law Enforcement
SOPP	Statement of Organization Practices and Procedures
RSA	Research Set-Aside
SSC	Scientific and Statistical Committee
S-K	Saltonstall-Kennedy Grant Program

## Introduction

The Mid-Atlantic Fishery Management Council (hereafter the Council) is responsible for the conservation and management of more than 64 fish and shellfish stocks that are found within the federal 200-mile limit of the mid-Atlantic region (North Carolina through New York).

The Mid-Atlantic Council was established in 1976 by the Fishery Conservation and Management Act (later renamed the Magnuson-Stevens Fishery Conservation and Management Act, or MSA). The MSA created a 200-mile Exclusive Economic Zone (EEZ), eliminated foreign fishing within the EEZ, and charged eight regional councils with management of fishery resources in the newly expanded federal waters.

The Council develops fishery management recommendations which must be approved by the Secretary of Commerce before they are finalized and implemented by NOAA Fisheries. All of the Council's fishery management recommendations must be consistent with the ten national standards as defined by the MSA and must be developed in an open, public process as prescribed by law.

Fourteen species are directly managed with specific fishery management plans (FMPs). These include summer flounder, scup, black sea bass, Atlantic bluefish, Atlantic mackerel, *Illex* and longfin squids, butterfish, Atlantic surfclams, ocean quahogs, golden and blueline tilefish, spiny dogfish (joint with the New England Council), and monkfish (joint with the New England Council). In addition, more than 50 forage species are managed as "ecosystem components" in all seven FMPs. The Council partners with other fishery management organizations, including states and NOAA Fisheries, in the development of effective management plans. For instance, spiny dogfish and monkfish are managed under joint FMPs developed in coordination with the New England Fishery Management Council (NEFMC). The Council also coordinates the management of summer flounder, scup, black sea bass, bluefish, and spiny dogfish with the Atlantic States Marine Fisheries Commission (ASMFC).

The Council is made up of 21 voting members and four non-voting members. Seven of the voting members represent the constituent states' fish and wildlife agencies, one represents NOAA Fisheries, and 13 are private citizens who are knowledgeable about recreational fishing, commercial fishing, or marine conservation. Four non-voting members represent and facilitate coordination with the ASMFC, the U.S. Fish and Wildlife Service, the U.S. Department of State, and the U.S. Coast Guard. The Council also has a full-time support staff that is based in Dover, Delaware. The staff assists with tasks such as planning and facilitation of meetings, development of FMPs, and coordination with other management agencies. The Council also utilizes advisory bodies, including a Scientific and Statistical Committee (SSC) and advisory panels for fisheries or other specific issues.

Over the last 43 years the Council has made significant progress toward rebuilding stocks that were once overfished and ensuring sustainable fisheries that provide the greatest overall benefit to the Nation. However, the Council still faces social, economic, and ecological challenges that impact the stability and sustainability of Mid-Atlantic fisheries. The strategic planning process is critical for defining the Council's future and will enable proactive, efficient, and effective responses to the challenges that lie ahead.

This strategic plan will guide the Council’s activities and priorities for the years 2020 through 2024. The goals and objectives described in this plan have been informed by the foundation created and progress achieved under the Council’s previous strategic plan, as well as stakeholders, the public, and management partners.

The Council’s 2020-2024 Strategic Plan was developed to meet the following overarching objectives:

- Maintain sustainable fisheries, ecosystems, and habitats in the Mid-Atlantic;
- Address specific issues identified by the Council and its constituents;
- Improve communication with constituents and other organizations;
- Improve the Council’s ability to collect and use input from constituents and management partners;
- Increase efficiency in the management process;
- Promote stability in Mid-Atlantic fisheries; and,
- Establish a more proactive process for addressing management challenges.

## **The Strategic Landscape**

The Council is operating in a rapidly changing world and faces increasing and competing demands on its time and resources. Over the next five years, the Council will confront new and ongoing challenges that will require it to prioritize management activities and make difficult decisions, including:

- Limited staff resources and capacity to respond to unforeseen circumstances.
- Competing constituent interests.
- Changing ocean conditions that impact the distribution, productivity, and sustainability of managed species.
- Competing ocean uses and their potential impacts on the Council’s fisheries.
- Habitat loss and degradation.
- Interactions between protected resources and managed species.
- Availability of management partner resources to address the Council’s needs/priorities.

Within this context, the 2020-2024 Strategic Plan is designed to provide a framework to guide progress toward the Council’s long-term goals and allow the Council to be responsive to changing circumstances.



## Vision, Mission, Core Values, and Strategic Goals

### Vision

Healthy marine ecosystems and thriving, sustainable fisheries and fishing communities that provide the greatest overall benefit to the nation.

### Mission

The Council manages fisheries in federal waters of the Mid-Atlantic region for their long-term sustainability and productivity consistent with the national standards of the Magnuson-Stevens Fishery Conservation and Management Act. The Council is committed to the stewardship of these fisheries, and associated ecosystems and fishing communities, through the collaborative development of effective, science-based fishery management plans and policies.

### Core Values

The Council's activities, operations, and decisions are guided by the following core values.

- Stewardship
- Integrity
- Effectiveness
- Fairness
- Competence
- Transparency

### Strategic Goals

The following goals have been identified to help the Council advance towards its Vision during the years 2020 through 2024.

**Communication:** *Engage stakeholders and the public through education and outreach that foster sustained participation in, and awareness of, the Council process.*

**Science:** *Ensure that the Council's management decisions are based on timely and accurate scientific information and methods.*

**Management:** *Develop effective management strategies that provide for sustainable fisheries and healthy marine ecosystems while considering the needs of fishing communities and other resource users.*

**Ecosystem:** *Support the ecologically sustainable utilization of living marine resources in a manner that maintains ecosystem productivity, structure, and function.*

**Governance:** *Ensure that the Council's practices accurately represent and consider the interests of fisheries, fishing communities, and the public through a transparent and inclusive decision-making process.*

For each of these goals, the Council has developed a suite of objectives and associated strategies to guide its progress over the next five years.

## Communication

**GOAL:** *Engage stakeholders and the public through education and outreach that foster sustained participation in, and awareness of, the Council process.*

**Objective 1. Use a wide range of communication tools and methods tailored to engage target audiences.**

- Employ a variety of traditional, web-based, and social media tools to disseminate relevant information, updates, and communication materials.
- Upgrade the content and organization of the Council website to enhance usability for target audiences.
- Coordinate communication efforts with management partners and other organizations to expand the distribution of messages to a broader audience.
- Seek opportunities to expand media coverage of Council actions, managed fisheries, and opportunities for stakeholder participation.
- Expand the use of “interested-parties” email lists to deliver fishery- and action-specific information and updates to interested stakeholders.
- Maintain the online calendar of meetings and events with links to meeting materials and supplemental information.
- Establish a Communication/Outreach Advisory Panel to assist in the review and development of communication and outreach tools and approaches.

**Objective 2. Increase stakeholder participation in the Council process.**

- Hold workshops to facilitate collaborative development of innovative management approaches among fishermen, managers, scientists, and other interested stakeholders.
- Develop outreach materials to facilitate constructive stakeholder input on proposed management actions (e.g. scoping guides, fact sheets, etc.).
- Schedule, advertise, and conduct meetings and public hearings in a manner that encourages and enables stakeholder attendance and participation.
- Maintain action-specific web pages to inform stakeholders about opportunities to participate in the development of Council actions (e.g., FMPs, amendments, and frameworks).
- Expand the use of online comment forms to gather public input.
- Utilize webinars, conference lines, and other technology to provide opportunities for remote access and participation.

**Objective 3. Broaden the public’s understanding and awareness of the Council and its managed fisheries.**

- Develop and distribute general outreach and education materials to increase awareness and understanding of Council-managed fisheries and the Council process.
- Partner with external organizations to develop and promote workshops and other interactive educational opportunities for stakeholders.
- Collaborate with science and management partners and other academic or research institutions to develop outreach materials that explain fisheries science and data collection.
- Use plain language in Council documents to improve public understanding.

## Science

**GOAL:** *Ensure that the Council's management decisions are based on timely and accurate scientific information and methods.*

**Objective 4. Collaborate with science partners and research institutions to ensure that the Council's science priorities are addressed.**

- Engage science and management partners to leverage opportunities for inclusion of the Council's research priorities in external funding programs (e.g. Saltonstall-Kennedy (S-K), Bycatch Reduction Engineering Program (BREP), regional Sea Grant, etc.).
- Collaborate with management partners and the Northeast Fisheries Science Center (NEFSC) to identify common research priorities and strategically address science, data, and information needs.
- Support implementation and continued development of the new Northeast Region Coordinating Council (NRCC) stock assessment process to improve assessment efficiency.
- Develop a process for cross-communication between the Council's SSC and other council SSCs to promote sharing of scientific approaches, methods, and information.
- Develop and implement a comprehensive research plan to address the research needs identified in the Five-Year Research Priorities document.

**Objective 5. Support the use of collaborative research to meet the Council's science, data, and information needs.**

- Collaborate with the NEFSC to expand and enhance existing cooperative research initiatives carried out under the umbrella of the NEFSC's Northeast Cooperative Research Program (NCRP)
- Identify research needs that can be addressed using collaborative approaches with commercial, for-hire, and recreational fishery participants.
- Cooperate with management partners to support and identify funding opportunities for science priorities identified by the Northeast Area Monitoring and Assessment Program (NEAMAP) Operations Committee.
- Support development of cooperative research programs that use "vessels of opportunity" from all sectors to address science and research needs.
- Support innovations in gear development and configuration that increase efficiency and reduce catch of non-target species in commercial and recreational fisheries.
- Evaluate options for future research set-aside (RSA) program.

**Objective 6. Promote efficient and accurate data collection, monitoring, and reporting systems.**

- Support implementation of improvements in fishery data accuracy, efficiency, and timeliness as identified in the Greater Atlantic Regional Fisheries Office (GARFO)/NEFSC Fishery Dependent Data Initiative.
- Work with science and management partners to develop and implement a unique trip identifier to integrate different individual reporting programs (e.g., fisherman, dealer, observer, port sampler, etc.).
- Collaborate with science and management partners to eliminate duplicative or unnecessary reporting.

- Address inconsistencies in permitting, reporting, and vessel inspection requirements across commercial and for-hire fisheries.
- Determine the utility of electronic reporting phone apps to improve recreational harvest estimates in the Mid-Atlantic region.

**Objective 7. Promote the collection of relevant social and economic data and on-the-water observations.**

- Engage the Council’s SSC to identify existing studies or other sources of social and economic information that could be used to inform management decisions.
- Support efforts to incorporate fishermen’s knowledge in the stock assessment process.
- Identify data/information gaps that can be addressed with on-the-water observations.
- Continue to support data collection efforts for improved social and economic impact analyses, such as cost-benefit analysis, for all fisheries.

**Objective 8. Identify and prioritize the Council’s research needs.**

- Conduct a biennial review of the Council’s Five-Year Research Priorities by the advisory panels, monitoring committees, and SSC to ensure the document is reflective of the current state of scientific knowledge and Council priorities.
- Review research needs identified in stock assessments for inclusion in the Council’s Five-Year Research Priorities.
- Develop a process to better track progress toward addressing the Council’s research priorities and to identify what research has been completed.

## Management

**GOAL:** *Develop effective management strategies that provide for sustainable fisheries and healthy marine ecosystems while considering the needs of fishing communities and other resource users.*

**Objective 9. Strengthen state, federal, and interstate partnerships to promote coordinated, efficient management of fishery resources.**

- Continue to use the NRCC process as a forum for Atlantic coast management entities to enhance communication, coordination, and pursue shared objectives.
- Coordinate with management partners to ensure efficient allocation of staff resources for jointly managed species and issues of common interest.
- Collaborate with management partners to address inconsistencies in regulations across state, federal, and regional boundaries.

**Objective 10. Adapt management approaches and priorities to address emerging issues and changing fishery conditions.**

- Monitor the variability and changes in species distribution, abundance, and availability and associated impacts on Council-managed fisheries.
- Use fishery performance reports and State of the Ecosystem reports as tools to develop management responses to changing fishery conditions.
- Regularly review the performance of existing management measures.

**Objective 11. Ensure that management decisions consider social, economic, and community impacts and opportunities.**

- Expand the use of Management Strategy Evaluation (MSE) to determine/evaluate the impacts of management decisions on fishing communities and other resource users.
- Evaluate the impacts of current management approaches on recreational angler fishery participation and satisfaction through the use of focus groups or workshops.
- Continue and expand the use of multi-year management approaches to increase fishery stability and predictability to the extent practicable.
- Evaluate the impacts of management decisions on the economic efficiency and sustainability of commercial and for-hire businesses and associated shoreside operations.

## Ecosystem

**GOAL:** *Support the ecologically sustainable utilization of living marine resources in a manner that maintains ecosystem productivity, structure, and function.*

**Objective 12. Implement the Council’s Ecosystem Approach to Fisheries Management (EAFM) as described in the EAFM Guidance Document.**

- Establish a process to track implementation of the Council’s EAFM Guidance Document and ensure that progress is effectively communicated to the public.
- Use the EAFM structured framework approach as a tool to implement the Council’s EAFM policy and incorporate species, fleet, habitat, and climate interactions into the Council’s science and management programs.
- Collaborate with the Council’s science partners and stakeholders to increase the collection, utilization, and consideration of ecosystem-level biological, social, and economic information.

**Objective 13. Collaborate with management partners to develop ecosystem approaches that are responsive to the impacts of climate change.<sup>1</sup>**

- Determine the data and information necessary to evaluate and respond to climate-induced species and habitat changes for both managed and unmanaged species.
- Work with Atlantic coast management partners to evaluate potential management and governance responses to shifting species distributions through scenario planning workshops and/or other exercises.
- Evaluate the flexibility/ability of current management approaches, including the NOAA Fisheries climate-ready fisheries management process, to respond to shifting species distributions.
- Consider management strategies that are responsive to the impacts of climate change on current fishery allocations.

**Objective 14. Identify, designate, and protect habitat using an ecosystem approach.**

- Identify and document the contributions of inshore habitats to offshore productivity.
- Review and strengthen essential fish habitat (EFH) designations to account for species interactions, connectivity, and changing ocean conditions.
- Develop the linkages between habitat science and conservation and fishery outcomes with a focus on ecosystem resiliency and productivity.
- Participate with management partners in the Northeast Regional Marine Fish Habitat Assessment Project, Atlantic Coastal Fish Habitat Partnership (ACFHP), and other regional habitat partnerships.
- Ensure that the Council’s habitat policies regarding both fishing and non-fishing activities reflect current scientific information and best management practices.
- Examine the use of the Council’s existing EFH/Habitat Area of Particular Concern (HAPC) authorities and designations to ensure ecosystem integrity and services are maintained.

---

<sup>1</sup> The term “climate change” encompasses related impacts such as global warming, ocean acidification, etc.

**Objective 15. Engage in the offshore energy development process to address impacts to Council-managed species and associated habitats.**

- Collaborate on offshore energy issues with state and federal management partners and other relevant organizations to identify information needs and evaluate potential impacts of offshore energy development on marine resources.
- Comment on proposed offshore energy projects to ensure developers and permitting agencies are aware of natural resource concerns and Council priorities.

**Objective 16. Support the maintenance of an adequate forage base to ensure ecosystem productivity, structure, and function.**

- Consider and account for, to the extent practicable, the role of Council-managed species in the ecosystem, including roles as prey, predator, and food for humans.
- Consider and account for, to the extent practicable, the impact of Council-managed fisheries on the forage base.
- Monitor landings of currently unmanaged forage species and respond to changes if necessary.

**Objective 17. Develop management approaches that minimize adverse ecosystem impacts.**

- Annually review information from the NEFSC's annual State of the Ecosystem reports to identify potential ecosystem impacts of the Council's management approaches.
- Develop management measures that consider ecological interactions to reduce regulatory discards, promote greater utilization of catch, and minimize impacts to habitat.
- Consider fishery management approaches that avoid or reduce negative impacts on protected resources.

## Governance

**GOAL:** *Ensure that the Council's practices accurately represent and consider the interests of fisheries, fishing communities, and the public through a transparent and inclusive decision-making process.*

**Objective 18. Maintain an open, accessible, and clearly defined process.**

- Develop, refine, and communicate policies regarding operations of committees and advisory and technical bodies, including the SSC.
- Provide annual updates on Council activities and progress towards implementation of the Strategic Plan.
- Ensure that the Council's Statement of Organization Processes and Procedures (SOPP) are regularly reviewed, updated as needed, and made available on the Council's website.
- Provide conference lines or Webinar access to Council and advisory body meetings whenever feasible.

**Objective 19. Engage management partners to promote effective collaboration and coordination.**

- Review regional operating agreement with GARFO, the NEFSC, and Office of Law Enforcement (OLE) and revise if necessary.
- Collaborate with the ASMFC to define roles, responsibilities, and procedures for joint meetings and joint action development.
- Consider development of agreements with the New England and/or South Atlantic Councils to define management roles and processes for joint and/or cross-jurisdictional species management.
- Review the composition and operation of Council committees to ensure that the concerns of management partners are effectively understood and addressed.

**Objective 20. Ensure that stakeholder interests are understood and addressed.**

- Consider incorporating additional opportunities for general public comment (i.e. not related to specific agenda items) during Council meetings.
- Expand opportunities for stakeholders to provide input during the development of annual Implementation Plans.
- Regularly evaluate the composition of advisory bodies to ensure effective representation of diverse interests.
- Explore options to better communicate how public input was used in management decisions.

**Objective 21. Provide training and development opportunities for Council members and staff to enhance organizational performance.**

- Provide opportunities for Council member training and development on topics such as parliamentary procedure and best practices for effective meetings.
- Support the ongoing professional development of Council staff.
- Continue to promote collaboration with GARFO, NEFSC, and ASMFC staff through staff-to-staff meetings.



## Attachment 1: Evaluation Plan

### Objectives

- Ensure that the Council's actions result in progress towards its vision.
- Provide flexibility to adapt strategies to accommodate changing circumstances.
- Maintain stakeholder and public engagement with the strategic planning process.
- Allow new Council members to become familiar with the Strategic Plan.
- Provide opportunities for stakeholder and public feedback on emerging issues and future Implementation Plan actions.

### Annual Review

**Purpose:** Review the status of implementation activities from the previous year and consider suggestions from constituents regarding implementation activities for the following year.

**Timing:** *October – December*

#### Tasks:

- Council develops draft list of items for Implementation Plan in October.
- Provide opportunity for stakeholders and the public to review draft Implementation Plan and offer suggestions (e.g. via online comment form, webinar, etc.).
- Council reviews input and finalizes Implementation Plan in December.

### Mid-Plan Review

**Purpose:** Mid-term review of the Strategic Plan to determine progress towards completion of objectives and to obtain stakeholder and public perceptions.

**Timing:** *October – December 2022*

#### Tasks:

- Determine which objectives have advanced, which have not, and circumstances contributing to delays.
- Provide opportunity for stakeholder and public feedback on progress and direction for remainder of the plan timeframe (e.g., via APs, online comment form, webinar, etc.)
- Council reviews input and considers any shifts in strategy or reordering of priorities based on current or anticipated conditions.

### Comprehensive Review

**Purpose:** Review goals, objectives, and strategies, and evaluate overall progress towards achievement of the Council's Vision. Use results of the evaluation to inform development of the next five-year strategic plan.

**Timing:** *Mid- to late 2024*

#### Tasks:

- Develop a process to obtain stakeholder and public feedback regarding progress and perceptions of success.
- Evaluate goals and revise based on Council, stakeholder, and public input.
- Determine which objectives remain priorities for the next strategic plan and develop new objectives as necessary.
- Determine the efficacy of current strategies and consider necessary modifications.

**Draft 2020-2024 Strategic Plan**  
**Webinar Public Input Session**  
**November 12, 2019**

**Attendees:** Fred Akers, Katie Almeida, William Barnes, Bonnie Brady, Greg DiDomenico, Meghan Lapp, Carl LoBue, Pam Lyons Gromen, Joe Noble, Tom Smith, Mike Waine

**Other attendees:** Mary Clark Sabo (Council staff), Michelle Duval (contractor)

Only one question was asked: Will implementation of the new 2020-2024 Strategic Plan be similar to implementation of the last five-year Strategic Plan? In other words, will the Executive Committee have oversight and create an Implementation Plan that goes with the 2020-2024 Strategic Plan so that stakeholders can see what initiatives are being tackled each year and track progress? Staff responded that there will continue to be an annual Implementation Plan, but work is underway to improve the implementation planning process to more closely link the Strategic Plan with the Implementation Plan and make it easier for the Council to connect each year's activities with the five-year goals and objectives. The Executive Committee will continue to have oversight of that process.

Comments were received on the following sections of the draft 2020-2024 Strategic Plan:

Mission

- One attendee commented that in the second sentence “associated ecosystems and communities” were essentially the same thing, as humans are effectively part of the ecosystem. Would “associated ecosystems, communities, and fisheries” be more appropriate, or is the second sentence even necessary? It was explained that the Council received significant public comment recommending inclusion of communities in this statement. The final suggestion was to insert the word “fishing” before “communities” to clarify this, i.e. “associated ecosystems and *fishing* communities.”

Core Values

- One attendee asked if the core values were ranked and staff responded there was no ranking.

Communication

- One attendee asked for clarification on the phrase “management partners” – are we all partners or are we stakeholders? Who are the management partners? Staff explained that the phrase is traditionally used to refer to other fisheries management organizations such as the ASMFC, GARFO, state fishery management agencies, etc. The suggestion was made to try to clarify this for the general public.
- An attendee asked if it would be possible to provide webinar or audio access to advisory panel meetings, monitoring committee meetings, and any Council-related meeting in order to increase stakeholder participation (Objective 2, last strategy). In order to provide a transparent and open process, having access to some kind of recording – whether it is a webinar recording, audio recording, podcast, etc. – for each of these meetings would allow stakeholders who cannot attend these meetings to better follow and participate in the process.

Science

- One attendee recommended replacing “Support” in the wording of Objective 7 with “Promote.” Promote is very specific and a more active word, and indicates the Council would actually do this, rather than just be supportive of it.

### Management

- One attendee noted that the wording of Objective 11 did not include the word “ecological” along with “social, economic, and community impacts.” In considering things in the realm of optimum yield, we would want those ecological considerations to be included in management decisions. Is this just not specifically included because the Council has a whole new Ecosystem goal and set of objectives? Staff confirmed that this was the intent of the Ecosystem goal, which incorporates ecological considerations into management decisions in part under Objective 12, which implements the Council’s Ecosystem Approach to Fisheries Management, as well as Objective 17, which includes ecosystem considerations in the development of management measures. The purpose of the Ecosystem goal was to capture ecosystem considerations that had been spread between both Science and Management into one place to better address them.

### Ecosystem

- One attendee requested that “EAFM” be included in the list of acronyms.
- An attendee indicated strong support for the first strategy under Objective 12 to track implementation of the Council’s EAFM Guidance Document and to communicate that progress to the public. The danger of having the EAFM Guidance Document separate from the Strategic Plan is sometimes there is a lapse in communication in how these are integrated and moving forward.
- Another attendee noted that the third strategy under Objective 12 includes collaboration with science partners to collect social and economic information and suggested that perhaps this should also include stakeholders or fishing partners. Social and economic information might not just come from the Council’s science partners, whomever they may be. Stakeholders should be included with those science partners somehow.
- One attendee noted strong support for inclusion of the Ecosystem goal and set of objectives. Now that the EAFM Guidance Document is a living document and the Council is working from it, the Ecosystem goal is a good addition overall.
- A question was asked about the Frank R. Lautenberg Deep-Sea Coral protection area, which included frameworkable actions that were going to be revisited in some way through a dynamic process. That doesn’t appear to be reflected in the habitat objective, i.e. revisiting things we have done and making sure they are based on the best available and most current science. For example, with the Unmanaged Forage Omnibus Amendment, the Council receives an annual report on the harvest of species that don’t have federal FMPs – there is a process to track this and bring information back to the Council each year. There doesn’t appear to be the same process for deep-sea corals. Is this captured somewhere else in the document? This is not necessarily specific to deep-sea corals, but for any action the Council takes that includes a monitoring component, we need to create a dynamic process or feedback loop that will allow the Council to receive and improve information being used in decisions.
- Another commenter wondered if the deep-sea coral protected area is included in the NOAA Marine Protected Areas registry. These areas are supposed to be reviewed on a regular timeframe to ensure the information used is current.

### Governance

- An attendee suggested a slight modification to the language of the goal statement to make “fishery” and “community” plural. Perhaps change this to “consider fisheries, fishing communities, and public interests.”
- One attendee asked if Objective 21 was meant to apply only to Council members and staff, and if it was possible to include opportunities for stakeholders to participate in training for topics such as Robert’s Rules. It would be useful for stakeholders to have extra knowledge regarding these topics as well, and

some would like to obtain information at a higher level regarding how to engage in the process. It would be great to have some way for people to obtain this information in a way they could absorb it. Staff responded that it might be more appropriate to include or expand upon one of the Communication strategies under Objective 3 to address training opportunities for stakeholders.

### General Comments

- One attendee stated that Council staff did a good job putting the plan together, and that this would likely result in some changes to procedures or to issues that need to be considered and discussed when making management decisions. Will staff explain those anticipated changes as part of the discussion the Council will have when adopting the plan? Staff responded that there is unlikely to be much additional explanation beyond what is provided in the plan, as the objectives and strategies are meant to be self-explanatory. However, any suggestions regarding how to explain this information to the Council are welcome.
- Several attendees complimented staff on the effort to distill all stakeholder and public feedback into such a comprehensive plan.

**Draft 2020-2024 Strategic Plan**  
**Webinar Public Input Session**  
**November 13, 2019**

**Attendees:** Chris Batsavage (Council member), Ron Larsen, Rick Pearson, Tony Friedrich

**Other attendees:** Mary Clark Sabo (Council staff), Michelle Duval (contractor)

There were no questions from the attendees.

One attendee noted that he is a staff member with the NOAA Fisheries Highly Migratory Species Division, which is in the process of conducting a similar exercise, so he was participating to hear what the Mid-Atlantic Council was doing.

There were no additional comments.

## Draft 2020-2024 Strategic Plan

### Written Comment Summary

A total of seven written comments were received from five individuals. Comments are summarized according to the sections of the Draft 2020-2024 Strategic Plan they address.

#### General

- One individual stated the Strategic Plan should be production of fish for food and economic value.

#### Vision

- One individual stated that the U.S. public is the major stakeholder that owns the fish, and the Council's Vision statement should include support and respect for healthy fish.

#### Core Values

- One individual noted the core value of "stewardship" and stated that Council stewardship has resulted in regulations that reduce domestic production of seafood while creating a market share for imports.
- An individual noted the core value of "integrity" and stated that the Council's regulations create waste and a policy of total utilization of all resource caught would be better.
- Regarding the core value of "effectiveness" one commenter stated that no management actions or regulations have ever been allowed sufficient time to produce results prior to being changed.
- A commenter stated that with respect to "fairness" that the Council and NOAA must address the discrepancy in reporting requirements between commercial and recreational fishermen by requiring recreational fishermen to report via phone app.
- One individual stated that "transparency" does not exist; any precaution from the Science Center or plan development team is not documented in any report.

#### Communication

- One comment suggested that creative social media solutions, such as online petitioning, may be a way to reach more interested but unaware individuals.
- One individual noted the challenge of integrating the results of science and monitoring with communication to a diverse array of constituents, including Councils. This results in the problem of being "data rich, but information poor." There are a number of examples of successful science translation.
- An individual noted that there is limited understanding of the effects of human activities in coastal watersheds.
- One individual stated that the Council's communication efforts were biased toward industry. Communication and outreach efforts needed to include environmental organizations and the general public, which currently receive no information, and are ignored.
- One individual stated that the Council's outreach is not reaching fishermen, and that communication uses acronyms that most do not understand and should be eliminated in all Council documents.

#### Science

- A commenter stated support for collaborative research as a tool to augment the research and monitoring efforts of the Northeast Fisheries Science Center.
- An individual supported development of an integrated vessels of opportunity/NOAA survey program by the Northeast Fisheries Science Center.

- One commenter stated that on-the-water observations are about money, not facts.
- One individual stated that the Science goal needs to focus on stock enhancement, reducing discards of saleable fish, providing alternatives to fishing on large female fish, and the effects of pharmaceuticals. The Council's science should investigate other causes for population declines before requiring harvest reductions by fishermen.

### Management

- One individual noted that climate change and shifting species distributions will require adjustments in quotas and consideration of socioeconomic effects.
- A commenter stated that the Council should adopt an adaptive ecosystem-based management approach that incorporates atmospheric forcing.
- One individual stated that aquaculture is a dirty industry that hurts wild fish populations.
- A commenter stated that it was outrageous to allow commercial fishing that results in high levels of dead bycatch and that donating bycatch to feed the poor was unacceptable.
- One individual stated that the Strategic Plan must address seafood imports and why tariffs have not been imposed on foreign seafood. Mismanagement has resulted in a decline in domestic seafood production.
- One individual stated that management plans should be allowed sufficient time to demonstrate results prior to change.

### Ecosystem

- One individual recommended that the Council include in the Strategic Plan setting up a task force to address potential contamination of managed fish species by microplastics and PFAS (per- and polyfluoroalkyl substances) in order to respond to seafood safety concerns.
- One individual noted that the productive capacity of Essential Fish Habitat has been altered by a variety of factors.
- A commenter stated that promoters of wind farms are often ignorant of the impacts on fishing, but that both uses should be able to coexist.
- One individual stated that the Council's EAFM should also consider dynamic modeling approaches being developed on the west coast that incorporate the impacts of climate change on microbial food webs.
- An individual stated the Council should develop fishery management plans and habitat protection measures that are responsive to climate change.
- One person stated that the Council's management of forage species that are moving into New England and is a major management concern complicated by climate change.
- One individual stated that a healthy ecosystem is one that is free of driftnets.
- A commenter stated that the ecosystem has been altered by mismanagement such that dogfish make up the majority of biomass due to incorrect science.

### Governance

- One commenter stated a need for increased coordination between federal/state ocean planning agencies and marine resources management agencies.
- One individual supported having a mechanism in place that allows the Council to continually assess progress towards the goals of the Strategic Plan, and incorporates stakeholder input and engagement as part of that process.

**From:** Michelle Duval michelleduval22@gmail.com  
**Subject:** Fwd: Form Submission - Draft 2020-2024 Strategic Plan Comments  
**Date:** November 18, 2019 at 9:29 PM  
**To:** Michelle Duval michelleduval22@gmail.com

---

**From:** Squarespace <[no-reply@squarespace.info](mailto:no-reply@squarespace.info)>  
**Sent:** Monday, October 21, 2019 6:46 AM  
**To:** Mary Clark Sabo <[msabo@mafmc.org](mailto:msabo@mafmc.org)>  
**Subject:** Form Submission - Draft 2020-2024 Strategic Plan Comments

**Name:** Daniel Potrepka

**Email:** [dan.potrepka@starpower.net](mailto:dan.potrepka@starpower.net)

**Which role(s) best describe you? (optional):** Private Recreational Angler

**Please type your comments on the draft strategic plan in the space below:** Some of the challenges that the council faces such as limited resources and evolving challenges that require creative solutions could benefit from innovative social media solutions. Is the model of online petitioning for awareness through a major partner such as [change.org](http://change.org) a way to reach more who may be interested but unaware? I wasn't sure if there is a partner already who reaches the private angler, public at large. Otherwise the outreach plans and the rest of the strategic plan look well thought out and satisfactory. Thank you.

(Sent via [Mid-Atlantic Fishery Management Council](#))



**From:** David Dow ddow420@comcast.net  
**Subject:** Strategic Plan Comments  
**Date:** October 17, 2019 at 6:44 AM  
**To:** michelleduval22@gmail.com  
**Cc:** David Dow ddow420@comcast.net

---

I am a retired marine scientist from the Fisheries Lab in Woods Hole, Ma. and a grassroots environmental activist living on Cape Cod. I wanted to mention an emerging seafood safety issue that might effect some of the predator species managed by the Mid-Atlantic Fishery Management Council (MAFMC). On October 2 I attended the University of Rhode Island STEEP (Sources, Transport, Exposure, Effects of PFAS) Science Day in Hyannis, Ma. where they discussed potential pathways where perflourinated chemicals could get into fish species from groundwater and freshwater sources (including sediments).

On October 15 I attended the Woods Hole Oceanographics Institution's (WHOI) Morss Colluquia on "Microplastics in the Ocean: Emergency or Exagerancy ?" which was the start of a 3 day scientific conference on this issue. Some of panelists at this program pointed out that microplastics can adsorb legacy toxic contaminants (PCBs; DDTs; PAHs; etc.). Because of ocean circulation patterns microplastics are often concentrated in subtropical gyres between 20-40 degrees latitude in the Northern and Southern Atlantic Ocean. One aspect of climate change is that it is altering ocean circulation (Gulf Stream flow; North Atlantic Oscillation strength; Atlantic Meridonal Overturning Circulation; etc.) and responsible for changes in the marine food web that have altered the distribution of fish species and their prey in space and time.

At this point in time it is unknown what threat consumption of fish contaminated by PFAS chemicals and microplastics pose to sensitive human populations (females of child bearing age and kids). As the former Recreational Fisheries Coordinator in the Northeast for NOAA Fisheries, I had to address concerns about mercury contamination of swordfish and PCB contamination of inshore predators (striped bass) in the Hudson River system/New Bedford Harbor. Both methyl mercury and PCBs accumulate in the marine food chain and it is feasible that microplastics/PFAS chemicals could do so as well.

There is more research and policy developments on the threats posed by microplastics and PFAS chemicals in the European Union than here in the United States because they utilize the "Precautionary Approach" for managing toxic chemicals. Even though the "PA" is used to manage fisheries in the US, it has not been adopted by EPA or the FDA for toxic chemicals. PFAS chemicals have biogeochemical pathways similar to PCBs/DDTs and there is rising concerns at the state levels on their health impacts on humans and wildlife. Thus the maximum contaminant levels for drinking water are being lowered from the EPA hazard level of 70 parts per trillion to 10-20 pt. in New Jersey and New York. Food is also a source of PFAS exposure.

I would recommend that the MAFMC set up a task force under its strategic plan to explore options to address microplastics and PFAS contamination of managed fish species near the top of the food chain in order to respond to potential seafood safety concerns. Climate change will alter the base of the marine food chain (microbial food web is longer than than the grazing food chain which cold reduce the yield of managed fish species and increase bioaccumulation of micronplastics and PFAS chemicals

the yield of managed fish species and increase bioaccumulation of microplastics and PFAS chemicals in the fish themselves) and increase seafood safety concerns.

It appeared to me at the Morss Colloquia that the scientists didn't take the effects of climate change into account in evaluating the potential pathways of microplastics in the environment and potential impacts on fish at the top of the food chain. It is hard to remove plastics from the ocean and their importance in the world economy (1.5 % or \$ 1.2 trillion per year) makes it unlikely that their production will be drastically reduced in the coming years. The estimates of plastic bag breakdown in the ocean vary widely (1-500 years). PFAS chemicals are referred to as "forever chemicals" and their environment persistence is also poorly understood.

Humans

have both microplastics and PFAS chemicals in their bodies with the health consequences being subject to cutting edge research studies. The microplastic scientists on the WHOI panel were divided on

whether this constituted an emergency or an exaggeration with a similar perspective on PFAS chemicals

at the URI STEEP Science Day.

Thanks for your consideration of these comments.

Dr. David D. Dow  
East Falmouth, Ma.

**From:** David Dow ddow420@comcast.net  
**Subject:** Mid-Atlantic FMC Strategic Plan Public Comments  
**Date:** November 12, 2019 at 6:13 PM  
**To:** michelleduval22@gmail.com  
**Cc:** David Dow ddow420@comcast.net

DD

I am a retired marine scientist from the Fisheries Lab in Woods Hole and grassroots environmental activist living on Cape Cod. Since many Mid-Atlantic Fishery Management Council (FMC) species are **migrating into Nantucket Sound** (Summer Flounder; scup; black sea bass; various forage fish species; extension of ocean quahog/surf clam fishery) **or emigrating into the warming Gulf of Maine** (American lobsters; declining sea herring and GoM cod fisheries; Winter flounder; etc.), these shifts in commercial/recreational fisheries in space and time will require adjustments in the quotas and associated socioeconomic effects. This also has effects on interactions of fisheries with sea turtles; marine mammals and seabirds. The **“productive capacity” of Essential Fish Habitat** has been altered by eutrophication; increased ocean noise; warming waters & increased ocean acidity and competing ocean usages (wind farms; US Naval Training; sonic surveys for oil/gas deposits; commercial and recreational vessels and fishing). Thus **federal/state ocean planning** needs to have better coordination/integration with **Marine Resource Management**. I recently participated in a meeting on Climate Change and the Cape Cod Commission’s Regional Policy Plan with no mention being made of ocean planning or state/federal marine resource management (Massa.DMF; ASMFC; MA FMC; NE FMC; NOAA Fisheries GARFO).

I will make comments on selected Components of the Strategic Plan (**Communications; Science; Management; Ecosystem and Governance**) and selected bullets under these 5 main categories (**one to twenty one**). A major challenge is integrating science and monitoring efforts with communication to constituents; general public; policy makers; managers and elected officials to overcome the problem of being data rich, but information poor for users of these products. This partly explains why regional ocean planning amongst federal/state government and tribal representatives promotes ocean wind farms (overseen by BOEM) which create problems with commercial fishing and large whale **Unusual Mortality Events (UME)** or the interaction between climate change/NorthAtlantic right whale increased mortalities from lobster gear entanglements in Northeastern waters and low calving rates off the southeastern US Coast. The Northeastern Regional Ecosystem Conceptual Model that underlies **living marine; protected and natural resources (LMR/PR/NTR)** management in our part of the world assumes that the ocean ecosystem is in a steady state, equilibrium condition rather than being a non-linear, dynamic ecosystem with a shifting ocean baseline with marine biota changing in place and time. The Northeastern Fisheries Science Center (NEFSC) population dynamic

place and time. The **Northeastern Fisheries Science Center (NEFSC)** population dynamic models used to establish Fishery Management Plan (FMP) quotas incorporates most of these effects as “**natural mortality**” which has increased for sea herring; GoM cod; American Lobsters; Atlantic striped bass; etc.

### **Communication:**

**Objective 3-** Here on Cape Cod there is limited understanding of the effects of human activities in coastal watersheds (nitrogen enrichment from septic systems; perfluorinated chemical contamination of our groundwater; wetland and seagrass degradation of Essential Fish Habitat (EFH); relative sea level rise) on the productivity of marine biota and the surrounding ocean environment. The Massachusetts Ocean Management Plan (MOMP) promotes the Marthas Vineyard Wind Farm, but ignores its effects on fishing. Noise from the Wind Farms is being examined by BOEM/NEFSC as cumulative environmental impacts, but largely ignored local/state elected officials/ENGOS that support ocean renewable energy. Fishing and wind farms should be able to co-exist in the ocean off of Cape Cod and elsewhere. Ocean noise is an under appreciated threat to **LMRs/PRs/NTRs (Living Marine/Protected/Natural Trust Resources)**. The role of the warming ocean on increased temperature and humidity on land in the future, even if we drastically reduce greenhouse gases (ghg) released into the atmosphere is almost never discussed here on Cape where hot, humid weather creates health problems for sensitive populations.

### **Science:**

**Objective 5-** Collaborative research is certainly an important tool to augment the research and monitoring surveys conducted by NOAA Fisheries NEFSC which faces declining funding and increased number of contractors replacing civil service staff. A major challenge exists in being data rich, but information poor when it comes to providing data products directed at Fishery Management Councils; ENGOS; fishermen/women; local/state/federal elected officials. I used to work for NASA conducting remote sensing research via 3-4 contractors for very civil servant and they are much better than NOAA Fisheries or the FMCs in converting science and monitoring data into useful information products to diverse constituents. The NOAA Sea Grant Program at the Massa. Institute of Technology/Woods Hole Oceanographic Institution; Woods Hole Research Center on Climate Change Effects; Waquoit Bay National Estuarine Research Reserve offer case studies on successful science translation for diverse constituent groups.

**Objective 6-** The NEFSC needs to develop an integrated vessels of opportunity/NOAA survey ships to support an ecosystem approach to management monitoring program for both fish & shellfish/EFH and large whales (supporting this endeavor by restoring the Ecosystems Assessments Branch to resolve the challenge of being data rich, but information poor).

**Objective 10-** The MA FMC needs to adopt an Adaptive Ecosystems-based Management

**Objective 10** - The MA FMC needs to adopt an adaptive, Ecosystems based management (AEbM) that includes atmospheric forcing (ice melting in Arctic and alteration in the atmospheric jet stream have been linked to changes in the North Atlantic Oscillation and Atlantic Meridional Overturning Circulation which effects coastal shellfish landings and cod recruitment in the North Atlantic Ocean) to shifts in the marine food chain (**NEFSC EMaX project**) from climate change in the ocean. One characteristic of **nonlinear, dynamic systems is surprises** which requires an adaptive component for EBM approaches.

**Objective 12**- I presume that the recent paper by Sarah K. Gaichas et al. Implementing ecosystem approaches to fishery management : Risk assessment in the US Mid-Atlantic. in Front. Mar. Sci. 2018. describes the framework for this Ecosystem Approach to Fisheries Management (EAFM). This is a good start, but I would consider the following as well: dynamic Eco-coast modeling approach being developed on the West coast and the effects of climate change on the length of the microbial food web in the plankton/increased community respiration in the marine food chain. When I participated in the **NEFSC EMaX (energy modeling & analysis exercise)**, we had more primary production (estimated from satellite ocean color data) at the base of the food chain than yield of LMRs/PRs/NTRs at the top. We added the microbial food web to the grazing food chain to balance this energy flow (effectively increasing community respiration via a longer trophic food web). Since Climate Change increases the strength of the thermal stratification in the ocean from Spring to early Fall which favors the microbial food web which uses ammonia as its nitrogen source, this increases community respiration and thus lowers the yield of fish and shellfish. The forage fish in the water column link the planktonic community to most of the predacious fish managed by the MA FMC/NOAA Fisheries GARFO (Greater Atlantic Regional Fisheries Office). Changes in the ocean's biology, chemistry and physics will require an EAFM approach to manage fisheries in a shifting marine ecosystem.

**Objective 13 and 14** - Omnibus Habitat Amendment 2 developed by the NE FMC and approved by NOAA Fisheries GARFO didn't mention climate change and they were caught by surprise by the rapid warming in the Gulf of Maine its consequences on cod; American lobster; Winter flounder, sea herring etc. The MA FMC should develop FMPs and associated habitat protection measures to avoid such surprises. Offshore the threats come from the effects of warming waters on recruitment and competition at the top of the food chain and the shifts at the base of the food chain between the grazing component and microbial food web. Inshore we face challenges from "N" eutrophication', increased ocean acidification, water stratification and hypoxia. In late Summer/early Fall we experienced hypoxia in Cape Cod Bay which killed lobsters in their cages. We have periodic hypoxia in embalmment off of Nantucket Sound which effect shellfish populations and leads to fish kills which wash up on our beaches. On the outer Cape we face increased seal and forage fish populations and predation by Great White sharks which pose threats to human recreational uses and our tourist economy.

**Objective 15-** As mentioned previously we face challenges of more offshore wind farms to produce more renewable energy and reduce our ghg emissions, while increasing commercial fishing/saltwater angling which are important parts of **Cape Cod's "Blue Economy"**. The economic multiplier effect of fishing is important to coastal communities. Loss of our **"working waterfront"** to other non-water dependent uses has diminished the **Blue Economy** on Cape Cod and elsewhere in New England.

**Objective 16-** Since the MA FMC manages a number of forage species which are migrating into southern New England waters which provide lobster trap bait and support twin paired mid-water trawlers (with a buffer of up to 25 miles offshore being proposed for Cape Cod), providing a forage base for the marine food chain (subject of **EMaX research project** for the NE Continental Shelf Ecosystem) and protect river herring generated by wetland restoration projects on Cape Cod are major fishery management concerns locally. This is a complicated issue given the shift in prey and predators in space and time due to climate change which effects competition and recruitment of both managed fish species and natural populations. Forage species serve as prey for seabirds and marine mammals which can lead to bycatch/entanglement challenges which lead to marine fishing gear restrictions from the Endangered Species Act/Marine Mammal Protection Act (lobsters/NARWS) and EFH designations (NE Canyons & Seamounts National Monument).

Thanks for your consideration of these comments.

Dr. David Dow  
East Falmouth, Ma.

**From:** Jean Public jeanpublic1@yahoo.com

**Subject:** Re: public comment on federal register very disappointed that you dont outreach to enviro groups or to general public at all - they are underrepresented and they own the fish

**Date:** October 22, 2019 at 3:06 PM

**To:** contract@mafmc.org, michelleduval22@gmail.com, info@peta.org, info@idausa.org, info@cok.net, info@pewtrusts.org, information@sierraclub.org, info@greenpeace.org, scoops@huffpost.com, contact@thedodoc.com, info@nyclass.org, westchesterhumane@gmail.com

JP

i would like to be put on your list to receive from time to time any surveys you put out for public comment. it is clear that your surveys get to commercial profiteers but the general public and environmental groups are sadly ignored and blackballed from any comment. they should not be. they have comments on what is happening to the fish. they are all going extinct through regulatory capture of this agency by commercial fishing and recreational fishing groups. nobody else but them ever hears about this agency. that is a failure to the entire american public and keepign us all informed. failure to the grade of a f minus grad.

the u.s. public is the major stakeholder of all. they are the major major ones. we all own those fish. 328 million of us own those fish. and you dont make any effort to include the general public at all. you only want comment from profiteers in the fishing industry. your statement should include that we need and support and respect healthy fish. the communities with which you give such voice will allow the stealing and raping for their own selfish ends, leading to nothing for all who are not seabound communities.

a healthy ecosystem is free of drift fish nets that impale and kill whales dying in them day after day after day. fines should be levied to \$5 million on those who put out nets like that. if a whale dies in it \$5 million and you lose your fishing license. we need fines that count. allowing coastal communities to rape and pillage fish stocks is certainly not an attainable ecosystem at all. unfortunately, on the water observations are all about money, profiteering greed and are not fact situations at all. all users must include the welfare of the general public and that is of first importance. communication and outreach must include environmental groups and general public, both of which currently get zero information. this agencys regulatory capture by fish profiteers allow completely unscientific information to be used every single day.

ocean aquaculture is a dirty, polluting industry which produces dirty polluted water and diseased fish. it hurts wild populations immensely. we have endless escapes of such diseased fish into the wild meaning their diseases come with them. \rh

this agency should be working for all americans and not just for your hand picked alleged "stakeholders". the u.s. public is being screwed by this agency. you have absolutely zero comment from any environmental group interested in the ocean. not one single comment. you are doing biased communication since you pick out only profiteers to communicate with. this comment is for the public record. please receipt. jeanpublic1@yahoo.com

[Federal Register Volume 84, Number 204 (Tuesday, October 22, 2019)]

[Notices]

[Pages 56445-56446]

From the Federal Register Online via the Government Publishing Office [[www.gpo.gov](http://www.gpo.gov)]

[FR Doc No: 2019-22987]

-----  
DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XV111

Mid-Atlantic Fishery Management Council (MAFMC); Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

[[Page 56446]]

ACTION: Notice of public meetings.

---

SUMMARY: The Mid-Atlantic Fishery Management Council (Council) will hold two public webinars to solicit public comments on the Draft 2020-24 Strategic Plan.

DATES: The webinars will be held November 12, 2019, beginning at 6 p.m. and concluding by 8 p.m., and November 13, 2019, beginning at 10 a.m. and concluding by 12 p.m. Written comments must be received on or before 11:59 EST, November 15, 2019. For additional instructions for submitting written comments, see SUPPLEMENTARY INFORMATION.

ADDRESSES: The meetings will be held via webinar, which can be accessed at: <http://mafmc.adobeconnect.com/mafmc-strategic-plan/>. Meeting audio can also be accessed via telephone by dialing 1-800-832-0736 and entering room number 2122298.

FOR FURTHER INFORMATION CONTACT: Christopher M. Moore, Ph.D., Executive Director, Mid-Atlantic Fishery Management Council, telephone: (302) 526-5255.

SUPPLEMENTARY INFORMATION: The Mid-Atlantic Fishery Management Council has released its Draft 2020-24 Strategic Plan for public review and comment. The plan includes updated vision and mission statements and proposes five major goals to guide the Council's activities and management priorities for the next five years. Development of the plan was informed by public input provided through a survey and outreach meetings in early 2019. The Draft Strategic Plan is available on the Council's website at <http://www.mafmc.org/strategic-plan>. All interested stakeholders and members of the public are invited to provide comments on the draft plan. The Council will hold two public input webinars during which participants will have an opportunity to ask questions and offer public comments on the draft strategic plan. The webinars will be held on the following dates:

1. Tuesday, November 12, 2019 at 6 p.m.
2. Wednesday, November 13, 2019 at 10 a.m.

The webinars can be accessed at: <http://mafmc.adobeconnect.com/mafmc-strategic-plan/>. Meeting audio can also be accessed via telephone by dialing 1-800-832-0736 and entering room number 2122298.

Written comments may also be submitted by any of the following methods:

1. Online at <http://www.mafmc.org/comments/2020-2024-strategic-plan>



2. Email to [michelleduval22@gmail.com](mailto:michelleduval22@gmail.com)
3. Mail to Dr. Chris Moore, Executive Director, Mid-Atlantic Fishery Management Council, 800 North State Street, Suite 201, Dover, DE 19901
4. Fax to (302) 674-5399

Please include ``Strategic Plan Comments'' in the subject line if using email or fax or on the outside of the envelope if submitting comments by mail.

Comments must be submitted by Friday, November 15, 2019, 11:59 EST. The Council will review public comments and approve the final plan at its December meeting in Annapolis, MD.

#### Special Accommodations

These meetings are physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to M. Jan Saunders at the Mid-Atlantic Council Office, (302) 526-5251, at least 5 days prior to the meeting date.

Authority: 16 U.S.C. 1801 et seq.

Dated: October 17, 2019.

Tracey L. Thompson,  
Acting Deputy Director, Office of Sustainable Fisheries, National  
Marine Fisheries Service.

[FR Doc. 2019-22987 Filed 10-21-19; 8:45 am]

BILLING CODE 3510-22-P

**From:** Jean Public jeanpublic1@yahoo.com  
**Subject:** Re: Reminder: Strategic Plan Webinars November 12 & 13  
**Date:** November 12, 2019 at 5:55 PM  
**To:** Mid-Atlantic Fishery Management Council contact@mafmc.org, michelle.duval22@gmail.com



the bycatch was reported today by a commercial fisherman to be 23% that are thrown back in the ocean and he has a plan to donate that 23% to trinity church to feed the poor. first of all it is outrageous that you are allowing commercial fishermen in nj to overcatch 23% of all fish. that is outrageous and needs to be curtailed so that they dont take 23% of fish out of the ocean to kill them by throwing them back

secondly feeding fish to the poor may mean they are eating mercury and plastic since both are in the fish that are in the ocean. we had kim guadagno, mart mchughe and a mr winkler at a meeting today with a plan to donate fish to trinity. they are looking for a whole new process. first of all fish feel pain when killed. they dont want to die either.

this plan is unacceptable and i am writing to you to say i am against this plan pushed by marty mchugh and kim guadanoa. kjean upbliee jeanpublic1@yahoo.com

On Tuesday, November 12, 2019, 02:15:29 PM EST, Mid-Atlantic Fishery Management Council <contact@mafmc.org> wrote:

View this message in your [browser](#)



November 12, 2019

## ***Reminder!***

### **Strategic Plan Public Input Webinars November 12 & 13**

*Written Comments Due November 15*

The Mid-Atlantic Fishery Management Council will hold two webinars to gather public comments on the [Draft 2020-2024 Strategic Plan](#). The webinars will be held on the following dates:

- **Tuesday, November 12, 2019** at 6:00 p.m.
- **Wednesday, November 13, 2019** at 10:00 a.m.

To join the webinars, go to: <http://mafmc.adobeconnect.com/mafmc-strategic-plan/>. Audio connection instructions will pop up automatically when the webinar opens. Telephone-only access is available by dialing **1-800-832-0736** and entering room number **2122298#**.

The Draft Strategic Plan is available on the Council's website [here](#). The plan includes updated vision and mission statements and proposes five major goals, with associated objectives and strategies, to guide the Council's activities and management priorities for the next five years. Development of the plan was informed by public input provided through a survey and outreach meetings in early 2019.

through a survey and outreach meetings in early 2021.

### **Submit Written Comments**

Written comments may also be submitted by any of the following methods:

- **ONLINE** at <http://www.mafmc.org/comments/2020-2024-strategic-plan>
- **EMAIL** to [michelleduval22@gmail.com](mailto:michelleduval22@gmail.com)
- **MAIL** to Dr. Chris Moore, Executive Director, Mid-Atlantic Fishery Management Council, 800 North State Street, Suite 201, Dover, DE 19901
- **FAX** to 302.674.5399

Please include “Strategic Plan Comments” in the subject line if using email or fax or on the outside of the envelope if submitting comments by mail.

Comments must be submitted by **Friday, November 15, 11:59 EST**. The Council will review public comments and approve the final plan at its December meeting in Annapolis, MD.

For additional information and background documents, please visit [www.mafmc.org/strategic-plan](http://www.mafmc.org/strategic-plan) or contact Michelle Duval at [michelleduval22@gmail.com](mailto:michelleduval22@gmail.com) or 919-601-3798.

---

### **Mid-Atlantic Fishery Management Council**

[www.mafmc.org](http://www.mafmc.org)

800 North State Street, Suite 201, Dover, DE 19901

Phone: (302) 674-2331 | Toll-Free: (877) 446-2362 | Fax: (302) 674-5399

### **Manage Your Subscription**

This message was sent to [jeanpublic1@yahoo.com](mailto:jeanpublic1@yahoo.com) from [contact@mafmc.org](mailto:contact@mafmc.org)

Mid-Atlantic Fishery Management Council

800 N. State St. Suite 201

Dover, DE 19901

-----



**iContact**<sup>®</sup>  
TRY IT FOR FREE ▶

## Comments on Mid Atlantic Fishery Management Council STRATEGIC PLAN FOR 2020 – 2024

The Mid-Atlantic Council was established in 1976 by the Fishery Conservation and Management Act (later renamed the Magnuson-Stevens Fishery Conservation and Management Act, or MSA). The law created a 200-mile Exclusive Economic Zone (EEZ), eliminated foreign fishing effort within the EEZ, and charged eight regional councils with management of fishery resources in the newly expanded federal waters.

Draft Strategic plan for 2000 – 2024 must address why The Department of Commerce & the Department of State uses the National Marine Fisheries & the Council to make the U.S. 92% to 93% dependent on imported seafood! The strategic plan must reverse the policy by Philip Rondel director of NMFS in 1972 to make the agency resource oriented rather than user oriented” The former BCF had been user oriented.

**Question! Why does the Country WITH THE SECOND LARGEST EEZ IN THE WORLD IMPORT 92% TO 93% OF THE SEAFOOD CONSUMED IN THE COUNTRY? LET THE 2020 – 2024 STRATEGIC PLAN ADDRESS THIS SINGLE QUESTION!**

### **CONSIDER:**

The Strategic plan **MUST ADDRESS WHY NOAA & COMMERCE** DOES NOT HAVE TARIFFS ON IMPORTED SEAFOOD.

### **WHY COUNCIL WILL NOT ADDRESS IMPORTS?**

The paper uses Stewardship Why has the Council allowed regulations that allows imports 93% market share?

1. regulation that allow a closed season to allow imports market share.
2. Size regulations that allow smaller imports to fill a market void.
3. Regulations targeting larger females, thus reducing spawn, & long term breeding smaller slower growing species.

What stewardship reduces production of seafood while creating market share for imports? COUNCILS.

Integrity:: why does the Council write regulations that create **waste?**  
**WOULD NOT A POLICY OF TOTAL UTILIZATION OF ALL RESOURCE CAUGHT BE BETTER?** IS A strategic plan of waste acceptable?

Effectiveness: Have any management action been allow time to effect the species prior to regulatory change? Has Commerce, State, NOAA, NMFS, OR COUNCIL

EVER ALLOWED A REGULATION TIME TO PRODUCE RESULTS PRIOR TO IMPLEMENTING DIFFERENT REGULATIONS?

FAIRNESS, The Strategic plan must address the commercial fishing requiring to report with operator licenses, vessel permits log books & trip reports.

While NOAA NMFS Council will NOT REQUIRE RECREATIONAL TO REPORT WITH CELL PHONES!

80% of EEZ recreational fishermen return to private docks yet Council **does not require reporting, why?** Merfs could have required cell phone reporting and been fair, Why was mandatory reporting by recreational not mandated by NMFS, Council? STRATEGIC PLAN COULD ADDRESS THIS!

Transparency does not exist! When the science Center produces a report, if precaution is added it is not documented, the plan development team does not document caution added to it's report, when the advisors vote on the report or ask that total length to retain fish with no discarding The Council staff states **NOTHING IS ALLOWED! To be added by advisors,** Transparency is not allowed in the strategic or any other document.

Communication: Out Reach does not reach the fishermen, how many bank or bridge fishermen attend the meetings? The communication to them is in the terms of acronyms that most do not understand, the Council uses acronyms like the Catholic church used Latin to keep the public in the dark!

The strategic plan should prevent the use of acronyms in all Council Documents!

**SCIENCE?** The Council So Called science: Missed the dogfish population by 80%. The Science forced the council to basically stop dogfish fishing. The strategic plan should insist the science be asked why it directs the Council to make fishermen fish on large female fish. The science should be asked why it has never suggested stock enhancement of faster maturing fish as part of a strategic plan. Science should be asked the value to science of discarding small salable fish? Science in the strategic plan could suggest other reasons for fish population declines. {weakfish as an example} oh not a Council species so not council science} Instead of always over fishing. Perhaps science should investigate the effects of pharmaceuticals on fish reproduction in this strategic plan! Perhaps the strategic plan could have science list five other things to do before reducing harvest by fishermen as a goal for the strategic plan. Management: should review if any management plans have been allowed time to show results in the fish population before being changed at the suggestion of best science.

Management: under the Strategic plan should be asked!

Why does the Country with the second largest EEZ in the World import 92% to 93% of the seafood consumed in the Country?

ANSWER: Mismanagement by U.S. Department of Commerce, U.S. Department of State NOAA National Marine Fishery Service and the Council, in 43 years seafood production has only declined from what production was prior to Magnuson Act under incorrect management. The ecosystem: Has been changed by management; dogfish make up 70% of the biomass due to science being incorrect,  
Will This strategic Plan Change this?

The strategic plan should be to produce fish for food and economic value.  
James Fletcher as individual opinion 123 Apple Rd. Manns Harbor NC 27953

**From:** Mike Waine mwaine@asafishing.org  
**Subject:** Strategic Plan Comments  
**Date:** November 15, 2019 at 6:53 PM  
**To:** michelleduval22@gmail.com



Hi Michelle,

This is a very thorough strategic plan and has many objectives and strategies that are directly in line with comments made today at the MSA listening session. I have a question, which may be a comment. How will the Council track the progress of the goals and objectives laid out in the strategic plan? I'm assuming it is through an annual planning process, but I wanted to make sure that there was a mechanism in place that allows the council to continue to reflect on this strong strategic plan as they navigate the everyday challenges of fisheries management in the Mid-Atlantic. The point I'm trying to make is I think it will be important to continually assess progress towards the goals of the strategic plan, and I think stakeholder input and engagement as part of that will be important.

Thanks,  
MW

---

Michael W. Waine  
Atlantic Fisheries Policy Director  
American Sportfishing Association  
Phone: 508-221-5508  
Email: [mwaine@asafishing.org](mailto:mwaine@asafishing.org)



**Mid-Atlantic Fishery Management Council**

800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | [www.mafmc.org](http://www.mafmc.org)  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 25, 2019  
**To:** Council  
**From:** Brandon Muffley, Staff  
**Subject:** 2020-2024 Comprehensive Research Priorities Document – Meeting Materials

The Council will review and finalize the 2020-2024 Comprehensive Research Priorities document on Monday, December 9, 2019. Materials listed below are provided for Council consideration of this agenda item.

*Materials behind the tab:*

1. November 22, 2019 Research Steering Committee meeting summary, recommendations, and motion
2. Draft 2020-2024 Comprehensive Research Priorities document





## Research Steering Committee

### Meeting Summary

November 22, 2019

**Research Steering Committee Member Attendees:** L. Nolan, S. Heins (Committee Vice-Chair), P. deFur, A. Nowalsky (Committee Chair), T. DiLernia, K. Wilke, C. Batsavage

**Additional Attendees:** B. Muffley (Council staff), M. Seeley (Council staff), T. Miller (SSC), G. Giancesin (NEFSC)

The Research Steering Committee met via webinar on Friday, November 22, 2019 to review and provide feedback on the Council's draft Five-Year (2020-2024) Research Priorities document. The draft document has been re-organized and prioritized based on feedback and input from the Council's Scientific and Statistical Committee (SSC), Monitoring Committees and Advisory Panels. The Council reviewed an initial draft of the document at their October 2019 meeting. Since the October meeting, the document was updated to incorporate Council feedback and the comprehensive list of research priorities for all Council-managed species was completed.

Council staff gave a short presentation on the broad research themes, the new organization and prioritization of the document, the process and development of the species-specific priorities list, future reviews and revisions to the document, and the potential development of a comprehensive research plan. The Committee then reviewed and discussed each section of the document and offered the following suggested edits and modifications to the draft document:

- **Research priority themes**
  - Add additional language to the ecosystem/EAFM and/or climate change themes to ensure they are not limiting and can address a variety of climate-induced impacts that have biological, socioeconomic, or management implications (e.g., invasive species, parasites etc.).
  - Augment the title and descriptive information of the recreational data collection theme to include utilization and evaluation of recreational data. The Committee also recommended including a reference to the recent NMFS announcement regarding the formation of a recreational electronic reporting task force given the potential application to this theme.

- Add additional descriptive language under the social and economic data theme about the need to work collaboratively with industry in collecting the appropriate information and demonstrating the benefits and utility in providing this sensitive information.
- **Species-specific priorities list**
  - In the introduction section (page 9), add some language to clarify the term “scale” (used as a descriptor for the priority categories – small scale and large scale) is not intended to reference spatial/geographic scale but refers to the size and scope of a particular priority.
  - Add a long-term/larger scale research priority under the General/Cross-Species priorities list that would evaluate and monitor changes in stock distribution for all managed-species. Similar priorities are included for some species (e.g., black sea bass), but the Committee noted the importance of this issue for all species and provides a connection to the climate change and species distribution broad research priority theme.
  - Add a short-term/smaller scale priority under the Bluefish priorities list that would enhance the data collection of recreational discard lengths and weights to develop a more reliable recreational discard estimate in weight.
  - Modify research priority #51 (re-numbered #53) under the long-term/larger scale research priorities list for Chub Mackerel to remove the word “U.S.” and add “as applicable” to the end of the priority. These changes are intended to allow for Chub Mackerel information and research throughout their range in the Atlantic Ocean be considered.
- **Future direction**
  - The Committee suggested providing additional information for each species-specific priority that indicates which broad research priority theme(s) is being addressed. Providing this information helps link the broad themes to the species-specific priorities to help ensure the identified research addresses the Council’s larger priority themes. Given the time needed to complete this task, the Committee suggested adding new language to this section to indicate this will be completed as part of the first biennial update to the species-specific research priorities.

Following the discussion of the document and the suggested modifications, the Committee made the following motion:

*Move that the Council approve the Five-year (2020-2024) Research Priorities document as modified by the Committee today (deFur/Nolan). Motion passed by unanimous consent.*

The draft research priorities document included in the December 2019 Council meeting briefing book has been updated to reflect the suggested modifications made by the Committee and those edits are highlighted in **yellow**.



Mid-Atlantic Fishery Management Council  
Comprehensive Five Year (2020 – 2024) Research Priorities

Draft Priorities

December 9, 2019

Annapolis, Maryland

## Introduction

---

The 2006 reauthorization of the Magnuson-Stevens Act (MSA) required that each federal Council develop a five-year research priorities document. The research priorities developed by the Council should address “fisheries, fisheries interactions, habitat and other areas of research that are necessary for management purposes.” NOAA Fisheries and the regional science centers are to consider these research priorities when developing their own research priorities and budgets within the region of the associated Council(s).

The Mid-Atlantic Fishery Management Council (Council), in coordination with the Scientific and Statistical Committee (SSC), completed its first research priorities plan in 2008. That plan was primarily informed by reviewing research recommendations within the various stock assessment documents and the Council’s Research Set-Aside Program. The current version of the research plan (2016 – 2020) was approved in 2015 and the Council’s Visioning Project and Strategic Plan played a critical role in developing and identifying key themes and elements contained in the document. The current five-year research priorities document runs through 2020; however, the Council agreed to update the research plan early in order to align with and be informed by the development of the Council’s next Strategic Plan (2020-2024), the new 5-Year Cooperative Agreement and other Council priorities and guidance documents.

Throughout 2019, Council staff solicited input on existing research priorities and potential new priorities from the Advisory Panel, Monitoring Committee and SSC for each species/FMP as part of the fishery specification review process. The staff lead and NEFSC assessment lead then reviewed all of the species-specific input received and provide recommendations for Council consideration. The SSC also provided extensive feedback and input regarding existing and potentially new research priority themes.

The 2020-2024 comprehensive research priorities document begins with a review of the current priorities document to evaluate the use and utility of the document to the Council and its regional partners. Updated research themes are then included that incorporate SSC input and stakeholder feedback received during the current Strategic Plan development. Revised and re-prioritized species-specific research lists for Council-managed species are then provided. Lastly, short- and long-term strategies and approaches to improve the documents effectiveness are provided, including a review process to track research priority progress and the future direction of a comprehensive research and implementation plan.

## Review of Current Five-Year Research Priorities

---

As mentioned above, the MSA specifies the Council develop a list of research priorities and those lists be provided to NOAA Fisheries and the NMFS Northeast Fisheries Science Center (NEFSC) to help inform science and budgeting needs and priorities for the region. However, there is little information or understanding as to how these research priority documents have been utilized by the Council and the NEFSC in allocating resources to address the identified science and management priorities. Understanding the utility and applicability of this document may be particularly important to understand given potential differences in overall science goals, objectives, and time/funding scales between the Council and NEFSC. These differences were noted by the SSC at their March 2019 meeting and they questioned how the plan is used by the Council and the NEFSC to inform priorities for funding and requested information on what research priorities in the current plan were addressed and if any of the research was used within the management process.

A review of Mid-Atlantic Council supported scientific and management projects from 2015 – 2018, not including any Research Set-Aside projects, was conducted to evaluate the use and utility of the current research plan (Table 1). During this time period, the Council supported 21 different projects covering all six

fishery management plans (FMPs) and nine different species. These projects covered a wide range of topics including biological information, survey data, stock assessments, social and economic trade-offs and management strategies. Council staff reviewed each project to determine if the project was identified in the current five-year research plan and whether or not it was used to help inform a stock assessment or management. Based on the staff review, the results indicate relatively high overlap of the research priorities plan to inform Council supported projects. Of the 21 total projects, 14 projects (67%) addressed specific research priorities (10) or addressed aspects of the priority themes (4) that are identified in the current research plan. When considering the applicability of the projects, the results are even greater. Over 90% of the projects (19 of the 21) have been, or likely will be in the future, used to support or inform a stock assessment or management action. While the results show high applicability of Council supported projects to inform stock assessments and management, how the current research priorities document was utilized by the Council and staff to inform priority projects and resource allocation is unclear. In 2016-2017, the Council's Collaborative Fisheries Research Program utilized the current five-year research priorities document to identify general specific research priority categories in the RFP and ultimately funded four projects specifically listed under the different species/FMP research needs. How the current five-year plan was used to inform and identify other Council supported projects (10 projects) is not as straightforward. Identifying and prioritizing these projects was largely driven by emerging issues and needs to inform a specific stock assessment or management question, but the research priorities document was not specifically considered.

A comprehensive evaluation of the utility and use of the research plan by the NEFSC is difficult to conduct and is not included here. However, the NEFSC 2016-2021 Strategic Plan<sup>1</sup>, the FY2020 Annual Guidance Memo<sup>2</sup>, and the 2020-2023 Greater Atlantic Region Strategic Plan<sup>3</sup> include a number of research and science priorities that align with the broad research themes and needs identified in the Council's current five-year priorities document. Common priorities between the Council, NEFSC, and NEFSC/GARFO plans include: improving fishery data collection through increased use of electronic technologies, incorporation of ecosystem level information into stock assessments, improving stock assessment information, modelling approaches and capacity, and increased utilization and incorporation of social and economic information into the management process.

THIS SPACE INTENTIONALLY LEFT BLANK

---

<sup>1</sup> The 2016-2021 Northeast Fisheries Science Center Strategic Plan can be found at: <https://nefsc.noaa.gov/rcb/stratplan/>

<sup>2</sup> The FY2020 Annual Guidance memo can be found at: <https://nefsc.noaa.gov/rcb/stratplan/agm-fy20-final.pdf>

<sup>3</sup> A presentation outlining the strategic goals of the 2020-2023 Northeast Regional Plan can be found at: [https://s3.amazonaws.com/nefmc.org/14a.-190531\\_Strat-Plan-Presentation.pdf](https://s3.amazonaws.com/nefmc.org/14a.-190531_Strat-Plan-Presentation.pdf)

**Table 1.** Summary of Mid-Atlantic Fishery Management Council supported projects from 2015-2018 used to support science and management needs.

Project Title (Year Started)	Primary Species/FMP	From 5-year research plan (Y/N)	Used in Assessment and/or Management (Y/N)
Acceptable Biological Catch (ABC) Control Rule and Risk Policy Management Strategy Evaluation (2017-2018)	Omnibus	Y	Y - Management
Surf clam species diagnostics and population connectivity estimates to inform management (2018)	SCOQ	N	Possibly Yes in future
Summer Flounder Recreational Management Strategy Evaluation (2018)	Summer Flounder	Not specific research item but related to issues addressed in introduction	Likely Yes in future
Summer Flounder Commercial/Recreational Allocation Model (2016)	Summer Flounder	Y	Y - Management
Summer Flounder Commercial/Recreational Allocation Model Update (2018)	Summer Flounder	Y	Likely Yes in future
Summer Flounder Recreational Measures Model (2015)	Summer Flounder	N	N
Estimating and mitigating the discard mortality rate of black sea bass in offshore recreational rod-and-reel fisheries (2016)	Black Sea Bass	Not specific research item but related to issues addressed in introduction	Not yet
Determining Selectivity and Optimum Mesh Size to Harvest Three Commercially Important Mid-Atlantic Species (2016)	SF/S/BSB	Not specific research item but related to issues addressed in introduction	Y - Management
Collaborative development of a winter habitat model for Atlantic Mackerel, version 2.0, for the identification of "cryptic" habitats and estimation of population availability to assessment surveys and the fishery (2016)	Atlantic Mackerel	Y	Y - Management
Changes in availability of Mid-Atlantic fish stocks to fisheries-independent surveys (2016)	SF/BSB/Spiny Dogfish	N	Not yet
Fisheries-independent pilot survey for golden ( <i>Lopholatilus chamaelonticeps</i> ) and blueline ( <i>Caulolatilus microps</i> ) tilefish throughout the range from Georges Bank to Cape Hatteras (2017)	Golden Tilefish and Blueline Tilefish	Y	Y - Management

Developing and Testing Stock Assessment Models for Black Sea Bass Using Stock Synthesis (2016)	Black Sea Bass	Y	Not directly, support for primary assessment model
Black Sea Bass Habitat Research Needs in the Mid-Atlantic (2017)	Black Sea Bass/Habitat	N	N?
Evaluating the Importance of Chub Mackerel in HMS Diets (2018)	Chub Mackerel	N	Not yet
A Genetic-based Investigation of Blueline Tilefish: Development of molecular markers and an assessment of stock structure and connectivity (2015)	Blueline Tilefish	Y	Y - Both
Blueline tilefish biological sample collection (2016)	Blueline Tilefish	Y	Y - Assessment
Atlantic mackerel stable isotope analyses (2017)	Atlantic Mackerel	Y	Y - Assessment
Blueline Tilefish DLM Toolkit - ABC Recommendations (2017-2018)	Blueline Tilefish	N	Y
Delphi Process - Blueline Recreational Catch (2016)	Blueline Tilefish	N	Y
Mackerel Quota DLM/MSE (2017)	Atlantic Mackerel	Y	Y
Implementing Electronic Logbook Reporting for Mid-Atlantic For-Hire Fisheries (2016 - 2017)	Omnibus / Recreational Fisheries	Not specific research item but one of major themes	Y - Management

## Research Priority Themes

Similar to the approach taken with the 2016 – 2020 Research Priorities document, key research themes are included to address broad concepts that cut across a number of Council-managed species. These themes are also responsive to input received during the Council’s development of the updated (2020 – 2024) Strategic Plan regarding the data and science used in the management process. For example, the updated Strategic Plan revises the Council’s Science goal to address public input on data accuracy and credibility and the use of collaborative research in the science and management process. The Science goal, *ensure that the Council’s management decisions are based on timely and accurate scientific information and methods*, focuses on the core of the Council’s mandated science-based decision-making process. In addition, the updated Strategic Plan now includes an Ecosystem goal that specifies the Council *support the ecologically sustainable utilization of living marine resources in a manner that maintains ecosystem productivity, structure, and function*. This goal seeks to address a wide range of Council issues related to climate change, forage, habitat, species interactions, and other factors that impact the health of the marine ecosystem. These research priority themes are directly related to and support a number of the Science and Ecosystem objectives and strategies identified in the updated Strategic Plan. Aligning the Council’s research priorities with the Strategic Plan will help ensure consistency, appropriately prioritize Council resources, and improve coordination of science and management efforts throughout the region.

### **Stock assessment improvement**

Improvements to the data and analysis supporting the stock assessment process was identified as the Council’s top priority in the 2016 – 2020 research priorities document and the SSC strongly recommended the continued focus on stock assessment improvements in this edition as well. Significant stock assessment

improvements have been made for a number of Council managed species including black sea bass, ocean quahog, Atlantic surfclam, and summer flounder. A major focus of the current document was for all Council-managed species to have a quantitative assessment. While not all species have a quantitative framework, Atlantic mackerel now has an approved benchmark assessment with fishing and biomass proxy reference points, and *Illex* squid is scheduled for a research track assessment in the fall of 2021. However, since the implementation of the current research document, the Council has added two more species (blueline tilefish and chub mackerel) to its list of managed species responsibilities, neither of which has acceptable quantitative stock assessments. The Northeast Region Coordinating Council (NRCC) recently approved a new stock assessment process that makes assessments more flexible, increases research opportunities and establishes a long-term assessment schedule. This process will provide for applied stock assessment research, more timely stock assessment information, and should provide for significant advancements in the regions stock assessment capabilities and capacity.

While advancements have been made and new information obtained (see Table 1 for examples), continued focus and advancement of data collection programs that improve size/age composition of the catch, discard estimates and associated mortality rates, and fishery independent abundance information remains a priority. Feedback obtained during the development of the new Strategic Plan also highlight the need for continued science-based industry collaboration and increased utilization of fishing fleet information and on-water observations. In addition, building off the efforts in the recent summer flounder benchmark that included the development of the Ecosystem Context for Stock Assessment report, continued development and inclusion of ecosystem factors and environmental covariates in stock assessments remain a priority.

#### ***Research to support measures which reduce/eliminate discards***

Obtaining accurate discard information and the management challenges to reduce regulatory discards remain, particularly within the recreational sector. Stakeholder feedback during the development of both strategic plans and during many Advisor Panel meetings focus on the need significantly reduce discards and develop new management strategies to convert regulatory discards into harvest to provide both economic and biological benefits. Reducing regulatory discards through improved gear performance, and the development of management procedures and approaches to allow for greater retention of catch or the avoidance of unmarketable, sub-legal or otherwise prohibited species should continue to be explored.

The Council has supported a variety of discard related projects (see Table 1), primarily in the summer flounder, scup and black sea bass fisheries. However, findings from those projects have yet to directly change management approaches and additional research, data collection and management strategies are needed. In addition, there is a need for continued focus on collaborative research opportunities with both commercial and recreational vessels to evaluate gear selectivity, discard mortality estimates, and innovative management strategies to avoid and minimize discards.

#### ***Collect and incorporate social and economic data into fishery management decision process and stabilize yields***

The continued collection, analysis, and increased utilization of social and economic information in the Council's decision process remains a high priority for the Council and stakeholders. While the Council has been successful in meeting the biological mandates of the MSA, the resulting social and economic consequences have been viewed as unnecessarily severe by both commercial and recreational stakeholders. Unfortunately, basic information on the number of fishermen and their permits, the associated costs to determine profitability of vessels in a port, and how profits change with regulatory changes, is often limited.



Over the last several years, the Council initiated or implemented a number of socioeconomic related policy and management actions. One policy within the Council's EAFM guidance document is to evaluate ecosystem-level trade-offs, including social and economic considerations. The Council has made significant EAFM advancements including the completion of an EAFM risk assessment which identified 12 different social and economic risk elements that may threaten achieving the social and economic objectives the Council may have for its fisheries. Building off the results of the risk assessment, the Council is currently piloting the development a summer flounder conceptual model that will consider the biological, socioeconomic, and management high priority risk elements affecting summer flounder and its fisheries. Once complete, the Council will consider conducting a comprehensive management strategy evaluation (MSE) to answer management questions and objectives identified from the conceptual model which may focus on social and economic targets, thresholds, and trade-offs. Development of MSE approaches for its managed species, with particular focus and inclusion of socioeconomic considerations, remains a high priority.

Beyond EAFM related activities, the Council is considering potential changes to its risk policy to more fully account for economic objectives. Utilizing the results of two different MSE projects, the Council evaluated nine different risk policy alternatives that consider both biological and economic impacts and trade-offs. For the future, the Council has expressed interest in explicitly including both biological and economic factors in the risk policy and the potential development of a forage-based specific risk policy. Additional data collection programs and quantitative modeling approaches need to be conducted to more comprehensively evaluate the biological and socioeconomic implications of these risk policy modifications.

In addition, the Council recently approved changes to the acceptable biological catch (ABC) control rule to allow for constant, multi-year ABCs using the average ABCs (or average risk of overfishing) to provide for management and fishery stability (a goal identified in the 2016 – 2020 research priorities document). However, the social and economic implications and trade-offs of this approach have not been conducted.

A recent joint Council-SSC meeting primarily focused on increased capacity and utilization of the SSC to provide needed social and economic science information to the Council, highlighting the continued importance and prioritization of this theme. The SSC recommended the Council, working with GARFO, begin to incrementally implement reporting and recordkeeping requirements throughout its FMPs to collect basic social and economic data.

The majority of the social and economic information available is collected through voluntary surveys with permitted vessels, dealers, and processors. Participation in these voluntary surveys has declined for many Mid-Atlantic fisheries, resulting in less socioeconomic information available to understand and evaluate changes in fleet dynamics and profitability. New or additional data collection programs need to be developed in collaboration with the fishing industry to help ensure buy-in and trust in providing this type of information. Highlighting the need, utility, and benefits of providing this information can help alleviate some industry concerns and promote support for these types of data collection efforts.

### ***Evaluation of existing allocations to fishery sectors***

A number of Council managed species allocate the ABC by fishery sector and, in some cases, by state. The fairness, equity and overall management structure of many of the current allocation scenarios have been questioned by stakeholders and fishery managers. In addition, stakeholders have noted the general inflexibility of the fixed quota allocation system currently in place and recommended that the Council consider alternative methods to allocate annual quotas. Changing species distributions, stock productivity

and the recently updated Marine Recreational Information Program (MRIP) catch timeseries have only added to the desire to reconsider current allocation scenarios. The EAFM risk assessment results indicated “allocation” was a high risk element for 12 of the Council’s fisheries and/or sectors, the most of any risk element considered. Recent Council actions (e.g., Summer Flounder Commercial Issues Amendment) have tried to address allocation issues, but not all stakeholders have been supportive of the efforts to date and many more allocation decisions remain. Therefore, there remains a strong need to identify methods and analyses (e.g., management strategy evaluation and scenario planning) that help identify alternative management strategies and determine optional allocation options that incorporate biological, social and economic considerations.

### ***Recreational data collection and utilization***

The SSC recommended the Council include recreational data collection as a priority research theme in the updated research priorities document. The incorporation of the new MRIP recreational catch timeseries into stock assessments and the implications within the management system are just beginning to be considered and addressed by the Council. The SSC noted the inclusion of the new MRIP catch timeseries and the differential catch trends among Council managed species introduces an important new source of scientific uncertainty. The recent passing of the Modernizing Recreational Fisheries Management Act of 2018 adds to the uncertainty of recreational fisheries management but may also provide for opportunities to collect new/additional information and dedicate resources to improving management approaches for recreational fisheries. For example, Sections 201 and 202 of the Act require increased incorporation of various recreational data sources and an evaluation of alternative data collection methods (e.g., smart phone apps and other electronic reporting options). In addition, the NOAA Fisheries recently announced the formation of a recreational electronic reporting task force to help in the development and advancement of electronic data collections programs. Outcomes from this task force could compliment any Council recreational data collection initiatives.

This theme also looks to not only advance new and additional recreational data collection programs to support Council activities, but to also develop new and alternative methods to evaluate and incorporate recreational data into the management process. Approaches such as the use of management strategy evaluations for example, to improve management approaches for the use of recreational data should be perused.

### ***Collect ecosystem data and development of ecosystem tools and management strategies to support EAFM initiatives***

The Council’s 2020-2024 Strategic Plan, the 2016-2021 NEFSC Strategic Plan and the 2020-2023 Greater Atlantic Region Strategic Plan all include a focus on ecosystem science as a major goal, theme or strategy. There is broad support for the continued collection of ecosystem-level climate, habitat, fleet dynamics, and species interaction information to help improve our understanding on the current and anticipated impacts of climate change on the region’s fisheries and the broader marine ecosystem. Advances in scientific information and understanding will lead to the continued improvement, development, and utilization of ecosystem tools, products, and processes such as the Integrated Ecosystem Assessment, State of the Ecosystem reports, and the Climate-Ready Fisheries Management, respectively. The future success of the Council’s EAFM process relies on the continued support of these activities and requires the investment in ecosystem science and data collection, analytical tools, and management strategies.

### ***Climate change impacts on stock productivity and distribution shifts***

Climate-related changes in the Mid-Atlantic have already been widely observed and documented by fishermen, managers, and scientists. These changes in the environment have led to shifts in stock distributions, possible changes in stock productivity and have the potential to impact the Council's ability to effectively manage these resources. Climate induced changes to ocean acidification, food web dynamics, and habitat can also affect growth, natural mortality, and fecundity which can also have implications for stock productivity. While this research theme is embedded in a number of the other included themes (e.g., stock assessment, socioeconomic considerations, allocation and EAFM initiatives), the SSC recommended it be a stand-alone theme given the importance of this issue and its linkages to other research and management priorities. Incremental scientific advances under this theme can inform efforts and activities under other priority themes. NOAA Fisheries recently released a technical memo<sup>4</sup> outlining a six-step science-management process to incorporate, account for and respond to changing climate conditions and the impacts to fisheries. Enhanced data collection programs to detect change and the development of short/mid-range distribution forecast models to understand the drivers and magnitude of change and the associated biological and management risks are critical research needs. Developing management strategies and governance structure options through MSE simulation, scenario planning and/or structured decision making are necessary to create adaptive approaches to respond to continually changing conditions and risks.

### Species Specific Priorities List

---

The 2016 – 2020 species-specific research priorities were primarily derived from the research needs identified by the SSC and the stock assessment workgroup following the most recent benchmark stock assessment for a specific species. A broader and more comprehensive process to solicit input on research priorities was undertaken for this document. Input on current and new priorities was provided by the Advisory Panel, Monitoring Committee, and the SSC as part of the specification review/setting process for each Council-managed species. Staff then worked with the Council species lead and the NEFSC assessment lead to review all input received, as well as the research priorities identified in the benchmark stock assessment reports and SSC meeting reports, to develop a revised list of species-specific research priorities. It is important to note that these lists are not meant to be exhaustive and cover every issue, science need or management topic that has been raised for a particular species. These lists are meant to focus on some of the more critical and important areas of consideration to advance science, stock assessment approaches and results, and improve management outcomes.

In addition, a different organizational and prioritization approach for the species-specific priorities list was developed for this document. Draft research priorities are now separated into two different categories, short-term/smaller scale and long-term/larger scale projects. Within each category, the different research topics are then listed in priority order. This type of approach was suggested by the SSC and is meant to reflect the different end users of this document – the Council, the NEFSC and other science partners – and to devise a document that is both tactical and strategic in addressing the most important research and science needs for effective management by the Council. The short-term/smaller scale priorities provide a tactical approach to answer specific scientific and management questions, particularly when limited resources (i.e., funding, expertise and staff) are available. . It should be noted that the use of the term “scale” to describe and categorize priorities does not refer to spatial or geographic scale, but references the size and scope of a

---

<sup>4</sup> Karp, M.A. et. al. 2018. Accounting for Shifting Distributions and Changing Productivity in the Fishery Management Process: From Detection to Management Action. U.S. Dept. of Comm, NOAA. NOAA Technical Memorandum NMFS-F/SPO-188, 37 p. <http://spo.nmfs.noaa.gov/tech-memos>

particular priority. A short-term/smaller scale priority could be large in spatial/geographic scale but focus on a specific question in which data collection and research could be completed in a short period of time with less resources needed to complete. These priorities are where the Council would likely focus its attention and are the types of projects the Council has typically supported in the past when opportunities are available. Addressing these short-term/small scale projects can lead to incremental advances in support of long-term/larger scale priorities. These priorities are more strategic and seek to address larger concepts and issues that likely require significant resources over an extended period of time. This approach allows the Council, NEFSC and other partners to leverage resources, for example matching funds and technical expertise, to identify funding opportunities to address these larger projects. The SSC also indicated they could provide this type of information (i.e., short/smaller versus long/larger) when developing research priorities during the ABC setting process.

Below is the updated comprehensive list of research priorities for each Council-managed species. In addition to the species-specific lists, there is also a list of research priorities that are more general and/or have applicability across several or all Council-managed species. For example, priorities related to habitat, socioeconomic information, allocation strategies and stock structure dynamics are topics that are covered in this section. As mentioned above, these lists are organized by short-term/smaller scale and long-term/larger scale projects and are in priority order under each grouping.

THIS SPACE INTENTIONALLY LEFT BLANK

# Comprehensive list of research needs for Mid-Atlantic Council managed species

## GENERAL OR CROSS-SPECIES

### SHORT-TERM/SMALLER SCALE

1. Investigate stock structure utilizing otolith microchemistry and other genetic analyses for different Mid-Atlantic stocks (e.g., golden and blueline tilefish, black sea bass, Atlantic mackerel, and surfclam).
2. Understand the objectives and performance measures for the fishery from a biological and socioeconomic perspective, to evaluate the balance of costs and benefits of ABC specifications (e.g., variable vs. average ABC).
3. Explore the utilization of local ecological knowledge to help characterize and understand fisheries habitat change over time to help identify areas of greatest need of protection.
4. Create a framework to improve social science information regarding crew employment, remuneration and job satisfaction for all Mid-Atlantic fisheries.
5. Evaluate the potential impacts of offshore wind development on habitats and productivity of Council-managed stocks.
6. Evaluate the relationship between changes in landings limits and the rates and magnitude of discarding in the commercial and recreational fisheries.
7. Evaluate the use of samples collected by the industry study fleet for all Mid-Atlantic stocks.

### LONG-TERM/LARGER SCALE

8. Monitor changes in distribution for all Mid-Atlantic species and evaluate implications for stock productivity.
9. Collect accurate size and age composition of commercial and recreational catch (including the discarded component of the catch) to develop or improve catch at age matrices for all managed stocks.
10. Incorporate ecosystem level data (predator/prey interactions, trophic dynamics, etc.) into single and multi-species assessment and management models.
11. Investigate potential sector and region allocation changes and adaptive management strategies to respond to changing environmental conditions.
12. Develop tools to collect representative economic information on fixed and variable trip costs to understand fleet profitability for all Mid-Atlantic fisheries.
13. Evaluate potential socio-economic impacts of offshore wind development on Council-managed fisheries, including changes in fishing behavior, changes in the distribution of fishing effort, changes in revenues, and differential impacts on commercial and recreational fisheries.
14. Implement novel supplemental surveys to derive fishery independent indices of abundance (black sea bass, blueline tilefish, Atlantic mackerel).

## ATLANTIC MACKEREL

### SHORT-TERM/SMALLER SCALE

15. Investigate stock structure and spawning components through additional otolith microchemistry and/or genetic projects.
16. Continue to collect and evaluate mackerel egg data (ECOMON survey).

### LONG-TERM/LARGER SCALE

17. Develop methods for using acoustics to determine Atlantic mackerel abundance and/or catchability.
18. Initiate a reproductive study in the U.S. to obtain fecundity estimates and spawning seasonality. Update Canadian fecundity estimates (which are currently based on a 1986 publication) and compare estimates between countries.
19. Obtain biological samples from all components of the fishery and covering both spawning contingents.
20. Investigate possible growth and maturity differences between spawning contingents.

21. Continue to pursue modeling approaches that explicitly account for the spatial structure of the stock (i.e. two spawning contingents).
  22. Explore potential changes in environmental conditions (habitat changes, larval diets, cannibalism, etc.) that impact larval survival and recruitment.
- 

## BLACK SEA BASS

### SHORT-TERM/SMALLER SCALE

23. Increase sea sampling in both stated and federal waters to verify information from commercial logbooks to provide better estimates of discards (with emphasis on pot trap and hook and line gear).
24. Evaluate the implications of continued ABC overages on stock projections.
25. Utilize a management strategy evaluation to consider alternative allocation schemes.
26. Continued evaluation of the appropriateness of the current model structure with two spatial sub-units.

### LONG-TERM/LARGER SCALE

27. Investigate movement rates and cues within the population, and spatial patterns in growth, recruitment, and mortality.
  28. Investigate the impact of a changing environment due to climate change on the life history and spatial dynamics of the stock and fisheries.
  29. Develop a reliable fishery independent index for black sea bass for habitats not effectively sampled with existing methodologies.
- 

## BLUEFISH

### SHORT-TERM/SMALLER SCALE

30. Enhance the data collection of recreational discard lengths and weights to develop a more reliable recreational discard estimate in weight.
31. Evaluate species associations with recreational angler trips targeting bluefish to potentially modify the bluefish recreational CPUE index used in the assessment.
32. Evaluate methods for integrating disparate indices produced at multiple spatial and temporal scales into a stock-wide assessment model.
33. Evaluate changes in selectivity of age-0 bluefish in fishery independent surveys due to shifting environmental conditions. Investigate trends in recruitment.
34. Conduct a post-release mortality study to determine if the recreational discard mortality rate has changed over time.
35. Investigate the assumption of zero discards in the commercial fishery.

### LONG-TERM/LARGER SCALE

36. Develop a fishery independent index and/or fishery dependent sampling program of offshore populations of bluefish to capture larger, older fish.
  37. Investigate how environmental variability may affect timing of migration patterns of juvenile Bluefish and the distribution of adults, which in turn, may affect availability.
- 

## BLUELINE TILEFISH

### SHORT-TERM/SMALLER SCALE

38. Identify data sources and sampling methods to improve the biological length samples of commercial and recreational landings to better characterize the size distribution of removals.
  39. Incorporate mandatory logbook reporting for all recreational anglers and collect fishery-dependent information such as effort, total catch and length information on harvested and discarded fish.
-

40. Collect additional biological samples to enhance understanding of life history dynamics and biological characteristics of the stock (e.g., age and size of maturity, maximum age, fecundity, spawning periods).

---

#### **LONG-TERM/LARGER SCALE**

---

41. Research the reliability of aging methods and determination of growth parameters (e.g. intensive tagging survey). Collect additional age information from the commercial and recreational sectors.

42. Investigate new stock assessment approaches, including non-equilibrium methods, should be explored.

43. Conduct habitat studies of deep-water sites in the mid-Atlantic (Norfolk Canyon, Baltimore Canyon, and Hudson Canyon).

---

### **BUTTERFISH**

---

#### **SHORT-TERM/SMALLER SCALE**

---

44. Examine the efficiency (including day vs. night) of survey gear and potential changes in butterfish catchability including a parallel catchability estimate for NEFSC Spring surveys so that both Spring and Fall surveys can be included in the model.

45. Evaluate approaches to include additional surveys, e.g., from States, in the assessment model.

46. Evaluate the uncertainty in the ad hoc  $F_{MSY}$  proxy and effects on catch advice.

47. Consider development of reference points that are internal to the stock assessment model.

---

#### **LONG-TERM/LARGER SCALE**

---

48. Further investigate the role of butterfish in the ecosystem and refine predation estimates.

49. Reconsider stock structure and degree of exchange with south Atlantic stock component (i.e., stock ID).

---

### **CHUB MACKEREL**

---

#### **SHORT-TERM/SMALLER SCALE**

---

50. Collect age, growth, maturity information from fishery independent and dependent data sources throughout U.S. Atlantic water.

51. Evaluate catch per unit effort including the influence of environmental and socioeconomic factors.

52. Investigate existing egg and larval surveys throughout the U.S. Atlantic coast to better understand chub mackerel recruitment dynamics.

---

#### **LONG-TERM/LARGER SCALE**

---

53. Investigate stock mixing throughout US Atlantic waters, as applicable.

54. Investigate habitat use at different life stages.

---

### **GOLDEN TILEFISH**

---

#### **SHORT-TERM/SMALLER SCALE**

---

55. Utilize fishery-independent information to assess whether the dome-shaped selectivity curve used in the assessment reflects fishery selectivity or availability, or both.

56. Evaluate data collection methods to increase information on gear conflicts, species interactions (i.e., spiny dogfish), and bait type to understand their effects on the commercial CPUE index.

57. Collect and analyze biological samples to improve life history, maturity and distribution information.

58. Develop sampling programs to increase information of recreational landings at size and age.

59. Assess the accuracy and reliability of aging techniques.

---

#### **LONG-TERM/LARGER SCALE**

---

60. Evaluate the role of the golden tilefish gear restricted areas on the stock and its fisheries.

61. Evaluate the effects of climate and environmental indices on stock dynamics.

---

## ILLEX SQUID

### SHORT-TERM/SMALLER SCALE

- 62. Collect demographic information on growth, mortality, reproduction by sex, season, and cohort.
- 63. Investigate feasibility of real-time management, including undertaking cooperative research with the fishing industry.
- 64. Analyze the change in availability of *Illex* to the survey and fishery, resulting from long-term changes in climate or other oceanographic factors.
- 65. Expand investigations into oceanographic correlates with trends in recruitment and abundance.

### LONG-TERM/LARGER SCALE

- 66. Investigate beyond-shelf availability.

## LONGFIN SQUID

### SHORT-TERM/SMALLER SCALE

- 67. Further develop practicable ways to reduce bycatch.
- 68. Refine understanding of availability and catchability in surveys (especially NEAMAP-Bigelow comparisons).
- 69. Collect more age, sex and maturity data for each seasonal cohort.
- 70. Evaluate effectiveness of current mesh regulations.
- 71. Determine what portion of stock is outside current research trawl surveys.

### LONG-TERM/LARGER SCALE

- 72. Until real-time assessment is feasible, expand cohort analysis to refine stock assessments and their incorporation of seasonal indices (currently spring and fall are just averaged).
- 73. Evaluate approaches to real time management including expanding age and growth studies to better estimate average growth patterns and to discern seasonal productivity/catchability patterns.
- 74. Evaluate methods of incorporating ecological relationships, predation, and oceanic events that influence abundance and availability.
- 75. Refine understanding of stock range and structure.

## OCEAN QUAHOG

### SHORT-TERM/SMALLER SCALE

- 76. Conduct research to better understand life history for an extremely long-lived species at appropriate temporal and spatial scales (growth, size-at-age, recruitment, natural mortality, maturity-at-length, and fecundity – in order of priority).
- 77. Evaluate the cost and benefit of HABCAM or other optical surveys for measuring Ocean Quahog abundance and habitat.

### LONG-TERM/LARGER SCALE

- 78. Conduct work to support spatially explicit stock assessments that account for source and sink differences in productivity (i.e., are some areas more important to productivity than others).
- 79. Development of techniques to age Ocean Quahogs in a cost-effective manner.

## SCUP

### SHORT-TERM/SMALLER SCALE

- 80. Evaluate the spatial and temporal overlap of Scup and squid to better understand and characterize Scup discard patterns.
- 81. Characterize the pattern of selectivity for older ages of Scup in both surveys and fisheries.
- 82. Explore the relationship between Scup market trends, regulatory changes, and commercial landings and discards.



---

## LONG-TERM/LARGER SCALE

- 83.** Evaluate the role and relative importance of implemented management strategies (i.e., gear restricted areas, increased minimum mesh size, and minimizing scup and squid fishery interactions) versus the long-term climate variability to the increases in stock abundance and high recruitment events since 2000.
- 84.** Characterize the current Scup market and explore the development of new markets.
- 85.** Explore the applicability of the pattern of fishery selectivity in the model to the most recent catch data to determine whether a new selectivity block in the model is warranted.
- 

## SPINY DOGFISH

### SHORT-TERM/SMALLER SCALE

- 86.** Integrate recent information on the efficiency of the NEFSC survey gear as it relates to: distribution of spiny dogfish beyond the current NEFSC trawl survey geographic footprint (including inter annual differences); gear efficiency; depth utilization within the footprint; distribution within the survey footprint under different environmental conditions.
- 87.** Explore model-based methods to derive survey indices for Spiny Dogfish
- 88.** Investigate alternative stock assessment modeling frameworks that evaluate: the effects of stock structure; distribution; updated biological information such as sex ratio and spiny dogfish productivity; state-space models; and sex-specific models.
- 89.** Evaluate the utility of the study fleet information as it relates to issues identified under priority #86 above.
- 

### LONG-TERM/LARGER SCALE

- 90.** Research opportunities to increase domestic and/or international market demand.
- 91.** Expand information on the efficiency of the NEFSC survey gear as it relates to: distribution of spiny dogfish beyond the current NEFSC trawl survey geographic footprint (including inter annual differences); gear efficiency; depth utilization within the footprint; distribution within the survey footprint under different environmental conditions.
- 92.** Continue aging studies for spiny dogfish age structures (e.g., fins, spines) obtained from all sampling programs (include additional age validation and age structure exchanges), and conduct an aging workshop for spiny dogfish, encouraging participation by NEFSC, Canada DFO, other interested state agencies, academia, and other international investigators with an interest in dogfish aging (US and Canada Pacific Coast, ICES).
- 93.** Evaluate ecosystem effects on spiny dogfish acting through changes in dogfish vital rates.
- 

## SUMMER FLOUNDER

### SHORT-TERM/SMALLER SCALE

- 94.** Collect length, weight, and age data by sex to fully evaluate the sex and size distributions of landed and discarded fish in the Summer Flounder fisheries.
- 95.** Evaluate Summer Flounder discard survival under different environmental variables and gear configurations with survey design considerations that account for feeding and predation.
- 

### LONG-TERM/LARGER SCALE

- 96.** Continue to evaluate the causes for decreased recruitment, changes in recruitment distribution, and changes in the recruit per spawner relationship in recent years. Develop studies, sampling programs, or analyses to better understand how and why these changes are occurring, and the implications to stock productivity.
- 97.** Evaluate range expansion and/or changes in distribution and their implications for stock assessment and management.
- 98.** Explore the potential mechanisms for recent slower growth that is observed in both sexes.
- 99.** Incorporate sex-specific differences in size-at-age into the stock assessment through model structures as well as data streams.
-

## SURFCLAM

### SHORT-TERM/SHORTER SCALE

**100.** Conduct research to better understand life history at appropriate temporal and spatial scales (fecundity, maturity at-length, age and growth, recruitment, and natural mortality information).

**101.** Evaluate the cost and benefits of HABCAM or other optical surveys for measuring surfclam abundance and habitat, including patch size.

### LONG-TERM/LARGER SCALE

**102.** Examine the effects of climate change on the spatial distribution of clams, on the operation of the fishery, and patterns of discarding/incidental mortality, and on the overall productivity of the stock.

**103.** Evaluate small-scale surfclam patch density and the implications on stock dynamics, particularly reproductive success.

---

THIS SPACE INTENTIONALLY LEFT BLANK

## Future Direction

---

The MSA requires each Council to develop a list of research priorities to help inform the research and budget priorities for the regional science center. However, there is little information or understanding as to how these research priority documents have been utilized by the Council and the NEFSC in allocating resources and address the identified science and management priorities. A review of the current 2016 – 2020 research priorities document was conducted in order to evaluate its utility and applicability. Based on this review and input from the SSC, modifications to the organization and prioritization of the document have been made in an effort to develop a more tactical and strategic document to more effectively advance scientific and management information that is aligned with the resources and priorities of the Council and NEFSC.

In an effort to move beyond the current process of creating a long list of priorities that get reviewed every five years which may or may not be used to inform science and budget priorities, a new approach and process to evaluate the utility and implementation of the research priorities document will be implemented. A biennial review of the current priorities list (i.e., two reviews that occur in years two and four, during the five-year period) by the Advisory Panel, Monitoring Committee and SSC will help ensure the document is reflective of the current state of scientific knowledge and the Council's science and management priorities. Input on current or new priorities will occur as part of the Advisory Panel development of the Fishery Performance Report and when the SSC and Monitoring Committees review or develop new catch specifications. As part of the initial biennial review, each species-specific research priority will include information to identify which broad research priority theme(s) are being addressed by that priority. Providing this information helps link the broad themes to the species-specific priorities to help ensure the identified research addresses the Council's larger priority themes and needs.

The biennial review would not apply to the broader research priority themes which would remain the same for the entire five-year document period. In addition, staff plan to develop a review process to track the progress toward addressing research priorities and to identify what research has been completed and why other areas may not have been addressed. Revised research priorities and a report on the progress made on addressing research needs will then be provided to the Council's Research Steering Committee for feedback and then presented to the Council for approval.

Lastly, a more comprehensive review and evaluation of the various (Mid-Atlantic, New England, NEFSC) research plans and priorities will be conducted in the future. Since the NEFSC serves both the Mid-Atlantic Council and the New England Fishery Management Council, which has its own research priorities list, it must consider both research priority documents to inform research and budget priorities for the entire region. A more comprehensive and holistic review can help identify research similarities, highlight differences, and ensure continued communication and coordination to maximize and leverage limited staff and fiscal resources. This evaluation could lead to the development of a comprehensive research priorities plan for the Council to provide a process and approach to effectively and efficiently carry out and address the identified research needs identified in this document.

These enhancements, planned reviews, and comprehensive research plan development are included as strategies in the Council's updated 2020 – 2024 Strategic Plan. Aligning the Strategic Plan and Five-Year Research Priorities will help ensure the Council achieves its science goal and associated objectives.



## Mid-Atlantic Fishery Management Council

800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

# MEMORANDUM

**Date:** November 27, 2019  
**To:** Council  
**From:** Brandon Muffley, Staff  
**Subject:** Risk Policy Framework Meeting #2 – Meeting Materials

The Council will review and select the preferred alternative(s) for the omnibus risk policy framework action on Monday, December 9, 2019. Materials listed below are provided for Council consideration of this agenda item.

*Materials behind the tab:*

1. Risk policy discussion document and staff recommendation
2. *Fine-tuning the ABC control rule for Mid-Atlantic fisheries* report by Dr. John Wiedenmann
3. *Economic Trade-offs of Additional Alternative ABC Control Rules for Summer Flounder and Implications for Scup and Butterfish* draft report by Dr. Cyrus Teng and Dr. Doug Lipton



# **Omnibus Acceptable Biological Catch and Risk Policy Framework Adjustment**

**Framework Meeting 2 Discussion Document**

**December 9, 2019**

**Annapolis, Maryland**

## Introduction:

In 2011, the Mid-Atlantic Fishery Management Council (Council) implemented the current risk policy and Acceptable Biological Catch (ABC) control rule to comply with the 2006 re-authorization of the Magnuson-Stevens Act (MSA)<sup>1</sup>. The risk policy specifies the Council's acceptable level of risk (i.e., the probability of overfishing,  $P^*$ ) and works in conjunction with the Scientific and Statistical Committees (SSC) application of the ABC control rule to account for scientific uncertainty to determine an ABC for a specific stock. Five years after implementation, the Council agreed to conduct a review of the current risk policy and determine if any modifications were necessary to meet the Council's goals and objectives for its managed fisheries. During the risk policy review, the Council expressed interest in evaluating not only biological factors but to also more comprehensively consider economic and social factors and the potential implications of any risk policy alternatives. The Council specified that the evaluation should assess the short and long-term trade-offs between stock biomass protection, fishery yield, and economic benefits. In addition, the Council agreed that any alternatives considered would retain the biologically based foundation of the existing risk policy of specifying a probability of overfishing ( $P^*$ ) that is conditional on the current stock biomass relative to  $B_{MSY}$  and would not explicitly include but consider economic factors, targets or thresholds.

In 2019, a workgroup comprised of NOAA Fisheries staff, SSC members, academia and Council staff was formed and tasked with further developing and analyzing the current risk policy and any potential alternatives. Members of the workgroup built off their existing biological<sup>2</sup> and economic<sup>3</sup> management strategy evaluation (MSE) models. These models were updated to include the summer flounder benchmark assessment data, the new MRIP recreational catch information and refined to address specific Council objectives. The workgroup met on five separate occasions to review and discuss risk policy alternatives, conduct new and additional analyses needed to evaluate the biological and economical trade-offs associated with each alternative, and provide any recommendations and considerations.

The Council held the first framework meeting in August 2019<sup>4</sup> and reviewed and approved nine different alternatives for further analysis and evaluation. The Council is scheduled to take final action on the omnibus risk policy framework at their December 2019 meeting. provide feedback and approve draft alternatives for further analysis and evaluation.

This discussion document contains an overview of the different risk policy alternatives being considered by the Council, a summary of the results of the biological and economic MSE analyses, and the staff recommendation to help support Council deliberations. Comprehensive

---

<sup>1</sup> For more information on the development and implementation of the risk policy and ABC control rule, please see the omnibus amendment at: <http://www.mafmc.org/s/2011-Omnibus-ABC-AM-Amendment.pdf>

<sup>2</sup> For more information on the biological MSE, see summary report and presentation in the February 2018 Council meeting materials at: <http://www.mafmc.org/briefing/february-2018>.

<sup>3</sup> For additional details on the summer flounder economic MSE, please see summary report and presentation in the December 2018 Council meeting materials at: <http://www.mafmc.org/briefing/december-2018>.

<sup>4</sup> See the August 14, 2019 omnibus acceptable biological catch and risk policy framework adjustment discussion document. Available at: [http://www.mafmc.org/s/Tab09\\_Risk-Policy-Framework\\_2019-08.pdf](http://www.mafmc.org/s/Tab09_Risk-Policy-Framework_2019-08.pdf)

final reports outlining the methods, model structure, and results of the biological and economic models are included as materials in the December briefing book.

### **Overview of Alternatives:**

There are nine different risk policy alternatives, including *status quo*, for Council consideration. Six of the alternatives (Alternatives 1 – 5 and 9) were previously provided to the Council during the initial framework review in 2017. Three new alternatives were identified and analyzed during this framework process. Alternatives 6 and 7 were developed by the workgroup and presented to the Council as part of framework meeting 1. During that review and discussion, the Council developed a new alternative (Alternative 8) that combined certain aspects of Alternatives 6 and 7. Alternative 9, removal of the typical/atypical designation, does not specify a risk policy but could be applied to any of the other eight alternatives.

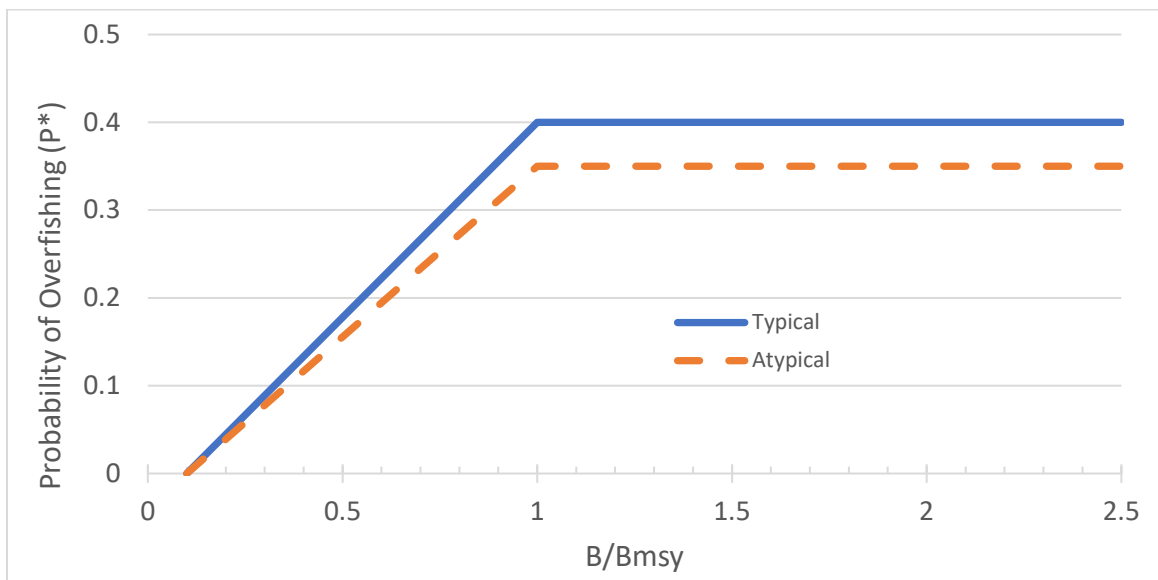
Under any of the risk policy alternatives provided below, the existing language on the application of the risk policy to stocks under a rebuilding plan or for those stocks with no OFL, or OFL proxy, would remain as currently implemented (see page 3 of the August 2019 risk policy discussion document for more details).

Below is the rationale and description on how the risk policy would be applied for each alternative.

**THIS SPACE INTENTIONALLY LEFT BLANK**

**1. Current risk policy/status quo – linear ramping with a maximum P\* of 0.4 when the B/B<sub>MSY</sub> ratio is equal to or greater than 1.0**

This alternative would retain the existing risk policy with the acceptable probability of overfishing (P\*) for a given stock conditional on current stock biomass relative to B<sub>MSY</sub> and a maximum P\* set at 0.4 (see Figure1). The stock replenishment threshold defined as the ratio of B/B<sub>MSY</sub> = 0.10, is utilized to ensure the stock does not reach low levels from which it cannot recover. The probability of overfishing is 0 percent (i.e., no fishing) if the ratio of B/B<sub>MSY</sub> is less than or equal to 0.10. The P\* increases linearly as the ratio of B/B<sub>MSY</sub> increases, until the inflection point of B/B<sub>MSY</sub> = 1.0 is reached. A maximum P\* of 0.4 or 0.35 is utilized (typical or atypical stock, respectively) for ratios equal to or greater than 1.0. The SSC determines whether a stock is typical or atypical each time an ABC is recommended.



**Figure 1:** Alternative 1, *status quo* – the current Mid-Atlantic Fishery Management Council risk policy.

**2. Linear ramping with a maximum P\* of 0.45 when the B/B<sub>MSY</sub> ratio is equal to or greater than 1.0**

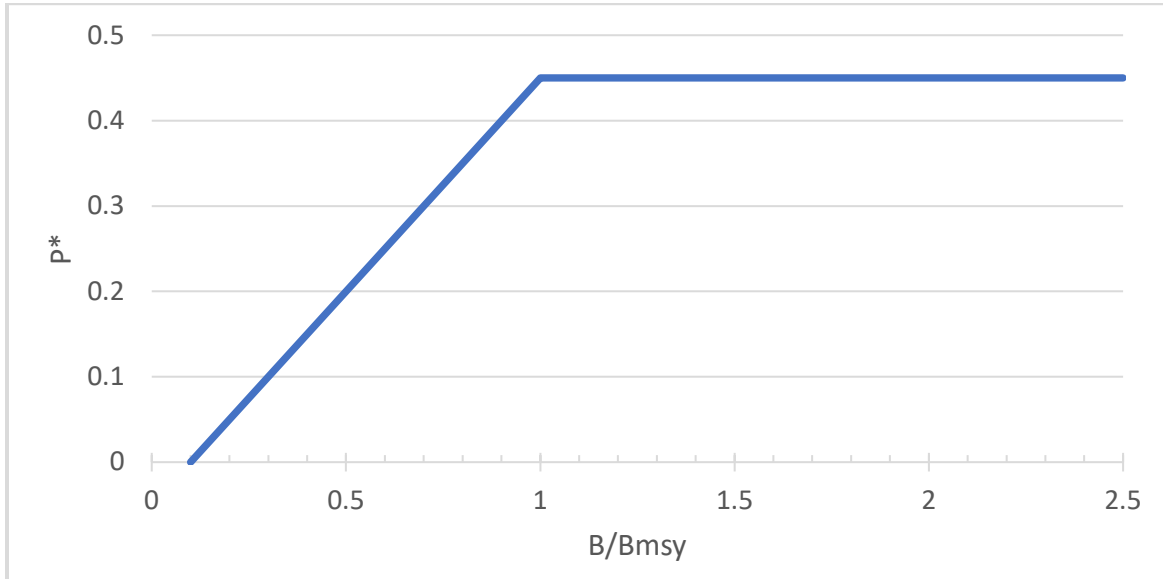
Under this alternative, the Council would assume a higher level of risk (P\*=0.45) than the current policy (P\*=0.40) in cases where the stock biomass was greater than the B<sub>MSY</sub> target. Under this alternative, the P\* would be variable and conditioned on current stock biomass when stock size falls below B<sub>MSY</sub> as per the current risk policy but would be held constant at 0.45 when stock size exceeds B<sub>MSY</sub> (Figure 2A). The maximum P\* of 0.45 is higher than the current Council risk policy but is lower than the 0.50 maximum allowed under the MSA.

A P\* of 0 percent if the ratio of B/B<sub>MSY</sub> is less than or equal to 0.10 would remain to ensure a stock does not reach low levels from which it cannot recover. It is worth noting that by increasing the maximum P\* to 0.45 under this alternative, the slope of linear ramping portion to

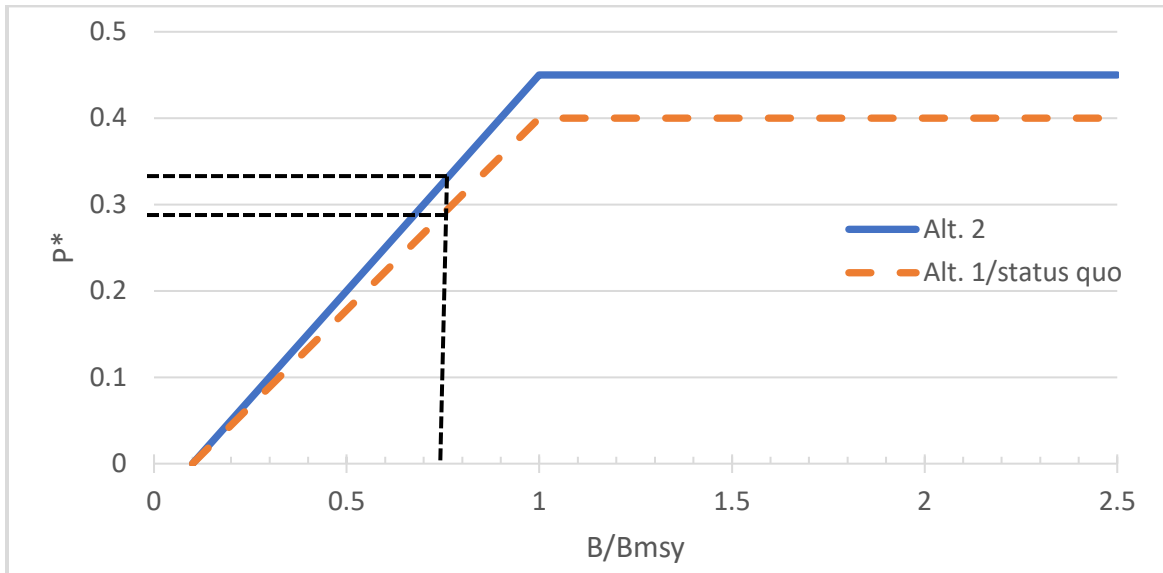


determine a  $P^*$  for stocks whose biomass is less than  $B_{MSY}$  is also modified (Figure 2B). Therefore, when compared to the current risk policy, this alternative would result in slightly higher  $P^*$  values (higher risk of overfishing) under the same current stock biomass when less than  $B_{MSY}$ .

**A)**



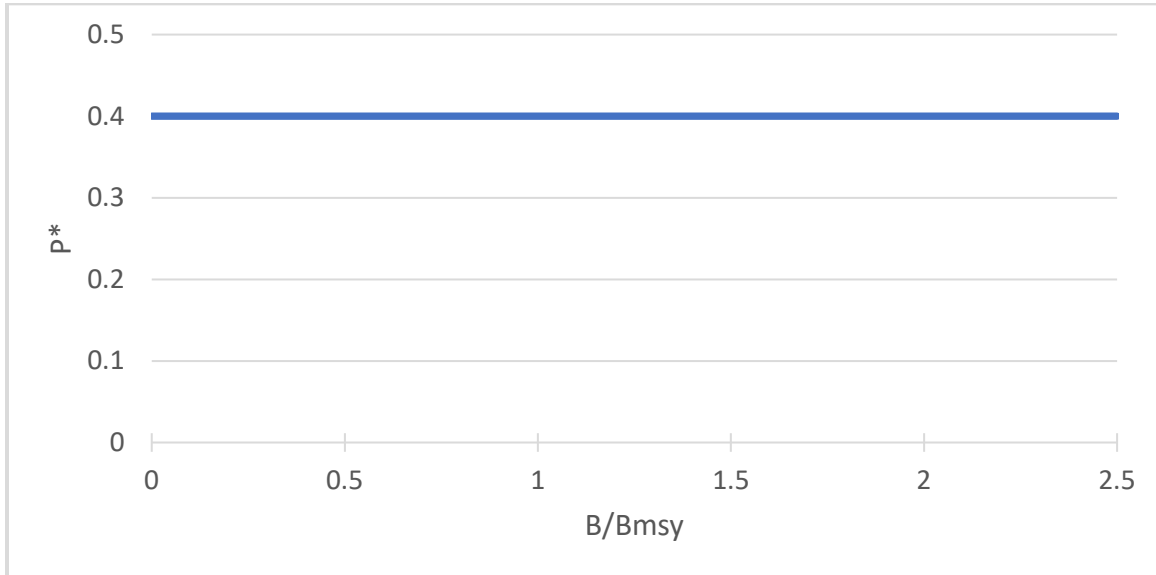
**B)**



**Figure 2:** **A)** Alternative 2 with a variable probability of overfishing ( $P^*$ ) up to a maximum  $P^*$  of 0.45 when the  $B/B_{MSY}$  ratio is equal to or greater than 1.0. **B)** Comparison between Alternative 1/*status quo* (typical life history) and Alternative 2. Dashed lines show the difference between the two alternatives in the  $P^*$  calculation under the same biomass ratio.

### 3. Constant P\* equal to 0.40

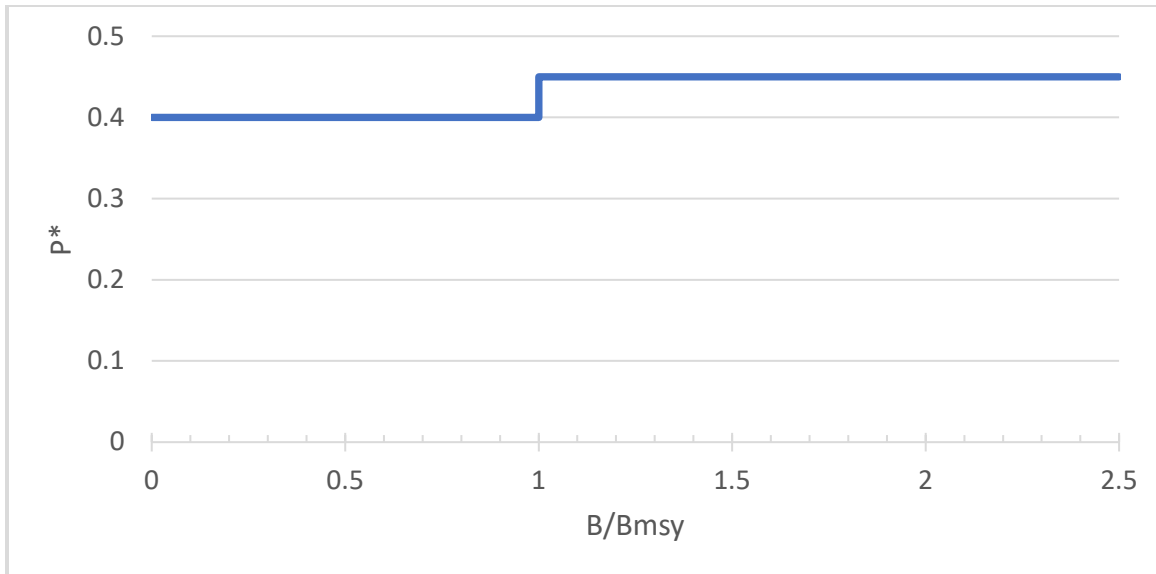
Under this alternative, the variable P\* as a function of stock biomass would be removed and a constant P\* equal to 0.4, the current maximum P\* value, would be maintained under all circumstances (Figure 3). The P\* of 0.4 would be applied regardless of current stock biomass, rebuilding status, life history etc. The current ramping of the P\* conditioned on biomass is an attempt to prevent stocks from being overfished by reducing the probability of overfishing as stock size falls below  $B_{MSY}$ . However, this feature of the current risk policy is not a mandatory requirement of the MSA.



**Figure 3.** Alternative 3 with a constant P\* equal to 0.40 under all stock biomass conditions.

### 4. Two step P\* - constant P\* equal to 0.40 for B/B<sub>MSY</sub> ratios less than 1.0 and a constant P\* at 0.45 for B/B<sub>MSY</sub> ratios equal to or greater than 1.0

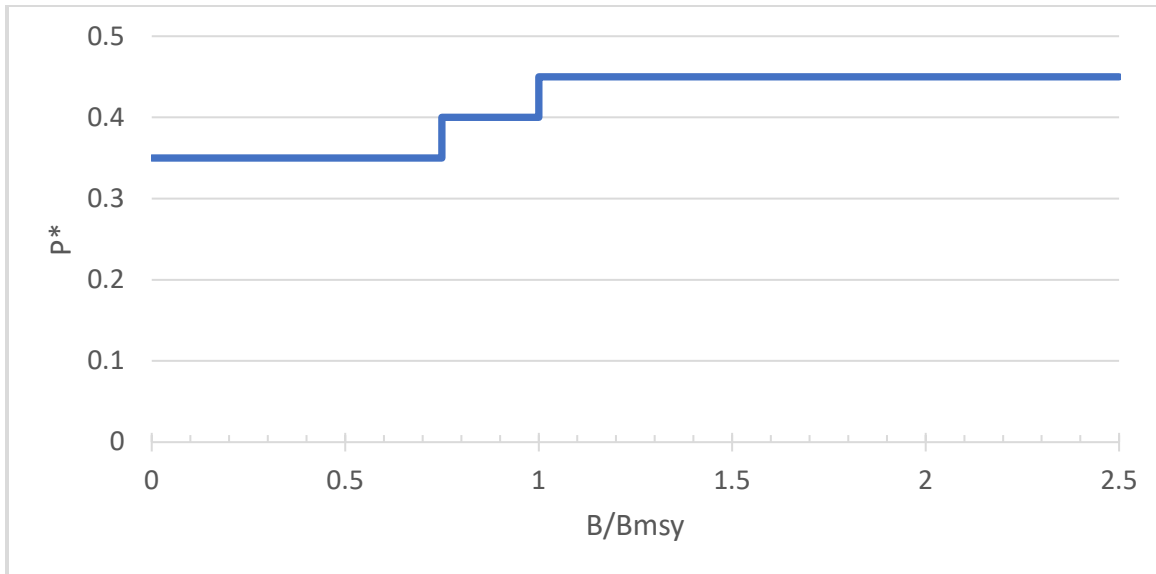
Under this alternative, current stock biomass relative to  $B_{MSY}$  would be considered but instead of applying a variable P\* associated with the current policy, a constant P\* equal to 0.40 or 0.45 would be applied depending upon the B/B<sub>MSY</sub> ratio (Figure 4). For stocks whose biomass is less than  $B_{MSY}$  (B/B<sub>MSY</sub> ratio less than 1.0), a constant P\* equal to 0.40, the current maximum P\* value, would be applied. For stocks whose biomass is equal to or greater than  $B_{MSY}$  (B/B<sub>MSY</sub> ratio equal to or greater than 1.0), a constant P\* equal to 0.45 would be applied. This maximum P\* value is higher than the current Council risk policy maximum but lower than the 0.50 maximum allowed under the MSA.



**Figure 4.** Alternative 4, a two-step  $P^*$  with a constant  $P^*$  equal to 0.40 when the  $B/B_{MSY}$  ratio is less than 1.0 and a constant  $P^*$  equal to 0.45 when the  $B/B_{MSY}$  ratio is equal to or greater than 1.0.

**5. Three step  $P^*$  - constant  $P^*$  equal to 0.35 when the  $B/B_{MSY}$  ratio is less than 0.75, constant  $P^*$  of 0.40 when the  $B/B_{MSY}$  ratio is between 0.75 and 1.0 and a constant  $P^*$  of 0.45 when the  $B/B_{MSY}$  ratio is equal to or greater than 1.0**

Similar to Alternative 4, under this alternative, current stock biomass relative to  $B_{MSY}$  would be considered but instead of applying a variable  $P^*$  associated with the current policy, a constant  $P^*$  equal to 0.35, 0.40 or 0.45 would be applied depending upon the  $B/B_{MSY}$  ratio (Figure 5). For stocks whose biomass is more than 25 percent below  $B_{MSY}$  ( $B/B_{MSY}$  ratio less than 0.75), a lower risk would be assumed and a constant  $P^*$  equal to 0.35 would be applied. When stock biomass is less than  $B_{MSY}$  but equal to or less than 25 percent below  $B_{MSY}$  ( $B/B_{MSY}$  ratio equal to or greater than 0.75 but less than 1.0), a constant  $P^*$  of 0.40 would be applied. For stocks whose biomass is equal to or greater than  $B_{MSY}$  ( $B/B_{MSY}$  ratio equal to or greater than 1.0), a higher risk would be assumed and a constant  $P^*$  equal to 0.45 would be applied. This alternative considers current stock biomass and would implement a lower risk tolerance under lower stock biomass conditions and increasing risk with increasing stock biomass.

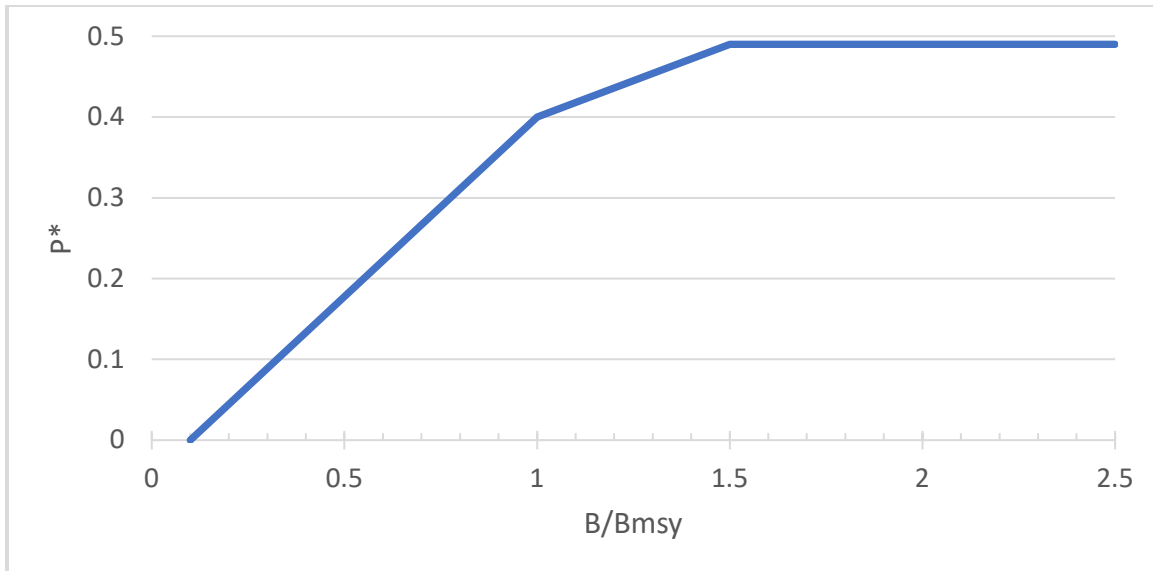


**Figure 5.** Alternative 5, a three-step  $P^*$  with a constant  $P^*$  equal to 0.35 when the  $B/B_{MSY}$  ratio is less than 0.75, a constant  $P^*$  equal to 0.40 when the  $B/B_{MSY}$  ratio is greater than or equal to 0.75 but less than 1.0, and a  $P^*$  equal to 0.45 when the  $B/B_{MSY}$  ratio is greater than or equal to 1.0.

**6. Linear ramping with a maximum  $P^*$  of 0.40 when the  $B/B_{MSY}$  ratio is less than or equal to 1.0 and a linear ramping with a maximum  $P^*$  of 0.49 when the  $B/B_{MSY}$  ratio is equal to or greater than 1.5**

Under the alternative, linear increases in the  $P^*$  would occur as the ratio of  $B/B_{MSY}$  increases to a maximum of 0.40 at the inflection point of  $B/B_{MSY} = 1.0$ . This is consistent with the current risk policy. Once stock biomass exceeds  $B_{MSY}$  and the  $B/B_{MSY}$  ratio is equal to or greater than 1.0, linear increases in the  $P^*$  would then occur to a maximum  $P^*$  of 0.49 at the inflection point of  $B/B_{MSY} = 1.5$ . The maximum  $P^*$  of 0.49 would then be applied when  $B/B_{MSY}$  ratios are equal to or greater than 1.5 (Figure 6). This alternative seeks to prevent stocks from being overfished by reducing the probability of overfishing as stock size falls below  $B_{MSY}$ ; while also allowing for increased risk under high stock biomass conditions that are 1.5 times greater than  $B_{MSY}$ . Consistent with the current risk policy, this alternative would also implement a  $P^*$  of 0 percent if the ratio of  $B/B_{MSY}$  is less than or equal to 0.10 would remain to ensure the stock does not reach low levels from which it cannot recover.

A  $B/B_{MSY}$  ratio of 1.5 indicates a very robust stock with favorable conditions that are substantially above the  $B_{MSY}$  target, even with uncertainty in the terminal year biomass estimate. These very high biomass conditions have not been observed frequently throughout the Council's management history. Currently, only scup and black sea bass have a  $B/B_{MSY}$  ratio greater than 1.5. Butterfish, surfclam and ocean quahog have  $B/B_{MSY}$  ratios between 1.0 and 1.5 which, under this alternative, would result in a  $P^*$  between 0.4 and 0.48.



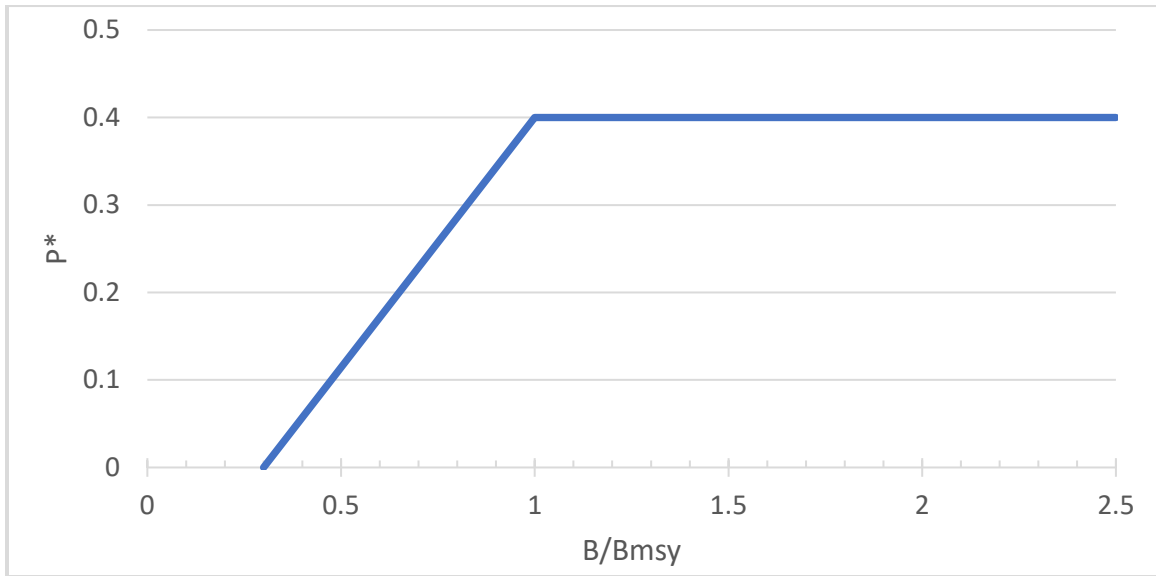
**Figure 6.** Alternative 6, linear ramping with a maximum P\* of 0.40 when the B/B<sub>MSY</sub> ratio is less than 1.0 and a linear ramping with a maximum P\* of 0.49 when the B/B<sub>MSY</sub> ratio is equal to or greater than 1.5.

### 7. Current risk policy with a stock replenishment threshold equal to 0.3

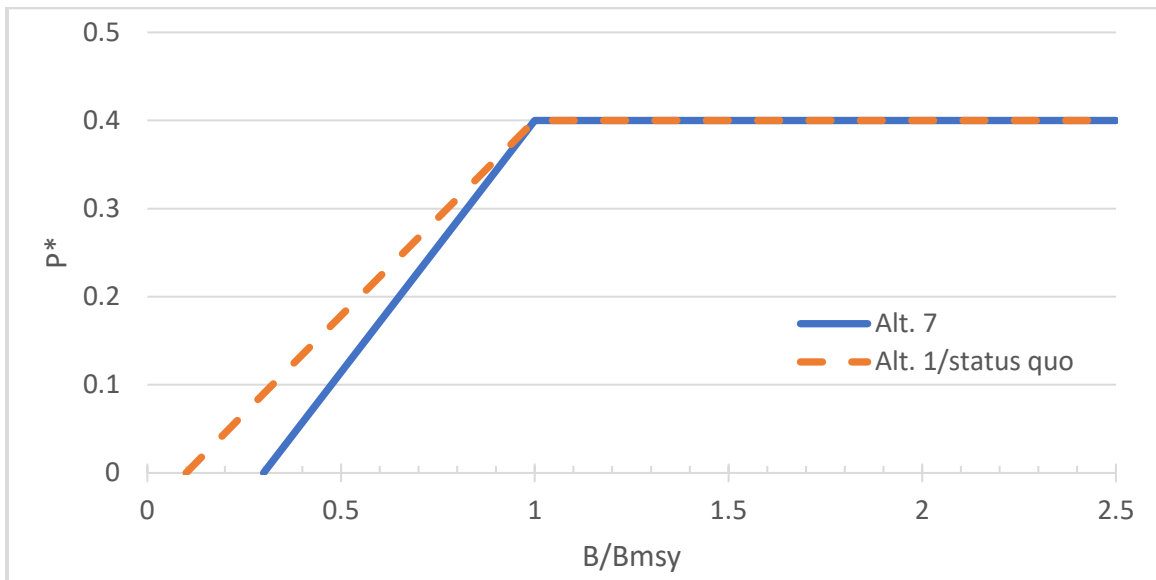
Under this alternative, the current risk policy would remain with the P\* for a given stock conditional on current stock biomass relative to B<sub>MSY</sub> and a maximum P\* set at 0.4 when the B/B<sub>MSY</sub> ratio is equal to or greater than 1.0; however, the P\* will be set equal to 0 percent (i.e., no fishing) if the ratio of B/B<sub>MSY</sub> is less than or equal to the stock replenishment threshold of 0.3 instead of the current threshold of 0.1 (Figure 7A). This alternative is more risk adverse than the current risk policy and attempts to minimize the likelihood of getting to an overfished condition and increase the probability of stock recovery in shorter period of time (Figure 7B).

The current stock replenishment threshold was determined by expert opinion but was not quantitatively derived and may be too low to adequately provide for stock recovery. This alternative allowed for a comprehensive evaluation to quantify the implications and trade-offs associated with the cost of closing a fishery and minimizing the risk of reaching an overfished condition under different stock replenishment thresholds. However, it should be noted that once the B/B<sub>MSY</sub> ratio is less than 0.5, the stock is declared overfished and a rebuilding plan is implemented. Therefore, some caution in evaluating the implications of the different stock replenishment thresholds under very low biomass levels is needed since the standard application of the risk policy, as depicted in the figures, may not be used under a rebuilding plan.

A)



B)

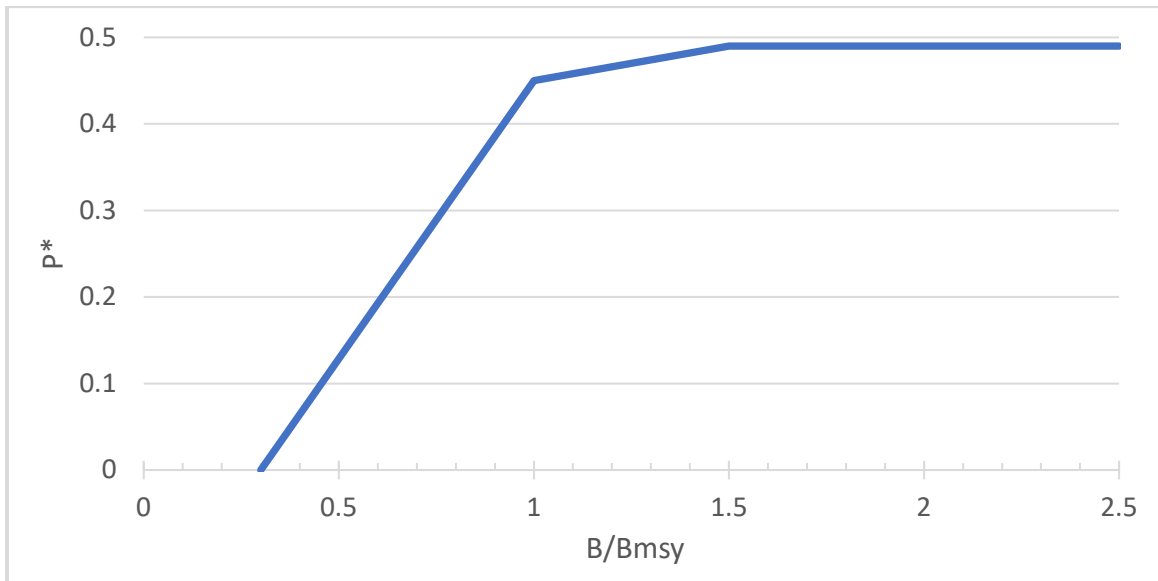


**Figure 7:** A) Alternative 7 with a variable probability of overfishing ( $P^*$ ) up to a maximum  $P^*$  of 0.40 when the  $B/B_{MSY}$  ratio is equal to or greater than 1.0 and a  $P^*$  of 0 if the ratio of  $B/B_{MSY}$  is less than or equal to the stock replenishment threshold of 0.3. B) Comparison between Alternative 1/*status quo* (typical species) and Alternative 7.

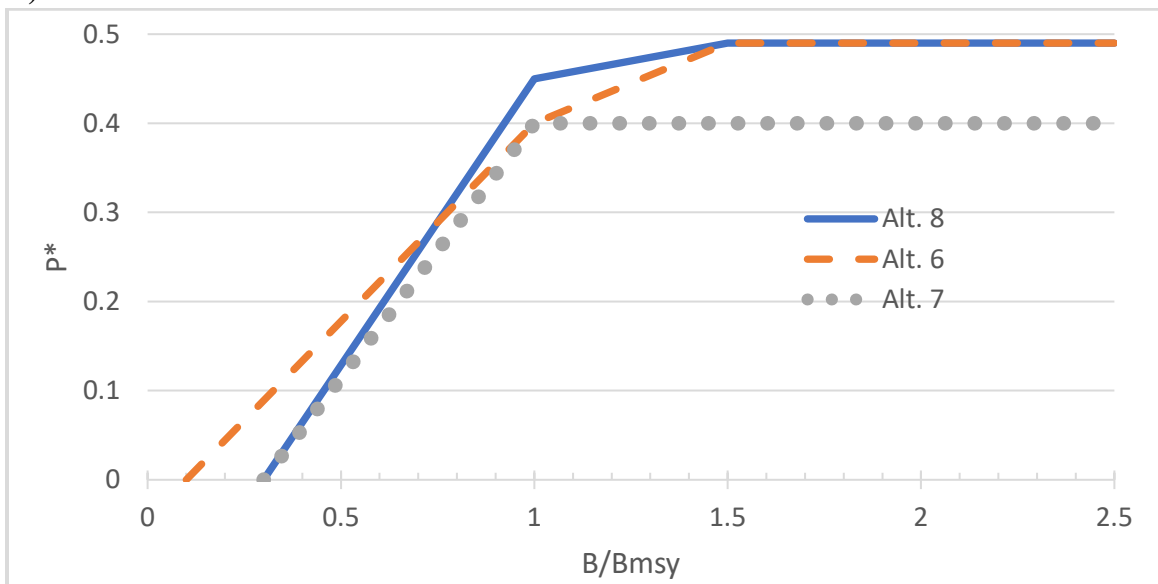
8. Linear ramping with a maximum  $P^*$  of 0.45 when the  $B/B_{MSY}$  ratio is less than or equal to 1.0, and a linear ramping to a maximum of 0.49 when the  $B/B_{MSY}$  ratio is equal to or greater than 1.5 and a  $P^*$  equal to 0 when the  $B/B_{MSY}$  ratio less than or equal to 0.3

This alternative was developed by the Council during framework meeting 1 deliberations and integrates certain elements of Alternatives 6 and 7 (Figure 8A). Similar to Alternative 6, this alternative would have two different linear ramping functions with a maximum  $P^* = 0.49$  when the  $B/B_{MSY}$  ratio is greater than or equal to 1.5. However, this alternative allows for linear increases in the  $P^*$  as the ratio of  $B/B_{MSY}$  increases to maximum  $P^*$  of 0.45 at the inflection point of  $B/B_{MSY} = 1.0$ , while Alternative 6 sets the maximum  $P^* = 0.40$  at this biomass ratio. Similar to Alternative 7, this alternative would set the  $P^* = 0$  (i.e., no fishing) if the ratio of  $B/B_{MSY}$  is less than or equal to the stock replenishment threshold of 0.3. This alternative provides for increasing risk under higher stock biomass, particularly when biomass is near or above the target, and would be more risk adverse as a stock biomass declines to minimize the risk of reaching an overfished condition (Figure 8B).

A)



B)



**Figure 8: A)** Alternative 8 with a linear ramping to a maximum  $P^*$  of 0.45 when the  $B/B_{MSY}$  ratio is less than or equal to 1.0, and a linear ramping to a maximum of 0.49 when the  $B/B_{MSY}$  ratio is equal to or greater than 1.5 and a  $P^* = 0$  when the  $B/B_{MSY}$  ratio is less than or = 0.3. **B)** Comparison between Alternatives 6 and 7 and Alternative 8, a modified hybrid alternative that incorporates elements of both Alternatives 6 and 7.

## 9. Eliminate the typical/atypical distinction in the risk policy

Similar to the approach taken with the current risk policy for “typical” species, the  $P^*$  associated with an “atypical” species is conditional on current stock biomass relative to  $B_{MSY}$  but has a maximum  $P^*$  set at 0.35 instead of 0.4 (Figure 1). This measure was originally implemented by the Council reflecting the Council’s lower risk tolerance for species whose life histories make them more vulnerable to over-exploitation. Currently, ocean quahog is the only stock in which the SSC applied the atypical designation when making an ABC recommendation. Under this option, the  $P^*$  would be the same for all species regardless of their life histories. Eliminating or retaining the typical/atypical designation could be implemented in conjunction with either fixed or variable  $P^*$  alternatives considered here.

### Summary of Management Strategy Evaluation Results:

The updated MSE conducted by Dr. John Wiedenmann from Rutgers University considered the biological and fishery yield implications of the different risk policy alternatives<sup>5</sup>. The MSE was conducted for summer flounder, scup, and butterfish and included updated stock assessment information, the new MRIP estimates, assessment timing base on the new NRCC assessment schedule, an assumed 100% OFL CV distribution, and variable natural mortality, recruitment and stock assessment bias to evaluate the robustness of the risk policy alternatives to changing stock conditions.

Consistent with previous analyses, the results of the updated MSE indicate that all of risk policy alternatives generally limited the risk of overfishing under “average” and “good” conditions; while the linear ramping  $P^*$  alternatives (i.e., those like the current Council risk policy) were better at preventing overfishing and reduced the risk of a population declining to low levels particularly under “poor” conditions (i.e. above average natural mortality and below average recruitment). On the other hand, the constant and stepped alternatives generally produced higher catch, greater economic welfare, and limited catch variability, particularly within the first five years of projections. However, these results are highly dependent upon the starting condition of the stock.

For scup, where the biomass is nearly twice the  $B_{MSY}$  target, all of the alternatives performed equally well at limiting risk to the stock with only a 1% - 2% difference between the ramped alternatives and the constant and stepped alternatives. Short and long-term catch of scup was also

---

<sup>5</sup> To find more information on the biological MSE conducted by Dr. Wiedenmann, please see the full report at: <http://www.mafmc.org/briefing/december-2019>.



similar among the alternatives, except for Alternative 7 which resulted in consistently lower catch. The maximum  $P^*$  value (0.4, 0.45, or 0.49) played a larger role in short and long-term scup yield than any specific control rule shape.

For butterfish, where the starting biomass is about 41% higher than the  $B_{MSY}$  target, the results show very distinct differences between the risk policy alternatives. The constant and stepped alternatives consistently resulted in higher short and long-term catch across all productivity scenarios. Butterfish catch was typically 50% greater, and in some cases as much as 10 times greater, under the constant and stepped alternatives. However, the constant and stepped alternatives also resulted in higher risk and were consistently higher, sometimes significantly, than the ramped alternatives. In a number of scenarios the constant and ramped alternatives resulted in exceeding the 50% probability of overfishing or the stock becoming overfished. Butterfish stock dynamics, such as highly variable recruitment, play a large role in these results with the ramped alternatives providing for greater stock protection and stability.

For summer flounder, where the starting biomass is 22% below  $B_{MSY}$  target, the results are mixed. All alternatives performed well under average and good stock productivity conditions but under poor stock productivity scenarios the constant and stepped alternatives resulted in situations close to or exceeding the 50% probability of overfishing. Overall, the constant and stepped alternatives were 31% higher on average in the probability of overfishing and 11% higher on average in the probability of becoming overfished than the ramped alternatives. Since summer flounder biomass is below the  $B_{MSY}$  target, the ramped alternatives have a lower starting  $P^*$  than the constant and stepped alternatives and therefore, consistently result in lower short-term catch under all stock productivity scenarios. However, as stock biomass increases and stabilizes over time, the long-term catch and economic welfare is generally the same across all alternatives, except for *status quo* and Alternative 7 which produced the lowest catch and economic welfare.

The results also highlight the importance and potential biological and management implications of assessment bias. When a stock assessment underestimates terminal year biomass, all of the risk policy alternatives perform well, except for butterfish where other stock dynamics play a greater role in the outcomes. However, consistently overestimating the terminal year biomass can substantially increase the probability of a stock becoming overfished regardless of the risk policy implemented. This situation could undermine management actions to control catch and prevent overfishing and should be closely monitored and evaluated following each stock assessment.

Dr. Doug Lipton (NMFS Office of Science and Technology) and Dr. Cyrus Teng (post-doctoral fellow with the University of Maryland) were then able to utilize the summer flounder outputs from the biological MSE and integrate with a summer flounder economic model to evaluate the economic effects of the different risk policy alternatives<sup>6</sup>. The results indicate differences in the total net economic benefits between the risk policy alternatives with the current policy and Alternative 7, the two most conservative approaches, providing the lowest net economic benefit.

---

<sup>6</sup> To find more information on the economic MSE conducted by Dr. Lipton and Dr. Teng, please see the full report at: <http://www.mafmc.org/briefing/december-2019>.

Similar to the results noted above, the differences between the alternatives were highly influenced by the starting condition of the summer flounder biomass with lower catch and, therefore, lower net economic benefit for some harvest control rules when stock biomass is below the  $B_{MSY}$ . As biomass stabilizes around  $B_{MSY}$ , there was a much smaller difference in the long-term net economic benefits between all of the alternatives as they effectively become equivalent to each other at higher biomass levels. Based on the quantitative assessment conducted for scup, the total economic welfare is likely to be much more similar across the alternatives given the overall similarity in short and long-term catch across the alternatives and the lower market price and lower sensitivity to recreational trips for scup. Drawing specific economic welfare conclusions for butterfish is more difficult given its low commercial price flexibility.

### **Staff Recommendation:**

Based on a review of the both MSE model results, evaluating the biological and economic trade-offs associated with each alternative, and considering Council goals and objectives for its managed fisheries, staff recommend the Council adopt Alternative 2, linear ramping with a maximum  $P^*$  of 0.45 when the  $B/B_{MSY}$  ratio is equal to or greater than 1.0. This alternative performed well across all three species and all stock productivity scenarios evaluated and best balanced biological and fishery trade-offs by minimizing overall risk while allowing for moderate increases in yield and economic welfare when compared to the current risk policy.

There were five different linear ramping alternatives, including the current/*status quo* alternative, evaluated during this risk policy review (Alternatives 1, 2, 6, 7, and 8). These linear ramping alternatives are intended to prevent stocks from becoming overfished by reducing the probability of overfishing as the stock size falls below the  $B_{MSY}$  target. The risk policy MSE analyses conducted for this action support the effectiveness of this approach as the linear ramping alternatives generally performed better than the constant or stepped alternatives, particularly under poor stock productivity scenarios. As previously noted by staff, these ramped risk policy alternatives may provide for additional stock protection as environmental conditions become increasingly variable and continue to change in the Mid-Atlantic as a result of climate change and therefore, the use and implementation of the linear ramping approach should continue.

When comparing the ramped alternatives, Alternative 2 did result in slightly higher risk (higher probability of overfishing and becoming overfished) when compared to the *status quo* and Alternative 7, the most risk adverse alternative, but was lower than the other two ramped alternatives. However, even with this slight increase in risk, there was no scenario in which Alternative 2 resulted in a probability of overfishing that exceeded 50% and only under persistent poor stock productivity conditions did the probability of becoming overfished exceed 50%, which occurred for all alternatives considered (Tables 1A, 2A, and 3A). Alternative 2 also resulted in greater benefits to the fishery (catch, economic benefit and stability) by 6% on average when evaluating across all species and all scenarios compared to the *status quo* alternative and, according to the economic model, would result in an annual increase in economic welfare of \$7.2 million (\$36 million over five years) to the summer flounder fisheries

over the *status quo* alternative. Except for short-term catch of scup, Alternative 2 outperformed all other ramped alternatives for all three species under the different stock productivity scenarios in terms of short or long-term catch and economic welfare by 3% - 13% on average (Tables 1B, 2B, and 3B). In addition, Alternative 2 minimized catch variability when compared to the other ramped alternatives, providing the additional benefit of increased stability.

When comparing Alternative 2 to the constant and stepped alternatives (Alternatives 3, 4, and 5), the results were more mixed but did a better job overall at balancing the biological and economic trade-offs. Alternative 2 outperformed all three alternatives, particularly Alternatives 4 and 5, from risk of overfishing and becoming overfished across all three species. However, Alternatives 4 and 5 consistently resulted in higher short-term catch and economic welfare for all three species compared to Alternative 2. Given the higher maximum  $P^*$  associated with Alternative 2 compared to Alternative 3, 0.45 and 0.40 respectively, short-term catch of scup was higher for Alternative 2. Long-term catch performance between Alternative 2 and the constant and stepped alternatives was driven by starting biomass conditions. Alternative 2 performed slightly better or same for summer flounder, slightly worse or similar for scup, and worse for butterfish. The constant and stepped alternatives consistently resulted in lower catch variability on both an annual basis and in the maximum change in catch, a positive benefit of these risk policy alternatives.

Mid-Atlantic stock assessments and modeling approaches continue to make significant improvements and advancements and can more appropriately account for and address a species vulnerability to over-exploitation. These stock assessment improvements have also resulted in better quantitatively derived biological reference points to appropriately capture the unique life-history characteristics of a particular species. In addition, the new Northeast Region Coordinating Council (NRCC) stock assessment process designed to support research and stock assessment improvements will further enhance the regions stock assessment science to more comprehensively account for a species life-history dynamics. Given these improvements in accounting for a species vulnerability to over-exploitation and the limited use of the atypical designation by the SSC, staff recommends the Council adopt Alternative 9 to remove/eliminate the typical/atypical designation.

Staff also recommends the Council retain a single risk policy that is applied to all Council-managed stocks. The different analyses conducted to date do not show any measurable or specific benefit to implementing a different risk policy for each species, species groups, or based on different life histories. A consistent application of the risk policy across all species provides a more comprehensible and predictable process with understood outcomes. Different harvest policies using the same risk policy can occur across Council-managed species given stock assessment results that incorporate different life history parameters within approved biological and fishing mortality reference points.

If a new risk policy is recommended by Council, staff would recommend retaining the new risk policy for a several years (anywhere from 7-10 years) in order to fully evaluate its performance prior to any future review. The current risk policy has been in place for eight years and all of the alternatives considered during this review, including *status quo*, generally performed similarly

well over the long-term, particularly under average conditions. In addition, the new NRCC stock assessment process will also allow for increased opportunities for the Council and SSC to receive updated stock status information and respond to stock changes, through the risk policy and ABC control rule, in a timely manner. Future reviews could then consider more fully implementing economic factors into the risk policy and other potential EAFM risk policy considerations such as a forage-based policy. These approaches would require the development of new and different models and analyses and will require significant time and input from the Council, SSC and stakeholders.

**Table 1 – Summer flounder: A)** Summary results from the biological MSE showing the probability of overfishing and the probability of becoming overfished for the eight risk policy alternatives under different stock productivity or assessment bias scenarios. **B)** Summary results from the economic and biological MSE showing short and long-term economic welfare compared to *status quo* and the average annual change and maximum annual change in catch. **C)** Average metric value across all productivity and/or assessment bias scenarios for both biological and economic metrics. For all tables, shading represents the relative difference and direction (better or worse) between an alternative compared to the *status quo* – white/light cells indicate the metric performs better or similar to the *status quo* and the darker the cell the worse it performed compared to *status quo* (black cells in Table A indicate the alternative exceeded the 50% probability of overfishing or being overfished).

**A)**

Metric Description	Productivity or Assessment Error	Alternative							
		<i>Status Quo</i>	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Prob. of Overfishing	Average	0.13	0.23	0.13	0.19	0.19	0.19	0.1	0.26
	Good	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.06
	Poor	0.32	0.39	0.58	0.58	0.48	0.32	0.32	0.39
	Underestimate Biomass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06
	Overestimate Biomass	0.32	0.47	0.39	0.52	0.48	0.45	0.32	0.48
Prob. of Becoming Overfished	Average	0.14	0.23	0.15	0.24	0.23	0.24	0.14	0.27
	Good	0.03	0.05	0.03	0.05	0.05	0.06	0.02	0.06
	Poor	0.72	0.8	0.87	0.87	0.84	0.75	0.71	0.78
	Underestimate Biomass	0.0	0.01	0.0	0.02	0.01	0.02	0.0	0.04
	Overestimate Biomass	0.29	0.5	0.32	0.5	0.48	0.5	0.3	0.57

**B)**

Metric Description	Productivity	Alternative							
		<i>Status Quo</i>	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Cumulative Short-Term (5-Year) Economic Welfare (in millions USD)	Average	0	36	72	82	67	7	-20	16
	Good	0	45	74	91	76	16	-20	30
	Poor	0	27	68	73	58	3	-19	6
Cumulative Long-Term (20-Year) Economic Welfare (in millions USD)	Average	0	7	6	11	9	0	-1	9
	Good	0	50	0	49	50	43	1	59
	Poor	0	3	14	13	12	-2	-4	-3
Avg. Change in Catch	Average	0.14	0.15	0.12	0.13	0.14	0.16	0.15	0.17
	Good	0.09	0.09	0.08	0.09	0.09	0.11	0.09	0.11
	Poor	0.18	0.2	0.14	0.15	0.16	0.19	0.2	0.23
Max Change in Catch	Average	0.36	0.42	0.26	0.31	0.34	0.45	0.4	0.51
	Good	0.31	0.34	0.27	0.3	0.31	0.4	0.32	0.4
	Poor	0.47	0.52	0.3	0.33	0.35	0.51	0.56	0.64

C)

Metric Description	Productivity or Assessment Error	Alternative							
		<i>Status Quo</i>	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Prob. of Overfishing	Avg. across all	0.15	0.22	0.22	0.26	0.23	0.20	0.15	0.25
Prob. of Becoming Overfished	Avg. across all	0.24	0.32	0.27	0.34	0.32	0.31	0.23	0.34
Cumulative Short-Term (5-Year) Economic Welfare (in millions USD)	Avg. across all	0	36	71	82	67	9	-20	17
Cumulative Long-Term (20-Year) Economic Welfare (in millions USD)	Avg. across all	0	20	7	24	24	14	-1	22
Avg. Change in Catch	Avg. across all	0.14	0.15	0.11	0.12	0.13	0.15	0.15	0.17
Max Change in Catch	Avg. across all	0.38	0.43	0.28	0.31	0.33	0.45	0.43	0.52

**THIS SPACE INTENTIONALLY LEFT BLANK**

**Table 2 – Scup:** **A)** Summary results from the biological MSE showing the probability of overfishing and the probability of becoming overfished for the eight risk policy alternatives under different stock productivity or assessment bias scenarios. **B)** Summary results from the biological MSE showing short and long-term catch compared to the *status quo* and the average annual change and maximum annual change in catch (note: there is no quantitative economic model for scup). **C)** Average metric value across all productivity and/or assessment bias scenarios for both biological and catch metrics. For all tables, shading represents the relative difference and direction (better or worse) between an alternative compared to the *status quo* – white/light cells indicate the metric performs better or similar to the *status quo* and the darker the cell the worse it performed compared to *status quo* (black cells in Table A indicate the metric exceeded the 50% probability of overfishing or being overfished).

A)

Metric Description	Productivity or Assessment Error	Alternative							
		<i>Status Quo</i>	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Prob. of Overfishing	Average	0.1	0.26	0.1	0.23	0.23	0.29	0.1	0.32
	Good	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.06
	Poor	0.32	0.39	0.39	0.45	0.42	0.39	0.32	0.39
	Underestimate Biomass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Overestimate Biomass	0.47	0.55	0.52	0.58	0.58	0.55	0.45	0.58
Prob. of Becoming Overfished	Average	0.21	0.26	0.21	0.26	0.26	0.27	0.21	0.27
	Good	0.05	0.08	0.05	0.09	0.09	0.1	0.05	0.11
	Poor	0.55	0.61	0.57	0.63	0.62	0.6	0.55	0.63
	Underestimate Biomass	0.01	0.03	0.01	0.03	0.03	0.03	0.01	0.03
	Overestimate Biomass	0.44	0.51	0.45	0.51	0.51	0.53	0.44	0.54

**B)**

Metric Description	Productivity or Assessment Error	Alternative							
		Status Quo	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Short-term (5-year) Catch	Average	0	992	0	992	992	1,861	0	1,861
	Good	0	1,079	0	1,079	1,079	2,000	0	2,000
	Poor	0	939	0	939	939	1,749	0	1,749
	Underestimate Biomass	0	2,844	3,257	5,386	4,707	1,844	-1,207	2,616
	Overestimate Biomass	0	2,489	2,673	5,419	5,019	2,807	-820	3,013
Long-Term (20-year) Catch	Average	0	584	84	746	685	670	-14	944
	Good	0	1,592	20	1,628	1,628	2,428	0	2,670
	Poor	0	111	473	502	355	-153	-28	9
	Underestimate Biomass	0	2,483	4,632	6,318	5,123	1,861	-1,526	1,787
	Overestimate Biomass	0	2,354	3,281	4,910	3,970	2,239	-962	2,482
Avg. Change in Catch	Average	0.11	0.11	0.11	0.11	0.11	0.12	0.11	0.12
	Good	0.08	0.08	0.08	0.08	0.08	0.09	0.08	0.08
	Poor	0.12	0.13	0.12	0.12	0.12	0.14	0.13	0.15
	Underestimate Biomass	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Overestimate Biomass	0.14	0.14	0.13	0.14	0.14	0.15	0.14	0.15
Max Change in Catch	Average	0.27	0.28	0.26	0.27	0.27	0.3	0.27	0.3
	Good	0.24	0.25	0.24	0.25	0.25	0.27	0.24	0.27
	Poor	0.32	0.34	0.28	0.29	0.3	0.36	0.35	0.42
	Underestimate Biomass	0.23	0.24	0.23	0.23	0.24	0.26	0.23	0.26
	Overestimate Biomass	0.34	0.37	0.32	0.34	0.34	0.38	0.34	0.4

**C)**

Metric Description	Productivity or Assessment Error	Alternative							
		Status Quo	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Prob. of Overfishing	Avg. across all	0.18	0.24	0.20	0.25	0.25	0.26	0.17	0.27
Prob. of Becoming Overfished	Avg. across all	0.25	0.30	0.26	0.30	0.30	0.31	0.25	0.32
Short-Term (5-year) Catch	Avg. across all	0	1,669	1,186	2,763	2,547	2,052	-405	2,248
Long-Term (20-year) Catch	Avg. across all	0	1,425	1,698	2,821	2,352	1,409	-506	1,578
Avg. Change in Catch	Avg. across all	0.11	0.11	0.11	0.11	0.11	0.12	0.11	0.12
Max Change in Catch	Avg. across all	0.28	0.30	0.27	0.28	0.28	0.31	0.29	0.33



**Table 3 – Butterfish:** **A)** Summary results from the biological MSE showing the probability of overfishing and the probability of becoming overfished for the eight risk policy alternatives under different stock productivity or assessment bias scenarios. **B)** Summary results from the biological MSE showing short and long-term catch compared to the *status quo* and the average annual change and maximum annual change in catch (note: there is no quantitative economic model for butterfish). **C)** Average metric value across all productivity and/or assessment bias scenarios for both biological and catch metrics. For all tables, shading represents the relative difference and direction (better or worse) between an alternative compared to the *status quo* – white/light cells indicate the metric performs better or similar to the *status quo* and the darker the cell the worse it performed compared to *status quo* (black cells in Table A indicate the metric exceeded the 50% probability of overfishing or being overfished).

A)

Metric Description	Productivity or Assessment Error	Alternative							
		<i>Status Quo</i>	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Prob. of Overfishing	Average	0.06	0.13	0.16	0.19	0.19	0.13	0.06	0.15
	Good	0.2	0.2	0.6	0.6	0.5	0.16	0.1	0.13
	Poor	0.13	0.19	0.32	0.35	0.29	0.19	0.16	0.23
	Underestimate Biomass	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.13
	Overestimate Biomass	0.19	0.27	0.26	0.35	0.32	0.26	0.19	0.29
Prob. of Becoming Overfished	Average	0.54	0.64	0.65	0.71	0.69	0.64	0.51	0.65
	Good	0.03	0.04	0.15	0.16	0.12	0.02	0.02	0.02
	Poor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Underestimate Biomass	0.5	0.57	0.6	0.66	0.63	0.55	0.4	0.57
	Overestimate Biomass	0.7	0.8	0.77	0.82	0.83	0.83	0.68	0.82

**B)**

Metric Description	Productivity or Assessment Error	Alternative							
		Status Quo	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Short-term (5-year) Catch	Average	0	2,754	3,823	5,575	4,592	2,077	-895	2,257
	Good	0	5,248	14,250	15,755	12,452	676	-4,287	633
	Poor	0	1,306	3,930	4,591	3,553	671	-497	891
	Underestimate Biomass	0	2,844	3,257	5,386	4,707	1,844	-1,207	2,616
	Overestimate Biomass	0	2,489	2,673	5,419	5,019	2,807	-820	3,013
Long-Term (20-year) Catch	Average	0	2,464	4,547	5,981	5,022	1,699	-1,200	1,894
	Good	0	3,852	37,255	36,008	31,631	995	-43,270	-10,495
	Poor	0	1,094	2,979	3,623	2,828	790	-183	1,063
	Underestimate Biomass	0	2,483	4,632	6,318	5,123	1,861	-1,526	1,787
	Overestimate Biomass	0	2,354	3,281	4,910	3,970	2,239	-962	2,482
Avg. Change in Catch	Average	0.16	0.16	0.12	0.12	0.13	0.17	0.18	0.19
	Good	0.15	0.15	0.1	0.1	0.09	0.15	0.26	0.18
	Poor	0.2	0.21	0.12	0.13	0.14	0.21	0.25	0.27
	Underestimate Biomass	0.15	0.16	0.11	0.12	0.12	0.17	0.17	0.19
	Overestimate Biomass	0.17	0.18	0.13	0.14	0.15	0.19	0.18	0.2
Max Change in Catch	Average	0.38	0.41	0.27	0.27	0.29	0.44	0.45	0.52
	Good	0.5	0.51	0.32	0.32	0.31	0.49	0.64	0.59
	Poor	0.51	0.55	0.27	0.29	0.31	0.57	0.73	0.78
	Underestimate Biomass	0.37	0.39	0.26	0.27	0.28	0.43	0.44	0.51
	Overestimate Biomass	0.41	0.44	0.29	0.3	0.32	0.47	0.46	0.55

**C)**

Metric Description	Productivity or Assessment Error	Alternative							
		Status Quo	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Prob. of Overfishing	Avg. across all	0.11	0.18	0.29	0.33	0.29	0.17	0.11	0.19
Prob. of Becoming Overfished	Avg. across all	0.55	0.61	0.63	0.67	0.65	0.61	0.53	0.61
Short-Term (5-year) Catch	Avg. across all	0	2,928	5,586	7,345	6,065	1,615	-1,541	1,882
Long-Term (20-year) Catch	Avg. across all	0	2,449	10,539	11,368	9,715	1,517	-9,428	-654
Avg. Change in Catch	Avg. across all	0.17	0.17	0.12	0.12	0.13	0.18	0.21	0.21
Max Change in Catch	Avg. across all	0.43	0.46	0.28	0.29	0.30	0.48	0.54	0.59

# Fine-tuning the ABC control rule for Mid-Atlantic fisheries

John Wiedenmann

Department of Ecology, Evolution, and Natural Resources  
Rutgers, the State University of New Jersey

Report to the Mid-Atlantic Fishery Management Council

November 27<sup>th</sup> 2019

## **Table of Contents**

Executive Summary.....	3
Introduction.....	4
Methods.....	5
Results.....	9
Conclusions.....	12
References.....	13
Tables.....	14
Figures.....	22

## Executive Summary

Eight ABC control rule alternatives for Mid-Atlantic fisheries were tested using a management strategy evaluation model for scup, summer flounder, and butterfish. These control rules varied in their maximum allowable  $P^*$ , and how the  $P^*$  changed as biomass declined. Performance of the control rules relative to one another was evaluated by comparing short- and long-term yields to the fishery, average and maximum variability in yield, the risk of overfishing, and the risk of driving the population to low levels. Variability in future stock productivity was incorporated in the model, and comparison of control rule performance was evaluated across 1) the baseline model run of average productivity, 2) under good future productivity only, and 3) under poor future productivity. Control performance varied by stock and by future conditions, but in general, the fixed and stepped Alternatives (produce greater benefits to the fishery, with high stable short- and long-term catches across stocks and productivity levels. However, with greater reward comes greater risk, as these control rules also had the greatest risks of overfishing and causing the stocks to become overfished, and in some cases the risk of overfishing exceeded the 50% threshold. Ramped control rules, on the other hand, had lower risks of overfishing and of becoming overfished, particularly under average and poor productivity conditions across stocks. In general, ramped options with higher maximum  $P^*$  had higher yield, on average, particularly under average and good productivity. Ramped control rules had greater variability in yield overall, with the greatest variability occurring for options with more rapid changes in the target  $P^*$  with biomass. For summer flounder, ramped control rules had considerably lower short-term yield than the fixed and stepped options, owing to the fact that summer flounder biomass is currently below the  $S_{MSY}$  target. Of the ramped control rules, Alternative 2 seemed the best able to balance the tradeoffs in management objectives, resulting in relatively high catch, low risks of overfishing and becoming overfished, and lower variability in catch.

## Introduction

This project seeks to evaluate alternative acceptable biological catch (ABC) harvest control rules in consideration by the Mid-Atlantic Fisheries Management Council (MAFMC). The control rules are all variants of the P\* approach (Shertzer et al. 2008), whereby a distribution for the overfishing limit (OFL) is created by using the point estimate from the assessment and projection models as the median of a lognormal distribution with an assumed uncertainty (determined by a specified coefficient of variation, or CV), and selecting some percentile of the distribution at or below the median (target  $P^* \leq 0.5$ ). The MAFMC currently uses a control rule whereby the target P\* depends on the estimated biomass, with a target P\* of 0.4 when current spawning biomass for a stock is at or above the biomass target ( $S \geq S_{MSY}$ ), and the target P\* declining linearly as biomass falls below  $S_{MSY}$ , with the fishery shut down (target  $P^* = 0$ ) when biomass is below 10% of  $S_{MSY}$ . The assumed CV of the OFL varies by stocks, but CVs 1.0 are typically used by the SSC for Mid-Atlantic stocks.

This work is an extension of previous work for the Council, where a total of five control rules were evaluated for summer flounder, scup, and butterfish. The original five control rules explored are shown in Figure 1A and 1B. Two of these were “ramped” with the target P\* declining linearly as biomass falls below the target spawning biomass ( $S_{MSY}$ ), with the difference between these options the maximum P\* at or above  $S_{MSY}$  (0.4 or 0.45). The ramped P\* with a maximum P\* of 0.4 (herein called Alternative 1) is current control rule. Three of the control explored either had a fixed P\* of 0.4 across all levels of biomass (Alternative 3), or were fixed over ranges of biomass, with stepped changes as the estimated biomass crossed specified threshold (herein called the stepped control rules, or Alternative 4 and 5; Figure 1B). The Council was interested in exploring additional control rules, particularly ones that allowed for higher catches when the biomass is above the target. Both of these options have a maximum P\* of 0.49, but differ in the biomass at which the fishery closes (10% of  $S_{MSY}$  for Alternative 6 and 30% for Alternative 8), but there are also differences in the target P\* once the stock biomass exceeds  $S_{MSY}$ ; Figure 1C). The final control rule include here (Alternative 7) is another ramped option with a maximum P\* of 0.4, but with closure of the fishery occurring at 30% of  $S_{MSY}$ . In addition to three controls being added to the analysis, this work included updated information from assessments for each stock (NEFSC 2017, Adams, NEFSC 2019). The previous work also split out model runs based on average trends in natural mortality and recruitment to characterize different levels of future productivity. The current work differs in that larger changes in natural mortality and recruitment were explicitly included as different formulations of the operating model (described in more detail in the Methods below). Performance of each control rule across a range of management objectives was assessed by calculating metrics that summarized risk (e.g., the probability of overfishing or of becoming overfished) and reward (e.g., high, stable yield).

## Methods

The MSE simulation used for this analysis model is an extension of the work of Wiedenmann et al. (2017), which was developed to test control rule performance for generic species with different life history strategies (i.e., short, medium, and long-lived). The current model was tailored to the specific dynamics of butterfish, summer flounder and scup, with species-specific parameters obtained from recent stock assessment for each stock (NEFSC 2017, Adams, NEFSC 2019). The MSE model dynamics were nearly identical for each stock, although there were some differences, described below.

The model is a closed-loop MSE (Butterworth and Punt 1999) with three main components (operating, assessment and management submodels), and was developed in AD Model Builder (Fournier 2012). The foundation of the MSE simulation is the operating model, which determines the population dynamics of the stock and how data are generated. Data generated in the operating model are based on the true state of the population with some specified amount of observation error. The operating model generated data on fishery harvests, as well as a fishery-independent index of abundance. These data were then used in the assessment model to estimate stock status and biological reference points. The assessment model was a statistical catch at age (SCAA) model, and output from the assessment was used in the management model to determine the catch limit using a particular ABC control rule. The catch limit estimated in the management model was removed from the population, without implementation error, and the simulation loop continues for a set number of years. This process was repeated 1000 times stochastically for each stock to account for the variability in the population dynamics, data generation, and assessment estimation. At the end of each run, the true and estimated values summarizing the population and fishery dynamics were stored and used to evaluate the ability of a control rule to meet multiple management objectives.

### *Operating, Assessment, and Management Models*

The operating model was split into two periods, the historical period and the management period. Population and fishery dynamics during the historical period are based on information obtained from stock assessments for each stock (NEFSC 2017, Adams, NEFSC 2019), including the estimated abundance and selectivity at age, the observed catch, weight and maturity at age, and the assumed natural mortality rate. The length of the management period was 30 years, while length of the historical period varied for each stock based on the number of years of estimates available in the most recent stock assessment.

Equations governing the population and data-generating dynamics are presented in Table 1, with definitions of the variables in Table 2, and parameters defined in Table 3. A key distinction between the population dynamics between the historical and management periods is that variability in the population dynamics in the historical period is constrained around values estimated in the stock assessment. Numerical abundance at age in the historical period was fixed across ages at the estimated values from the assessment. Variability in stock size in the management period is driven by variability in recruitment, natural mortality, and fishing mortality, with the variability in fishing

mortality resulting from error in assessment estimates and the specific control rule being applied. Fishery and survey data generation occurs throughout both the historical and management periods, as data generated in both periods are fed into the assessment model to estimate abundance in repeated assessments.

Equations governing the dynamics in the management period are referenced by their number in Table 1, such that the formula for calculating recruitment is referred to as Eq. T1.1. Recruitment followed the Beverton-Holt stock-recruit relationship, with bias-corrected lognormally distributed and autocorrelated deviations (Eq. T1.1). Parameters for the stock-recruit relationship were estimated using a maximum likelihood approach with the estimates of spawning biomass and recruitment from each assessment for each stock (Figure 3). Total spawning biomass in a given year was calculated by summing the product of the proportion mature, weight at age and abundance at age over all recruited age classes (Eq. T1.2). Annual abundance of recruited ages was determined from the abundance of that cohort the previous year, decreased by continuous natural and fishing mortality (Eq. T1.3). Total mortality at age was the sum of fishing and natural mortality (Eq. T1.4). Natural mortality was independent of age, but varied over time following an autocorrelated process on the log scale (Eq. T1.5). Fishing mortality at age was the product of fishing intensity of fully selected ages and selectivity at age. The model contained a single fishery with a selectivity function that could either be dome-shaped or asymptotic (logistic). Dome-shaped selectivity was assumed for scup and summer flounder, while logistic selectivity was assumed for butterfish. The selectivity ogive varied over time as the parameters that determines the first age at peak selectivity for the dome-shaped relationship and 50% selectivity in the logistic relationship varied annually in an autocorrelated manner (Eq. T1.6). This variability was included because selectivity in a fishery can vary in response to changing regulations, fishing practices, or changes in growth, although the source for the changes was not modeled explicitly. Weight and maturity at age were fixed over time in the historical period at the observed values, and fixed during the management period as the average over the most recent five years for a given age class.

The data used in the assessment were the fishery catch (both total and proportions at age) and a fishery-independent index of abundance (both total and proportions at age). These data sets were generated by applying observation error to the true values using lognormal errors for the total index and catch, and multinomial distributions for the age compositions (Eqs. T1.7 - T1.11). The amount of observation error in the generation of the data was varied by stock, with greater variability in survey CVs for scup and butterfish, and also fewer ages sampled. The effect of doing this is that the assessment estimates are more uncertain for these stocks. The rationale for this is that there is greater variability within and across years in the survey indices for these stocks compared to summer flounder, perhaps because the survey is better suited for catching summer flounder.

The time series of catch and survey data were input into the SCAA model to estimate the abundance at age, fishing mortality rates in each year, and reference points for management. Model parameters within the SCAA were estimated using a maximum



likelihood approach, with the specific parameters estimated the abundance at age in the first year, recruitments and fishing mortality rates (across years), fishery selectivity parameters, survey selectivity parameters, and survey catchability. Survey catchability and age at peak selectivity in the fishery are assumed constant over time in the assessment model, even though they were varied with time in the operating model. Natural mortality was assumed to be constant over age and time at the mean value for the given stock (Table 3). All other required SCAA inputs (i.e., maturity and weight at age) are set to the true values specified in the operating model. The SCAA model also estimated the spawning potential ratio (SPR) – based reference points for scup and summer flounder, using SPR limits of 0.4 and 0.35, respectively, as these are the ratios that define the  $F_{MSY}$  proxy for these species. For butterfish, the  $F_{MSY}$  proxy is 2/3 of the assumed  $M$  in the assessment, and the  $S_{MSY}$  proxy is calculated with Monte Carlo projections as the median spawning biomass in the final year after fishing for 50 years at  $F_{MSY}$ . Including a Monte Carlo simulation following each assessment in the MSE was computationally intensive, so deterministic projections were done using the mean estimated recruitment. Comparisons were made outside of the MSE between  $S_{MSY}$  estimates from this deterministic approach to stochastic projections, and estimates of  $S_{MSY}$  were within  $\pm 10\%$  of one another, with most being within  $\pm 5\%$ .

In the management model, a harvest control rule was applied using the estimated biomass projected from the terminal assessment year over the interval between assessments (2 years for scup and summer flounder, 3 years for butterfish). The projected biomass in the first year was calculated using the terminal abundance at age, fixed weight at age, assumed  $M$  and estimated  $F$  at age in the terminal year, with recruitment assumed equal to the estimated mean. Biomass over the remaining years was estimated in the same manner, but by fishing at the estimated  $F_{MSY}$  to produce estimates of the OFL. A given control (Figure 1) then applies a buffer to set the ABC, with the size of the buffer in most of the control rules being biomass-dependent. In such cases, the estimated spawning biomass ratio ( $S / S_{MSY}$ ) in each projected year is used to calculate the size of the buffer in the control rule. Note that this approach ignores the changes in abundance that might occur by setting the  $ABC < OFL$ , which would result in  $F < F_{MSY}$  with accurate estimates of abundance. As a result, the deterministic projections provided more conservative estimates of the OFL because the  $F$  associated with the OFL is higher than the  $F$  associated with the ABC in most cases. The estimated ABC is then removed from the population the following year, and the resulting  $F$  is calculated using the Baranov catch equation. Control rules were applied for 30 years for each stock.

#### *Parameterization and Model Runs*

For each stock and for each control rule, the model was run for 30 years under the parameters in Table 3. To test the potential impacts that changes in productivity would have on control rule performance, two additional configurations of the operating model were explored for each stock / control rule combination. A “good” productivity run was explored where over the 30 year period the control rule is applied the mean natural mortality rate is reduced by 25% and the mean recruitment increases by 25 (although both vary over time around each mean). A “poor” productivity run was also explored

where the mean natural mortality increased by 25% and the mean recruitment decreased by 25%.

### *Performance Measures*

At the end of each run, multiple performance measures were calculated to summarize the ability of each control rule to meet a suite of management objectives (Table 4). The primary performance measures used to assess control rule performance were fishery yield, variability in fishery yield, frequency of overfishing, and the proportion of runs where the biomass dropped below the overfished threshold ( $S < 0.5 S_{MSY}$ ). Fishery yield was calculated over short- and long-term timespans, representing the first 5 and final 20 years, respectively. Inspection of the distribution of biomass and catch was done to ensure that transitory dynamics were not occurring in the final 15 years. The probability of overfishing was calculated as the proportion of years during the management period in which  $F$  exceeded  $F_{MSY}$ . Year-to-year variability in fishery yield was summarized by calculating the relative change yield from one year to the next, averaged across all 30 years, but also by estimating the maximum change between any two years over the entire management period.

## Results

Model runs are grouped by the average, good, and poor future productivity, and median performance measures are presented by stock and productivity level in Table 4 and are also shown in Figures 3-18. Runs were also categorized based on whether the stock assessment over- or underestimated the terminal abundance, on average across assessments in the 30 year period, but for the average productivity runs only. Median performance measures by stock and assessment error are presented in Table 6. Short and long-term catch performance measures were calculated as the difference relative to the current control rule, while all other performance measures represent the actual magnitude for each Alternative. Discussion of performance here is grouped by whether the control rules were fixed or stepped (Alternatives 3, 4, and 5), or whether they were ramped (Alternatives 1, 2, 6, 7, 8).

### *Fixed and Stepped P\* Control Rules (Alternatives 3, 4 and 5).*

In general, the fixed P\* and ramped P\* control rules performed well across the range of objectives for all stocks, particularly under average and good future productivity. For butterfish across all productivity levels, Alternatives 4 and 5 (with a max P\* of 0.45) produced the highest long-term catch (Figure 6; Table 5). These Alternatives also produced some of the highest yields for summer flounder under average and poor future productivity, and high yields (but not the highest) for scup across all productivities, and for summer flounder under good future productivity (Figures 4 and 5). Short-term catch was also calculated, but because summer flounder was the only stock below the biomass target of  $S_{MSY}$ , this was the only stock where overall control rule performance differed between short- and long-term catch. Alternatives 3 and 4 had the highest short-term yield for summer flounder, followed by Alternative 5 which had a lower target P\* of 0.35 when the stock is below 75% of  $S_{MSY}$  (Figure 3). When assessments either under- or overestimated biomass, Alternatives 4 and 5 often had the highest short- and long- term catch across stocks and productivity scenario (Table 6).

The fixed and stepped control rules also had the benefit of having the lowest variability in catch, with the fixed P\* of 0.4 control rule (Alternative 3) having the most stable catch overall, with average changes of 10-12% for butterfish, 8-14% for summer flounder, and 8-12% for scup across productivity scenarios. Alternative 3 also had the lowest maximum change in catch between years, with changes of 27-32% for butterfish, 26-30% for summer flounder, and 24-28% for scup across productivity scenarios. Differences in catch variability between Alternatives 3, 4, and 5 and the ramped control rules were less pronounced for Scup under average and good productivity, owing to the biomass starting well above  $S_{MSY}$  and tending to remain there over much of the 30-year period (Table 5).

Although the fixed and stepped P\* control rules resulted in the most stable catch, and often very high if not the highest catch for given stock and productivity scenario, they resulted in some of the highest risks of overfishing and of causing a stock to become overfished. For scup and summer flounder under average and poor productivity, Alternatives 3-5 had a risk of overfishing below 0.5, with higher risk for control rules

with a higher maximum  $P^*$  (Alternatives 4 and 5) under average productivity (Figures 13 and 15; Table 5)). Similarly, the risk of becoming overfished for these stocks increased with higher maximum  $P^*$  targets, and were between 15-24% for summer flounder and 21-26% for scup under average productivity (Figures 14 and 16; Table 5). Under poor productivity for summer flounder and scup, Alternative 3-5 had the highest risk of overfishing compared to the ramped control rules, and for summer flounder Alternatives 3 and 4 had a probability of overfishing above 0.5, meaning overfishing was more likely to occur than not. For summer flounder under poor productivity, these Alternative also had the highest risk of causing the stock to become overfished (87% for 3 and 4 compared to the lowest risk of 71% for Alternative 7; Figure 14). For scup under poor productivity, Alternatives 4 and 5 had risk of becoming overfished of 63 and 62%, respectively, but there was less difference overall between these and the ramped control rules (Figure 16). When assessments for scup and summer flounder tended to overestimate biomass, the risks of overfishing and of becoming overfished increased with the maximum  $P^*$  allowed, so Alternative 4 and 5 had some of the highest risks overall, and exceeded the 50% overfishing threshold for summer flounder for Alternative 4, and Alternatives 3, 4, and 5 for scup (Table 6).

For butterfish across productivity scenarios, Alternatives 3,4, and 5 also had the highest risk of overfishing and of becoming overfished (Figures 17 and 18; Table 5). However, the highest risk of overfishing occurred under good productivity, with a risk of 61% for Alternative 3 and 4 and 52% for Alternative 5, compared to a risk of 10-19% for the ramped control rules (Table 5). Under good productivity for butterfish, assessment error increased leading to inflated estimates of the OFL, but this did not occur of summer flounder or scup. Although the risk of overfishing was very high under good productivity, the risk of becoming overfished was only 12-16% for these control rules, since the increased productivity kept biomass relatively high. Under average productivity for butterfish the risk of becoming overfished for Alternative 3, 4, and 5 was 65, 71, and 69%, respectively, and under poor productivity all control rules (Alternatives 1-8) resulted in a 100% chance of the stock becoming overfished (Table 5).

#### *Ramped Control Rules (Alternatives 1, 2, 6, 7, and 8)*

Performance across the ramped control rules was more variable across productivity runs for each stock, owing to large differences in the size of the buffer above and below  $S_{MSY}$  (Figure 1). For butterfish, Alternative 2 had consistently high long-term yield compared to the other Alternatives. Because butterfish biomass is inherently more variable due to its high natural mortality and recruitment variability, Alternative 7 and 8, which are the most conservative as the stock declines, tended to have the lowest yield for butterfish (Figure 6). For summer flounder, Alternative 2 had the highest short-term yield of all ramped control rules across productivity levels (Figure 3). Alternative 2 also had the highest long-term yield of the ramped control rules for summer flounder under poor productivity, and near the highest yield under average productivity. Under good productivity, however, Alternatives 6 and 8 with a maximum  $P^*$  of 0.49 had the highest long-term yield (Figure 4; Table 5). Similarly for scup, which had biomass well above  $S_{MSY}$  at the start of the management period, highest catches occurred for Alternatives 8 and 6 under average and good productivity. Under poor productivity, however,

Alternative 2 had the highest long-term yield for scup (Figure 5). When assessments tended to underestimate biomass, Alternative 2 performed well with high long-term yield across stocks compared to other ramped control rules. When assessments overestimated biomass, Alternative 2 also produced high long-term yield, but so did Alternatives 8 and 6 (Table 6).

The ramped control rules resulted in greater variability in catch compared to the fixed and stepped  $P^*$  control rules. In general, the more rapidly the target  $P^*$  changed with biomass, the more variable the catch was overall, particularly for stocks under poor productivity. As a result, options 7 and 8 had the greatest average variability in catch, as well as the greatest maximum change in catch between years across stocks, whereas Alternatives 1 and 2 had the lowest (Figures 7-12; Table 5). For butterfish ramped control rules resulted in average interannual changes between 15-27%, and maximum changes between 45-78% across productivity levels. For summer flounder they resulted in average interannual changes between 9-23%, and maximum changes between 31-64% across productivity levels. Finally for scup, ramped control rules resulted in average changes in catch of 8-15% and maximum changes of 24-42% (Table 5).

In general, the risks of overfishing and of becoming overfished were lower for the ramped control rules, although the differences relative to Alternative 3, 4, and 5 varied by stock and productivity scenario. Across productivity levels for each stock, all of the ramped control rules resulted in a risk of overfishing below the 50% threshold (Table 5), with higher risk with higher maximum target  $P^*$ . When assessments overestimated biomass for scup, however, only the ramped options with a maximum  $P^*$  of 0.4 did not cross the 50% threshold (Alternatives 1 and 7; Table 6). The risk of becoming overfished also increased with the maximum  $P^*$  target, and was lowest for Alternatives 1 and 7 across stocks and productivity levels. The exception to pattern was butterfish under poor productivity, where the risk of becoming overfished was 100% across all control rules (Table 5).

## Conclusions

A range of ABC control rule alternatives were tested using an MSE for scup, summer flounder, and butterfish. These control rules varied in their maximum allowable  $P^*$ , and in how the  $P^*$  changed as biomass declined (Figure 1). Performance of the control rules relative to one another was evaluated by comparing short- and long-term yields to the fishery, variability in yield, the risk of overfishing, and the risk of driving the population to low levels (below 50%  $S_{MSY}$ ). Variability in future stock productivity (recruitment and natural mortality) were incorporated in the model, and comparison of control rule performance was evaluated across 1) the baseline (average productivity) model runs, 2) under good future conditions only, and 3) under poor future conditions. Runs were also separated based on assessment error into those that tended to under- or overestimate biomass, on average.

In general, the fixed and stepped Alternatives (3,4,5) produce greater benefits to the fishery, with high stable short- and long-term catches across stocks and productivity levels. However, with greater reward comes greater risk, as these control rules also had the greatest risks of overfishing and causing the stocks to become overfished. In some cases the risk of overfishing exceeded the 50% threshold, occurring for summer flounder and scup under poor productivity, and for butterfish under good productivity. The risk of overfishing also exceeded 50% for summer flounder under Alternatives 3, and 4, and Alternative 5 for scup when the assessment overestimated biomass. Ramped control rules, on the other hand, had lower risks of overfishing and of becoming overfished, particularly under average and poor productivity conditions across stocks. In general, ramped options with higher maximum  $P^*$  had higher yield, on average, particularly under average and good productivity. An exception to this pattern was for butterfish under Alternative 8, which had a maximum  $P^*$  of 0.49, but was also more conservative as the stock declined below  $S_{MSY}$ . For summer flounder, which started below  $S_{MSY}$ , the ramped control rules had larger differences in short-term yield with Alternatives 3, 4, and 5 compared to long-term yield. Ramped control rules had greater variability in yield overall, with the greatest variability occurring for options with more rapid changes in the target  $P^*$  with biomass (Alternatives 6, 7, and 8). Of the ramped control rules, Alternative 2 seemed the best able to balance the tradeoffs, resulting in relatively high catch, low risks of overfishing and becoming overfished, and lower variability in catch compared to most of the ramped Alternatives.

## References

- Adams CF. 2018. Butterfish 2017 Stock Assessment Update. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 18-05 31 p. Available from: <http://www.nefsc.noaa.gov/publications/>
- Butterworth, D. S., and Punt, A.E. 1999. Experiences in the evaluation and implementation of management procedures. ICES J. Mar. Sci. 56: 985–998.
- Fournier, D. 2012. An Introduction to AD Model Builder for Use in Nonlinear Modeling and Statistics. Version 10. <http://admb-project.org/documentation/manuals/admbuser-manuals>.
- NEFSC (Northeast Fisheries Science Center). 2017. Scup Stock Assessment Update for 2017. Available at: <http://www.mafmc.org/ssc-meetings/2017/july-19-20>.
- NEFSC (Northeast Fisheries Science Center ). 2019. 66th Northeast Regional Stock Assessment Workshop (66th SAW) Assessment Report. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 19-08; 1170 p. Available from: <http://www.nefsc.noaa.gov/publications/>
- Punt, A.E. 2003. Evaluating the efficacy of managing West Coast groundfish resources through simulations. Fish Bull. 101: 860-873.
- Shertzer, K., Prager, M., and Williams, E. 2008. A probability-based approach to setting annual catch levels. Fish. Bull. 106: 225-232.
- Terceiro M. 2016. Stock Assessment of Summer Flounder for 2016. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 16-15; 117 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026, or online at <http://www.nefsc.noaa.gov/publications>
- Wiedenmann, J., M. Wilberg, A. Sylvia, and T. Miller. 2017. An evaluation of acceptable biological catch (ABC) harvest control rules designed to limit overfishing. Canadian Journal of Fisheries and Aquatic Sciences. doi: 10.1139/cjfas-2016-038

Table 1. Equations governing the population and data-generating dynamics in the operating model.

Equation	Description
<i>Population, life history and fishing dynamics</i>	
1	Stock-recruit relationship
$R(t) = \frac{S(t - a_R)}{\alpha + \beta S(t - a_R)} e^{\varepsilon_R - 0.5\sigma_R^2}$	
$\alpha = \frac{S_0(1 - h)}{4hR_0} \quad \beta = \frac{5h - 1}{4hR_0}$	
$\varepsilon_R(t) = \rho_R \varepsilon_R(t - 1) + \sqrt{1 - \rho_R^2} \varphi_R(t)$	
$\varphi_R(t) \sim N(0, \sigma_R^2)$	
2	Spawning biomass
$S(t) = \sum_a m(a)w(a)N(a, t)$	
3	Numerical abundance at age
$N(a, t) = \begin{cases} R(t) & a = a_R \\ N(a - 1, t - 1)e^{-Z(a-1, t-1)} & a_R < a < a_{max} \\ N(a - 1, t - 1)e^{-Z(a-1, t-1)} + N(a, t - 1)e^{-Z(a, t-1)} & a = a_{max} \end{cases}$	
4	Total mortality
$Z(a, t) = M(t) + s(a, t)F(t)$	



5  $M(t) = \bar{M}e^{\varepsilon_M(t)-0.5\sigma_M^2}$  Time-varying  
natural mortality

$$\varepsilon_M(t) = \rho_M \varepsilon_M(t-1) + \sqrt{1 - \rho_M^2} \varphi_M(t)$$

$$\varphi_M(t) \sim N(0, \sigma_M^2)$$

6a  $s(a, t) = \frac{1}{1 + e^{\frac{a - s_{50}(t)}{slope}}}$  Logistic  
selectivity at age

$$s_{50\%}(t) = \bar{s}_{50\%} e^{\varepsilon_s(t) - 0.5\sigma_s^2}$$

$$\varepsilon_s(t) = \rho_s \varepsilon_s(t-1) + \sqrt{1 - \rho_s^2} \varphi(t)$$

$$\varphi(t) \sim N(0, \sigma_s^2)$$

in fishery or  
survey, with time  
varying selectivity  
only in the fishery

6b  $s(a, t) = \begin{cases} e^{\frac{-(a - a_{mid})}{s_{up}}} & a \leq a_{mid} \\ e^{\frac{-(a - a_{mid})}{s_{down}}} & a > a_{mid} \end{cases}$  Dome-shaped  
selectivity at age  
in fishery

$$s_{mid}(t) = \bar{s}_{mid} e^{\varepsilon_s(t) - 0.5\sigma_s^2}$$

$$\varepsilon_s(t) = \rho_s \varepsilon_s(t-1) + \sqrt{1 - \rho_s^2} \varphi(t)$$

$$\varphi(t) \sim N(0, \sigma_s^2)$$

$$7 \quad C(a, t) = \frac{s(a, t)F(t)}{Z(a, t)}w(a)N(a, t)(1 - e^{-Z(a, t)})$$

Annual catch at  
age and total  
catch

$$C(t) = \sum_a C(a, t)$$

*Data-generating dynamics*

$$8 \quad C_{obs}(t) = C(t)\varepsilon_C(t)-0.5\sigma_C^2$$

Observed catch

$$\varepsilon_C(t) \sim N(0, \sigma_C^2)$$

$$9 \quad I(a, t) = q(t)s_s(a)N(a, t)$$

True index of  
abundance

$$I(t) = \sum_a I(a, t)$$

$$q(t) = qe^{\varepsilon_q(t)-0.5\sigma_q^2}$$

$$\varepsilon_q(t) \sim N(0, \sigma_q^2)$$

$$10 \quad I_{obs}(t) = I(t)\varepsilon_I(t)-0.5\sigma_I^2$$

Observed index of  
abundance

$$\varepsilon_I(t) \sim N(0, \sigma_I^2)$$

$$11 \quad \mathbf{p}_{obs}(t) = \frac{1}{n}\mathbf{\Theta}(t)$$

Observed vector  
of proportion at  
age in fishery  $f$

$$\mathbf{\Theta}(t) \sim \text{Multinomial}(n, \mathbf{p}(t))$$

$$\mathbf{p}(t) = \frac{1}{I(t)}(I(a_R, t), \dots, I(a_{max}, t))$$

Table 2. Description of the index and state variables used in equations in the model (presented in Table 1). Parameter descriptions and values used are presented in Table 3.

Symbol	Description
Index variables	
$t$	Year
$a$	Age
State variables	
$N$	Numerical abundance
$S$	Spawning biomass (kg)
$L$	Length (cm)
$w$	Weight (kg)
$m$	Maturity (proportion)
$s_s$	Survey selectivity (proportion)
$s_f$	Fishery selectivity (proportion)
$F$	Fishing mortality rate (year <sup>-1</sup> )
$M$	Natural mortality rate
$Z$	Total mortality rate (year <sup>-1</sup> )
$C$	Total fishery catch (kg)
$C_{obs}$	Observed fishery catch (kg)
$p_C$	Proportions at age in catch
$p_{C,obs}$	Observed proportion at age in catch
$I$	Survey numerical index of abundance
$I_{obs}$	Observed survey numerical index of abundance
$q$	Survey catchability
$p_I$	Proportions at age in survey
$p_{I,obs}$	Observed proportion at age in survey

Table 3. Parameter values used in the model for each species. Note that for butterfish, the  $F_{MSY}$  reference point is set at  $2/3 \cdot M$  and is not based on a SPR calculation.

Parameter	Description	Summer		
		Butterfish	flounder	Scup
$a_R$	Age at recruitment (to population)	1	1	1
$a_{max}$	Maximum age (a plus group)	5	8	8
$\bar{M}$	Mean natural mortality rate	1.22	0.25	0.2
$\sigma_M$	standard deviation of time-varying $M$	0.1	0.1	0.1
$\rho_M$	autocorrelation in $M$	0.3	0.3	3
$h$	Steepness	0.85	0.9	0.92
$R_0$	Virgin recruitment	7877266	48000	134111
$S_0$	Unfished spawning biomass	93747	150000	320732
$\sigma_R$	standard deviation of stock-recruit relationship	0.5	0.5	0.5
$\rho_R$	autocorrelation in recruitment	0.44	0.44	0.6
$S_{f,peak}$	Age at maximum selectivity in dome-shaped function	3.0	5.0	4.0
$S_{f,up}, S_{f,down}$	Controls how rapidly selectivity increases / decreases	1.5 / 20.0	1.73 / 5.44	3.67 / 2.09
$\sigma_s$	standard deviation of age at 50% or peak selectivity	0.01	0.15	0.1
$\rho_s$	autocorrelation in selectivity	0.3	0.2	
$S_{s,50\%}$	mean age at 50% selectivity in survey	0.5	0.5	0.5
$S_{s,slope}$	Slope of survey selectivity function	1	1	1
$\sigma_C$	standard deviation of catch estimates	0.29	0.2	0.2
$\sigma_I$	standard deviation of survey estimates	0.47	0.29	0.63
$\bar{q}$	mean catchability in survey	$5 \times 10^{-5}$	$5 \times 10^{-5}$	$5 \times 10^{-5}$
$\sigma_q$	standard deviation of catchability random walk	0.01	0.05	0.05
$n_C$	effective sample size of the catch	50	100	50
$n_I$	effective sample size of the survey	50	100	50
$SPR_{lim}$	Spawning potential ratio (SPR) that defines overfishing	-	0.35	0.4
$F_{MSY}$	Fishing mortality rate that defines overfishing	0.81	0.3	0.22

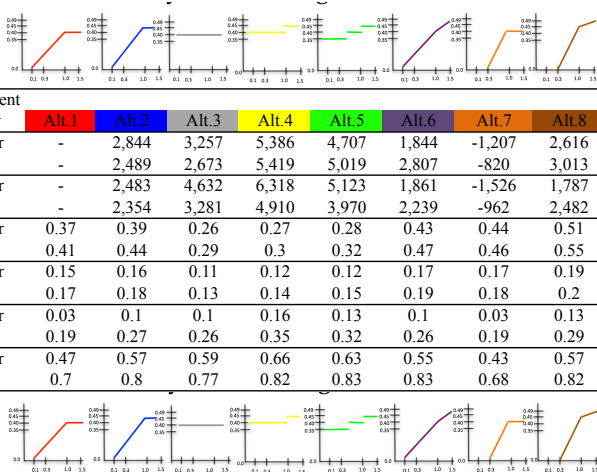
Table 4. Performance measures calculated for different time periods at the end of each model run. The average change in the catch is calculated following Punt (2003) as  $\sum_{t>1} |C(t) - C(t - 1)| / \sum_t C(t)$

Performance Measure	Description	Time Period(s)
Initial catch	Mean catch	first 5 years
Long-term catch	Mean catch	final 20 years
Average change in catch	Average relative interannual variation in catch	all years
Maximum change in catch	Maximum relative change in catch between any two years of the 30-year period	all years
Probability of overfishing ( $P_{OF}$ )	Proportion of years when $F > F_{MSY}$	all years
Risk of becoming overfished	Proportion of runs where the stock becomes overfished ( $S < 0.5 S_{MSY}$ )	all years

Table 5. Median performance measures for each stock by productivity scenario. Short- and long-term catch values are calculated as the difference between each control rule and the current control rule (Alt. 1), with positive and negative values meaning higher and lower catch, respectively, on average.

Performance Measure		Productivity	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Butterfish	Short-term catch	Average	0	2,754	3,823	5,575	4,592	2,077	-895	2,257
	Short-term catch	Good	0	5,248	14,250	15,755	12,452	676	-4,287	633
	Short-term catch	Poor	0	1,306	3,930	4,591	3,553	671	-497	891
	Long-term catch	Average	0	2,464	4,547	5,981	5,022	1,699	-1,200	1,894
	Long-term catch	Good	0	3,852	37,255	36,008	31,631	995	-43,270	-10,495
	Long-term catch	Poor	0	1,094	2,979	3,623	2,828	790	-183	1,063
	Max. change in catch	Average	0.38	0.41	0.27	0.27	0.29	0.44	0.45	0.52
	Max. change in catch	Good	0.5	0.51	0.32	0.32	0.31	0.49	0.64	0.59
	Max. change in catch	Poor	0.51	0.55	0.27	0.29	0.31	0.57	0.73	0.78
	Avg. change in catch	Average	0.16	0.16	0.12	0.12	0.13	0.17	0.18	0.19
	Avg. change in catch	Good	0.15	0.15	0.1	0.1	0.09	0.15	0.26	0.18
	Avg. change in catch	Poor	0.2	0.21	0.12	0.13	0.14	0.21	0.25	0.27
	Overfishing prob.	Average	0.06	0.13	0.16	0.19	0.19	0.13	0.06	0.15
	Overfishing prob.	Good	0.16	0.19	0.61	0.61	0.52	0.16	0.1	0.13
	Overfishing prob.	Poor	0.13	0.19	0.32	0.35	0.29	0.19	0.16	0.23
	Overfished prob.	Average	0.54	0.64	0.65	0.71	0.69	0.64	0.51	0.65
	Overfished prob.	Good	0.03	0.04	0.15	0.16	0.12	0.02	0.02	0.02
	Overfished prob.	Poor	1	1	1	1	1	1	1	1
Summer flounder	Short-term catch	Average	0	564	1,226	1,226	1,110	0	-319	216
	Short-term catch	Good	0	575	1,222	1,222	1,025	0	-304	178
	Short-term catch	Poor	0	548	1,169	1,169	1,000	0	-309	178
	Long-term catch	Average	0	579	94	566	639	451	-6	574
	Long-term catch	Good	0	1,566	-114	1,526	1,530	2,108	29	2,381
	Long-term catch	Poor	0	194	357	390	293	31	-83	169
	Max. change in catch	Average	0.36	0.42	0.26	0.31	0.34	0.45	0.4	0.51
	Max. change in catch	Good	0.31	0.34	0.27	0.3	0.31	0.4	0.32	0.4
	Max. change in catch	Poor	0.47	0.52	0.3	0.33	0.35	0.51	0.56	0.64
	Avg. change in catch	Average	0.14	0.15	0.12	0.13	0.14	0.16	0.15	0.17
	Avg. change in catch	Good	0.09	0.09	0.08	0.09	0.09	0.11	0.09	0.11
	Avg. change in catch	Poor	0.18	0.2	0.14	0.15	0.16	0.19	0.2	0.23
	Overfishing prob.	Average	0.13	0.23	0.13	0.19	0.19	0.19	0.1	0.26
	Overfishing prob.	Good	0	0	0	0	0	0.03	0	0.06
	Overfishing prob.	Poor	0.32	0.39	0.58	0.58	0.48	0.32	0.32	0.39
	Overfished prob.	Average	0.14	0.23	0.15	0.24	0.23	0.24	0.14	0.27
	Overfished prob.	Good	0.03	0.05	0.03	0.05	0.05	0.06	0.02	0.06
	Overfished prob.	Poor	0.72	0.8	0.87	0.87	0.84	0.75	0.71	0.78
Scup	Short-term catch	Average	0	992	0	992	992	1,861	0	1,861
	Short-term catch	Good	0	1,079	0	1,079	1,079	2,000	0	2,000
	Short-term catch	Poor	0	939	0	939	939	1,749	0	1,749
	Long-term catch	Average	0	584	84	746	685	670	-14	944
	Long-term catch	Good	0	1,592	20	1,628	1,628	2,428	0	2,670
	Long-term catch	Poor	0	111	473	502	355	-153	-28	9
	Max. change in catch	Average	0.27	0.28	0.26	0.27	0.27	0.3	0.27	0.3
	Max. change in catch	Good	0.24	0.25	0.24	0.25	0.25	0.27	0.24	0.27
	Max. change in catch	Poor	0.32	0.34	0.28	0.29	0.3	0.36	0.35	0.42
	Avg. change in catch	Average	0.11	0.11	0.11	0.11	0.11	0.12	0.11	0.12
	Avg. change in catch	Good	0.08	0.08	0.08	0.08	0.08	0.09	0.08	0.08
	Avg. change in catch	Poor	0.12	0.13	0.12	0.12	0.12	0.14	0.13	0.15
	Overfishing prob.	Average	0.1	0.26	0.1	0.23	0.23	0.29	0.1	0.32
	Overfishing prob.	Good	0	0	0	0	0	0.06	0	0.06
	Overfishing prob.	Poor	0.32	0.39	0.39	0.45	0.42	0.39	0.32	0.39
	Overfished prob.	Average	0.21	0.26	0.21	0.26	0.26	0.27	0.21	0.27
	Overfished prob.	Good	0.05	0.08	0.05	0.09	0.09	0.1	0.05	0.11
	Overfished prob.	Poor	0.55	0.61	0.57	0.63	0.62	0.6	0.55	0.63

Table 6. Median performance measures for each stock for runs separated by whether or not the assessment tended to over- or underestimate biomass, on average over the 30 year period. Short- and long-term catch values are calculated as the difference between each control rule and the current control rule (Alt. 1), with positive and negative values meaning higher and lower catch, respectively, on average.



Stock	Performance Measure	Assesment Error	Assesment							
			Alt.1	Alt.2	Alt.3	Alt.4	Alt.5	Alt.6	Alt.7	Alt.8
Butterfish	Short-term catch	Under	-	2,844	3,257	5,386	4,707	1,844	-1,207	2,616
	Short-term catch	Over	-	2,489	2,673	5,419	5,019	2,807	-820	3,013
	Long-term catch	Under	-	2,483	4,632	6,318	5,123	1,861	-1,526	1,787
	Long-term catch	Over	-	2,354	3,281	4,910	3,970	2,239	-962	2,482
	Max. change in catch	Under	0.37	0.39	0.26	0.27	0.28	0.43	0.44	0.51
	Max. change in catch	Over	0.41	0.44	0.29	0.3	0.32	0.47	0.46	0.55
	Average change in catch	Under	0.15	0.16	0.11	0.12	0.12	0.17	0.17	0.19
	Average change in catch	Over	0.17	0.18	0.13	0.14	0.15	0.19	0.18	0.2
	Overfishing prob.	Under	0.03	0.1	0.1	0.16	0.13	0.1	0.03	0.13
	Overfishing prob.	Over	0.19	0.27	0.26	0.35	0.32	0.26	0.19	0.29
	Overfished prob.	Under	0.47	0.57	0.59	0.66	0.63	0.55	0.43	0.57
	Overfished prob.	Over	0.7	0.8	0.77	0.82	0.83	0.83	0.68	0.82
	Summer Flounder	Short-term catch	Under	-	462	1,643	1,651	1,245	43	-394
Short-term catch		Over	-	866	771	901	899	218	-106	699
Long-term catch		Under	-	846	115	917	878	712	-19	1,026
Long-term catch		Over	-	335	141	402	476	182	92	349
Max. change in catch		Under	0.34	0.37	0.24	0.28	0.31	0.41	0.37	0.45
Max. change in catch		Over	0.4	0.46	0.3	0.35	0.39	0.51	0.43	0.58
Average change in catch		Under	0.13	0.14	0.11	0.12	0.13	0.15	0.14	0.16
Average change in catch		Over	0.15	0.16	0.13	0.14	0.15	0.19	0.16	0.19
Overfishing prob.		Under	0	0	0	0	0	0	0	0.06
Overfishing prob.		Over	0.32	0.47	0.39	0.52	0.48	0.45	0.32	0.48
Overfished prob.		Under	0	0.01	0	0.02	0.01	0.02	0	0.04
Overfished prob.		Over	0.29	0.5	0.32	0.5	0.48	0.5	0.3	0.57
Scup		Short-term catch	Under	-	2,844	3,257	5,386	4,707	1,844	-1,207
	Short-term catch	Over	-	2,489	2,673	5,419	5,019	2,807	-820	3,013
	Long-term catch	Under	-	2,483	4,632	6,318	5,123	1,861	-1,526	1,787
	Long-term catch	Over	-	2,354	3,281	4,910	3,970	2,239	-962	2,482
	Max. change in catch	Under	0.23	0.24	0.23	0.23	0.24	0.26	0.23	0.26
	Max. change in catch	Over	0.34	0.37	0.32	0.34	0.34	0.38	0.34	0.4
	Average change in catch	Under	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Average change in catch	Over	0.14	0.14	0.13	0.14	0.14	0.15	0.14	0.15
	Overfishing prob.	Under	0	0	0	0	0	0	0	0
	Overfishing prob.	Over	0.47	0.55	0.52	0.58	0.58	0.55	0.45	0.58
	Overfished prob.	Under	0.01	0.03	0.01	0.03	0.03	0.03	0.01	0.03
	Overfished prob.	Over	0.44	0.51	0.45	0.51	0.51	0.53	0.44	0.54

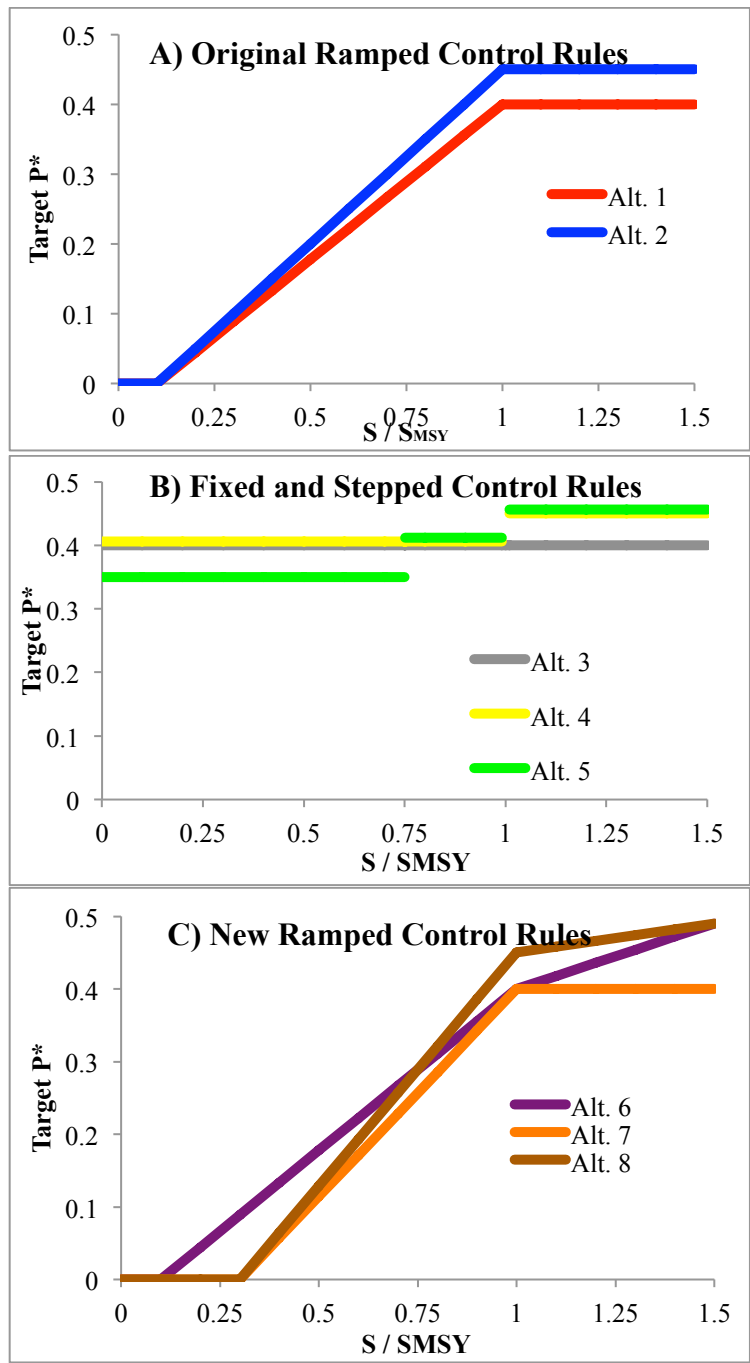


Figure 1. Control rules explored in this work, showing the target  $P^*$ . Those in panel C are new from the previous work. Alternatives 3-5 (panel B) are offset slightly to prevent overlap. Colors for all control rules will be used consistently throughout this report.



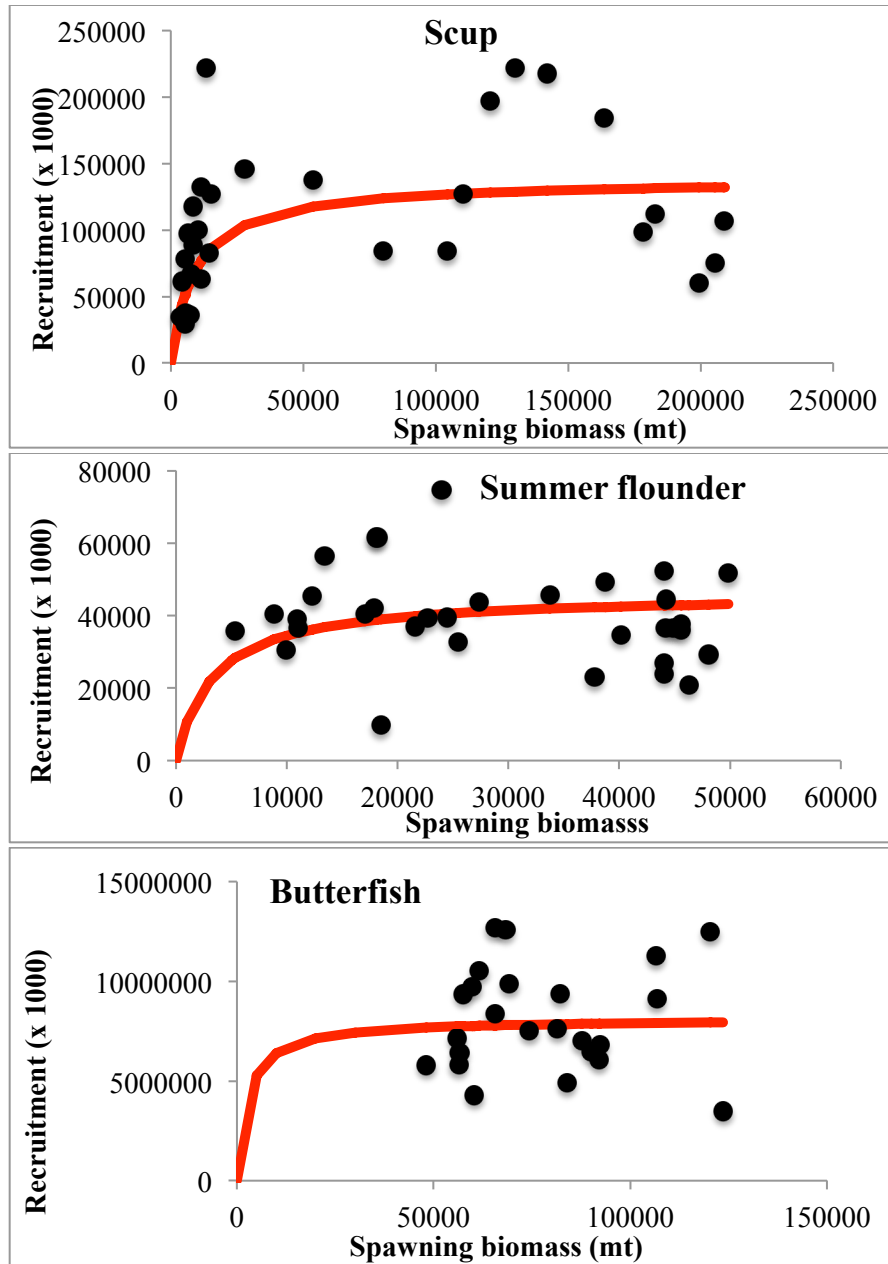


Figure 2. Stock-recruit relationship for each stock based on maximum likelihood fits of the Beverton-Holt model (red line) to the estimates of spawning biomass and recruitment (black circles) from the most recent stock assessment for each stock.

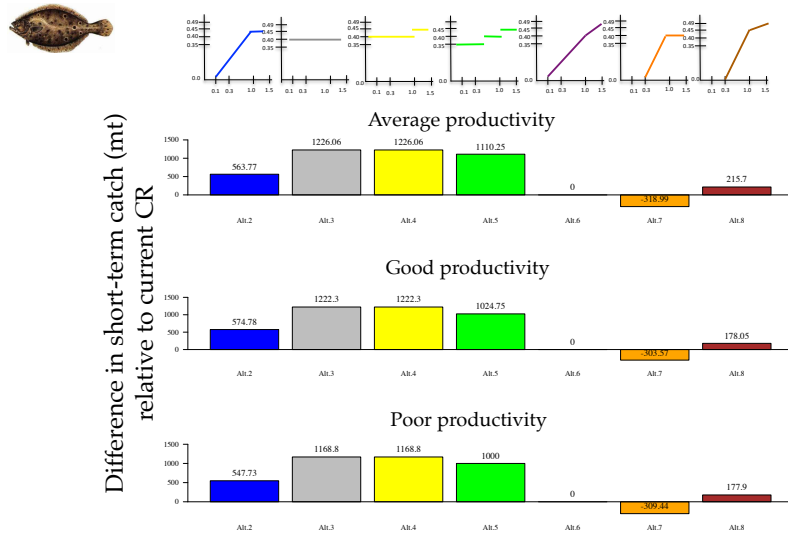


Figure 3. Difference in average catch in first 5 years of control rule implementation for summer flounder for each alternative control rule relative to the current control rule.

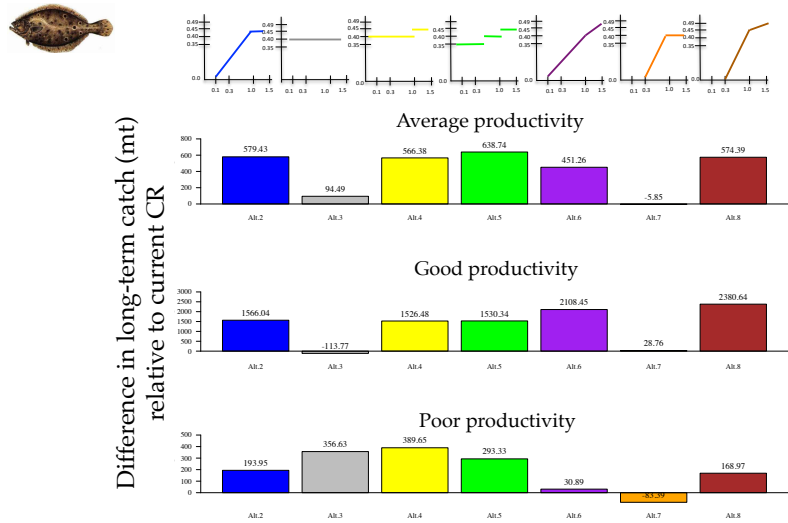


Figure 4. Difference in average catch in final 20 years of control rule implementation for summer flounder for each alternative control rule relative to the current control rule.

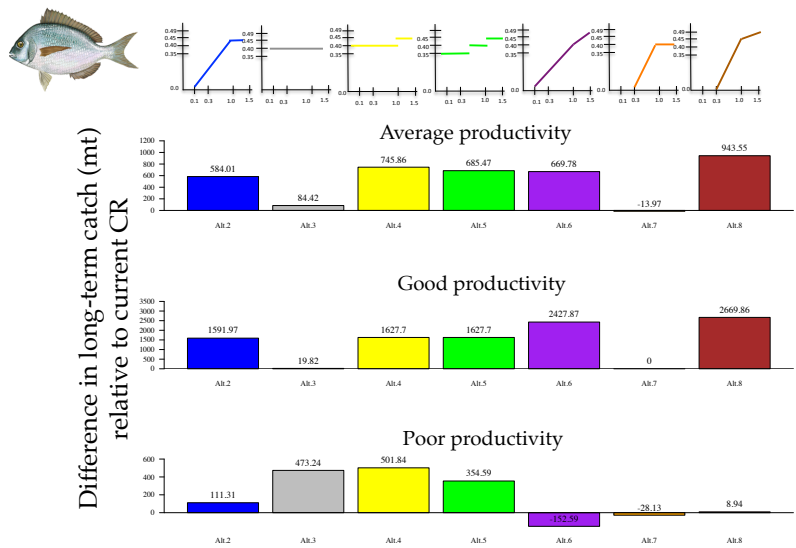


Figure 5. Difference in average catch in final 20 years of control rule implementation for scup for each alternative control rule relative to the current control rule.

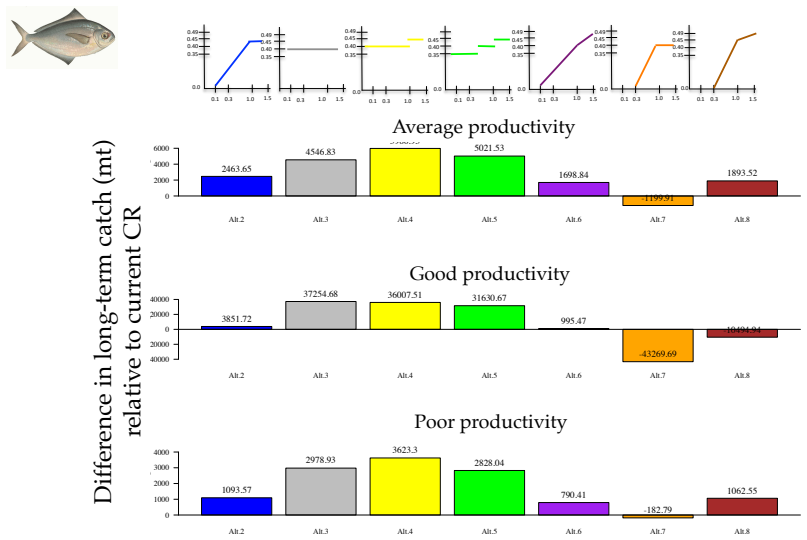


Figure 6. Difference in average catch in final 20 years of control rule implementation for butterfish for each alternative control rule relative to the current control rule.

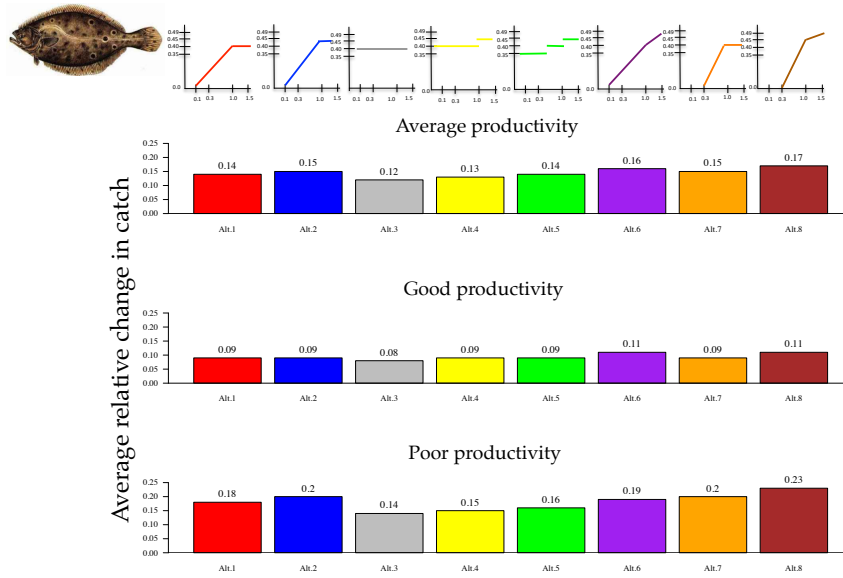


Figure 7. Change in relative catch for summer flounder between years averaged over the entire 30 year period.

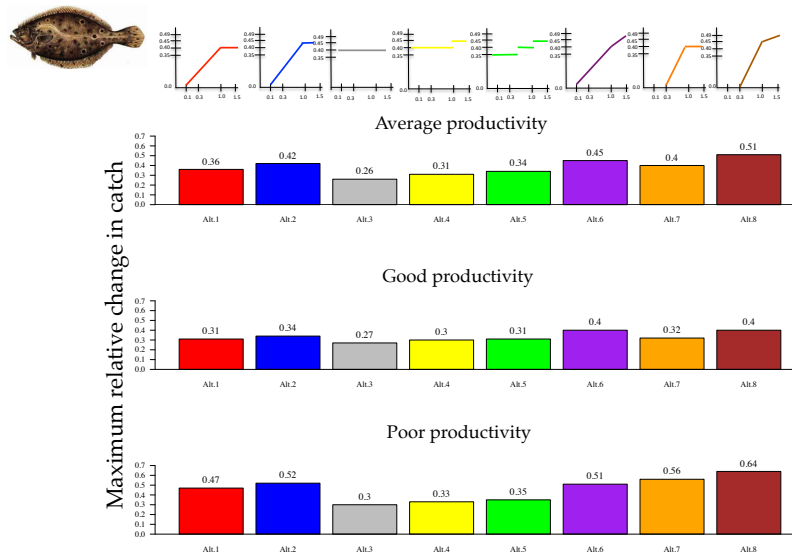


Figure 8. Maximum change in relative catch for scup between any two years over the entire 30-year period.

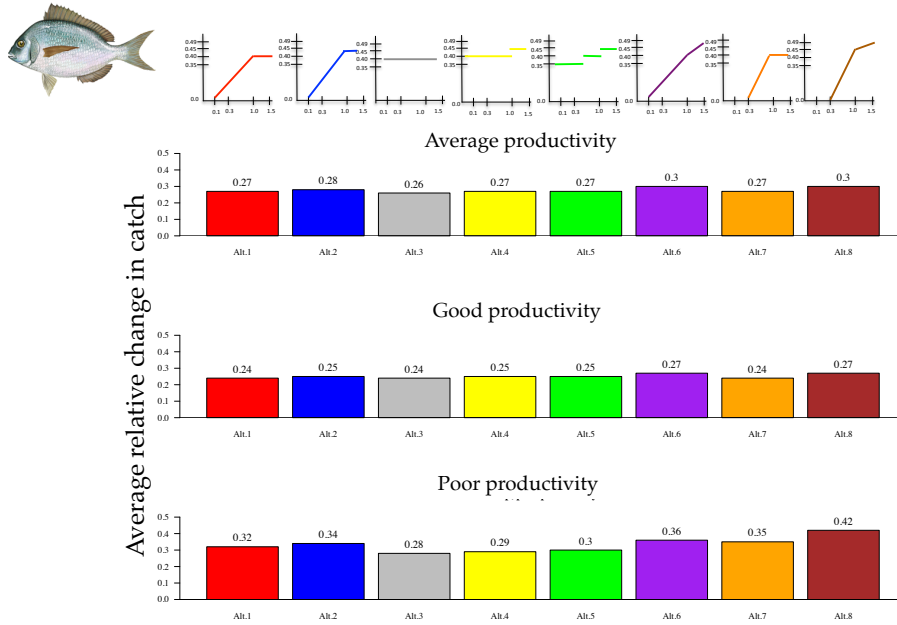


Figure 9. Change in relative catch for scup between years averaged over the entire 30-year period.

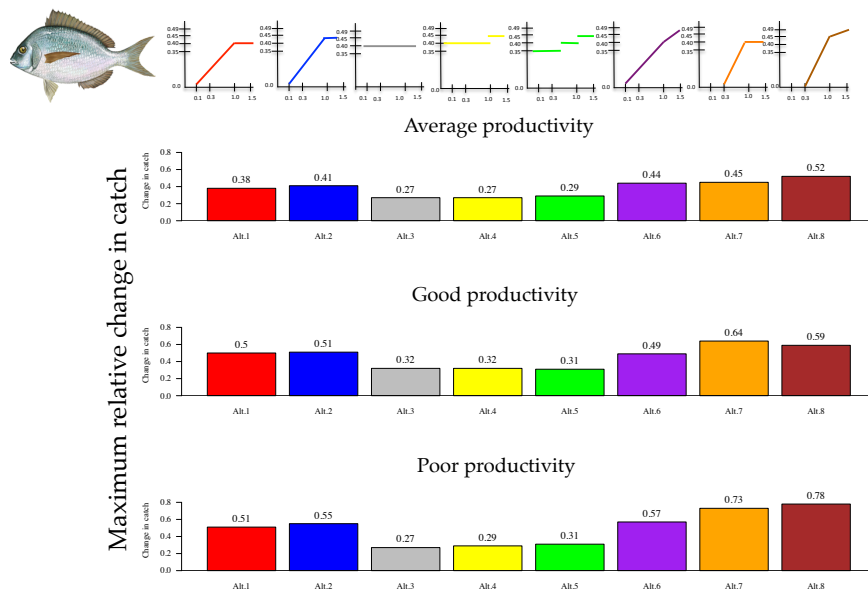


Figure 10. Maximum change in relative catch for scup between any two years over the entire 30-year period.

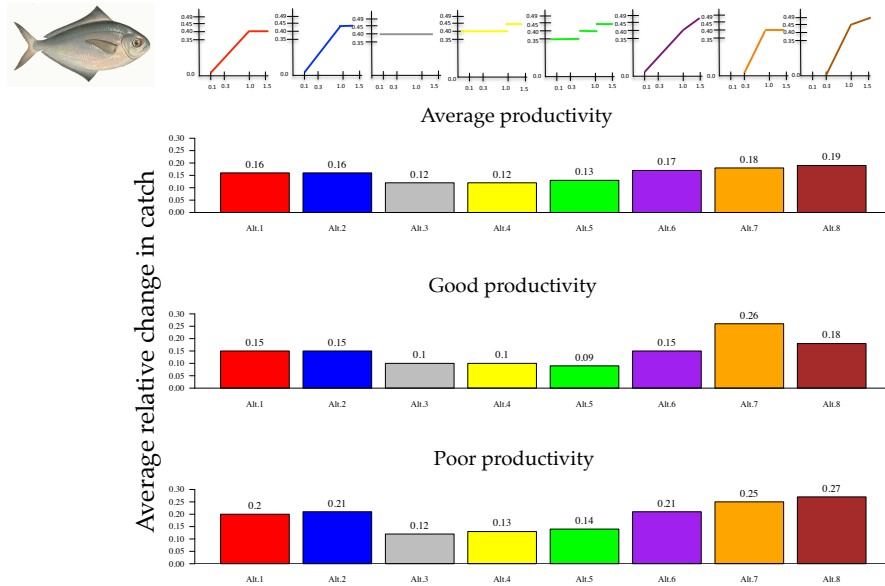


Figure 11. Change in relative catch for butterfish between years averaged over the entire 30-year period.

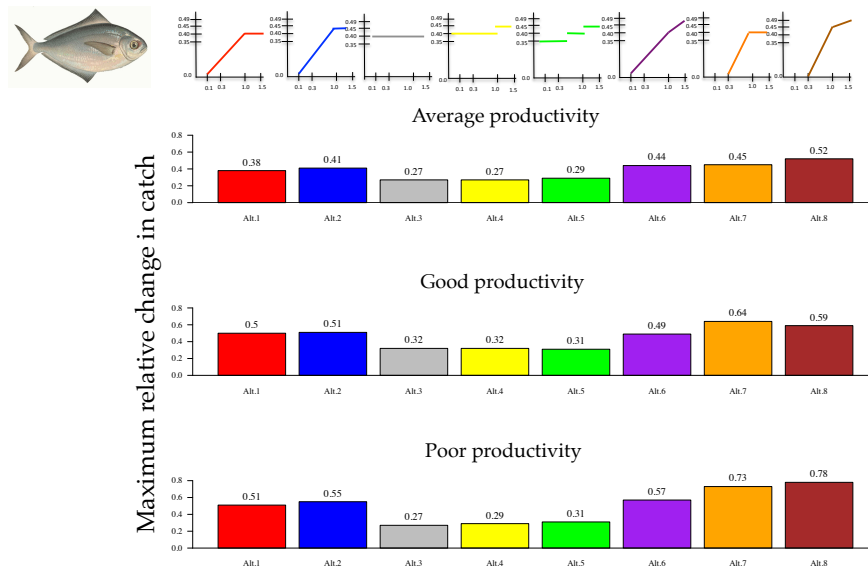


Figure 12. Maximum change in relative catch for scup between any two years over the entire 30-year period.

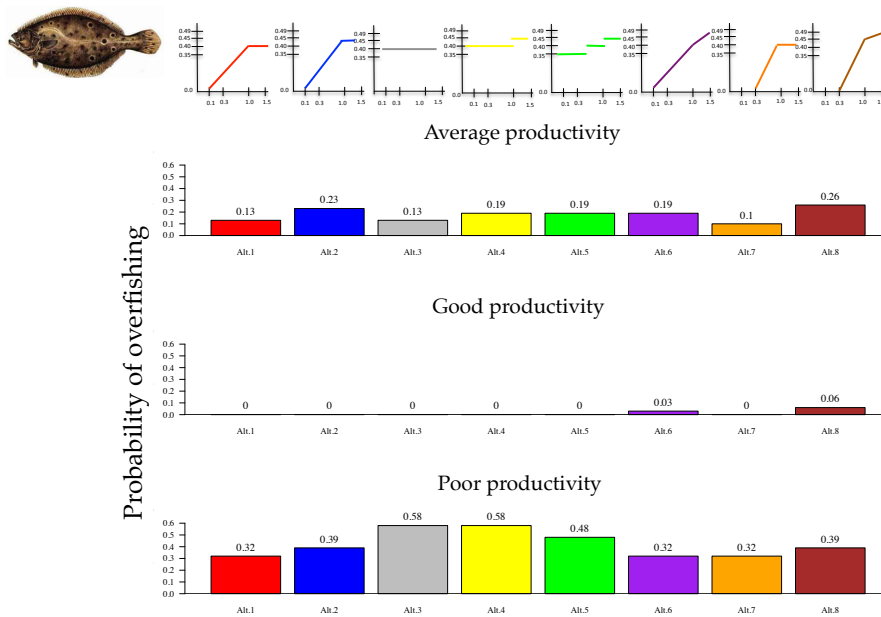


Figure 13. Median probability of overfishing for summer flounder by control rule.

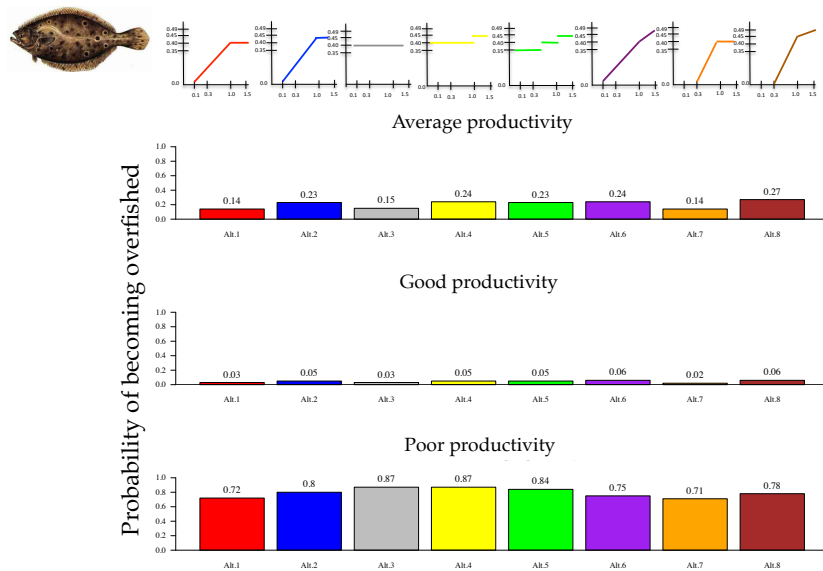


Figure 14. Median probability of becoming overfished for summer flounder by control rule.

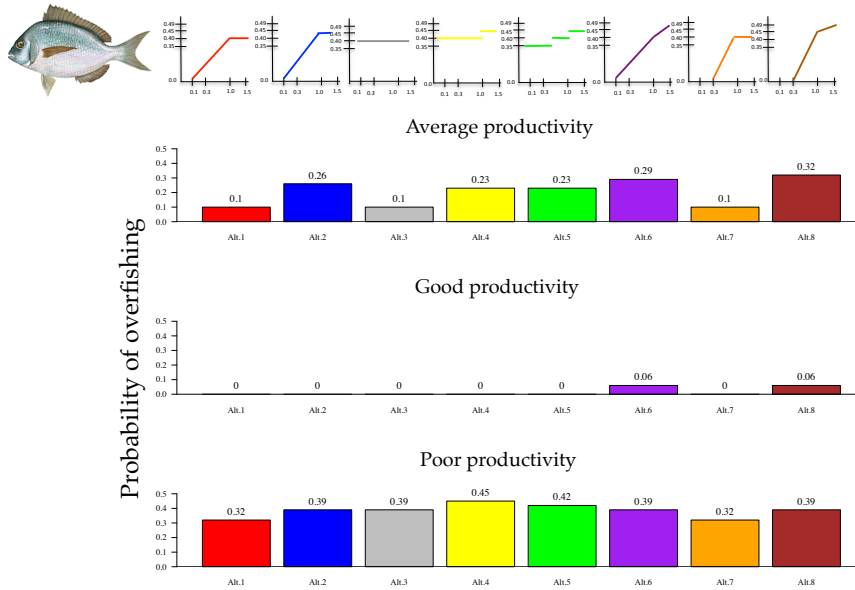


Figure 15. Median probability of overfishing for scup by control rule.

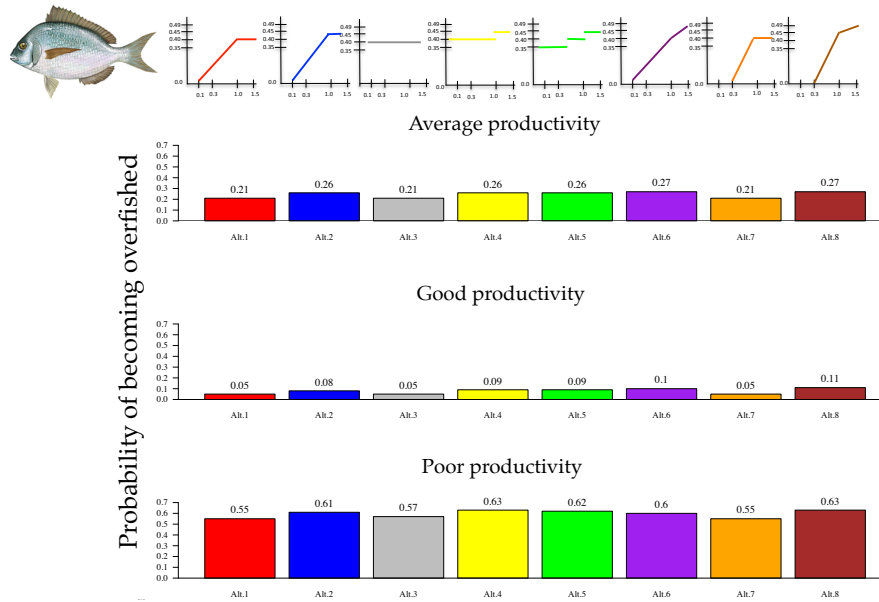


Figure 16. Median probability of becoming overfished for scup by control rule.



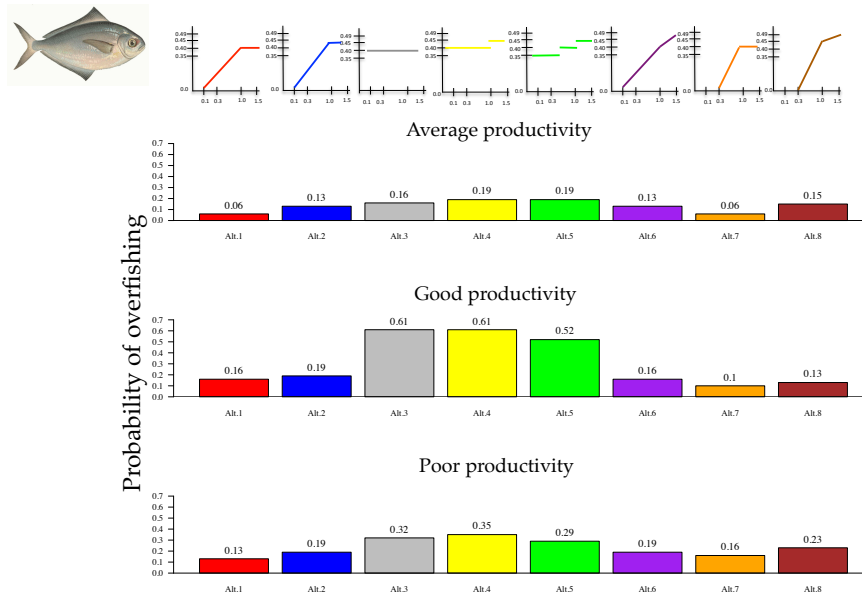


Figure 17. Median probability of overfishing for butterfish by control rule.

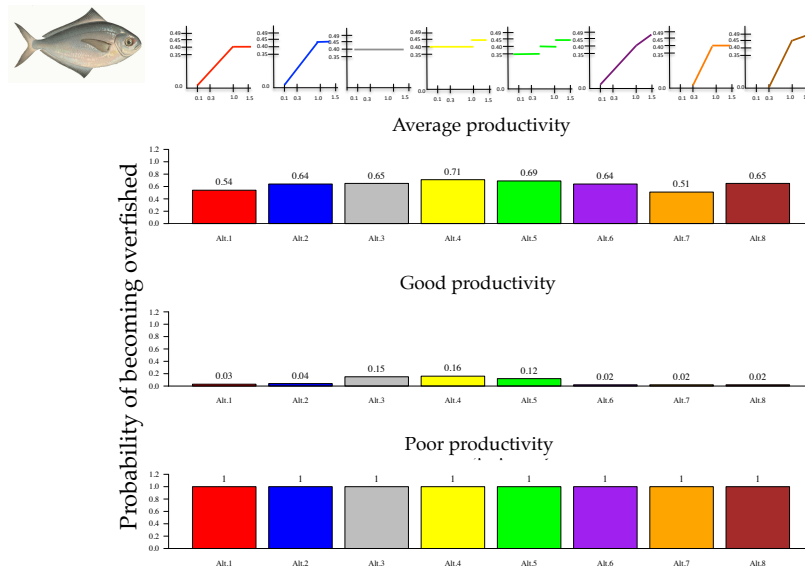


Figure 18. Median probability of becoming overfished for butterfish by control rule.

DRAFT

Economic Trade-offs of Additional Alternative ABC Control Rules for Summer Flounder and  
Implications for Scup and Butterfish

Cyrus Teng (University of Maryland College Park)  
Doug Lipton (NOAA Fisheries Senior Scientist for Economics)

Preliminary Report to the Mid-Atlantic Fishery Management Council

December 9, 2019

## Introduction

At the February 2018 Mid-Atlantic Fishery Management Council (MAFMC) meeting, John Wiedenmann presented his results on the “Evaluation of Alternative ABC Control Rules for Mid-Atlantic Fisheries” (Wiedenmann 2018). In that study, control rules were varied as to how the probability of overfishing ( $P^*$ ) was implemented: fixed, 2-step, 3-step, and ramped. Using a management strategy evaluation (MSE) simulated over 30 years for scup, summer flounder and butterfish; performance of the control rules was evaluated in terms of the average biomass, long-term and initial catch, probability of overfishing, probability of becoming overfished, risk of very low biomass, mean  $F/F_{MSY}$ , and year-to-year catch variability. The study found that the chosen control rule’s performance mattered more, in term of the variables being evaluated, under poor future conditions such as high natural mortality, low recruitment and overestimates of stock size.

Given the biological consequences of the different control rules, Council members expressed additional interest in the economic trade-offs among control rules or other ways in which economic considerations could be accounted for in harvest control rules. At that time, two of the authors (i.e., Hutniczak and Lipton) were working with Wiedenmann on an economic analysis of the timing of stock assessment updates and data management lags building on another MSE study (Wiedenmann et al. 2017). That study (Hutniczak et al. 2018), used a suite of economic models built around the summer flounder fishery, to demonstrate that annually updating the summer flounder stock assessment produced summer flounder economic benefits greater than the cost of updating. We found that the difference between a two year stock assessment update interval with a data lag of one year (base scenario), and a five year update interval with a two year data lag is only 10,000 metric tons of summer flounder harvested over a 27 year period. Our analysis estimates, however, that the difference in economic benefits between the two scenarios is about \$102.7 million which is more than the added cost of updating every two years. We offered to the Council that, at least for summer flounder, we could modify the harvest control rules in our base scenario to match the simulations in the Wiedenmann (2018) report, and determine the differences in economic benefits from the fishery for the scenarios analyzed in that report.

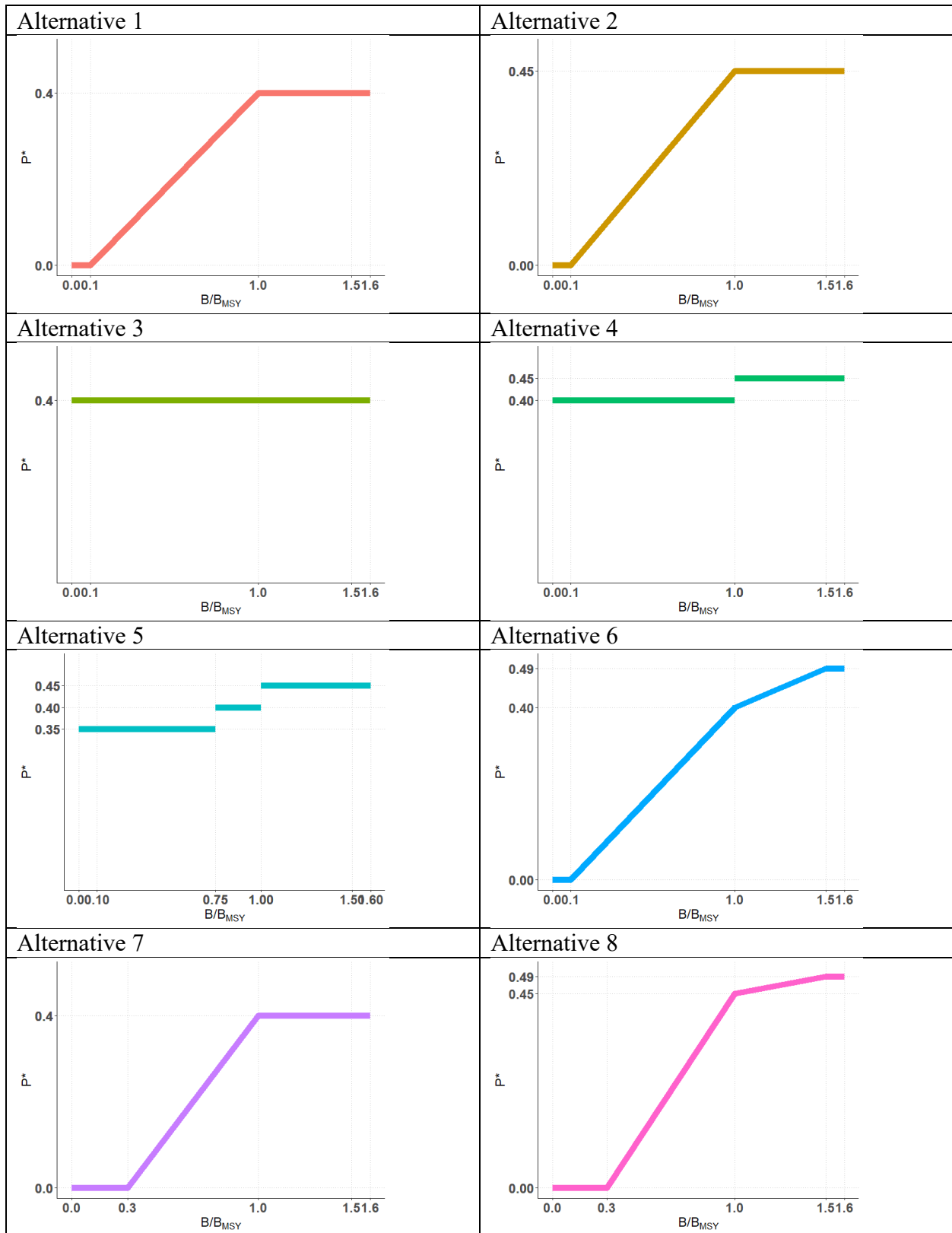
Results of that economic analysis were presented to the Council in its December 2018 meeting and summarized in the report “Economic Trade-offs of Alternative ABC Control Rules for Summer Flounder”, dated December 10, 2018. The analysis found that the current policy (Alternative 1 in this study) was the most conservative and leads to the lowest economic welfare, while the 2-step policy (Alternative 3 in this study) performed the best. The gap in performance between these two control rules increased with time. In the beginning of the period, when  $B/B_{MSY}$  of the summer flounder resource is below one, the current policy restricted harvest which resulted in its underperformance. In later years, the 2-step policy was better able to take advantage of the increased biomass, again resulting in the underperformance fo the current policy.

Subsequent to the December 2018 report Risk Policy Working Group identified three additional control rules for evaluation (hereafter referred to as Alternatives 6, Alternative 7, and Alternative 8). In addition to these newly proposed control rules, another development also necessitated the

re-evaluation of economic performances of alternative control rules. In July 2018, the Marine Recreational Information Program (MRIP) replaced the existing estimates of recreational catch of summer flounder with a calibrated 1982-2017 times series that corresponds to new survey methods that were fully implemented in 2018. Additionally, a benchmark stock assessment incorporating the new MRIP estimates was implemented. The new MRIP estimates resulted in significant increases in estimated recreational summer flounder catch and overall biomass. As a result, we expect economic welfare to increase significantly overall and for the recreational sector.

As part of this re-evaluation, additional MSE simulations were performed by John Wiedenmann under five control rules previously considered (Alternatives 1 through 5) as well as under the three new proposed control rule alternatives (Alternatives 6 through 8). Table 1 shows the control rule alternatives. Corresponding economic welfare analysis were performed on the MSE outputs according to the methods outlined in the next section.

Table 1. Control Rule Alternatives



## Methods

Figure 1 shows the conceptual framework by which the catch projections and spawning stock biomass (SSB) estimates from Wiedenmann's MSE serve as inputs to three economic submodels to calculate total economic benefits from the fishery. Details of the economic models are available in Hutniczak et al 2018.

The economic estimates are generated from estimating models for summer flounder price from an inverse demand model, summer flounder net fishing revenue from a model that relates multispecies days at sea to changes in the total allowable catch and stock biomass, and a summer flounder recreational fishing valuation model.

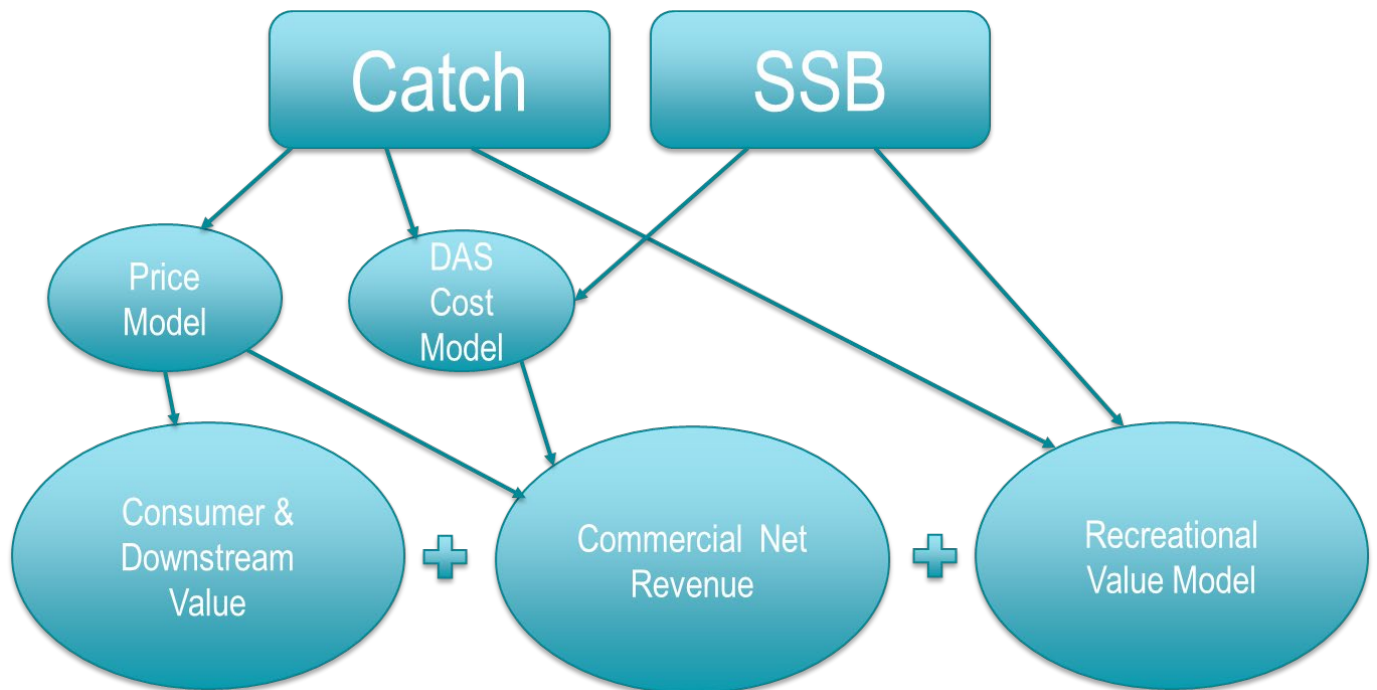


Figure 1. Conceptual approach showing how catch and spawning stock biomass from MSE feed into economic submodels (DAS=days at sea). For details of economic models, see Hutniczak et al. 2018).

The scenarios analyzed follow those in Wiedenman's MSE outputs which contain 500 simulated catch and biomass projections over 30 years for each of the eight control rule alternatives. In addition to the base scenario of average summer flounder fishery productivity, there are two additional scenarios corresponding to higher than average recruitment and lower than average natural mortality (good productivity scenario) and to lower than average recruitment and higher than average natural mortality (poor productivity scenario). Additionally, economic welfare comparisons were performed for each of the three scenarios for the initial five years as well as

for the final 20 years of projections. This is to distinguish between periods in which summer flounder relative biomass is below target (initial 5 years) and above target (final 20 years). All scenarios assume a coefficient of variation (CV) of 1.0.

## Results – 30 Year Projections

Figure 2 shows the summer flounder estimated SSB from the MSE for the average productivity scenario over 30 years. Conservative control rule Alternatives 1 and 7 results in the highest SSB levels for the entire projection period. Alternative 6, which is identical to Alternative 1 when  $B/B_{MSY}$  is below one, performs well in the initial five years but underperforms at higher  $B/B_{MSY}$  where it is less conservative. The non-ramped Alternatives 3 through 5 performs the worst in the initial five years. However, Alternative 3, with a conservative constant  $P^*$  of 0.4 even at  $B/B_{MSY} > 1$ , has the third highest SSB level over the 30-year projection period.

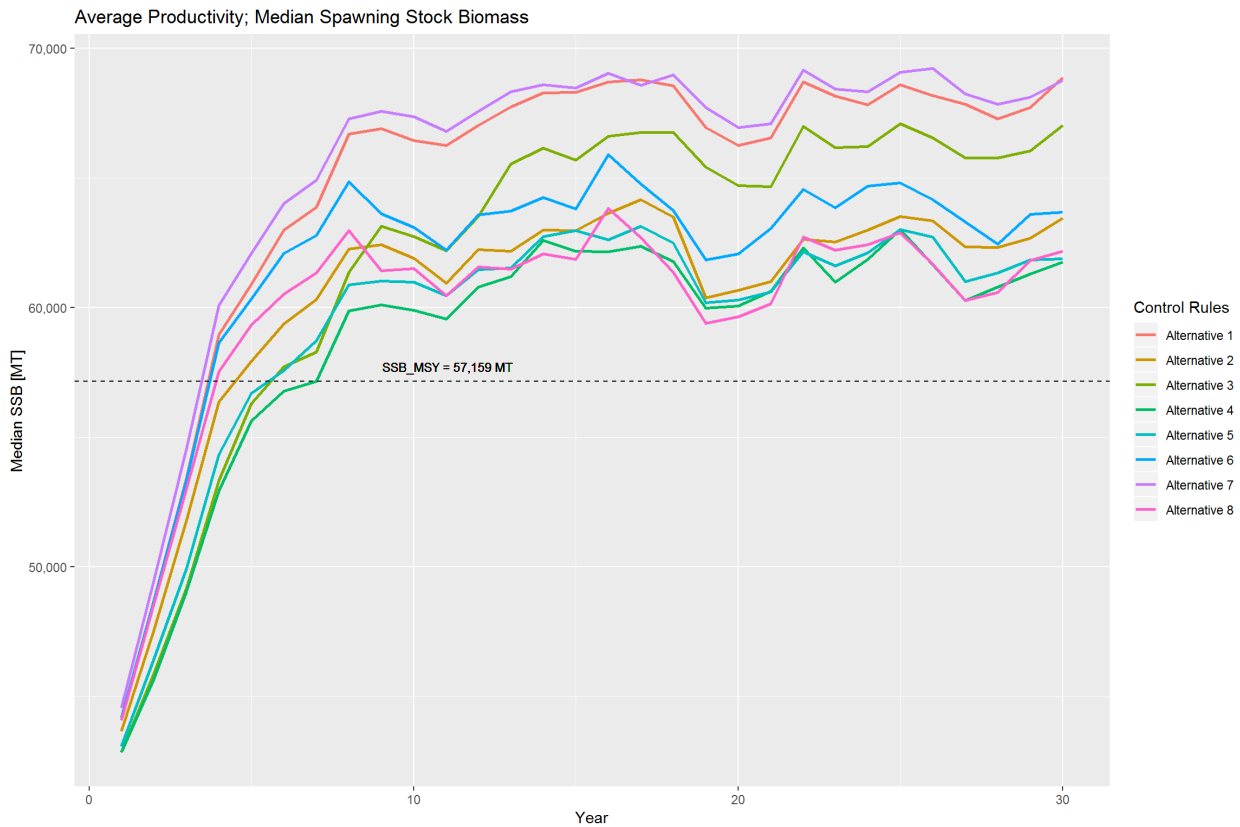











Figure 2. Simulated summer flounder median spawning stock biomass used as input for the average productivity scenario as input to the economic submodels.

In our initial set of projections, we run the economic models using the full 30-year dataset of projections of catches and SSB. In addition to the average productivity scenario, we present the economic projections for the good and poor productivity scenarios. Table 2 shows the mean cumulative total economic welfare under the three productivity scenarios for each of the control rule alternatives, as well as the increases relative to Alternative 1, and the rankings.



Table 2. Mean Cumulative 30-Year Total Economic Welfare (Millions, 3% PV) / Increase over Alternative 1 / Rank

Control Rule									
Average Productivity	4,312	4,390	4,380	4,427	4,414	4,352	4,295	4,379	
	0	78	68	115	102	40	-17	67	
	7	3	4	1	2	6	8	5	
Good Productivity	7,434	7,670	7,476	7,693	7,685	7,723	7,423	7,768	
	0	236	42	259	251	289	-11	334	
	7	5	6	3	4	2	8	1	
Poor Productivity	2,515	2,544	2,632	2,632	2,606	2,513	2,478	2,503	
	0	29	117	117	91	-2	-37	-12	
	5	4	1	1	3	6	8	7	

### Discussion

Table 2 shows that Alternatives 4 and 5, the stepped control rules, perform well under all productivity scenarios, ranking no worse than third and fourth, respectively, among all alternatives. Alternative 7 is the worst performer, ranking last in all three productivity scenarios. Alternatives 8 and 6, which have maximum  $P^*$  of 0.45 at 1.5  $B/B_{MSY}$ , perform relatively well under the good productivity scenario, ranking first and second, respectively. However, both perform poorly under the poor productivity scenario, ranking seventh and sixth, respectively. Alternative 3, the constant 0.4  $P^*$  control rule performs the best under poor productivity scenario but ranks sixth under the good productivity scenario. Alternative 1, the status quo, ranks no better than fifth, and is second to last in the average and good productivity scenarios.

To see how the various control rule alternatives may affect the welfares of consumers, commercial fishermen, and recreational fishermen differently, we broke out the three measures of economic welfare for the average productivity scenario in Table 3. It shows that the alternatives with the most positive impacts on consumer and recreational welfare tend to have the most negative impacts on producer welfare, and vice versa.

Table 3. Mean Cumulative 30-Year Economic Welfares (Millions, 3% PV) / Increase over Alternative 1










Control Rule									
Producer Welfare	421	399	410	392	395	403	423	393	
	0	-22	-11	-29	-26	-18	2	-28	
Consumer Welfare	1,044	1,075	1,076	1,096	1,089	1,059	1,036	1,068	
	0	31	32	52	45	15	-8	24	
Recreational Welfare	2,846	2,916	2,894	2,939	2,930	2,891	2,836	2,918	
	0	70	48	93	84	45	-10	72	
Total Welfare	4,312	4,390	4,380	4,427	4,414	4,352	4,295	4,379	
	0	78	68	115	102	40	-17	67	

Figure 3 shows the distribution of the present value of total economic welfare over 30 years of the 500 simulated runs under the poor productivity scenario. It shows that Alternatives 3 through 5, the control rules with piecewise constant  $P^*$ , have lower variability in total economic welfare compared to control rules with ramped  $P^*$  under poor productivity conditions. This pattern is not as pronounced in either the average or the good productivity scenarios.

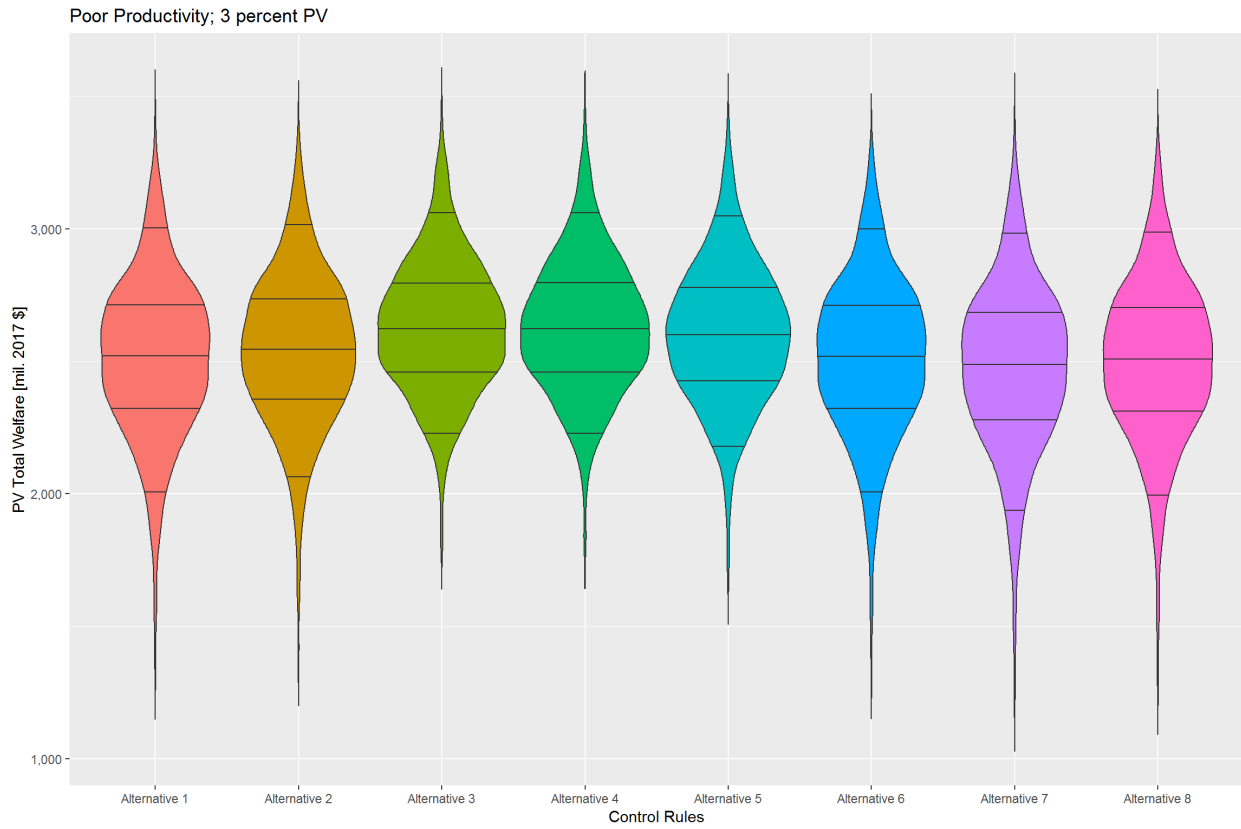










Figure 3. Violin plots of model runs showing the 5%, 25%, 50%, 75%, and 95% quantiles of the present value of total economic welfare over 30 years for the poor productivity scenario.

## Results – Initial 5 Years Projections

The economic performance of the various control rule alternatives in the initial five years is summarized in Table 4.

Table 4. Mean Cumulative Initial 5-Year Total Economic Welfare (Millions, 3% PV) / Increase over Alternative 1 / Rank

Control Rule								
Average Productivity	758	794	830	840	825	765	738	774
	0	36	72	82	67	7	-20	16
	7	4	2	1	3	6	8	5
Good Productivity	892	937	966	983	968	908	872	922
	0	45	74	91	76	16	-20	30
	7	4	3	1	2	6	8	5
Poor Productivity	638	665	706	711	696	641	619	644
	0	27	68	73	58	3	-19	6
	7	4	2	1	3	6	8	5

### Discussion

It is rather simple to rank the performance of the alternative control rules in the initial five-year period: Alternative 4 is the best in all productivity scenarios. Alternatives 3 and 5 ranks either second or third. The bottom five rankings remain constant in all productivity scenarios with Alternative 2 in fourth, Alternative 8 in fifth, Alternative 6 in sixth, Alternative 1 in seventh, and Alternative 7 in last place.

Figures 4 shows the distribution of the present value of total economic welfare over the initial five years of the 500 simulated runs under the average productivity scenario. It shows that Alternatives 3 through 5, the control rules with piecewise constant  $P^*$ , have lower variability in total economic welfare compared to control rules with ramped  $P^*$ . This pattern is also observed under both good and poor productivity scenarios.

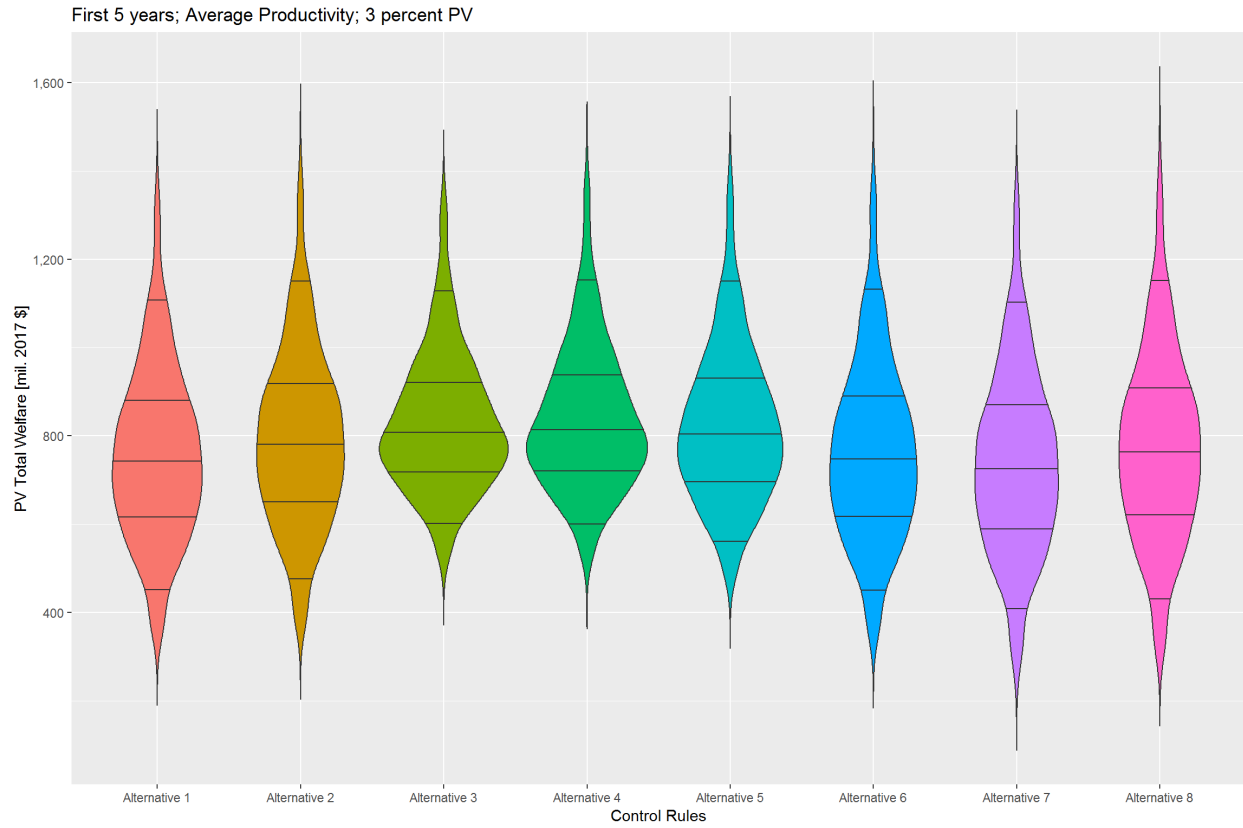











Figure 4. Violin plots of model runs showing the 5%, 25%, 50%, 75%, and 95% quantiles of the present value of total economic welfare over the initial 5 years for the average productivity scenario.

## Results – Final 20 Years Projections

The economic performance of the various control rule alternatives in the final 20 years is summarized in Table 5.

Table 5. Mean Cumulative Final 20-Year Total Economic Welfare (Millions, 3% PV) / Increase over Alternative 1 / Rank

Control Rule									
Average Productivity	1,147	1,154	1,153	1,158	1,156	1,147	1,146	1,150	
	0	7	6	11	9	0	-1	3	
	6	3	4	1	2	6	8	5	
Good Productivity	2,265	2,315	2,265	2,314	2,315	2,308	2,266	2,324	
	0	50	0	49	50	43	1	59	
	7	2	7	4	2	5	6	1	
Poor Productivity	578	581	592	591	590	576	574	575	
	0	3	14	13	12	-2	-4	-3	
	5	4	1	2	3	6	8	7	

### Discussion

Table 5 shows that there is relatively little difference among the control rule alternatives in the final 20 years when  $B/B_{MSY}$  is greater than one. The rankings in Table 5 are similar to those in Table 2. They show that Alternatives 2, 4, and 5 perform well under all productivity scenarios, ranking no worse than fourth, fourth, and third, respectively, among all alternatives. Alternative 7 is the worse performer, ranking sixth in the good productivity scenario but last in the remaining two scenarios. Alternative 8 ranks first under the good productivity scenario but second to last under the poor productivity scenario. Alternative 3, the constant 0.4  $P^*$  control rule performs the best under poor productivity scenario but ranks seventh under the good productivity scenario. Alternative 1, the status quo, ranks no better than fifth, and ranks second to last in the good productivity scenario.

Figure 5 shows the distribution of the present value of total economic welfare over the final 20 years of the 500 simulated runs under the poor productivity scenario. It shows that Alternatives 3 through 5, the control rules with piecewise constant  $P^*$ , have lower variability in total economic

welfare compared to control rules with ramped  $P^*$  under poor productivity conditions. This pattern is not as pronounced in either the average or the good productivity scenarios.

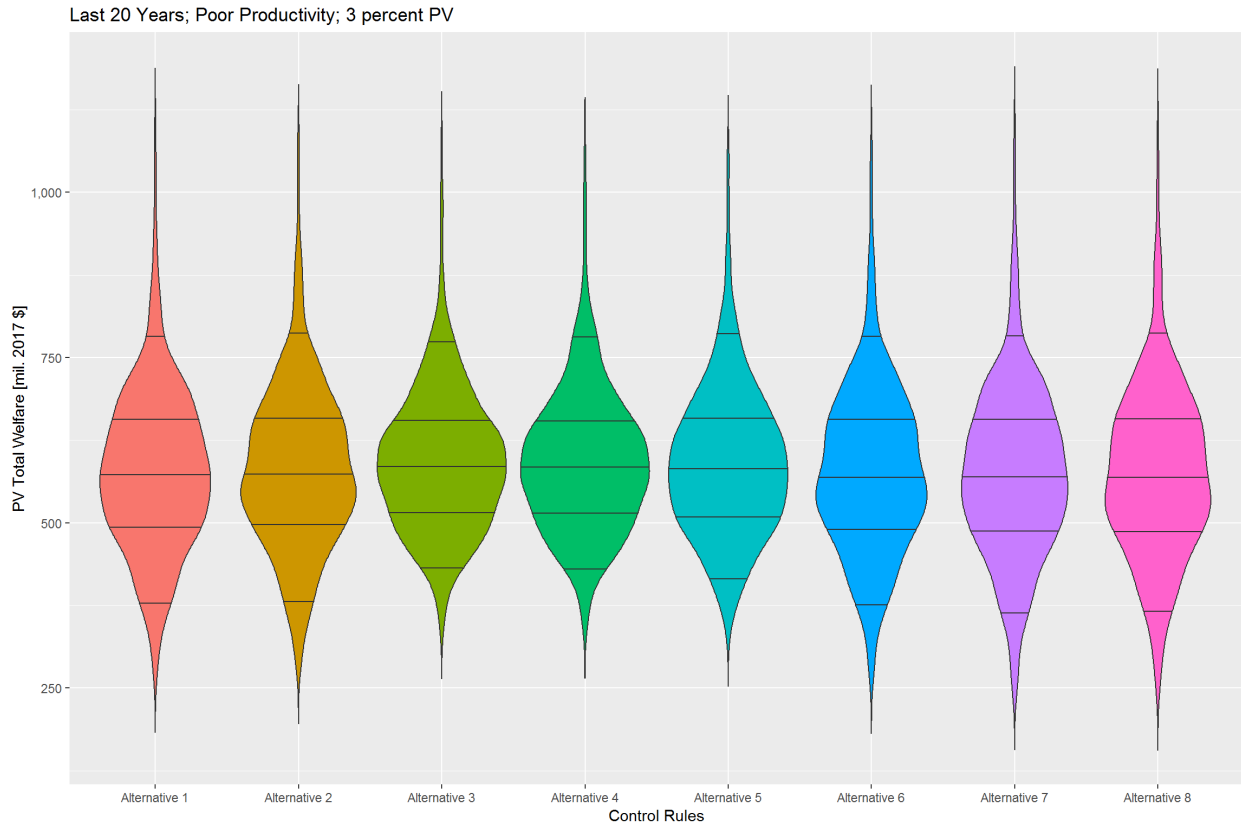


Figure 5. Violin plots of model runs showing the 5%, 25%, 50%, 75%, and 95% quantiles of the present value of total economic welfare over the final 20 years for the poor productivity scenario.

## Discussion

Similar to results from the December 2018 report, we found that total economic welfare correlates strongly with allowable catch. Alternatives 4 and 5, which are less conservative when  $B/B_{MSY}$  is below one, perform the best under average and poor productivity scenarios, and in the initial five years when the summer flounder resource has below target biomass. Their relative performance is not as strong under good productivity scenarios. The current policy, Alternative 1, and its close variant, Alternative 7, which are most conservative under all  $B/B_{MSY}$  levels, perform rather poorly, often ranking in the bottom two. Alternative 3, with a constant  $0.4 P^*$  performs relatively well under poor productivity scenarios and in the initial five years, but relatively poorly under good productivity scenarios. In contrast, Alternative 8 performs relatively well under good productivity scenarios but relatively poorly under poor productivity scenarios and in the initial five years. Our results also show that Alternatives 3 through 5, the least

restrictive alternatives under low  $B/B_{MSY}$  levels, produce the lowest variability in economic welfare, particularly under poor productivity scenarios, and in the initial five years.

# A Note About Other Species Economic Impacts of Harvest Control Rules

Since we do not have quantitative economic models developed for the other two species, scup and butterfish, analyzed in the Wiedenmann study, we looked at factors indicative of how these species might deviate from summer flounder in their economic performance relative to the different harvest control rules analyzed.

## Recreational Value

The presence of a major recreational fishery for summer flounder and scup increases the overall magnitude of the economic impact of the harvest control rules compared to fisheries without a recreational sector (i.e., butterfish). According to revised MRIP estimates, directed trips for scup (trips for which the individual indicated they were targeting scup as their first or second choice) averaged 1.3 million trips per year from 2009-2018 compared to an average of just over 1.0 million trips per year for summer flounder (Figure 1).

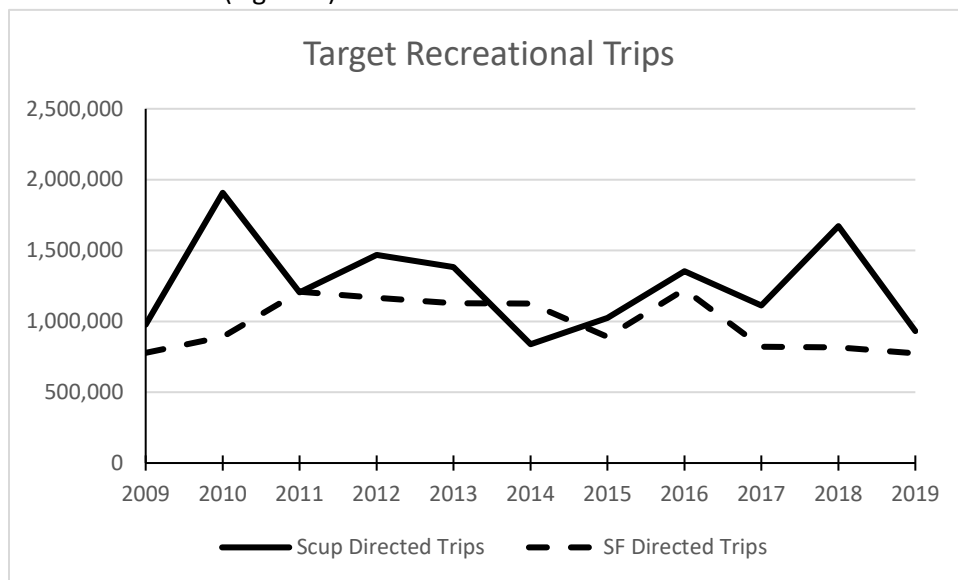


Figure 3. Trips targeting scup and summer flounder.

In our detailed summer flounder analysis, the harvest control rules affect both the value of a trip (due to catch rate changes related to biomass) and the number of trips taken (due to changes in the recreational quota). We do not have estimates of the value (willingness-to-pay) for scup trips to compare with summer flounder trips. Evidence would suggest, however, that the number of scup trips taken is not as sensitive to the quota level as it is for summer flounder. Figure 2 shows the relationship between TAC and the number of directed trips for scup and summer flounder. As expected, there is a positive relationship ( $r^2 = 0.225$ ) between trips and TAC for summer flounder, but no relationship ( $r^2 = 0.001$ ) for scup.



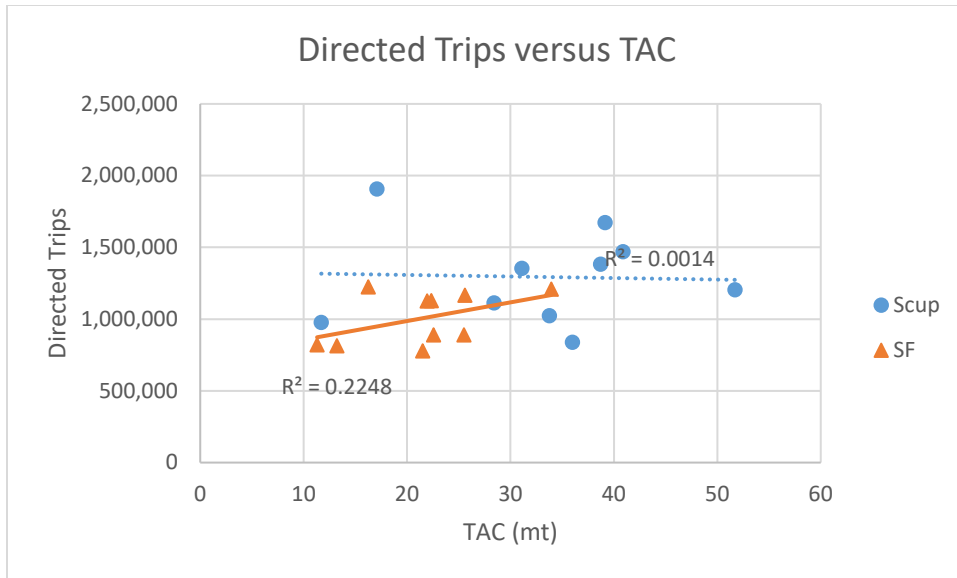


Figure 4. Relationship between scup and summer flounder directed trips and quota

Given the lack of sensitivity of directed trips for scup to the quota, it is expected that the recreational economic impacts of the different harvest control rules considered will be significantly less than the impacts for the summer flounder fishery. However, if scup biomass, and thus TAC, attains extremely low values, this might lead to sharp reductions in trips taken, and thus a more significant economic impact could ensue. The implication for the harvest control rule performance for scup recreational value is that due to the trip to quota relationship, the rules that avoid extremely low quotas are more beneficial; whereas, there is little increased recreational benefit from control rules that lead to significantly higher than average quotas.

### Commercial Value

We looked at commercial landings and price data from 2009-2017 for scup and butterfish in comparison to summer flounder (Figure 3) in order to examine qualitatively how commercial fishing value analyses for these species diverge from the summer flounder model presented elsewhere. Over the period examined, average summer flounder ex-vessel price is over 4 times that of scup and butterfish.

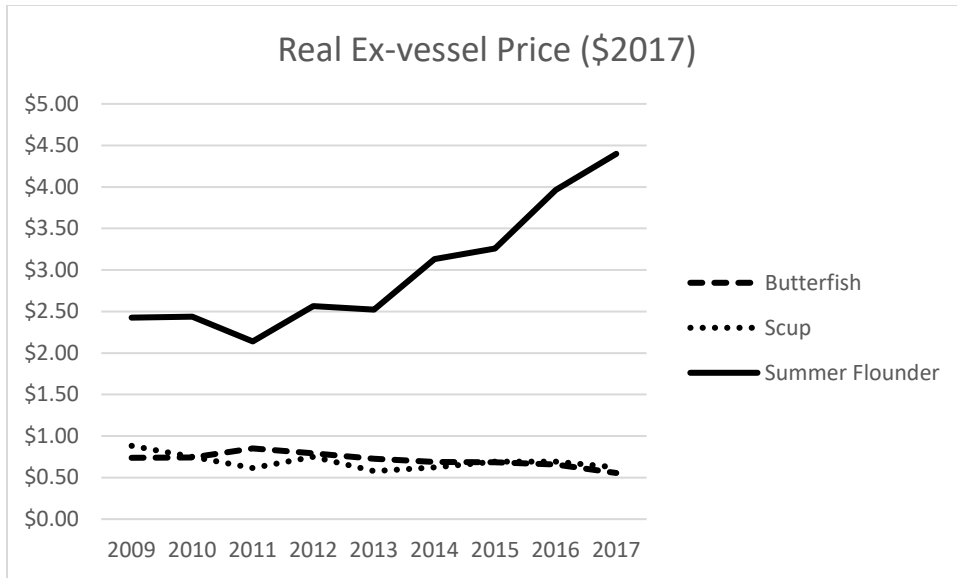


Figure 5. Real (2017 dollars) ex-vessel price for butterfish, scup and summer flounder.

Figures 4, 5 and 6 provide simple price-quantity relationships for summer flounder, scup and butterfish, respectively. The summer flounder model in our detailed harvest control rule analysis contains a more sophisticated summer flounder inverse demand model, but for comparison purposes, we are using the simplified relationships for all three species here.

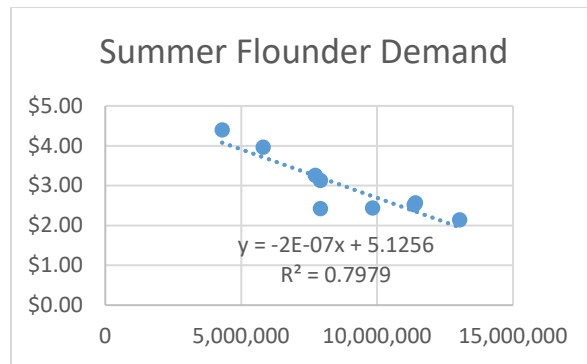


Figure 6. Simple summer flounder demand relationship.

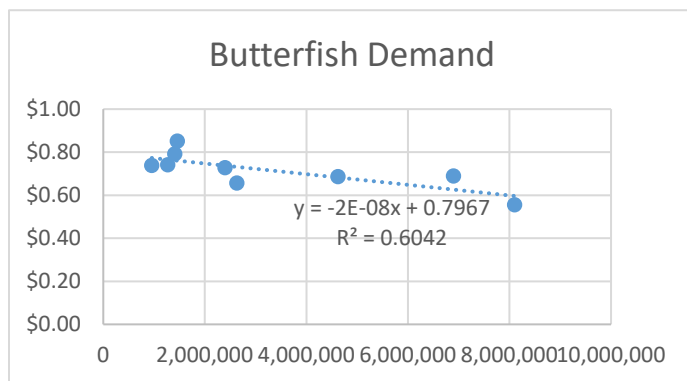


Figure 7. Simple butterfish demand relationship.

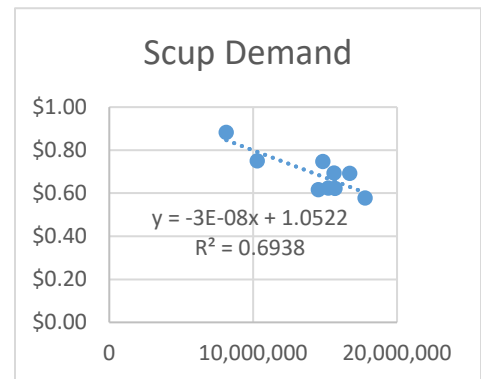


Figure 6. Simple scup demand relationship.

The demand relationship affects the performance of the harvest control rules in two significant ways. First, the price flexibilities<sup>1</sup>, will impact the total commercial revenue of the fishing fleet. The calculated flexibility at the mean of summer flounder quantity and prices is 0.59, 0.62 for scup and 0.09 for butterfish. Since all three flexibilities are less than 1.0, at the mean, fleet total revenues will decline when the quota is lowered from the mean and revenues will rise when the quota is raised (assuming all quota is landed). Given our linear demand estimation, as one moves down the demand curve due to higher quotas and landings, prices become more flexible. At high quotas and landings, a reduction in quota is compensated for by a higher price, but an increase in quota means that prices decrease at a greater percentage than landings increase and total revenue declines. For summer flounder and scup, the price flexibilities calculated at the highest level of landings over the sample period –during 2011 for summer flounder and 2013 for scup, were both greater than 1.0. This means that had quotas and landings been set any higher, revenues would have fallen. This price effect dampens the benefits from control rules that allow significantly higher catch for these species. This effect is captured in the more detailed summer flounder analysis. Butterfish, on the other hand, exhibits low price flexibility, even at maximum catch, compared with scup and summer flounder. Industry total revenues, will thus, follow more closely the trends in predicted biologically driven results from the Wiedenmann model.

In the detailed summer flounder model, we also use the summer flounder demand curve estimation to calculate consumer surplus, the net economic welfare from downstream effects of summer flounder as it reaches the final consumer. The greater the slope of the demand curve, the greater the consumer surplus. Since the butterfish demand curve is relatively flat (near horizontal), the differences between harvest control rules leading to changes in quota setting will have a muted impact on the net benefit estimation. Consumer surplus for scup will vary similarly to summer flounder in direction, but will be significantly lower for scup due to the overall lower demand for that species.

## Conclusion

From the above qualitative analysis, it can be expected that if we had conducted a comprehensive analysis of the scup fishery, similar to our analysis of summer flounder, the differences between harvest control rules would be similar to those found for summer flounder. However, the absolute magnitude of the impacts would be significantly lower due to its lower market price and the lack of sensitivity of recreational trips to the quota level. Butterfish, lacking a recreational fishery and having low price flexibility, would have a different economic response than summer flounder or scup. For butterfish, the difference in performance of the harvest control rules in terms of allowable catch and biomass as derived from the Wiedenmann study, should serve as an indicator of economic performance.

---

<sup>1</sup> Price flexibility is defined as the percentage change in price for a 1% change in quantity. This is the inverse of price elasticity and are used in fisheries models because often the quantity supplied to the market is fixed by a quota or environmental factors and we are interested in how the price adjusts. A flexibility > 1 means that total revenue will increase with a decrease in quantity supplied. In a linear demand relationship, the flexibility will vary along the point on the demand curve where it is calculated. The usual practice is to provide the value at the sample mean of prices and quantity.

## References

- Hutniczak, B., Lipton, D., Wiedenmann, J. and Wilberg, M. 2018. Valuing changes in fish stock assessments. *Canadian Journal of Aquatic and Fisheries Sciences*. Published on the web 10 November 2018, <https://doi.org/10.1139/cjfas-2018-0130>.
- Wiedenmann, J., M. Wilberg, A. Sylvia, and T. Miller. 2017. An evaluation of acceptable biological catch (ABC) harvest control rules designed to limit overfishing. *Canadian Journal of Fisheries and Aquatic Sciences*. doi: 10.1139/cjfas-2016-038
- Wiedenmann, J. 2018. Evaluation of alternative harvest control rules for Mid-Atlantic fisheries. Report to the Mid-Atlantic Fisheries Management Council. March 12, 2018.



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901-3910  
Phone: 302-674-2331 | FAX: 302-674-5399 | [www.mafmc.org](http://www.mafmc.org)  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 27, 2019  
**To:** Council  
**From:** José Montañez and Jessica Coakley, Staff  
**Subject:** Atlantic Surfclam and Ocean Quahog (SCOQ) Excessive Shares Amendment – Final Action

At the December Council meeting, the Council will review the public hearing comments and the SCOQ Committee and staff recommendations. The Council will select preferred alternatives and take final action at this meeting. The following documents are available for Council consideration on this subject (note: documents listed in italics are available only in the online version of the briefing book at <http://www.mafmc.org/briefing/december-2019>):

1. *Excessive Shares Amendment (Draft as of November 19, 2019).*
2. SCOQ Excessive Shares Amendment - Staff Recommendations memo dated November 25, 2019.
3. *Additional Written Comments Received (as of November 27, 2019).*
4. Summary of all Comments (received between August 1 and September 14, 2019).
5. *Public Hearings Meeting Summaries (August 1,7 and September 9-10, 2019).*
6. *Written Comments (received between August 1 and September 14, 2019).*

The following document will be posted on the meeting page as a supplemental item under Tab 5 when it becomes available:

- Summary of the December 2, 2019 SCOQ Committee Meeting

**Note:** Due to the length of this tab, the compiled online briefing book contains the abbreviated version of this tab (documents #2 and 4 listed above). The complete tab, with documents #1-6, is available at: [http://www.mafmc.org/s/Tab05\\_Excessive-Shares-Amendment\\_2019-12.pdf](http://www.mafmc.org/s/Tab05_Excessive-Shares-Amendment_2019-12.pdf).



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 25, 2019  
**To:** Chris Moore, Executive Director  
**From:** Jessica Coakley and José Montañez, Staff  
**Subject:** Atlantic Surfclam and Ocean Quahog (SCOQ) Excessive Shares Amendment - Staff Recommendations

### Introduction

The following provides the staff recommendation for measures contained within the SCOQ Excessive Shares Amendment to the Fishery Management Plan (FMP). More detail on the complete suite of measures under consideration can be found in the Amendment document.

### Goals and Objectives

**Staff recommend the Council revise the objectives for the SCOQ FMP and adopt the revised goals and objectives as drafted by the Fishery Management Action Team (FMAT).**

Goals and objectives are a public statement from the Council describing what the FMP is trying to accomplish and the Council's longer-term intent and guidance for the fisheries. They should be written in a manner that is concise, clear to stakeholders and the public, and remain relevant over time.

The current SCOQ FMP objectives reflect the desired outcomes of Amendment 8 which implemented the individual transferable quota (ITQ) program. Many of those objectives were short-term and aspects of those objectives have already been achieved. Revising FMP goals and objectives would allow the Council to acknowledge the improvements that have been made to the management of the SCOQ fisheries, recognize what is working well, and focus on maintaining and sustaining these improvements in the long-term.

As noted in the goals and objectives synthesis document,<sup>1</sup> some of the specific terms used in the objectives are unclear to those who were not involved at the time Amendment 8 was developed or are unfamiliar with economic jargon. Terms are confusing because they are not defined or have

---

<sup>1</sup> Synthesis Document for Review of Goals and Objectives for the Atlantic Surfclam and Ocean Quahog Fishery Management Plan. Prepared by Fisheries Leadership & Sustainability Forum (October 2017). See Appendix B of Excessive Shares Amendment.

multiple definitions (e.g. economic efficiency, economic dislocations, etc.). In addition, the current objectives are complicated and combine topics (e.g. Objective 1 addresses both biology and economics).

The FMAT drafted goals and objectives drew from themes in the original objectives but simplified the terminology and focused on longer-term goals. They were crafted around goal areas focused on sustainability, a simple and efficient management regime, managing for stability, management that is flexible and adaptive to changes, and the promotion of science and research. The staff believe that these better reflect the Council's long-term intent for these fisheries.

The current objectives were adopted in 1988 through Amendment 8 to the SCOQ FMP:

1. Conserve and rebuild Atlantic surfclam and ocean quahog resources by stabilizing annual harvest rates throughout the management unit in a way that minimizes short term economic dislocations.
2. Simplify to the maximum extent the regulatory requirement of clam and quahog management to minimize the government and private cost of administering and complying with regulatory, reporting, enforcement, and research requirements of clam and quahog management.
3. Provide the opportunity for industry to operate efficiently, consistent with the conservation of clam and quahog resources, which will bring harvesting capacity in balance with processing and biological capacity and allow industry participants to achieve economic efficiency including efficient utilization of capital resources by the industry.
4. Provide a management regime and regulatory framework which is flexible and adaptive to unanticipated short-term events or circumstances and consistent with overall plan objectives and long-term industry planning and investment needs.

The FMAT proposed revisions to the goals and objectives recommended by staff are as follows:

**Goal 1:** Ensure the biological sustainability of the surfclam and ocean quahog stocks to maintain sustainable fisheries.

**Goal 2:** Maintain a simple and efficient management regime.

**Objective 2.1:** Promote compatible regulations between state and federal entities.

**Objective 2.2:** Promote coordination with the New England Fishery Management Council.

**Objective 2.3:** Promote a regulatory framework that minimizes government and industry costs associated with administering and complying with regulatory requirements.

**Goal 3:** Manage for stability in the fisheries.

**Objective 3.1:** Provide a regulatory framework that supports long-term stability for surfclam and ocean quahog fisheries and fishing communities.

**Goal 4:** Provide a management regime that is flexible and adaptive to changes in the fisheries and the ecosystem.

**Objective 4.1:** Advocate for the fisheries in ocean planning and ocean use discussions.

**Objective 4.2:** Maintain the ability to respond to short and long-term changes in the environment.

**Goal 5:** Support science, monitoring, and data collection that enhance effective management of the resources.

**Objective 5.1:** Continue to promote opportunities for government and industry collaboration on research.

## **Excessive Shares Alternatives**

**Staff recommend the Council select Sub-Alternative 4.4: Two part-cap - Quota share ownership cap and a second, annual allocation cap based on the possession of cage tags (Surfclams: 35/65%, Ocean quahogs: 40/70%), with the selection of the family affiliate level and the cumulative 100% model for tracking of ownership.**

If fully consolidated, this sub-alternative could potentially result in a minimum of three large entities participating in the surfclam fishery (i.e., 35%, 35%, 30%) and three large entities participating in the ocean quahog fishery (i.e., 40%, 40%, 20%). In addition, this alternative would limit the exercise of control, through possession of tags as limited by the second part of the cap.

This alternative represents a compromise on the part of the fishing industry, from their initial recommendation for no action (100%) or the 95% alternative which was added by the SCOQ Committee on the recommendation of the industry, neither of which would have addressed the market power or socioeconomic concerns raised by the Council in their excessive shares definition. With no restriction on ownership or consolidation for nearly 30 years, sub-alternative 4.4 will allow for some additional efficiencies in the fisheries (through further consolidation) and a reasonable number of entities to exist if fully consolidated.

In addition, staff recommend the family affiliate level. Most of the connections in these fisheries are already connected at the individual/business and family level; therefore, the corporate officer level added little additional information to the process in terms of ownership connections. Including just the family level captured the bulk of control through both individual/business and familial affiliations. This is the same affiliate level used in the Council's other individual fishing quota (IFQ) program, golden tilefish.

The staff also recommend the cumulative 100% model for tracking. This is the same tracking model that is used for the Atlantic sea scallop fishery. This fishery also has large numbers of transfers and transactions that occur within the fishing year and uses this tracking model to account for both ownership and control in the fishery. Based on discussions with the Analysis Program and Support Division (APSD), this would be the simplest tracking model, the least likely to create issues with tracking within year transactions, and it should result in the lowest cost recovery burden for ITQ holders. In addition, under the actual percentage model, individuals or businesses could circumvent the cap system by modifying their individual or business percent ownership in a company to ensure they remain below any excessive share quota ownership cap or cage tag possession cap requirements. Under the cumulative 100% model, if you touch it through ownership of quota shares or cage tag possession, it is tagged to you within the system. As such, staff recommend this as the most straightforward and efficient model for tracking, with the benefit that it follows an already proven model for tracking in the Northeast.

## **Excessive Shares Review Alternatives**

**Staff recommend Alternative 2 that would require the periodic review of the excessive share measures at least every 10 years or as needed.**

Conditions in the fisheries have changed over time and are likely change in the future; therefore, an excessive shares measure established at an appropriate level now could become inefficiently



high or low over time. The staff recommend the Council require periodic review of these measures because it should, as part of its responsibilities to manage these fisheries on behalf of the nation, routinely review its management regimes, particularly those that limit access to the fisheries. This review could be linked to the Catch Share Program Review which should be conducted every 7 years based on National Marine Fisheries Service (NMFS) Procedural Instruction 01-121-01 (Guidance for Conducting Review of Catch Share Programs).

### **Framework Adjustment Process Alternatives**

**Staff recommend Alternative 2, which would add excessive shares cap level to the list of measures to be adjusted via framework.**

This frameworkable item would allow modifications to the cap value only and not the underlying cap system, and only if the modification would not result in an entity having to divest. This modification would allow the Council to make changes to the caps in a timely manner, through a public process of Council meetings and a rulemaking process. This would not preclude the holding of advisory panel meetings or other steps to solicit input on the issue, that are frequently done with Frameworks. While frameworks typically take a minimum of 1 year to be completed, its more common for them to take up to 2 years with rulemaking. An Amendment process, if this was not frameworkable, could take several years to complete. Given limited staff resources, the staff recommend the Council support efficiencies in the process wherever possible.

### **Multi-year Management Measures Alternatives**

**Staff recommend Alternative 2, where specifications will be set for maximum number of years consistent with the Northeast Regional Coordinating Council (NRCC)-approved stock assessment schedule.**

This alternative would provide additional flexibility as specifications could be set until a new surfclam and/or ocean quahog stock assessment is produced. New specifications of annual quotas would be prepared in the final year of the quota period, unless there is a need for interim quota modifications. Given limited staff resources, the staff recommend the Council support efficiencies in the process wherever possible, which allows both the Council and the staff to dedicate resources to other ongoing or more pressing fishery management issues.



**Atlantic Surfclam and Ocean Quahog**  
**Excessive Shares Amendment**

**Summary of All Comments Received**  
**August 1 – September 14, 2019**

The following provides a summary of common themes provided in both the written and public hearing comments regarding the Excessive Shares Amendment – Public Hearing Document. Please see the summary of public hearing comments and the complete written comments for additional detail.

**Comment Period:** August 1 to September 14, 2019

**Number of Written Comments Received:** 29 comments were received. Some individuals and/or businesses provided multiple comment letters.

**Number of Public Hearings:**

- Cape May, NJ – Thursday, Aug. 1
- Dover, Delaware (Webinar) – Wednesday, Aug. 7
- Salisbury, MD – Monday, Sept. 9
- Warwick, RI – Tuesday, Sept. 10

**Attendance at Hearings:** 40 in attendance cumulatively at the 4 hearings (excluding hearing officers and Council Staff); comprised of 29 individuals/people (i.e., some people attended more than 1 hearing). Twenty-seven cumulative oral comments were made at the 4 hearings. Some people provided comments at two or more public hearings.

---

*Goals and Objectives*

- Most comments noted that the current goals and objectives should not be change.
- They have worked well for 30 years and have accomplished what they were designed to. Changing the existing Goals stated in the FMP could create potential misinterpretations.
- Bumble Bee Seafoods indicated that they support the Council’s efforts to update the goals and objectives of the SCOQ FMP.
  - They stand by the list of revised/rewritten goals and objectives that were submitted in writing to the Council on July 12, 2017.

- Refreshing these goals and objectives to include things like sustainability and science/research would be good.

### *Excessive Shares Alternatives*

- The status quo alternative is not fairly represented in the document. The current system has been in place for 29 years and it works. GARFO is requiring a quantifiable excessive shares cap. This is not required by MSA. There is already an excessive shares definition in place.
- There is insufficient information to support implementing a specific excessive shares cap, or even if one is needed at all.
- The impact analysis of all excessive shares cap alternatives is deficient.
- The purpose and need for action (excessive shares cap) as described in the document is not consistent with MSA and what was implemented under Amendment 8.
- Some people indicated that they would still prefer the no action/status quo alternative (alternative 1) and/or 95% cap under sub-alternative 2.3 (single cap on ownership with unlimited leasing) and/or 49% cap under sub-alternative 2.2 (single cap on ownership with unlimited leasing) and/or 49% cap under sub-alternative 3.3 (combined cap), because of less potential for harmful economic impacts.
- However, the industry is willing to compromise in order to achieve results everyone can live with. The clam industry has operated in good faith and is willing to compromise to accomplish what the MAFMC/NMFS maintain is necessary under National Standard (NS) 4.
  - Compromise expressed by the majority of industry members that provided comments.
- Industry supports sub-alternative 4.3 with minor modifications.
  - Currently, sub-alternative 4.3 includes:
    - Two-Part Cap Approach – A cap on quota share ownership and a cap on combined quota share ownership plus leasing of annual allocation (cage tags).
    - The ownership quota share cap would be 30% and the combined cap (quota share ownership plus leasing of annual allocation or cage tags) would be 60%.
  - Industry supports sub-alternative 4.3 with the following modifications to the values in sub-alternative 4.3:
    - For Surfclams: 35% ownership / 65% combined.
    - For Ocean Quahog: 40% ownership / 70% combined.
- One commenter supported sub-alternative 4.3 without modifications.
- Alternatives 5 and 6 will have devastating adverse economic impacts to the industry. They should be deleted from the public hearing document.

- Adverse impacts associated with alternatives 5 and 6 are not adequately described in the document.
- There were no comments submitted that directly supported alternative 5 or alternative 6. However, three commenters indicated that they would like to see the quota match the current landings levels.
- Some major themes regarding opposition to alternatives 5 and 6 were:
  - Alternatives 5 and 6 will give market power to the non-participant ITQ holders.
  - The non-participant ITQ holders do not contribute to the marketing process, infrastructure development, science and technology development, etc. that is needed to keep this industry successful.
  - The SSC report dated 17 May 2019 regarding monopsony power issues (presented to the Council in June 2019) was not peer reviewed and is inaccurate, and should not be included in the public hearing document.
  - Under alternatives 5 and 6, the industry would need to lease more shares from non-participants. Non-participants have not invested capital into the industry and are not taking any risks, nor have they invested in this industry.
  - A major flaw of alternatives 5 and 6, is that there are a couple of allocation holders that currently will not lease out their allocations due to negative feelings towards everyone in the business. This would create a downward spiral effect and make the catch go down.
  - Alternatives 5 and 6 are not designed to address excessive shares but rather as a mechanism for reallocation.
  - Alternatives 5 and 6 micromanage the fishery. Industry do not want to go that route; have been there and it was not good for the industry or management process.
  - Alternatives 5 and 6 are designed around the quota holders that do not have lessors to rent to. This is social engineering so a few leaseholders, that are large leaseholders, can use their quota.
  - Alternatives 5 and 6 are market restructuring plans (social engineering/share reallocation) and not excessive share controls.
  - Reducing everyone's quota (share) forces harvesters and processors to lease quota before all of their owned quota is used. Industry data suggests that the non-sellers/non-participants are highly concentrated – turns them into oligopoly sellers of quota.
  - Alternatives 5 and 6 are in violation of NS5.

- Analysis submitted during the public hearings indicates that there is no monopsony power issues in the clam fisheries.
- Analysis submitted during the public hearings indicates that the two-tier quota system under alternatives 5 and 6 would turn non-participants into oligopoly sellers of their “A shares.” Therefore, these alternatives would give market power to those individuals.
- It is not known how many individuals (non-participants) would benefit from alternatives 5 and 6 as there is no information on how many ITQs are not leased. It is likely that alternatives 5 and 6 would benefit a few non-participant allocations holders while harming people currently participating in the fishery.
- Alternatives 5 and 6 will result in a decrease in net leasing activity.
- Alternatives 5 and 6 would reduce the ITQ available for collateral and increase the cost of producing clam products.
- Alternatives 5 and 6 would have negative impacts on jobs by raising processors cost and passing those costs to consumers.
- Alternatives 5 and 6 would result in increased imports of cheap foreign clam products and diminish US product marketability.
- Regarding the model/affiliation levels for selecting/monitoring any excessive shares alternative the Council selects, a few comments indicated support for the following:
  - Net Actual Percentage model.
  - 100% cumulative model.
  - Individual/business affiliation level.
  - Family level affiliation level.

#### *Other Alternatives*

- These alternatives were also supported by industry members that offered comments:
  - Excessive Shares Review (Box ES-2) – Alternative 1, No Action.
  - Framework Adjustment Process (Box ES-3) – Alternative 1, No Action.
    - A framework adjustment process does not allow for a full transparency to address changes.
    - Industry can manage the fisheries on their own.
  - Multi-year Management Measures (Box ES-4) – Alternative 2, Specifications to be set for maximum number of years consistent with the Northeast Regional Coordinating Council (NRCC)-approved stock assessment schedule.

### *Other Comments*

- A request for correction of information under Section 515 of Public Law 106-554 was submitted.
  - It was indicated that the submission was made because there were substantial changes to the public hearing documents between the version that came out of the June Council meeting and the version that was used for public hearings.
- The excessive shares definition should not include social engineering concepts.
- Concerns were raised through a few comments on participation of independent stakeholders in the industry and management process.
- Industry is not catching the quota due to low demand levels, increasing foreign competition, and habitat area closures.



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901-3910  
Phone: 302-674-2331 | FAX: 302-674-5399 | [www.mafmc.org](http://www.mafmc.org)  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 27, 2019  
**To:** Council  
**From:** Jessica Coakley, Staff  
**Subject:** Habitat Update

The Council will receive a progress update on the Northeast Regional Habitat Assessment (NRHA), a presentation on the CCC Habitat Workgroup Workshop (held August 2019), and will receive a presentation from the Greater Atlantic Regional Fisheries Office (GARFO) Habitat Conservation Division (HCD) on "Projects of Interest" occurring in our region.

In 2015, the Council requested that HCD and Council staff coordinate to ensure the Council receives periodic written and/or verbal updates on:

- Offshore Projects - All proposed projects (e.g., energy projects, cables, sand mining, etc.).
- Nearshore/Estuarine Projects - Only large-scale proposed projects, including any large transportation and port development projects.

These updates could also include other habitat activities of interest occurring within the region (i.e., restoration, dam removal, etc.) and be at least biannual, if possible. Annapolis, MD based HCD staff, Keith Hanson, will present to the Council on this subject.

The following background information is included for Council consideration on this subject:

1. Northeast Regional Habitat Assessment (NRHA) website: <http://www.mafmc.org/nrha>.
2. Report from the Council/NOAA Fisheries EFH Consultation and Regional Innovations Workshop (August 20-22, 2019) - online only



**COUNCIL COORDINATION COMMITTEE**

**HABITAT WORK GROUP**

**Report from  
Council/NOAA Fisheries EFH Consultation and  
Regional Innovations Workshop**

**August 20-22, 2019**

**Portland, Oregon**



## Executive summary

Staff (or designee)<sup>1</sup> from each of the eight U.S. regional fishery management councils, the five regional offices of NOAA Fisheries, and select NOAA Fisheries headquarters staff with national habitat responsibilities met in Portland, Oregon for a three-day workshop held August 20-22, 2019. The purpose of the workshop was to advance our collective work toward effective essential fish habitat (EFH) consultations on non-fishing activities. This mission was accomplished by sharing current practices and challenges across regions and brainstorming ways to improve our collaborations with one another and outside partners in the future. At the conclusion of the workshop, each region developed the beginning of a work plan, with both short- and long-term opportunities for growth across the topics discussed.

In this context, consultations mean not only essential fish habitat consultations in a formal sense, as prescribed by the Magnuson Stevens Fishery Conservation and Management Act and led by NOAA Fisheries Habitat staff in each region, but also more informal involvement by both NOAA Fisheries and the councils in developing projects that may affect fish habitats and fisheries. Each council has a distinct approach to engaging in these types of projects, but we share many things in common, including limited staff and member time to address these issues and a desire to provide advice that is grounded in science. Among other activities, workshop participants agreed councils can amplify the conservation recommendations of NOAA Fisheries, and that the council process serves as a focal point for convening fishermen, managers, scientists, state and federal agencies, tribes, and conservation organizations.

### Sessions

In advance of and during the workshop, council and NOAA Fisheries staff developed and facilitated sessions around eight themes. This report summarizes the content of each of these sessions, including major discussion points and potential action items.

1. **Introduction** of the workshop roadmap, bridge from the 2016 National EFH Summit, and a foundation for the remaining sessions.
2. **EFH consultation process** to describe how councils and regional offices communicate and collaborate.
3. **Habitat goals** and how their articulation can assist councils in effectively using EFH authorities.
4. **Council policy statements** to provide standing guidance for EFH consultation and habitat conservation efforts.
5. **Offshore marine planning and regional issue** coordination on a larger scale.
6. **Fishery science center engagement** in EFH consultation work.
7. **Tools and technology** to aid councils and regional offices in providing access to and use of EFH information in consultations.
8. **Obtaining and sharing data to refine EFH designations**, especially approaches and best practices.

---

<sup>1</sup> The Caribbean Fishery Management Council was represented by a member of the Scientific and Statistical Committee.

## Major themes and discussion highlights

Different councils and regional offices (ROs) take different approaches to EFH consultation issues, which is appropriate given regional differences. This standing work group and specifically this workshop provide an opportunity to learn from one another, especially since many types of non-fishing projects that may impact EFH are common to multiple regions.

Everyone has limited staff resources to devote to these issues and thus needs to prioritize among habitat conservation initiatives. It is important to identify and leverage wider networks when developing expertise and conservation recommendations related to non-fishing projects. In terms of staff resources, there are tradeoffs between the ability to take quick action on a topic and the cost of maintaining regional expertise on specific issues.

Initial work to establish habitat-related goals and policies is one way to develop expertise on these issues that can be used to inform prioritization efforts. While time-intensive, such work can streamline commenting on specific projects. Effective goals are tiered, prioritized, specific, clearly articulated, and evaluated over time to ensure continued relevance. Habitat goals and policies are also an important external communication tool for partner agencies involved in permitting non-fishing projects. The goal and policy development process should include a plan for dissemination.

Ongoing communication between councils and ROs is beneficial. Building these relationships, including maintenance of communication channels between organizations and individual staff members, takes time, but regular communication will facilitate coordination when the councils are asked to or decide to engage in EFH consultation for specific non-fishing projects. Council policies around best conservation practices should be coordinated with NOAA staff to take advantage of their expertise and ensure consistency with their conservation recommendations.

Many of the issues discussed at this workshop are too large for one or a few staff to handle effectively and benefit from a coordinated group approach to tracking and analysis. While team approaches require additional resources to administer, they can lead to deeper fisheries engagement as well as more robust analyses and conservation recommendations. Groups outside NOAA and the councils, such as regional coalitions and planning groups, are important partners in terms of data sharing and research initiatives.

Although fishery science centers (FSCs) were not included directly in this workshop in an effort to limit meeting scope and size, relationship building between councils, ROs, and FSCs is very important. The importance of clear, two-way communication between managers and scientists should not be overlooked as a way to ensure that conservation recommendations are grounded in science, and research will benefit the consultation process. Strengthening these relationships will allow us to work more effectively on challenging issues together. One near-term opportunity for collaboration is to compare council and NOAA research priorities and plans to identify areas of alignment. In addition to more sophisticated research questions related to production values by habitat type or habitat suitability modeling, it is imperative to continue gathering basic presence/absence and relative abundance data across habitat types to inform the consultation process and other fishery management efforts. Many of these data-gathering efforts will require partnerships with states and research organizations.

Extensive time and energy has been invested in developing EFH information on the part of the councils, ROs, and FSCs, and a relatively small additional investment in communicating this information would greatly enhance its dissemination to outside partners. All councils and regions were able to identify areas for improvement, but there are many good examples of information products to draw from, which could be simple web-accessible documents, or more complex data portal initiatives. Information shared should include research priorities related to habitat.

## **Possible actions for the CCC**

Workshop participants suggested two specific actions that the CCC itself could take to contribute to this area of work. First, the CCC could support coordinated outreach to action agencies. The goal of such outreach would be to remind action agencies of the important role that councils play as fishery management partners, as well as congressional mandates to address impacts on council-designated EFH. While NOAA Fisheries conducts EFH consultations, action agencies are encouraged to coordinate around actions that will impact EFH designated by the councils. Second, the CCC could identify habitat science priorities that are shared across regions and councils and communicate them to NOAA Fisheries leadership at both the ROs and FSCs. Shared science and research objectives can provide a foundation for work that could be done across FSCs and would benefit multiple councils and their habitat conservation initiatives.

## **Conclusions and next steps**

Regional workshop participants and their colleagues have scoped work plans (contained in this report), and will initiate potential tasks identified during the workshop. Straightforward, near-term initiatives such as better communication of EFH information are already underway; other longer-term coordination work will require additional planning and organizational buy-in. During 2020 and beyond, the CCC Habitat Work Group intends to continue work on specific initiatives scoped at this workshop, under the guidance of the CCC, and to provide additional details and avenues for enhancing CCC outreach with partners and potential to identify shared habitat science priorities.

## **Table of contents**

Executive summary	2
Table of contents	5
Abbreviations and acronyms	6
Workshop purpose, objectives, and desired outcomes	7
Session objectives and highlights	9
Session 1: Introduction	9
Session 2: EFH consultation process: How councils and regional offices communicate and collaborate	10
Session 3: How can articulating habitat goals assist councils in effectively using EFH authorities?	12
Session 4: Council policy statements to provide standing guidance for EFH consultation and habitat conservation efforts	14
Session 5: Offshore marine planning and regional issues	15
Session 6: Fishery science center engagement in EFH consultation work	17
Session 7: Tools and technology to aid councils and regional offices in providing access to and use of EFH information in consultations	18
Session 8: Approaches and best practices for obtaining and sharing data to refine EFH designations	21
Potential regional future work	23
New England and Mid-Atlantic Councils	23
South Atlantic Council	24
Caribbean Council	25
Gulf of Mexico Council	26
Pacific Council	26
North Pacific Council	27
Western Pacific Council	29
Headquarters Offices of Habitat Conservation and Science & Technology	30
Reflections and next steps	31
Appendix 1: Workshop Participants	33
Appendix 2: Potential Approaches to Facilitate Council and Regional Office Collaboration on Non-Fishing Activities Impacting EFH	34
Appendix 3: Feedback Summary from Pre-Workshop Partner Survey	37

## **Abbreviations and acronyms**

AKRO	Alaska Regional Office
BOEM	Bureau of Ocean Energy Management
CCC HWG	Council Coordination Committee Habitat Work Group
EBFM	Ecosystem Based Fisheries Management
ECO	Environmental Consultation Organizer
EFH	Essential Fish Habitat
FEP	Fishery Ecosystem Plan
FSC	Fishery Science Center
GARFO	Greater Atlantic Regional Fisheries Office
HAIP	Habitat Assessment Improvement Plan
HAPC	Habitat Area of Particular Concern
MAFMC	Mid-Atlantic Fishery Management Council
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NEFMC	New England Fishery Management Council
NPFMC	North Pacific Fishery Management Council
OHC	NOAA Fisheries Office of Habitat Conservation
PFMC	Pacific Fishery Management Council
RO	Regional Office
S&T	NOAA Fisheries Office of Science and Technology
SAFMC	South Atlantic Fishery Management Council
SEFSC	Southeast Fisheries Science Center
SERO	Southeast Regional Office
USACE	U.S. Army Corps of Engineers
WCRO	West Coast Regional Office

## Workshop purpose, objectives, and desired outcomes

Regional fishery management councils (councils) are congressionally mandated to conserve and manage fisheries, which depend on essential fish habitat (EFH) as part of a healthy ecosystem. The definition of [essential fish habitat](#) is provided in the [Magnuson-Stevens Fishery Conservation and Management Act](#) (MSA). The councils are directed to consider, and have the authority to comment on, federal or state policies, permits, or other actions which in their view, potentially impact EFH. Given the statutory deadlines associated with these activities, councils coordinate on an ongoing basis with NOAA Fisheries regional office (RO) staff on EFH consultations. The overall goal of the workshop was to create a cross-regional forum for practitioners representing the councils and ROs to share best practices with respect to EFH consultations on non-fishing actions. During the workshop, participants did not limit discussions to formal EFH consultation and conservation recommendations, but instead took a broad view of potential approaches to collaboration around habitat concerns related to non-fishing activities.

The workshop was intended as a small working meeting for EFH practitioners (see Appendix 1 for a list of attendees). In addition to CCC Habitat Working Group (HWG) members, participants were selected because they are directly involved in EFH designation or consultation work. NOAA Fisheries headquarters staff working on science and policy topics that directly support EFH work also attended. CCC HWG members and other participants developed and facilitated the workshop sessions. Because this was a meeting of the CCC HWG, the specific focus was on practices within the councils' authority.

The CCC HWG acknowledged at the outset that there is no one-size-fits-all approach to EFH designation and consultation. Councils and ROs face different circumstances when it comes to understanding the habitat needs of their fishery species and the degree to which federal activities in a region have the potential to adversely impact EFH. This workshop provided a forum to compare best practices across regions, and allowed each region to identify ways to improve their own processes. The workshop provided an opportunity to evaluate the capabilities of other regions and tailor these ideas to make them work effectively and efficiently within each council's process.

Best practices and coordination around non-fishing impacts to EFH is a very large topic. To focus our work, the CCC HWG identified five **objectives** for the workshop in the preliminary plan for the meeting that was presented to the CCC in November 2018.

1. Fulfill recommendations from the EFH Summit that EFH practitioners should seek collaborations between regions and action agencies through better communication of key interests, and identify opportunities to share conservation approaches across regions.
2. Evaluate EFH designations as they relate to consultations on non-fishing impacts, considering whether their design is effective for use in non-fishing consultations.
3. Evaluate how best to make use of limited council staff and member attention on short time frames, while still providing meaningful consultation on issues of concern to the council.
4. Identify best practices for designating EFH at a fine-scale resolution that more closely matches the appropriate scale on which non-fishing federal activities are occurring.
5. Identify ways to provide more effective access to existing EFH spatial and habitat/species use information through online tools and capabilities. These tools are supported by the councils, NOAA Fisheries, and regional partner agencies for internal use by the councils and NOAA Fisheries and for external use by other federal agencies, States, or regional stakeholders. This collaboration would identify and connect existing capabilities and regional access to EFH information to enhance the council/NOAA Fisheries EFH consultation, permit and policy review processes.

The CCC HWG also identified the following potential **outcomes**:

- Compare processes to identify the level of council involvement needed on different issues, cases when it is sufficient to confer only with council staff, and cases when NOAA Fisheries can incorporate standing council guidance without additional coordination with the council. (Objectives 1 and 3)
- Identify effective coordination measures between regional staff, council staff, council bodies under constraining timelines. (Objectives 1 and 3)
- Discuss the implications of crafting a council policy statement to provide standing guidance for EFH consultations supporting efficient and timely council and NOAA Fisheries response. (Objectives 1 and 3)
- Discuss the use of technology to collect and share information that will enable more useful and detailed responses to questions or issues that arise in EFH consultation. (Objectives 1 and 5)
- Discuss defining and designating EFH to better support more effective localized responses and non-fishing consultations, such as through a regional EFH user guide. (Objectives 1, 2, and 4)

The section of this report on reflections and next steps summarizes the extent to which these objectives and outcomes were met during the workshop.

## Session objectives and highlights

The workshop objectives were addressed through eight sessions. The purpose of and major takeaways from each session are summarized below. While there were opportunities for breakout discussions, all participants contributed to all sessions (i.e., none were concurrent). Some session leads identified questions for a partner survey, distributed prior to the workshop (see Appendix 3 for a summary of partner feedback). Survey recipients and respondents were from the Army Corps of Engineers (USACE), Bureau of Ocean Energy Management (BOEM), Navy, Federal Highway Administration, National Park Service, NOAA Fisheries, state agencies, and universities. In addition, background information for some of the sessions was obtained through a survey of participants and consultation partners (participants survey), where council staff and others summarized current policies and practices related to EFH consultation work. Questions and responses from both surveys are highlighted under relevant sessions below.

### Session 1: Introduction

*Ian Lundgren, Josh DeMello, Thomas Remington (rapporteur: Lisa Hollensead)*

In 2016, NOAA Fisheries and the Fisheries Leadership and Sustainability Forum hosted the [National Essential Fish Habitat Summit](#), which assembled council and NOAA Fisheries habitat managers and scientists to examine EFH implementation, share ideas and approaches across regions, and consider how the use of EFH authorities may respond to a changing environment. The findings and outcomes are reflected in the report from the summit ([NOAA Technical Memo NMFS-OHC-August 2017](#)).

The introductory session provided a contextual bridge from the 2016 EFH Summit, a “roadmap” for the workshop, and a foundation for subsequent sessions. Assuming participants arrived with a working knowledge of the EFH designation, consultation, and policy review processes, the introduction provided a high-level briefing of participants’ roles in EFH designations, federal action and policy review, and EFH consultation. Furthermore, the session highlighted differences in workload, staffing, and collaboration approaches to demonstrate variability.

#### **Discussion points, action items, and takeaways**

Councils and NOAA Fisheries have a joint responsibility to define EFH for managed species, designate habitat areas of particular concern (HAPCs), minimize adverse effects on EFH from fishing impacts, and identify and minimize non-fishing impacts to EFH for managed fisheries, including anadromous fish. For non-fishing impacts, council comments are discretionary, except when pertaining to anadromous fish. NOAA Fisheries largely divides its role between its fishery science centers (FSCs), which generate science to support EFH designations, and ROs, which engage in EFH consultations. Councils often interact with NOAA Fisheries in non-linear ways as the designation and consultation processes are executed. While the designation process typically has tri-lateral involvement, non-fishing impact consultations have traditionally been less collaborative due to inherent differences dictated by ecology and commercial fishery targets, and to differences in how the EFH process is approached.

A brief overview of key consultation issues in various regions showed many similarities and some differences in the types of activities that result in consultation. Some activities are common throughout all regions, including energy development (fossil fuels and renewable energy), coastal development



(including docks and piers), and aquaculture. Other issues apply only to certain regions, including sand mining, beach nourishment, and reef restoration.

While each RO has substantial latitude to implement their EFH consultation program in a manner best suited to specific regional conditions (ecology, managed species life histories, climate, etc.), EFH consultations led by NOAA Fisheries are often influenced by logistical realities and action agency agendas. For example, in the Southeast region, coastal development and port expansion drive an abundance of EFH consultations, and the Southeast Regional Office currently receives approximately half of all EFH consultation requests nationwide. The variability in the number and complexity of activities that trigger consultations create uneven conditions between regions. Likewise, regions with the highest consultation requests also deal directly with more councils and USACE regulatory districts.

In order to deal with inequalities, regions with higher consultation loads tend to rely more on certain consultation tools than others. For example, east coast ROs rely more on general concurrences and programmatic consultations than other regions, or use findings to streamline consultation processes with action agencies. Some regions use HAPCs, a focused subset of EFH identified by the councils, to address a variety of conservation and protection challenges. HAPCs are used in various ways by the councils for fishery management. Within the EFH consultation process, HAPCs encourage increased scrutiny and more rigorous conservation recommendations to reduce adverse impacts to fish habitat.

Outcomes from this workshop will be useful as NOAA Fisheries embarks on a revision of EFH consultation guidance (expected in May 2020), which, when originally written, did not anticipate many present-day challenges. There is also an opportunity to incorporate regional issues into the guidance revision, including coordination processes that more fully engage councils on non-fishing EFH consultations.

## **Session 2: EFH consultation process: How councils and regional offices communicate and collaborate**

*Diana Evans, Jessica Coakley, John Stadler, Steve MacLean, Matt Eagleton (rapporteur: Josh DeMello)*

Evaluation of the potential effects of non-fishing activities on EFH is a collaborative process between the councils and NOAA Fisheries. However, collaboration can vary by the type of activity being considered and by RO and council staff involved. This session sought to provide an overview of regional processes, techniques, and tools to engage partners in EFH consultations with the intent to identify best practices. Attendees discussed current practices and topics of joint importance for ROs, FSCs, and councils, including input from internal and external EFH partners (see Appendix 3), on when councils should and do become actively engaged in consultation, and how and whether there is an ongoing need for collaboration as a project proceeds.

Most councils have a single staffer to address habitat issues as one part of their overall responsibilities; the New England, Gulf of Mexico, and South Atlantic Councils each have at least a full-time habitat staff person. The amount of effort required may exceed one full-time equivalent for discrete periods, such as EFH reviews, HAPC reviews, and other habitat-related actions. Consultation with outside groups can be used to augment council staff resources. For example, state Coastal Zone Management offices have access to a variety of data and the support of state governors.

Attendees presented mini-case studies highlighting collaborations in different regions. John Olson (NOAA Fisheries Alaska RO) reported that depth stipulations/limitations were successfully reinserted into a gold mining permit in nearshore waters in Nome, Alaska, that overlapped with red king crab habitat. NOAA Fisheries and the North Pacific Fishery Management Council's (NPFMC) Crab Plan Team articulated concerns about the project leading to research funding to document at what depth adverse impacts to red king crab habitat were likely to occur. After review, the USACE reinserted depth criteria that had been removed from individual permits. Jennifer Gilden (Pacific Fishery Management Council, or PFMC) presented a case study in which the council's habitat goals were incorporated, through their Habitat Committee, into Pacific Marine Energy Center plans for an offshore energy test site, thereby avoiding impacts to an important rocky reef. John Stadler (NOAA Fisheries West Coast Regional Office) described the ongoing effort by the PFMC Habitat Committee to define criteria for the types of actions on which they would likely comment. NOAA Fisheries can then use these criteria to identify actions that are of interest to the council. Jessica Coakley (Mid-Atlantic Fishery Management Council (MAFMC)) highlighted a recent successful multi-agency collaborative effort to extend the comment period on an offshore energy project. Two councils (MAFMC and New England Fishery Management Council (NEFMC)) wrote letters requesting the extended comment period to allow their councils to review the projects. Council staff also sent letters to state governors' key staffers, identified by environmental non-governmental organizations, to ensure that the issue would rise to the governors' attention. After receiving multiple requests from a wide variety of stakeholders, BOEM extended the comment period, as requested.

### ***Discussion points, action items, and takeaways***

Attendees were asked to consider a number of questions about council engagement in EFH consultations for a group discussion: What is the value of council engagement? How useful is it for councils to be engaged? How do we add value to the council's engagement? Why should councils get involved?

Habitat goals and policies were discussed as solutions during this session, but these topics received more detailed consideration during sessions 3 and 4. Briefly, attendees recommended that councils should develop habitat goals and objectives to better communicate council habitat issues and priorities to NOAA Fisheries (see Session 3 summary). Also, attendees suggested that it would be useful for councils to develop policy statements that provide clear direction on which non-fishing activities the council wishes to engage, and articulate the council's standing comments on larger projects (see Session 4 summary).

*What does council support for NOAA Fisheries consultations look like in practice? How do the councils add value to the consultation process?*

Attendees generally agreed that council engagement in EFH consultations is valuable when the council comments are similar or the same as NOAA Fisheries comments. Councils often articulate concerns at a big-picture level and rely on NOAA Fisheries to make specific conservation recommendations. Even when the councils are echoing NOAA Fisheries' comments, it is powerful when both organizations speak with the same voice. Attendees noted that councils have the opportunity to write letters that are not bound by EFH consultation requirements to which NOAA Fisheries must adhere.

Councils are also a nexus for fishermen and fishery stakeholders. Because councils more directly represent commercial and recreational fishermen than NOAA Fisheries does, their comments can add

weight to agency comments and suggestions. In addition, councils may also consider impacts that the agency does not evaluate during EFH consultations (e.g., economic impacts), thereby adding information to the process that may resonate with business and development advocates. The council process can be used to share project information with, and bring perspectives from, these stakeholders, and is an opportunity to give feedback to action agencies about the social and economic impacts of a proposed action or habitat mitigation strategy.

It would be useful to track what happens when councils engage in EFH consultations, for instance determining whether council engagement influence outcomes. Attendees noted that collaboration comes at a cost, and there are limits on time and resources available for consultations. Tracking effectiveness would allow us to be smarter about how we prioritize our work.

*What collaboration tools are most effective and what are some opportunities for improvement?*

Attendees indicated that annual reporting from NOAA Fisheries to councils on the state of consultations, highlights, and predictions of upcoming issues can allow councils to strategically consider where they can engage. Appendix 2 includes for more detailed best practices for collaborating on EFH consultations.

*Ways to achieve early intervention on projects when the timing doesn't overlap a council meeting*

Councils can adopt policy statements with positions on particular activities to let action and consulting agencies know when councils wish to be engaged (see Session 4 summary). As an example, the South Atlantic Fishery Management Council (SAFMC) has both [habitat type and activity-based statements](#) that identify EFH for potentially impacted council-managed species, and conservation recommendations that can be cited by NOAA Fisheries or state/regional partners during or outside of the EFH consultation process. Councils can defer commenting to committees and/or staff, guided by goals and policy statements. Longer-term, the newly implemented [Environmental Consultation Organizer \(ECO\)](#) consultation tracking system may be useful for early intervention. Currently, councils can only view closed consultations through this public portal. However, the ability to view ongoing consultations may be added in the future.

### **Session 3: How can articulating habitat goals assist councils in effectively using EFH authorities?**

*Emily Farr, Jessica Coakley, Michelle Bachman, Diana Evans, Steve MacLean, Tauna Rankin (rapporteur: Michelle Bachman)*

Habitat conservation goals can help councils and NOAA Fisheries prioritize activities, communicate with action agencies, and guide more deliberate use of EFH authorities. This session discussed what elements make an effective habitat goal, where those goals can be articulated, and how they can be used to guide management action. Several regional councils are moving toward proactive approaches to habitat conservation. Habitat goals are one tool to articulate priorities and encourage proactive thinking.

Each council articulates its habitat goals in a different way. Some are explicitly stated in fishery management plans, operating procedures, strategic plans, or habitat policies. Other goals are implicit, such as through research priorities or purpose statements associated with HAPC designations. Habitat goals also vary in their level of specificity, ranging from very general to more tactical and action-oriented.

The pre-workshop partner survey included several questions related to habitat goals. Most consultation partners agreed that habitat goals would facilitate coordination in the EFH process by helping action agencies improve EFH assessments, minimize impacts on priority areas, identify research priorities, and better understand NOAA Fisheries conservation recommendations. A few examples were given where habitat goals have been useful, including in developing regional conditions for the Army Corps nationwide permit program, and by communicating priority areas through the designation of HAPCs.

### ***Discussion points, action items, and takeaways***

#### *What is the value in setting habitat goals, and for what audience?*

Participants agreed that habitat goals add value to the EFH process. For the councils, habitat goals can help focus activities and inform decisions for specific areas or habitat types. They can also serve as a communication tool for the regulated community, and influence management actions beyond the jurisdiction of the council or NOAA Fisheries. Action agencies and developers that are engaged in projects with non-fishing impacts on EFH may not be thinking about the role of habitat in fisheries, and habitat goals help express the need for conservation measures that support healthy fisheries and economies. Consequently, habitat goals may affect the outcomes of consultations through early coordination to reduce impacts. Council goals for habitat conservation may also help influence management actions beyond the jurisdiction of the council or NOAA Fisheries through coordination with regional partnerships, associations, or planning bodies. NOAA could also use these types of goals to prioritize its restoration and conservation activities and grant opportunities.

#### *What makes an effective habitat goal?*

Effective habitat goals are tiered, prioritized, and specific. A tiered approach would include high-level goals across all species and habitats, specific goals built into fishery management plans or other management structures, and more detailed actions attached to those goals. An example of a high-level goal came from NEFMC: “Maintain and enhance the current quantity and quality of habitats supporting harvested species, including their prey base.” Goals are likely to be more effective when they are closely tied to council priorities; for example, ecosystem protection, fish stock recovery and sustainability, or improved fisheries economics. Participants agreed that HAPCs are most effective when they have specific goals associated with their designation. One example provided was the Tilefish HAPC in the Mid-Atlantic, which was developed to meet the specific goal of protecting vulnerable pueblo habitats from fishing gear impacts. In addition to being tiered, prioritized, and specific, habitat goals should be clearly articulated to the proper audience, and actionable. Finally, goals should be critically evaluated and tested over time to ensure continued relevance.

#### *How do we measure what degree of habitat protection is sufficient to meet habitat goals?*

Measuring progress and determining the degree of protection needed to meet habitat and fishery management goals remains a challenge. For most species, information linking habitat to fish productivity is unavailable, and environmental change makes decisions about how much habitat protection is needed to meet fishery management goals into a moving target. However, it is important to set habitat goals that help buffer against this uncertainty and refine them to include more quantitative information as it becomes available. An indicator-based approach that uses available information (e.g., the size distribution of a species) as a proxy for habitat quality or quantity was suggested as one possible strategy for measuring the success of habitat protection. PFMC provided an example of a measurable goal: “there should be no net loss of the productive capacity of marine, estuarine, and freshwater habitats that sustain commercial, recreational, and tribal salmon fisheries beneficial to the nation.” Participants agreed that the concept of “no net loss” is clear, simple, and effective.

## **Session 4: Council policy statements to provide standing guidance for EFH consultation and habitat conservation efforts**

*Michelle Bachman, Diana Evans, Steve MacLean (rapporteur: Diana Evans)*

Policy statements are an opportunity for councils to articulate their views on habitat management, including concerns about non-fishing activities that may affect fish habitats, in a clear, outward-facing, and easily shareable manner. In this context, policy statements refer to evidence-based best practices for habitat conservation, values-based statements about the desire for habitat protection, and statements of operational policies that structure the mechanisms for council engagement in habitat conservation efforts. Done effectively, these policies can benefit both council and NOAA staff engaged in habitat conservation work. This session explored the processes used to generate these policies, the content and language included in these policies, and how these policies are used (or not used). The goal was to identify areas for improvement and begin to create a tool kit of ideas that can be used to refine existing policies or create new ones.

Questions around awareness about and usage of council policy statements were part of the pre-workshop partner survey and informed the discussion (see Appendix 3 for a summary). As a case study, MAFMC discussed their efforts to develop a series of policy statements.

### ***Discussion points, action items, and takeaways***

#### *Are policy statements useful?*

Among the external partners surveyed prior to the workshop that were aware of council habitat policies, many agreed that they were useful, or could perhaps be useful. Similar to the discussion around habitat goals, partners felt that council policy statements could be used to bolster decisions or recommendations on projects or permits affecting fish habitats. Partners suggested that statements should be specific, focused, clear, and concise; and that councils should collaborate with NOAA Fisheries on content to create consistency between NOAA Fisheries and council conservation recommendations. Workshop attendees agreed that statements should be clear and concise.

#### *Development approaches*

The MAFMC policy statement process considered an array of non-fishing activities, with the topics actually developed winnowed from a longer list of potential issues. Consultant-developed background materials and subject matter experts were used to educate council members about the activities and their effects on habitat. A small technical team drafted the initial statements, which were vetted by experts before being provided to the council for further editing and approval. During the approval process, the council discussed how to use the statements to streamline the development of comments on specific projects. Overall the process took about two years. SAFMC completed similar work before MAFMC. One difference between the two councils is that SAFMC subject matter experts tend to be integrated with their council process on an ongoing basis via advisory panel membership, vs. through as-needed participation in specific meetings for MAFMC. The NPFMC has taken a similar approach to developing conservation recommendations for the non-fishing impacts appendices to their fishery management plans. In practice, some of these conservation recommendations have been built into projects from the beginning, which has allowed them to avoid making those suggestions during the EFH consultation process.

The group discussed specific process approaches, which will be detailed further in the toolkit, but generally considered who was involved in the process of policy development, and when. For example, you could begin the writing process with staff, and then solicit subject matter expert review, or start with best practices drafted by individuals working in the field. Early council buy-in and feedback was felt to be important; the utility of Scientific and Statistical Committee review was discussed. Attendees also noted the issue of institutional memory and the possible need for ongoing education about these non-fishing issues, given that council members, staff, and others rotate out of the system. However, continuing education takes time and resources.

#### *Scientific underpinnings and uncertainty*

The overarching premise behind these policies is that habitat conservation actions benefit managed species productivity. There was agreement about the need for conservation recommendations to be evidence-based. Although there will always be questions about whether and how much a given conservation action benefits a particular stock, particularly under changing environmental conditions, these questions don't invalidate the council's habitat goals and policies as precautionary guidance intended to buffer against uncertainty. It seems important to communicate areas of uncertainty and needs for additional scientific study when writing policy statements. Documenting past negative impacts of projects on fishery resources also seemed important as a means of underscoring the need for conservation recommendations.

#### *Outreach and communication*

After these types of conservation recommendations are developed, it is important to have a plan for dissemination. The results of the partner survey indicated mixed awareness of council policy statements, which suggests a need for better communication with external partners about their existence. North Pacific NOAA Fisheries attendees noted that they deliberately communicate changes to their conservation recommendations whenever updates occur. Policy statements originating from NPFMC could be a useful complement to these documents. Greater Atlantic NOAA Fisheries staff do similar outreach, particularly when agencies responsible for these non-fishing projects get new staff. Outreach about conservation recommendations and related council policies at fishery science centers could be useful. Current engagement with FSCs is mixed. A challenge here can be a lack of alignment between these specific conservation topics and individual FSC staff work plans.

### **Session 5: Offshore marine planning and regional issues**

*Jessica Coakley, Michelle Bachman, David Dale, John Stadler (rapporteur: Diana Evans)*

The session discussed ongoing and potential regional practices and approaches to coordinate on large-scale activities occurring in the region's offshore space such as offshore wind, oil and gas development, aquaculture, and marine spatial planning. This coordination occurs among councils, ROs, and FSCs in the context of habitat protection and EFH consultation, although other issues such as impacts to fisheries operations or protected species are often considered as well. The discussion was focused around how these groups intersect and coordinate on cross-cutting and region-wide issues and what practices may be useful for enhancing the council's contributions to the consultation process, either directly or indirectly, with limited availability of time and resources for all involved. This session discussed the benefits of coordinated tracking of these major activities among the councils and their NOAA Fisheries partners.

Offshore wind in the northeast region was examined as a case study. This is a major activity that requires input from multiple councils, federal agencies, and stakeholder groups, and encompasses multiple long-term projects.

### ***Discussion points, action items, and takeaways***

#### *Regional coordination through internal and external groups*

The pre-workshop survey of regional habitat expertise indicated that 46% of those surveyed coordinate within their region on cross-regional issues, with common topics including energy development, naval issues, and programmatic consultations. The Northeast Wind Energy Team, a collaboration among staff from the NOAA Fisheries RO and FSC, and two councils, was presented as a case study for how to tackle cross-regional issues. Some of the benefits of the Wind Team include shared resources and information (including a joint council-hosted [webpage](#)), the ability to track issues that would otherwise overwhelm an individual organization or staff person, and the development of better scientific and technical products to inform comments on these activities/projects. The team does, however, require a big investment in time and effort for coordination through monthly calls, calls in between, and many more “cooks in the kitchen” developing technical products and comments on projects.

Workshop participants also discussed how they coordinate on regional activities such as aquaculture, energy development, and ocean planning. The roles of the previous regional planning bodies, and state-organized groups such as the Northeast Regional Ocean Council (NROC) and Mid-Atlantic Regional Ocean Council (MARCO) (which support data portals), and regional coalitions such as the Responsible Offshore Development Alliance and Responsible Offshore Science Alliance were considered.

#### *Councils as a source of information*

The participants identified a strong role for councils in helping collect and disseminate information at a broad scale. This information can be used by those commenting on the specifics of projects and by fishery stakeholders who may wish to engage in the process. For example, SAFMC has a data portal on its website and uses a regional Habitat and Ecosystem Advisory Panel to guide habitat conservation and ecosystem-based management activities and policy development. Councils can help identify information needed to understand an issue so stakeholders can engage more productively (e.g., council contributions to NROC and MARCO ocean planning portals). Councils are an important venue for information sharing among stakeholders about upcoming comment opportunities, for example by circulating requests for information and sharing how and when to engage on non-fishing projects within the region.

#### *Need for advanced planning*

For complex issues, there is a need to have both personnel and learning in place before these issues emerge, as once these projects start, they can happen fast. For example, Northeast offshore wind was described as “trying to fly a plane while we are building it.” The challenges of learning about new developments in technology and non-fishing issues emerging within a region can be substantial. Related to this, continuous relationship-building is key, so that emerging issues can be anticipated and the expertise needed on these topics is easily identified. Early engagement needs to be balanced with the potential for meeting fatigue, particularly if there isn’t a focal project to dig into. Some emerging issues may take years before they come to fruition, if they do at all.

#### *Potential role of the CCC*

There is a potential role for CCC to help clarify with other federal agencies that councils, as major partners in managing fisheries, need to be part of the EFH consultation process. In addition, planned outreach through the CCC on the role of the councils could be considered to groups such as the Navy, USACE, or other national-level agencies or organizations that might not be fully aware of the councils or their role.

## **Session 6: Fishery science center engagement in EFH consultation work**

*Margaret (Peg) Brady, Tony Marshak (rapporteur: Jennifer Gilden)*

The objective of this session was to identify short and long-term recommendations to improve coordination between FSCs, councils, and ROs regarding EFH. FSCs work to understand and document the critical roles that habitat plays in supporting marine species, and provide managers with the information they need to manage our nation's marine species. FSCs conduct habitat research and provide technical support to ROs and councils as they conduct EFH consultations. The FSCs also conduct habitat assessments that provide a collection of information about a species in relation to its environment, including products like maps and status and condition reports. The [NOAA Habitat Science Story Map](#) provides an overview of the habitat research work conducted by the FSCs.

Two key findings from the 2016 EFH Summit report that focus on habitat science to support management include the following:

- NOAA Fisheries and partners need to address habitat science gaps and improved coordination among scientists and managers.
- EFH practitioners, including scientists, managers, and consultation staff, need to build a community of practice, maintain communications, and develop effective working relationships.

In 2018, NOAA Fisheries updated the 2010 Habitat Assessment Improvement Plan (HAIP) in the context of the 2016 Ecosystem-based Fisheries Management Policy and Roadmap. The [HAIP II](#) plan identified the following recommendations: improve additional stock assessments, refine EFH designations, inform ongoing ecosystem-based fisheries management (EBFM) implementation and address remaining gaps and emerging habitat science needs with respect to the 2016 EBFM Policy and Road Map.

To gauge the current level of engagement among these parties around EFH, a brief questionnaire was distributed to the FSCs, ROs and councils prior to this workshop. The responses from the questionnaire were shared and discussed during this session.

### ***Discussion points, action items, and takeaways***

Opportunities to improve engagement include enhanced communication, joint meetings, and shared understanding of needs/priority setting, for example:

- Distribute a list of habitat contacts at FSCs, ROs, councils to build relationships. FSC contacts were provided during the workshop.
- Conduct council EFH briefings for FSCs to illustrate where science and management intersect, as well as challenges in using existing data.
- Share examples of how habitat science information improved consultations and ensured positive outcomes (e.g., how habitat information was used in assessments; Tony Marshak and John Olson noted examples).



- Identify habitat and ecosystem experts to join council regional plan teams or advisory committees.

Longer-term recommendations include the following:

- Improve FSC understanding of scope/timeliness of EFH consultation requirements; create opportunities through cross-regional teams (e.g., wind energy); set joint habitat priorities so that research matches management needs.
- Gather regional input on national science initiatives to improve alignment with regional priorities.
- Seek to review and provide comments on regional strategic plans developed by ROs and FSCs, and understand how those priorities feed into work plans. Identify funding opportunities that might be available for councils (noting their funding restrictions).
- Ensure that new staff are up to speed on habitat science priorities. Ensure that staff are aware of the councils' research and data needs documents or websites.

#### *The potential role for the CCC*

It would be useful for the CCC to identify regional habitat science priorities and share them with NOAA Fisheries leadership at both the ROs and FSCs.

### **Session 7: Tools and technology to aid councils and regional offices in providing access to and use of EFH information in consultations**

*Roger Pugliese, Reni Garcia (rapporteur: Kerry Griffin)*

The session was designed to provide councils with examples of regional online systems, tools or visual presentation technology that would enhance access to and use of EFH designations, supporting information, spatial representations, and council policy guidance used to address impacts associated with non-fishing activities.

In advance of the session all regions provided input which supported the session breakout. The session included a review and discussion of the existing council and regional online capabilities for distributing habitat and ecosystem information supporting the EFH consultation process. This was done to evaluate the potential to provide councils/regions more effective access to existing EFH spatial and habitat/species use information and highlight other technologies available to collect and share information that will enable more useful and detailed responses to questions or issues that arise in EFH consultation.

Breakout groups provided cross-region discussion on the following areas: 1) EFH Designations; 2) Habitat and Species Information; 3) EFH and HAPC geographic information systems (GIS); 4) Habitat Policies; and 5) Research Needs and Tools. The groups were guided to identify various distribution methods employed, target audience, needs to be addressed and/or processes supported, and to identify capabilities reviewed which may enhance council and regional ability to address impacts of non-fishing activities on EFH.

#### ***Discussion points, action items, and takeaways***

*EFH designation information should be readily available*

The group agreed that EFH designations should be easy to find, with links provided on council habitat pages and NOAA Fisheries EFH consultation pages, and including a council summary document listing all designations. In addition, each council should have a document or single area of its website for all of the materials related to EFH designation. A regional EFH user guide could be developed as a collaboration with the NOAA Fisheries. For example, the Southeast Regional Office (SERO) developed such a document to present all council designations, clarify designation uncertainties in the consultation process, and link to associated map products. NOAA Fisheries Greater Atlantic Regional Office (GARFO) is in the process of updating an EFH assessment worksheet to assist permit applicants and action agencies with effects analysis and help NOAA Fisheries gather the information needed for their new tracking system.

#### *Habitat/species information*

Many regions have buried habitat species information in their fishery management plans and analyses, which can make the information difficult to find. [NOAA Fisheries Alaska Region's page](#) is an example of a well-organized site that includes EFH descriptions, amendments, maps, consultation resources, habitat assessments, HAPC regulations and other resources all on a single page. Another variation is the [SAFMC Fishery Ecosystem Plan \(FEP\) II Dashboard](#), which includes access to all habitat, EFH and EBFM information, web services, and other tools through one location. The [Northwest Fishery Science Center Fishery Resource Analysis and Monitoring Data Warehouse](#) has information on the substrate and fishing effort used in the analysis of changes to bottom trawl closures in Amendment 28 to the Pacific Coast Groundfish Fishery Management Plan. Information on habitat suitability probability modeling for many of the 92 species in the Plan will be available soon. These pages might serve as models for other regions, or there may be value in building a national information system with all EFH designations.

Other recommendations include the following:

- Develop fact sheets on EFH for each species and make available through council websites.
- Support outreach and education about what EFH and HAPCs mean for other state and federal action agencies.
- Develop or support regional interactive data portals or web services that provide the ability to view all EFH and map creation functions, including the ability to drop a pin or draw a polygon or overlay other information to tell a specific story.
- Include new information on thresholds for impacts as developed (e.g., tolerance limits of species to suspended sediment).
- Councils should aim to map EFH/HAPC for the full range of the species.

#### *EFH and HAPC GIS and Mapping Portals*

Mapping portals should address the needs of their target audience, particularly action agencies or consultants who are submitting a project for EFH consultation, project developers who are researching potential habitat implication of their project, council analysts looking for how EFH may be affected by a potential council management measure change, and NOAA Fisheries staff evaluating areas for restoration or other assessments. The [National EFH Mapper](#) provides spatial information from all the regions, and some councils have their own mapping portals with information that is more up-to-date. A

new consultation tracking system, ECO, was just released (see Session 2 summary) and may be upgraded in the future to include GIS capability.

NOAA Fisheries may be less nimble with frequently updating regionally-specific information online than councils, so councils should consider how to make their websites more informative to get timely information out. Councils may consider working with state and regional partners to share data across systems. To enhance collaboration and support enhancement, councils can also work with the NOAA Fisheries Office of Science and Technology as relevant.

Suggestions to improve the presentation of spatial data include the following:

- Council websites should be structured to enhance access to spatial information, and consider new presentation formats such as ESRI Story Maps.
- Make sure all councils have a spatial representation of EFH, HAPCs, and related information available for review and download online (e.g., web services) in multiple formats including shapefiles, or point to the National EFH Mapper and the NOAA Fisheries Office of Habitat Conservation's EFH data inventory website.
- Include fishery closure areas on EFH maps, with an explanation for why each area is closed (e.g., habitat protection).
- Focus on how constituents could use the websites. Ongoing coordination could include a technology transfer from the North Pacific and South Atlantic Councils to others with less refined web content in terms of spatial data.
- Web services can expand the capability to include representative photos and videos of various habitat types or species using habitat (e.g., [SAFMC Managed Area Service](#) in the [SAFMC Digital Dashboard](#)).

A spatially explicit evaluation "tool" at ROs or councils to assess non-fishing effects, in a similar manner as for fishing practices (fishing effects model used in the North Pacific and Northeast), has not yet been developed. However, one example for Alaskan waters is *Geospatial Datasets Applicable to an Essential Fish Habitat Non-fishing Vulnerability Assessment: Norton Sound, Alaska, Dr. Chris Maio, June 30, 2015.* [https://drive.google.com/file/d/11AD9Pn-KaM\\_AbZzxiNCTIAqnE291ZZxb/view?usp=sharing](https://drive.google.com/file/d/11AD9Pn-KaM_AbZzxiNCTIAqnE291ZZxb/view?usp=sharing)

#### *Habitat Policies*

Building on the dedicated habitat policies session, the group discussed how those policies can be applied and disseminated. Councils who develop EFH policies or policy statements should make them accessible online for review and download to enhance their use by NOAA Fisheries, state and federal action agencies and regional partners. Council staff could directly use those policies in comment letters, and NOAA Fisheries consulting biologists and state/regional partners could easily draw on and incorporate approved council policies into their recommendations or justifications.

#### *Research Needs*

NPFMC's Alaska Fisheries Information Network (see [www.research.psmfc.org](http://www.research.psmfc.org)) was provided as an example of a searchable online database of data needs targeted at researchers and research funders. Participants agreed that this was a good model, and NPFMC will look into sharing the architecture of the database for other regions to implement. Having council research priorities easily accessible and all in one place (e.g., housed on CCC webpage) would enhance collaboration among researchers, help communicate needs to FSCs, and help track progress towards habitat goals and strategic plans. In

addition, the database of research priorities could link to existing spatial systems, or be tailored to address other regional priorities (e.g., habitat, EBFM needs articulated in FEPs). Councils should ensure habitat and ecosystem research priorities are developed and highlighted in standing prioritization processes, and should strive to engage other regional partners (NOAA Cooperative Institutes, Sea Grant, Ocean Observing Associations, Regional Habitat Partnerships, etc.) to help refine priorities and link them to habitat and ecosystem goals.

## **Session 8: Approaches and best practices for obtaining and sharing data to refine EFH designations**

*Lisa Hollensead, Karen Greene, Roger Pugliese (rapporteur: Jessica Coakley)*

The purpose of this session was to discuss EFH data collection, management, sharing, and utility for designation. Additionally, the council and RO participants had an opportunity to identify challenges in the data gathering and analysis process and were encouraged to provide potential solutions for these challenges. The goal of the session was to provide an opportunity for participants to synthesize approaches for efficient scientific data collection used to inform EFH designation.

The pre-workshop participants survey gauged how councils obtain, store, and share habitat data. Results indicated that FSCs are relied on heavily for both habitat data collection and management. During the workshop, participants discussed the questions outlined in the session vision.

### ***Discussion points, action items, and takeaways***

The session provided a unique opportunity for regional council and RO staff to share experiences with data collection and identify challenges to addressing data needs. These issues are often complicated and confounded by regional-specific effects; however, a few common themes were identified across regions. Effective data collection requires close collaboration with a wide variety of scientific partners. In particular, there is a need to work more closely with partners on nearshore habitats. Additionally, continued robust collection of level 1 and 2 information (presence/absence and relative abundance data) is imperative for describing potential changes in fish habitat use over time and constructing more complex (i.e., ecosystem-based) spatial models. The group agreed that discussions at a future meeting could be focus on spatial modeling approaches and identifying data needs for EFH delineation.

*What types of spatial data are collected in the different management regions? How are spatial data collected, stored, and shared with other partners?*

According to the pre-workshop survey, councils rely heavily on FSCs and ROs for habitat data collection and storage. Additionally, academic institutions and non-governmental organizations also aid in data collection and habitat analyses. The group agreed that it is important to involve diverse partners in habitat data collection as different projects have different data requirements.

*How are data used to inform EFH designation? How do EFH outputs translate as management tools? What to do when different spatial analyses give different EFH designation results?*

The group stated that refining level 1 and 2 data collection is important for designating EFH. From these data sets, a variety of spatial modeling approaches, such as habitat suitability index models and generalized additive models, can be used to inform EFH delineation. Additionally, it is important to collect basic fish population distribution information, as several managed species have been observed expanding or shifting from their historic ranges. These range shifts may be associated with broader

global climate change effects and should continue to be monitored by fisheries managers for implications to EFH.

*How to deal with broad EFH designations?*

In regards to EFH consultations incorporating the uncertainty associated with species distributions, the group stated it was better to be overinclusive to account for the possibility of habitat use by a number of species. Broadly, there was agreement that protecting what has already been designated and maintaining current conservation areas is a high priority. In addition, broader designations are still effective if finer resolution mapping and more detailed characterization of habitat are conducted during the EFH consultation process.

*Are EFH designations effective for use in non-fishing consultations?*

The group recognized that improvements could be made to better collect nearshore data (i.e., from state partners) which can inform the creation of habitat conservation plans associated with energy development and exploration.

*What is the future for EFH data collection?*

EBFM approaches are seeing more utility in fisheries planning. Ecosystem models are increasingly able to handle direct inputs of habitat information. While these new models are still being developed for stock assessments, it is beneficial to continue and expand data collection programs that will support future ecosystem-based models.

## Potential regional future work

Participants were tasked with scoping ideas and next steps for their respective regions, including a list of potential actions, a rough sense of timing, and who might need to be involved. The intent was that these staff-level plans would be a starting point for action, and attendees would coordinate with others in their regions, including their councils. Workshop attendees recognized throughout the workshop and during this planning exercise that each region is unique and solutions will vary.

### New England and Mid-Atlantic Councils

Greater Atlantic region participants Jessica Coakley, Michelle Bachman, and Karen Greene discussed simpler/short-term and more intensive/longer-term strategies for coordination and communication, both among the councils and NOAA Fisheries, and with outside stakeholders involved in EFH consultations.

As discussed in the session on access to **EFH information**, both the councils and GARFO can better disseminate EFH information on their webpages.

- Add informational content about EFH designations and the consultation process to sites, engaging communications staff.
- Ensure the three websites are accurately linked to each other.
- For councils, post lists of types of projects we have asked GARFO to communicate with councils on, and related comment letters.
- For GARFO, include information about coordination with the councils on their site.

As a next step, work together to highlight some successes in terms of conservation outcomes, effective collaboration between councils and NOAA Fisheries, or both. This outreach could be regional as well as national and should engage the NOAA Fisheries Office of Science and Technology (S&T). GARFO is also planning an EFH user guide.

Related to the **habitat policies** session, councils can enhance existing policies, develop new ones, and better coordinate around shared conservation recommendations embedded in the policies.

- MAFMC developed a range of habitat policies in 2016; no major updates are planned.
- NEFMC is considering new habitat policies, which may expand upon the range of topics addressed by MAFMC.
- GARFO can make sure that staff are aware of and using the policies during EFH consultation work.

In terms of identifying shared objectives and longer-term planning, the northeast team discussed consolidating goals, objectives, policies, and habitat-related research priorities for the region in one place.

- Consider how to make these lists searchable/accessible.
- Identify shared priorities.
- Crosswalk to identify links between these and national/regional strategic plans.
- Consider whether this might step us toward a regional strategic plan for habitat activities.

- Consider forming a workgroup of council, GARFO, and NEFSC staff for this review and longer-term planning.

## **South Atlantic Council**

### ***Timeline for action***

- Sept 2019: Provided an update on the CCC HWG workshop during the Habitat Protection and Ecosystem Based Management Committee and South Atlantic Council meeting.
- Oct 2019: Will provide an update on the CCC HWG workshop during the October Habitat Protection and Ecosystem Based Management Advisory Panel meeting.
- Plan to send the final workshop report to the Habitat and Ecosystem Advisory Panel and Committee once prepared for November CCC meeting.
- April 2020: At the spring Habitat and Ecosystem Advisory Panel meeting, review the workshop report and identify potential opportunities for improvement of council response to non-fishing activities impacting EFH and enhanced council-RO coordination on EFH and habitat issues.
- June 2020: Review the Habitat and Ecosystem Advisory Panel recommendations on the workshop report and potential opportunities for improvement of council response to non-fishing activities impacting EFH and enhanced council-RO coordination on EFH and habitat issues.

### ***List of potential opportunities for improving coordination on EFH and habitat issues***

1. Refine council habitat and ecosystem page and FEP II dashboard and web services. Use of story maps and other technology to guide access to and use of information clarifying council's EFH designations, policies and conservation and management actions supported by the [South Atlantic FEP II Implementation Plan](#).
2. Refine communication between SERO/SEFSC and council/council staff on EFH consultations and information supporting them.
3. Review habitat science component of NOAA Fisheries Southeast Region Geographic Strategic Plan.
4. Habitat and Ecosystem Advisory Panel discuss long-term habitat goals as they relate to or are integrated into the FEP II Implementation Plan.
5. Habitat and Ecosystem Advisory Panel October 2019 Meeting Activities and guidance supporting refined habitat conservation and EBFM in the South Atlantic region.
  - a. NOAA Fisheries EBFM activities for the South Atlantic region: deliverables supporting the FEP II Two Year Roadmap, including the South Atlantic Ecosystem Status Report and South Atlantic Climate Vulnerability Analysis.
  - b. Update on Kitty Hawk wind project area research and development activities.
  - c. Draft environmental impact statement for the Florida Keys National Marine Sanctuary marine zoning and regulatory review.

- d. Council ecosystem considerations: prey supporting dolphin wahoo fisheries in the form of bullet and frigate mackerel as ecosystem component species to the Dolphin Wahoo Fishery Management Plan.
  - e. Update on the development of next generation Ecopath with Ecosim model.
  - f. Mapping/characterization of South Atlantic deepwater ecosystems: [DEEP SEARCH](#) 2019 expeditions on NOAA Ships *Ron Brown* and *Okeanos Explorer* in the South Atlantic.
  - g. Fishery-independent research in the South Atlantic region: update on the Southeast Reef Fish Survey.
  - h. Guidance on SAFMC Citizen Science Program research prioritization.
  - i. State Panel breakout session: [FEP II Roadmap](#) and state activities associated with climate change and extreme event planning. Potential future addendum to the council's climate policy statement.
  - j. State panel session: report creation using [Ecospecies](#) and SAFMC/Fish and Wildlife Research Institute web services.
5. Refine SAFMC/NOAA Fisheries EFH User Guide.

## **Caribbean Council**

The Caribbean Fishery Management Council (CFMC) works in close association with SERO with respect to all consultation projects regarding EFH, including both fishery and non-fishery related proposals. The CFMC is working with NOAA, academicians, consultants, NGOs, and stakeholders to develop ecosystem conceptual models for an EBFM-FEP. Broad consultation with stakeholders will benefit this process and will be an essential part of EBFM. Outreach and education efforts are underway to familiarize the public with local marine ecosystems and to help determine the non-fishing impacts to EFH.

An action plan is ongoing and based on the development of the ecosystem-based approach to fishery management that could improve the CFMC/NMFS collaborations regarding EFH consultation projects includes the following.

1. Definition and mapping of EFH distributions within the Caribbean US-EEZ.
  - a. Data mining of paper maps results in the georeferencing of useful habitat maps.
  - b. Development of story maps depicting the commercial reported landings is expected to guide future habitat research.
2. Continued collaboration with NOAA's Biogeography Group, Office of Ocean Exploration and Research, Coral Reef Conservation Program, and others for multibeam mapping in HAPCs within the US Caribbean EEZ, prioritizing the mesophotic reef zones that serve as seasonal spawning aggregation sites for a variety of federally managed commercially important fish and shellfish species and areas of high ecological value due to live coral resources.
3. Production of benthic habitat maps and biological characterizations of sessile-benthic (coral, sponge, algae, others), fish, and shellfish communities associated with HAPCs (species-habitat data) within the upper mesophotic depth range (30-50m).



4. Pilot studies using autonomous underwater vehicles and remotely operated vehicles to explore and characterize benthic habitats associated with prime fishery areas for deep (100-200m) snapper and grouper assemblages that are of high priority in the Puerto Rico fishery.
5. Multi-layered digital tools, including story maps, to facilitate analyses of potential impacts by fishery and non-fishery related projects upon EFH and HAPCs.
6. Production of a GIS digitized commercial fishery landings database for Puerto Rico and the US Virgin Islands, allowing temporal and spatial analyses of species landings through time for both jurisdictions.
7. On-going revision and improvements of the CFMC web page to provide user friendly access to EFH maps and species-habitat information.

### **Gulf of Mexico Council**

The Gulf of Mexico Fishery Management Council will continue working closely with partners at SERO and SEFSC as these relationships are imperative to achieving EFH in the Gulf of Mexico. In the short-term, a few tasks are either scheduled to begin shortly or are currently in progress.

- Currently, the Gulf Council, SERO, and SEFSC are collaborating on a new EFH amendment that will help define EFH policy goals within Gulf Council's fishery management plan (Initial draft to be presented to the council early 2020).
- The Gulf Council has and will continue to address the comments given by SERO regarding the Council's 2016 EFH 5-year review (currently ongoing).
- Identify any EFH designation changes defined in the EFH amendment that require updating based on recent 5-year EFH review (Fall of 2019).
- The Gulf Council is currently working to update portions of the website to make pertinent material informative for EFH consultation more readily available (Will be evaluated early 2020).

### **Pacific Council**

*Identifying priorities:* The Pacific Council's Habitat Committee is currently working with the region to identify a set of priority actions for council comment. At the same time, NOAA Fisheries West Coast Regional Office (WCRO) is developing an internal process to inform the Pacific Council of relevant habitat actions.

*Communicating data needs:* The Pacific Council is planning to develop a searchable database of research needs similar to that of the NPFMC.

*Communicating with the public:* The Pacific Council and WCRO are both making changes to their websites. The Pacific Council plans to enhance the habitat section with links EFH, West Coast Region EFH, etc. WCRO is transitioning its website to the National NOAA Fisheries website. The EFH information is being improved and reorganized to be more accessible.

*Clarifying habitat goals:* The Pacific Council will combine its existing general habitat goals into one document and post this to the new habitat page on our website. Eventually the Pacific Council would like to have goals associated with HAPCs (for example, no net loss of any particular habitat function).

The Habitat Committee would need to propose these goals to the Pacific Council with the intent of providing guidance to support NOAA Fisheries non-fishing consultations that cover HAPCs. That could be framed to the council as elaborating on our habitat goals to focus on HAPCs. The NOAA Fisheries Regional EFH team would need to develop guidelines for incorporating council general goals and position statements (and eventually HAPC goals) into consultation documents. They hope to do this by next spring.

*Position statements:* The Pacific Council's habitat correspondence contains many position statements that could be extracted and organized. This would be helpful to the Region in terms of developing EFH.

*Training on Pacific Council role:* NOAA Fisheries WCRO EFH team plans to roll the concept of the Pacific Council's role into its trainings for staff and action agencies.

*Cross-Region Coordination:* Partly due to the wave energy discussion at the meeting, the Pacific Council's Habitat Committee has invited the Responsible Offshore Development Alliance (see Session 5 summary) to present in November.

## **North Pacific Council**

### *Timeline for action*

- Oct 2019: Short report to the North Pacific Council on CCC HWG workshop in the October council meeting Executive Director's report.
- Nov 2019: Send final workshop report to Ecosystem Committee once prepared for the November CCC meeting.
- Jan/Feb 2020: Present briefing on the workshop, and potential opportunities for improvement to council-NOAA Fisheries coordination on EFH and habitat issues in Alaska, at the next Ecosystem Committee meeting on January 28, 2020. Ecosystem Committee can prioritize among actions, and task staff to work on any that are deemed important. The Council will review and approve the Committee's recommendations at the February North Pacific Council meeting.
- Apr 2020: Present staff work on any tasking at the April Ecosystem Committee meeting, in conjunction with the annual EFH review. If agreeable, schedule council agenda item to review e.g., a refreshed North Pacific Council-NOAA Fisheries habitat operating agreement.
- May 2020: submit an update on Alaska progress to be included as part of CCC HWG's annual report to the CCC.
- Subsequent: continue to work on other ideas and opportunities on an appropriate schedule.

### *List of potential opportunities for improving coordination on EFH and habitat issues in Alaska*

1. Update the North Pacific Council website to link to the NOAA Fisheries EFH website. As was pointed out at the meeting, NOAA Fisheries Alaska Regional Office (AKRO) has done a great job developing their EFH website, and while there is no need to duplicate that effort, the North Pacific Council should do a better job linking our habitat pages to the NOAA Fisheries site as well as to habitat goals that the council may have articulated.
2. Improve communication between NOAA Fisheries and North Pacific Council/Council staff about agency EFH consultations. A range of ideas could be considered here, including scheduling regular briefings among ourselves, having NOAA Fisheries copy council habitat staff on all EFH

consultation letters (and potentially including such letters in council mailings), including council staff in periodic check-in meetings with partner agencies (primarily BOEM and USACE), and providing a RO Habitat Conservation Division update slide in the NOAA Fisheries management report at each council meeting.

3. Involve the Ecosystem Committee more in annual EFH briefings to the North Pacific Council. Begin with a short briefing to the Ecosystem Committee (and the council?) about the process and frequency of EFH consultations occurring at NOAA Fisheries, to reacquaint the Committee with how the council may choose to engage. Distinguish between “may” and “shall” instruction in the MSA regarding salmon projects. Identify the degree to which the Committee should be involved.
4. Review the NOAA Fisheries Geographic Strategic Plan (GSP) with respect to habitat science. The GSPs are intended to formalize operating agreements between the FSCs and the ROs for each region, with council involvement acknowledged. These provide an opportunity to ensure that any council needs and concerns for habitat science are addressed.
5. Have the North Pacific Council articulate and adopt habitat goals. For this workshop, staff pulled together the disparate list of habitat goals that are explicitly in council document across the board, and implicit in the actions the council has taken in recent years. These could be reviewed by the Ecosystem Committee and the council, formally adopted, and listed transparently among the North Pacific Council’s management policies. They should distinguish global and project-specific goal types.
6. Develop North Pacific Council guidance of when to provide council comments on habitat concerns. Several examples were provided at the workshop of other councils that are articulating generic comments about specific activities that are likely to have an adverse impact on habitat, or the degree of impact threshold that necessitates council involvement or comment. Having a more transparent guideline would allow the council, its staff, and NOAA Fisheries to a better gauge of when a proposed project is likely to be one on which the council intends to comment. Could address types of activity or threshold for potential impacts as well as when in process council would prefer to engage (e.g., during planning or only permitting stages, etc.). The NOAA Fisheries ‘triage’ list for consultation could be a useful starting point.
7. Refresh the NOAA Fisheries-North Pacific Council agreement on EFH consultations. The council and NOAA Fisheries adopted their agreement for biannual consultation updates from NOAA Fisheries in 2012, and it is appropriate that the document be reconsidered at this time. The refresh should include any relevant opportunities of interest to the council from the above list (e.g., articulating habitat goals or policy positions related to when the council may choose to provide comment, etc.).
8. Discuss whether to reconstitute the Alaska Marine Ecosystem Forum (AMEF). A first step could be to conduct (update?) a survey of non-fishing activities occurring in federal waters off Alaska, and potential overlap with fishery concerns. Consider whether the State of Alaska (especially agencies outside of the Alaska Department of Fish and Game, Department of Environmental Conservation, and Department of Natural Resources) would be interested in participating in a reconstituted AMEF. Reconsider the memorandum of understanding for the AMEF, and what purpose it would serve relative to other coordination groups, especially with respect to workshop concern of being ready to rapidly mobilize to address new activities should they occur.

## **Western Pacific Council**

Western Pacific region representatives discussed potential improvements to habitat management, summarized into three categories: information/data, communication, and internal council changes. The details for proposed improvements, tools, and steps needed (including timeline) are provided below by these categories. Note that these improvements are only proposed and need to be vetted by the council and its advisory groups, in coordination with the Pacific Islands Regional Office.

### ***Information/data***

Western Pacific habitat data availability is poor, which limits the ability to designate EFH beyond the most basic levels. Data could be improved through the development and implementation of baseline surveys and additional habitat data collection. For the data that are available, providing easier access to managers and users would facilitate use and priority planning. The following actions are proposed to help improve data accessibility in the region.

- *Include habitat maps and shapefiles on the PacIOOS website.* The Pacific Integrated Ocean Observing System (PacIOOS) houses many data streams related to the Pacific Ocean and may be a suitable place to house habitat information for the region as well. The Western Pacific Council should meet with PacIOOS to request EFH maps and files be made available as a layer/tool on its site. A meeting can be held immediately though it is unknown what process PacIOOS uses to review and secure data layers for its site.
- *Improve information available on the Western Pacific Council websites.* Simpler tasks like including research priorities and maps on websites can be done quickly and immediately. Also, using optical character recognition in PDF documents would allow for FEP text to be searchable with little effort. The council will strive to ensure that EFH designations listed on the website are current and available. Other changes to improve the availability of information that clients look for directly, like changes to species or designations, are harder to find and older documents may need to include optical character recognition. The Western Pacific Council and NOAA Fisheries can meet immediately to develop a list of those documents or information that is needed but is harder to find, and make appropriate changes to its websites.

### ***Communication***

Communication within the region is key to understanding between the Western Pacific Council and NOAA Fisheries. The following steps could be taken in order to improve communication.

- *Review the EFH Regional Operating Agreement (ROA)* to ensure that roles and expectations are accurate and maintained. The ROA provides both the Western Pacific Council and NOAA Fisheries with an understanding of each organization's responsibilities. The ROA is reviewed annually so potential changes can be made within the next year. Potential changes to be discussed between the organizations could include requesting habitat presentations to the council annually on consultations, as well as assisting with a habitat/ecosystem module for the annual Stock Assessment and Fishery Evaluation reports.
- *NOAA Fisheries to provide the Western Pacific Council with briefings on the consultation process.* The consultation process is not well known outside of NMFS, so having a presentation to the council and/or its advisors will be beneficial in improving communication. The council and its advisors would have a better understanding of what happens during a consultation and what

could trigger the need for mitigation measures. Briefings to the council and its advisory groups can be scheduled at any time and requests will be made to NOAA Fisheries.

- *Developing council policies and/or position statements* would likely make communication of the Western Pacific Council's stance on habitat issues (both fishing and non-fishing impacts) more broadly available and clearer for other agencies to use in the consultation process. Developing a policy or position statement would likely start with the council's advisory groups and later approval by the council, and could take one to two years to complete.

### ***Internal council changes***

Within the current Western Pacific Council structure and processes, the following steps can be taken to improve coordination.

- *Council staff shadows a consultation with RO staff* to better understand the process of consultation from request to completion. Council staff receive requests from outside agencies for the council's assistance on interpretation and mitigation requirements. There is often a loss of institutional knowledge within the council as habitat coordinators are either shifted to other tasks or leave the council staff. Providing an opportunity for council staff to work closer on a consultation would allow for them to better understand how conclusions were reached, should there be questions. There would need to be agreement by the council and RO to add to staff workload, and it could be implemented immediately.
- *Use the Regional Ecosystem Advisory Committee (REAC) to pivot towards habitat.* The council's current advisory group for fishery ecosystems is being reimagined to better address EBFM. A pivot towards habitat can be included in this reimagining, including using the REAC for reviewing habitat goals, policies, and annual report modules. This task can be implemented within the next year after discussion with the council and staff on the direction of the REAC and EBFM.
- *Clarifying habitat goals, research priorities, etc.* FEPs include habitat in goals and objectives, but not explicitly. Research priorities also tend to be more fishery-based rather than exclusively habitat-based. The Western Pacific Council, through the REAC, may look to clarify FEP goals and objectives to include habitat, and may provide priorities for habitat-related research. This work would be done through the REAC at future meetings in the next one to two years.
- *Identifying the EFH designation approach (and prioritizing the review cycles)* would help the Western Pacific Council provide a better understanding of its intent in the designation of EFH both in the past and in the future. This is another work item that could be added to the council's advisory groups in the next one to two years.

### **Headquarters Offices of Habitat Conservation and Science & Technology**

The Office of Habitat Conservation (OHC) supported the development and execution of this workshop to build connections among regions and between council and RO staff. While the 2016 EFH Summit provided an opportunity for attendees to learn about examples of effective EFH implementation and build a framework, this workshop allowed participants to fill in the pieces by brainstorming, working in small groups, sharing and discussing ideas, and thoroughly comparing methods and technologies across regions. With workshop participants sufficiently energized to continue increasing the efficiency of EFH processes, OHC will continue to support the CCC HWG. Additionally:

- OHC is actively engaged in discussions with each RO on how to best incorporate workshop conclusions into a revision of official EFH guidance and council recommendations.
- OHC will support councils in establishing policy statements for activities that may trigger consultations, and in setting specific habitat goals linked to fishery outcomes, which can enhance NOAA Fisheries' conservation recommendations and help promote early EFH consultation coordination.
- OHC will support the development of regional action plans, as appropriate.
- OHC will explore opportunities to enhance capabilities of the [National EFH Mapper](#) with links to updated information in appropriate council web services.
- Tools and technology that can facilitate EFH information sharing and consultation processes can be discussed and shared on a national level, facilitated by headquarters.
- Outcomes and recommendations will be discussed with fishery science center representatives, and OHC will host a webinar for science centers to engage in discussion with the group on research-related topics in the context of management needs.
- OHC can play a role in coordinating council research priorities and linking priorities to NOAA Fisheries activities.
- OHC and S&T will share outcomes from this workshop with the NOAA Fisheries National Habitat Leadership Team and FSC Habitat Science representatives at their November 2019 meeting.
- Success stories (for example, regional products and presentations) will be shared around headquarters and the regions with the aid of OHC's communications team.
- NOAA Fisheries' websites could be better cross-linked with council habitat pages and web services and habitat and ecosystem tools, which could be facilitated at a headquarters level.

## Reflections and next steps

The workshop was an important opportunity for HWG members to identify potential work items for 2020. Next steps for the HWG could include the following items:

- Report to the CCC on progress towards implementing ideas generated at this workshop. A preliminary report can be provided at the November 2019 CCC meeting and a more thorough presentation of next steps will be provided in May 2020.
- Improve the content of councils' and NOAA Fisheries' EFH-related websites and communication practices.
- Review the [Habitat Assessment Improvement Plan 2](#) and determine if these habitat priorities are being included in regional planning activities, such as research plans and habitat-related initiatives at each council.
- Track progress on the ongoing revisions to NOAA Fisheries' EFH consultation guidance.
- Provide the National Habitat Leadership Team with this report for inclusion in the November 2019 meeting materials. If the Team discusses report contents, the HWG will welcome feedback and habitat science-related opportunities.

- Identify the best ways to directly engage with FSCs during future CCC HWG calls and in-person meetings.
- Continue to discuss the science and data needed to improve effectiveness of EFH designations, including the following:
  - Tool and model validation.
  - Learning from other regions' use of habitat data and integration with assessments.
  - Learning from other councils' or regions experiences related to specific habitat issues. For example, in part as a followup to the wind energy discussion held at the workshop, the Pacific Council has reached out to the Responsible Offshore Development Association to learn how wind energy issues have been addressed on the east coast and to prepare for similar activities in the Pacific.
  - Sharing architecture and communication tools.
  - Cooperate to acquire information related to needs identified in fishery management plans (through the most recent EFH 5-year reviews) and fishery ecosystem plans. Highlight habitat data needed to increase the levels of EFH information available. The working group will explore the potential for shared research priorities among councils, ROs, and FSCs.

## Appendix 1: Workshop Participants



### Councils

Michelle Bachman, NEFMC  
 Jessica Coakley, MAFMC  
 Joshua DeMello, WPFMC  
 Diana Evans, NPFMC  
 Jorge (Reni) Garcia, CFMC SSC  
 Jennifer Gilden, PFMC  
 Kerry Griffin, PFMC  
 Lisa Hollensead, GMFMC  
 Steve MacLean, MPFMC  
 Roger Pugliese, SAFMC, 2019 CCC HWG Chair

### NOAA Fisheries ROs

Anne Chung, PIRO  
 David Dale, SERO  
 Matt Eagleton, AKRO  
 Stuart Goldberg, PIRO  
 Karen Greene, GARFO  
 Ian Lundgren, PIRO/OHC  
 John Olson, AKRO  
 Korie Schaeffer, WCRO  
 John Stadler, WCRO

### NOAA Fisheries HQ

Heather Coleman, OHC  
 Emily Farr, OHC  
 Tauna Rankin, OHC

Margaret (Peg) Brady, S&T  
 Tony Marshak, S&T



## Appendix 2: Potential Approaches to Facilitate Council and Regional Office Collaboration on Non-Fishing Activities Impacting EFH

This appendix presents a broad range of approaches currently being implemented in various regions to facilitate collaboration on non-fishing activities that may adversely affect EFH. The approaches listed can be taken by councils, ROs, or both. The HWG expects that not all of the following items are appropriate for every region, but this appendix provides them as a reference when developing region-specific approaches to collaboration. We view this section as a “living” document that will be updated as new approaches are developed.

### ***Approaches to identify council areas of concern***

Improving communication between councils and ROs on areas of council concern (specific habitat types or non-fishing activities, e.g., offshore energy projects) would position the councils to meet their statutory authority to provide comments on federal and state actions that may adversely affect EFH (MSA 305(b)(3)). A coordinated approach will take advantage of expertise, promote consistency within conservation recommendations, and maintain consistency with council policies. Team approaches can lead to deeper fisheries engagement, as well as more robust analyses and conservation recommendations. Potential approaches include the following items.

- List of interests and topics of concern: These interests and topics may be associated with specific habitat types or non-fishing activities or represented in standing council policies. They are most helpful when transparent and on the web, available to applicants.
  - Council committees can suggest specific ideas in collaboration with advisors or other council stakeholders.
  - Stakeholder presentations and meeting sessions can allow partners to describe potential activities that help councils identify what upcoming key issues.
  - Background and education will be important on specific topics, and will require working with the right experts. Focus on opportunities to identify specific elements of projects that will be of most concern (on a council level or staff level), and identify nuances that really matter.
- Council policy statements: Ideally, council policy statements provide guidance for use by a council, NOAA Fisheries, and state and regional partners on the breadth of potential activities and standing council policy related to a habitat type or activity impacting EFH.
- Organization of issues needing habitat guidance: Annually develop a list of key issues on which a council (or advisors providing habitat guidance) should be briefed, which could include (but not limited to): ongoing research, potential projects, potential impacts, and consultations.
  - As new issues are identified by NOAA, council members, council staff, or regional advisors, the responsibility is on individuals to check if a project type that is new within a region requires consultation, especially if an issue will become more relevant over time.
  - Identify general criteria for things that the council would generally comment on (to apply to out-of-the-norm circumstances, i.e., precedent setting).

***Approaches for keeping councils informed about projects on which NOAA Fisheries is consulting that fall under council-stated habitat priority areas***

- Annual/periodic report from RO Habitat Conservation Divisions to councils.
  - Membership and participation on council habitat (or ecosystem) advisory panels or committees can provide an ongoing interaction.
  - Attendance at meetings preferred to allow questions and dialog.
- Briefings by RO Habitat Conservation Division and/or FSC staff (to councils, committees, advisory panels, etc.) on issues of stated council concern. These briefings could facilitate councils to provide formal responses, draft policies, or recommend research needs to address non-fishing activities impacting habitat.
- Copy council staff on formal NOAA Fisheries' responses to permits. For instance, the South Atlantic Fishery Management Council has a process where EFH consultation letters are provided by NOAA Fisheries with a spatial reference so they can be included and accessible through the South Atlantic Council's EFH Web Service.
- Use 5-year EFH reviews as an opportunity to update councils on specific recommendations, changes to non-fishing advice, etc.
- Encourage regular communication at the staff level about potential upcoming issues or actions to encourage early coordination on projects of stated council interest.
  - Effective communication relies on institutional knowledge of long-term council and NOAA Fisheries staff. Knowing who to reach out to is key.
  - A guide for who to talk with is especially needed for new staff.
- A new communication tool at NOAA Fisheries, [Environmental Consultation Organizer \(ECO\)](#), tracks projects in consultation (it replaces the old system, PCTS) and allows viewing of completed consultations. The public interface is now live.
  - ECO includes title and EFH impact information. It may also include spatial information and letters from NOAA Fisheries to action agencies.
  - Notification subscriptions are not currently built into the system.

***Approaches for councils to provide comments***

- Letters can be written by staff if a policy statement is already in place and a project falls within the range of issues/impacts considered in the policy statement.
  - Highlight council standing policy that could support or augment concerns already raised by NOAA Fisheries.
  - Councils generally focus on the big picture with their concerns. Allow NOAA Fisheries to draw on council standing policies to delve into details of specifying local conservation recommendations. Note the level of detail presented in standing policies may vary by region.

***Approaches that councils can use that NOAA Fisheries cannot (council added value)***

- Councils can write letters to governors, Coastal Zone Management offices (e.g., to extend a comment period, express concerns about process or other big-picture issues for a region).

- Councils can serve as a conduit for input from stakeholders on social and economic impacts.
- Councils provide the weight of fishing industries and state/regional partners about what does or does not matter to a council.

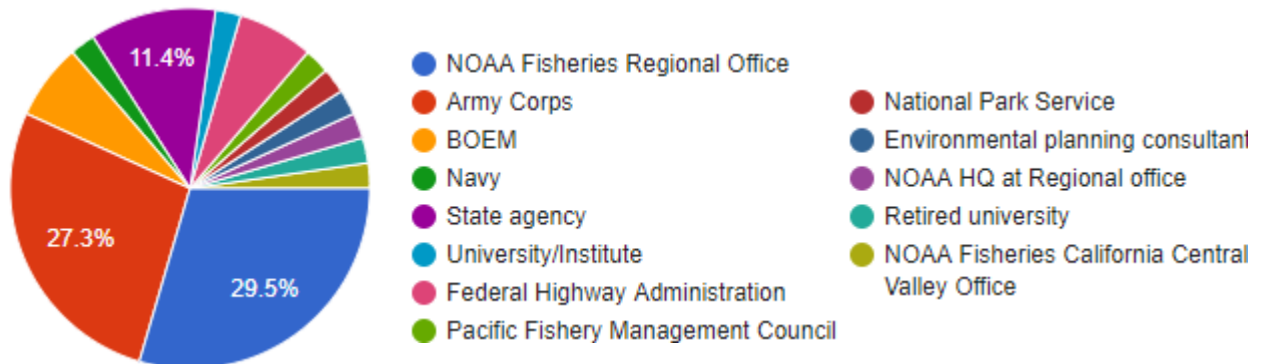
***Approaches to address constraints of timeliness***

- Early information sharing on projects is often very beneficial. The benefits are especially dependent on good working relationships between NOAA Fisheries, councils, and cross-council staff connections.
- Policy statements facilitate council-supported letters to be submitted even if the timing does not overlap with a council meeting.

## Appendix 3: Feedback Summary from Pre-Workshop Partner Survey

The CCC HWG solicited feedback from NOAA Fisheries personnel outside of the work group who have knowledge of EFH designation and consultation practices and issues, and well as employees of partner agencies who consult with NOAA Fisheries or have other EFH-related knowledge. A summary of respondents' feedback follows.

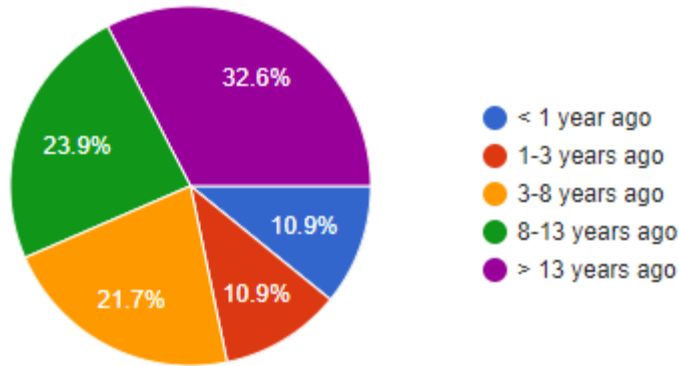
### Respondent affiliations:



### How have you been engaged with NOAA and/or Fishery Management Council(s) on EFH?

- Pursued multiple actions that have triggered multiple EFH consultations - 30 responses.
- Pursued an action that has triggered an EFH consultation - 18 responses.
- Involved in EFH designations or modifications - 15 responses.
- A former member of ASMFC Habitat panel, As a NCDMF representative I work in parallel and discuss projects with NMFS representatives.
- HCD-GARFO staff; involved with NE Council Habitat PDT; Mid-Atl FMAT.
- Supervise combined EFH/ESA consultations for NMFS.
- Oversaw many EFH consultations (from NOAA manager viewpoint).
- I am the aquatic farm lease coordinator for DNR and we have received EFH information in response to our agency notices of a proposed lease at times.
- CFMC SSC member and Chair; researcher on EFH.

### How long ago was your first interaction with EFH?



**Are you aware of whether the council(s) you work with have habitat conservation goals?**

- Yes - 31 responses.
- No - 14 responses.

**Would council articulation of habitat conservation goals help facilitate coordination in the EFH consultation process?**

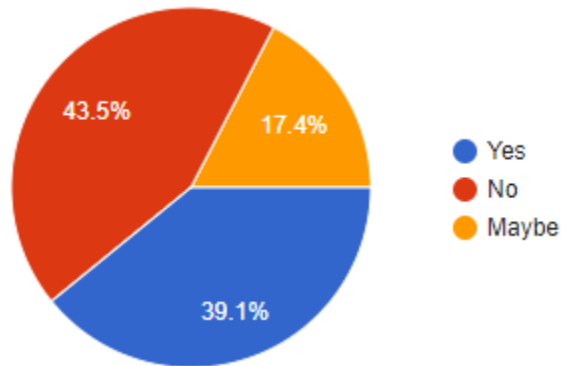
- Yes - 40 responses (more detailed answers below):
  - Coordination throughout our NEPA planning process (especially early on during NEPA scoping) would be recommended.
  - We would know what the priorities are and how we can best consider the effects of our actions on their overall goals.
  - We try to contact NOAA at the beginning of a process. So any early coordination is very helpful - especially on what priority habitats may be in our project area and what surveys we need to complete, if any.
  - If we built in stipulations or considerations into the proposed action it could potentially streamline EFH consultations. But coordination with councils rarely happens prior to NMFS involvement in my experience.
  - Such a definition could inform the mitigation process for regional areas of habitat.
  - Being able to cite a council document could be helpful, particularly with early coordination projects. However, if the Council does not also articulate the stated concern as projects move forward, citing the council document will likely lose some of its impact and become just another citation in a letter/discussion.
  - It would help to inform effects determinations on EFH and encourage avoidance and minimization in the pre-application stage.
  - Habitat conservation goals, as long as they were relatively simple/straightforward and meaningful, could help facilitate coordination and result in better assessments and conservation recommendations. However, they could potentially confuse the process since these goals are not currently part of the consultation process regulations. An action agency may not understand how to use/interpret the goals. However, if written and presented in a clear, coherent way, they could help to inform the effect determination and associated analysis.
  - We only hear from NMFS. The council goals would help us prioritize, and help us understand their point of view.
  - Any clarification of conservation goals would be helpful for facilitating consultation.
  - This would help justify to applicants the importance of the CR and justify the permit decision.
  - A clear statement of EFH consultation goals would improve knowledge and working together.

- They assist NOAA in providing EFH conservation recommendations.
- What would help is more review of impact projects by the council.
- This helps us shape our projects and reduce impacts or avoid sensitive habitats.
- The Pacific Council attempted to habitat conservation goals in its FMPs. However, a more narrow articulation of goals would have helped the most recent EFH review that the council conducted for groundfish.
- It is appropriate for NOAA to provide that information during the DNR Agency 20-day Notice.
- It may help focus and/or prioritize our work, and NMFS and council working together would likely improve conservation outcomes.
- Particularly if a) based on sound, regional (vs. activist agenda) driven data; and b) published independently (available w/o consultation) so that during project development those goals could be worked into project design. Many opportunities for collaborative improvements to habitat are likely lost when alternatively they could be beneficial byproducts of project design that would cost little or nothing to provide.
- Maybe designating certain zones that have priority species on habitats, so if a project is in an area that has EFH designated for all or almost all FMP-managed species, consulting agencies could look at which zone it is in and which species/habitat is a priority for that zone. It would at least help narrow down the consultation to the species that have been determined a priority for conservation, and then it would be helpful to have a go-to list of mitigation recommendations for those species. Obviously this would not be an end-all be all, but it would be a good place to start and provide some consistency across consulting parties.
- It would help when developing an EFH assessment; if the goals were explicitly listed on the website, we could include a deeper discussion and/or provide better description of how our action does/does not impact the habitat.
- Especially on large scale projects and in particular where they are concurrently being evaluated with needs for listed species and critical habitat as well and how that could benefit or impact sustainable fisheries and catch limits.
- What would help is more review of impact projects by the council.
- It is not clear how the council wishes to engage the RO on EFH consultations, and can commit to meeting regulatory deadlines.
- Short answer: yes. Long answer: No. We have not formally consulted the council for EFH consultation, instead consulting solely with NMFS and seeking technical assistance on EFH designations from the council. Per guidance from NMFS, we understand that council goals do not factor into how NMFS approaches consultation. This disconnect between the council designation and NMFS implementation creates a rift for those who much consult with NMFS.
- Probably not for me because I work primarily on the freshwater part of Pacific salmon EFH, where ESA consultation is king and EFH consultation usually adds little additional value.

**Examples of where a council's clear articulation of goals/priorities around habitat conservation has enabled this early coordination?**

- Regional conditions for the Corps NWP program.
- The council's habitat conservation goals were considered in our recent review of groundfish EFH.
- HAPCs in the Gulf of Mexico.
- Production of SAV as HAPC for Summer Flounder has been instrumental in development of general conditions to avoid these areas.
- MAFMC policies are always used to help action agencies better design projects.

**Are you aware of council policy statements on habitat management or impacts/concerns related to non-fishing activities?**



**If yes, do you use them in EFH consultations or other work?**

- Yes - 10 responses:
  - To assist with developing compatible state policies or fill gaps in federal policies.
  - For EFH consultations, NEPA documents, and white papers or reports.
  - I use them in general to promote habitat restoration.
  - Only in a such a way that I know what the end goal is. I don't often use specific policy goals.
  - I have used them in consultation, however, NMFS-HCD has informed me that the council provides no input for consultations. Thus, if I justify a determination using information from a FEP, I am informed that it is inaccurate. I think it would be most useful if NMFS-HCD would be able to articulate their needs for consultation prior to plans being formulated. Again, they have not been able to provide clear and consistent consultation without, what I would call, near complete plans. Because of this and a lack of general EFH assessment needs, it is difficult to plan projects to fully suit the needs of NMFS-HCD in an efficient manner.
- No - 4 responses.
- Sometimes.
- Rarely.
- The MAFMC has approved a number of specific policies regarding how to minimize the habitat impacts of offshore wind power (e.g., burial of transmission cables) that reinforce many of the priorities that NMFS/GARFO follows when submitting comments and making conservation recommendations for individual wind energy projects. They were developed in order to assist the Council when it drafts its own comments, but in reviewing recent comment letters to BOEM from both regional councils, I find no mention of these policies. Council comments are mostly directed at fishery impacts.

**If no, would they be useful to you? What would a useful policy statement look like?**

- Yes - 18 responses:
  - Any council or agency policy would bolster our permit decisions.
  - Something specific...what, where, when and why.
  - Should state the overarching goals and priorities. As well as a step by step approach that agencies should follow to complete EFH consultation.

- Understanding the intent for designation and the impact non-fishing activities have on EFH and ensuring that policy is adhered and the goals achieved, would reasonably be expected to greatly inform consultation.
- Articulation of concerns, proposed mitigations and guidance for specific activities is helpful. If these differ by species/EFH, it would help to note that.
- If they have a specific purpose with well-defined terms, clear expectations, a concise implementation process, and can be captured in a 3-page document, although 1-page would be even better.
- They would be useful in making effects determinations. Useful: easy to read, including flow charts or something similar.
- A statement pertaining to coastal development and the impact it has on nursery habitats would be of interest.
- A statement regarding the life stage and potential stressors that are of interest would help.
- It would be helpful to the regulated community to know what the Council's habitat protection goals are so that it is just not NMFS trying to protect habitat through its regulatory role.
- Specify it's intended use. Coordinate development of the statement with the Division of Habitat Conservation. Use the Council's ability to leverage action that the agency is unable to do.
- The RO and FMC coordinated by regional operational agreement, so policy statements that are mutually agreeable would likely be preempted by that agreement.
- A helpful statement would be: The Council is committed to reducing impacts to submerged aquatic vegetation due to it serving as habitat for juvenile cod. Please include in the EFH any impacts to SAV as a result of your action and ways that impact can be mitigated.
- "It is the policy of the Council to recognize that rural infrastructure improvements are important to the social and economic viability of many communities; and that working cooperatively with agencies tasked to provide those community benefits may synergies that also enhance and improve important fish habitats and/or local fisheries."
- It would be useful to periodically reinforce/restate those statements for less experienced project managers entering into the field.
- MAFMC wind energy policies are well articulated and would be useful if applied, but we wouldn't use them (not directly)...the councils would.
- Since I said maybe, I would like to think specific goals that we could utilize when engaging the regulated public would be helpful. Particularly if it is something we could cut and paste or reference when we are requesting and/or providing information to public.

**Within your region, do you coordinate with or across councils, regional offices, and/or fishery science centers in broader marine spatial planning processes, or other activities occurring in the region's offshore space in the context of habitat and EFH consultations?**

- Yes - 21 responses:
  - As a member of the Habitat AP, collaborate on policy revisions; participated in SE bottom mapping workshops.
  - Aquaculture, offshore energy.
  - The PFMC routinely writes letters to federal agencies (like BOEM) on impacts of offshore wind, oil & gas leases, wave energy, etc. (Writing letters is the only action the PFMC can take in terms of non-fishing activities). These letters are generated by the Habitat Committee.
  - Work in Pacific West Region of NPS - so work in waters off of WA, OR, CA, Hawaii, Guam, Saipan. Occasionally talk with different NOAA staff in different regions, but generally don't coordinate within a group of these individuals.



- I have worked on the action agency side of a programmatic EFH consultation, which included three different NMFS regions. I dealt with one NMFS point of contact, then she coordinated internally.
- We always work without regional office. For one project in my experience (NYNJ Harbor Deepening), we also worked with NEFMC to share data and with a Science Center to jointly collect and analyze data on winter flounder.
- I have asked for information on EFH in project areas. Also discussed conservation measures with regional office.
- EBFM initiatives.
- I participate in a team that is developing an interagency coral functional assessment credit/debit tool.
- I coordinate with both regional councils on EFH consultations regarding habitat impacts of fishing and development of EFH designations and other MSA EFH requirements of FMPs. I am also a member of the NMFS wind energy team, coordinating with NEFSC, state agencies, and the councils on habitat impact assessments.
- The Corps is regularly engage to participate in planning processes with NMFS and other stakeholders.
- Offshore wind is the prime example.
- O&G leasing and activity.
- I primarily deal with harbor construction, dredging, and dredged material placement/disposal.
- DNR includes NOAA in our agency notice for all proposed aquatic farm leases.
- Variable levels of coordination on aquaculture, energy, and oil/gas projects within marine habitats.
- We coordinate our offshore science goals and needs with multiple councils for renewable energy and marine minerals
- In a nutshell, the capability of primarily Alaska Native communities to safely access traditional areas for subsistence use of marine mammals and fish.
- Involved with the CFMC and SEFSC to develop an Ecosystem Plan.
- No - 19 responses.
- Maybe - 6 responses.

**Do you have ideas for how those groups might coordinate to share ideas/expertise, collaboratively track issues, or enhance existing processes, like EFH consultations?**

- More outreach to state and federal resource agencies that review permit applications or play a role in water dependent activities.
- Share list of resources present, and surveys that have been completed in particular areas, so that we can share research and resources.
- I don't know the internal coordination process, but it does seem to simplify the process to communicate with one primary person.
- All concerned federal and state groups involved in EFH consultations will be greatly benefited by availability of a master multi-layer biogeographic database that may facilitate the evaluation of proposed activities in the context of the existing marine biological resources and the prevailing physical and oceanographic characteristics of the region(s) in question.
- Create a cross discipline think tank workshop.
- Ask regional leadership to articulate a vision that includes development of a professional community made up of people from these various entities to identify the most pressing problems related to issues on your list, then empower/reward that community to work with each other to solve those

problems. Regional leaders must also follow-up on that vision with time and resources to support it, or no new or additional effort at coordination is likely to occur.

- One issue I have seen is that there isn't one agency responsible for tracking the effectiveness of conservation measures and mitigation (avoidance, minimization, and compensatory mitigation). The Corps tracks it for individual projects, but doesn't have the staff or the mandate to collate the information and assess the results. It would be nice if there were a single-point "clearinghouse" where this information could be stored (and displayed on GIS) and used to help inform future resource management decisions.
- Needs dedicated staff or contractors tasked with coordination.
- I try to base my assessments off of the information I have read in the FEPs, the Fisheries Regulations, and NOAA and the Council's websites. NMFS-HCD has repeatedly stated that these documents have errors and that they do not follow them in consultations. When asked what is needed to accurately assess impacts to EFH, they say that it is all project specific. I can appreciate this but they should have some basic, general level of expectations that they can share. They have also been asked if they could provide information on how they review impacts so that agencies could work backwards and find the basic information needed for review. Again, they said that they do not know until they look at a project's specifics. I find this very hard to believe. That a federal agency does not have a review plan in place for review according to law. EFH consultations could be enhanced if these groups could provide clear, concise, and consistent levels of information needed for EFH impact assessments. If this information already exists and/or if the regulations, FEPs and websites are in fact accurate, then EFH consultations could be enhanced by NMFS-HCD being made aware of this.
- It would be nice to have Councils more engaged with anadromous fish restoration projects which are clearly linked to offshore resources.
- develop working groups around certain regularly-encountered actions: dredging, aquaculture, etc. and develop a list of go-to mitigating measures to institute in these types of consultations, as well as just meeting regularly to keep up on the status of all these types of projects.

**What do you see as potential improvements in access to online EFH information of value to partners involved in the EFH consultation process?**

- More accurate Mapper; NMFS providing FULL EFH managed species lists, not partial lists.
- If reviewers referred to the online EFH resources, it could improve thoroughness and efficiency of commenting, ensure impacts are avoided.
- A clear precise website. Current website is too busy and hard to navigate.
- Publicly available maps are good now but can always be improved either in information provided or user accessibility/ease of use.
- Ability to upload a shape file of an impact area and see all pertinent EFH consultation species/ HAPC, conservation area information, etc. - right now the tool is useful but could be improved.
- The EFH mapper tool is useful but can be confusing.
- Provide very clear, simple, step-by-step instructions. Assuming that the reader doesn't have a background or understanding of the issues or process.
- Information on steps or thresholds that could make the consultation informal rather than formal (e.g., a list of mitigation measures). I work for BOEM, and we are currently working on a mapping tool that automates an EFH assessment to be used internally for our consultations with NMFS. Something like this may be very useful for other stakeholders, especially if they are less experienced in consultations.

- Our consultations with NMFS Regional office are excellent. Local staff are helpful and flexible to work with our agency challenges and needs. Early communication, including an explanation of our agency limitations and understanding of NMFS needs really helps.
- More comprehensive documentation of deep benthic habitats in the 200 - 500 m range and characterization of the biological communities at these sites.
- An EFH assessment template available online, similar to the expedited ESA informal consultation template.
- More communication between agencies is always helpful. More programmatic!
- Update your maps faster, continue to refine them based on new sci lit.
- Easier access to text descriptions - currently need to go species by species to get text or do a location search and then open each species text description.
- Easy access to a library of EFH impact analyses, avoidance and minimization measures, and case examples.
- Google earth overlays or easily obtainable GIS data.
- Easier and more streamlined system that includes all area under council jurisdiction.
- I think it would be invaluable to have a place where action agencies and the public could go to better understand the EFH process. The page should be clear and as concise as possible. It would be nice to have a tool where you could click on a spot on a map (e.g., project location) and know what MUS would be affected. Then, you could click on the plan for that MUS. Also, if there were a simple list of things people could incorporate for standard projects into their project design/project description to help minimize impacts to EFH that would be great. If you had a template for an EFH assessment, that would be great.
- Any specifics. At this point, if we put any project on a map, it looks like we can't build anything at all- there are time of year restrictions that overlap so that no work can get done, ever. I'm sure that's not actually the case, so if we knew what was of a real concern, we could focus our conservation measures.
- Efforts led by Michelle Bachman and the NEFMC Habitat Committee, in collaboration with Alaska Pacific University, to update a Fishing Effects Model and post model output on the NROC NE Ocean Portal will provide public access to a tool that tracks changes in habitat disturbance from fishing between seasons and years in time and space within the NE region.
- A tracking tool similar to the NMFS-PRD PCTS (soon to be updated) could be helpful. But our interactions with the St. Pete office are often responded to in reasonable time frames so the tracker would really function as a status check.
- I haven't done an assessment in a while but if the online tools could recommend CRs that if adopted resulted in final consultation, that might be handy.
- Update mapping tools in a thorough and timely manner. Eliminate HQ delays.
- More and better information online will improve consultation process so action agencies and consultants (public) can access data and provide analysis for EFH assessments. Spatial data assists the offshore planning process
- The NMFS-HCD has made it very clear that the FEP, Federal Register, NOAA and Council websites all have errors and that they do not utilize the information within them for consultations. Providing an accurate amount of information would be a start. However, I believe that these resources are not in error and that they were meant to be used in compliance with EFH consultations. It would be very helpful if the NMFS-HCD would use them and provide consulting parties with rational and pragmatic guidance for EFH impact assessments.
- Map portal doesn't always match written EFH descriptions. Open access to info regarding potential issues and the preferred way to mitigate or avoid impacts (like invasive species)
- The more specific and detailed it can be the better.

- Readily available/distilled information regarding federally managed fishery species' habitat utilization patterns and dependencies that are currently buried in FMPs/FEPS.
- Trainings on using the EFH mapper (using the mapper, intended uses); trainings on where to access EFH information (written in addition to mapped); trainings on the EFH consultation process; clear guidance on the EFH consultation process within each region; incorporating info into arcGIS online?
- Need to make it clear that the maps are only for life history stages where there is level 2 or higher data and EFH exists outside of the mapped area. Alaska Region EFH maps do not show EFH for nearshore waters because nearshore waters are used in early life history stages of managed species where there is insufficient information to map EFH. Those nearshore waters may in fact be EFH, but are not mapped as EFH for a managed species. That's a major problem with communicating to the public what is EFH for managed species.
- Development of user-friendly references and spatial platforms. As is, partners have to access multiple, voluminous FMP appendices, and the national EFH mapper has limited utility in helping to develop EFH/species lists.
- I strongly believe that the councils and ROs should be leveraging the FSC expertise and funding by matching investments in work that increases the levels of information for EFH designations. Better access to poor information is not the best approach IMO.
- This sounds like an IPaC sort of question. The IPaC-type format used by the USFWS is helpful for accessing information is helpful so long as it is more refined. If a project is in a specific area, and the habitat polygons cover three time zones, all that does is require in-person contact to ask what the relative risk is for that species in that location. Recognizing that broad-brush characterizations of 'risk polygons' has been used as a biologically and legally 'safe' way to do business in the grand scale, it does little to obviate the need to later meet in-person for consultations on the fine scale. If the online data could be much more fine-scale such (and of course more expensive to collect and maintain), it perhaps could reduce the need for in-person consultations.
- Improve the EFH Mapper!!! Nation-wide and local (I am in Alaska) It is NOT user-friendly.
- A template EFH assessment could be helpful. The Marine Mammal Protection Act's Letter of Authorization/Incidental Harassment Authorization application template is quite helpful for that process.
- I have not explored what we have online and need to spend more time looking into that first but would suggest having a workshop/survey with these partners to learn what we could do better for online resources. We had some resources for partners in the SER/GOM we shared via email because they often complained the EFH maps were so broad, guidance was vague, what actually occurs in a given project area was confusing for them. No sure if they would be good online resources but something like that might help if allowed.



## Mid-Atlantic Fishery Management Council

800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | [www.mafmc.org](http://www.mafmc.org)  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

# MEMORANDUM

**Date:** November 22, 2019  
**To:** Council  
**From:** Brandon Muffley, Staff  
**Subject:** EAFM Summer Flounder Conceptual Model – Meeting Materials

The Council will review and finalize the EAFM summer flounder conceptual model on Tuesday, December 10, 2019. Materials listed below are provided for Council consideration of this agenda item.

Note: please be sure to click on the link for item #2 below to find the interactive conceptual model and detailed information tables.

*Materials behind the tab:*

1. Staff briefing memo to Council
2. Summer flounder conceptual model website:  
[https://gdepiper.github.io/Summer\\_Flounder\\_Conceptual\\_Models/sfconsmod\\_riskfactors\\_subplots.html](https://gdepiper.github.io/Summer_Flounder_Conceptual_Models/sfconsmod_riskfactors_subplots.html)
3. September 19-20, 2019 EOP Committee meeting summary
4. November 13, 2019 EOP Committee meeting summary



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 22, 2019  
**To:** Council  
**From:** Brandon Muffley, Staff  
**Subject:** EAFM Summer Flounder Conceptual Model – Background Information and Meeting Goals

### Background:

Approved in 2016, the Council's Ecosystem Approach to Fisheries Management (EAFM) guidance document seeks to enhance the Council's species-specific management programs with more ecosystem science and broader ecosystem considerations and management policies. The guidance document identified the Council's ecosystem policies, goals, and recommendations for forage species, habitat, climate change, and ecosystem interactions. The guidance document also provided a structured framework process to incorporate ecosystem considerations in order to evaluate policy choices and trade-offs as they affect FMP species and the broader ecosystem.

The first step in the structured framework process includes identifying and prioritizing ecosystem interactions and risks through a comprehensive risk assessment. The Council completed a risk assessment in 2017 to help the Council decide where to focus limited resources to address priority ecosystem considerations in its science and management programs. Utilizing the results of the risk assessment, the Council agreed to pilot the development of a conceptual model that will consider key risk factors affecting summer flounder and its fisheries. Conceptual model development is the second step in the EAFM structured framework process and are built to ensure key relationships throughout the system are accounted for and help identify specific management questions to address the highest priority ecosystem factors.

In addition to the development of the pilot conceptual model, potential outcomes requested by the Council included information on data availability and needs, relative importance of risk factors and elements and 10 management questions that could be answered using the model and the available data. A diverse multi-disciplinary workgroup comprised of NEFSC, NOAA Fisheries, GARFO, SSC, ASMFC, state agencies, and Council members and staff was formed to work on and address the tasks identified by the Council. The workgroup met on six separate occasions throughout 2019 to identify key high-risk factors, important ecosystem elements associated with each risk factor, document available data sources, develop a conceptual model

visualization tool, and draft management questions relevant to summer flounder and the associated fisheries. The draft conceptual model and supporting information and documentation were provided to the Ecosystem and Ocean Planning (EOP) Committee for feedback and direction during two separate EOP Committee meetings<sup>1</sup>.

Building off the information developed during the conceptual model process, conducting a comprehensive management strategy evaluation (MSE) to address the Council's management questions and objectives would be the next, and third, step in the EAFM structured framework process. An MSE would evaluate different management approaches within an ecosystem context to determine if the outcomes associated with these different approaches achieve the management goals and objectives specified by the Council.

### Conceptual Models:

Conceptual models are a good communication and engagement tool and are becoming an increasing common approach used in a variety of systems across a number of Councils to address ecosystem considerations. As mentioned above, conceptual models can help answer particular management questions to ensure that key ecological, climate, habitat, fleet, social, and economic interactions are addressed. They also help organize information, highlight key relationships throughout the system and allow for managers, stakeholders and scientists to have a common understanding of the system. They also allow for scientists to evaluate data availability and gaps and identify possible analytical tools and approaches that could be developed to answer a particular management question. It should be noted that conceptual models are not used to conduct a stock assessment, develop fishery reference points or other comprehensive analyses. They are used to scope out the priority management questions and objectives, identify the key ecosystem components, data sources and potential tools. This conceptual model scoping process provides a very specific and strategic approach to help inform a comprehensive management strategy evaluation.

The conceptual model(s) developed by the workgroup can be found at the following link:

[https://gdepiper.github.io/Summer\\_Flounder\\_Conceptual\\_Models/sfconsmod\\_riskfactors\\_subplots.html](https://gdepiper.github.io/Summer_Flounder_Conceptual_Models/sfconsmod_riskfactors_subplots.html). The website provides some background on conceptual models and a description on how to understand and interpret the different conceptual models. There are a series of conceptual models available for review to help simplify model complexity, identify ecosystem linkages and build up to full model. The workgroup built the model by starting with the 12 summer flounder high-risk factors identified by the risk assessment. The workgroup then identified the critical ecosystem elements that drive or impact the risk factor dynamics. Three additional risk factors not identified as high risk were also included by the workgroup given their overall importance (i.e., Offshore Habitat, Stock Biomass, and Stock Assessment) to summer flounder stock or fleet dynamics. The EOP Committee added Offshore Wind as another risk factor to be considered and included in the conceptual model.

---

<sup>1</sup> The September 19-20, 2019 and November 13, 2019 EOP Committee meeting summaries are included as background material behind Tab 7 in the December 2019 Council meeting briefing book.

The “full model” includes all critical summer flounder ecosystem elements identified by the workgroup and EOP Committee and the associated linkages between these elements. These ecosystem elements are grouped by functional categories (e.g., management, summer flounder, habitat etc. See color code key for the model). There are also sub-models for each of the 16 high-risk factors with the associated ecosystem elements, including a sub-model that evaluates the linkages between the 16 different high-risk factors (see Figure 1 for a static version of the “Risk Elements Only” conceptual model). This is the first time the relationships and linkages between the elements developed in the risk assessment were considered. This is one of the benefits of the conceptual model process and can help advance the risk assessment in moving beyond evaluating individual risk factors but also their relationships and connectivity with other factors. In addition, all of the models are interactive (hover over an element with the pointer) and allows for a user to visualize and highlight the linkages associated with a specific ecosystem element.

Below the conceptual model visualizations are documentation tables for each of the 16 high-risk factors considered. These documentation tables provide details on each of the ecosystem elements included for each high-risk factor. A justification for inclusion of each element, any associated data or information source(s) and any spatial considerations associated with the element are included. These tables help document the decisions made by the workgroup, highlight data availability and science gaps and will be used to help build the analytical tools associated with a possible management strategy evaluation process. In addition, at the request of the EOP Committee, definitions for each of the 16 high-risk factors in terms of risk to the Council meeting its management objectives are included.

### Summer Flounder Management Questions:

Typically, conceptual models are developed and built to address a particular management question of interest to help ensure the appropriate management objectives and ecosystem factors are addressed. In this case, the Council did not specify a management question and instead tasked the workgroup to develop a comprehensive conceptual model first and then identify 10 management questions that could be addressed with the model and the available data. The EOP Committee reviewed the initial 10 draft management questions developed by the workgroup and identified seven potential topics of interest and tasked the workgroup to further develop and refine the questions focused on these topics. The EOP Committee then reviewed the revised questions and developed a final list of draft management questions for Council consideration<sup>2</sup>.

Below are the three draft management questions, in priority order, as recommended by the EOP Committee. Below each question is additional information on the Committee justification, the types of issues/outcomes that could be evaluated through an MSE, how the question ties into the broader ecosystem context and other Council priorities and initiatives.

- 1. How does utilizing recreational data sources at scales that may be inappropriate for the data source (e.g., MRIP data at the state/wave/mode level) affect management variability, uncertainty, and fishery performance? Evaluate the**

---

<sup>2</sup> Please see the November 13, 2019 EOP Committee meeting summary to see all seven management questions considered by the Committee and for additional detail, discussion and rationale for prioritizing each question.



**impact of that variability and uncertainty and its use in the current conservation equivalency process on recreational fishery outcomes.**

The EOP Committee selected this question as its top priority given the importance of the recreational summer flounder fishery, concerns about MRIP data and its use in management, and the potential application to other Council-managed fisheries. This question is not intended to conduct a review and evaluation of the MRIP program but to understand the management implications of the current approaches and utilization of MRIP data within the recreational management process. Evaluating this question can help the Council understand the potential biological and management implications associated with the limitations in the current utilization the MRIP data within the management system and offer alternative strategies to help achieve recreational management objectives.

While this question focuses on recreational data and management, there are also ecosystem aspects and considerations that can be evaluated. The Data Quality high-risk factor is linked to four other risk factors contained in the conceptual model including: Allocation, Regulatory Complexity, Management Control, and the Stock Assessment. Conducting a full evaluation of this question can provide insight and guidance on a number of biological, environmental, social, economic, and management objectives. A future analysis of this question can also pull together, and be informed by, other Council funded projects (i.e., F-based management for the recreational summer flounder fishery) and Monitoring Committee activities evaluating MRIP uncertainty.

**2. What are the mechanisms driving summer flounder distribution shift and/or population range expansion? What are the biological, management, and socioeconomic implications of these changes? Identify potential management and science strategies to help account for the impacts of these changes.**

The EOP Committee noted the number of challenges the Council is already facing because of the significant biological and management implications of shifting species distributions. Evaluating this question has the potential to provide the Council with an increased understanding of what's driving these population shifts, what those implications might be, and offer different tools and strategies to address these issues and meet its management objectives.

Summer flounder distribution shift was identified as a high-risk factor through the EAFM risk assessment and is the most linked ecosystem element within the conceptual model. Eleven other high-risk factors, across all aspects of the summer flounder fishery conceptual model ecosystem, are affected by summer flounder distribution shifts that have implications for not only summer flounder management but other managed fisheries and protected species as well.

**3. Evaluate the biological and economic benefits of minimizing discards and converting discards into landings in the recreational sector. Identify management strategies to effectively realize these benefits.**

The EOP Committee noted the various management challenges to address and reduce regulatory discards, particularly within the recreational sector summer flounder fishery where 90% of the recreational catch is released. This issue is also raised frequently by stakeholders and Advisory Panel members. The Committee noted the potential utility in linking this question and the EAFM process to the Councils typical recreational review and management process. For example, the November 2019 staff memo<sup>3</sup> regarding 2020 summer flounder recreational management measures recommends considering management strategies that depart from the current management approaches used under the conservation equivalency process in an effort to reduce recreational discards. Given the Councils potential interest in addressing recreational summer flounder discards in both the EAFM and traditional management process, this could present a unique opportunity to align these efforts.

Summer Flounder Discards was identified as a high-risk factor through the EAFM risk assessment and is linked to seven additional high-risk factors across issues of Management, Summer Flounder Stock, Science, Fishing Fleets, and Benefits derived from the resource.

The question below was identified as a priority for some members but the Committee did not reach consensus that this question should be considered within the group of high priority questions due to the limited scope of the question and its focus on the commercial sector only.

- **Are there alternative allocation schemes that would provide more flexibility in the commercial allocation strategy and allow fishermen to adapt to changing biological, economic, and social dynamics more effectively? Although this would apply for allocations across sectors as well, data limitations, modeling challenges, and mechanism complexities make this larger inter-sector question intractable, at this time. Identify and evaluate potential fleet efficiencies, economic and biological trade-offs and potential adjustments to baseline access to the summer flounder resource by the commercial sector through these alternate allocation schemes.**

### Meeting Goals:

At the December 2019 meeting, Council and NEFSC staff will provide an overview of the conceptual model development and step through the configuration and interpretation of the conceptual model (**note:** Council and NEFSC staff will be available Monday evening to demonstrate and discuss the conceptual model if Council members are interested). The Council will review and finalize all of the draft conceptual model products developed by the workgroup

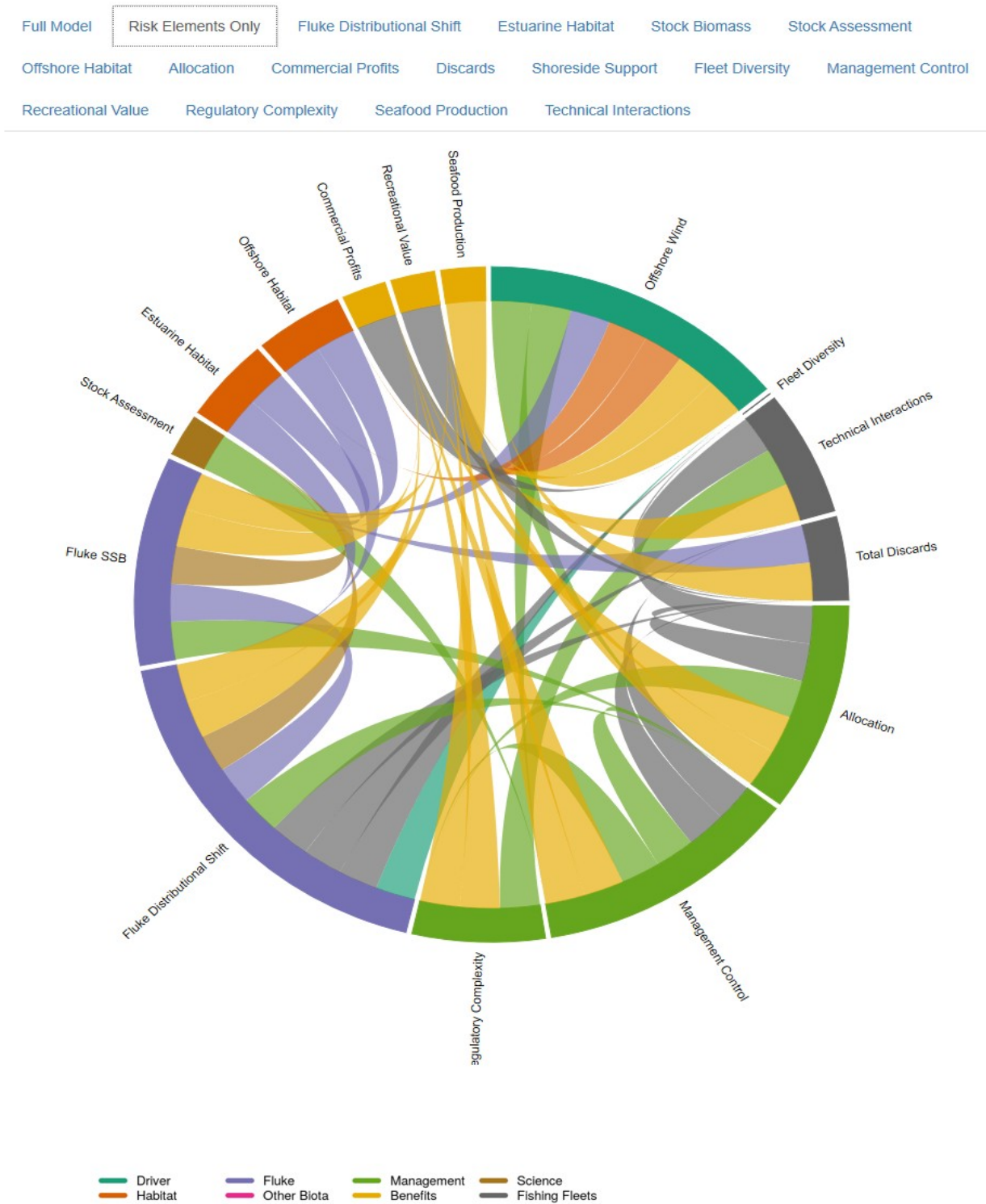
---

<sup>3</sup> For more information and details, the November 6, 2019 Staff Memo on 2020 Recreational Summer Flounder Management Measures can be found at: [http://www.mafmc.org/s/bsb\\_rec\\_memo2020.pdf](http://www.mafmc.org/s/bsb_rec_memo2020.pdf)

and EOP Committee, including: the draft conceptual models, detailed ecosystem element information and data, and management questions.

The Council will need to determine if continuing the EAFM structured framework process through the development of an MSE is appropriate. If so, the Council should select the summer flounder management question (from the list above) to be addressed through the MSE process. The MSE would then begin in 2020 with an iterative and stakeholder driven process. The MSE will provide the Council with strategies and alternatives that could be useful in achieving the goals and objectives outlined in the summer flounder management question selected.

**Figure 1.** EAFM summer flounder conceptual sub-model showing the linkages between the 16 different ecosystem high-risk factors identified by the Council’s Ecosystem and Ocean Planning Committee.





## **Ecosystem and Ocean Planning Committee**

### **Meeting Summary**

September 19 – 20, 2019

Baltimore, Maryland

**EOP Committee Member Attendees:** S. Michels, S. Lenox, W. Townsend, S. Gwin, S. Winslow (Committee Vice-Chair), G.W. Elliott (Committee Chair), M. Ruccio, P. deFur (Day 1), A. Nowalsky, M. Luisi (Council Chair)

**Additional Attendees:** S. Gaichas, G. DePiper (Day 1), B. Muffley, K. Dancy, E. Gilbert, J. Deem, G. DiDomenico, A. Applegate (webinar), M. Lapp (webinar)

The purpose of the meeting was for the Ecosystem and Ocean Planning (EOP) Committee to review and provide feedback on a draft summer flounder conceptual model, data availability and draft management questions that could be explored with the conceptual model. As part of the Council's Ecosystem Approach to Fisheries Management (EAFM) decision framework, the Council agreed to pilot the development of a summer flounder conceptual model that will consider the high priority risk factors affecting summer flounder and its fisheries. A technical workgroup has been working throughout 2019 to develop a draft conceptual model and document the presence/absence of all supporting data and pertinent information. Specific feedback and recommendations offered by the Committee to the workgroup for further consideration and development are noted in **bold**.

### **Overview of EAFM Structured Framework and Conceptual Model Utilization and Development**

The Committee chairman began with a review of meeting goals and a brief reminder as to the Council's commitment to the EAFM guidance document and how related to the development of a conceptual model. The Committee's focus for the meeting is to "groundtruth" the information provided by the technical workgroup and ensure these tools, products and process provide something meaningful to the Council.

A number of short presentations were provided by Council and NEFSC staff that gave an overview of the Council's EAFM structured framework process<sup>1</sup>, how that process was used in the development of a summer flounder conceptual model, example conceptual models and their potential uses and applicability, and the process undertaken by the technical workgroup to develop the summer flounder conceptual model and associated products.

The Committee discussed the utility of conceptual models generally and then how this conceptual model and associated information might be used in the future to conduct a management strategy evaluation (MSE), the next step in the EAFM structured framework process. A conceptual model can be utilized in a number of different ways including: a visual communication tool, provide for a common understanding of ecosystem and linkages, identify research needs and priorities, generate management and/or science questions, and can be organized in a way to begin building a more comprehensive and quantitative model for use in a MSE. As specified by the Council when they agreed to pilot the development of the model, the draft summer flounder conceptual model was constructed in a way to inform all of these potential applications.

As it pertains to informing the MSE, the summer flounder conceptual model could be used as a comprehensive checklist to scope out the key ecosystem factors when specifying what an analysis could address through an MSE. The MSE process gives the Council the ability to consider management strategies (e.g., alternative summer flounder allocation scenarios) outside the typical process and evaluate impacts across the ecosystem in order to achieve specified ecosystem, biological and/or management objectives. An MSE allows the Council to evaluate consequences and trade-offs to the summer flounder fishery as continued changes in the ecosystem occur (e.g., climate change, distribution shifts, changes in habitat and stock productivity). The Committee questioned whether, given the commitment of time and resources, an MSE was necessary or were other approaches appropriate. Given the scope of the conceptual model and the larger issues the management questions are likely to consider, the Committee agreed that an MSE is likely the best approach to appropriately address these challenges. The Committee discussion highlighted the importance of appropriately specifying the right management question(s) with clear objectives and uncertainty to help ensure an MSE is addressing different perspectives appropriately.

### **Discussion and Feedback on Conceptual Model Elements, Data Sources, and Visualization Tool**

The bulleted list below provides details on the various topics in which the Committee provided general comments, feedback and/or offered recommendations for workgroup consideration or development.

---

<sup>1</sup> For more details, see the Council's EAFM Guidance Document at: <http://www.mafmc.org/s/EAFM-Doc-Revised-2019-02-08-palr.pdf>

- The Committee supported the workgroup approach of building the conceptual model by starting with the high risk factors identified from the risk assessment and then identifying the key ecosystem elements that drive/affect each risk factor. This includes additional risk factors included in the conceptual model (offshore habitat, stock biomass and stock assessment) but not identified as high risk because of that factor’s overall importance and/or linkages throughout the system.
- Consider (in future) ways to textualize how the different elements are aligned – what it impacts and what impacts it – particularly since some elements were combined and include a variety of topics and considerations.
- **Consider including competition/other species interactions with summer flounder** – ex. dogfish and competition for space – as a potential ecosystem element under appropriate risk factor.
- **Review conceptual model visualization and detailed tables for consistency in terminology.** Some elements such distribution shift and change are used interchangeably between figure and tables and within the tables; while some other terminology issues may arise because elements may have been combined in the conceptual model to help “simplify” the visualization but may not be reflective of information in tables.
  - **Map out to ensure 1-to-1 relationships exist for all included elements in tables and conceptual model**
- The Committee discussed the need and/or ability to quantify relationships between elements (i.e., what relationships or linkages are more/less important or have more/less of an impact). Evaluating the importance or weight of any relationship will depend, and likely change, depending on the management question being considered. Therefore, this process would likely happen during the MSE process and the weighting/importance would be done based on the context of the questions/objectives being addressed with input from stakeholders, Council, staff etc. The current model assumes all relationships are equally important. Similarly, the MSE process would also be the appropriate time
- **The Committee discussed whether or not the Water diversion/flow (under estuarine habitat) should be included as an element and asked the workgroup to consider if appropriate.**
- **The Committee noted a separate glossary of definitions for the different elements and to how used by workgroup would be helpful (e.g. community vulnerability)**
- **Consider adding “regulations from other management entities” as an element under the Regulatory Complexity risk factor.** This element is captured under the Technical Interactions risk factor, but the Committee believes this element is also appropriate under Regulatory Complexity.
- **Consider the feasibility and utility of creating a conceptual model visualization that categorizes the current model elements by those that are identified as “within the Councils authority and management control” and those that are not – potentially**

using a simplified color scheme (e.g., black/white/grey). Categorizing and visualizing the elements this way might be informative to highlight how much/little is within the Councils control and maybe focus on those areas for future evaluation.

- **Add offshore wind/other ocean uses as an additional risk factor and build out the sub-model (i.e., identify ecosystem elements and associated data availability).** The Committee felt this risk factor (already included within the Risk Assessment) was a very important issue and should be included in the conceptual model given the likely differential impacts to commercial and recreational fisheries, habitat, science etc. While offshore wind/energy is likely to impact many Mid-Atlantic fisheries, the scope of this issue will be specific to the impacts and implications for summer flounder only. **The Committee also requested the workgroup develop a draft management question pertaining to this topic for consideration at their next meeting** (see additional information in section below). An advisor noted the website/email system “Tethys Blast” as a resource for wind and marine renewable energy information.
- **Consider pollution (e.g., pharmaceuticals and plastics) for inclusion as an element under estuarine habitat**
  - For additional information on this topic, a Committee member provided the following link: [https://www.usgs.gov/mission-areas/water-resources/science/emerging-contaminants?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/mission-areas/water-resources/science/emerging-contaminants?qt-science_center_objects=0#qt-science_center_objects)

After reviewing the details of the conceptual model and all of the supporting documents, the Committee discussed the benefits of the EAFM process and approach and the rationale for continued Council support and prioritization in future implementation plans (i.e., continuing with an MSE as the next step). The Committee noted the significant advancement and progress the Council has made to date to collect, consider and account for ecosystem considerations into the management process. Since this approach is not specifically constrained by the typical management process and requirements, it allows for a more comprehensive approach to address a complex issue that can't be answered through a more straightforward analysis. For example, an MSE could consider allocation alternatives that move away from simply taking allocation from one sector/state and give to another but evaluate system-wide alternatives that increase fleet efficiencies, minimize waste and increase management control. While the EAFM approach requires a lot of work with limited immediate tangible benefits, the Committee strongly believes the Council needs to see this process through to fully realize the return in its investment of time and resources.

### **Discussion and Feedback on Draft Management Questions**

---

The Committee then discussed the 10 draft management questions provided by the workgroup. The Committee decided, at this point, to further explore seven managements questions – five from the existing draft list and two new questions. The bullets below summarize the Committee



feedback on the existing questions and recommendations for new/additional questions to be developed by the workgroup for consideration at the next Committee meeting.

- Current draft question #1 regarding biological and management implications of summer flounder distribution shifts/expansion was supported by the Committee to keep with no specific recommendations for modification.
- Current draft question #4 regarding estuarine habitat and summer flounder stock productivity was supported by the Committee to keep. However, the Committee offered feedback on the scope and focus of the question for the workgroup to consider. **The Committee recommended making the question broader, allow for consideration of water quality parameters and rephrase the question to make more management focused or clearer as to how this question would be addressed through an MSE.**
- Current draft question #6 regarding approaches to minimize and convert discards into harvest within the recreational sector was supported by the Committee with no specific recommendations for modification.
- Current draft question #8 regarding the most influential elements impacting stock dynamics and management decisions was supported by the Committee with no specific recommendations for modification.
- Current draft question #9 (last question in list) regarding data limitations and the associated variability and uncertainty in utilizing the data was supported by the Committee. While this question would have considered all data and information, **the Committee is interested in focusing this question specifically on recreational data (i.e., MRIP) and implications and how it will aide in Council decisions. Specifically, evaluate the variability and uncertainty in the MRIP data to provide for a more optimized recreational fishery, evaluate the use of the data in the current conservation equivalency process, and simulations evaluating fishery performance and data appropriateness at the state, region and coastwide level.** The workgroup should review the existing question and modify as needed to address these recommendations.
- **The Committee requested the workgroup develop of a new management question focused on allocation.** While allocation is implicitly included or a component of the distribution shift question (question #1), the Committee felt a specific and focused question on allocation is needed. The current process and alternatives considered to date generally take at very binary approach (give/take quota from sector or state) but this process provides an opportunity to look at this issue more holistically. **The Committee supported the development of an allocation question that considers efficiencies to be gained that allows for increased opportunities without necessarily taking fish away from one sector/state etc. Additionally, the Committee was interested in understanding the potential bounds (i.e., min/max) of access to the resource by both sectors and what management strategies might include under either scenario.**

- As mentioned in the section above, **the Committee requested the workgroup also develop a management question focused on offshore wind/other ocean use implications for summer flounder. The Committee noted the following areas for consideration – affects of sound/noise on distribution, science/trawl survey impacts, habitat and productivity implications, and commercial and recreational fishery impacts.**
- The Committee commented that all of the draft questions developed by the workgroup were very relevant and interesting even though not all were recommended for further consideration and noted that certain aspects of some of these questions (i.e., stock recruitment and productivity) may still be addressed as part of the questions still being considered.

### **Next Steps**

---

The Committee then discussed the next steps. The workgroup will meet in mid-October to address the feedback and recommendations made by the Committee. The updated conceptual model, detailed data tables and draft management questions will then be presented to the Committee (and Advisory Panel) again in early/mid-November. At that meeting, the Committee will recommend if continued advancement of the EAFM process through development of an MSE should occur in 2020. If so, the Committee will recommend or prioritize the specific management question(s) to be addressed through an MSE. The full Council will review and finalize the conceptual model and all supporting documents, including the Committee recommendations, at the December 2019 meeting. The Committee noted the value of walking through and explaining the development and building of the different conceptual models and the relationship to the detailed tables. This will be important to do for the full Council and consideration on how to do efficiently at the Council meeting and opportunities to provide information ahead of the meeting will be important so members can all be prepared and understand the model and its utility.



## Ecosystem and Ocean Planning Committee

### Meeting Summary

November 13, 2019

**EOP Committee Member Attendees:** S. Michels, W. Townsend, G.W. Elliott (Committee Chair), M. Ruccio, P. deFur, A. Nowalsky, T. DiLernia, K. Wilke, S. Lenox

**Additional Attendees:** S. Gaichas, G. DePiper, B. Muffley, E. Keiley

The purpose of the webinar was for the Ecosystem and Ocean Planning (EOP) Committee to review and provide feedback on an updated draft summer flounder conceptual model, supporting data availability and draft management questions. The development of the summer flounder conceptual model is part of the Council's Ecosystem Approach to Fisheries Management (EAFM) decision framework and considers the high priority risk factors affecting summer flounder and its fisheries. The EOP Committee reviewed an earlier draft model in September 2019 and provided a number of recommendations for the technical workgroup to consider and address in a revised model. The EOP Committee reviewed these updates and developed recommendations for full Council consideration at the December 2019 Council meeting.

### **Review of EOP Committee Recommendations and Conceptual Model Workgroup Activities**

---

The summer flounder conceptual model workgroup met on October 21, 2019 to discuss and address the various recommendations the Committee provided on the initial draft conceptual model and the associated supporting information and documents<sup>1</sup>. Staff provided an overview of the workgroup response and work conducted to incorporate and answer all of the Committee tasks and recommendations. These tasks and recommendations covered topics such as adding/dropping various ecosystem elements included in the model, standardizing terminology in model and tables, developing a definitions page, and ensuring 1:1 relationships exist between the model and tables for all ecosystem elements. Overall, the Committee thought the workgroup did a great job and supported the approach, justification, and work completed by the workgroup. Two areas the Committee, with support from the workgroup, was interested in continuing to further develop and evaluate in the future were pollution

---

<sup>1</sup> See the September 19-20, 2019 EOP Committee meeting summary, found behind Tab 7 of the December 2019 Briefing Book for all of the Committee recommendations provided to the workgroup on the initial draft conceptual model.

impacts (e.g., microplastics and emerging contaminants) to summer flounder stock dynamics and the development of an alternative conceptual model visualization tool that categorizes ecosystem elements by those elements that are within and those that are outside Council authority and management control.

### **Review and Discussion on Updates to Conceptual Model and Data Element Tables**

---

Staff then presented updates to the conceptual model and supporting data tables as requested by the Committee. Specifically, the Committee tasked the workgroup with adding Offshore Wind as an additional risk factor in the model and identify the key ecosystem elements and supporting information. It should be noted, the scope of offshore wind is specific to the impacts and implications to summer flounder and its fisheries only. The workgroup identified 10 different ecosystem elements covering biological, socioeconomic, and management factors that could be impacted by offshore wind development. These elements and the associated relationships and linkages were then incorporated into the conceptual model. The Committee reviewed the these Offshore Wind products developed by the workgroup and had no suggested edits or modifications and agreed to their inclusion in the model and supporting documentation.

### **Review, Discussion, and Prioritization of Updated Draft Management Questions**

---

At the September meeting, the Committee reviewed the initial 10 draft management questions developed by the summer flounder conceptual model workgroup that could be explored with the conceptual model. The Committee tasked the workgroup with either re-scoping individual questions or developing new questions to address seven different topics of interest. Three original questions were retained without change by the Committee and four modified and/or new questions were developed by the workgroup. Staff provided an overview of the workgroup's justification, rationale, and intent of the re-scoped and new questions. After a lengthy discussion on all seven questions, the Committee ultimately agreed to prioritize three management questions for Council consideration. Of the remaining four questions, one was identified by some members of the Committee as a priority and the other three questions were not recommended by the Committee as a priority. Below is the prioritized list of the top three management questions, followed by Committee rationale for prioritizing and potential products and ecosystem considerations for each question.

- 1. How does utilizing recreational data sources at scales that may be inappropriate for the data source (e.g., MRIP data at the state/wave/mode level) affect management variability, uncertainty, and fishery performance? Evaluate the impact of that variability and uncertainty and its use in the current conservation equivalency process on recreational fishery outcomes.**

- Rationale: the Committee was split between this question and question #2 below as the top priority, but ultimately reached consensus to make this the top priority. Given the importance of the recreational summer flounder fishery, concerns about MRIP data and its use in management, and the potential

application to other Council-managed fisheries were some of the reasons the Committee decided to make this question the top priority. However, it's important to note the focus of this question is not to conduct a review and evaluation of the MRIP program but to understand the management implications of the current approaches and utilization of MRIP data within the recreational management process.

While this question focuses on recreational data and management, there are also a number of ecosystem aspects and considerations that can be evaluated, a value of the conceptual model and goal of the EAFM approach. Data quality is linked to four high risk factors contained in the conceptual model including Allocation, Regulatory Complexity, Management Control, and the Stock Assessment. Conducting a full evaluation of this question can provide insight and guidance on a number of biological, environmental, social, economic, and management objectives.

**2. What are the mechanisms driving summer flounder distribution shift and/or population range expansion? What are the biological, management, and socioeconomic implications of these changes? Identify potential management and science strategies to help account for the impacts of these changes.**

- Rationale: this question very closely followed the top priority question above. The Committee noted the number of challenges the Council is already facing because of the significant biological and management implications of shifting species distributions. Evaluating this question has the potential to provide the Council with an increased understanding of what's driving these population shifts, what those implications might be, and offer different tools and strategies to address these issues and meet its management objectives.

Summer flounder distribution shift was identified as a high-risk factor through the EAFM risk assessment and is the most linked ecosystem element within the conceptual model. Eleven of the 16 other high-risk factors, across all aspects of the summer flounder fishery conceptual model ecosystem, are affected by summer flounder distribution shifts that have implications for not only summer flounder management but other managed fisheries and protected species as well (see the conceptual model and associated tables for a complete list of all high-risk factors affected by distribution shifts).

**3. Evaluate the biological and economic benefits of minimizing discards and converting discards into landings in the recreational sector. Identify management strategies to effectively realize these benefits.**

- Rationale: assessing the various management challenges to address and reduce regulatory discards, particularly within the recreational sector summer flounder

fishery where 90% of the recreational catch is released, is a high priority for the Council. This issue is also raised frequently by stakeholders and Advisory Panel members. The Committee noted the potential utility in linking this question and the EAFM process to the Councils typical recreational review and management process. The November 2019 staff memo<sup>2</sup> regarding 2020 summer flounder recreational management measures recommends considering management strategies that depart from the current management approaches used under the conservation equivalency process in an effort to reduce recreational discards (Note: the staff memo also highlights the challenges and potential management implications of utilizing the MRIP data at fine scales (management question #1 above) and potential implications for increasing discards). Given the Councils consideration of addressing recreational summer flounder discards in the EAFM and traditional management process, this could present a unique opportunity to align these efforts. However, addressing this question through the EAFM and management strategy process would not provide management options and considerations for the 2020 fishing season.

Summer Flounder Discards was identified as a high-risk factor through the EAFM risk assessment and is linked to 7 additional high-risk factors across issues of Management, Summer Flounder Stock, Science, Fishing Fleets, and Benefits derived from the resource.

The question below was identified as a priority for some Committee members but the Committee did not reach consensus that this question should be considered within the group of high priority questions.

- **Are there alternative allocation schemes that would provide more flexibility in the commercial allocation strategy and allow fishermen to adapt to changing biological, economic, and social dynamics more effectively? Although this would apply for allocations across sectors as well, data limitations, modeling challenges, and mechanism complexities make this larger inter-sector question intractable, at this time. Identify and evaluate potential fleet efficiencies, economic and biological trade-offs and potential adjustments to baseline access to the summer flounder resource by the commercial sector through these alternate allocation schemes.**
  - Rationale: the Committee was interested in developing a question that considered allocation strategies for both the recreational and commercial sectors and evaluated minimum access scenarios for each sector as well. However, the conceptual model workgroup felt that minimum access scenarios for each fleet would be too variable and uncertain to define and, at this time, there was only enough information on the commercial sector to fully investigate

---

<sup>2</sup> For more information and details, the November 6, 2019 Staff Memo on 2020 Recreational Summer Flounder Management Measures can be found at: [http://www.mafmc.org/s/bsb\\_rec\\_memo2020.pdf](http://www.mafmc.org/s/bsb_rec_memo2020.pdf)

allocation strategies. Since the question developed by the workgroup could not address all areas of interest to the Committee, the question was not considered as high a priority. However, some members of the Committee felt there was still value in considering this question and the potential outcomes due to recent Council actions to consider allocations changes to four Council-managed species.

Allocation was identified a high-risk factor through the EAFM risk assessment and is linked to 9 additional high-risk factors across issues of Management, Summer Flounder Stock, Fishing Fleets, Offshore Wind, and Benefits derived from the resource.

The questions below were considered by the Committee but were not identified as a priority and not listed in priority order. While these issues are important to the Council, the Committee felt these were a lower priority, might not be as well suited for a management strategy process, or might be addressed through other on-going activities and/or technical groups.

- **Is the availability and quality of habitat a limiting factor for summer flounder stock productivity? Evaluate changes in critical habitat (i.e., quality, quantity, spatial extent and overlap) across summer flounder life stages, identify habitat thresholds and the implications for stock productivity. Develop potential management goals and strategies to address summer flounder habitat change and identify actionable outcomes for Council consideration.**
- **What are the most influential elements that impact stock dynamics (i.e., recruitment, distribution, SSB, growth etc.) and management decisions? Identify data gaps for those elements and develop a research planning process to address these gaps.**
- **Offshore wind construction and operation is likely to impact the ecological and socioeconomic environment for summer flounder and its fisheries. What are the key drivers of recreational and commercial fleet dynamics under different scenarios of opportunity and access level to offshore wind lease areas? Evaluate the changes to and potential trade-offs between sector fleet dynamics and evaluate the biological implications (e.g., spawning stock biomass, recruitment) of these fleet dynamic scenarios. Determine and evaluate fishery management options to address these sector specific implications and trade-offs.**

The Committee also noted, while there was significant public interest in prior EAFM products (i.e., risk assessment), there was minimal public input and participation in the conceptual model development process and in attendance at the two EOP Committee meetings. Therefore, the conclusions and recommendations offered reflect Committee decisions with minimal stakeholder input. However, it should be noted that the management strategy evaluation (MSE) development, the next step in the EAFM process, is expected to provide for explicit stakeholder engagement with the exact specifications to be defined by the Council.

As discussed at length during the September meeting, the Committee reiterated its support for the continued implementation and advancement of the EAFM structured framework process through the development of an MSE that would begin in 2020.

### **Next Steps**

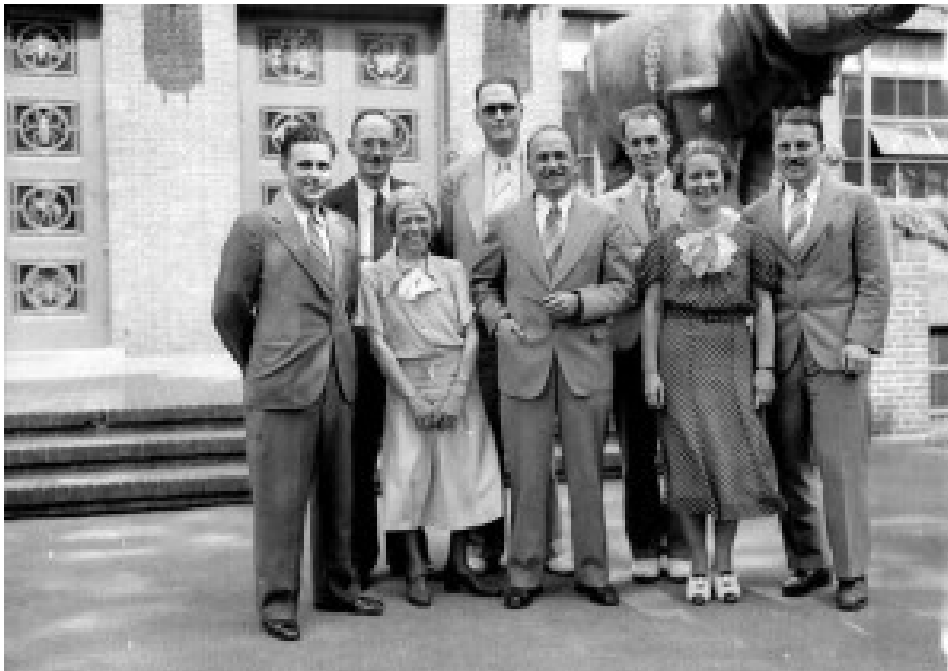
---

The final draft conceptual model, supporting data availability tables, management questions, and Committee meeting summaries and recommendations will be provided to the full Council prior to the December 2019 Council meeting. The Council will review and finalize the full conceptual model and determine if continuing the EAFM process through the development of an MSE is appropriate. If so, the Council will select the management question to be addressed through the MSE process. The MSE would then begin in 2020 as an iterative and stakeholder driven process. The MSE will provide the Council with strategies that could be useful in achieving the goals and objectives outlined in the management question selected.



# The Oscar E. Sette Award for Outstanding Marine Fishery Biologist

The O.E. Sette award for general excellence is given annually by the Marine Fisheries Section of the American Fisheries Society. Oscar Elton Sette (1900-1972) was a pioneer in integrating fisheries, oceanography, and meteorology to understand the dynamic structure of the equatorial Pacific Ocean and the importance of upwelling and frontal structures on tuna, sardines and other species. The NOAA research ship Oscar Elton Sette (<http://www.oma.noaa.gov/learn/marine-operations/ships/oscar-elton-sette>) stationed in Honolulu, is named in his honor.



Oscar Sette (middle front) with NAFO co-workers

Sette was born on March 29, 1900. He was 18 when he began his scientific career, counting albacore on the docks of Monterey for William F. Thompson (1888-1965), then-director of the California State Fisheries Laboratory in San Pedro. After a stint in the U.S. Army during World War I, and a degree at Stanford, Sette went to work for Thompson. He incorporated increasing amount of statistical data into his research, leading to a position with the U.S. Bureau of Fisheries as Chief of the North Atlantic Fisheries Investigations in 1928. The Bureau transferred him back to California in 1937, to head a new sardine research program. His sardine program was adopted by the California Cooperative Oceanic Fisheries Investigation (CalCOFI).

Congress allocated funds in 1947 to build a new large laboratory in Honolulu. Sette was appointed director and made chief of the Pacific Oceanic Fishery Investigations (POFI) in 1949. With three new research vessels, Sette's team produced a large number of publications on ocean conditions, including the influential "Progress in Pacific Oceanic Fishery Investigations, 1950-53." Sette was one of the founding members of the American

Institute of Fishery Research Biologists (<http://www.aifrb.org/founding-fellow-oscar-elton-sette/>). The Department of the Interior awarded him its highest service honor upon his retirement in 1961. He died in Los Altos, California, on July 25, 1972.

Sette is remembered for his remarkable scientific career, but also for his unassuming demeanor, enormous tact, and administrative ability. Friends described him as a life-long scholar, with an enthusiasm for teaching.

The basic criterion for identifying recipients of the award is sustained excellence in marine fishery biology through research, teaching, administration, or a combination of the three. MFS adopted the following guidelines:

- North American residents are the preferred recipients, but the award may be given to any suitable candidate.
- Membership in the American Fisheries Society is a positive attribute but is not required. AFS membership could tip the balance between otherwise equally-deserving candidates.
- Living recipients are preferred, but the award may be given posthumously.
- The Committee considers not only candidates who, by virtue of their position and personality, are widely known, but may also have labored quietly and are less well-known, but who have made sustained and important contributions to marine fishery biology.
- Candidates should be clearly identified with marine fishery science, even though there may well be crossover between marine and freshwater environments. Contributions to any discipline within the broad spectrum of activities in marine fisheries biology should be considered appropriate for candidates, including systematics, physiology, and ecology.

#### **Present and Former Recipients of the Oscar Elton Sette Award:**

2017 Tim Essington, University of Washington, Seattle, Washington, USA

2016 Ellen Pikitch, Stony Brook University, Stony Brook, New York, USA

2015 David Conover, Stony Brook University, Stony Brook, New York, USA

2014 Mary Fabrizio, College of William and Mary, Virginia Institute of Marine Science, Gloucester Point, Virginia, USA

2013 C. Phillip Goodyear

2012 Andre Punt, University of Washington, Seattle, Washington, USA

2011 Brian J. Rothschild, University of Massachusetts, Dartmouth

2010 Michael H. Prager

2009 Bernard A. Megrey, NOAA/NMFS, Alaska Fisheries Science Center

2008 Kevin M. Bailey  
2007 Robert Francis, University of Washington  
2006 Kenneth Sherman, NOAA Fisheries Service, Narragansett, RI  
2005 Richard Beamish  
2004 Kenneth Able  
2003 Michael P. Sissenwine  
2002 William Richards  
2001 Daniel Pauly  
2000 Edmund S. Hobson  
1999 Austin B. Williams  
1998 Edward D. Houde  
1997 William E. Ricker  
1996 William (Bill) C. Leggett, Queens University, Kingston, Ontario  
1995 William G. Pearcy  
1994 Saul B. Saila  
1993 D.E. (Curly) Wohlschlag  
1992 Douglas Chapman  
1991 Lloyd Dickie

Source: <https://mfs.fisheries.org/sette>



White Paper on the Membership Review of the  
Mid-Atlantic Fishery Management Council's  
Scientific and Statistical Committee

December 2019

## Introduction

---

The Magnuson-Stevens Act (MSA) requires each Council to establish, maintain, and appoint members of the Scientific and Statistical Committee (SSC), and membership shall be comprised of “Federal employees, State employees, academicians, or independent experts and shall have strong scientific or technical credentials and experience.” The Mid-Atlantic Fishery Management Council (Council) Statement of Organizational Practices and Procedures (SOPPs) generally follow the language contained in the MSA but also specifies membership credentials and experience in “biological, statistical, economical, social, and other relevant disciplines” while striving to achieve balance in the home base and expertise of the membership (see Appendix 1 for entire SOPPs pertaining to SSC membership).

The Council SOPPs indicate the SSC may have up to 20 members, with the ability for additional membership for an interim period or special appointment. In March 2019, the Council re-appointed 16 existing members of the SSC to another 3-year term, leaving four vacancies on the SSC. The Council agreed to delay adding new members to the SSC and tasked staff with developing a white paper to evaluate SSC membership, the future needs of the Council, and the expertise necessary to address those needs. This evaluation considers and seeks to align new SSC membership with the Council’s 2020-2024 Strategic Plan, the 5-year Research Priorities, and any other Council guidance documents or relevant issues. In addition, the evaluation includes a review of SSC membership affiliation and expertise across all eight council SSCs to compare approaches and help identify similarities and differences across the country. The SSC discussed this topic at their September 2019 meeting and their feedback and input has been incorporated into the white paper.

The Council will review the white paper and identify membership needs and areas of expertise at the December 2019 meeting. Nominations for new members that fit the needs and expertise identified by the Council will be solicited in early 2020. The Council will then review and approve new membership at the February 2020 meeting and new members would then join the SSC in March 2020.

## SSC Membership Across Regional Councils

---

The composition, structure and expertise of the SSC can be quite varied across the eight regional Councils. This is not surprising, given SSC (and Council) membership is typically aligned with each region’s specific needs and goals of their managed fisheries, constituents, and ecosystem and habitat dynamics. Membership primarily falls into three affiliations – state government, federal government or academia (Table 1). Some SSCs also have members affiliated with not-for-profit or NGO’s, consulting companies, or fishing industry participants. In addition, some council SOPPs specify the number of state and federal members and their representation. For example, the Pacific Fishery Management Council SOPPs specify the SSC membership will be comprised of four state fishery management agency representatives (i.e., Idaho, California, Washington, and Oregon), four NMFS representatives (2 from the Northwest Science Center and 2 from the Southwest Science Center), one West Coast tribal agency, and the remaining seats filled by “at-large” representatives. Generally, government employees (federal and state) tend to comprise the majority of SSC membership across all the Councils, and the Mid-Atlantic and

Caribbean are the only SSCs without a state agency representative. The Mid-Atlantic SSC membership is primarily comprised of academicians (75% of membership), the highest proportion among all SSCs, but in line with the Gulf and New England Council membership.

SSC membership by specialty or expertise tends to be much broader in order to address the varied scientific issues and responsibilities the SSC is tasked with in assisting their respective Council (Table 2). Given the significant focus of the SSC in making acceptable biological catch (ABC) recommendations and their role in reviewing stock assessment information, there tends to be a concentration of membership expertise in stock assessment science and biostatistics. Most council SOPPs, including the Mid-Atlantic, are very general when identifying membership expertise provided the membership is multidisciplinary and includes biological and social science members who are knowledgeable about the managed fisheries. However, some councils specify the number of members by expertise. For example, the New England Fishery Management Council SOPPs requires that nine members have stock assessment expertise, four be experts in fisheries ecology, and four should be experts in social sciences related to fisheries management. Members with a specialized expertise are utilized on west coast SSCs but are currently not found on any Atlantic coast SSC. Mid-Atlantic SSC expertise is primarily concentrated in fisheries biology and ecology, a very diverse science field, and followed by stock assessment expertise. This is consistent with other SSC membership expertise where one of these two areas of expertise make up the highest concentration of members. The Mid-Atlantic SSC is tied with the Caribbean SSC with the fewest social science members (two) and has the lowest concentration of social science membership of any SSC, comprising 12.5% of total membership.

SSC composition and expertise are also influenced by the structure and responsibilities unique to each SSC<sup>1</sup>. For example, the Pacific and Gulf Councils have standing species or FMP specific SSC sub-committees where the majority of the SSC work is conducted and then reported to their full SSC. Members assigned to those species/FMP specific sub-committees tend to have relevant expertise for those species, including specialized areas such as avian or marine mammal science. In addition, many SSCs also have standing socioeconomic sub-committees that provide social and economic advice on council management actions. For example, the South Atlantic SSC has a nine-member Socio-Economic Panel, three of which also serve as full SSC members, that meets prior to an SSC meeting to review and provide socio-economic advice to the SSC on relevant agenda items. The Gulf Council's SSC is specifically charged with providing advice to the Council on the scientific information and analyses for management alternatives in FMPs and amendments and has one of the more diverse memberships with a range expertise to address this charge.

---

<sup>1</sup> For more information on SSC responsibilities and utilization across the eight Councils, see the briefing materials for the joint Council-SSC meeting in August 2019 at: [http://www.mafmc.org/s/Tab03\\_Joint-Council-SSC-Meeting\\_2019-08.pdf](http://www.mafmc.org/s/Tab03_Joint-Council-SSC-Meeting_2019-08.pdf)

**Table 1.** SSC membership by affiliation categories across all 8 regional Councils (as of August 2019).

	New England	Mid-Atlantic	South Atlantic	Gulf	Pacific	North Pacific	Western Pacific	Caribbean
<b>State</b>	2	0	5	3	3	4	3	0
<b>Federal</b> (e.g., NMFS, USFWS, IPHC, Tribal, DFO)	4	4	6	3	11	6	7	5
<b>Academia</b>	9	12	7	10	3	7	6	5
<b>Other</b> (e.g., consultant, not-for-profit, industry)	3	0	0	3	1	2	2	0
<b>Total</b>	<b>18</b>	<b>16</b>	<b>18</b>	<b>19</b>	<b>18</b>	<b>19</b>	<b>18</b>	<b>10</b>

**Table 2.** SSC membership by specialty/expertise categories across all 8 regional Councils (as of August 2019).

	New England	Mid-Atlantic	South Atlantic	Gulf	Pacific	North Pacific	Western Pacific	Caribbean
<b>Stock Assessment/Biometrician</b>	9	5	8	3	7	5	4	1
<b>Fisheries Social Science</b>	4	2	3	3	3	4	3	2
<b>Fisheries Management</b>	0	0	0	1	0	2	0	0
<b>Fisheries Biology/Ecology</b>	4	9	7	8	7	6	10	2
<b>Other</b> (e.g., specialized biologist, climate science, oceanography, industry, law)	0	0	0	2	1	2	1	0
<b>Total</b>	<b>17</b>	<b>16</b>	<b>18</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>18</b>	<b>5</b>

### Future Council Needs and Areas for Potential SSC Expertise

A goal of the comprehensive review is to ensure SSC membership aligns with the future needs and priorities of the Council and the appropriate expertise is available in order to provide the Council with science advice necessary to address these issues. Below is a list of some relevant

guidance documents and issues that will help identify and set future Council priorities and management initiatives.

### *2020-2024 Strategic Plan*

The Council is finalizing its 2020-2024 Strategic Plan. This plan builds off the Council's existing, and first, strategic plan and will guide Council activities that help achieve the goals and objectives identified in the plan.

At their August 2019 meeting, the Council approved new Vision and Mission statements, new Communication, Science, Management and Governance goals and included a new Ecosystem goal<sup>2</sup>. The new goals are as follows:

- **Communication** - Engage stakeholders and the public through education and outreach that foster sustained participation in, and awareness of, the Council process.
- **Science** - Ensure that the Council's management decisions are based on timely and accurate scientific information and methods.
- **Management** - Develop effective management strategies that provide for sustainable fisheries and healthy marine ecosystems and consider the needs of fishing communities and other resource users.
- **Ecosystem** - Support the ecologically sustainable utilization of living marine resources in a manner that maintains ecosystem productivity, structure, and function.
- **Governance** - Ensure that the Council's practices accurately represent and consider fishery, community, and public interests through a transparent and inclusive decision-making process.

The Science and Ecosystem goals likely have the most relevance to the SSC and potential membership needs. The Science goal was modified to address public comments that “focused on data accuracy and credibility, followed by inclusion of on-the-water observations and use of collaborative research in the scientific and decision-making processes” The new goal addresses these comments by simplifying it to the core of the Council's mandated science-based decision-making process. The SSC is included in a number of science objectives and strategies and will play an integral role in helping the Council successfully achieve its Science goal.

The Ecosystem goal will facilitate more effective implementation of the EAFM Guidance Document (discussed more in the section below) by consolidating the Council's ecosystem objectives under a single goal area that serves as an umbrella for activities that overlap Management, Science, and Governance. “This goal addresses a wide range of issues, including climate change, forage stocks, fish habitat, species interactions, and other matters that impact the health of the marine ecosystem.” The Strategic Plan outlines a significant number of Ecosystem objectives and strategies that could substantially advance ecosystem science, tools, strategies and management approaches available for Council consideration and implementation. SSC expertise

---

<sup>2</sup> For more information on the 2020-2024 Strategic Plan and Council action at their August 2019 meeting, please see the Briefing Book material at: [http://www.mafmc.org/s/Tab04\\_2020-2024-Strategic-Plan-Framework\\_2019-08.pdf](http://www.mafmc.org/s/Tab04_2020-2024-Strategic-Plan-Framework_2019-08.pdf).



in these rapidly developing areas of science will be needed to help guide the Council as it implements and transitions to an ecosystem approach to management.

### *Ecosystem Approach to Fisheries Management (EAFM), Climate Change, and Distribution Shifts*

The Mid-Atlantic region is experiencing significant biological and physical changes due to climate change. These changing, and increasingly variable, conditions have resulted in shifting stock distributions and species productivity with social and economic consequences to fishing communities and effective fisheries management. In addition, these ecosystem considerations and climate-driven implications increase the scientific complexity and uncertainty the SSC considers during its ABC deliberations.

Approved in 2016, the Council's EAFM guidance document seeks to enhance the Council's species-specific management programs with more ecosystem science, broader ecosystem considerations and management policies with a framework that considers policy choices and trade-offs as they affect FMP species and the broader ecosystems. The Council's EAFM framework also seeks to work with its regional science and management partners to create an adaptive and responsive management process to address climate induced changes. Advancing ecosystem and climate science initiatives, such as the EAFM guidance document are high priorities for the Council and are highlighted in the 2020 – 2024 Strategic Plan and Research Priorities document.

In order to continue to account for and incorporate ecosystem considerations into its science and management programs, the Council will rely on new and additional ecosystem data and the increased refinement and utilization of analytical tools and management strategy evaluations. In addition, anticipating continued implementation of ecosystem management and the continued changes in stock distributions and availability, the need for setting ABCs for data limited species, such as blueline tilefish and chub mackerel, are likely to increase in the future. The SSC noted additional expertise in fisheries ecology, life history, and/or data limited approaches should be considered to help support these areas of increasing Council interest.

Other ecosystem considerations that may be addressed by the Council and require new or additional SSC resources and expertise include changes in habitat suitability, quantity and productivity, forage fish management, and potential changes in stock structure and increased utilization of genetic information. In addition to these biological factors, socioeconomic priorities and implications in an ecosystem context also need to be considered. SSC membership could support the Council in the development and evaluation of social and economic targets, thresholds, and the trade-offs associated with ecosystem management objectives and changing stock dynamics.

In order to fully evaluate and successfully implement these ecosystem initiatives and goals, the Council will continue to rely on and utilize the expertise of the SSC, collectively and/or individually. Increased capacity and ecosystem science expertise on the SSC in biological, socioeconomic, ecosystem modeling, and management strategy and optimization will be necessary to support this Council priority.

## *New Northeast Region Coordinating Council (NRCC) Stock Assessment Process*

A significant focus of SSC time and resources are spent on a variety of activities associated with ABC recommendations for Council-managed species. These activities include reviewing stock assessment reports, scientific literature, data updates and fishery performance reports, assisting in the development of science advice for Council policies, and providing guidance on research and science priorities to improve overfishing limit (OFL) and ABC recommendations. In addition, the Council and Northeast Fisheries Science Center use the SSC to chair and/or serve as independent peer reviewers for benchmark stock assessments, as necessary.

The NRCC recently approved a new stock assessment process that makes assessments more flexible, increases research opportunities and establishes a long-term assessment schedule to increase the regions' assessment capabilities and capacity. This new process created two types of assessments: management and research, and both require an independent peer review. The long-term schedule for management track assessments provides a predictable schedule that allows for more frequent assessments for many Mid-Atlantic species. The research track process will allow for increased opportunities to develop quantitative assessments for all Council-managed species or, through the research topic reviews, apply alternative approaches to existing assessments. These enhancements to the assessment process will result in increased ABC review and recommendations from the SSC. Additional SSC resources and increased SSC stock assessment expertise will be needed to accommodate the increased frequency of stock assessments, peer review requirements, and ABC recommendations. Increased stock assessment expertise was also recommended by the SSC for Council consideration.

### *Social and economic considerations*

The continued collection and the increased utilization of socioeconomic information in the Council process has been highlighted by the Council, the SSC, and stakeholders and has been included in the 2020-2024 Strategic Plan and Comprehensive Research Priorities. The need for additional socioeconomic information applies across all Council-managed species and fisheries and could be evaluated and utilized across the different Council activities and actions. The SSC serves a critical role in assisting the Council in identifying relevant social and economic data elements and then evaluating the social and economic impacts of management measures and actions.

As part of the recent joint Council-SSC meeting held in August 2019, current social science members of the SSC developed a discussion document on the potential to expand SSC engagement in providing relevant social and economic science information to the Council<sup>3</sup>. The document provided specific management and science examples covering a range of issues where social and economic issues could be undertaken by the SSC. Management issues the Council will likely undertake in the future where social science input and engagement from the SSC include,

---

<sup>3</sup> The detailed agenda for the joint Council-SSC meeting, including the entire socio-economic discussion document, can be found at: [http://www.mafmc.org/s/Tab03\\_Joint-Council-SSC-Meeting\\_2019-08.pdf](http://www.mafmc.org/s/Tab03_Joint-Council-SSC-Meeting_2019-08.pdf).

but not limited to sector and state-specific allocations, modifications to limited access permit programs, offshore wind, recreational management, and ecosystem management.

Given the potential range and magnitude of issues, an increased and diverse social science membership on the SSC is needed. Based on the range of potential issues, the SSC offered guidance on the types of social science expertise that could be utilized. For example, an economist with experience in demand modeling for commercial and recreational sectors could help evaluate trade-offs associated with alternative allocation scenarios. Economists with experience in finance, processing, marketing, trade, and seafood markets could provide policy advice associated with changes to an FMP management program. Also, given the diversity of Mid-Atlantic fisheries and communities, a cultural anthropologist with experience in fishing community structure and function could provide valuable insight and should be considered.

The SSC strongly supported increased capacity and diversity of its social science membership; however, they also noted that the Council should define the role and identify needs for the existing and potentially new social science membership. Currently, the majority of SSC time and resources are spent on a variety of activities associated with ABC recommendations, with limited socioeconomic focused tasks and input. A major focus of the joint Council-SSC meeting was to discuss opportunities and avenues to increase the engagement and use of the existing, and future, social science membership. For example, there was discussion about potentially adding a socioeconomic Term of Reference (ToR) to the existing suite of ABC ToRs the SSC considers. The group also discussed the possibility of having the SSC provide advice on certain Council actions (i.e., frameworks and/or amendments). However, no specific recommendations were developed. If additional social science membership is supported, identifying the needs and capacity for work will help provide meaningful and productive benefits for the Council and SSC.

## Conclusions

---

After reviewing SSC membership across the country and considering Council priorities and needs over the next several years, staff have identified three major areas where new and additional SSC membership should be focused to help support these Council priorities. Within each area, staff then identified specific types of SSC expertise needed to address these priorities.

- **Stock Assessment** – an additional member with quantitative assessment expertise is recommended. A significant focus of the SSC will continue to be various activities associated with setting ABCs for Council-managed species, in which a large component is interpreting stock assessment reports and information. Gaining an additional member with a strong stock assessment background can help in SSC deliberations regarding scientific uncertainty associated with various assessment modeling approaches and outcomes. A stock assessment expert that also has experience in data-limited tools and approaches could also provide additional benefits related to climate change and species distribution shifts (area of focus highlighted below).

In addition, the new NRCC process will provide for more frequent management and research track assessments. This will result in more frequent ABC recommendations and increased SSC support and participation in various assessment process activities such as stock assessment workgroups, the Assessment Oversight Panel, and serving as peer review panelists. When comparing to other SSC's stock assessment membership, an additional stock assessment expert added to the Mid-Atlantic SSC membership would bring the total to six members which be right in the middle in terms of absolute number, and as a proportion of total membership.

- **Ecosystem, Climate, and Distribution Shifts** – in order to support and address the various ecosystem and climate change issues and priorities, staff recommend one additional fisheries biologist/ecologist and one economist/social scientist that each have experience and expertise in ecosystem related issues. Advancing the Council's EAFM guidance document and understanding and addressing climate related science and management issues are a focus of the 2020-2024 Strategic Plan and Research Priorities. The Council and regional partners are also interested in the continued development and inclusion of ecosystem factors within the stock assessment process. As this area advances, additional expertise on the SSC to evaluate these results and the implications for ABC recommendations will be very beneficial. Areas of expertise to consider for the fisheries biologist/ecologist member include genetics, stock structure, ecosystem dynamics and modeling, or management strategies and optimization.

Ecosystem considerations and climate induced changes such as distribution shifts and stock productivity have significant implications to Atlantic coast fishing communities. Understanding and evaluating these science and management implications from a social and economic perspective will be critical for the Council to understand the potential trade-offs associated with different management actions that try to address these issues. Areas of expertise to consider for the economist or social science member include ecosystem modeling, demand modeling to evaluate trade-off scenarios, community structure and function, recreational fishing, and changes to fleet dynamics and profitability.

- **Social and Economic Science** – an additional economist or social science member, in addition to the one recommended above, to help support the different Council priorities and actions that will have socioeconomic implications is recommended. The Mid-Atlantic SSC has one of the smallest social science contingents, in absolute number and proportion of total members, of any of the eight regional council SSCs. However, the Council, the SSC, and stakeholders support increased utilization of social science information in the management process and increased engagement of the SSC to help provide the Council with social science advice. The SSC has previously noted current and future issues the Council is pursuing where the SSC can provide needed socioeconomic advice and guidance to help provide for more informed management decisions. An additional economist or social science member with the necessary expertise could help

increase the SSCs capacity to help evaluate upcoming Council actions addressing allocation, limited access privileges, offshore wind, recreational management, and management/regulatory implications.

In addition, the Council might also want to consider the use of SSC liaisons, when appropriate, with other SSCs to help provide topic-specific expertise and also increase cross-communication between SSCs. Bringing in a member from another SSC with specific expertise or experience to provide input and guidance on a relevant topic being considered by the Mid-Atlantic SSC could help address a specific need without taking away from existing SSC resources. A liaison approach, particularly across the Atlantic coast SSCs, could also provide for a cross-communication process in which SSC members share different scientific approaches and perspectives to common issues and challenges across the SSCs and Councils. A liaison approach would not be necessary for all SSC meetings, but considered on meeting and/or agenda specific basis.

THIS SPACE INTENTIONALLY LEFT BLANK

## **Appendix 1.**

### **Mid-Atlantic Council SOPPs Pertinent to SSC Membership**

#### **2.6.1 Scientific and Statistical Committee**

##### *2.6.1.3 Members and Chair*

- (a) The Committee shall have up to 20 members, all of whom shall be nominated for membership on the Committee by Council members, and shall be appointed to the Committee by a majority vote of the Council. The Committee may be composed of Federal employees, State employees, academicians, or independent experts, and each shall have strong scientific and/or technical credentials and experience in the biological, statistical, economical, social, and other relevant disciplines. The goal will be to structure the committee such that there is a balance in both home bases and expertise of its members. Each member of this committee shall be treated as an affected individual for purposes of paragraphs (2), (3)(B), (4), and (5)(A) of subsection (j) of Section 302 of the Act. The Secretary shall keep disclosures made pursuant to this subparagraph on file.
- (b) Members of the Committee will be appointed by the Council for a period of three years, and may be reappointed at the discretion of the Council. Appointments to the Committee will be staggered to allow overlap of membership. Vacancy appointments shall be for the remainder of the unexpired term of the vacancy. When vacancies arise the Committee shall provide the Council with a list of recommended candidates for consideration; the Council is not bound by the Committee's list of recommended nominees.
- (c) In addition to the 20 members identified in (a) above, interim or special appointments to the Committee of limited duration (not to exceed one year) may also be made to add expertise in special topic areas being addressed by the Committee. These interim appointments have all the rights and privileges of regular Committee members.
- (d) Committee members shall be notified of meetings at least 30 days in advance of each meeting. Committee members who cannot attend a scheduled meeting shall so advise the Executive Director. The terms of members who are absent for three consecutive SSC meetings without notifying the Executive Director in advance of the absence and without a reasonable excuse may be revoked. In addition, Committee members shall attend at least half of the meetings each year in person. Failure to do so may also lead to loss of membership on the Committee.
- (e) From within the membership of the Committee, the Council Chair shall appoint a Chair of the SSC.
- (f) From among their membership, the Committee may elect a Vice-Chair. The Committee Vice-Chair assists the Committee Chair in running meetings, and may represent the Committee to the Council if requested.



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 22, 2019  
**To:** Council and Board  
**From:** Matthew Seeley, Council staff  
**Subject:** 2020-2021 Bluefish Recreational Specifications

The Council and Board will consider 2020-2021 recreational specifications for bluefish on Tuesday, December 10, 2019. Materials listed below are provided for the Council and Board's consideration of this agenda item.

- 1) Advisory panel meeting summary dated November 19, 2019
- 2) Monitoring Committee recreational measures recommendation summary dated November 14, 2019
- 3) Staff memo on 2020-2021 bluefish recreational management measures dated November 1, 2019
- 4) Supplemental bluefish public comment dated November 27, 2019



## **Bluefish Advisory Panel Summary November 19, 2019**

**Advisory Panel members present:** Vince Cannuli (MD), Victor Hartley III (NJ), Arnold Leo (NY), Michael Pirri (CT), Peter Moore (CT), and Tom Roller (NC).

**Others present:** Dustin Colson Leaning (ASMFC Staff), Greg DiDomenico (GSSA), Paul Caruso, Rusty Hudson (FL), Steve Cannizzo (NY), Cynthia Ferrio (GARO), Hannah Hart (FL FWC), Michael Toole, Olivia Phillips, Steven Witthuhn (NY), TJ Karbowski, and Matt Seeley (MAFMC Staff).

### *Introduction*

The Mid-Atlantic Fishery Management Council's Bluefish Advisory Panel (AP) met jointly with the Atlantic States Marine Fisheries Commission's Bluefish Advisory Panel on Tuesday, November 19, 2019 from 10:00 a.m. until 12:00 p.m. The purpose of this meeting was to offer the APs an opportunity to provide comments and recommendations on recreational management measures for bluefish for the 2020 fishing year developed by the Monitoring Committee (MC) at their November 14<sup>th</sup> meeting.

Council staff provided a presentation with background information including the management overview, updated stock status and data update, a recap of recent recreational fishery performance, and the recommendations from the MC. Then, discussion commenced with comments on and suggestions for the recreational management measures to constrain harvest to the recreational harvest limit.

The AP began discussion by emphasizing their dissatisfaction with the Marine Recreational Information Program estimates. Most AP members and the public do not believe the estimates and feel they are driving unnecessary changes in regulations despite observing only slight changes on the water. Many of these on the water observations relate to the availability of bait fish. If bait is present and abundant, bluefish are present and abundant. If bait is unavailable, bluefish do not appear in coastal waters at the same general time each year. AP members would like to see more information related to bait species presence-absence in order to correlate bluefish presence-absence. This bait "issue", as referred to by AP members, is only an issue in certain states. However, AP members from NY, NJ, and NC all mentioned that bait is not the primary issue in their states.

### *Comments on the Monitoring Committee Recommendations*

Almost all AP members and public that participated in the meeting were speaking in terms of the for-hire sector and stated that the proposed four alternatives will not work for their needs. They



understand that the reduction in harvest is necessary but cannot successfully work with the proposed alternatives. Stakeholders invested in the for-hire sector adamantly stated that these measures will put them out of business as there will be little to no incentive for their clients to pay for a fishing trip where they cannot harvest more than three bluefish. Additionally, AP members and the public emphasized that these proposed regulations come at a very poor time for for-hire stakeholders. On top of these bluefish measures, for-hire stakeholders are also dealing with large restrictions on striped bass, black sea bass, summer flounder, and scup.

For many of the for-hire stakeholders, bluefish is not their primary target species. These captains and anglers often treat bluefish as a reliable fallback species when the main target species (striped bass, summer flounder, etc.) are either not available or the restrictions dictate what can be harvested.

While the AP and public recognize the need for a coastwide reduction in harvest, they do not believe it needs to be as harsh as shifting from 15 fish to a 3 fish bag limit with no size restriction, or a 4 fish bag limit with 17 inch size restriction (or a 5 fish – 19 inch, or a 6 fish – 21 inch). Instead, many AP members and public offered their recommendations. To have coastwide measures that appease the for-hire and private/shore sectors, discussion revolved around an 8-10 fish bag limit with a 12-14” minimum size. An advisor from NC indicated the strictest regulations that could be supported would be a 5 fish bag limit, but with hesitation on a size limit because many people harvest snapper bluefish for consumption and bait. Furthermore, an AP member indicated that imposing a size limit will increase the number of dead discards because anglers will have to handle the fish more than under the current regulations due to the need to be measured.

Few comments directly addressed the coastwide 3-fish bag limit. The AP and public’s main concern was that the proposed regulations are too drastic of a reduction, especially during a time where many other species are experiencing similar regulations. The AP and public would prefer a higher coastwide bag limit for 2020 and potentially a lower limit for 2021 to spread out the impacts of the reductions over a longer time period. Overall, there was consensus that the coastwide 15 fish bag limit is not necessary (when not considering the for-hire sector).

The AP and public discussed the ability to impose a seasonal closure and agreed with the MC recommendation. Any sort of seasonal closure will not be fair and equitable coastwide to individual states and will have larger detrimental effects than any other proposed measure.



**Bluefish Monitoring Committee  
Meeting Summary  
November 14, 2019**

**Attendees:** Matthew Seeley (Council Staff), Dustin Colson Leaning (ASMFC), Cynthia Ferrio (GARFO), Mike Celestino (NJ-F&W), Richard Wong (DE-F&W), Eric Durrell (MD-DNR), Nicole Lengyel (RI-DMF), Jim Gartland (VIMS), Tony Wood (NEFSC), John Maniscalco (NY DEC), Greg Wojcik (for Kurt Gottschall) (CT Bureau MF), Amy Zimney (SCDNR), Lee Paramore (NCDENR), Joseph Munyandorero (FL FWC) and Sam Truesdell (MA DMF).

**Others in attendance:** José Montañez (Council Staff), Kiley Dancy (Council Staff), Karson Coutre (Council Staff), Mark Terceiro (NEFSC), Nichola Meserve (MA), Maureen Davidson (NY DEC), Olivia Phillips, and Alex Aspinwall (VMRC).

***Introduction***

The Council and Board approved a Recreational Harvest Limit (RHL) of 9.48 million pounds and expected recreational landings value of 13.27 million pounds (2018 recreational landings) at the October joint meeting. Thus, the Monitoring Committee (MC) was tasked with developing recreational measures to constrain recreational harvest by 28.56% to prevent exceeding the RHL in 2019. At the Bluefish MC meeting, staff presented a summary of recent recreational fishery performance, the specifications process, and a summary of the analyses conducted to constrain 2020 recreational harvest to the RHL. The MC explored seasonal closures, bag limits, size limits, and various combinations to constrain harvest. The MC also looked at mode specific measures to address potential socio-economic impacts on particular sectors of the recreational fishery.

The MC recognizes that the recommendations presented at the end of this document are not ideal for all stakeholders, so four alternatives are presented with different recreational measures available for specific fishing modes.

***Seasonal Closures***

The MC explored a variety of alternatives to constrain recreational harvest using seasonal closures by wave. Although closing one wave, or a combination of waves, would achieve the necessary reduction in recreational harvest, the MC recommended no seasonal closure.

According to the Bluefish Fishery Management Plan, imposed regulations need to offer fair and equitable access to the resource for all states. The MC concluded there were no equitable approaches to be taken through seasonal closures, whether imposed as the only method to constrain harvest or in combination with another measure (Table 1). This is due to the migratory

nature of bluefish that make them available to different states at different times of the year. For example, Florida harvested more pounds than any other state in 2018. Of those landings, 46.45% were harvested in wave 1 when no other state harvested bluefish. Therefore, a closure of wave 1 only affects one state when attempting to reduce harvest coastwide.

### ***Bag Limits***

The MC discussed how including discards and fishing mode all affect potential bag limit alternatives. For discards, the MC recommended not including estimated discards into the bag limit analysis because the MC is tasked to constrain harvest to the RHL, which already accounts for discards earlier in the specifications process when the annual catch target is reduced to the total allowable landings. For fishing mode, the MC recommended identifying if the necessary reduction in harvest could be achieved with different measures for the for-hire sector compared to shore and private anglers. The MC decided to explore different measures for each mode because particular measures are expected to affect the modes differently. The for-hire industry, which is responsible for less than 5% of overall harvest (2018), would be largely impacted by a decreased bag limit as their business thrives off clients being able to harvest more fish. If the bag limit is increased for one sector, these measures need to be combined with other RHL constraining measures, such as a minimum size limit, to make sure each mode meets the necessary reduction (see below for the Combination of Measures).

The current federal bag limit is 15 fish. Reducing the bag limit to 3 fish coastwide for all modes will result in decreased harvest by the necessary 28.56% (Table 2). However, in addition to the impacts stated above a decreased bag limit may lead to increased discards through incidental encounters while targeting other species. Alternatively, the increased discards may be offset by decreased effort as many anglers may not target bluefish because as advisors indicated, the 15 fish limit is great incentive for anglers to want to target bluefish.

### ***Size Limits***

The MC discussed different approaches from the initial staff memo on how to analyze the size limit data. The MC first recommended that the length data be binned to a finer scale to ultimately allow for a conversion from fork length bins in inches to total length bins in inches because size limits are set for other managed species using total length. Also, like the bag limit measures, the MC recommended analyzing the size limit data by mode to explore sector specific measures (Table 3).

When discussing size limit alternatives a few MC members indicated that the private and shore modes would be heavily impacted by a minimum size limit as this would eliminate the “snapper” (age 0) and bait fisheries. These two fisheries occur coastwide but are prevalent in waters off Connecticut (snapper) and North Carolina (bait). The snapper and bait fishery are not large but would experience the greatest reduction if a size limit is approved.

### *Combination of Measures*

The MC explored different combinations of management measures to help constrain harvest to the RHL coastwide and by mode (excluding season). But no recommendations were made including combinations of measures to constrain harvest to the RHL for shore and private/rental fishermen. This was because any bag limit over 3 fish would warrant a size limit (greater than 14 inches) that is too large and not adequate for certain recreational stakeholders to even desire to target bluefish.

When considering the for-hire sector, which represented <5% of overall landings in 2018, the MC explored a bag and size limits. The goal was to allow the for-hire sector to keep more fish (incentive for their clients), but at a size limit they frequently catch. Results for the reduction associated with 3-6 fish bag limits and the associated size limits are presented in Table 4.

### *Monitoring Committee Recommendation*

The Council approved expected recreational landings of 13,270,862 pounds is 28.56% higher than the 2020 RHL of 9,480,162 pounds. Thus, the MC recommends a coastwide 3-fish bag limit to constrain harvest by 28.78% so that the 2020 recreational harvest does not exceed the RHL.

In consideration of the potential socio-economic impacts of a 3-fish bag limit, the MC offered 3 alternatives that constrain harvest by the necessary 28.56% to allow the for-hire sector to land more than 3 fish with associated size limits (Table 4).

**Table 1. Annual average percent of bluefish harvest (lbs) by state and wave from 2016-2018 based on revised MRIP estimates.**

<b>Row Labels</b>	<b>Wave 1</b>	<b>Wave 2</b>	<b>Wave 3</b>	<b>Wave 4</b>	<b>Wave 5</b>	<b>Wave 6</b>	<b>Total</b>
<b>2016</b>	<b>0.87%</b>	<b>11.84%</b>	<b>38.12%</b>	<b>15.01%</b>	<b>28.72%</b>	<b>5.44%</b>	<b>100.00%</b>
MAINE	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%
NEW HAMPSHIRE	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%
MASSACHUSETTS	0.00%	0.00%	17.97%	39.79%	42.24%	0.00%	100.00%
RHODE ISLAND	0.00%	0.00%	25.01%	34.08%	33.39%	7.52%	100.00%
CONNECTICUT	0.00%	0.00%	5.06%	48.20%	37.68%	9.06%	100.00%
NEW YORK	0.00%	4.87%	48.73%	22.48%	19.70%	4.21%	100.00%
NEW JERSEY	0.00%	9.13%	46.17%	3.41%	33.23%	8.06%	100.00%
DELAWARE	0.00%	0.00%	77.94%	5.97%	16.09%	0.00%	100.00%
MARYLAND	0.00%	0.00%	5.07%	44.78%	49.58%	0.57%	100.00%
VIRGINIA	0.00%	17.67%	41.41%	19.69%	21.11%	0.12%	100.00%
NORTH CAROLINA	0.01%	13.22%	30.31%	24.95%	29.28%	2.23%	100.00%
SOUTH CAROLINA	0.00%	17.14%	10.83%	1.82%	58.12%	12.09%	100.00%
GEORGIA	0.00%	16.89%	34.33%	2.46%	46.32%	0.00%	100.00%
FLORIDA	7.36%	42.45%	27.93%	1.49%	16.01%	4.77%	100.00%
<b>2017</b>	<b>0.29%</b>	<b>43.33%</b>	<b>25.84%</b>	<b>10.45%</b>	<b>12.19%</b>	<b>7.91%</b>	<b>100.00%</b>
MAINE	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%
MASSACHUSETTS	0.00%	0.00%	25.67%	41.24%	33.09%	0.00%	100.00%
RHODE ISLAND	0.00%	0.00%	27.12%	15.25%	57.60%	0.03%	100.00%
CONNECTICUT	0.00%	0.00%	5.23%	52.22%	42.55%	0.00%	100.00%
NEW YORK	0.00%	0.01%	26.71%	23.77%	24.37%	25.14%	100.00%
NEW JERSEY	0.00%	25.98%	59.14%	4.90%	8.87%	1.12%	100.00%
DELAWARE	0.00%	50.52%	46.97%	0.29%	2.22%	0.00%	100.00%
MARYLAND	0.00%	1.54%	6.67%	58.40%	31.74%	1.65%	100.00%
VIRGINIA	0.00%	26.73%	2.70%	2.63%	7.03%	60.91%	100.00%
NORTH CAROLINA	1.05%	49.05%	28.28%	3.45%	12.99%	5.18%	100.00%
SOUTH CAROLINA	0.00%	49.85%	13.15%	5.94%	17.45%	13.60%	100.00%
GEORGIA	0.00%	0.00%	91.59%	4.99%	2.80%	0.62%	100.00%
FLORIDA	0.57%	92.88%	0.30%	1.69%	0.06%	4.50%	100.00%
<b>2018</b>	<b>15.84%</b>	<b>11.84%</b>	<b>21.88%</b>	<b>12.42%</b>	<b>26.87%</b>	<b>11.15%</b>	<b>100.00%</b>
MASSACHUSETTS	0.00%	0.00%	13.89%	53.26%	32.85%	0.00%	100.00%
RHODE ISLAND	0.00%	0.00%	8.35%	14.70%	76.95%	0.00%	100.00%
CONNECTICUT	0.00%	0.00%	3.05%	51.73%	45.22%	0.00%	100.00%
NEW YORK	0.00%	0.00%	55.65%	16.88%	26.30%	1.17%	100.00%
NEW JERSEY	0.00%	0.00%	46.42%	13.10%	40.32%	0.15%	100.00%
DELAWARE	0.00%	0.00%	80.38%	7.07%	11.80%	0.75%	100.00%
MARYLAND	0.00%	0.00%	0.70%	44.08%	55.20%	0.02%	100.00%
VIRGINIA	0.00%	0.58%	3.74%	28.93%	43.37%	23.38%	100.00%
NORTH CAROLINA	0.00%	13.32%	21.84%	8.65%	43.34%	12.85%	100.00%
SOUTH CAROLINA	0.00%	4.22%	36.47%	1.20%	56.38%	1.72%	100.00%
GEORGIA	0.00%	13.66%	36.52%	0.32%	4.06%	45.43%	100.00%
FLORIDA	46.45%	26.37%	1.45%	1.50%	1.70%	22.52%	100.00%
<b>Coastwide</b>	<b>3.46%</b>	<b>26.36%</b>	<b>29.35%</b>	<b>12.41%</b>	<b>20.74%</b>	<b>7.67%</b>	<b>100.00%</b>

**Table 2. Associated percent reduction in harvest (pounds) using bluefish bag limits from 2016-2018 for (A) all modes combined (coastwide), (B) shore and private rental (relative to sector harvest), and (C) for-hire (relative to sector harvest).**

<b>A</b>	<b>All Modes</b>				
	<b>Bag Limit</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>Average</b>
	1	-62.27%	-56.19%	-61.80%	<b>-60.09%</b>
	2	-43.36%	-38.02%	-43.47%	<b>-41.61%</b>
	3	-29.89%	-26.30%	-30.15%	<b>-28.78%</b>
	4	-20.58%	-18.69%	-21.20%	<b>-20.16%</b>
	5	-15.29%	-13.11%	-14.56%	<b>-14.32%</b>
	6	-11.18%	-9.34%	-10.02%	<b>-10.18%</b>
	7	-8.23%	-6.50%	-7.47%	<b>-7.40%</b>
	8	-5.69%	-4.71%	-5.67%	<b>-5.36%</b>
	9	-4.01%	-3.19%	-4.27%	<b>-3.82%</b>
	10	-2.50%	-2.03%	-2.96%	<b>-2.50%</b>

<b>B</b>	<b>Shore and Private Rental</b>				
	<b>Bag Limit</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>Average</b>
	1	-62.38%	-56.87%	-62.01%	<b>-60.42%</b>
	2	-43.42%	-38.87%	-43.65%	<b>-41.98%</b>
	3	-29.91%	-27.22%	-30.28%	<b>-29.14%</b>
	4	-20.56%	-19.66%	-21.32%	<b>-20.51%</b>
	5	-15.27%	-14.10%	-14.63%	<b>-14.67%</b>
	6	-11.15%	-10.36%	-10.07%	<b>-10.53%</b>
	7	-8.19%	-7.55%	-7.52%	<b>-7.75%</b>
	8	-5.67%	-5.77%	-5.73%	<b>-5.72%</b>
	9	-3.98%	-4.27%	-4.34%	<b>-4.20%</b>
	10	-2.46%	-3.12%	-3.04%	<b>-2.87%</b>

<b>C</b>	<b>For-Hire</b>				
	<b>Bag Limit</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>Average</b>
	1	-50.86%	-44.65%	-54.88%	<b>-50.13%</b>
	2	-39.81%	-28.66%	-37.95%	<b>-35.47%</b>
	3	-28.75%	-19.89%	-27.17%	<b>-25.27%</b>
	4	-21.56%	-13.67%	-19.36%	<b>-18.20%</b>
	5	-16.62%	-10.08%	-14.64%	<b>-13.78%</b>
	6	-12.91%	-7.13%	-11.40%	<b>-10.48%</b>
	7	-9.87%	-4.69%	-8.70%	<b>-7.76%</b>
	8	-7.14%	-2.81%	-6.60%	<b>-5.51%</b>
	9	-5.48%	-1.60%	-4.79%	<b>-3.96%</b>
	10	-4.20%	-0.72%	-3.17%	<b>-2.70%</b>

**Tables 3. Associated percent reduction in harvest (pounds) using bluefish size limits from 2016-2018 for (A) all modes combined, (B) shore and private rental, and (C) for-hire.**

<b>All Modes - Size Limits</b>						
<b>TL (in)</b>	<b>Pounds</b>	<b>Numbers</b>	<b>Landings (pounds)</b>	<b>% of total landings</b>	<b>Cumulative %</b>	<b>Reduction %</b>
4	0.02	97,787.65	2,439.93	0.00%	0.00%	0.00%
5	0.05	933,965.08	44,858.47	0.06%	0.07%	0.00%
6	0.08	2,686,589.34	219,741.41	0.31%	0.38%	0.07%
7	0.13	2,121,954.25	271,790.40	0.39%	0.77%	0.38%
8	0.19	2,322,351.52	438,254.93	0.62%	1.39%	0.77%
9	0.27	2,440,059.22	647,681.90	0.92%	2.31%	1.39%
10	0.36	2,514,130.53	905,069.47	1.29%	3.60%	2.31%
11	0.47	2,979,932.58	1,412,738.54	2.01%	5.61%	3.60%
12	0.61	3,833,331.12	2,335,990.85	3.32%	8.93%	5.61%
13	0.77	2,914,732.84	2,237,248.57	3.18%	12.12%	8.93%
14	0.95	2,713,088.35	2,578,111.44	3.67%	15.79%	12.12%
15	1.16	1,738,230.79	2,014,713.96	2.87%	18.65%	15.79%
16	1.40	1,176,896.79	1,642,475.13	2.34%	20.99%	18.65%
17	1.66	972,376.28	1,615,554.76	2.30%	23.29%	20.99%
18	1.96	1,383,233.81	2,708,631.05	3.85%	27.14%	23.29%
19	2.29	1,912,636.64	4,374,903.92	6.23%	33.37%	27.14%
20	2.65	802,359.81	2,126,684.79	3.03%	36.40%	33.37%

<b>Shore and Private Rental - Size Limits</b>						
<b>TL (in)</b>	<b>Pounds</b>	<b>Numbers</b>	<b>Landings (pounds)</b>	<b>% of total landings</b>	<b>Cumulative %</b>	<b>Reduction %</b>
4	0.02	97,779.93	2,439.74	0.00%	0.00%	0.00%
5	0.05	933,965.08	44,858.47	0.07%	0.07%	0.00%
6	0.08	2,686,173.04	219,707.36	0.32%	0.39%	0.07%
7	0.13	2,120,837.53	271,647.36	0.40%	0.80%	0.39%
8	0.19	2,319,070.24	437,635.71	0.65%	1.44%	0.80%
9	0.27	2,427,764.88	644,418.53	0.95%	2.39%	1.44%
10	0.36	2,486,362.11	895,073.03	1.32%	3.71%	2.39%
11	0.47	2,930,586.24	1,389,344.22	2.05%	5.76%	3.71%
12	0.61	3,759,589.02	2,291,053.21	3.38%	9.15%	5.76%
13	0.77	2,857,051.03	2,192,974.00	3.24%	12.38%	9.15%
14	0.95	2,641,820.87	2,510,389.54	3.71%	16.09%	12.38%
15	1.16	1,671,761.04	1,937,671.53	2.86%	18.95%	16.09%
16	1.40	1,141,008.31	1,592,389.23	2.35%	21.30%	18.95%
17	1.66	938,361.83	1,559,041.45	2.30%	23.60%	21.30%
18	1.96	1,352,402.98	2,648,258.51	3.91%	27.51%	23.60%
19	2.29	1,892,554.93	4,328,969.66	6.39%	33.90%	27.51%
20	2.65	777,135.09	2,059,825.72	3.04%	36.94%	33.90%

**Table 3 Continued. Associated percent reduction in harvest using coastwide bluefish size limits from 2016-2018 for (A) all modes combined, (B) shore and private rental, and (C) for-hire.**

<b>For-Hire - Size Limits</b>						
<b>TL (in)</b>	<b>Pounds</b>	<b>Numbers</b>	<b>Landings (pounds)</b>	<b>% of total landings</b>	<b>Cumulative %</b>	<b>Reduction %</b>
4	0.02	7.72	0.19	0.00%	0.00%	0.00%
-	-	-	-	-	-	-
6	0.08	416.30	34.05	0.00%	0.00%	0.00%
7	0.13	1,116.73	143.04	0.01%	0.01%	0.00%
8	0.19	3,281.28	619.22	0.02%	0.03%	0.01%
9	0.27	12,294.34	3,263.37	0.13%	0.16%	0.03%
10	0.36	27,768.43	9,996.44	0.40%	0.56%	0.16%
11	0.47	49,346.34	23,394.31	0.93%	1.48%	0.56%
12	0.61	73,742.09	44,937.64	1.78%	3.26%	1.48%
13	0.77	57,681.81	44,274.57	1.75%	5.02%	3.26%
14	0.95	71,267.48	67,721.90	2.68%	7.70%	5.02%
15	1.16	66,469.74	77,042.43	3.05%	10.75%	7.70%
16	1.40	35,888.48	50,085.91	1.98%	12.73%	10.75%
17	1.66	34,014.45	56,513.31	2.24%	14.97%	12.73%
18	1.96	30,830.83	60,372.54	2.39%	17.36%	14.97%
19	2.29	20,081.71	45,934.26	1.82%	19.18%	17.36%
20	2.65	25,224.72	66,859.07	2.65%	21.83%	19.18%

**Table 4. Alternatives to constrain coastwide harvest with associated percent reductions in harvest using coastwide bluefish bag and size limits from 2016-2018.**

<b>Alternative</b>	<b>Mode</b>	<b>Bag Limit</b>	<b>Size (inches)</b>	<b>Reduction by Mode</b>
<b>1</b>	All Modes	3	0	28.78%
<b>2</b>	For-Hire	4	17	28.61%
	Shore and Private Angler	3	0	29.14%
<b>3</b>	For-Hire	5	19	28.75%
	Shore and Private Angler	3	0	29.14%
<b>4</b>	For-Hire	6	21	30.02%
	Shore and Private Angler	3	0	29.14%





Mid-Atlantic Fishery Management Council  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 1, 2019  
**To:** Dr. Chris Moore, Executive Director  
**From:** Matthew Seeley, Staff  
**Subject:** 2020-2021 Bluefish Recreational Management Measures

### **Introduction and Background**

The 2019 bluefish operational assessment concluded the bluefish stock was overfished, and overfishing was not occurring in 2018 relative to the updated biological reference points. Based on the SSC's recommendation, the Council and Bluefish Board adopted an ABC of 16.28 million pounds for 2020 and 2021. After accounting for expected discards using the Marine Recreational Information Program (MRIP) mean weight approach, this ABC translates to a commercial quota (CQ) of 2.77 million pounds and a recreational harvest limit (RHL) of 9.48 million pounds for 2020 and 2021 (Table 1). Compared to 2019, this represents a 64% decrease in the CQ and an 18% decrease in the RHL. In recent years, a portion of the total allowable landings above the expected recreational harvest have been transferred from the recreational fishery to the commercial fishery. However, because the recreational fishery is anticipated to fully harvest the RHL, the Council did not authorize a quota transfer from the recreational to the commercial sectors for 2020-2021. Furthermore, the Council adopted the terminal year landings (2018) as the estimate for expected recreational landings. Thus, the Monitoring Committee (MC) now needs to recommend management measures that will constrain the expected recreational landings (13,270,862 pounds) to the Council approved RHL (9,480,162 pounds). This equates to an expected 28.56% reduction in recreational harvest.

### **Past RHLs and Management Measures**

Since 2000, the bluefish fishery has only exceeded the RHL once in 2007 (Table 2). This did not trigger accountability measures because the RHL was exceeded due to a transfer from the recreational to the commercial fishery. Since Amendment 1 (2000), the only implemented management measures have been a federal 15-fish bag limit. Due to the recent change in stock status to overfished, appropriate management measures are necessary to constrain recreational harvest to a lower RHL. Furthermore, the implementation of recreational management measures constraining harvest offers a smooth transition to the forthcoming rebuilding plan.

**Table 1. 2020-2021 Council approved bluefish commercial quota and RHL.**

Management Measure	2020 - 2021		Basis for the Recommendation
	M lbs	mt	
ABC	16.28	7,385	Derived by SSC; Council P* policy
ACL	16.28	7,385	Defined in FMP as equal to ABC
Management Uncertainty	0	0	Derived by MC
Commercial ACT	2.77	1,255	(ACL – Mgmt. Uncertainty) x 17%
Recreational ACT	13.51	6,130	(ACL – Mgmt. Uncertainty) x 83%
Commercial Discards	0	0	Value used in assessment
Recreational Discards	4.03	1,829	2018 Rec. Discards
Commercial TAL (pre-transfer)	2.77	1,255	Comm. ACT – Comm. Discards
Recreational TAL (pre-transfer)	9.48	4,301	Rec. ACT – Rec. Discards
TAL Combined	12.25	5,556	Comm. TAL + Rec. TAL
Transfer	0	0	Calculated so Expected Rec. Landings = RHL (if transfer can occur)
Expected Rec Landings	13.27	6,020	2018 Rec. Landings
Commercial Quota	2.77	1,255	Comm. TAL + Transfer
Recreational Harvest Limit	9.48	4,301	Rec. TAL - Transfer

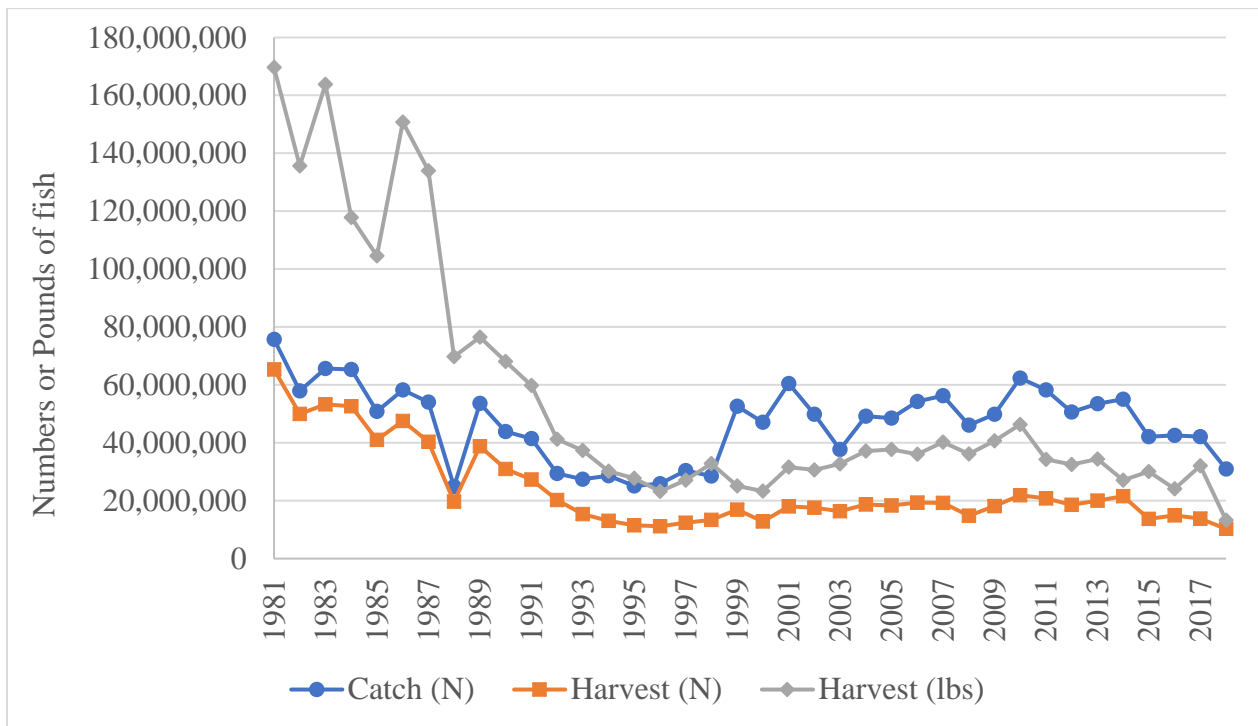
**Table 2. Summary of bluefish management measures, 2000 – 2019 (Values are in million pounds).**

Management Measures	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 <sup>8</sup>	2019
TAC <sup>1</sup> / ABC <sup>2</sup>	34.22	29.15	32.03	31.89	34.08	34.38	31.74	<b>32.04</b>	<b>27.47</b>	<b>24.43</b>	<b>21.54</b>	<b>19.45</b>	<b>20.64</b>	<b>21.81</b>	<b>21.81</b>
TAL <sup>3</sup>	30.85	24.8	27.76	28.16	29.36	29.26	27.29	28.27	23.86	21.08	18.19	16.46	18.19	18.82	19.33
Comm. Quota <sup>4</sup>	10.5	8.08	8.69	7.71	9.83	10.21	9.38	10.32	9.08	7.46	5.24	4.88	8.54	7.24	7.71
Comm. Landings <sup>5</sup>	7.04	6.98	7.51	6.12	7.1	7.55	5.61	4.66	4.12	4.77	4.02	4.1	3.64	2.20	
Rec. Harvest Limit <sup>4</sup>	20.35	16.72	19.07	20.45	19.53	18.63	17.81	17.46	14.07	13.62	12.95	11.58	9.65	11.58/NA	11.62
Rec. Landings <sup>6</sup>	19.86	16.65	21.76	19.79	14.47	16.34	11.5	11.84	16.46	10.46	11.67	9.54	9.52	3.64/13.27	
Rec. Possession Limit (# fish)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Total Landings	26.9	23.63	29.27	25.91	21.57	23.89	17.11	16.5	20.58	15.23	15.69	13.64	13.16	5.84/15.47	
Overage/Underage	-3.95	-1.17	1.51	-2.25	-7.79	-5.37	-10.18	-11.77	-3.28	-5.85	-2.5	-2.82	-5.03	-12.98	
Total Catch <sup>7</sup>	31.55	28.08	35.12	31.83	25.10	27.93	20.39	19.26	24.06	17.96	18.65	16.09	15.65	6.96	
Overage/Underage	-2.67	-1.07	3.09	-0.06	-8.98	-6.45	-11.35	-12.78	-3.41	-6.47	-2.89	-3.36	-4.99	-14.85	

<sup>1</sup> Through 2011. <sup>2</sup> 2012 fwd. <sup>3</sup> Not adjusted for RSA. <sup>4</sup> Adjusted downward for RSA. <sup>5</sup> Dealer and South Atlantic Canvas data used to generate values from 2000-2011; Dealer data used to generate values from 2012-2018. <sup>6</sup> MRIP. <sup>7</sup> Recreational discards were calculated assuming MRIP mean weight of fish landed or harvested. <sup>8</sup> Values for 2018 where a “/” is included indicate “old MRIP/new MRIP”.

## Recreational Catch, Harvest, and 2019 Projections

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 (Figure 1, Table 3 [1991-2018]). Bluefish advisors and MC members suspect that 2018 may have been an anomalous fishing year and may not fully represent recent trends in landings. To help account for this variability, the MC initially recommended that the Council approve using the three-year average for expected recreational landings (23.15 million pounds). However, the Council used 2018 landings as a proxy for expected recreational landings in 2020 and 2021 because 2018 represents the most recently completed fishing year and is consistent with how expected recreational landings have been proposed in recent years.



**Figure 1. Recreational bluefish catch and harvest from 1981-2018.**

**Table 3. Number of recreational bluefish fishing trips, recreational harvest/catch, recreational landings per trip, and average weight from 1991 to 2018.**

Year	# of bluefish trips	Recreational Catch (N)	Recreational Harvest (N)	Recreational Harvest (lbs)	Recreational landings per “bluefish” trip	Average weight/fish (lbs)
<b>Re-Calibrated MRIP Estimates</b>						
1991	13,896,933	41,416,277	27,317,926	59,792,834	2.0	2.2
1992	11,409,027	29,447,522	20,180,578	41,217,703	1.8	2
1993	11,826,365	27,427,201	15,369,463	37,415,750	1.3	2.4
1994	9,721,530	28,624,144	13,063,628	30,145,680	1.3	2.3
1995	9,968,256	25,084,134	11,532,807	27,710,092	1.2	2.4
1996	7,876,695	25,864,668	11,126,333	23,207,235	1.4	2.1
1997	6,383,072	30,448,296	12,400,982	27,039,375	1.9	2.2
1998	7,638,343	28,511,666	13,397,302	32,880,412	1.8	2.5
1999	7,840,089	52,596,228	16,878,789	25,106,100	2.2	1.5
2000	6,449,833	47,102,869	12,879,485	23,357,120	2.0	1.8
2001	8,161,746	60,512,252	18,048,645	31,654,978	2.2	1.8
2002	8,381,422	49,810,122	17,607,380	30,654,388	2.1	1.7
2003	7,769,721	37,746,238	16,411,932	32,758,670	2.1	2.0
2004	8,894,616	49,239,076	18,631,904	37,133,463	2.1	2.0
2005	9,024,550	48,482,667	18,341,452	37,742,807	2.0	2.1
2006	8,255,002	54,310,049	19,397,272	36,081,958	2.3	1.9
2007	9,655,930	56,313,391	19,189,747	40,239,101	2.0	2.1
2008	8,044,324	46,045,003	14,845,435	36,166,834	1.8	2.4
2009	7,972,341	49,866,587	18,085,386	40,731,438	2.3	2.3
2010	9,773,363	62,350,109	21,929,517	46,302,792	2.2	2.1
2011	8,492,874	58,290,651	20,814,884	34,218,748	2.5	1.6
2012	9,655,507	50,658,367	18,578,838	32,530,917	1.9	1.8
2013	6,394,975	53,494,664	19,975,051	34,398,327	3.1	1.7
2014	9,615,976	55,093,766	21,510,651	27,044,276	2.2	1.3
2015	7,001,696	42,148,960	13,725,106	30,098,649	2.0	2.2
2016	8,625,069	42,528,746	14,899,723	24,155,304	1.7	1.6
2017	8,264,782	42,159,923	13,842,164	32,023,497	1.7	2.3
2018	5,749,291	30,928,703	10,245,710	13,270,862	1.8	1.3

Similar to the approaches used to project landings for other Council managed species, the MC can project 2019 bluefish landings using data from waves 1-4 to estimate overall 2019 landings. The 2019 projections are presented here for context despite the Council’s approved value for expected recreational landings. This estimate results in 17,122,744 pounds harvested compared to the Council approved 13,270,862, which represents a difference of 3,851,882 pounds (Table 4). Understanding the difference between the 2018 landings and 2019 projected landings as the assumed expected recreational landings will assist in avoiding an RHL overage in 2020. Using the

Council approved estimate, constraining harvest to the RHL would result in a necessary 28.56% reduction while constraining harvest using the 2019 projected landings would result in a necessary 44.63% reduction.

**Table 4. 2019 projected recreational harvest (in pounds) by state and values used to calculate projections. Values are based on new MRIP estimates. Projections were calculated using 2019 wave 1-4 harvest and the proportion of annual harvest by wave in 2018.**

State	2016-2018 wave 1-4 harvest as % of annual harvest	2019 wave 1-4 harvest	Average annual harvest 2016-2018	2019 projected annual harvest	% of projected 2019 total harvest
Maine	100%	0	27	0	0.00%
New Hampshire	100%	0	7	0	0.00%
Massachusetts	64%	277,568	985,870	435,128	2.54%
Rhode Island	44%	1,099,034	369,586	2,473,273	14.44%
Connecticut	55%	310,130	723,794	564,494	3.30%
New York	63%	3,332,449	4,201,467	5,274,758	30.81%
New Jersey	71%	1,422,351	5,780,646	1,993,690	11.64%
Delaware	94%	322,360	903,313	344,695	2.01%
Maryland	53%	98,268	376,809	186,960	1.09%
Virginia	52%	588,754	340,062	1,143,155	6.68%
North Carolina	67%	2,120,394	3,207,078	3,175,257	18.54%
South Carolina	45%	463,252	533,079	1,033,297	6.03%
Georgia	53%	10,435	26,489	19,599	0.11%
Florida	88%	2,213,233	5,701,659	2,528,308	14.77%
<b>Total</b>	<b>72%</b>	<b>12,258,228</b>	<b>23,149,887</b>	<b>17,122,744</b>	<b>100%</b>

### **Accountability Measures**

In 2013, the Council modified the recreational accountability measures (AMs) for Mid-Atlantic species through the Omnibus Recreational AM Amendment. Additionally, in the event of an Annual Catch Limit (ACL) overage, recreational AMs no longer necessarily require a direct pound-for-pound payback of the overage amount in a subsequent fishing year. Instead, AMs are tied to stock status. Though paybacks may be required in some circumstances, any potential payback amount is scaled relative to biomass, as described below.

The ACL will be evaluated based on a single-year examination of total catch (landings and dead discards). Both landings and dead discards will be evaluated in determining if the ACL has been exceeded. If the ACL is exceeded, the appropriate AM is determined based on the following criteria:

*Recreational landings AM when the ACL is exceeded and no sector-to-sector transfer of allowable landings has occurred. If the fishery-level ACL is exceeded and landings from*

the recreational fishery are determined to be the sole cause of the overage, and no transfer between the commercial and recreational sector was made for the fishing year, as outlined in §648.162(b)(2), then the following procedure will be followed:

*If biomass is below the threshold, the stock is under rebuilding, or biological reference points are unknown.* If the most recent estimate of biomass is below the  $B_{MSY}$  threshold (i.e.,  $B/B_{MSY}$  is less than 0.5), the stock is under a rebuilding plan, or the biological reference points ( $B$  or  $B_{MSY}$ ) are unknown, and the ACL has been exceeded, then the exact amount, in pounds, by which the most recent year's recreational catch estimate exceeded the most recent year's ACL will be deducted from the following year's recreational ACT, or as soon as possible thereafter, once catch data are available, as a single-year adjustment.

*If the ACL has been exceeded.* If the ACL has been exceeded, then adjustments to the recreational management measures, taking into account the performance of the measures and conditions that precipitated the overage, will be made in the following fishing year, or as soon as possible thereafter, once catch data are available, as a single-year adjustment.

### **Monitoring Committee Responsibility**

The Monitoring Committee must consider and recommend management measures to ensure that landings in 2020 will not exceed the 2020 RHL. Recreational possession limits, minimum fish size limits, and seasons can be modified to achieve this goal.

Harvest in 2018 is used as the 2020 harvest proxy when considering such measures under the assumption that conditions in 2020 will be similar to those in 2018. Based on the 2018 harvest proxy of 13.27 million pounds, it is assumed that *status quo* recreational management measures will result in a 28.56% overage compared to the 2020 and 2021 RHL of 9.48 million pounds.

### **Recreational Harvest Constraining Alternatives**

The following alternatives were developed to achieve the necessary 28.56% reduction in recreational harvest. Size limit alternatives have been proposed but are not recommended due to angler preference to often harvest smaller fish since larger bluefish are deemed less desirable. Furthermore, the MC can explore a combination of the presented alternatives to assist in meeting the necessary reduction.

#### ***Size Limits***

To constrain harvest, the MC can consider implementing a minimum size limit (fork length) for bluefish, but consideration should be given to the size at which bluefish are mature. According to SAW/SARC 60, 50% of bluefish coastwide are mature at 11.76 inches and 95% at 17.45 inches. Based on a length frequency distribution calculated using re-calibrated MRIP estimates, an 8-inch minimum size will result in a 28.62% reduction meeting the Council/Board required reduction in harvest. To ensure that approximately 50% of the population can spawn at least once, a 12-inch minimum size results in a 63.92% reduction (Table 5). Furthermore, the MC should note that the expanded lengths show anglers are keeping 4-inch fish, which may not be consistently represented throughout the fishery.

**Table 5. Expanded length frequencies of landed bluefish, 2016-2018, from Maine through Florida, as a percent of total recreational landings of bluefish.**

Fork Length (Inches)	N Landings (Sum)	% of Total Landings	Cumulative %
4	870,272	2.23%	2.23%
5	2,456,210	6.30%	8.53%
6	2,513,814	6.45%	14.98%
7	2,554,204	6.55%	21.53%
8	2,762,542	7.09%	28.62%
9	3,394,296	8.71%	37.32%
10	3,563,355	9.14%	46.46%
11	3,387,727	8.69%	55.15%
12	3,417,832	8.77%	63.92%
13	2,334,301	5.99%	69.91%
14	1,297,979	3.33%	73.23%
15	1,118,902	2.87%	76.10%
16	1,667,740	4.28%	80.38%
17	1,849,626	4.74%	85.13%
18	722,462	1.85%	86.98%
19	447,313	1.15%	88.13%
20	602,034	1.54%	89.67%
21	296,521	0.76%	90.43%
22	192,002	0.49%	90.92%
23	166,507	0.43%	91.35%
24	214,936	0.55%	91.90%

***Seasonal Closures***

All states are required to maintain fair and equitable access to the fishery. This may be difficult to achieve through seasonal closures due to bluefish’s migratory life history (Table 6 and 7). During the winter, bluefish are more accessible to the southern states while they are more accessible to the northern states in the summer. The alternatives below take this into account when possible.

Close waves 1 and 2

Close waves 5 and 6

Combination of closures: close different waves in the north and south



**Table 6. Annual average percent of bluefish harvest (pounds) by state and wave from 2016-2018 based on revised MRIP estimates.**

<b>Row Labels</b>	<b>Wave 1</b>	<b>Wave 2</b>	<b>Wave 3</b>	<b>Wave 4</b>	<b>Wave 5</b>	<b>Wave 6</b>	<b>Total</b>
<b>2016</b>	<b>0.87%</b>	<b>11.84%</b>	<b>38.12%</b>	<b>15.01%</b>	<b>28.72%</b>	<b>5.44%</b>	<b>100.00%</b>
Maine	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%
New Hampshire	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%
Massachusetts	0.00%	0.00%	17.97%	39.79%	42.24%	0.00%	100.00%
Rhode Island	0.00%	0.00%	25.01%	34.08%	33.39%	7.52%	100.00%
Connecticut	0.00%	0.00%	5.06%	48.20%	37.68%	9.06%	100.00%
New York	0.00%	4.87%	48.73%	22.48%	19.70%	4.21%	100.00%
New Jersey	0.00%	9.13%	46.17%	3.41%	33.23%	8.06%	100.00%
Delaware	0.00%	0.00%	77.94%	5.97%	16.09%	0.00%	100.00%
Maryland	0.00%	0.00%	5.07%	44.78%	49.58%	0.57%	100.00%
Virginia	0.00%	17.67%	41.41%	19.69%	21.11%	0.12%	100.00%
North Carolina	0.01%	13.22%	30.31%	24.95%	29.28%	2.23%	100.00%
South Carolina	0.00%	17.14%	10.83%	1.82%	58.12%	12.09%	100.00%
Georgia	0.00%	16.89%	34.33%	2.46%	46.32%	0.00%	100.00%
Florida	7.36%	42.45%	27.93%	1.49%	16.01%	4.77%	100.00%
<b>2017</b>	<b>0.29%</b>	<b>43.33%</b>	<b>25.84%</b>	<b>10.45%</b>	<b>12.19%</b>	<b>7.91%</b>	<b>100.00%</b>
Maine	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%
Massachusetts	0.00%	0.00%	25.67%	41.24%	33.09%	0.00%	100.00%
Rhode Island	0.00%	0.00%	27.12%	15.25%	57.60%	0.03%	100.00%
Connecticut	0.00%	0.00%	5.23%	52.22%	42.55%	0.00%	100.00%
New York	0.00%	0.01%	26.71%	23.77%	24.37%	25.14%	100.00%
New Jersey	0.00%	25.98%	59.14%	4.90%	8.87%	1.12%	100.00%
Delaware	0.00%	50.52%	46.97%	0.29%	2.22%	0.00%	100.00%
Maryland	0.00%	1.54%	6.67%	58.40%	31.74%	1.65%	100.00%
Virginia	0.00%	26.73%	2.70%	2.63%	7.03%	60.91%	100.00%
North Carolina	1.05%	49.05%	28.28%	3.45%	12.99%	5.18%	100.00%
South Carolina	0.00%	49.85%	13.15%	5.94%	17.45%	13.60%	100.00%
Georgia	0.00%	0.00%	91.59%	4.99%	2.80%	0.62%	100.00%
Florida	0.57%	92.88%	0.30%	1.69%	0.06%	4.50%	100.00%
<b>2018</b>	<b>15.84%</b>	<b>11.84%</b>	<b>21.88%</b>	<b>12.42%</b>	<b>26.87%</b>	<b>11.15%</b>	<b>100.00%</b>
Massachusetts	0.00%	0.00%	13.89%	53.26%	32.85%	0.00%	100.00%
Rhode Island	0.00%	0.00%	8.35%	14.70%	76.95%	0.00%	100.00%
Connecticut	0.00%	0.00%	3.05%	51.73%	45.22%	0.00%	100.00%
New York	0.00%	0.00%	55.65%	16.88%	26.30%	1.17%	100.00%
New Jersey	0.00%	0.00%	46.42%	13.10%	40.32%	0.15%	100.00%
Delaware	0.00%	0.00%	80.38%	7.07%	11.80%	0.75%	100.00%
Maryland	0.00%	0.00%	0.70%	44.08%	55.20%	0.02%	100.00%
Virginia	0.00%	0.58%	3.74%	28.93%	43.37%	23.38%	100.00%
North Carolina	0.00%	13.32%	21.84%	8.65%	43.34%	12.85%	100.00%
South Carolina	0.00%	4.22%	36.47%	1.20%	56.38%	1.72%	100.00%
Georgia	0.00%	13.66%	36.52%	0.32%	4.06%	45.43%	100.00%
Florida	46.45%	26.37%	1.45%	1.50%	1.70%	22.52%	100.00%
<b>Coastwide</b>	<b>3.46%</b>	<b>26.36%</b>	<b>29.35%</b>	<b>12.41%</b>	<b>20.74%</b>	<b>7.67%</b>	<b>100.00%</b>

**Table 7. Average bluefish percent reduction in coastwide harvest (lbs) associated with closing one day per wave from 2016-2018 based on revised MRIP estimates.**

<b>Sum of Harvest (A+B1) Total Weight (pounds)</b>						
<b>Row Labels</b>	<b>Wave 1</b>	<b>Wave 2</b>	<b>Wave 3</b>	<b>Wave 4</b>	<b>Wave 5</b>	<b>Wave 6</b>
Maine	0.00%	0.00%	1.15%	0.48%	0.00%	0.00%
New Hampshire	0.00%	0.00%	0.00%	1.61%	0.00%	0.00%
Massachusetts	0.00%	0.00%	0.34%	0.70%	0.59%	0.00%
Rhode Island	0.00%	0.00%	0.37%	0.35%	0.87%	0.04%
Connecticut	0.00%	0.00%	0.08%	0.81%	0.66%	0.07%
New York	0.00%	0.03%	0.64%	0.36%	0.37%	0.23%
New Jersey	0.00%	0.24%	0.84%	0.08%	0.40%	0.07%
Delaware	0.00%	0.55%	0.95%	0.04%	0.10%	0.00%
Maryland	0.00%	0.01%	0.06%	0.78%	0.77%	0.01%
Virginia	0.00%	0.27%	0.31%	0.27%	0.36%	0.43%
North Carolina	0.01%	0.44%	0.45%	0.20%	0.44%	0.10%
South Carolina	0.00%	0.39%	0.30%	0.05%	0.74%	0.16%
Georgia	0.00%	0.21%	0.65%	0.01%	0.11%	0.66%
Florida	0.23%	1.10%	0.09%	0.03%	0.05%	0.15%
<b>Coastwide</b>	<b>0.06%</b>	<b>0.43%</b>	<b>0.48%</b>	<b>0.20%</b>	<b>0.34%</b>	<b>0.13%</b>

## Bag Limits

The current federal bag limit is 15 fish. Reducing the bag limit to 3 fish will result in decreased harvest by the necessary 28.56% (Table 8). However, a decreased bag limit may lead to increased discards through incidental encounters. Alternatively, the increased discards may be offset by decreased effort as many anglers may not target bluefish because as advisors indicated, the 15 fish limit is great incentive for anglers to want to target bluefish.

**Table 8. Associated percent reduction in harvest if the bag limit was reduced to 1-10 fish for 2016-2018 based on revised MRIP estimates using group catch data. This analysis assumes that all non-compliant anglers (landing greater than 15 fish) will continue to be non-compliant and that previous compliant anglers (land 15 fish or less) will comply with the proposed regulations and land the full bag limit if they were previously landing higher than the proposed limits.**

Bag Limit	Percent Reduction							
	2018		2017		2016		Average (2016-2018)	
	No Discards	Discards	No Discards	Discards	No Discards	Discards	No Discards	Discards
<b>10</b>	-2.50%	-2.12%	-2.03%	-1.57%	-2.96%	-2.50%	-2.50%	-2.06%
<b>9</b>	-4.01%	-3.41%	-3.19%	-3.01%	-4.27%	-4.08%	-3.82%	-3.50%
<b>8</b>	-5.69%	-4.84%	-4.71%	-4.48%	-5.67%	-5.46%	-5.36%	-4.93%
<b>7</b>	-8.23%	-6.99%	-6.50%	-6.23%	-7.47%	-7.20%	-7.40%	-6.81%
<b>6</b>	-11.18%	-9.50%	-9.34%	-8.91%	-10.02%	-9.64%	-10.18%	-9.35%
<b>5</b>	-15.29%	-13.00%	-13.11%	-12.54%	-14.56%	-13.88%	-14.32%	-13.14%
<b>4</b>	-20.58%	-17.49%	-18.69%	-17.85%	-21.20%	-20.21%	-20.16%	-18.52%
<b>3</b>	<b>-29.89%</b>	<b>-25.40%</b>	<b>-26.30%</b>	<b>-25.16%</b>	<b>-30.15%</b>	<b>-28.81%</b>	<b>-28.78%</b>	<b>-26.46%</b>
<b>2</b>	-43.36%	-36.85%	-38.02%	-36.27%	-43.47%	-41.47%	-41.61%	-38.20%
<b>1</b>	-62.27%	-52.93%	-56.19%	-53.46%	-61.80%	-59.05%	-60.09%	-55.15%

## Staff Recommendation

The Council approved expected recreational landings of 13,270,862 pounds is 28.56% higher than the 2020 RHL of 9,480,162 pounds. Thus, staff recommends a coastwide 3-fish bag limit to constrain harvest by 28.78% (no discards) so that the 2020 recreational harvest does not exceed the RHL.



# **NEW YORK RECREATIONAL & FOR-HIRE FISHING ALLIANCE**

**'LET US FISH'**

November 27, 2019

**Michael Pentony, Regional Administrator**

**National Marine Fisheries Service**

**55 Great Republic Drive, Gloucester, MA 01930**

**cc: Dr. Christopher M. Moore. Executive Director – MAFMC**

**Matthew Seeley, Fishery Management Specialist – MAFMC**

**RE: Bluefish 2020 Recreational Specifications**

Mr. Pentony,

On behalf of the New York Recreational & For-Hire Fishing Alliance (NY RFHFA), their crew members, and the tens of thousands of recreational anglers that fish aboard party and charter vessels each year, we offer the following comments relative to the proposed 2020 recreational Bluefish measures for the December 2019 Council Meeting in Annapolis, MD.

Based upon the concerns heard from for-hire operators, stakeholders, and fishermen within the NY Marine Coastal District the NY RFHFA is ***strenuously opposed*** to the proposed reductions made in the November 1, 2019, '2020-2021 Bluefish Recreational Management Measures' in which:

***“Staff recommends a coastwide 3-fish bag limit to constrain harvest by 28.78% (no discards) so that the 2020 recreational harvest does not exceed the RHL.”***

For the last half of a century, bluefish have been one of the most important recreational species for not only the for-hire fleet, but recreational angling public who look forward in catching one of the most exciting inshore gamefish to which they have access to. Bluefish were the primary species which led to the aluminum party boat construction boom throughout the 1970s and 1980s, as well as being a major economic driver for the bait & tackle industry in New York City and on Long Island.

Since that time, the popularity of bluefish has lessened due to the greater abundance and preference in fishing for striped bass, summer flounder, black sea bass and scup. There has also been a noticeable socio-demographic change in the population of fishermen who target saltwater fish in the downstate region of New York over the last two decades. More so, this has occurred during what has been the apparent change to the traditional migration patterns of various species in the spring and fall time period which now align with documented NMFS data on north and eastward stock shifting due to warming waters especially during the time period from a story on bluefish from last season as reported by stakeholders in the bordering and shared waters fishing fleet in New Jersey.<sup>(1)</sup>

<sup>(1)</sup> See APP, ***‘Have bluefish changed their habits?’*** Dan Radel, Asbury Park Press, Published Sept. 1, 2018;

<https://www.app.com/story/sports/outdoors/fishing/hook-line-and-sinker/2018/09/01/hook-line-sinker-nj-fishing-bluefish/1143797002/>

For the party and charter boat industry in the NY Marine Coastal District as well as the secondary businesses that rely economically upon the recreational fishing activities derived from the bluefish fishery, it has been one over the last few years to maintain the sustainability of these fishing businesses by continuing to provide the fishing public with the ability to take home a reasonable amount of bluefish. This is at a time when most, bay, shoreline, nearshore and mid-offshore species have either:

- A by-catch possession limit of seven or less fish or,
- Such high minimum size limits that exceed the productivity and availability of fish in a given area or,
- The shortened number of open days during the calendar year which a for-hire vessel can target or an angler can legally have access to and harvest a particular finfish species.

Using the latest new MRIP data sets for the four recreational modes it is extremely apparent that the for-hire industry in the Mid-Atlantic and New England region accounts for less than 5% of coastal harvest. More so, reported recreational landings in New York when looking over a time series during the past five season (four full seasons plus half of 2019), the total harvest number as a percentage comparison between party and charter vs private vessel and shore bound mode is even lower percentage in removals for New York for-hire fishers.

Estimate Status	Year	Common Name	BLUEFISH NEW YORK Fishing Mode	Total Harvest (A+B1)	PSE	Harvest (A+B1) Total Weight (lb)	PSE	Average Length (in)	PSE	Average Weight (lb)	PSE
FINAL	2015	BLUEFISH	SHORE	1,423,577	36.1	2,608,938	32.2	13.1	46.9	1.8	48.4
FINAL	2015	BLUEFISH	PARTY BOAT	30,753	37.7	185,990	48.6	22.2	56.2	6.0	61.5
FINAL	2015	BLUEFISH	CHARTER BOAT	103,587	61.5	806,574	59.3	25.9	86.6	7.8	85.5
FINAL	2015	BLUEFISH	PRIVATE/RENTAL BOAT	879,895	24.7	4,516,911	26.1	20.5	34	5.1	36
FINAL	2016	BLUEFISH	SHORE	1,057,171	41.9	680,207	46.7	8.3	56	0.6	62.7
FINAL	2016	BLUEFISH	PARTY BOAT	35,987	33	119,959	33.1	17.6	46.5	3.3	46.7
FINAL	2016	BLUEFISH	CHARTER BOAT	24,983	21.2	147,358	22.5	23.4	29.9	5.9	30.9
FINAL	2016	BLUEFISH	PRIVATE/RENTAL BOAT	959,925	23.7	4,094,857	25.7	20.0	33.6	4.3	34.9
FINAL	2017	BLUEFISH	SHORE	2,147,008	29.5	1,698,588	45.1	8.6	40	0.8	53.9
FINAL	2017	BLUEFISH	PARTY BOAT	18,294	14.2	57,698	25.8	17.4	22	3.2	29.4
FINAL	2017	BLUEFISH	CHARTER BOAT	38,114	23.4	290,462	25	25.2	33.5	7.6	34.3
FINAL	2017	BLUEFISH	PRIVATE/RENTAL BOAT	861,143	44.7	4,115,755	43.5	18.9	61.3	4.8	62.4
FINAL	2018	BLUEFISH	SHORE	884,073	33.5	692,359	37.1	9.1	46	0.8	50
FINAL	2018	BLUEFISH	PARTY BOAT	7,489	31	10,130	33	13.2	43.2	1.4	45.3
FINAL	2018	BLUEFISH	CHARTER BOAT	9,708	27.6	21,912	28.3	16.4	38.8	2.3	39.5
FINAL	2018	BLUEFISH	PRIVATE/RENTAL BOAT	302,297	26.8	675,117	25.1	15.9	37.5	2.2	36.7
PRELIMINARY	2019	BLUEFISH	SHORE	1,380,419	29.3	1,538,272	50.1	9.7	40.9	1.1	58
PRELIMINARY	2019	BLUEFISH	PARTY BOAT	11,077	32.1	18,881	39.2	14.9	47	1.7	50.6
PRELIMINARY	2019	BLUEFISH	CHARTER BOAT	4,798	49.5	50,895	59	27.7	72.7	10.6	77
PRELIMINARY	2019	BLUEFISH	PRIVATE/RENTAL BOAT	511,792	27.5	1,724,402	26.1	18.4	38.5	3.4	37.9

Further when looking at the breakdown of recreational harvest and released bluefish over the past decade, the for-hire industry in New York has an extremely minor to insignificant impact to the overall coastal bluefish biomass.

NEW YORK		BLUEFISH NEW YORK ALL FOR-HIRE MODES COMBINED									
Year	Common Name	Observed Harvest (A)	PSE	Reported Harvest (B1)	PSE	Released Alive (B2)	PSE				
2010	BLUEFISH	95,088	19.2	77,801	23.4	79,826	17.1				
2011	BLUEFISH	55,148	34.8	77,009	32.3	75,601	31				
2012	BLUEFISH	143,746	15.3	142,642	16.6	131,316	12.8				
2013	BLUEFISH	217,932	26.4	406,207	22.1	77,376	19				
2014	BLUEFISH	125,860	14.9	28,004	52.9	91,116	42.2				
2015	BLUEFISH	65,916	46.3	68,424	61.6	6,398	60.2				
2016	BLUEFISH	53,360	23.8	7,609	37.9	32,939	32.3				
2017	BLUEFISH	44,531	15.1	11,877	54.1	16,552	30				
2018	BLUEFISH	13,575	24.4	3,622	35	5,769	28				
2019	BLUEFISH	8,358	36.8	7,517	39.5	8,663	30.7				

The current reduction table <sup>(2)</sup> noted in the November 22, 2019 – Memorandum from Matthew Seeley Fishery Specialist to the Council and Board, has some disturbing implications for not only the New York recreational fishermen, but any other state that has a for-hire fleet which fishes for bluefish during the year. The severity of the proposed reductions within the various alternatives will most certainly result in a negative economic impact to the for-hire sector within any state by removing one of the most valuable marketing tools in which an angler not only perceives, but has the likelihood to take home a reasonable number of bluefish.

For the handful of party boats in New York which specifically sail for bluefish during the season, the current possession limit is critical for them to somewhat maintain their sailing schedule in 2020 in this fishery.

<sup>(2)</sup> See Table 4. ***‘Alternatives to constrain coastwide harvest with associated percent reductions in harvest using coastwide bluefish bag and size limits from 2016-2018’***

[https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/5ddd9091377ff72cee4303cc/1574801555046/Tab10 Bluefish-Rec-Measures 2019-12.pdf](https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/5ddd9091377ff72cee4303cc/1574801555046/Tab10+Bluefish-Rec-Measures+2019-12.pdf)

The recreational regulatory proposal the NY RFHFA is recommending, is to review the ***differential possession limit approach*** developed and adopted for ‘Blueline Tilefish in Amendment 6 to the Tilefish FMP.’ The recognition in using decades of historical MRIP data on angler trip harvest by party and charter is well known to be much higher than the reported average of 1 to 3 bluefish for private vessel and shore bound mode fishermen.

In scaling down from the current 2019 bluefish possession limit of 15 fish to a reduction or “actual tangible cut to the for-hire fishermen” of



roughly one third in what they could possess in 2019 with 10 bluefish, or at the lowest minimum a cut of approximately half with eight fish in 2020. In addition, we do expect that any cut in the possession limit combined with a 'new' minimum size limit now attached to possessing a bluefish in the coming year on for-hire vessels, will not only exponential increase discard mortality, but continue to reduce the appeal for any full day bluefish trips in the coming years.

Atlantic bluefish along the east coast from Florida northward to Maine have a storied history during the 20<sup>th</sup> century with periods of becoming surprising scarce for no documented reason, and then quickly cycling up to an unending abundance as seen during the early 1970s through late 1990s. During the peak of the contemporary bluefish fishery, old time captains have stated,

“The more you caught, so many more bluefish would then take their place the following day, throughout the season and in the coming year.”

Bluefish have changed their spring, summer and fall migratory patterns due to changes in seasonal water temperatures, availability or lack of various forage fish, and the ever changing eco-system and water quality conditions. The current fishery performance pattern the for-hire industry is now experiencing during the season is with large schools of bluefish 'herding up' as they move to a inshore area, remaining for a few weeks of time, and then quickly moving on as waters either warm up or cool down. There has been a noticeable diminished abundance of larger, resident bluefish during the summer and early fall, yet during the same time of the season, for-hire operators along with fishers commenting or showing pictures of a limit catch of “gorilla-sized” bluefish when fishing in Long Island Sound or when fishing further

offshore, even in the local canyons when directly targeting tilefish or tuna.

In closing, the New York Recreational and For-Hire Fishing Alliance would like to thank Matt Seeley for his work, outreach in informing and answering questions as well as his consideration to stakeholders during the bluefish scoping process and various meetings from over the past two years in order to more accurately gauge the performance of this fishery for all user groups.

The NY RFHFA continues to support sustainable fishing practices aboard the party and charter fleet, and encourages all anglers to only harvest what they can personally use at home after a day of blue fishing. Thank you for the opportunity to comment on the proposed changes to the bluefish possession limit, and we hope our input will be helpful as you consider recreational regulatory changes in 2020 and in the follow years.

Sincerely,

Steven Cannizzo, NY RFHFA

New York Recreational & For-Hire Fishing Alliance

Executive Director Captain Joe Tangel, fv KING COD

Board Member Captain Jimmy Schneider, James Joseph Fleet

Board Member Captain Carl Forsberg, Viking Fleet

Board Member Captain Kenny Higgins, Captree Pride

Board Member Captain Anthony Testa Sr., f/v Steffani Ann

Board Member Captain Anthony Testa Jr., fv Steffani Ann

Also in consultation with Captain Steven Withuhn, TOP HOOK charters - MTK, formerly on the MAFMC Bluefish Advisory Panel and currently a NYS MRAC advisory member.



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 22, 2019  
**To:** Council and Board  
**From:** Matthew Seeley, Council staff  
**Subject:** Bluefish Allocation and Rebuilding Amendment

The Council and Board will review the revised scoping and public information document for bluefish on Tuesday, December 10, 2019. This document includes the revised Marine Recreational information Program estimates, rebuilding plan, and revised issues. Materials listed below are provided for the Council and Board's consideration of this agenda item.

- 1) Bluefish stock status letter to the Council dated received on November 12, 2019
- 2) Bluefish Allocation and Rebuilding Amendment Scoping and Public Information Document



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
GREATER ATLANTIC REGIONAL FISHERIES OFFICE  
55 Great Republic Drive  
Gloucester, MA 01930-2276

NOV 12 2019

Mr. Michael Luisi, Chairman  
Mid-Atlantic Fishery Management Council  
800 North State Street  
Suite 201  
Dover, DE 19901

Dear Mike,

On October 15, 2019, NOAA's Assistant Administrator for Fisheries formally determined that the Atlantic bluefish stock is overfished based on the best scientific information available. Consistent with section 304(e)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), we are providing the Council official notification of the following stock status change: Atlantic bluefish is now overfished. Based on the updated overfished status, the Council must prepare and implement a rebuilding program for Atlantic bluefish within 2 years of the receipt of this notification letter, as required by section 304(e)(3) of the Magnuson-Stevens Act. Consequently, I request that the Council take action to rebuild the Atlantic bluefish stock.

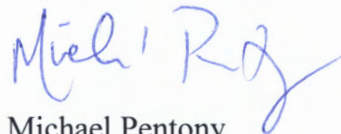
The Northeast Fisheries Science Center completed the most recent assessment of the Atlantic bluefish stock in August 2019 using data through 2018. This operational assessment showed that the stock is now overfished, but overfishing is not occurring. This is a change from the previous assessment in 2015 that indicated the stock was not overfished, and overfishing was not occurring. Both assessments used an Age-Structured Assessment Program model, and while the status determination criteria did not change between the two assessments, the 2019 assessment incorporated recently calibrated recreational time series catch data provided by the Marine Recreational Information Program (MRIP). The addition of the new calibrated MRIP data resulted in the model scaling estimates of spawning stock biomass (SSB), fishing mortality (F), and recruitment higher compared to using the previous data.

Although the 2019 assessment SSB value for 2018 is higher than the 2015 assessment SSB value for 2014, when the 2014 SSB value is re-calibrated with new MRIP estimates, data show that the current (2018) SSB estimate is actually less than it was in 2014 and has steadily declined. Based on the new 2019 stock assessment results, the re-calibrated SSB in 2014 was 94,204 mt, compared to 86,534 mt from the 2015 assessment. SSB was 91,041 mt in 2018. Further, the updated biological reference points in the 2019 assessment generated a re-calibrated  $SSB_{\text{threshold}}$  of 99,359 mt; nearly double what it was in the last assessment (55,614 mt). Therefore, the recent assessment supports a determination that the stock is overfished because  $SSB_{2018}$  (91,041 mt) is less than  $SSB_{\text{threshold}}$  (99,359 mt). The new assessment also shows that the estimated SSB has been below the overfished threshold since at least 2014 ( $SSB_{2014}$  (94,204 mt) is less than  $SSB_{\text{threshold}}$  (99,359 mt)).



We recommend that the Council submit the action within 15 months of this notice to ensure sufficient time to implement the appropriate regulations, if approved. We will support the Council's efforts to develop this rebuilding program. If you have any questions regarding this letter, please contact Cynthia Ferrio in the Sustainable Fisheries Division at (978) 281-9180, or by email at [cynthia.ferrio@noaa.gov](mailto:cynthia.ferrio@noaa.gov).

Sincerely,



Michael Pentony  
Regional Administrator

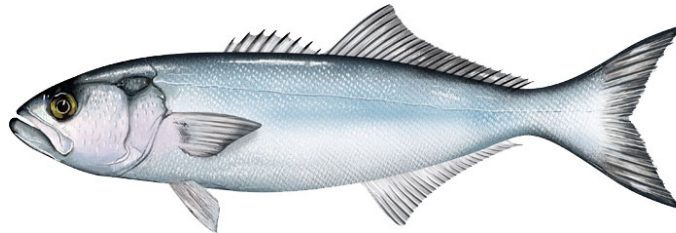
cc: Dr. Christopher Moore, Executive Director, Mid-Atlantic Fishery Management Council  
Robert Beal, Executive Director, Atlantic States Marine Fisheries Commission  
Dr. Jon Hare, Science and Research Director, Northeast Fisheries Science Center  
Alan Risenhoover, Director, Office of Sustainable Fisheries



## *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 February 22, 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-amendment>
2. **Email** to the following address: [mseeley@mafmc.org](mailto: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 Allocation and Rebuilding 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 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:

Matthew Seeley, Fishery Mgmt. Specialist  
Mid-Atlantic Fishery Management Council  
[mseeley@mafmc.org](mailto:mseeley@mafmc.org)  
(302) 526-5262

Dustin Colson Leaning, FMP Coordinator  
Atlantic States Marine Fisheries Commission  
[dleaning@asmfc.org](mailto:dleaning@asmfc.org)  
(703) 842-0714



**Public scoping hearings will be held on the following dates:**

Date	Time	Address
		NC Division of Marine Fisheries Central District Office, 5285 Highway 70 West, Morehead City, North Carolina
		NYSDEC Division of Marine Resources, 205 North Belle Mead Road, Suite 1, East Setauket, New York 11733
		Ocean City Library, 1735 Simpson Avenue, Ocean City, New Jersey 08226
		Brevard County Government Center North, “Brevard Room”, 518 South Palm Ave., Titusville, Florida 32780
		Plymouth Public Library, Otto Fehlow Room, 132 South Street, Plymouth, Massachusetts
		Internet webinar: Connection information to be available at <a href="http://www.mafmc.org">http://www.mafmc.org</a> or by contacting the Council

**Draft Timeline for Completion of Proposed Bluefish Allocation Amendment:**

<b>Date</b>	<b>Task Description</b>
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
January/February 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.

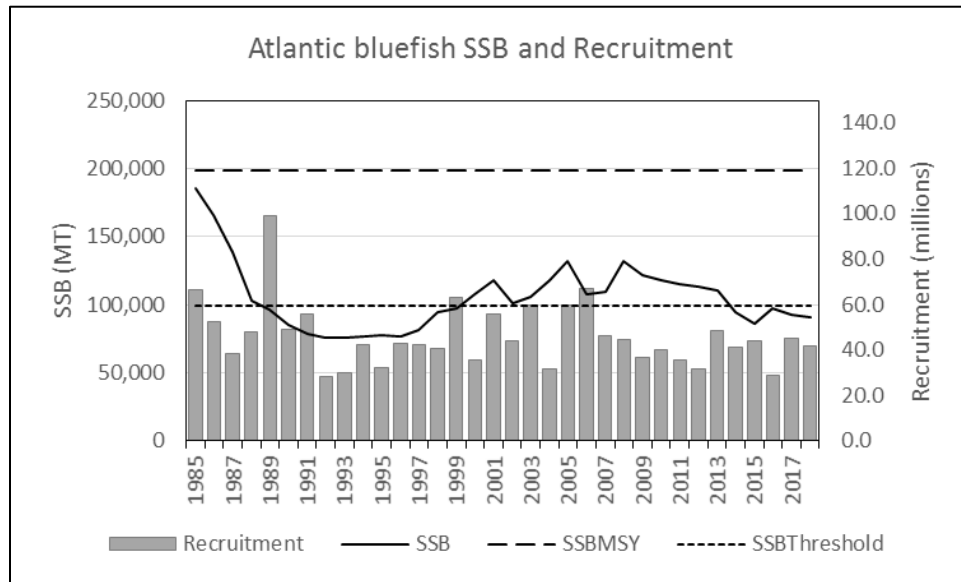
## ***Description of the Bluefish Resource***

### **Status of the Stock**

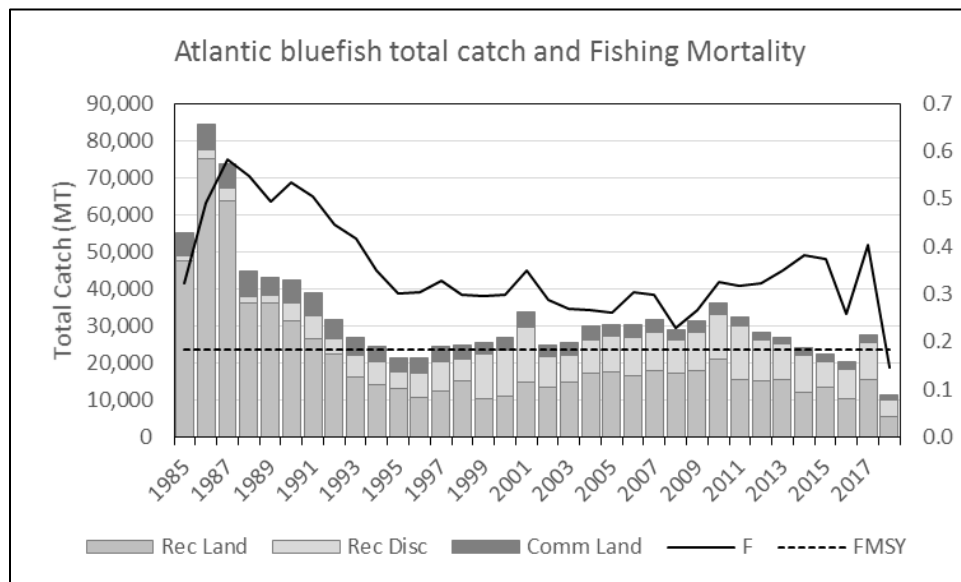
In August 2019, a bluefish operational assessment, which included revised bluefish MRIP estimates through 2018 changed the stock status and biological reference points previously identified in SAW 60, which utilized data through 2014.

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.”

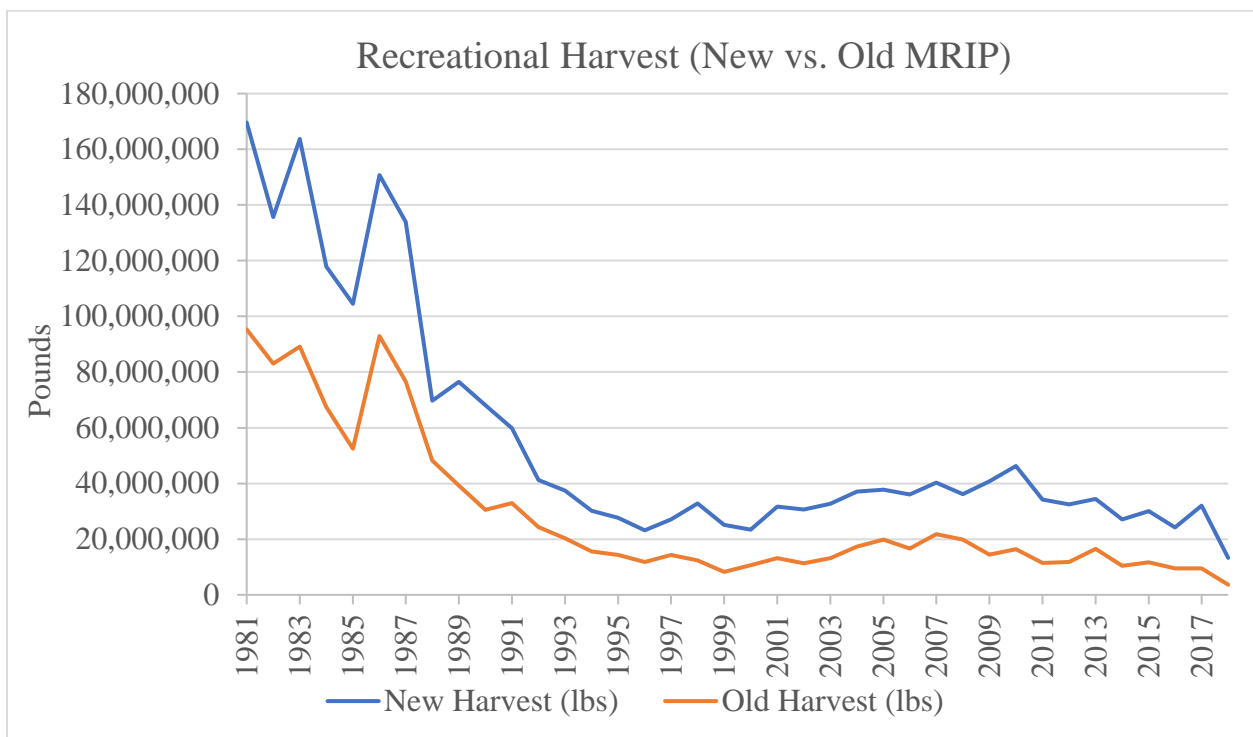
Bluefish born in a given year (young of the year) typically fall into two distinct size classes suggesting that there are two spawning events along the east coast. Literature also supports the existence of a small third spawn in the fall (Juanes et al. 2013). As a result of the bimodal size distribution, 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
<b>Grand Total</b>	<b>27,044,276</b>	<b>30,098,649</b>	<b>24,155,304</b>	<b>32,023,497</b>	<b>13,270,862</b>

### Commercial Fishery

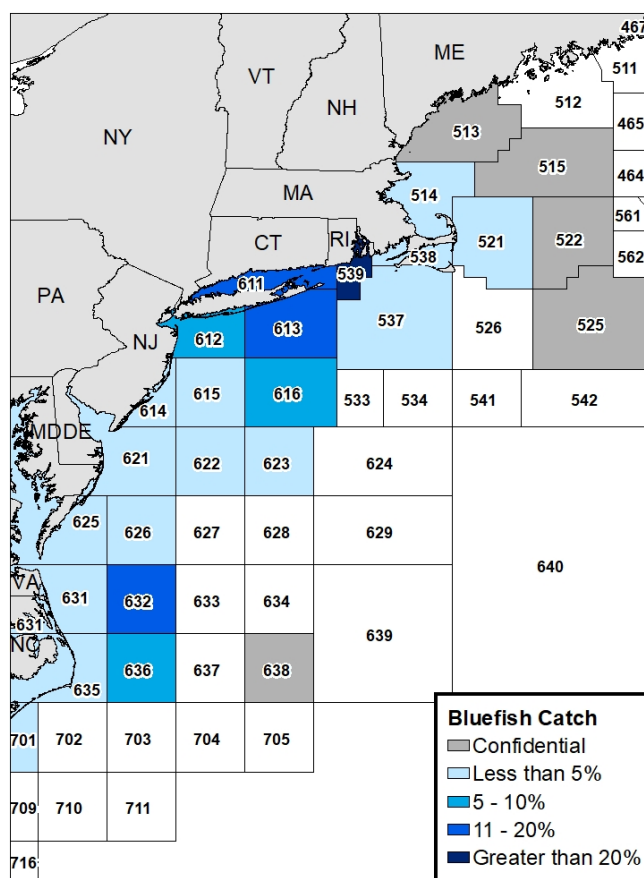
The current commercial bluefish allocation is 17% of the overall ACL. Current state allocations were partitioned using landings data from 1981 to 1989, as that period represents the years prior to the regulations that may have affected both recreational and commercial landings. Quotas were distributed 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
<b>Total</b>	<b>100.01</b>	<b>7,243,726</b>	<b>2,203,591</b>



**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.**

<b>Year</b>	<b>Final Sector Transfer Amount</b>	<b>FR Citation</b>
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





**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 27, 2019  
**To:** Council and Board  
**From:** Kiley Dancy, Staff  
**Subject:** Summer Flounder Recreational Measures for 2020

On Tuesday, December 10, the Council and Board will consider 2020 recreational management measures for summer flounder, including the use of either conservation equivalency or coastwide measures. Materials listed below are provided for the Council and Board's discussion of this agenda item.

- 1) Monitoring Committee recommendation summary from their November 13-14, 2019 meeting;
- 2) Staff memo on 2020 recreational summer flounder measures dated November 6, 2019;
- 3) Public comments on summer flounder recreational measures received prior to the briefing book comment deadline.

Additional materials will be posted as supplemental prior to the meeting, including:

- 1) Advisory Panel recommendations from their Friday, November 22, 2019 meeting;
- 2) Any additional public comments received by the supplemental comment deadline of December 5, 2019.



**Summer Flounder, Scup, and Black Sea Bass Monitoring Committee (MC)  
November 13-14, 2019 Meeting Summary  
Baltimore, MD**

**Monitoring Committee Attendees:** Alex Aspinwall (VMRC; via webinar, Nov 14 only), Julia Beaty (MAFMC staff), Peter Clarke (NJ F&W), Dustin Colson Leaning (ASMFC staff), Karson Coutré (MAFMC staff), Kiley Dancy (MAFMC staff), Steve Doctor (MD DNR), Emily Gilbert (GARFO), John Maniscalco (NY DEC), Jason McNamee (RI F&W), Caitlin Starks (ASMFC staff; Nov 14 only), Mark Terceiro (NEFSC; via webinar), Sam Truesdell (MA DMF), T.D. VanMiddlesworth (NC DMF), Greg Wojcik (CT DEEP), Rich Wong (DE F&W)

**Additional Attendees:** Steve Cannizzo (NY RFHFA; via webinar, Nov 14 only), Maureen Davidson (Council member; Nov 14 only), Greg DiDomenico (GSSA; via webinar, Nov 14 only), Jeff Gutman (via webinar, Nov 14 only), Megan Lapp (Seafreeze Ltd; via webinar, Nov 14 only), Nichola Meserve (MADMF; via webinar), Adam Nowalsky (Council member; Nov 14 only), Kirby Rootes-Murdy (ASMFC staff; via webinar), Tom Smith (via webinar, Nov 14 only), Wes Townsend (Council member)

### **Summer Flounder**

---

The projected 2019 summer flounder recreational harvest based on preliminary wave 1-4 data is 7.06 million pounds, which is 8% under the 2020 RHL of 7.69 million pounds. The 2020 RHL is within the coastwide percent standard error (PSE) for the 2019 preliminary wave 1-4 harvest estimates (10.5%) and within the average PSEs for recreational summer flounder harvest in the past few years (~10% 2015-2018). The MC has adopted a policy of considering the uncertainty surrounding the recreational estimates and generally recommending *status quo* measures and/or harvest levels when the following year's harvest limit falls within the PSE of the harvest projection (in either direction). This approach accounts for uncertainty in the recreational data and allows for increased stability in the recreational measures from year to year. The MC recommends continuing this approach for 2020 and maintaining *status quo* harvest.

The MC recommends the use of conservation equivalency for summer flounder in 2020. The group had a lengthy discussion about potential application of slot limits for summer flounder, as described below. In summary, the MC is supportive of further analysis and exploration of slot limits for possible future application. An example set of coastwide slot limit measures is provided that would likely constrain harvest to the RHL; however, the MC did not recommend these measures due to their disproportionate negative impact on the southern states. The MC supports further evaluation of possible regional or state-level slot limits for 2020 under conservation equivalency but could not definitively recommend this approach until considering additional analysis at the state and regional level.

### ***Potential Biological and Socioeconomic Impacts of Slot Limits***

The MC discussed the potential biological impacts of slot limits and whether there are signals in the fishery data and assessment that are cause for concern regarding potential population dynamic

effects of the recreational fishery selectivity. Overall, the MC does not see a clear signal that managers should necessarily be concerned about recreational harvest of females.

There are several ongoing changes currently being observed in the stock in terms of growth rates, sex ratios, and other dynamics. Growth rates for both sexes have slowed, and the sex ratio for larger fish has been shifting closer to 50/50. The biggest fish, over about 24 inches, are still mostly all females, but up to that point the sex ratio in the survey data is closer to 50/50. There have been several changes in stock dynamics over the last 10-15 years, including decreased mortality rates, slower growing fish, and male fish living to older ages.

Much of the discussion about sex ratios and sex-specific mortality in the recreational fishery is based on the work of Morson et al. (2015)<sup>1</sup>, the sampling for which was conducted in 2010 and 2011. This study compared recreational and commercial fishery sampling data to trawl survey data and found that the sex ratio and the sizes and ages in the commercial fishery closely matched that of the trawl surveys. In contrast, the length and age frequency and sex ratio in recreational fishery, especially in the southern region, didn't closely align with that of the trawl surveys or commercial fishery, and was more heavily weighted toward females. This study unfortunately represents a limited snapshot in time. During development of the last stock assessment, survey data was used to determine the sex of commercial and recreational fishery catch to test the application of sex-specific models. The result was that most catch in these fisheries are now male, due to the factors described above including changes in growth rates and sex ratios. However, this is based on using the trawl survey data to determine the sex of the recreational catch which makes an assumption about survey and fishery equivalency.

On a relative basis, the contention that the recreational fishery is removing too many large females does not appear to hold true, and in absolute terms, because total catch and F rates have decreased substantially in recent years, the fisheries are removing about half as many females (and males) as a decade ago.

Assessment scientists have attempted to model a stock-recruitment relationship for this species for decades and have been unsuccessful given that the relationship is essentially flat. Thus, it's difficult to draw any conclusions about the extent to which spawning stock biomass influences recruitment. There seem to be many factors that may be affecting recruitment including environmental factors.

In summary, the MC discussed that it does not seem that recreational measures and resulting mortality are causing big females to be "wiped out," and it is not clear whether they are directly affecting recruitment. It is worth noting that slot limits implemented over the course of several years would be expected to effect recreational selectivity and yield per recruit in the assessment model, although several years would be needed to see this effect. Slot limits may result in removing too many fish at smaller sizes without leaving enough to survive all the way through the slot, dissipating potential biological benefits.

Another important point about moving to a slot limit is that protecting larger fish in the recreational fishery does not reduce access to these fish in the commercial fishery, and in fact is likely to increase the availability of larger fish available for the offshore commercial trawl fishery.

---

<sup>1</sup> Morson, Jason M., Eleanor A. Bochenek, Eric N. Powell, Emerson C. Hasbrouck, Jennifer E. Gius, Charles F. Cotton, Kristin Gerbino & Tara Froehlich. 2015. Estimating the Sex Composition of the Summer Flounder Catch using Fishery-Independent Data, *Marine and Coastal Fisheries*, 7:1, 393-408, DOI: 10.1080/19425120.2015.1067261.

The benefits of slot limits for summer flounder would appear to be mostly related to angler satisfaction, including increased retention opportunity and potentially reduced discards. The MC also discussed the belief that many anglers are not likely to support slot limits given that they also eliminate the possibility of keeping the larger "trophy" fish. The group agreed that there is no system of constraining harvest with size limits that will make all anglers happy, given that there are segments of the fishery focused on targeting the largest fish and others that are more concerned with the opportunity to retain fish to eat.

A common suggestion under slot limits is to allow for trophy fish harvest above the maximum size. This generally has presented a problem in past analyses for a few reasons. First, the outcomes of these types of measures are highly unpredictable and very difficult to analyze, especially when it comes to predicting harvest in weight. This problem could be addressed by having a tag system for trophy sized fish to better quantify trophy harvest, however, given high effort for summer flounder, this would present logistical challenges and a high administrative burden for most states. In addition, previous analyses<sup>2</sup> have shown that under many slots, the potential benefits of a slot limit are essentially negated once a trophy fish option is included. Finally, including a trophy option reduces the effect of anglers shortening trips once their bag limit is caught, since many are likely to keep fishing to seek a trophy sized fish (and once the bag limit has been reached, high grading may be an issue).

### *Evaluation of Specific Coastwide Slot Limit Options*

The MC considered the staff recommendation of coastwide slot limit measures including a 17-19" slot, a season of May 15-September 15, and a 1 or 2 fish possession limit. The MC discussed that the 17-19" slot limit as analyzed in the staff memo actually includes fish up to 19.99" based on the way that the recreational size data is binned by MRIP. The staff memo thus effectively analyzes a 17-20" slot limit.

Under such a slot, consideration would be needed for how to treat 20" fish. The MC agreed that it is simpler from an enforcement and communication perspective if the maximum size is included in the range of sizes that can be harvested. For example, if the analysis for a slot included fish from 17.0"-19.99", the maximum size in the slot should be 20", and a buffer should be included to allow harvest of fish exactly at 20" but no larger than 20".

The MC requested further evaluation of the expected change in harvest and discards in weight, in addition to the analysis done in number of fish in the staff memo. A length-weight equation from the Northeast Fisheries Science Center spring and fall trawl surveys was applied to the 2018 recreational length frequency data. It is important to note that because this age-length relationship was derived from trawl survey data, it does not reflect the exact length-weight relationship of recreationally caught fish. To get a more precise estimate of the effects of a slot limit on weight harvested and discarded, a length-weight relationship derived specifically from recreational sampling would be needed, and this is not currently available.

The updated analysis including estimated changes in weight predicted that while harvest in numbers of fish is expected to substantially increase under this slot, harvest in weight would decrease. The updated evaluation showed that a 17-19.99" slot may result in a harvest in numbers

---

<sup>2</sup> e.g., Wiedenmann, J., M. Wilberg, E. Bochenek, J. Boreman, B. Freeman, J. Morson, E. Powell, B. Rothschild, and P. Sullivan. 2013. Evaluation of management and regulatory options for the summer flounder recreational fishery. Available at: <http://www.mafmc.org/s/A-Model-to-Evaluate-Recreational-Management-Measures.pdf>.

of fish that is 26% greater than the projected 2019 harvest of 7.06 million pounds, but that harvest in weight is estimated to decrease by 13% relative to projected 2019 levels. There are large caveats associated with this analysis, including that it does not account for estimates of non-compliance or changes in availability of each size class. Therefore, the results are very uncertain.

Because of this estimated decrease in harvest in weight, and the estimated 8% coastwide reduction resulting from the staff-proposed coastwide season, the MC felt that a higher associated possession limit could be considered than the 1 fish bag limit proposed in the staff memo. However, the effects of moving to a coastwide bag limit in combination with moving from a minimum length limit to a slot limit are difficult to analyze. Based on 2018 data, a 3-fish possession limit appears on paper to result in a 2% decrease in coastwide harvest; however, this does not account for the large change in availability of legal sized fish that would occur under this slot limit and the resulting expected increase in kept fish (i.e., many more anglers would be expected to keep 2 or 3 fish instead of 1 fish, as they will encounter more legal sized fish). The MC emphasized that as a result, the expected change in harvest under a 3 fish bag limit, in combination with the proposed slot and season, is nearly impossible to quantify but could result in a substantial increase in harvest. A possession limit of 3 fish is the highest that the MC would consider reasonable in combination with this slot and season.

Overall, the MC noted that a set of coastwide slot limit measures that could work to constrain harvest to the RHL include a 17-20" slot, a 3-fish possession limit, and an open season from May 15-September 15. While the MC believed that these measures would be reasonably expected to produce harvest at or below the RHL, the group also noted that the separate analyses of the slot limit, possession limit, and season do not easily allow for prediction of how those three changes would interact on a coastwide basis. Therefore, it is not possible to precisely quantify how coastwide harvest and discards would change overall under the measures discussed above.

While some states indicated that these measures would be feasible for consideration in their state and may provide benefits in terms of angler satisfaction, the group acknowledged that these measures would likely have negative impacts on the southern region in the states of Delaware and south. Differing availability of summer flounder by season and size makes it difficult to recommend coastwide measures that would be acceptable for all states, which is the primary reason conservation equivalency was originally developed. In addition, all states would like to further evaluate state-specific impacts and tradeoffs of these measures. Thus, while the MC notes that these coastwide measures could work in theory, the group is not recommending their application in 2020 due to the differential impacts by region.

The MC was supportive of further evaluation of slot limits, either for regional or state use under conservation equivalency in 2020, or for coastwide or regional application in future years. However, the degree of support for slot limits in this fishery was mixed among the group members in the absence of more refined analysis.

### ***Further Evaluation and Issues to be Addressed***

Additional evaluation of expected impacts by state was requested. While state-level impacts were evaluated for the coastwide May 15-September 15 season, the state-level effects of bag limit changes were only preliminarily considered, and the state-level impacts of the slot limit could not be evaluated by the end of the meeting. In order to evaluate the implications of the size limit change at a state level, length frequency distribution of discards by state for 2018 would be needed, which

was not available during the meeting. Similarly, the MC would like to see further evaluation of *regional* approaches to slot limits, if the Council and Board are interested in further pursuing these types of measures.

Another aspect of slot limits that the MC believes is important to consider is how to make this type of management dynamic, including how to consider and adapt to changes in availability and cohort strength. Slot limits allow for harvest of a narrower range of certain year classes within the population. Given year class strength effects, a slot limit could result in a large discard problem, and/or a lack of available fish within a slot in some years if these factors are not considered. While the staff analysis provides a reasonable analysis of one year out, if this approach were applied throughout multiple years, managers would need to be reactive to cohort strength dynamics to minimize the risk of substantially exceeding RHLs or increasing discards based on larger cohorts moving through the population. To do this, consideration should be given to moving the slot window every few years.

A further evaluation using a more statistically robust methodology for longer-term analysis, would be useful to guide how to apply slot limits beyond 2020. The recreational fleet dynamics model developed as part of the Council contract with Gavin Fay and Jason McNamee could possibly be used in part to estimate the interaction effects of the combination of measures, although the tool cannot currently directly predict the expected harvest or discards from slot limits.

Another issue to be evaluated is expected non-compliance and how to account for it when evaluating possible outcomes. The staff and the MC analyses do not currently fully consider non-compliance. Given that there would likely be resistance to discarding larger fish, the MC noted that non-compliance with size restrictions would likely be on the high end, and additional work should be done to build in a range of possible non-compliance rates into the evaluation of expected impact on harvest and discards in number of fish and in weight.

Another question is how to reconcile slot limit regulations with summer flounder fishing tournaments based on harvest of the largest sizes of summer flounder, particularly for states like New Jersey which have many economically important tournaments. It is not clear whether or how such tournaments would function under slot limit regulations.

There was a brief discussion of whether it would be possible to consider inshore vs. offshore slot limits, or a slot limit specific to shore mode, given that many of the anglers concerned about size limits are fishing from or near shore. While an inshore/offshore slot limit split would likely not be feasible in terms of enforcement, states with existing or planned separate shore site regulations could consider a separate shore mode slot. There is limited information, if any, about discard lengths from shore, so discard data from party/charter records would likely need to be used in the analysis which could present a challenge for analysis.

### ***Recommendations for 2020***

The MC recommends the use of conservation equivalency to manage the recreational summer flounder fishery in 2020, with further evaluation of slot limits at the state and regional level for possible application in 2020. The group did not reach consensus on whether regional level slot limits should be pursued in 2020, given varying opinions about feasibility in each state and the desire to review additional analysis of state level impacts.

Under conservation equivalency, the MC recommended *status quo* non-preferred coastwide measures, including a 19-inch size limit, 4 fish bag limit, and open season from May 15-September

15. The group considered putting forward the coastwide slot limit measures discussed above as the recommended non-preferred coastwide measures, but ultimately decided *status quo* was more appropriate given the uncertainties in the current preliminary slot analyses. The current non-preferred coastwide measures were deemed less likely to result in an overage of the RHL in 2020.

The MC was able to evaluate the current non-preferred coastwide measures using the fleet dynamics tool developed by Jason McNamee and Gavin Fay. The model results indicate that a 19" minimum size, 4 fish possession limit, and an open season of May 15-September 15 is predicted to result in recreational harvest of 7.13 million pounds, about 7% under the 2020 RHL and close to the projected 2019 harvest of 7.06 million pounds. As an important analytical note, the fleet dynamics tool estimates harvest in numbers of fish at length (not weight), so these estimates at length were converted to weight by applying the length-weight equation as described earlier in this report to the predicted lengths from the tool, and then multiplying that average weight-at-length by the number of predicted harvested fish at that length.

The MC also recommended *status quo* precautionary default measures under conservation equivalency, including a 20-inch minimum size, a 2 fish possession limit, and an open season of July 1-August 31. The group believed these measures to be sufficiently constraining to prevent states or regions from not abiding by conservation equivalency guidelines adopted by the Board.

As previously stated, the PSE of the projected 2019 harvest encompasses the 2020 RHL, and as such the MC recommends that 2020 state and regional harvest not be liberalized under conservation equivalency.

### ***Other Comments***

The MC discussed that although major changes are not needed for recreational measures for summer flounder in 2020, the revised MRIP data still has impacts related to the commercial/recreational allocations that need to be addressed. A joint amendment to re-evaluate these allocations was initiated by the Council and Board in October 2019.

### **Scup**

MC members discussed the New York wave 3 private mode scup recreational harvest estimate in 2019 that is 3 to 4 times the recent values. This pattern is not seen in the neighboring states of Connecticut and Rhode Island and a small proportion of intercepts appear to be driving the high estimate. A modified Thompson tau technique (previously used to identify possible outliers in NY and NJ black sea bass harvest estimates) was used to statistically determine whether or not the 2019 NY private mode wave 3 estimate could be considered an outlier. The analyses identified the estimate as statistically inconsistent with past NY Wave 3 private mode harvests and MC members felt that a more accurate projection for 2019 harvest in New York would be obtained by using the average proportions of total harvest by wave from 2014-2018, rather than the proportion of 2018 alone. This captured a longer-term trend of when harvest occurs and decreased the 2019 projected recreational harvest in New York by 1.59 million pounds. For all other states, they used the 2018 proportions of harvest by wave to project 2019 harvest. The MC noted that this updated projection decreases the projected 2019 and estimated 2020 total catch from the staff memo to lower than the 2020 Acceptable Biological Catch (ABC) under *status quo* recreational measures.

The updated projection also changes the percent reduction in recreational harvest needed to meet the 2020 RHL from 59% to 55%. The MC discussed the significant restrictions to management measures that would be needed to meet this reduction. The MC felt it would be inappropriate to consider any federal seasonal reductions because of the currently disparate seasons in state waters. A long federal season helps provide flexibility to states. Because of this, the MC agreed that the 55% reduction would need to be achieved through decreasing the bag limit, increasing the minimum size, or a combination of these approaches. A 3 fish bag limit would achieve the reduction needed to meet the RHL, however one MC member said this is a food fishery for some recreational anglers and people need more than 3 scup to provide enough fish to make the trip worthwhile in this context. A 12-inch minimum size could also achieve the reductions needed but would be a 3-inch increase from current measures. After calculating the cumulative reduction, the MC discussed a third way to reduce harvest to the RHL by having a 10-inch minimum size and a 5 fish bag limit. However, the MC did not feel comfortable putting these restrictions forward as a MC recommendation.

The MC discussed that they would like to avoid imposing additional restrictions on anglers as management adjusts to the new MRIP numbers, especially given that SSB is 200% of the target. One MC member felt it was inappropriate to impose restrictions on the recreational sector based on lack of flexibility in the FMP with regard to the allocation. MC members added that this issue is not the fault of the fishermen, rather it's a management problem, and more time is needed for management to respond. One MC member also noted that it was unfortunate that quota could not be transferred between sectors since the commercial sector has not harvested its full quota in recent years. There is little to no risk to the stock by allowing the recreational harvest to remain at status quo for 2020 while the management issues are resolved. Because of this management situation, healthy stock status, and catch projections below the 2020 ABC, the MC recommended status quo recreational measures in state and federal waters for scup in 2020.

Although the MC recommended *status quo* recreational measures for scup in state and federal waters for 2020, they agreed that in future years consideration should be given to more closely aligning the federal and state waters measures.

### **Black Sea Bass**

---

The MC agreed that 2019 annual black sea bass harvest should be projected based on coastwide, rather than state by state, proportions of harvest by wave in 2018. This results in 7.33 million pounds of projected harvest in 2019. This helps to account for the increased uncertainty in the MRIP estimates when they are broken down into smaller spatial, temporal, or mode-based increments. This is a different projection approach than that recommended for scup; however, they agreed that this difference is justifiable given that a state-specific correction was needed for scup, but not for black sea bass.

If it is assumed that 2020 harvest would otherwise equal the projected 2019 value (i.e., 7.33 million pounds), then recreational harvest would need to be reduced by about 20% to prevent an overage of the 2020 RHL of 5.81 million pounds. The group agreed that it is very hard to justify a reduction in harvest when the RHL is increasing by 59% compared to 2019, spawning stock biomass was 2.4 times the target level in 2018, and availability to anglers remains very high. They agreed that it is challenging to constrain the recreational fishery under current high levels of availability and



further restrictions on harvest would likely increase discards. They also noted that spawning stock biomass has remained very high despite multiple consecutive years of ABC overages, going back to at least 2015. Staff noted that recent above-average recruitment events have helped in maintaining a high biomass level despite ABC overages. The 2017 year class is estimated to be 72% below average. One MC member said he expects to see continued periodic above average year classes due to mild winters. In addition, representatives from New York, New Jersey, and Maryland said their state trawl surveys suggest that the 2018 year class may also be above average. An abundant 2018 year class was not evident in the Connecticut trawl survey; however, according to fishermen in Connecticut, there were signs of a strong year class later in 2019 after the trawl survey had concluded.

One MC member said availability of black sea bass to anglers in 2020 may decline due to the mid-year 59% increase in the commercial quota. A few MC members reiterated previously stated concerns about the potential for the increase in the commercial quota to result in unintended negative socioeconomic impacts if a sudden increase in landings causes the price to decrease.

Based on all these considerations, the MC recommended that all state and federal waters recreational bag, size, and season limits for black sea bass remain unchanged in 2020 compared to 2019. *Status quo* recreational management measures would be expected to result in an RHL overage of about 26%, a recreational Annual Catch Limit (ACL) overage of about 23%, and an ABC overage of about 12%. Catch would not be expected to exceed the Overfishing Limit (OFL).

The MC did not recommend the use of conservation equivalency (i.e., waiving the federal waters measures in favor of the state waters measures where anglers land their catch) for black sea bass in 2020. They noted that the conservation equivalency regulations require constraining harvest to the RHL, which would require more restrictive measures than *status quo*, which is their primary recommendation for 2020. The MC added that it would not be appropriate to set precautionary default measures under conservation equivalency based on the most restrictive state measures in 2019, as suggested in the staff memo, as these measures would not be restrictive enough.

The MC had a very brief discussion on the fixed 49% commercial/ 51% recreational allocation of the landings portion of the black sea bass ABC. They agreed that the Council and Board should prioritize review of this allocation as it poses challenges for managing the recreational fishery under the revised MRIP estimates. One MC member provided examples of changes that might warrant consideration, including allowing recreational harvest to fluctuate in response to availability while maintaining consistent access for the commercial fishery, for example by using dynamic, as opposed to fixed, allocations. Another MC member suggested consideration of a trigger-based approach, where the allocation to the recreational fishery is higher when the ABC exceeds a certain level. However, the group agreed that it would be inappropriate for them to have a detailed discussion on any potential changes at this point in time as the Council and Board have not yet clarified their goals with regards to potential changes to these allocations.

Two members of the public provided comments on black sea bass via webinar. One individual said the recreational fishing community does not believe the MRIP numbers. He added that with spawning stock biomass more than double the target level, the regulations should be relaxed. He said non-compliance may increase if the fishery continues to be so constrained. The staff recommendations for federal waters measures to constrain harvest to the RHL would put party/charter boats out of business, he said, especially considering concurrent restrictions in the striped bass, scup, and bluefish fisheries. Another member of the public agreed with these points,

adding that it feels like the fishery is restricted whether biomass goes up or down and the increases in the RHL feel like paper increases when they are not accompanied by liberalizations in recreational management measures.



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 6, 2019  
**To:** Chris Moore, Executive Director  
**From:** Kiley Dancy, Staff  
**Subject:** Summer Flounder Recreational Management Measures for 2020

### **Background and Summary**

In October 2019, the Council and the Atlantic States Marine Fisheries Commission's (Commission's) Summer Flounder, Scup, and Black Sea Bass Board (Board) reviewed the previously adopted commercial quota and recreational harvest limit for summer flounder for the 2020 fishing year. The Council and Board recommended no changes to the implemented catch and landings limits, based on the advice of the Scientific and Statistical Committee (SSC) and Monitoring Committee (MC). These 2020 specifications were approved in March 2019 based on the recommendations from the SSC following the 2018 stock assessment for summer flounder.

The final rule implementing the 2020 commercial quota and recreational harvest limit (RHL) published on October 9, 2019 (84 FR 54041) and includes a 2020 recreational harvest limit (RHL) for summer flounder of 7.69 million lb (the same as the revised 2019 RHL). Projected 2019 harvest in pounds, as described below, is 7.06 million pounds (8% below the 2020 RHL).

Each year, the Monitoring Committee (MC) is tasked with recommending recreational management measures (possession limits, size limits, and seasons) to constrain harvest to the RHL. For summer flounder, this includes recommending the use of coastwide measures (identical measures in all states and federal waters) or conservation equivalency (state- or region-specific measures in state waters, and "non-preferred" federal measures that are waived in favor of the state measures). In either case, the combination of measures is designed to constrain harvest to the RHL.

As discussed in the staff recommendation section below, staff recommend that the Monitoring Committee consider measures that depart from the current conservation equivalency measures, particularly regarding the current minimum size limits.

### **Recreational Catch and Landings Trends and 2019 Projections**

In July 2018, the Marine Recreational Information Program (MRIP) released revisions to their time series of recreational catch and landings estimates based on adjustments for a revised angler intercept methodology and a new effort estimation methodology (i.e., a transition from a telephone-based effort survey to a mail-based effort survey). The revised estimates of catch and landings are several times higher

than the previous estimates for shore and private boat modes, substantially raising the overall summer flounder catch and harvest estimates. On average, the new landings estimates for summer flounder (in pounds) are 1.8 times higher over the full time series (1981-2017), and 2.3 times higher in recent years (2008-2017). Recreational data included in this memo reflect revised MRIP data except where otherwise stated.

MRIP data for 2019 are incomplete and preliminary, with only the first four waves (January through August) available. Preliminary wave 1-4 data for 2019 were used to project catch and landings for the entire year by assuming the same proportion of catch and landings by wave as in 2018. These projections are typically assumed to be overestimates for states with more restrictive seasonal measures in remaining waves of the current year, and underestimates for those with less restrictive seasonal measures. Between 2018 and 2019, only a few very minor changes to recreational measures were made, including shifts of 1 or 2 days in season for Rhode Island and New Jersey, and the addition of shore mode regulations for Rhode Island (see Table 5).

For 2019, projected catch is 28.69 million fish (including landings, live discards, and dead discards), and projected landings are 7.06 million lb or 2.22 million fish (Table 1). For comparison purposes, 2019 projected annual harvest was also calculated using the coastwide (i.e., Maine through North Carolina) proportions of harvest by wave in 2018, rather than projecting by state. This resulted in a projected 2019 harvest of 6.98 million pounds and 2.18 million fish.

**Table 1:** Preliminary summer flounder 2019 catch and harvest through wave 4, and projected 2019 catch and harvest based on proportions by wave from 2018.

	Harvest (mil lb)	Harvest (mil fish)	Catch <sup>a</sup> (mil fish)
<b>Preliminary 2019 through Wave 4</b>	6.23	1.93	24.23
<b>Projected 2019 full year<sup>b</sup></b>	7.06	2.22	28.69

<sup>a</sup> Catch data provided by MRIP include harvest, dead discards, and live discards in numbers of fish.

<sup>b</sup> Using summed state level projections.

Table 2 provides the revised MRIP time series of recreational harvest (in number and weight) and catch (in number of fish) for 1981-2019 (with 2019 projected). Under the revised MRIP estimates, the time series high of harvest is 36.74 million lb or 25.78 million fish in 1983, with a low harvest of 5.66 million lb or 3.10 million fish (1989). Revised catch estimates show a high catch of 58.89 million fish in 2010 and a low in catch of 5.06 million fish in 1989 (Table 2). Table 2 also shows the percent of summer flounder released<sup>1</sup> (relative to total catch in numbers of fish) and the mean weight of landed summer flounder each year from 1981-2019 (projected).

<sup>1</sup> Reported as released alive, with 10% of those live releases assumed to die post-release.

**Table 2:** Summer flounder recreational catch and landings under revised MRIP estimates, Maine through North Carolina, 1981-2019, all waves (2019 projected based on data through wave 4).<sup>a</sup>

	<b>Catch (mil fish)</b>	<b>Harvest (mil fish)</b>	<b>Harvest (mil lb)</b>	<b>% Released (Released Alive)</b>	<b>Mean Weight of Landed Fish</b>
<b>1981</b>	22.77	17.02	15.85	25%	0.93
<b>1982</b>	26.07	19.29	23.72	26%	1.23
<b>1983</b>	36.35	25.78	36.74	29%	1.43
<b>1984</b>	39.82	23.45	28.23	41%	1.20
<b>1985</b>	26.28	21.39	25.14	19%	1.18
<b>1986</b>	32.52	16.38	26.47	50%	1.62
<b>1987</b>	29.94	11.93	23.45	60%	1.97
<b>1988</b>	25.45	14.82	20.79	42%	1.40
<b>1989</b>	5.07	3.10	5.66	39%	1.82
<b>1990</b>	15.47	6.07	7.75	61%	1.28
<b>1991</b>	24.83	9.83	12.91	60%	1.31
<b>1992</b>	21.11	8.79	12.67	58%	1.44
<b>1993</b>	36.18	9.80	13.73	73%	1.40
<b>1994</b>	26.11	9.82	14.29	62%	1.45
<b>1995</b>	27.84	5.47	9.02	80%	1.65
<b>1996</b>	29.75	10.18	15.02	66%	1.47
<b>1997</b>	31.87	11.04	18.53	65%	1.68
<b>1998</b>	39.09	12.37	22.86	68%	1.85
<b>1999</b>	42.88	8.10	16.70	81%	2.06
<b>2000</b>	43.26	13.05	27.03	70%	2.07
<b>2001</b>	43.68	8.03	18.56	82%	2.31
<b>2002</b>	34.48	6.51	16.29	81%	2.50
<b>2003</b>	36.21	8.21	21.49	77%	2.62
<b>2004</b>	37.95	8.16	21.20	79%	2.60
<b>2005</b>	45.98	7.04	18.55	85%	2.63
<b>2006</b>	37.90	6.95	18.63	82%	2.68
<b>2007</b>	35.27	4.85	13.89	86%	2.86
<b>2008</b>	39.48	3.78	12.34	90%	3.26
<b>2009</b>	50.62	3.65	11.66	93%	3.20
<b>2010</b>	58.89	3.51	11.34	94%	3.23
<b>2011</b>	56.04	4.33	13.48	92%	3.12
<b>2012</b>	44.71	5.74	16.13	87%	2.81
<b>2013</b>	44.96	6.60	19.41	85%	2.94
<b>2014</b>	44.58	5.37	16.24	88%	3.02
<b>2015</b>	34.14	4.03	11.83	88%	2.92
<b>2016</b>	31.24	4.30	13.24	86%	3.08
<b>2017</b>	28.03	3.17	10.06	89%	3.18
<b>2018</b>	23.55	2.41	7.60	90%	3.15
<b>2019 (proj.)<sup>b</sup></b>	28.69	2.22	7.06	92%	3.18

<sup>a</sup> Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 28, 2019. <sup>b</sup> Projected using proportion by wave from 2018 MRIP data and 2019 MRIP wave 1-4 data.

Landings by state in recent years, in thousands of pounds and thousands of fish are shown in Table 3 including projections for 2019.

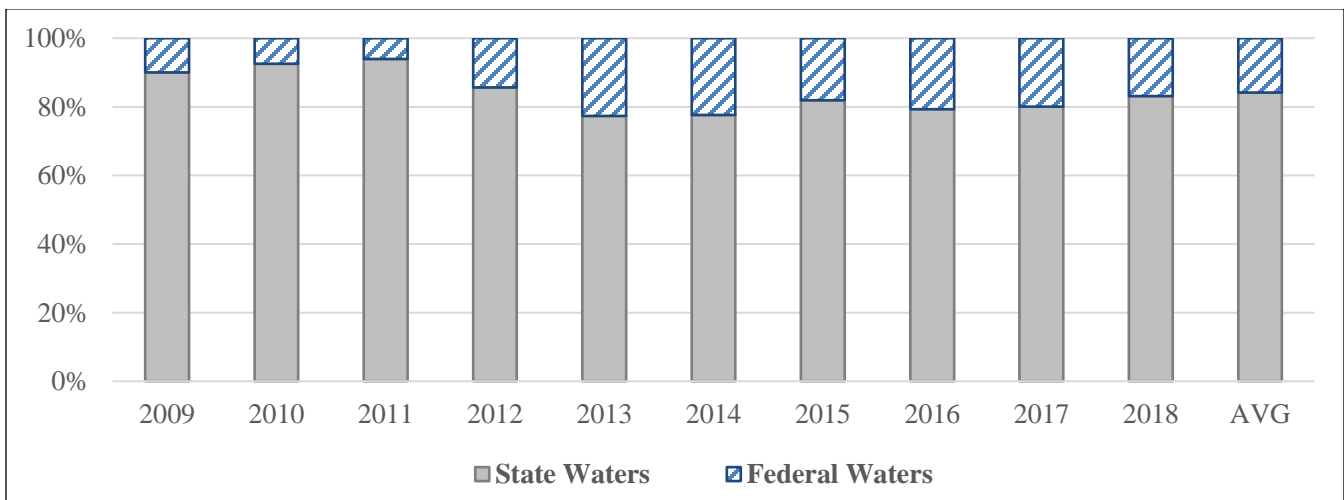
An average of 84% of summer flounder harvest in numbers of fish was taken from state waters (0-3 miles from shore) over the last 10 years (2009-2018; Figure 1). Over the same time period, most harvest originated from private/rental mode trips (87%), while party/charter mode and shore mode accounted for an average of 4% and 9% of the harvest, respectively (Figure 2). Because MRIP revisions affected only the shore and private angler modes and not the party/charter mode, the proportions of harvest by mode have shifted somewhat following the release of revised MRIP estimates.

**Table 3:** Summer flounder recreational harvest (in thousands of pounds and thousands of fish) for revised MRIP estimates, by state for all waves (January-December), 2015-2019 (projected).

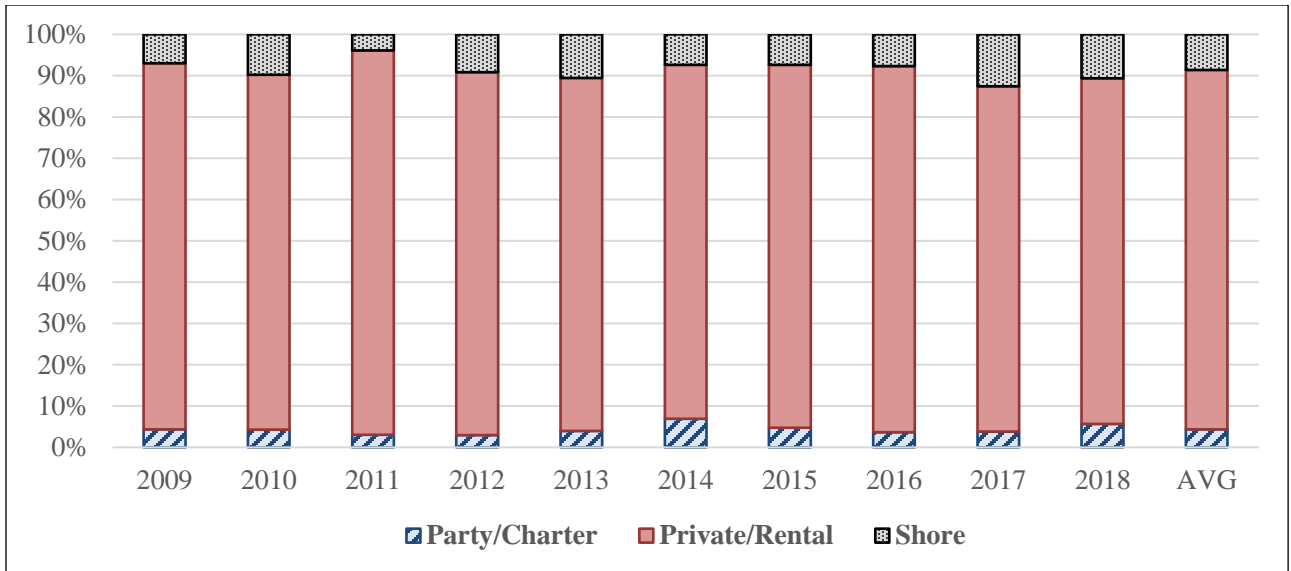
	Thousands of Pounds					Thousands of Fish				
	2015	2016	2017	2018	2019 (proj.)	2015	2016	2017	2018	2019 (proj.)
NH	-	-	-	-	-	-	-	-	-	-
MA	386	240	172	143	226	213	106	65	67	93
RI	791	341	599	604	753	222	113	156	169	198
CT	999	1,024	403	549	272	252	338	121	153	79
NY	5,011	5,744	4,214	2,385	2,298	1,517	1,800	1,186	641	533
NJ	3,246	4,718	3,571	3,155	2,561	1,180	1,456	1,200	1,045	894
DE	270	435	259	205	246	120	173	100	85	96
MD	251	98	171	122	118	98	40	57	48	50
VA	719	529	528	345	502	334	212	188	145	221
NC	157	110	147	92	84	99	65	91	58	56
<b>Coast</b>	<b>11,830</b>	<b>13,239</b>	<b>10,064</b>	<b>7,600</b>	<b>7,058</b>	<b>4,034</b>	<b>4,302</b>	<b>3,166</b>	<b>2,413</b>	<b>2,221</b>

<sup>a</sup> Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 28, 2019.

<sup>b</sup> Projected using proportion by wave from 2018 MRIP data and 2019 MRIP wave 1-4 data.

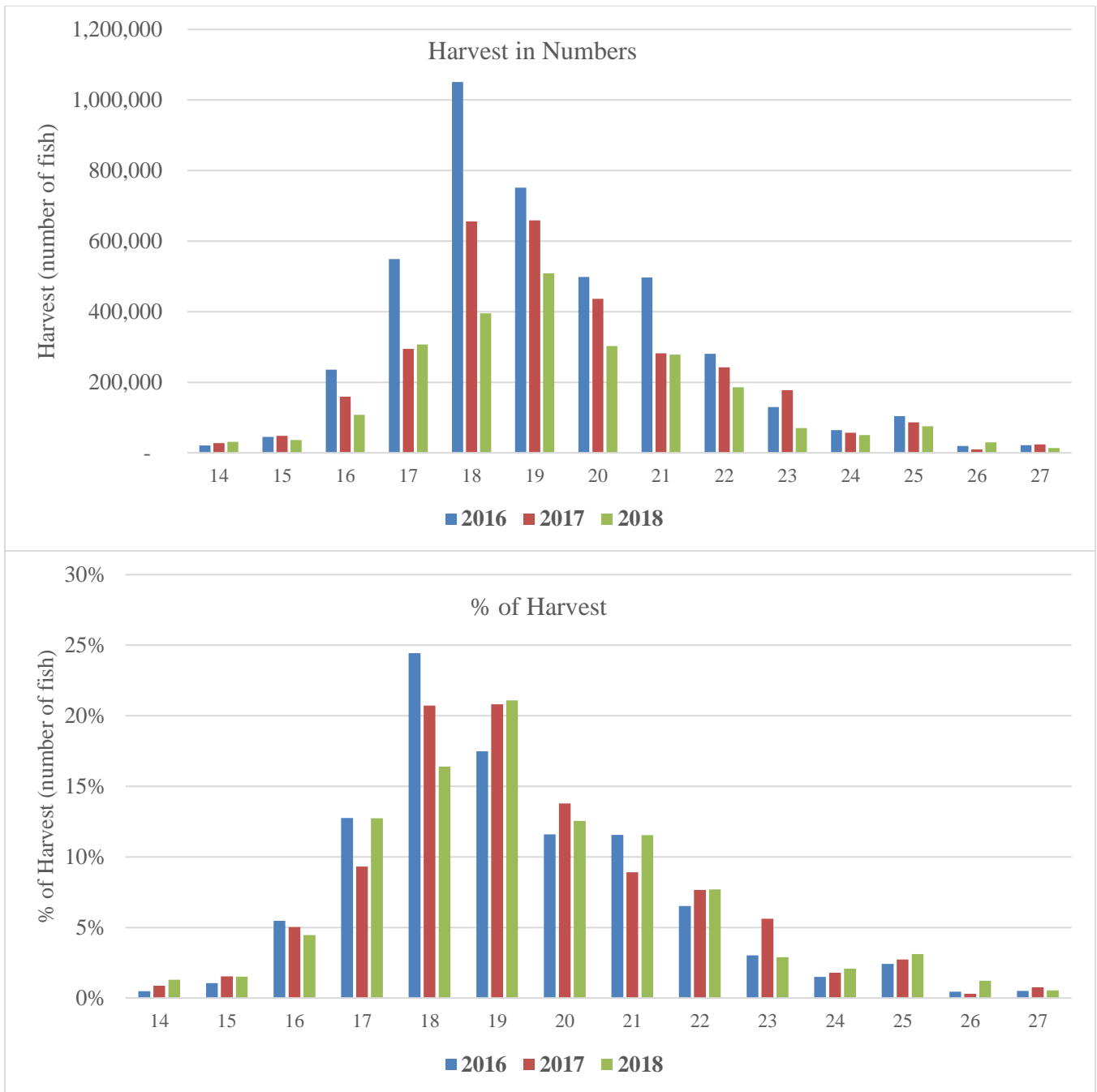


**Figure 1:** State vs. federal waters harvest in numbers of fish for summer flounder, 2009-2018. Fishing area information is self-reported by anglers. Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 28, 2019.



**Figure 2:** Summer flounder harvest by fishing mode (in numbers of fish), 2009-2018. Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 28, 2019.

Expanded length frequencies for summer flounder recreational harvest from 2016-2018 are shown in Figure 3, both in number of fish harvested and in percent of total harvest. Size limits were restricted in most states between 2016 and 2017, resulting in a shift in the size distribution toward larger fish in 2017. Size limits between 2017 and 2018 were largely the same except for a decrease from 17 inches to 16.5 inches in the states of Delaware, Maryland, and Virginia. In 2018, the size bin with the largest landings was 19 inches (21% of 2018 harvest, or about 509,000 pounds).



**Figure 3:** Expanded recreational length frequency for summer flounder, 2016-2018. Size bins below 14" and above 27" accounted for less than 0.5% each of the estimated total harvest and were omitted. Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 31, 2019.



## Past Fishery Performance and Management Measures

RHLs for summer flounder were first implemented in 1993. Since then, they have varied from a high of 11.98 million lb in 2005 to a low of 3.77 million lb in 2017. Performance relative to past RHLs can only be evaluated using pre-revision ("old") MRIP data, since past RHLs were set using assessments that incorporated the previous MRIP time series. Recreational harvest (pre-revision data) relative to the RHL has varied from a high of 122% over the RHL (2000) to a low of 49% under the RHL (2011; Table 4).

From 1993-2000, coastwide measures were in place for all states and federal waters, with possession limits ranging from 3-10 fish and size limits ranging from 14.0-15.5 inches. Starting in 2001, conservation equivalency was implemented, and has been used as the preferred management system each year since (Table 4). Under conservation equivalency, individual states or multi-state regions set measures that collectively are designed to constrain harvest to the coastwide RHL. Federal regulations are waived and anglers are subject to the summer flounder regulations of the state in which they land. State-by-state conservation equivalency was adopted each year from 2001 through 2013, with each state implementing different sets of management measures. Each year from 2014 through 2019, the Board has approved the use of regional conservation equivalency, where the combination of regional measures is expected to constrain the coastwide harvest to the RHL.

In March 2019, the Council and Board adopted regional conservation equivalency for the summer flounder recreational fishery in 2019. Region-specific possession limits in 2019 range from 2-6 fish with size limits ranging from 15.0-19.0 inches, with various seasons (Table 5).

Under conservation equivalency, the Council and Board must adopt two associated sets of measures: the non-preferred coastwide measures, and the precautionary default measures. The non-preferred coastwide measures are a set of measures that would be expected to constrain harvest to the RHL if implemented on a coastwide basis (the same measures in all states and in federal waters). The combination of state or regional measures under conservation equivalency is designed to be equivalent to this set of non-preferred coastwide measures in terms of coastwide harvest. These coastwide measures are included in the federal regulations but waived in favor of state- or region-specific measures. The non-preferred coastwide measures adopted in 2019 include a 4-fish possession limit, a 19-inch total length (TL) minimum size, and an open season from May 15-September 15. These non-preferred coastwide measures are only waived for the duration of the applicable fishing year; thus, the non-preferred measures described above will take effect in federal waters and for federal party/charter permit holders starting on January 1, 2020 until replaced (if applicable) by the implementation of conservation equivalency or alternative coastwide measures.

The precautionary default measures would be implemented in any state or region that failed to develop adequate measures to constrain or reduce landings as required by the conservation equivalency guidelines. The precautionary default measures in 2019 include a 2-fish possession limit with a 20-inch TL minimum fish size and an open season from July 1-August 31.

**Table 4:** Summary of federal management measures for the summer flounder recreational fishery, 1993-2020.

Measure	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
ABC (m lb)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Recreational ACL (land+disc; m lb)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RHL (m lb)	8.38	10.67	7.76	7.41	7.41	7.41	7.41	7.41	7.16	9.72	9.28	11.21	11.98	9.29
Harvest - OLD MRIP (m lb)	8.83	9.33	5.42	9.82	11.87	12.48	8.37	16.47	11.64	8.01	11.64	11.02	10.92	10.50
% Over/Under RHL(Old MRIP)	+5%	-13%	-30%	+33%	+60%	+68%	+13%	+122%	+63%	-18%	+25%	-2%	-9%	+13%
Harvest - NEW MRIP	13.73	14.29	9.02	15.02	18.52	22.86	16.70	27.03	18.56	16.29	21.49	21.20	18.55	18.63
Possession Limit	6	8	6/8	10	8	8	8	8	3	a	a	a	a	a
Size Limit (TL in)	14	14	14	14	14.5	15	15	15.5	15.5	a	a	a	a	a
Open Season	5/15 - 9/30	4/15 - 10/15	1/1 - 12/31	1/1 - 12/31	1/1 - 12/31	1/1 - 12/31	5/29 - 9/11	5/10 - 10/2	4/15 - 10/15	a	a	a	a	a
Measure	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ABC (m lb)	-	-	21.50	25.50	33.95	25.58	22.34	21.94	22.57	16.26	11.30	13.23	25.03	25.03
Recreational ACL (land+disc; m lb)	-	-	-	-	-	11.58	10.23	9.07	9.44	6.83	4.72	5.53	11.51	11.51
RHL (m lb) - landings only	6.68	6.22	7.16	8.59	11.58	8.49	7.63	7.01	7.38	5.42	3.77	4.42	7.69	7.69
Harvest - OLD MRIP (m lb)	9.34	8.15	6.03	5.11	5.96	6.49	7.36	7.39	4.72	6.18	3.19	3.35	-	-
% Over/Under RHL(Old MRIP)	+40%	+31%	-16%	-41%	-49%	-24%	-4%	+5%	-36%	+14%	-15%	-24%	-	-
Harvest - NEW MRIP	13.89	12.34	11.66	11.34	13.48	16.13	19.41	16.24	11.83	13.24	10.06	7.60	7.06 <sup>c</sup>	-
Possession Limit	a	a	a	a	a	a	a	b	b	b	b	b	b	-
Size Limit (TL in)	a	a	a	a	a	a	a	b	b	b	b	b	b	-
Open Season	a	a	a	a	a	a	a	b	b	b	b	b	b	-

<sup>a</sup> State-specific conservation equivalency measures. <sup>b</sup> Region-specific conservation equivalency measures. <sup>c</sup> Projected.

**Table 5:** Summer flounder recreational fishing measures in 2018 and 2019, by state, under regional conservation equivalency. 2018 and 2019 regions include: 1) Massachusetts, 2) Rhode Island, 3) Connecticut and New York, 4) New Jersey, 5) Delaware, Maryland, The Potomac River Fisheries Commission, and Virginia, and 6) North Carolina.

State	2018			2019		
	Minimum Size (inches)	Possession Limit	Open Season	Minimum Size (inches)	Possession Limit	Open Season
Massachusetts	17	5 fish	May 23-October 9	17	5 fish	May 23-October 9
Rhode Island (Private, For-Hire, and all other shore-based fishing sites)	19	6 fish	May 1-December 31	19	6 fish	May 3-December 31
RI 7 designated shore sites	N/A	N/A		19	4 fish <sup>a</sup>	
				17	2 fish <sup>a</sup>	
Connecticut	19	4 fish	May 4-September 30	19	4 fish	May 4- September 30
CT Shore Program (45 designated shore sites)	17			17		
New York	19			19		
New Jersey	18	3 fish	May 25-September 22	18	3 fish	May 24- September 21
NJ Shore program site (ISBSP)	16	2 fish		16	2 fish	
New Jersey/Delaware Bay COLREGS	17	3 fish		17	3 fish	
Delaware	16.5	4 fish	January 1-December 31	16.5	4 fish	January 1- December 31
Maryland						
PRFC						
Virginia						
North Carolina	15	4 fish	January 1-December 31	15	4 fish	January 1- September 3 <sup>b</sup>

<sup>a</sup> Combined possession limit of 6 fish, no more than 2 fish at 17-inch minimum size limit.

<sup>b</sup> Although originally specified as open year-round, the recreational flounder fishery in North Carolina (southern, gulf, and summer flounder) closed on September 4, 2019 as the result of measures implemented to end overfishing on southern flounder. NC manages all flounder in the recreational fishery under the same regulations resulting in a de facto closure of the summer flounder recreational fishery. The fishery will open in 2020 at a date to be determined. See the proclamation here: <http://portal.ncdenr.org/web/mf/proclamation-ff-32-2019>.

## Accountability Measures

Federal regulations include proactive accountability measures (AMs) to prevent the summer flounder recreational Annual Catch Limit (ACL) from being exceeded and reactive AMs to respond when an ACL is exceeded. Proactive recreational accountability measures include adjusting management measures (bag limits, size limits, and season) for the upcoming fishing year that are designed to prevent the RHL and ACL from being exceeded. The NMFS Regional Administrator no longer has in-season closure authority for the recreational fishery if the RHL or ACL is expected to be exceeded. For reactive AMs, paybacks of ACL overages may be required in a subsequent fishing year, depending on stock status and the magnitude of the overage, as described below. ACL overages in the recreational fishery are evaluated by comparing the most recent 3-year average recreational ACL against the most recent 3-year average of recreational dead catch (i.e., landings and dead discards). If average catch exceeds the average ACL, then the appropriate AM is determined based on the following criteria:

1. If the stock is overfished ( $B < \frac{1}{2} B_{MSY}$ ), under a rebuilding plan, or the stock status is unknown: The exact amount, in pounds, by which the most recent year's recreational ACL has been exceeded, will be deducted in the following fishing year, or as soon as possible once catch data are available.
2. If biomass is above the threshold, but below the target ( $\frac{1}{2} B_{MSY} < B < B_{MSY}$ ), and the stock is not under a rebuilding plan:
  - If only the recreational ACL has been exceeded, then adjustments to the recreational management measures (bag, size, and seasonal limits) would be made in the following year, or as soon as possible once catch data are available. These adjustments would take into account the performance of the measures and the conditions that precipitated the overage.
  - If the Acceptable Biological Catch ( $ABC = \text{recreational ACL} + \text{commercial ACL}$ ) is exceeded in addition to the recreational ACL, then a single year deduction will be made as a payback, scaled based on stock biomass. The calculation for the payback amount in this case is:  $(\text{overage amount}) * (B_{msy} - B) / \frac{1}{2} B_{msy}$ .
3. If biomass is above the target ( $B > B_{MSY}$ ): Adjustments to the recreational management measures (bag, size, and seasonal limits) would be considered for the following year, or as soon as possible once catch data are available. These adjustments would take into account the performance of the measures and the conditions that precipitated the overage.

The 2016-2018 recreational ACLs were set using assessments that used the pre-revision MRIP data; therefore, it is necessary to use catch estimates based on the old MRIP estimation methodology to compare pre-2019 recreational catch to the ACLs. MRIP stopped publicly releasing pre-calibration MRIP data after 2017, but back-calibrated 2018 recreational harvest data were provided to Council staff by request. 2018 dead discards were estimated by assuming the same ratio of recreational discards to landings for the 2018 pre- and post-revision MRIP data (using post-revision data from the 2019 Northeast Fisheries Science Center data update).

The resulting AMs evaluation shown in Table 6 indicates that the 2016-2018 average recreational catch (5.37 million pounds) was lower than the 2016-2018 average ACL (5.69 million pounds), meaning that a recreational accountability measure has not been triggered for application in 2020.

**Table 6:** Evaluation of summer flounder recreational accountability measures using 3-year moving average of the recreational ACL compared to 3-year moving average of recreational catch (using old MRIP estimation methodology).

	<b>Recreational Harvest (Old MRIP)</b>	<b>Recreational Dead Discards (Old MRIP)</b>	<b>Total Dead Recreational Catch (Old MRIP)</b>	<b>Recreational ACL</b>
<b>2016</b>	6.18	1.48	7.66	6.83
<b>2017</b>	3.19	0.94	4.13	4.72
<b>2018</b>	3.35	0.97	4.32	5.53
<b>AVG</b>	4.24	1.13	<b>5.37</b>	<b>5.69</b>

**Predicting 2020 Harvest and the Impacts of Management Measures**

When developing recommendations for recreational summer flounder measures, it is typically assumed that if regulations remain unchanged, effort and harvest in the upcoming year will be similar to projected harvest in the current year. This assumption does not always hold true. Harvest is impacted by many interacting factors including management measures, availability, factors influencing fishing effort other than regulations, weather, economic conditions, angler demographics, and availability and management measures for other recreational species. The impacts of these factors on harvest in future years can be difficult to accurately predict.

Table 7 provides estimates of the number of trips where summer flounder was reported as the primary target from Maine through North Carolina, and the estimated percentage of these directed summer flounder trips relative to directed trips from all species Maine through North Carolina. The number of directed recreational summer flounder trips has been generally declining since 2011 but summer flounder trips remain a relatively substantial portion of total fishing trips within the management unit (12% in 2018; Table 7). Summer flounder year class strength can be variable and can impact availability of the fish to anglers. Recruitment for summer flounder has been below average since about 2010, and availability of fish to anglers in the past few years has also been reported as relatively low.

The Monitoring Committee should consider these and other potentially relevant factors when discussing expected 2020 recreational harvest and any potential changes in management measures.

**Table 7:** Number of summer flounder directed recreational fishing trips, and percentage of total directed trips, Maine through North Carolina, 2007 to 2018.

	<b>Number of Summer Flounder Directed Trips (millions)<sup>a</sup></b>	<b>Percentage of Directed Trips Relative to Total Trips<sup>a,b</sup></b>
<b>2007</b>	9.85	11%
<b>2008</b>	8.84	10%
<b>2009</b>	10.42	11%
<b>2010</b>	11.92	12%
<b>2011</b>	13.03	14%
<b>2012</b>	11.89	13%
<b>2013</b>	11.23	13%
<b>2014</b>	11.49	13%
<b>2015</b>	10.61	13%
<b>2016</b>	10.19	12%
<b>2017</b>	8.62	10%
<b>2018</b>	8.59	12%

<sup>a</sup> Revised MRIP estimated number of recreational fishing trips (expanded) where the primary target species was summer flounder, Maine through North Carolina. Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 24, 2018 and October 31, 2019.

<sup>b</sup> Source of total trips for all species combined, revised MRIP data: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 24, 2018 and October 31, 2019.

At their respective August 2019 meetings, the Council and Board received presentations on the preliminary results of a summer flounder recreational Management Strategy Evaluation (MSE) for F-based recreational management conducted by Dr. Gavin Fay and Dr. Jason McNamee (Fay and McNamee 2019). This project includes two main components: a fleet dynamics model, which expands on previous work to forecast how changes in recreational measures impact changes in harvest, and a forecasting simulation model, which tests the performance and of current and alternative management approaches (including *status quo* and F-based management, both with and without incorporating estimates of uncertainty).

The fleet dynamics model is of particular relevance during the process of setting recreational measures for the upcoming fishing year to predict how changes in regulations are expected to influence harvest and discards. The Monitoring Committee has previously noted that the fleet dynamics model generally performs well and produces the expected results from modifications to management measures (bag limits, size limits, and seasons), and that this model will allow for better comparisons of the tradeoffs associated with increasing size limits on increasing dead discards. However, at the time of this memo, some adjustments were still needed to improve the performance of the model, which currently appears to be overestimating harvest in some states. Staff will work with the model developers to test the fleet dynamics model for the MC's consideration in developing 2020 measures. If possible, the MC should use this model alongside typical methods of analysis when considering 2020 measures at the state or coastwide level.

## **2020 Staff Recommendation**

The projected 2019 harvest for summer flounder using data through wave 4 is 7.06 million pounds, approximately 8% below the 2020 RHL of 7.69 million pounds. Relative to projected 2019 harvest, this would leave room for an approximate 9% liberalization in harvest in weight. However, wave 5 data should be considered once available as wave 5 accounted for about 28% of summer flounder harvest in 2017-2018. As discussed below, staff recommend departing from the measures used in recent years under conservation equivalency and adopting an alternative management strategy to reduce recreational discards and increase angler satisfaction. The following sections describe the challenges of current management and possible approaches toward improving fishery outcomes in 2020.

### ***Challenges of Conservation Equivalency as Currently Configured***

The system of conservation equivalency was originally adopted through Framework 2/Addendum XIV to alleviate perceived inequities of coastwide management measures on different states within the management unit, given summer flounder migrations and differences in availability by region. Conservation equivalency has been adopted every year since 2001, as coastwide measures have not been a palatable option for most states.

Over the years, measures under conservation equivalency have become more complex. Since 2014, regional conservation equivalency has been implemented with some success in increasing consistency in measures between neighboring states; however, the current regional management system still includes many single-state regions and a set of highly complex measures including measures by state, wave, fishing mode, and sub-area. This has made analyzing recreational measures increasingly complicated, and additionally, complex measures generally lead to more difficult enforcement and higher noncompliance, especially with a high frequency of changes to the measures. MRIP data is being used at fine scales for which it was not designed, with high uncertainties in the estimates at these levels, increasing the uncertainty in the outcomes of the measures set.

Conservation equivalency was designed around constraining harvest to the RHL, prior to implementation of annual catch limits and accountability measures. As such, conservation equivalency has historically used annual adjustments to meet a harvest-based target, based on an evaluation of a single prior year's performance, without thorough consideration of how measures influence dead discards. Although the Monitoring and Technical Committees have repeatedly acknowledged the discards issue, it is also recognized that the main requirement of conservation equivalency as currently outlined in the FMP is that the combination of state and regional measures must be expected to constrain harvest to the RHL, with no discussion of accounting for discards. In addition, it has typically been very difficult to predict precisely how regulations will influence dead discards, especially given uncertainty in discard estimates and a time lag in estimates of dead discards in weight.

When reductions are required in the recreational fishery, increases in size limits are typically the most effective and efficient way to accomplish a reduction. In addition, stakeholders in many states are not receptive to decreases in season under current season lengths, as longer seasons allow more opportunities to fish even if fewer fish can be retained.

One result of the fleet dynamics model developed by Fay and McNamee (2019) indicates that although increases in minimum sizes are effective at reducing harvest, they also, not surprisingly, result in increased discards. While only a portion (10%) of recreational discards are assumed to experience discard mortality, when accounting for this mortality, it is likely that such adjustments to measures are not having as much of a reduction on total removals as assumed. Figure 4 below, adapted from their report, illustrates this point, with the report noting, "When accounting for both harvest and discards, the interaction between the two model effects largely cancel each other out, minimizing the effect of minimum size as a management tool. There is still a decrease in catch (harvest + discards) but it is much less than when viewed by harvest alone."

Many managers, advisors, and other stakeholders have repeatedly expressed concerns with the relatively high minimum size limits implemented in some states under conservation equivalency. These are limits are perceived by many as being too high and associated with negative socioeconomic and biological outcomes.<sup>2</sup> Since 2002, size limits have fluctuated substantially in some states, especially under state by state conservation equivalency prior to 2014. Size limits were generally highest in 2008-2010, were liberalized somewhat in the next few years, and increased again after 2016 when a large coastwide reduction in harvest was required (Table 8).

Many stakeholders have argued that the current relatively high size limits focus fishing pressure disproportionately on the largest, most fecund female summer flounder, potentially influencing the sex ratio of the population and the reproductive potential of the stock. Female summer flounder grow faster and mature faster compared to males. The sex ratio for younger fish is skewed toward males, and as the cohort ages, the balance in the sex ratio shifts toward females. In a study by Morson et al. (2015), among thousands of fish sampled in the recreational fishery in 2010 and 2011 from North Carolina to Maine, the probability that a given fish landed in the recreational fishery was female was 80% at the smallest minimum sizes and approached 100% with increasing fish size. Many have stated concerns about how selecting on larger fish in the recreational fishery may be influencing recent trends of below-average recruitment. For many species, age and size dependent maternal effects on egg and larval quality can influence recruitment (Hixon et al. 2013; Gwinn et al. 2013). For summer flounder, it is not clear at this time to what extent recreational fishery selectivity may be influencing recruitment and other stock dynamics. Several factors have been hypothesized as potentially influencing low recruitment, but recent evaluations have not been able to conclusively separate the primary driver or drivers of this trend.

Anglers have expressed frustration with the very high release rates and low retention ability for summer flounder in the recreational fishery due to size limit regulations. The high rate of discards has decreased angler satisfaction and angler ability to keep fish for personal consumption. In addition, there is increasing concern regarding perceived waste in the fishery and the mortality associated with discards. Over the past 10 years (2009-2018), approximately 89% of summer flounder caught recreationally were estimated to be released (Table 2), with a 10% assumed discard mortality rate applied to those released fish. Some stakeholders and researchers have suggested that actual discard mortality rates may be higher under some conditions (Henderson and Fabrizio 2014), and that managers should take steps to reduce recreational discard mortality. Henderson and Fabrizio (2014) also found that discard mortality on undersized recreational summer flounder catch may be higher than for larger fish, although some of this effect may be explained by different emigration rates from their study area in the Chesapeake Bay.

---

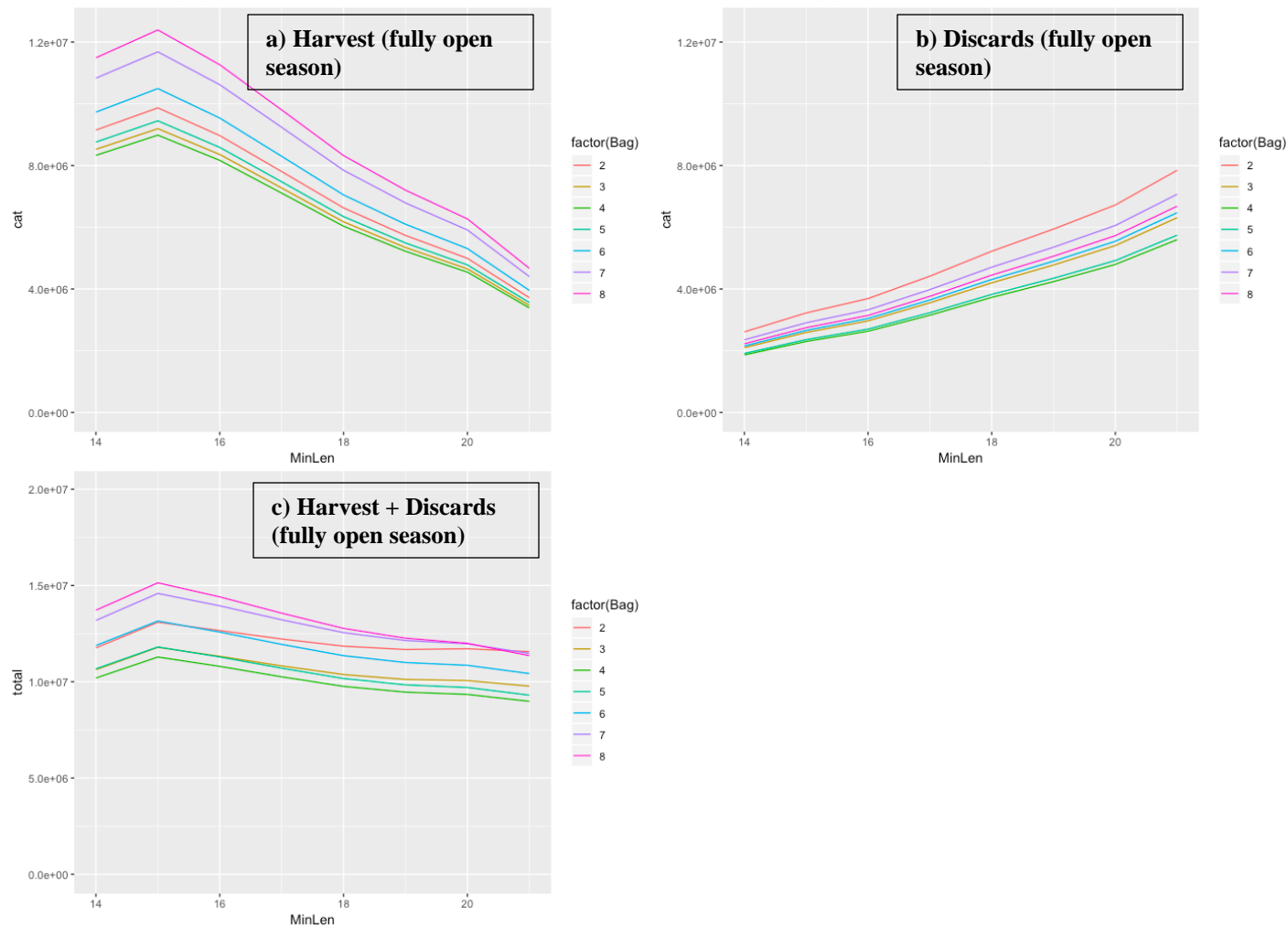
<sup>2</sup> For examples of recent comments, see: <http://www.mafmc.org/s/Summer-Flounder-Specifications-Supplemental-Comments-10-4-19.pdf>.



**Table 8:** Summer flounder size limits by state under conservation equivalency, 2002-2019. Includes the size limit in place for most of the state for most of the fishing season; does not account for special size limit programs such as shore mode programs or different size limits by area. Information is from prior recreational memos and has not been validated by states.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
MA	16.5	16.5	16.5	17	17.5	17.5	17.5	18.5	18.5	17.5	16.5	16	16	16	16	17	17	17
RI	18	17.5	17.5	17.5	17.5	19	20	21	19.5	18.5	18.5	18	18	18	18	19	19	19
CT	17	17	17	17.5	18	18	19.5	19.5	19.5	18.5	18	17.5	18	18	18	19	19	19
NY	17	17	18	17.5	18	19.5	20.5	21	21	20.5	19.5	19	18	18	18	19	19	19
NJ	16.5	16.5	16.5	16.5	16.5	17	18	18	18	18	17.5	17.5	18	18	18	18	18	18
DE	17.5	17.5	17.5	17.5	17	18	19.5	18.5	18.5	18	18	17	16	16	16	17	16.5	16.5
MD	17	17	16	15.5	15.5	15.5	17.5	18	19	18	17	16	16	16	16	17	16.5	16.5
VA	17.5	17.5	17	16.5	16.5	18.5	19	19	18.5	17.5	16.5	16	16	16	16	17	16.5	16.5
NC	15.5	15.5	14	14	14	14	14	15	15	15	15	15	15	15	15	15	15	15
<b>Average</b>	16.9	16.9	16.7	16.6	16.7	17.4	18.4	18.7	18.6	17.9	17.4	16.9	16.8	16.8	16.8	17.6	17.4	17.4
<b>Weighted Average<sup>a</sup></b>	16.8	16.7	16.8	16.7	16.6	17.8	18.8	18.5	18.6	18.2	17.9	17.9	17.5	17.5	17.7	18.2	18.1	-

<sup>a</sup> Average weighted by percent of harvest from each state.



**Figure 4:** Modeled effects of size limit increases from Fay and McNamee (2019) indicating that increases in size limits decrease harvest and increase discards, the effects of which largely cancel each other out, resulting in only slight to moderate decreases in total catch with increasing size.

### *Alternative Size Limit Regulations*

Many advisors and other stakeholders have requested evaluation of alternatives to high minimum size limits. Examples include slot limits (specification of a minimum and maximum size limit, with or without trophy fish allowance) or cumulative length limit (where all summer flounder of any length would count toward a total length allowance per angler).

Harvest slots are designed to protect both immature fish and older, larger fish that tend to have greater relative reproductive value. Several studies have suggested potential benefits of implementing slot limits to achieve multiple, sometimes conflicting, recreational management objectives. For example, Gwinn et al. (2013) modeled various recreational harvest strategies and found that harvest slots and minimum length limits were both effective at comprising between yield, numbers of fish harvested, and catch of trophy fish while also conserving reproductive biomass. An increase in fish harvested was assumed to have a positive impact on angler satisfaction given that it allowed for more fish to be harvested, while the biomass yield in weight was lower under a slot limit than under a minimum size only limit. The results of this study were not contingent on maternal effects, meaning that any size-dependent maternal effects on egg and larval quality that may be present would only enhance the benefits of slot limits.

The Monitoring Committee has discussed slot limits in the past and expressed reservations about their implementation in practice for summer flounder under current harvest limits and the current configuration of the FMP. An increase in harvest in numbers of fish is predicted under slot limits, and it is likely that very restrictive slots, combined with restrictive bag limits and seasons, may be required constrain harvest to the RHL. In addition, it is difficult to predict how angler behavior (including discarding behavior and compliance) would change under implementation of a slot limit for summer flounder when such measures have never been implemented for this species before.

A detailed slot limit analysis using for-hire catch data from 2008 was considered by the Monitoring Committee in 2009, including a range of slot limit options, bag limits, and options for trophy fish in combination with slot limits (Wong 2009). The results indicated that compared to a standard minimum size limit, the slot limit options considered would “certainly result in greatly increased numbers of fish harvested” due to the higher availability of smaller fish compared to larger fish. A management strategy evaluation analysis by Wiedenmann et al. (2013) also found that slot limits could result in an increase in the number of summer flounder harvested per angler, as well as a small reduction in the total number of female summer flounder harvested. They found that slot limits generally resulted in lower harvest and more discards by weight, and higher and more frequent ACL overages, compared to minimum size limits.

It is difficult to predict how an increase in the number of fish harvested would translate to harvest in weight, which is used to evaluate performance relative to the RHL. An increase in harvest in numbers of fish under a slot limit may not necessarily lead to a substantial increase in harvest in weight if the slot harvested fish are on average smaller than they would be under a standard minimum size limit, but this has been difficult to analyze due to the difficulty in predicting changes in landings and discards at length. Total weight of harvest and dead discards under a slot limit would depend heavily on availability of summer flounder by age class, along with other variable factors that impact effort and catch rates as discussed in the previous section of this memo.

The potential impacts of slot limits were also evaluated in the recent Framework 14/Addendum XXXI document. In this action, the Council and Board approved the use of a maximum size in the recreational regulations for summer flounder and black sea bass. This action is pending implementation by NMFS but is expected to be available for use in 2020.<sup>3</sup> Thus, the Monitoring Committee should consider whether a slot limit or other alternative to a single minimum size may be appropriate on a coastwide basis in 2020. Alternatively, the Monitoring Committee could consider encouraging states to evaluate slot limits and other alternative management approaches under conservation equivalency.

### ***Staff Recommendation***

Staff recommend that the Monitoring Committee consider alternative approaches to recreational management in 2020, including alternatives to the current size limits that would reduce regulatory discards and increase retention of fish while preventing the ACL from being exceeded. Given the language in the FMP requiring that conservation equivalency constrain harvest to the RHL, in the longer term, it may be necessary to consider a plan amendment that would re-evaluate conservation equivalency requirements to include, among other modifications, a better ability to account for how changes to measures influences discards and total removals and consideration of the recreational ACL in addition to the RHL.

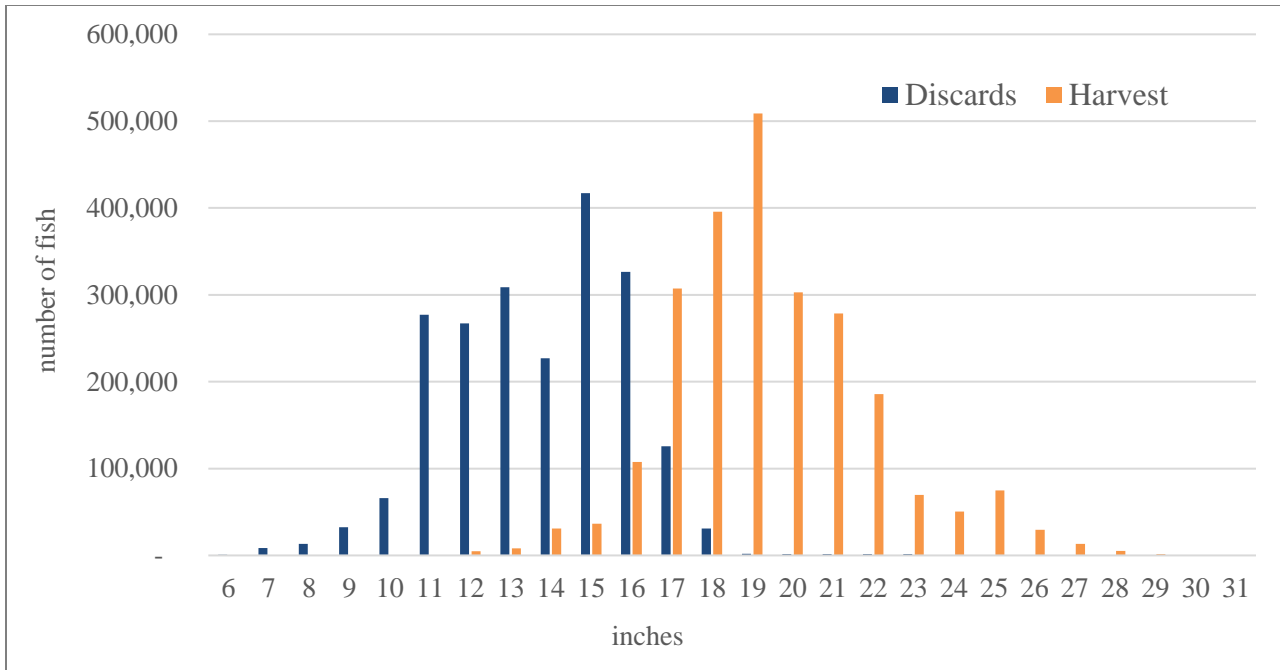
Based on preliminary analysis, **staff recommend consideration of a coastwide slot limit** that would preserve the spawning capacity of larger, older female fish while also protecting immature fish from harvest and limiting total removals of summer flounder to prevent overfishing.

As discussed above, the outcomes of slot limits are difficult to evaluate given current data and uncertainties about availability by size and angler behavior. Harvest and discard length frequencies can be used to evaluate what lengths are being landed vs. discarded under the current regulations, but it is difficult to predict how this distribution would change under modified regulations. However, the distribution data from 2018 gives some sense of the recent availability of different sizes classes to anglers (Figure 5). It is expected that harvest and total removals would increase under a slot limit as discussed above. Therefore, adjustments to possession limits and seasons are evaluated to provide a buffer against an expected increase in harvest.

Based on harvest at length and expanded dead discard at length data from 2018, an estimated 1.37 million fish in the 17"-19" range were either harvested or subject to discard mortality. Assuming that many of the discards in that range were regulatory, and that under a 17"-19" slot most of the fish encountered in that size range would not have been discarded, the dead discard estimate here could be scaled up by a factor of 10 (given the 10% discard mortality rate) to produce an estimated total theoretical harvest of 2.80 million fish under a slot limit in that size range. This represents a 16% increase from estimated 2018 harvest in numbers, and a 26% increase from projected 2019 harvest in numbers. This should be considered a very rough estimate and does not account for non-compliance or changes in effort or availability.

---

<sup>3</sup> See: <http://www.mafmc.org/actions/sfsbsb-recreational-management-fw>.



**Figure 5: 2018 expanded recreational dead discard and landings length frequency data for summer flounder. Length frequency data is from an MRIP query as of 10/31/19. Discard length frequency from M. Terceiro, pers. comm., 11/4/19. Length bins include harvest or discards from X.0 to X.99 inches.**

As indicated by the 2018 expanded harvest per angler trip data in Table 9, 67% of trips and 45% of the number of fish landed in 2018 were from angler-trips where only one summer flounder was landed. Some of this trend is likely related to the size limit regulations, meaning that many anglers are not able to find and land more than one or two legal sized summer flounder on a given trip due to the lower availability of higher size classes. If a slot limit were implemented with no changes to possession limits, it is likely that this distribution would shift toward higher numbers of fish retained per angler. Under a coastwide slot limit, a reduced coastwide possession limit should be considered to account for increases in encounters with legal size fish within the slot.

A possession limit analysis of the 2018 harvest per angler trip data was conducted to estimate the reduction from moving to a 1 or 2 fish possession limit on a coastwide basis. Assuming that definitively non-compliant harvest remains non-compliant, a 2 fish possession limit was associated with an estimated 9% coastwide harvest reduction, while a 1 fish possession limit was associated with a 31% coastwide harvest reduction (Table 9). These reduction percentages may be overestimated given that the non-compliance evaluation was based on the highest current state possession limit (6 fish) and there is likely other non-compliant harvest in the data that would likely remain.

As previously noted, the potential impacts of measures on recreational discards and discard mortality should be considered to the extent possible, but there are limited data to predict the effects of this type of bag limit reduction. Many stakeholders have commented that under a lower size limit and lower bag limit, the length of fishing trips is expected to decrease, such that anglers will catch their limit and stop targeting summer flounder, but under a very low bag limit it is difficult to predict the extent to which this would occur.

**Table 9: Expanded harvest per recreational angler trip for summer flounder in 2018, based on MRIP data as of 10/31/19, and associated estimated reduction for a coastwide 1 or 2 fish possession limit. Definitely non-compliant harvest (harvest per angler of over 6 fish) was assumed to remain noncompliant under a reduced bag limit. Actual non-compliance may be higher given differences in possession limit by state in 2018.**

	2018 harvest per angler trip				2 fish bag limit				1 fish bag limit			
# of fish	Angler trips	% of Trips	Total Fish	% of Harvest (# of fish)	# of fish	Angler trips	Total Fish	% of Harvest (# of fish)	# of fish	Angler trips	Total Fish	% of Harvest (# of fish)
1	1,085,098	67%	1,085,098	45%	1	1,085,098	1,085,098	50%	1	1,085,098	1,085,098	50%
2	385,445	24%	770,889	32%	2	385,445	770,889	35%	1	385,445	385,445	18%
3	113,646	7%	340,937	14%	2	113,646	227,292	10%	1	113,646	113,646	5%
4	31,865	2%	127,458	5%	2	31,865	63,729	3%	1	31,865	31,865	1%
5	5,428	0.30%	27,142	1%	2	5,428	10,857	0%	1	5,428	5,428	0%
6	4,063	0.20%	24,379	1%	2	4,063	8,126	0%	1	4,063	4,063	0%
7	343	0.00%	2,400	0.10%	7	343	2,400	0%	7	343	2,400	0%
8	11	0.00%	91	0.00%	8	11	91	0%	8	11	91	0%
9	-	-	-	-	9		0	0%	9		0	0%
10	2,195	0.10%	21,951	1%	10	2,195	21,951	1%	10	2,195	21,951	1%
<b>Tot.</b>	<b>1,628,094</b>	<b>100%</b>	<b>2,400,346</b>	<b>100%</b>		<b>1,628,094</b>	<b>2,190,434</b>			<b>1,628,094</b>	<b>1,649,987</b>	
							<b>Reduc. (# fish)</b>	<b>209,913</b>			<b>Reduc. (# fish)</b>	<b>750,359</b>
							<b>Reduc. (%)</b>	<b>9%</b>			<b>Reduc. (%)</b>	<b>31%</b>

Under a coastwide slot limit, staff also propose a coastwide season. The current non-preferred coastwide season, May 15-September 15, was evaluated to estimate the effects on harvest at a coastwide level. Table 10 shows the percent reduction that would be estimated on a coastwide basis, based on 2018 data, associated with closing one day per wave in each state. The coastwide sum represents the percent reduction associated with closing one day per wave in all states. All reductions are relative to coastwide harvest. For example, closing one day in wave 5 in NJ produces a 0.107% reduction in coastwide harvest, and closing one day in wave 5 for all states results in a 0.303% reduction in coastwide harvest.

Table 11 uses the information in Table 10 to calculate an expected change in harvest by state and wave under a May 15-September 15 coastwide season. On a coastwide basis, this season is estimated to produce about an 8% reduction in harvest. Since this is based only on 2018 data, these results should be interpreted cautiously given fluctuations in state harvest by wave on an annual basis. This analysis also assumes equal harvest distribution throughout a wave, which is an assumption that typically does not match reality.

**Table 10: Percent reduction, on a coastwide basis, associated with closing one day per wave in each state, based on 2018 harvest data by state and wave.**

a)	WAVE 1	WAVE 2	WAVE 3	WAVE 4	WAVE 5	WAVE 6
MA	0.000	0.000	0.014	0.016	0.031	0.000
RI	0.000	0.000	0.011	0.098	0.004	0.000
CT	0.000	0.000	0.066	0.036	0.007	0.000
NY	0.000	0.000	0.246	0.152	0.088	0.000
NJ	0.000	0.000	0.333	0.455	0.107	0.000
DE	0.000	0.000	0.023	0.025	0.010	0.000
MD	0.000	0.000	0.001	0.022	0.009	0.000
VA	0.000	0.000	0.009	0.056	0.032	0.001
NC	0.000	0.001	0.006	0.012	0.016	0.005
COAST	0.000	0.001	0.710	0.873	0.303	0.005

**Table 11: Percent reduction, on a coastwide basis, estimated from a May 15-September 15 coastwide season, based on 2018 harvest data by state and wave and the reduction in open days per wave compared to the 2019 measures. Negative values indicate an increase in harvest. Given annual fluctuations in state harvest proportions by wave, this should be considered a rough estimate.**

a)	WAVE 1	WAVE 2	WAVE 3	WAVE 4	WAVE 5	WAVE 6	TOTAL
MA	0.000	0.000	-0.115	0.000	0.746	0.000	0.631
RI	0.000	0.000	0.145	0.000	0.180	0.000	0.325
CT	0.000	0.000	0.794	0.000	0.099	0.000	0.893
NY	0.000	0.000	2.950	0.000	1.315	0.000	4.265
NJ	0.000	0.000	-2.996	0.000	0.852	0.000	-2.144
DE	0.000	0.000	0.322	0.000	0.439	0.000	0.761
MD	0.000	0.000	0.021	0.000	0.417	0.001	0.439
VA	0.000	0.000	0.126	0.000	1.484	0.046	1.656
NC	0.010	0.031	0.082	0.000	0.752	0.280	1.155
COAST	0.010	0.031	1.330	0.000	6.284	0.326	7.982

Given the above analyses, staff recommend that the Monitoring Committee consider possession limit and season adjustments that could balance an expected increase in harvest under a harvest slot. Specifically, **staff recommend that the Monitoring Committee consider a coastwide 1-fish possession limit, 17"-19" harvest slot, and an open season of May 15-September 15 as a starting point for discussion.** Alternatively, a 2 fish possession limit could be considered but would possibly need to be associated with a narrower harvest slot or reduced season.

Although there is uncertainty in the proposal outlined above, there is currently a slight buffer for liberalization given projections through wave 4, and the stock is not overfished and overfishing is not occurring. As discussed above, effects of measures on discards should be more thoroughly considered in the process of setting recreational measures, and these measures may provide more opportunities for retention and reduce regulatory discards within this size range. However, the Monitoring Committee should consider how discards may change under a very low possession limit and how discards in other size classes will be affected. An attempt at a different set of management measures on a one-year trial basis could be attempted in 2020 as an effort to obtain data about how angler behavior and landing and discarding patterns change under a slot limit.

#### *Alternate Recommends for Conservation Equivalency*

If conservation equivalency is preferred instead, the non-preferred coastwide and precautionary default measures would need to be recommended by the MC. The current non-preferred coastwide measures consist of a 4-fish possession limit, a 19-inch total length (TL) minimum size, and an open season from May 15-September 15. Again, these measures will take effect in federal waters and for federal party/charter permit holders starting on January 1, 2020 until replaced (if applicable) by the implementation of conservation equivalency or alternative coastwide measures.

Given the implementation of state and regional measures for many years, the expected harvest from coastwide measures has been difficult to evaluate. The MC should attempt to evaluate the current non-preferred coastwide measures using the fleet dynamics tool if possible. If the MC does not support or is unable to justify a set of coastwide measures involving alternative size limit approaches, staff recommend *status quo* non-preferred coastwide measures under conservation equivalency. Although projected 2019 harvest is 8% below the 2020 RHL, given the uncertainty in the outcome of these coastwide measures, staff recommend not liberalizing the non-preferred coastwide measures at this time.

Staff also recommends that if conservation equivalency is selected, the existing precautionary default measures of a 2-fish possession limit, 20-inch TL minimum fish size, and an open season from July 1-August 31 be maintained. These measures are likely to be sufficiently restrictive to deter states from implementing measures that do not follow the agreed upon conservation equivalency guidelines for the year.



## **References**

Fay, Gavin, and Jason E. McNamee. July 2019. Draft Report on the Project: Evaluation of F-Based Management for the Recreational Summer Flounder Fishery. Available at:

[http://www.mafmc.org/s/Report-on-Fluke-MSE\\_forMC\\_07-2019.pdf](http://www.mafmc.org/s/Report-on-Fluke-MSE_forMC_07-2019.pdf).

Gwinn, DC; Allen, MS; Johnston, FD; Brown, P; Todd, CR; and R Arlinghaus. 2015. Rethinking length-based fisheries regulations: The value of protecting old and large fish with harvest slots. *Fish and Fisheries*. 16. 259-281. 10.1111/faf.12053.

Henderson, Mark & Fabrizio, Mary. 2014. Estimation of summer flounder (*Paralichthys dentatus*) mortality rates using mark-recapture data from a recreational angler-tagging program. *Fisheries Research*. 159. 1–10. 10.1016/j.fishres.2014.05.003.

Hixon, MA; Johnson, DW; and SM Sogard. 2013. BOFFFFs: on the importance of conserving old-growth age structure in fishery populations. *ICES Journal of Marine Science*, 71: 2171-2185.

Morson, Jason M., Eleanor A. Bochenek, Eric N. Powell, Emerson C. Hasbrouck, Jennifer E. Gius, Charles F. Cotton, Kristin Gerbino & Tara Froehlich. 2015. Estimating the Sex Composition of the Summer Flounder Catch using Fishery-Independent Data, *Marine and Coastal Fisheries*, 7:1, 393-408, DOI: 10.1080/19425120.2015.1067261.

Wiedenmann, J., M. Wilberg, E. Bochenek, J. Boreman, B. Freeman, J. Morson, E. Powell, B. Rothschild, and P. Sullivan. 2013. Evaluation of management and regulatory options for the summer flounder recreational fishery. Available at: <http://www.mafmc.org/s/A-Model-to-Evaluate-Recreational-Management-Measures.pdf>

## **Written Comments on Summer Flounder 2020 Recreational Measures and General Summer Flounder Management Issues: November 2019**

---

Several written public comments were submitted on summer flounder recreational measures via email and web form for the December 2019 joint meeting. Some of these comments contained attachments which are also provided here. Comments include:

1. Nicholas Calio 11/15 comments
2. Tom Smith 11/7 email and attachment (an additional attachment to this email, a memo dated 9/15/19 was previously provided to the Council and Board and can be found at [http://www.mafmc.org/s/Tab12\\_Summer-Flounder-Specifications\\_2019-10.pdf](http://www.mafmc.org/s/Tab12_Summer-Flounder-Specifications_2019-10.pdf)).
3. Tom Smith 11/19 email and attachment
4. Email exchange in response to Tom Smith's comments, including comments from Jim Lovgren, Tom Smith, Tom Fote, and Jeff Eutsler
5. Ryan Landolfi 11/25 comments
6. Timothy Anfuso 11/25 comments
7. Mike Plaia 11/25 comments
8. Bruce Corrine 11/26 comments
9. Larry Hart 11/26 comments
10. Tom Trageser 11/26 comments
11. Jack Conway 11/26 comments
12. Alan Kenter 11/26 comments
13. Paul Geelan 11/26 comments
14. Dave Daly 11/26 comments
15. Martin Smith 11/26 comments
16. Roger Neset 11/27 comments
17. Bonnie Montevechi 11/27 comments
18. Additional emails from Tom Smith received through 11/27

---

**Name:** NICHOLAS CALIO

**Email:** [NACALIO@COMCAST.NET](mailto:NACALIO@COMCAST.NET)

**Topic(s):** Tab 12: Summer Flounder 2020 Recreational Specifications

**Comments:** Every year in NJ we have a limited season for summer flounder, approximately 100+ days. Is there any consideration given to the number of days that are unfishable during this period. Flounder fishing is typically a drifting situation which is nearly impossible when you have winds in excess of 15mph. We lost many days the past few seasons due to heavy winds and small craft advisories.

Would you please consider allocating additional days for summer flounder as a minimum the number of days that small craft advisories are posted. Ideally this would be added to the end of the summer flounder season and would reduce the number of days between the close of summer flounder and the opening of sea bass.

I fish in the Cape May area, and have been fishing for over 30 years. I keep a log, the 2019 was the worst ever for summer flounder in OUR area. It was worse than 2018 and 2018 was worse than 2017. I don't understand the rationale for not having slot limits rather than harvesting breeding female 18 inches or larger.

(Sent via [Mid-Atlantic Fishery Management Council](#))

## Kiley Dancy

---

**From:** Tom Smith <smith.tom560@gmail.com>  
**Sent:** Thursday, November 7, 2019 2:08 PM  
**To:** Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; NICHOLA.MESERVE@state.ma.us; White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Fote, Tom; JASON.SNELLBAKER@dep.nj.gov; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; CSTARKS@asmfc.org; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; PETER.CLARKE@dep.nj.gov; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; JEFFEUTSLER@me.com; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Lovgren, Jim; GREGDI@voicenet.com; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFOOD@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; harborman@optonline.net; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan  
**Subject:** Summer Flounder Fishery - Upcoming Meetings / Future Regulations  
**Attachments:** ASMFC December 19 Mtg.pdf; Joint Commission Council Meeting Executive Summary v4.pdf

Ladies and Gentlemen,

Many or some of you may have already read the attached analysis and materials which were disseminated at the Joint Commission and Council October Meeting in Durham North Carolina hosted by MAFMC regarding the Summer Flounder Fishery as well as other stocks. A copy of the Executive Summary along with details and analysis included in the briefing materials for that meeting are contained in the second attachment to this email titled "Joint Commission Council Meeting Executive Summary v4". The briefing material was included in Tab 12 under the Summer Flounder Section which Kiley Dancy presented. In addition, I've attached a second file which I implore everyone associated with the management of this fishery to please read as it highlights long-term trends in the fishery leading to its decline since the biomass and SSB hit their historical highs in the 2003 / 2004 time frame. The fishery has since been on a prolonged 15-yr decline which will continue unless changes as outlined in the memorandum are acknowledged and remedial measures adopted to current regulations. This vital fishery is in trouble and corrective measures need to be taken or we're risking the future of a once viable and healthy fishery being lost.

I need to point out that all data used in the analysis, trends, findings and conclusions are from the 57th and 66th SAW, marine fisheries own data, with the exception of a chart from the Rutgers Sex and Length Study used to illustrate the dramatic change which has taken place over the last four decades in catch composition in this fishery and the impact it's caused on the harvest of females versus males and significantly older age classes versus younger age classes. Regulatory decisions which made sense at the time have caused behavioral changes in the fishery causing irreparable harm in catch composition, reduced biomass levels, material gender and age composition alterations of SSB resulting in greatly weakened relative recruitment strength leading to significantly declining recruitment trend. The current management methodology combined with regulatory decisions over the last two decades have caused mandatory or behavioral changes in catch composition which in turn has caused this fishery to decline substantially. My analysis is based on decade long trends, not singular data points or anecdotal evidence. If we don't acknowledge what the data is telling us, we're at risk of losing another very vital fishery which will have far reaching economic impacts on businesses and people involved, both commercial and recreational. We're tied at the hip in that respect. I'm pleading with the Commission, Council, Technical Committees, Advisory Panels and anyone else involved in the management of this fishery to read the attached Memorandum titled "ASMFC December 19 Mtg" and draw your own conclusions.

I'd also like to recognize and personally thank Dustin Leaning and Kiley Dancy for their assistance in getting some of this material included in the briefing materials at the Joint Commission / Council Mtg in October. This data needs to get out and it needs to be viewed by as many people as possible with an open mind. Trend analysis is intended to identify changes over a period of time in anything that's undergone a change of fortune, including businesses or in this case fisheries. If you map the data out and compare relative changes over periods of time it will inevitably guide you in the right direction and identify issues or causes in this case holding back the fishery.

I've put this together not to discredit or disparage anyone involved in managing this fishery. I applaud everyone for dealing with the complexities involved in fishery management. You have my upmost respect as you do from countless others. As I mention in the draft, I consider myself a stakeholder in this fishery as we all are and am simply connecting the dots with data science has provided to illustrate reasons why the fishery has declined 40% - 50% over the last 15-years. Changes need to occur to reverse the fate of this fishery or the declines will continue which benefits no one.

If anyone has questions or comments, feel free to email me. If I left anyone out, feel free to forward the attached documents to them on my behalf. This fishery (SSB) grew 900% between 1989 and 2003, there's no reason it can't experience that kind of growth prospectively but regulatory changes need to be made for that to happen which address the causes of the decline outlined in the draft.

Dustin and Kiley, I'd ask again for your help including this material in briefing materials for any upcoming meetings by ASMFC or MAFMC involving the Summer Flounder Fishery and policy decisions governing 2020 and 2021. I'd ask the Commission and Council in making those policy decisions to heed what the data is telling us. If we don't address these issues immediately, the fishery is destined to suffer more irreparable damage over the foreseeable future than it already has over the last two decades.

Respectfully Submitted

Tom Smith

# Memo

**To:** ASMFC - Commissioners and Summer Flounder Board  
Mid-Atlantic Fisheries Marine Council Members  
Dustin Colson Leaning, Fishery Management Plan Coordinator ASMFC  
Kiley Dancy Fishery Management Specialist MAFMC

**From:** Thomas B. Smith

**Date:** November 7, 2019

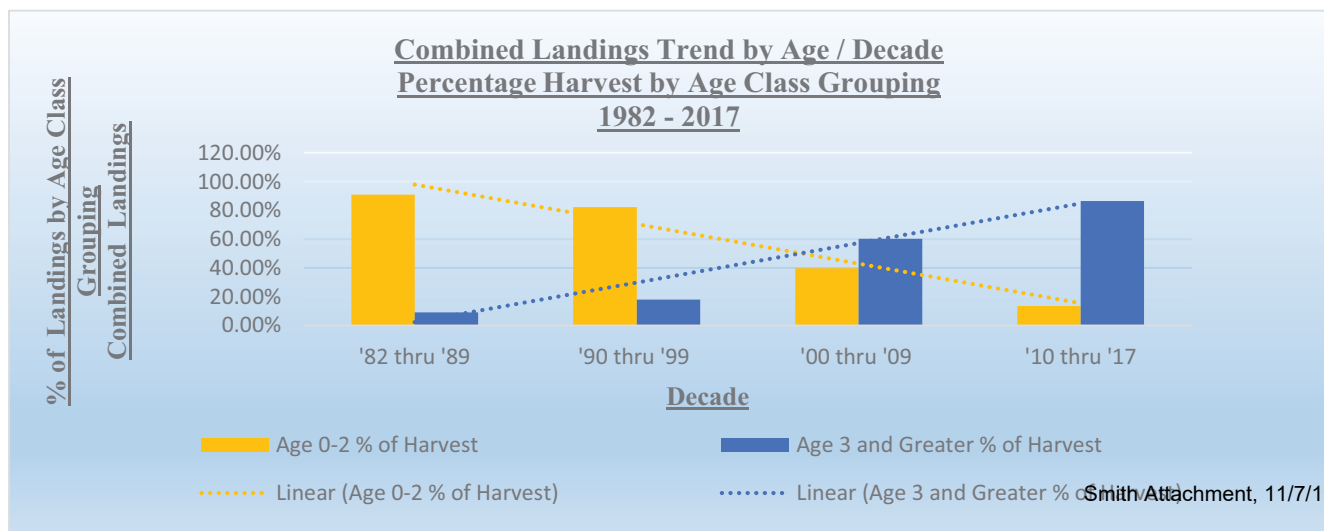
**Re:** Summary Summer Flounder Stock – Comments for Consideration at Upcoming December 10 – 12<sup>th</sup> Joint Meeting in Annapolis, MD

For anyone on the ASMFC or MAFMC Commission or Council, you should have received analysis and commentary regarding the state of the summer flounder fishery in the Mid-Atlantic region as part of the briefing materials provided for the October meeting at the Durham Convention Center. At that meeting, Kiley Dancy gave a presentation of the summer flounder stock which included a few comments from that analysis. I'm sending this document, along with said briefing material document from the October meeting, to all Commission and Council Members as it is still my strong belief the fishery is in trouble and continuing to experiencing problems which have caused a 15-year decline in every aspect of the fishery which will continue unless fundamental changes are made to the current regulations. The analysis, finding and conclusions drawn are based on data extracted from the 66<sup>th</sup> and 57<sup>th</sup> SAW reports, no third party data is being introduced.

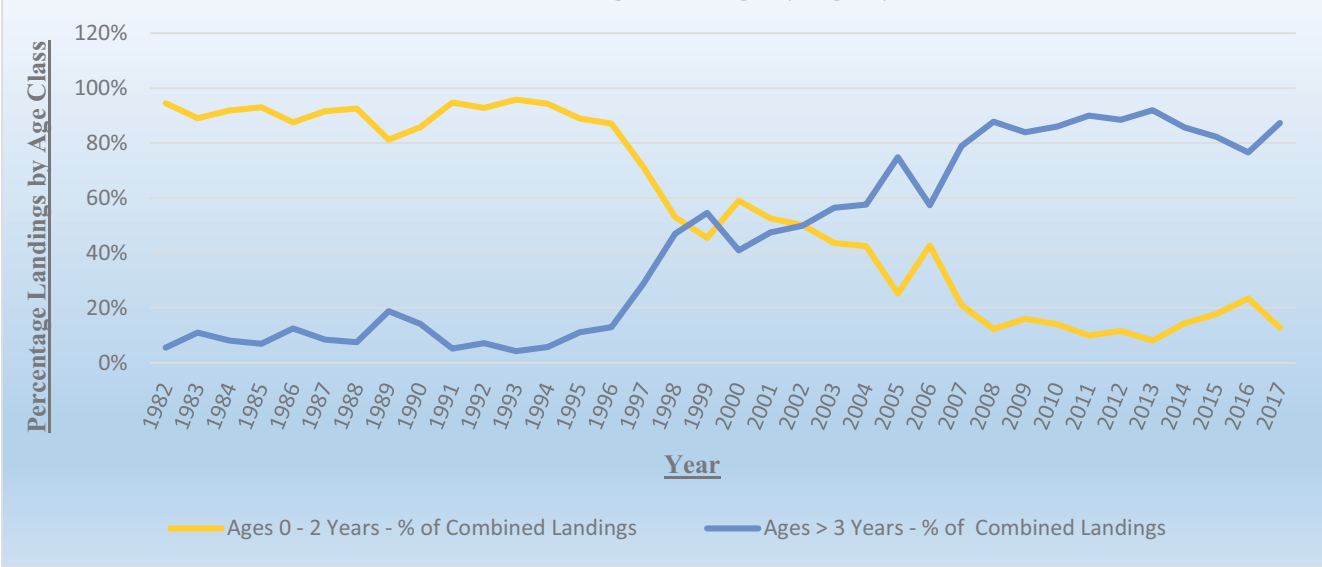
My intention again is to elevate to the attention of the Commission and Council Members substantial changes and materially altering trends in the Summer Flounder Fishery leading to substantive declines over a prolonged time frame. Declines in my opinion caused by unintended consequences from past policy decisions which trend analysis all but guarantees will continue in the absence of a fundamentally new approach to managing the stock.

## Landings Composition:

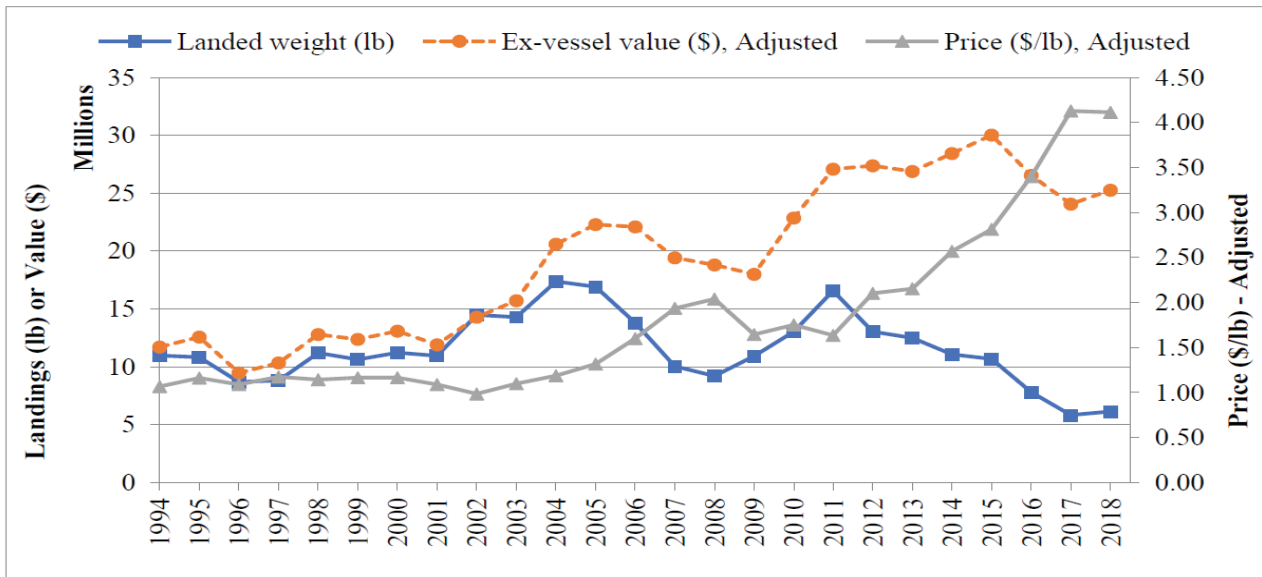
Combined landings (commercial and recreational) over the last four decades as it relates to age classes being harvested has experienced an unprecedented shift. Following charts illustrates that alteration:



**Combined Percentage Landings by Age by Year**

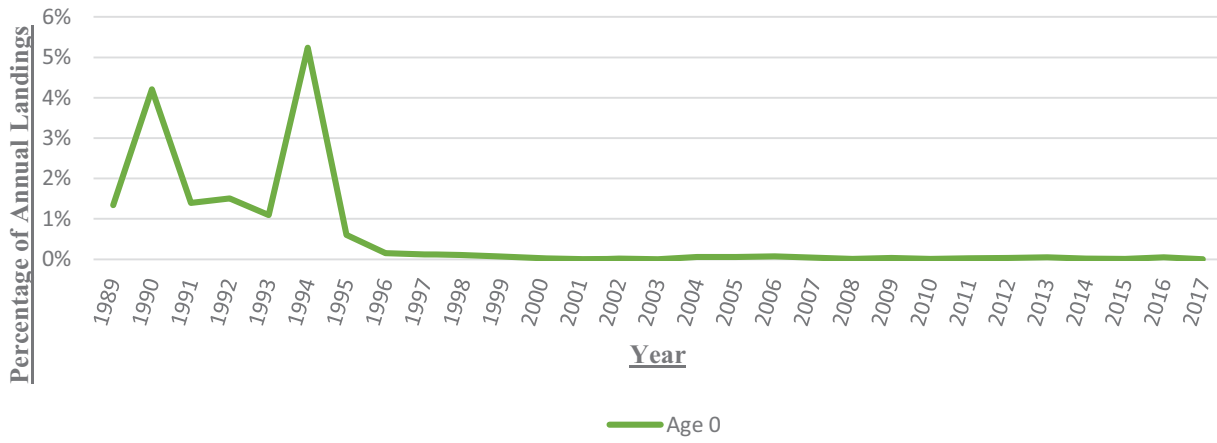


- 91% of combined landings between the period 1982 to 1989 represented age classes 0 – 2 when a 13” size minimum was in place.
- The trend of harvesting larger fish changed in the mid-nineties and accelerated when recreational size limits experienced a continued series of mandated increases while commercial, allowed to harvest 14” fish, electively increased presumably as a result of harvesting larger higher market value fish to mitigate consequences of reduced catch quotas and protect / grow ex-vessel values (orange line below graph). *Source - Page 7 MAFMC Summer Flounder Fishery Information Document August 2019*
- For the period 2010 to 2017, ~87% of landings now consists of age classes 3 and above. Important to note increases are not concentrated in any singular age class as all age classes 3 and above have experienced substantial increases in harvest relative to the late 80’s and 90’s per the below graphs.

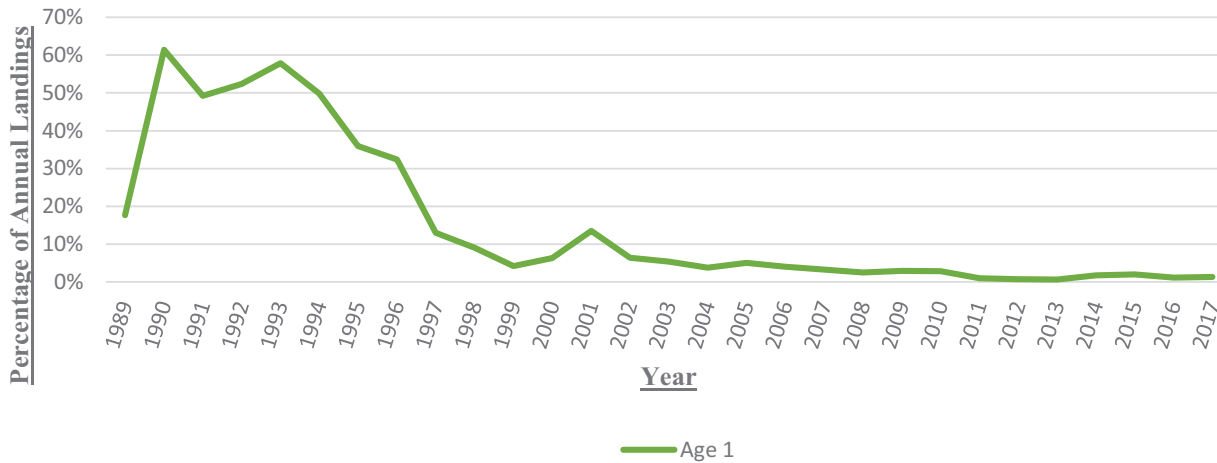


**Figure 4:** Landings, ex-vessel value, and price per pound for summer flounder, Maine through North Carolina, 1994-2018. Ex-vessel value and price are adjusted to real 2018 dollars using the Gross Domestic Product Price Deflator (GDPDEF).<sup>4</sup>

**Historical Percentage of Combined Summer Flounder Landings Trend - Age Class 0**



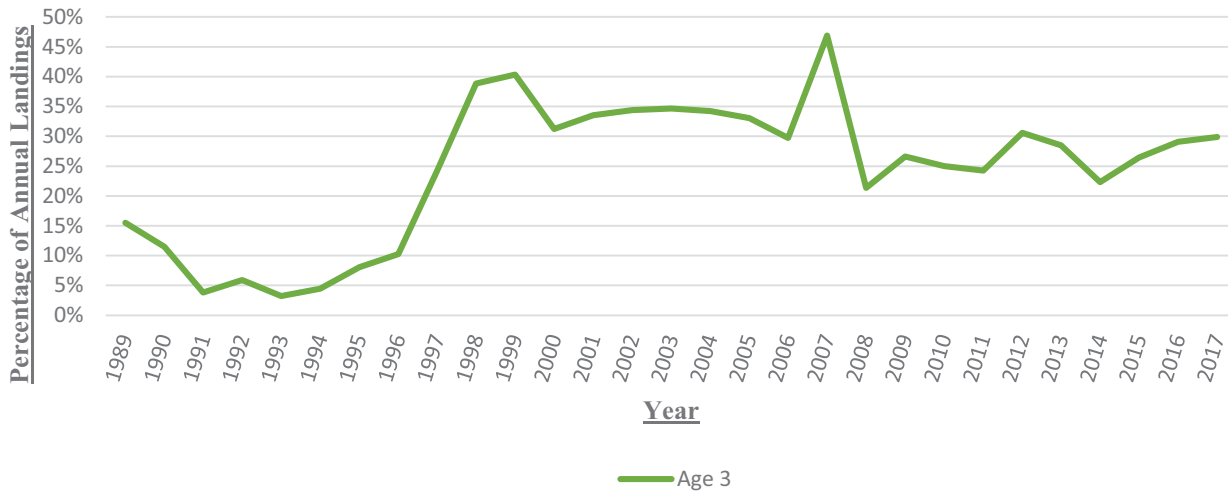
**Historical Percentage of Combined Summer Flounder Landings Trend - Age Class 1**



**Historical Percentage of Combined Summer Flounder Landings Trend - Age Class 2**



**Historical Percentage of Combined Summer Flounder Landings Trend - Age Class 3**



**Historical Percentage of Combined Summer Flounder Landings Trend - Age Class 4**



**Historical Percentage of Combined Summer Flounder Landings Trend - Age Class 5**

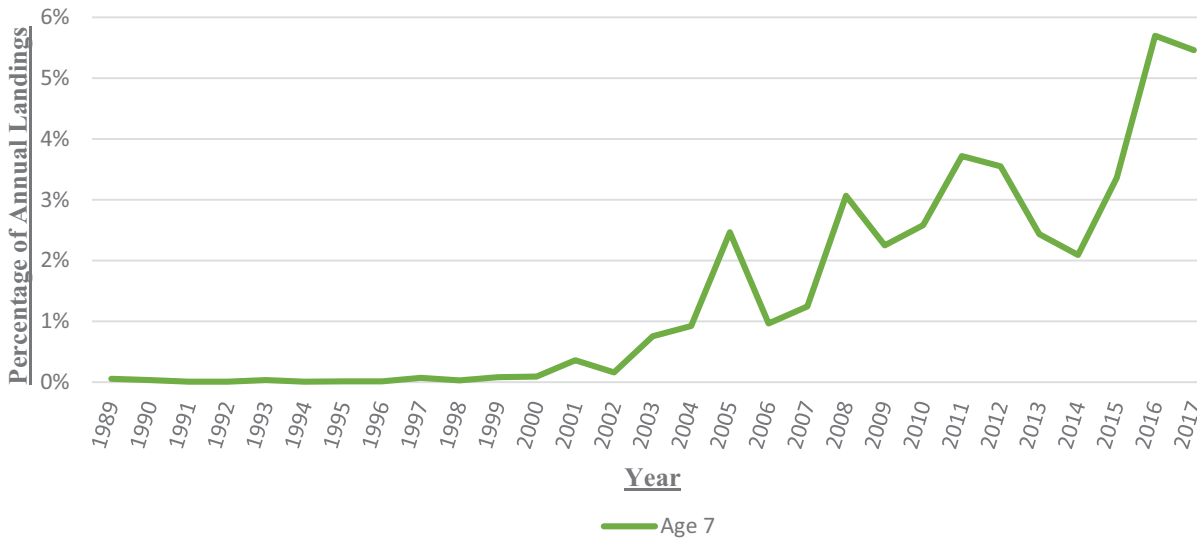




**Historical Percentage of Combined Summer Flounder Landings Trend - Age Class 6**



**Historical Percentage of Combined Summer Flounder Landings Trend - Age Class 7**

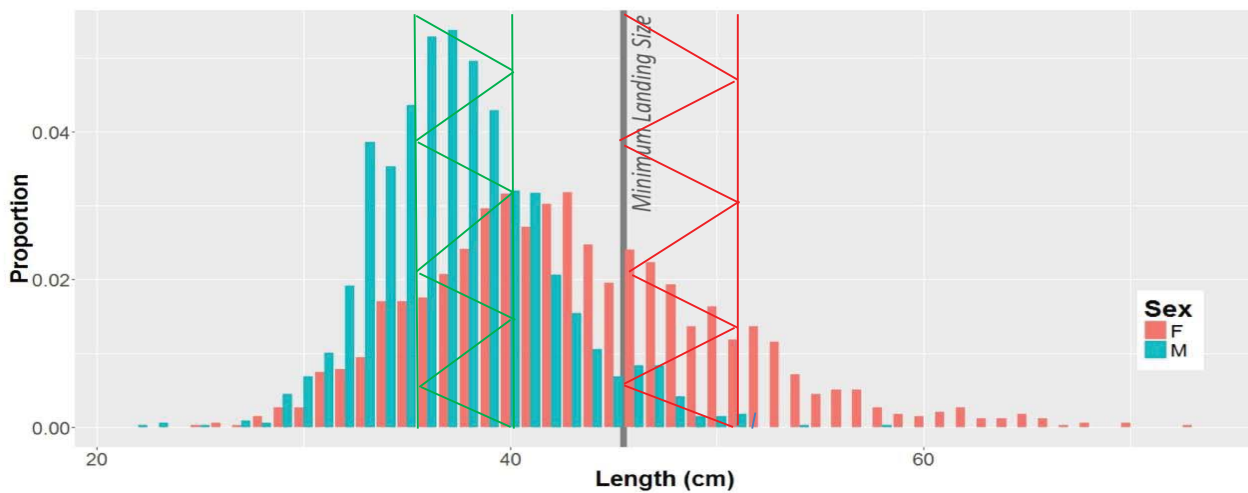
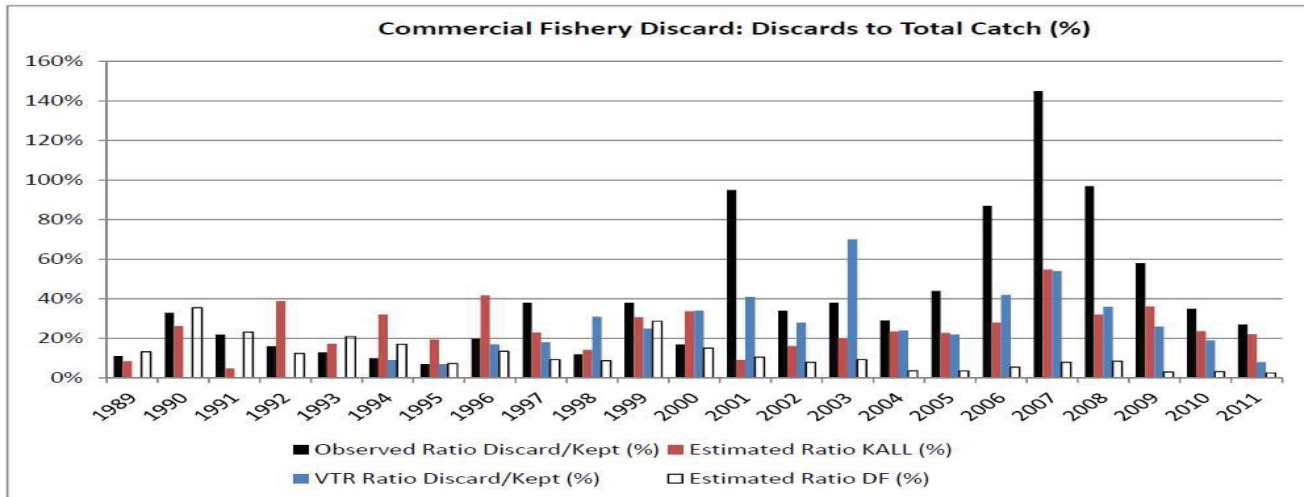


The above shift in catch composition, in spite of decreases in overall landings between 2004 and 2017 from 17,496 metric tons to 7,209 metric tons (an ~60% decrease) resulted in an ~37% decrease in SSB and an ~40% reduction in annual recruitment over the same period. Not only has SSB decreased, significantly more important is the gender composition of SSB has been materially impaired as stated in the following excerpt from the 66<sup>th</sup> SAW.

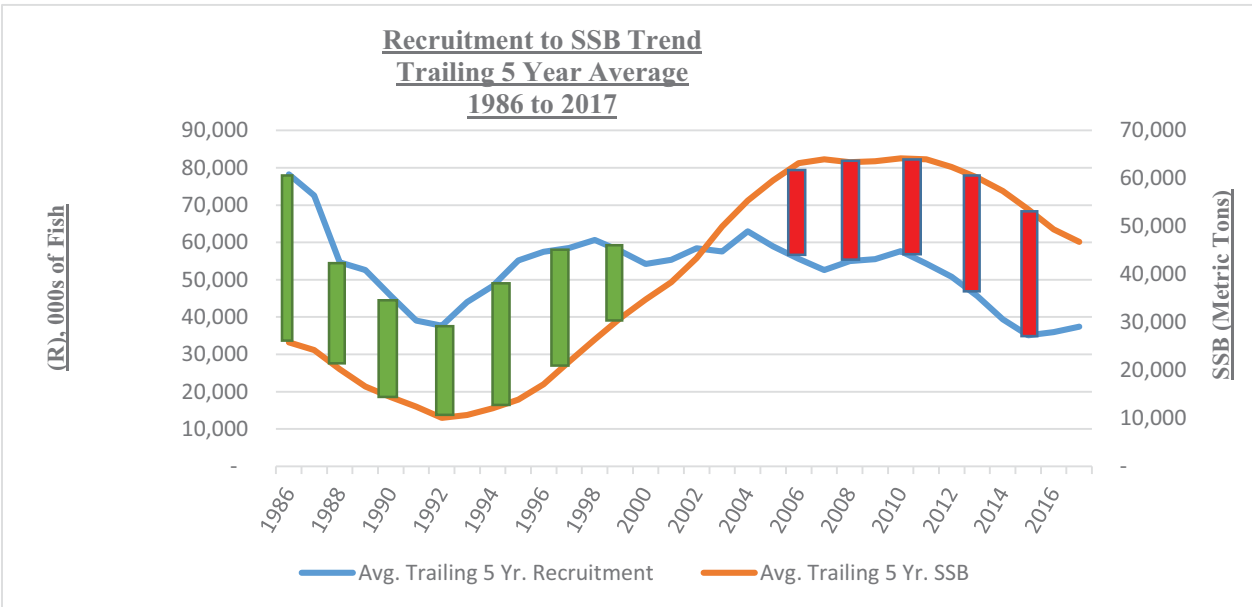
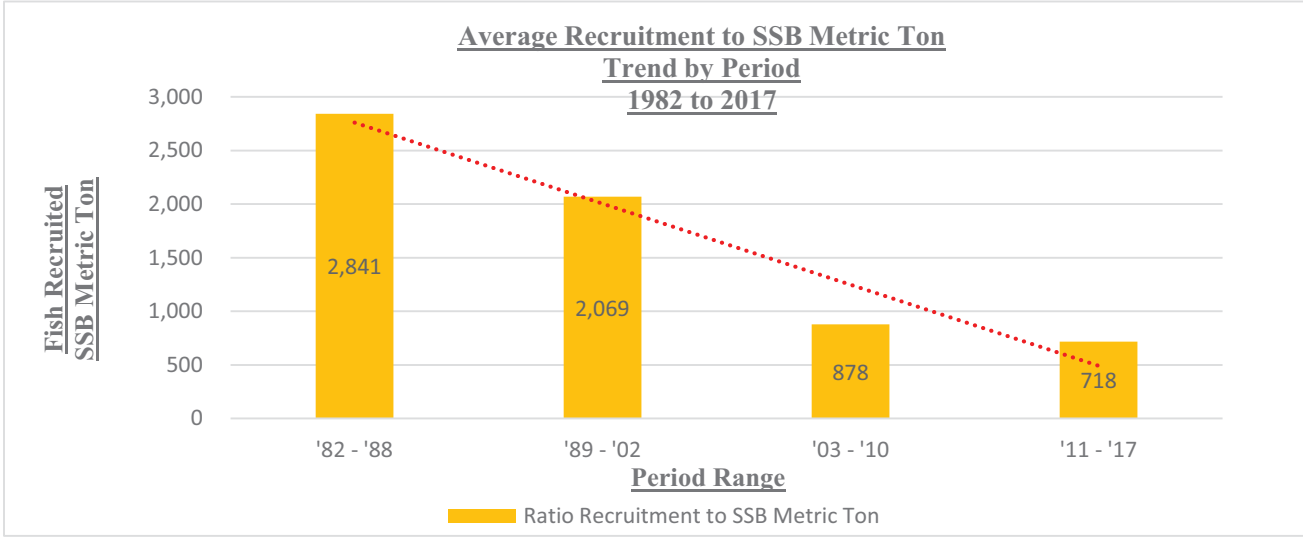
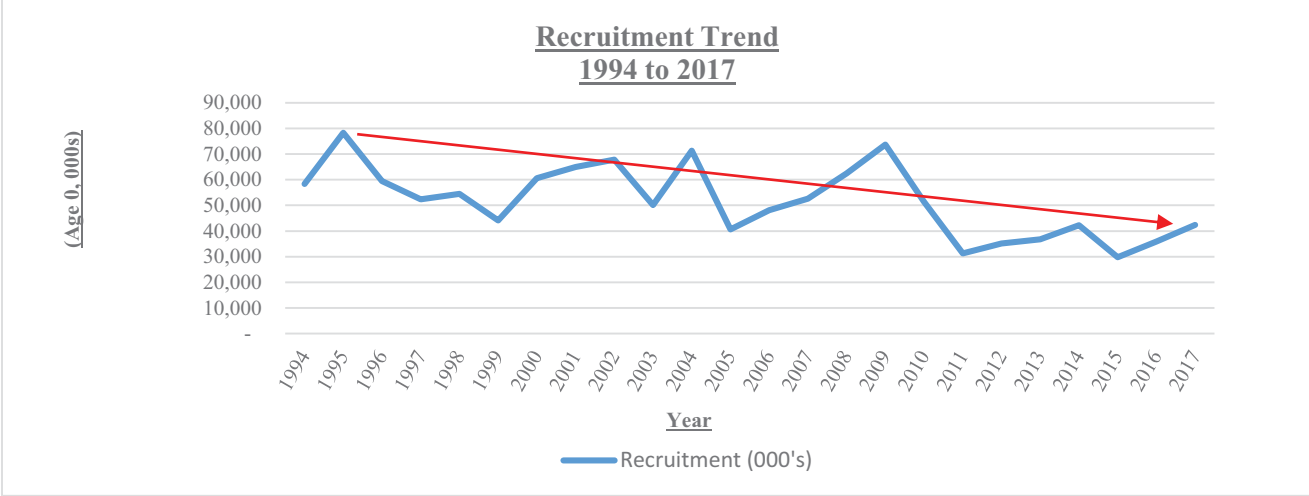
In the fall survey, the proportion of females shows no trend for age 0 and the mean proportion was 0.3. **For ages 1-3 the proportion has *DECREASED* from about 0.5-0.6 in the 1980's to 0.4-0.5 by 2012-2016. The proportions at ages 4 to 7 have *STRONGLY DECREASED* from about 0.8 through the late 1990's to about 0.3-0.8 by 2012-2016;** proportions at age 8 are highly variable (Figure A90).  
**Source 66<sup>th</sup> SAW - page 61.**

Based on the above statement and below five graphs, the harvest of older age class fish created multiple problems in the fishery, all directly impacting gender composition of SSB, its relative recruitment

strength, overall catch and discard levels. When larger fish started being harvested, commercial discard rates grew exponentially higher, SSB in the absolute declined, more important the gender composition of SSB was materially altered resulting in recruitment statistics dropping precipitously. Discard rates from observed trawls 1989 to 2012. *Source - Page 302, 57<sup>th</sup> SAW*



The above graph obtained from “Rutgers Sex and Length Study” illustrates the biggest threat to today’s fishery. The green shaded area represent size fish harvested in the 80’s and 90’s when SSB increased ~900%. Red shaded area represents the size fish being harvested today and for the better part of the last two decades. Notice the change in proportion between males and females. **During the 80’s and 90’s, the ratio of catch was almost 2:1 male to females. Last two decades, it’s closer to 4:1 female to males. The gender composition of SSB has been and continues to be decimated. Since a high percentage of the commercial harvest occurs in the fall / winter months during the stock’s spawn, a question which needs to be asked and answered is what impact is all this having on the efficacy of the spawn.**



I'd like to share dialogue I had with a Council Member regarding how data is being interpreted and used as a basis for policy decisions with the summer flounder fishery. My initial comments are in red in quotes. Black represents the Council Member's replies followed by my thoughts again in red regarding key issues effecting the fishery.

"substantial and continued declines in recruitment" - I have referenced in our discussions multiple reasons why recruitment may be a paper issue, including sampling not occurring where juveniles are, gear not optimized for catching of juveniles, and similar trends occurring with multiple species of flatfish nearly simultaneously. If you want to use science center data, the 2019 update shows improvements in recruitment in recent years. "Paper issue" translated means the data may be wrong. If so, inaccurate data understating recruitment and as a result the biomass in general has been driving more restrictive policy decisions. Conversely if the data is accurate and representative which we've been asked to believe, there's a significant problem with recruitment which hasn't been addressed for the better part of two decades. 1989 to 2003 annual recruitment averaged ~54 million recruits based on an average SSB of 29,000 metric tons. From 2011 to 2017, it averaged ~36 million recruits based on an average SSB of 50,000 metric tons. A 34% decrease in recruitment based on a 73% increase in SSB. The result of the erosion taking place with the gender composition of SSB and potentially the adverse effects associated with the harvest of almost exclusively breeder summer flounder commercially during their spawn.

"The fishery is in dire trouble" - The fishery may have shifted, but shows high availability in both recreational and commercial catches, particularly to the east. Using "their" data, SSB is 5x where it was 30 years ago. 30 years ago brings us back to 1988 when the fishery for all practical purposes collapsed with an SSB level of ~9,000 metric tons and a recruitment level of ~12.4 million new recruits, both the lowest recorded levels over the last 35 years. I would hardly suggest using that as a baseline measurement to illustrate the health of the fishery. **Fact is the fishery since 2003 when SSB attained its all-time high, recruitment, catch and SSB have decreased by 40%, 54% and 32% respectively while the overall biomass has decreased by 62 million fish or ~34%. And the trend analysis all but guarantees those decreases will continue until the issues causing those declines are addressed.** More important, SSB is defined as "The total weight of all sexually mature fish in the stock" so gender composition is not a factor in the calculation of SSB. SSB in the absolute is down 32% since 2004 compounded by the fact the female composition of age classes 1 to 7 have strongly decreased creating a material gender imbalance destroying recruitment strength. So yes, in my opinion based on the facts, this fishery is in dire trouble. Without changes in the regulations reversing the harvest of older age classes and correcting the unintended consequences it created of higher discard rates and the potentially disastrous impacts on the spawn, there's no logical reason to believe the fishery will rebound on the basis of its own merits.

High availability in both recreational and commercial catches, not sure how that position is supportable when as I mentioned earlier catch levels are down 54% since 2004. The data is indisputable in that respect. Commercial availability is a different story which I've commented on previously in the briefing materials. **Due to the disparity in size limits between recreational and commercial concerns, commercial operators have ~35 MILLION more fish they can harvest from the existing biomass than recreational.** So while I agree there's more fish for commercial parties to harvest, that's not indicative of a growing fishery. It's the result of a significant percentage of the biomass being made available to commercial interests for their exclusive harvest, an extremely disparate allocation of the resource. A serious problem created when size limits between both recreational and commercial were changed in the mid to late nineties, intensifying over subsequent years as recreational size limits continued to increase.

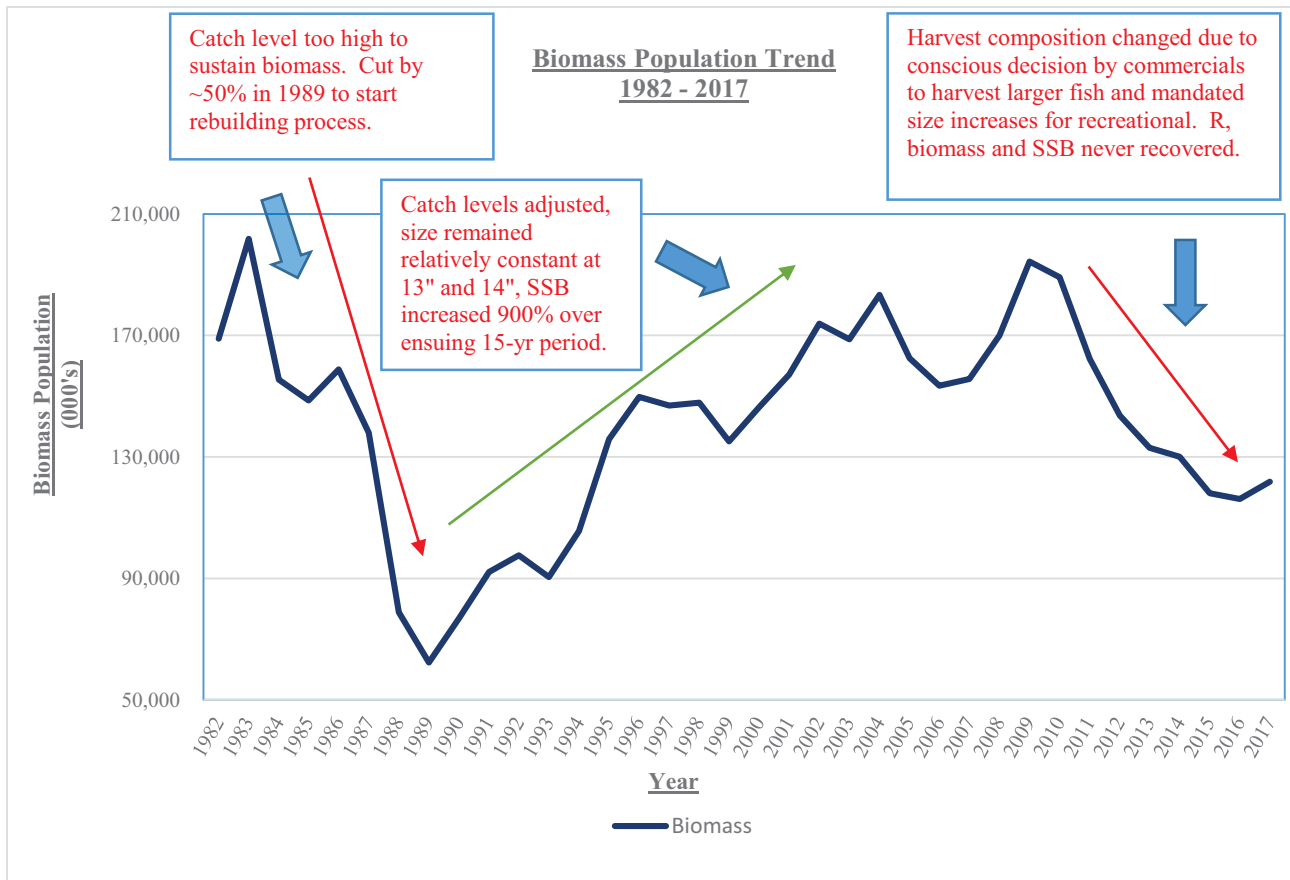
"Reproductive strength of the stock...has been destroyed" - My comments above re recruitment and availability support my disagreement with this statement. Couldn't disagree more with this explanation. Recruitment in the absolute and as a percentage of SSB has been declining for the better part of the last two decades and more recently at an accelerated pace. The data is indisputable in this respect as well. 50% increase in commercial quotas and continued harvest of almost exclusively female breeders will assuredly continue that decline. It has no choice. The stock has shown no signs of steepness in the last

35 years and with the gender balance created over the last two decades, there's no logical reason to believe it will develop that trait prospectively.

"scientists have stated going to a slot or reducing size minimums will further hurt this fishery" - I have never heard this statement outside of the context that as a result of current management mechanisms, in order to go to a smaller slot or minimum size, significantly shorter seasons would be required to constrain harvest to allowable levels...but not in a context that it would be biologically harmful. I would think the positive impact slot sizes or lower size limits in general would have in reducing recreational discards which carry a 33% mortality factor would more than cover the need to shorten seasons if instituted. That aside, it's perplexing how we had an 8 to 10 possession limit at 13" and 14" or slightly higher between 1989 and 2003 with catch levels during that period significantly greater than today resulting in 900% growth in SSB but the introduction of a slot fish would cause the need to shorten seasons more than they've already been. The logic behind those two thought is mutually exclusive.

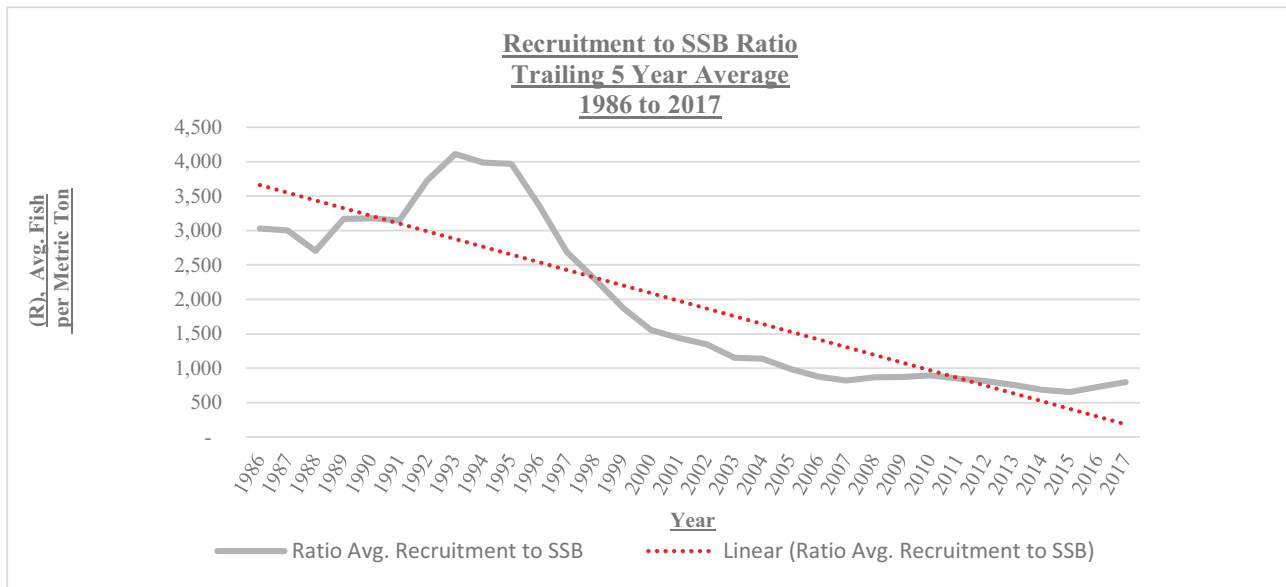
"What's compounded that...is...the commercial harvest...in the fall / winter months off shore" - That is a fishery that has been in place since the 1980's. Since its inception, biomass has experienced very large increases. You're correct there has been a winter / fall offshore fishery in place for years but there's four factors requiring consideration in your statement. First the fishery collapsed between 1980 and 1989 declining from an SSB of ~31,000 metric tons to ~7,000 over that period. Recruitment levels dropped from a high of ~102 million in 1983 to just over 12 million in 1988. Another potential indicator of the damage commercial harvest is having on the efficacy of the fall / winter spawn. Biomass jumped to record levels only when catch levels were cut in half in 1989, the primary driver of the biomass increase. Second, in the 80's and 90's, the fish being commercially harvested were age classes 1 to 2 representing a significantly lower percentage of sexually mature fish and a significantly reduced percentage of females than males harvested (reference Rutgers Sex and Length Study chart). Today the fish being harvested are primarily 3 to 6 yr. old classes, approximately 80% to 90% or more female and all sexually mature. Third, commercial discard rates from observed trawls experienced a material increase when older age groups started being harvested compared to percentages in the 90's. The above graph illustrates that and there's no reason to believe the same conditions don't exist today. **In the first decade of 2000, there's five years combined (2001, 2006, 2007, 2008 and 2009) which averaged ~100% DISCARD RATES TO TOTAL CATCH on observed trawls, an absolutely staggering statistic. 2007 alone is ~145%.** Fourth and notably in my opinion the most important, the biomass as stated in the 66<sup>th</sup> SAW is located in the most highly concentrated location on record. In 2018, areas 613, 616 and 537 accounted for 64% of the commercial catch. For the periods 1992 to 1999, 2000 to 2009 and 2010 to 2012, percentage catch from those three areas were 28%, 28% and 39% respectively. The biomass is highly concentrated and coupled with the fact ~75% of the commercial harvest occurs throughout the fall / winter season during the stock's spawn, you have to at minimum consider the potentially destructive consequences commercial harvest is having on reproduction. All the statistics and data point to a drop off in recruitment simultaneous with the harvest of older age classes, we may literally be regulating this fishery to a sterile SSB.

**Summation:**

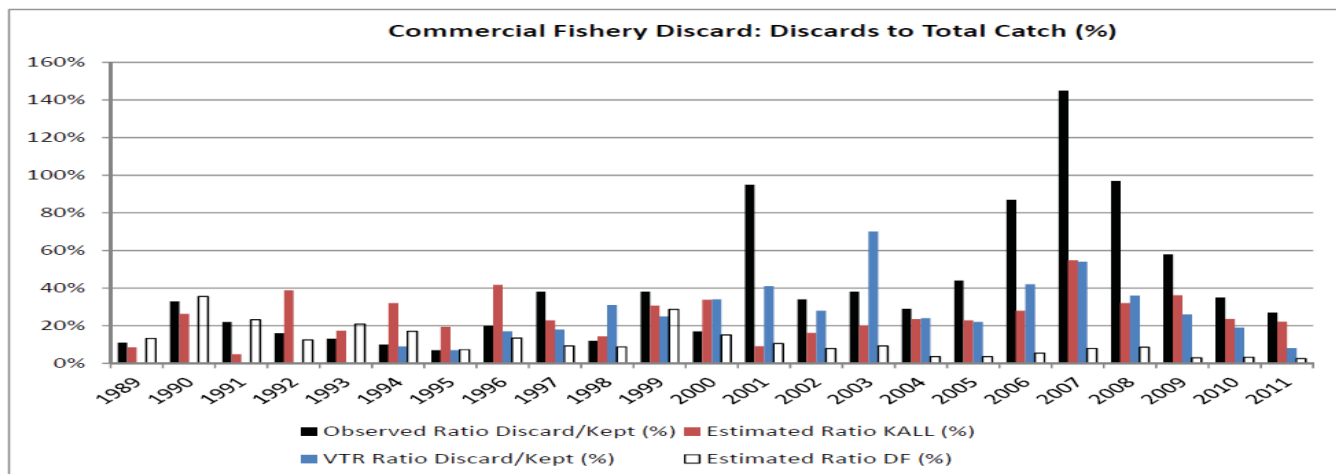


- Biomass declined between 1982 and 1989, result of catch averaging 115% of SSB, too high a percentage of the resource was being harvested resulting in an unsustainable fishery.
- Correct decision was made in 1989 to reduce catch by more than 50% which had an immediate and profoundly positive impact on the biomass, SSB and R. **PLEASE NOTE CATCH WAS DECREASED BY TONNAGE, SIZE LIMITS REMAINED UNCHANGED.** That point can't be emphasized enough. Recreational began a series of size increases in 1993 continuing through today resulting in a weighted average size limit between NJ, NY, Ct and RI of 18.82". Commercial on the other hand experienced a one-time size increase from 13" to 14" in 1997.
- Around 1996, landings of age classes 0 to 2 experienced sharp declines and landings of age classes 3 to 7 started making up larger percentages of annual catch, accelerating over the ensuing years. This marked the beginning of a change in catch composition within the fishery eventually leading to the downward trend we've experienced in all aspects of the fishery since 2003.
- Material change in catch composition led to a materially impaired SSB eroding the relative recruitment strength within the fishery. Recruitment, the single most important attribute of every healthy fishery, trending down over the last two decades is not an anomaly. It's the result of a

massive shift in the gender composition of SSB, the result of the over-harvest of female breeders due to size regulations recreationally and reduced catch quotas and higher market prices for larger fish commercially. Recruitment trends won't reverse until changes are made addressing the harvest of older age class fish. For any prognosticators who believes the stock is "steep" and recruitment will rebound on it's own merits, it won't. The below graph guarantees that. If it hasn't over the last ~35 years, why would we believe it will prospectively.



- The harvest of older age class fish have caused unprecedented levels of discard rates both recreationally and commercially. Recreationally due to size increases which caused a disparity of ~35 million less fish recreational anglers can harvest versus commercial concerns. Commercial due to their elective decision to harvest older age class breeders with greater market value. Remember these are discard rates on **OBSERVED** trawls, one can only imagine what the rates are on trips without observers on board. *Source is 57<sup>th</sup> SAW page 302.*



- For the period 1989 to 2003, combined landings averaged 16.5 million fish or 12,900 metric tons. For the years 2004 to 2017, landings averaged 10.6 million fish and 12,300 metric tons. A 35% decrease in fish landed translating to a 5.5% reduction in weight of fish landed (the result of larger older age class fish being harvested) and simultaneously as mentioned earlier recruitment, catch and SSB have decreased by 40%, 54% and 32% respectively while the overall biomass has decreased by 62 million fish or ~34% from 2004 through 2017. 62 million less fish in the biomass

with a 54% decrease in catch, another alarming statistic in this fishery. If these trends continue which they will based on current regulations, there won't be a fishery to manage in the not too distant future. The data supports that outcome, only thing that will change the stock's fortunes is someone acknowledging the data and making decisions to address the problems identified in this memorandum. Millions of recreational anglers and commercial operators are dependent on the later taking precedence.

- In order for this fishery to recover, we need to stop focusing on catch alone and start focusing on catch composition, size which equates to age and gender. Recreational size limits need to be changed back to 14" or at minimum a slot fish implemented as an interim measure phasing in reduced recreational size limits. The issue of commercial operators targeting older age class fish, a high percentage female breeders, during the fall / winter spawn **NEEDS TO BE ADDRESSED AND CHANGED**. This change in the fishery resulting in exponentially higher discard rates and significantly lower levels of recruitment relative to egg production is literally killing the fishery. The stock will never rebound unless preemptive measures are taken to protect the spawn, female breeders and the integrity of the recruitment strength of SSB in general.
- Data is revealing identifying relational changes in the fishery over the last four decades and reasons causing its decline and preventing its recovery. Lower levels of recruitment will be felt in the fishery for years and will continue until measures are implemented to protect breeders and the spawn in general. In its absence, the fishery will not only continue its decline but accelerate due to the recent 50% increase in commercial catch quota for 2019, 2020 and 2021. There's not one reason declining trends in the fishery since 2004 will correct themselves on their own merit without immediate changes to the regulations. The public is counting on the Commission and Council to acknowledge these facts and make the appropriate changes to begin the rebuilding process of this vital fishery. Blueprint already exists, it worked between 1989 and 2003 and there's no reason it wouldn't work today as long as catch composition is corrected. If not, other alternatives need to be considered and implemented. Recreational is the easier of the two, reduce size limits and catch composition and discard rates will correct themselves immediately. Commercial is more complicated but the harvest of older age class fish causing unprecedented levels of discards while disrupting the spawn of a highly concentrated biomass and destroying habitat in the process has to be addressed. If left unaddressed, the fishery will continue failing and defacto we'll be violating the provisions of MSA.
- MSA reauthorized in 2007 states the following:
  1. Acting to conserve fishery resources
  2. Providing for the implementation of fishery management plans (FMPs) which achieve optimal yield
  3. Establishing Regional Fishery Management Councils to steward fishery resources through the preparation, monitoring, and revising of plans which **(A) enable stake holders to participate in the administration of fisheries** and (B) consider social and economic needs of states and
  4. Protecting essential fish habitat.
- A biomass down 34% over the last 15 years with a failing recruitment trend is not conservation. Catch over that same period is down 54% so optimum yield I would argue is not being achieved. I consider myself a stakeholder in this fishery as do many others in the commercial, party boat, for-hire and recreational communities so I'm asking the Commission and Council to consider my analysis and conclusions based on marine fisheries data their own scientific community developed and make the necessary changes to correct the 15-yr decline of this vital fishery. Protecting the spawn and fish habitat is anything but what's occurring by allowing unabated harvest of a highly concentrated biomass, with 64% of the 2018 commercial quota coming during fall / winter months from areas 613, 616 and 537. My guess is that percentage will increase in 2019 with commercial operators being granted a 50% increase in catch quota. Changes in the fundamental management of this fishery are needed and the public is depending on the Commission and Council to make those changes. In the absence of a drastically different approach, the summer flounder fishery will continue its decline and eventually become a shadow of what it was in 2004.



In summary, changes in regulations (size recreationally and annual catch quotas commercially) have caused a seismic shift in catch composition over the last two decades leading to consequential damages to various attributes of the fishery, primarily a significant shift in gender composition, elevated levels of discard mortality and a declining recruitment trend. For recreational anglers, regulations mandate size fish harvested and they also guarantee significantly higher levels of discards. Recreational size increases have also caused **~35 MILLION fish or ~60% of the harvestable biomass (fish over 14" inches)** to be exclusively available for commercial harvest which is a tragically disparate allocation of the resource and a severe economic burden being shouldered solely by the recreational fishing community. Commercial operators on the other hand retained a 14" inch minimum size limit, have access to a significantly greater proportion of the biomass while making a conscious decision to harvest older age class fish for economic benefits creating unprecedented levels of discard rates in the process. Discard rates substantially higher than rates used in fishery management models in estimating commercial catch and determining catch quotas.

The result of the above is today's landings disproportionately consists of older class fish, primarily female breeders, which per the 66<sup>th</sup> SAW created a strong decrease in the female proportion of SSB. This gender imbalance coupled with higher discard rates referenced above has placed the fishery in a decline it can't recover from without management intervention. Reduced recruitment is a direct result of the above, started two decades ago and intensifying as recreational size limits increased and commercial harvest dynamics changed in the late nineties favoring larger breeders and predominantly sexually mature fish. The decision to maintain a 14" size minimum for commercial was the correct decision at the time but quickly became a moot point as the commercial harvest of younger age classes abruptly changed in the late nineties and represents a substantially lesser percentage of today's harvest. From 1989 to 1996, age classes 1 and 2 made up on average 85% of the annual commercial harvest, the same years SSB began an unprecedented 15-yr period of 900% growth. From 2010 to 2017, those classes made up on average 17% of the commercial harvest, an extraordinary change in commercial catch composition leading to a 33% decrease in SSB. Dynamics having disastrous effects on the gender and age composition of the biomass, associated discard rates and in strong likelihood the overall efficacy of the offshore spawn. All factors contributing to a steady decline in recruitment in turn causing a steady and prolonged decline in the fishery since 2004. In the late 80's after annual catch levels were adjusted and for most of the nineties, age classes 0 to 2 represented a majority of the recreational and commercial harvest and all other age classes by default, not by regulations, were largely left untouched. Older age sexually mature fish which perpetuated the future of the fishery. Today, age classes 3 through 6 comprise more than 80% of combined catch. By default, significantly elevated discard rates presumably consist of either 0 to 2 year age classes which are already at reduced levels due to poor recruitment statistics over the last decade or 7+ year classes with lower market values. **Age 0 to 2 year old fish accounted for 59 million fish of the biomass population in 1989 when the fishery for all practical purposes collapsed, 145 million fish in 1996, 146 million fish in 2004 and a mere 86 million in 2017.** That translates to a biomass population where every age class short of 7+ years is down moderately to substantially from 2009 to 2017 or a total reduction of 73 million fish representing a 38% decline in the population over that short period of time. A staggering statistic in itself, more so when you factor in catch levels both in tonnage and number of fish have been cut drastically over the same time frame. If we continue on the path we've been on for the last two decades, the fishery will continue declining. The data and trends guarantee it, those facts need to be acknowledged and remedial measures implemented to address the causes identified in this memorandum.

**A MAJOR ALTERATION HAS OCCURRED IN THE FISHERY IN CATCH COMPOSITION CREATING AN EXTENSIVE DECREASE IN THE FEMALE COMPOSITION OF SSB AND A SIGNIFICANTLY HIGHER LEVEL OF DISCARD RATES CAUSING DECLINES IN ALMOST EVERY AGE CLASS. DECLINES RESULTING IN A PRONOUNCED DECLINE IN RECRUITMENT STATISTICS LEADING TO A SUBSTANTIALLY LOWER AND GENDER IMPAIRED BIOMASS. THIS YEAR'S 50% INCREASE IN COMMERCIAL QUOTA WILL ACCELERATE THOSE DECLINES. COUPLE THIS WITH 75% OF COMMERCIAL**

**HARVEST OCCURING DURING THE SPAWN WITH THE PRIME BREEDERS BEING HARVESTED AND THIS IS THE CYCLE THE FISHERY IS IN WHICH WILL CONTINUE AT AN ACCELERATED PACE UNTIL THE REGULATIONS ARE CORRECTED TO RESTORE THE BALANCE THAT EXISTED IN CATCH COMPOSITION (AGE CLASSES AND GENDER) IN THE 80'S AND 90'S. IN THE ABSENCE OF THOSE CHANGES, ANOTHER FISHERY WILL BE LOST CAUSING SIGNIFICANT ECONOMIC AND SOCIAL IMPACTS TO HUNDREDS OF THOUSANDS IF NOT MILLIONS OF PEOPLE AND BUSINESSES THROUGHOUT THE MID-ATLANTIC STATES. IT'S NOT A POSSIBILITY, IT'S A GUARANTEE AS TREND ANALYSIS DOESN'T LIE UNLESS OF COURSE THE DATA WE'RE USING IS WRONG WHICH WE'RE BEING TOLD IS BEST AVAILABLE AND BEING USED EITHER WAY IN SETTING POLICY DECISIONS.**

I implore the people copied on this email to put your political, philosophical, personal and lobbyist agendas aside to address the issues raised in this analysis to save the fishery before it's unsavable. We've all witnessed too many fisheries disappear in our lifetimes, we don't need another one as vital as summer flounder on our conscience. I'm appealing to your hard work and sense of judgment to acknowledge the above trends as real and make the hard decisions to reverse the fortunes of this vital fishery. SSB once grew by 900%, there's no reason it can't again but changes in how the fishery is being managed have to be made.

## Kiley Dancy

---

**From:** Tom Smith <smith.tom560@gmail.com>  
**Sent:** Tuesday, November 19, 2019 10:34 AM  
**To:** Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; NICHOLA.MESERVE@state.ma.us; White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Fote, Tom; JASON.SNELLBAKER@dep.nj.gov; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; Starks, Caitlin; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; PETER.CLARKE@dep.nj.gov; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; JEFFEUTSLER@me.com; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Lovgren, Jim; GREGDI@voicenet.com; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFOOD@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; harborman@optonline.net; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan  
**Subject:** December ASMFC Joint Mtg - Annapolis MD  
**Attachments:** Summation December Joint Mtg v2.pdf

Ladies and Gentlemen,

I'm sending the attached summation of the summer flounder fishery for consideration in regulatory decisions made at the upcoming Joint Commission / Council meeting in Annapolis Maryland. The attached PDF is a much shortened version of the summation included with the briefing materials at the October MAFMC meeting earlier this year. The attached document is slightly over 5 pages long and an easy read.

Dustin I'd ask once again for the material to be included in the briefing materials for the December meeting. If that's not possible I'd ask at minimum for it to be included in the Supplemental Public Comments. Kiley if the meeting and agenda will appear on the MAFMC website, I'd ask that the attachment be made available there as well. Thanks in advance for your help making that happen.

This analysis and summation is based on marine fisheries own data, statistics the public has been asked to accept as data from best available science driving policy decisions. It couldn't be more clear what's happening with this fishery

experiencing significant declines since 2004. If you don't believe my analysis, I ask that each and every one of you at least believe your own data which my analysis is based on.

Without changes to the regulations addressing harvest composition of larger female breeders, the impact it's had on the gender composition of SSB and the negative impacts ultimately on recruitment levels, and protection of the offshore spawn this fishery will continue it's decline until ultimately failing. While I'm not intimately familiar with all the provisions of MSA legislation, I'm sure managing a fishery to failure is not one of those provisions.

Younger age classes today are now collateral damage in the process of harvesting older age groups with higher market values. Killing already materially impaired younger fish due to depressed recruitment levels in the pursuit of harvesting older age class fish will insure the further decline of future recruitment classes until the stock is ultimately irreparably damaged.

The decision is up to the Commission and Council. Manage the fishery for the short -term under the current regulations and there won't be a long-term. 16-year trends guarantee that. Or acknowledge what marine fisheries own data is clearly illustrating and make the necessary changes to preserve one of the most vital fisheries to the Mid-Atlantic States.

I hope someone on the Commission / Council has the courage and conviction to address the changes needed to save this fishery.

Respectfully Submitted

Tom Smith

# Memo

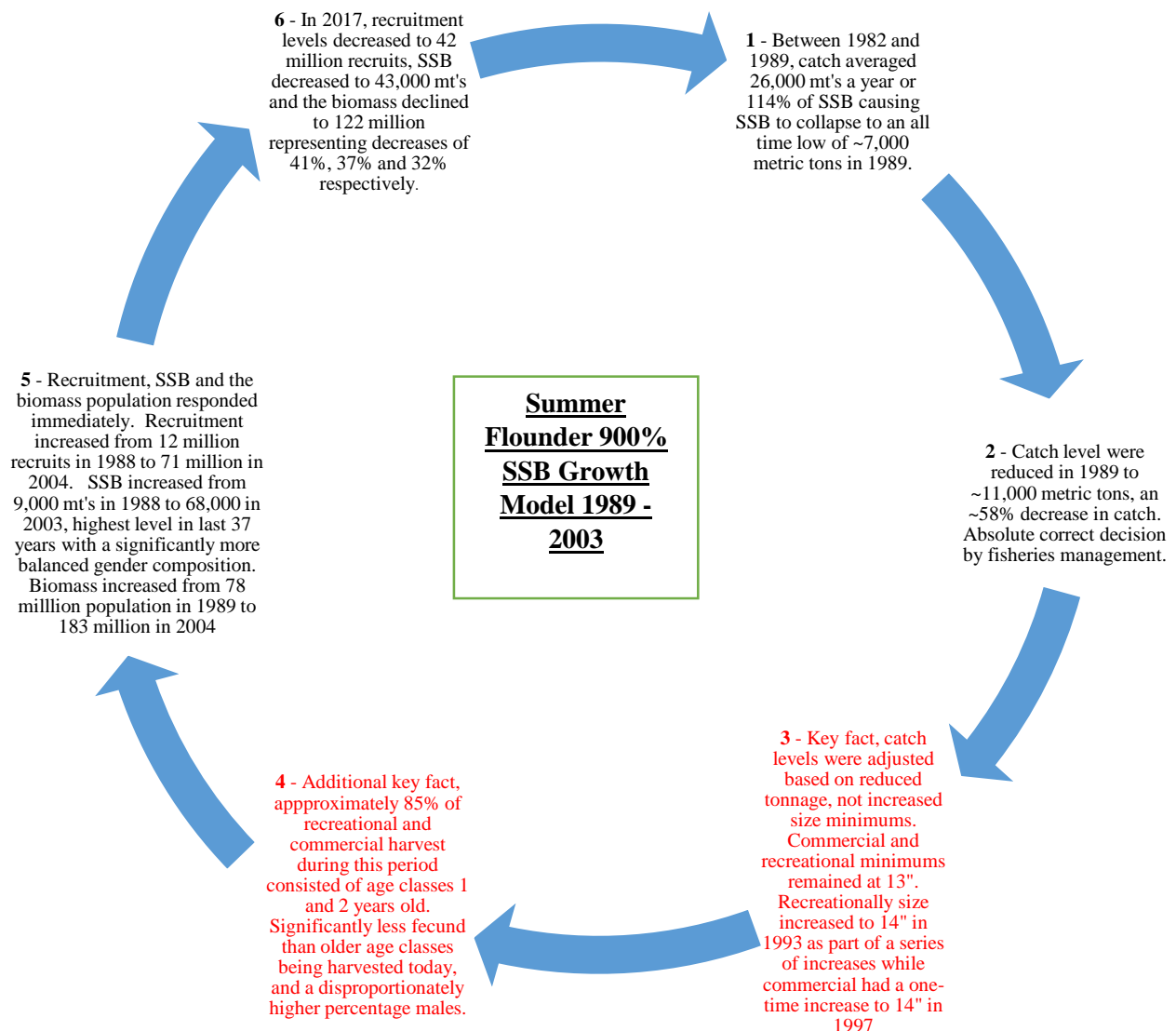
**To:** Atlantic States Marine Fisheries Commission - Commissioners and Summer Flounder Board  
Mid-Atlantic Fisheries Marine Council Members  
Dustin Colson Leaning, Fishery Management Plan Coordinator ASMFC  
Kiley Dancy Fishery Management Specialist MAFMC

**From:** Thomas B. Smith

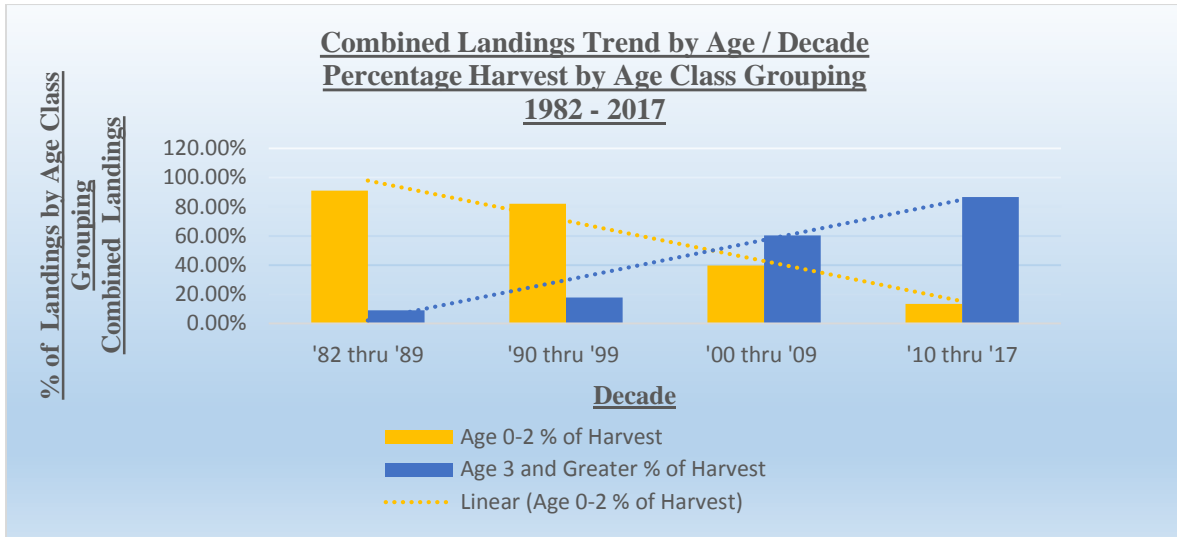
**Date:** November 19, 2019

**Re:** Executive Summary Summer Flounder Stock – Joint Council Meeting, December 9-12, Annapolis MD.

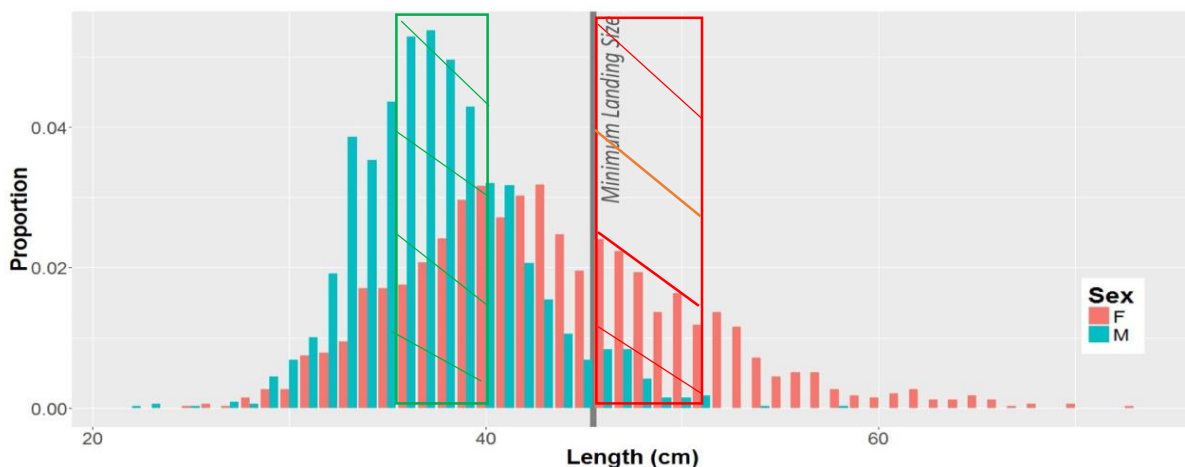
## Summer Flounder Growth (1989 to 2003)



- Proper catch composition drives a gender balanced SSB which drives recruitment levels. Recruitment levels are a pre-requisite to a sustainable fishery. SSB balance has been impaired in this fishery due to an imbalance in catch composition which began in 1997. Fishery exploded exponentially higher when younger age class fish were harvested and older age classes were left essentially untouched to grow and perpetuate the future of the stock. When harvest composition changed, the fishery experienced a series of unintended impacts promoting a 16-year decline. Change in harvest composition illustrated below.

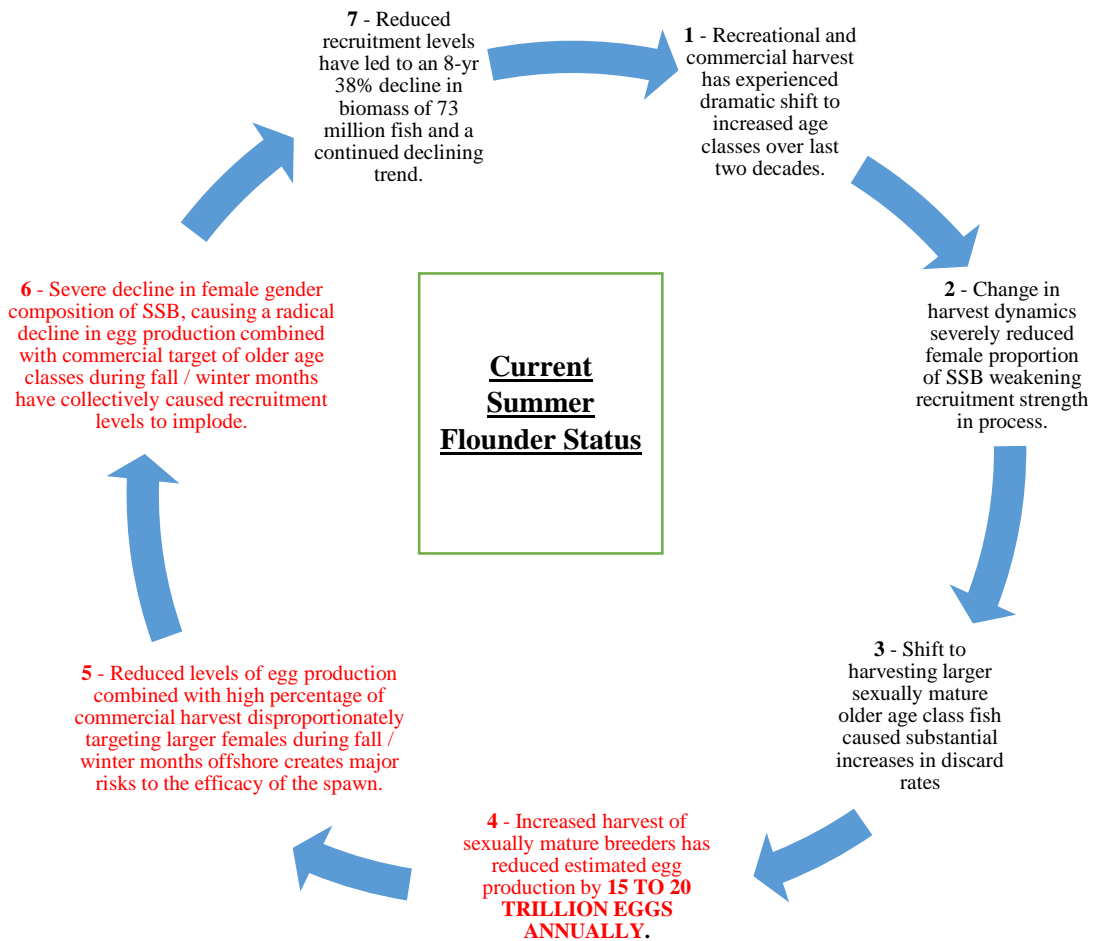


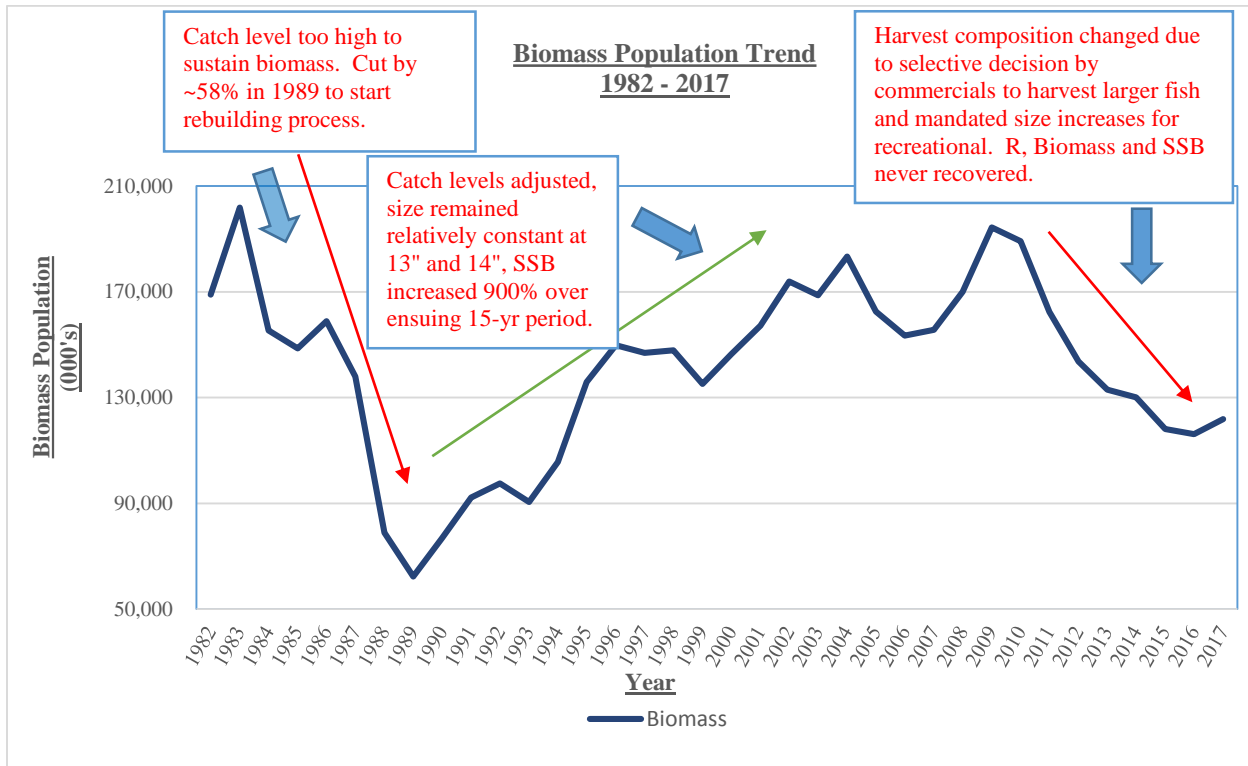
- When recreational size limits were significantly increased mandating the harvest of older age classes comprised of a significantly higher proportion of female breeders (below graph) over the last two decades coupled with commercial operators selectively deciding to target older age classes with greater market values to compensate for the economic impacts of reduced landings in 1997, everything changed. It prompted a series of negative impacts within the fishery outlined in the two cycle graphs which needs to be corrected for the fishery to ever recover.



The above graph extracted from “Rutgers Sex and Length Study” illustrates one of the largest threats to today’s fishery. The green shaded area represent size fish harvested in the 80’s and 90’s when SSB increased ~900%. Red shaded area represents the size fish being harvested today and for the better part of the last two decades. Notice the change in proportion between males and females. *During the 80’s and 90’s, the ratio of landings was 2:1 male to females. Last two decades, it’s closer to 4:1 female to males. The gender composition of SSB has been and continues to be materially altered weakening the reproductive capacity of the fishery.*

**Reasons for Summer Flounder Decline (2004 to Current)**





### Goals / Initiatives:

- Balance in catch composition (younger age class fish) and gender composition of SSB needs to be restored.
- Since gender composition of SSB has been materially impaired, it's critical for the spawn to be protected otherwise stock will never have the reproductive strength to rebound.
- With discard rates at all-time highs, natural mortality rates assigned at 20% annually, a gender impaired SSB and older age class fish continuing to be harvested along with this year's 50% increase in commercial quota, it's not practical to anticipate recruitment levels improving meaning the fishery will continue its decline.

All policy decisions made by the Commission and Council in the immediate future need to address the restoration of the gender balance of SSB and improving the reproductive strength within the fishery inclusive of protecting the offshore spawn for the foreseeable future until circumstances and statistics dictate otherwise.

### Recreational:

Goal should be to make policy decisions which gradually take us back to the regulations in place during the period the stock experienced substantial growth. Why reinvent the wheel when the blueprint already exists?

15" to 17" or 38.1 cm to 43.18 cm's has a balanced ratio of males to females per Rutgers Length and Sex analysis. Consideration should be given for one fish in 2020 falling in that slot range (15" to 17") and the existing possession limit from 2019 less one (for the slot) kept at the current size minimums in place for 2019. Reduced discard rates, the trend of harvesting more males, the impact of removing less breeders from SSB and the fact we're currently looking at coming in at 8% under 2019's RHL should more than compensate for any increase in harvest associated with



the slot while moving us closer to past regulations that promoted 900% growth of the fishery for the 15-yr period 1989 to 2003.

### **Commercial:**

Aside from safety, ex-vessel values and profits are paramount to commercial operators so they should be considered in setting policy decisions, just not at the expense of the fishery or the fisheries other constituents. Efforts should be made to protect those values but more important values to everyone involved in this fishery should be the health, sustainability and future of the fishery itself. With that said, the three most important impacts from commercial harvest are the selective harvest of older age class breeders and the impact its having on SSB and relative egg capacity, discard rates and the impact the fall / winter harvest is having on the spawn and recruitment levels. The Commission and Council need to address all three.

### **Protect the Spawn:**

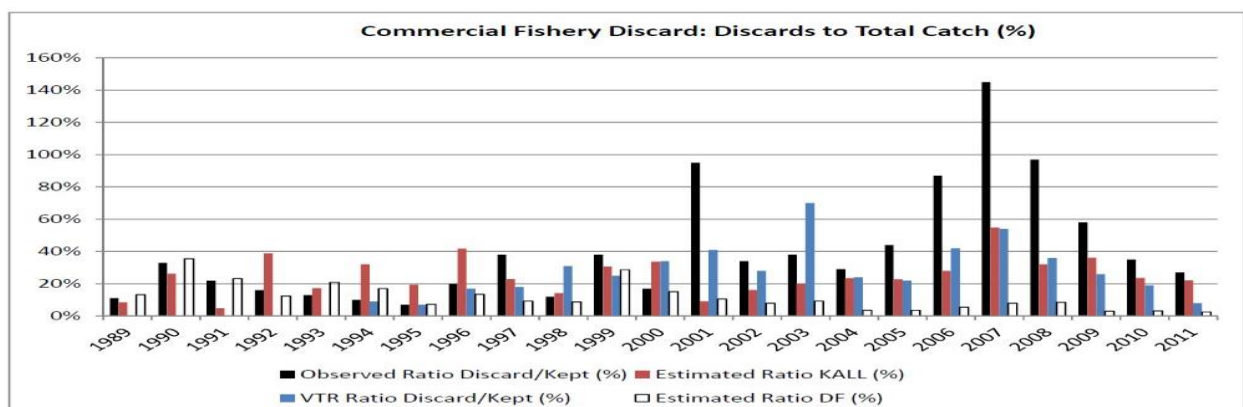
Three options to consider protecting the spawn:

1. Closed seasons (most draconian option)
2. Close or restrict access to areas in locations / depths known to hold larger summer flounder in their offshore wintering grounds.
3. Adjust the seasonal quotas so a significantly lesser percentage of the commercial harvest occurs in the fall / winter months which are the prime spawning months for summer flounder when they're highly concentrated and most vulnerable to the associated risks of commercial harvest. Risks including higher discard rates due to concentration of the biomass, adverse effects on the spawn and destruction of spawning habitat.

Option 3 would be my recommendation since it both positively impacts the efficacy of the spawn and should result in significantly lower discard rates. Take the percentage of the commercial harvest today from September through March and re-allocate half to the months April through August. This stock can't be pounded twelve months out of the year especially during the spawning cycle, science doesn't have to say so common sense does. Like every stock, summer flounder need an uninterrupted spawn to sustain their existence.

### **Discard Rates:**

Commission and Council have to address commercial discard rates. The following chart from the 57<sup>th</sup> SAW is incomprehensible:



If trip limits are a problem, they need to be addressed. If seasonal quotas are causing higher discard rates, they need to be changed. Observed discard rates as opposed to rates reported using the honor system VTR's need to be used prospectively in determining commercial catch quotas. If recreational is going to be bound by MRIP, a highly uncertain process in its infancy of development, commercial discard rates should be used based on empirical data derived from actual observed trips. It's a significant issue in this fishery per the above graph and needs to be factored into annual commercial catch quotas.

### **Harvest Composition of Commercial Catch:**

In spite of MSA, every lb. of summer flounder is not the same yet catch is the only focus every year in establishing quotas. Ten 14" inch 1 lb. fish harvested will have a significantly different impact on the fishery than two 5 lb. fish. The former more likely than not consists of 7 males and 3 females, all females not yet sexually mature. The later consists most assuredly of 2 females, each contributing in excess of 2 million eggs annually. Which is most important to the resource and which is most important to protect?

Commercial harvest of larger predominantly breeders has to decrease through either reduced mesh sizes, seasonal adjustments to quotas, voluntary selective harvest or any means possible. And it can't be at the expense of even greater discard rates of older age class fish otherwise the fishery will continue its downward spiral. If commercial concerns harvested predominantly 1 to 2-yr. old fish during the 80's and 90's, the question being asked should be why not the same today if the sustainability and future of the fishery is what hangs in the balance. If an increase in quota makes it economically viable to do so, that should be given consideration as long as it results in the harvest of younger age classes, reparation of the gender impairment of SSB, higher recruitment levels and a growing biomass which benefits all constituents of the resource.

## Kiley Dancy

---

**From:** Jim Lovgren <jlovgren3@gmail.com>  
**Sent:** Tuesday, November 19, 2019 8:46 PM  
**To:** Tom Smith  
**Cc:** Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; NICHOLA.MESERVE@state.ma.us; White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Fote, Tom; Snellbaker, Jason; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; Starks, Caitlin; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; Peter Clarke; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; JEFFEUTSLER@me.com; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Gregory DiDomenico; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFOOD@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; Ec Newellman; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan  
**Subject:** Re: December ASMFC Joint Mtg - Annapolis MD

Tom, you're doing a lot of research here, and unfortunately to me it is simply too biased to be used for management purposes. Your recreational slant is obvious by your stating that the offshore winter fishing grounds of the commercial industry is the spawning grounds for summer flounder and should be shut down for the health of the species. Reality is that summer flounder spawn in the fall from September through November, as they leave the inshore waters from 5 to 30 miles off the coast in most cases. By the time they reach the 40 plus fathom wintering grounds in December they are long spawned out. If your're worried about fishing effort maybe they shouldn't be fished in the summer when they are actually breeding and the fall when they lay their eggs.

Doesn't take a genius to know that if half the industry is forced to fish exclusively on large female fish due to managements inability to address the recreational catch, that a disaster will eventually happen. Management needs to immediately lower the ridiculous size limits that the recreational industry is forced to put up with, the undersized discards created by themselves will collapse a fishery. Commercial fishermen do not usually target the largest fish, half the time I fish, medium sized fish [14 to 16 inches] are worth more then the jumbos, [5 lbs +] The exception would be smaller scale fisherman targeting jumbo's for the bled market, and they do not catch that much of the quota. For the market 16 to 20 inch fish are by far the most valuable, with Jumbo's only worth slightly more than Mediums over the

course of the year. But what do I know? I've only been fishing them 45 years landing 50,000 to 100,000 lbs annually. By the way the sky is not falling, the fishery is still very healthy with the main problem being that the NEFSC cancelled the only useful trawl survey that could actually document how healthy the population really is, and that would be the winter flat fish survey that took place for over 15 years before being cancelled for the newer bigger better albatros know as the RV Bigelow. The fall and spring survey's take place during the migratory period for many species and that makes them particularly susceptible to annual variations in the weather. Combined with the absolutely horrendous history of breakdowns for that POS research vessel, this has given totally inaccurate information for the stock assessment scientists. There is now a resident [that means year round] population of Summer Flounder living in the middle of the Georges Bank, but don't expect the NEFSC to find it, or the humongous population that lines the continental shelf from December through April from Block canyon to the Hague Line in 50 to 90 fathoms. I fish all year for Summer flounder, and I have noticed just over the last 10 years a distinct change in their behavioral patterns during the summer and their fall migrations. Contrary to what you'd expect if the ocean was warming the fish would stay inshore for longer periods but that is not the case. The fish are migrating earlier, and not stopping on the inshore lumps such as Manasquan ridge, or the Klondike. they are'nt even stopping on the Cholera banks, they're heading for deeper water and are offshore earlier then ever. The population is so strong that a large amount of them stay only 20 to 30 miles offshore all winter along the mudhole.

Stop crying the sky is falling, it isn't. the population is still huge and is represented by all year classes including huge fish over 15 pounds. I have noted the best recruitment of 14 to 15 inch fish I have seen in 10 years in 2018 and 2019.

Whether the trawl survey data shows that or not I don't care, they couldn't catch a fish it you threw it to them.

Management needs to adopt either Jim Fletcher's almost 20 year old idea of total length, or some kind of slot limit.

Anything else at this stage is not acceptable. A moron knows you can't kill all the mommy's and expect a species to survive, how come the ASMFC and the MAFMC can't figure that out? thanks, Jim

## Kiley Dancy

---

**From:** Tom Smith <smith.tom560@gmail.com>  
**Sent:** Wednesday, November 20, 2019 12:25 PM  
**To:** Lovgren, Jim  
**Cc:** Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; NICHOLA.MESERVE@state.ma.us; White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Fote, Tom; Snellbaker, Jason; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; Starks, Caitlin; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; Peter Clarke; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; JEFFEUTSLER@me.com; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Gregory DiDomenico; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFood@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; Ec Newellman; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan

**Subject:** Re: December ASMFC Joint Mtg - Annapolis MD

**Categories:** SFSCBSB

Jim,

I appreciate the extent of your response. I'm not biased towards recreational or commercial, I'm biased towards a healthy fishery and a management process which incorporates accurate data in their assessment of the stock and then allocates that resource with some degree of parity. I couldn't agree more with your comments regarding recreational size limit increases, they're increasing discards and killing the gender composition of SSB. Changes in commercial catch composition are doing exactly the same. My comment regarding closed seasons or restricted access to certain areas during the winter months to protect the spawn wasn't intended to suggest a majority of the spawn occurred during the winter months as opposed to fall. It was intended to suggest protecting larger age class fish in a highly concentrated biomass during winter months will further decimate the gender composition of SSB while causing higher levels of dead discards considering the depths and temperatures the fish are being harvested in. Harvest which is additionally weakening SSB and further impacting an already impaired reproductive capacity of the fishery. Since your based in New

Jersey, your correct the primary spawn occurs in the September to late October / early November months from what my research indicates so we agree on that. Based on demographics however, there are areas where the spawn occurs later and throughout the winter months. My suggestion regarding restricted areas and or closed seasons was based on the intent of the very Original Fishery Management Plan "FMP" which states the following as use of a management tool:

## 2.2. LIMIT CATCH

### 2.2.1. Description

This would be accomplished by imposing quotas in the commercial fishery and bag limits in the recreational fishery.

### 2.2.2. Analysis

Since there is no valid current quantified MSY estimate at this time (Section 5.4), there is no scientific basis for establishing quotas.

## 2.3. IMPOSE SEASONAL OR AREA CLOSURES

### 2.3.1. Description

This would be accomplished by prohibiting fishing for summer flounder during specified seasons or in specified areas.

intended to accomplish the following objectives as stated in the same document:

## 2. SUMMARY

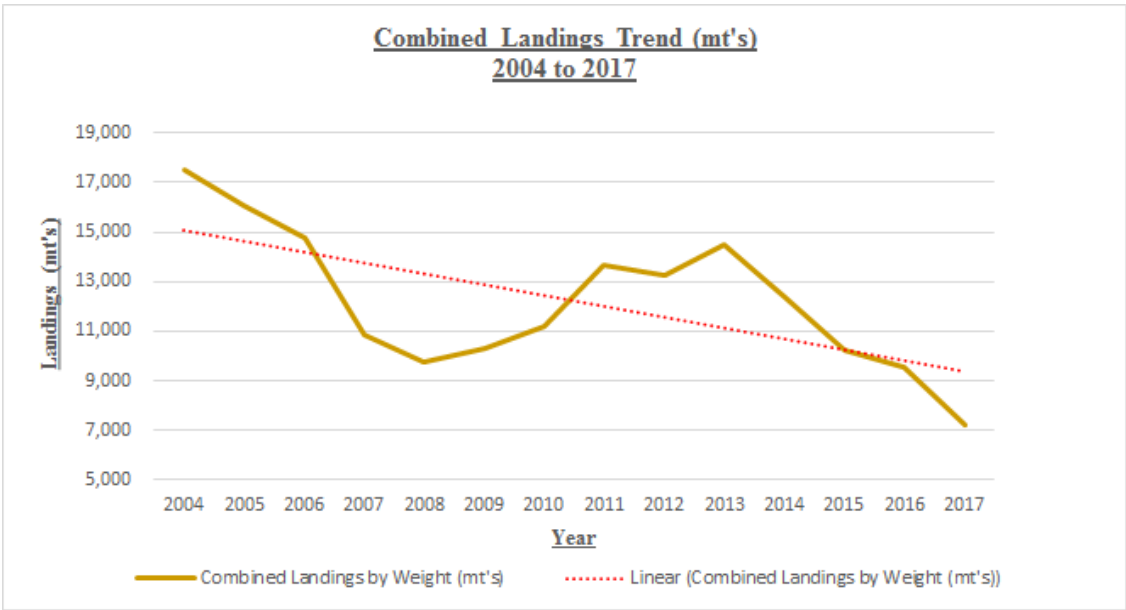
This Fishery Management Plan (FMP) for the Summer Flounder Fishery, prepared by the Mid-Atlantic Fishery Management Council (Council), is intended to initiate management of the summer flounder (*Paralichthys dentatus*) fishery pursuant to the Magnuson Fishery Conservation and Management Act of 1976, as amended (MFCMA). The management unit is summer flounder in US waters in the western Atlantic Ocean from North Carolina northward. The objectives of the FMP are to:

1. reduce fishing mortality on immature summer flounder;
2. increase the yield from the fishery;
3. promote compatible management regulations between the Territorial Sea and the EEZ; and
4. minimize regulations to achieve the management objectives recognized above.

What have we learned over the years? The **ONLY** period the stock has shown growth is when immature fish or fish just reaching maturity were being harvested during the period 1989 to 2003.. As I mentioned in my analysis, the fishery fell apart when the harvest of younger age classes was displaced by the harvest of almost exclusively sexually mature older age classes both recreationally and commercially. Difference is recreational increase in harvest lengths was mandated, commercial harvest of larger fish was an elective decision. That's a fact, not bias and one I believe we're in agreement on.

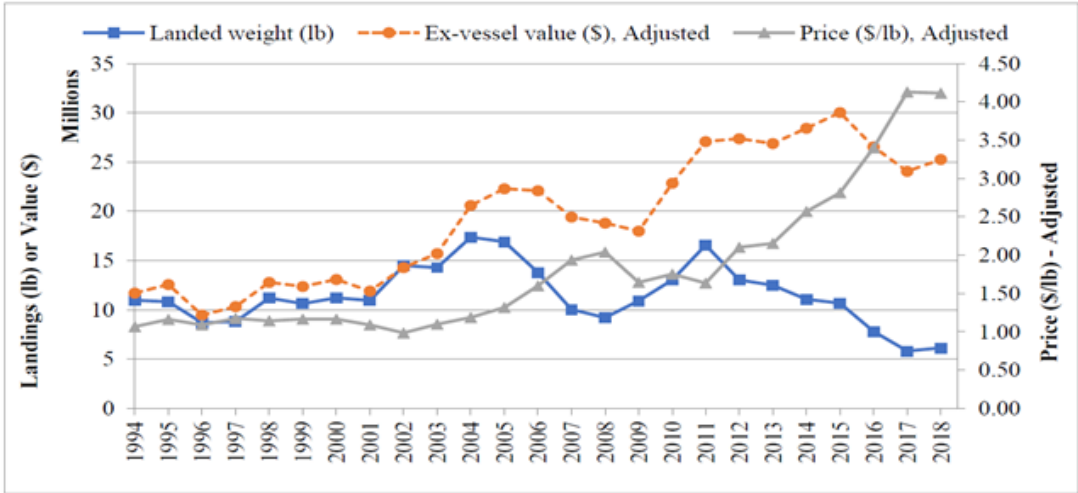
I believe the management decisions of this fishery much like what the striped bass fishery is currently going through made the same mistakes which is the following. Protect the immature fish and harvest the breeders. The result in both fisheries were declining recruitment levels causing a declining SSB and a declining biomass overall. The formula which worked in both fisheries was harvest the less mature or immature fish, enough will get through to sexual maturity and if left untouched will be the means of sustaining healthy recruitment levels to perpetuate the stock. That's the formulas we deviated from in both fisheries which caused both stock to decline as a result. I couldn't agree more when you say "When will fisheries management learn" not to make the same mistakes of past.

Per Original FMP, **Reduce fishing mortality on immature fish**. Commercial and recreational discard rates have exponentially increased for both due to regulations. **"Increase the yield from the fishery"**, below graph doesn't support that objective either. **A 60% decrease in landings between 2004 and 2017, still declining and not sufficient to stem the decline in the overall fishery. Amazing statistic.**



Biomass from 2009 to 2017 decreased from 195 million fish to 122 million fish, a reduction of 73 million fish in 9 yrs, or an almost 40% decrease. So maybe the increase in population you say you're observing is actually the result of the approximate 35 million less fish recreational anglers can't harvest because of the disparate size differences between recreational and commercial sizes and not necessarily an indication of a growing biomass. Either your anecdotal observations are incorrect or fishery managements data is incorrect as one suggests a significant decline occurring while your observations dispute that point very clearly illustrated in the latest stock assessment. Either way regulations are being based on the former and both commercial and recreational are collectively paying the price albeit in different ways with significantly varying degrees of severity. Again those are facts, not a bias towards recreational or commercial concerns.

Two illustrations to support my last statement. Ex-vessel values have increased which when all is said and done is the single most important aspect of the fishery to commercial concerns. Below graph *Source - Page 7 MAFMC Summer Flounder Fishery Information Document August 2019* illustrates that fact.



**Figure 4:** Landings, ex-vessel value, and price per pound for summer flounder, Maine through North Carolina, 1994-2018. Ex-vessel value and price are adjusted to real 2018 dollars using the Gross Domestic Product Price Deflator (GDPDEF).<sup>4</sup>

Commercial landings decreased by almost 50% between 1994 and 2018, a 25-yr period, while ex-vessel values increased by more than 100% over that same time frame and wholesale prices per lb of summer flounder quadrupled. In the process, commercial concerns based on my calculations have harvest rights of approximately 30 - 35 million more fish in the biomass than recreational anglers due to disparities in size regulations. Commercial operators can harvest fish year round, subject to trip and seasonal quota limitations. Recreational realistically, in spite of what the seasons stipulate, have a harvest window of basically July and August and most recreational anglers fish one day a week on the weekend so the season for all practical purposes for most anglers comes down to nine days of fishing effort. Possession limits have been cut from unlimited to 10 to now 3 in New Jersey, 4 in NY and Ct. with NY, Ct and RI having 19" size minimums. All Mid-Atlantic States have taken enormous hits and made enormous sacrifices recreationally in the same respect. Access to the fishery and possession limits are what's most important to the recreational angler and if you compared score cards based on the above facts, I believe most would agree recreational has been negatively impacted far more from a relative perspective based on what's matters most to both parties. Again these are facts, not a personal bias.

With all that said, if harvest size limits aren't scaled back, improving discard rates in the process and recruitment strengthened, this fishery will never recover. I believe we both agree on that as well. I would hope your future catch levels increase to 100,000 to 200,000 lbs annually but that won't happen until as I pointed out catch composition changes in the harvest of more males and less females. SSB in terms of gender composition improves dramatically, recruitment levels rise and the spawn is protected. Simply adjusting size limits higher or reducing catch levels has proven it will not only not address any of the above, it will exacerbate an already major problem within the fishery.

As long as policy decisions are based on marine fisheries data, yes the sky is falling. An ~40% decline in the biomass over the last 9 years with an ~60% decrease in landings over the last 17 years based on my definition constitutes falling skies. Maybe we don't share the same definition. If as you and others say is true that the stock is in a much healthier condition, the Commission and Council have a fiduciary responsibility under their charter and MSA legislation to correct that data problem since it ultimately drives access and harvest levels to the fishery for both commercial and recreational concerns having significant ramifications to each.

Thanks again for your reply, I don't think we're as far apart as your email suggests. And in spite of what you think, my focus is 90% on the health of the fishery and 10% on how the fishery is being allocated between parties dependent on the resource.

Regards,

Tom



## Kiley Dancy

---

**From:** Jim Lovgren <jlovgren3@gmail.com>  
**Sent:** Wednesday, November 20, 2019 6:31 PM  
**To:** Tom Smith  
**Cc:** Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; NICHOLA.MESERVE@state.ma.us; White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Fote, Tom; Snellbaker, Jason; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; Starks, Caitlin; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; Peter Clarke; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; JEFFEUTSLER@me.com; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Gregory DiDomenico; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFOOD@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; Ec Newellman; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan  
**Subject:** Re: December ASMFC Joint Mtg - Annapolis MD

**Categories:** SFSCBSB

Tom, everybody wants a healthy resource, also better science, whether that means better stock assessments using industry based trawl surveys, creation of an expert fishermen panel to review the spring and fall survey data, or better recreational catch data as the new system is no better then the old. I suggest you look a little farther back in your analysis of the summer flounder fishery because if you check out landings data from the 70's and 80's you will see a rising level of landings until the mid 80's where it levels off and then takes a sharp decline especially 1989 and 90. As low as the landings were in those two years they are misleading. Because the stock had reached a low level, commercial participation almost completely stopped, resulting in the lowest landings on record. We could have easily caught 20 million pounds that year if we wanted to, but because there were other more lucrative fisheries to pursue at the time, [the government hadn't yet taken away our multi species fishing ability] we fished for Squid, and black back flounder, or scallops where we made more money. Interestingly if you check the science centers data on summer flounder recruitment through the years you see that [These numbers are somewhat close, I'm rely on memory] the highest recruitment numbers on record are in 1981 and 1982, which are also two of the highest recorded years for landings by

both sectors. Interestingly the age structure of the biomass was truncated to mostly fish less than 3 years old. What I get out of that is that we should be targeting the smaller fish, 14 to 18 inches, because that makes the rest of the biomass spawn harder to keep up. I have brought this up numerous times over the last 20 years to deaf ears.

The winter offshore migration takes place sooner in northern waters, and later as you go south, and I have no doubt that there are still spawning fish off the north Carolina coast in december, and even january. The shelf edge is about a third of the distance from the Carolina coast as it is off of Jersey. There are environmental changes taking place in many fisheries right now, and fishermen are noticing them, but the NEFSC doesn't seem to want to hear from them about what they observe. I do not believe it is all caused by climate change. Too many important species are now changing their migratory patterns in the last 15 years and rising temperatures may be what some people want to blame it on, especially states to the north that want to increase their quota by stealing from the south. Weakfish have disappeared from inshore waters and are more abundant offshore in the winter when they mix with schools of porgies. I believe this change was driven by too much competition for food with the ravenous dogfish and striped bass populations decimating many of these primarily inshore species. Croakers seemed to be moving north 5 to 10 years ago but have not appeared off NJ in a few years now. Bluefish have definitely changed to an offshore migration pattern even in the summer. Meanwhile Pot fishermen are catching cod fish off of Delaware, and I had two tows last winter over a month apart where I caught over 500 pounds of really nice sized Haddock. Which I will add we have never ever landed in Point Pleasant before. Not this time either as I was not on a groundfish day at sea and couldn't retain them. The winter before in the exact same area as I caught the haddock, I caught two American Plaice, which is a gulf of Maine fish that I have never seen in jersey waters. these incidents go contrary to the sky is falling global warming hysteria. the fact is that weather runs in decadal cycles of which we seem to have little understanding of. Perhaps when the NEFSC is more open to allowing fishermen a part in the stock assessment process, then we can gain a better understanding of not only the fisheries but of ourselves and our place in the ecosystem. Thanks for all the work you're doing it is worthy of review. Jim

## Kiley Dancy

---

**From:** Tom Smith <smith.tom560@gmail.com>  
**Sent:** Wednesday, November 20, 2019 7:56 PM  
**To:** Lovgren, Jim  
**Cc:** Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; Meserve, Nichola (FWE); White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Fote, Tom; Snellbaker, Jason; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; Starks, Caitlin; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; Peter Clarke; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; JEFFEUTSLER@me.com; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Gregory DiDomenico; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFOOD@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; Ec Newellman; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan  
**Subject:** Re: December ASMFC Joint Mtg - Annapolis MD

**Categories:** SFSCBSB

Jim,

I can't tell you how much I appreciate the candor of your reply and perspective. Your memory serves you well, highest recruitment level on record was 1983 at slightly over 102 million new recruits at an SSB of 29,000 metric tons. For comparison sake, 2017 recruitment was approximately 42 million recruits on a SSB of 43,000 metric tons. An almost 60% decrease in annual recruitment or 60 million less recruits on a SSB 50% higher. That is the definition of **GENDER IMBALANCE DUE TO THE OVER HARVEST OF OLDER AGE CLASSES HEAVILY COMPRISED OF BREEDER FEMALES.**

I'm already familiar with the trends in the 70's and 80's and know the stock essentially collapsed at least on paper with an SSB of ~7,000 metric tons in 1989, lowest recorded level in at least 50 years. Didn't realize commercial concerns redirected their efforts at other species which I'm glad was an option. In my opinion, the fishery as mentioned in previous documents reversed fortune to the positive beginning in 1989 and for the next 15 years because even at an

extremely low SSB, once catch levels were adjusted, gender balance (recruitment strength) of SSB had a better proportionate mix of males and females and more importantly higher fecund older age females which brought SSB back to 68,000 metric tons in 2003. 900% increase in 15 years. You're words " ***What I get out of that is that we should be targeting the smaller fish, 14 to 18 inches, because that makes the rest of the biomass spawn harder to keep up.***" That's my entire summation in a nut shell with one minor exception with how you stated it. I don't think the remaining biomass had to work harder to keep up. I believe the age and gender composition of SSB even at lower levels in the late 80's / early 90's was more proportionate between males and females because the harvest composition of younger age classes as you stated allowed that. SSB consisted more of older age classes with a significantly higher female proportion with the highest levels of fecundity. May sound like a subtle distinction but it's huge part of what needs to be corrected. Changes in catch composition in 1997 started a 20 plus year decline in this fishery which was under the radar screen for a few years until 2004 when that change caught up with us and weakened the recruitment capacity of the fishery to a point of no longer being sustainable in spite of significant cuts in catch. Catch composition needs to change in order for this fishery to rebound.

There's so much more we can discuss but I don't want to take up any more of your or anyone else's time and I know everyone at this stage with the upcoming meeting is already on information overload. But Jim you and I are on the same page more than you realize and the solution to rebuilding this fishery is in the data and the trends that data reveals. As I said, the blueprint is already in place, we need to collectively listen to what it's telling us and have the passion, conviction, courage whatever you wish to call it and work together to change this fisheries fortune. In doing so, I hope Jim has his 200,000 lb year, I hope every commercial, for hire and recreational angler can enjoy and reap the benefits of a much larger pie we collectively worked together to create. My hope, really my prayer, is the Commission, Council, Technical Committee, AP Members, Scientists, Marine Biologists, Commercial and Recreational communities and anyone else involved can work together, leave our differences at the side door, and leave our mark in a positive way on this fishery. Future generations ability to enjoy and benefit from this stock are dependent on it. This is an extremely vital fishery, it would kill me to see another one disappear and there's absolutely no reason for it to happen.

Everyone have a great night!

Regards,

Tom

## Kiley Dancy

---

**From:** Tom Fote <tfote@jcaa.org>  
**Sent:** Friday, November 22, 2019 4:42 PM  
**To:** Tom Smith; Lovgren, Jim  
**Cc:** Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; NICHOLA.MESERVE@state.ma.us; White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Snellbaker, Jason; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; Starks, Caitlin; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; Peter Clarke; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; JEFFEUTSLER@me.com; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Gregory DiDomenico; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFood@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; Ec Newellman; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan  
**Subject:** Re: December ASMFC Joint Mtg - Annapolis MD

**Categories:** SFSCBSB

Tom Smith,

I appreciate the time and hard work you have put into your hypothesis but you should have really talked to a couple of people who have been involved in the fisheries for years and gotten the history of what really happen when the rebuilding took place. That is why your hypothesis had flaws since your started off with some gaps in your history of what went on with recruitment of summer flounder.

When we rebuilt the stocks it primarily on one, two and three year old fish since there were not many big fish. There was very little year class distribution and there were few fish older than five years. There were not the big females we have now and ages classes going out 12 years. A doormat fluke in the 80s into the 90s was a 5 pound fish and not a fish over 10 pounds as it is now. The average recreational caught fish in the late eighties and early nineties was 1 1/2 pounds not the over 3 pound fish it is now. That meant the recreational community is bringing home fewer but bigger fish.

When the stock was pronounced recovered with age classes going out to over 12 years old, recruitment started collapsing. This is called a bell shaped curve. We saw this in West Coast halibut.

When the stocks reached an all time high, recruitment dropped off. Dr. Pat Sullivan, who was working on the West Coast Halibut Commission at the time, suggested that they try fishing down the stock and see what happens with recruitment. It took 5 years of tough persuasion to get to implementation but when they did, recruitment jumped up. As we see in land based wildlife, when a species gets over crowded and the food sources get scarce, they stop reproducing. That is why many people are questioning your hypothesis. You work hard and I would like you to stay involved. But you also must understand, many of us have a long background and would gladly share our experiences with you as long as you are open to our impute.

Sincerely,  
Tom Fote

## Kiley Dancy

---

**From:** Jim Lovgren <jlovgren3@gmail.com>  
**Sent:** Friday, November 22, 2019 5:22 PM  
**To:** Fote, Tom  
**Cc:** Tom Smith; Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; NICHOLA.MESERVE@state.ma.us; White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Snellbaker, Jason; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; Starks, Caitlin; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; Peter Clarke; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; JEFFEUTSLER@me.com; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Gregory DiDomenico; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFOOD@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; Ec Newellman; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan  
**Subject:** Re: December ASMFC Joint Mtg - Annapolis MD

**Categories:** SFSCBSB

Tom, As Mr. Fote knows this is called density dependence and it is the real problem with the fishery if you have to have a problem. It gets down to the carrying capacity of an ecosystem, the ecosystem can only support so many animals at one time. All that management should be doing is trying to see if we can manipulate the ecosystem to the benefit of the more beneficial to society animals, such as flounders, demersal, and pelagic species, while trying to keep the less marketable fish at a low but still sustainable level, think, less dogfish, skates and sea robins for instance. Both commercial and recreational fishermen and their representatives have been harping on this one point for over 20 years, the government thinks that they can have all species at their highest ever recorded levels at the same time, anything less is a failure, yet they know this is totally impossible. And that is why fish populations that by any reasonable measurement would be considered healthy, are declared overfished. The NEFSC knows about this problem but has done nothing in the way of even attempting to address it. It seems they get more money if the sky is falling. Thanks, Jim

## Kiley Dancy

---

**From:** Tom Smith <smith.tom560@gmail.com>  
**Sent:** Friday, November 22, 2019 9:37 PM  
**To:** Fote, Tom  
**Cc:** Lovgren, Jim; Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; Meserve, Nichola (FWE); White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Snellbaker, Jason; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; Starks, Caitlin; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; Peter Clarke; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; JEFFEUTSLER@me.com; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Gregory DiDomenico; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFOOD@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; Ec Newellman; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan  
**Subject:** Re: December ASMFC Joint Mtg - Annapolis MD

**Categories:** SFSCBSB

## PLEASE READ

Tom / Jim,

Thanks for your replies. Tom Let me reply to your last statement first ***"But you also must understand, many of us have a long background and would gladly share our experiences with you as long as you are open to our input."*** By nature I'm a data driven individual and believe data and facts outweigh anecdotal arguments, what ifs and conjecture. Policy decisions are based on marine fisheries data in my analysis and not anecdotal observations so my personal belief is it would be prudent and beneficial to us all to direct our discussions around that data, accurate or inaccurate, as opposed to introducing alternate what ifs. In that sense, I've been very open minded to what the trends are revealing. Being open minded is different than being mindless and that door swings both ways so I would ask



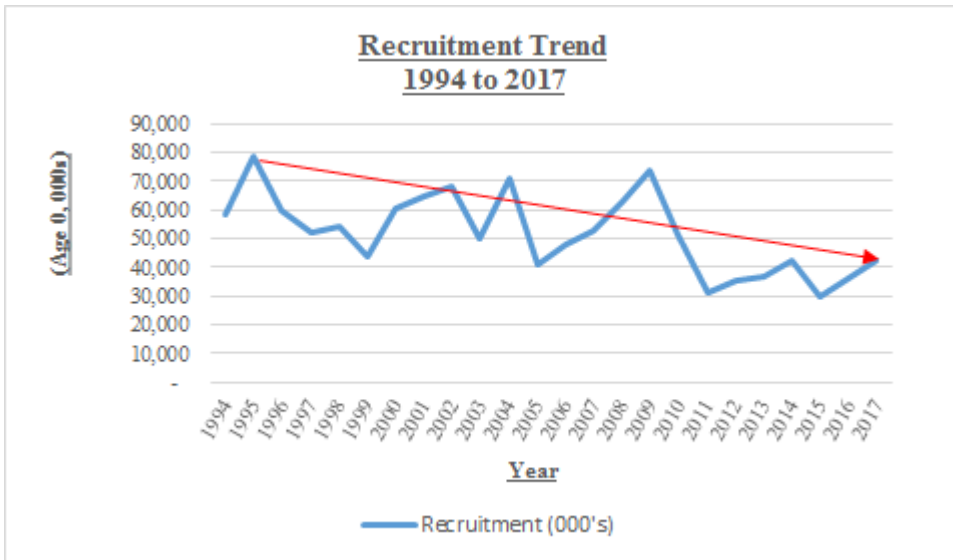
the same consideration from the Commission and Council Members and everyone else on this thread as well towards my analysis. I've been a CFO for a majority of my professional career and dealing with data is one of my expertise. I'm not introducing new data, not challenging existing data although some can definitely be challenged. I'm trying to elevate 30 to 40 year trends to the surface for the decision makers to see in the hopes it will identify the issues preventing this vital fishery from recovering.

To your point of getting people involved, I've put a tremendous amount of effort in to assist for the most part the people copied on this email with managing and saving this fishery for the benefit of both commercial and recreational parties. I've attended public meetings, listened and participated on countless webinars only to find out that comments made are significantly limited and largely ignored. For all practical purposes, public involvement is in my opinion a requirement of MSA legislation or subsequent re-authorizations with little to no intent of including that input in the management of the fishery or policy decisions. That's not just my opinion, it's the overwhelming opinion of the general public and the shame of that statement is there's a tremendous amount of talented people and knowledge base being wasted with that philosophy in the process.

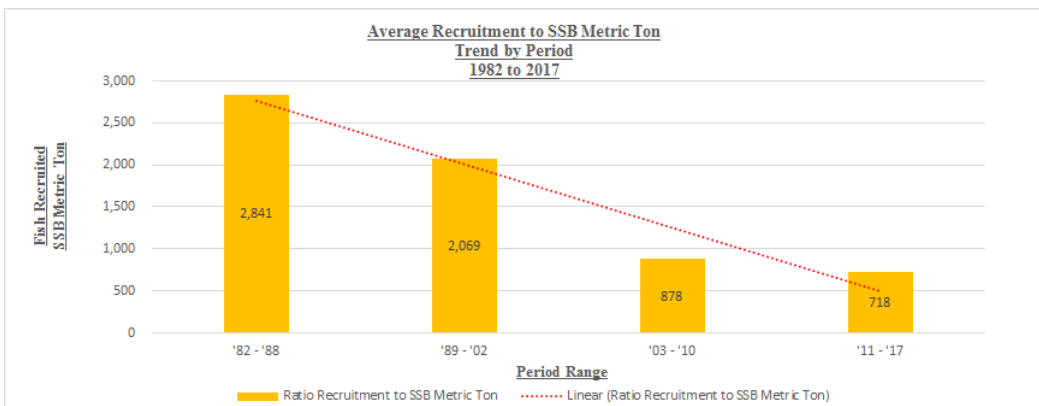
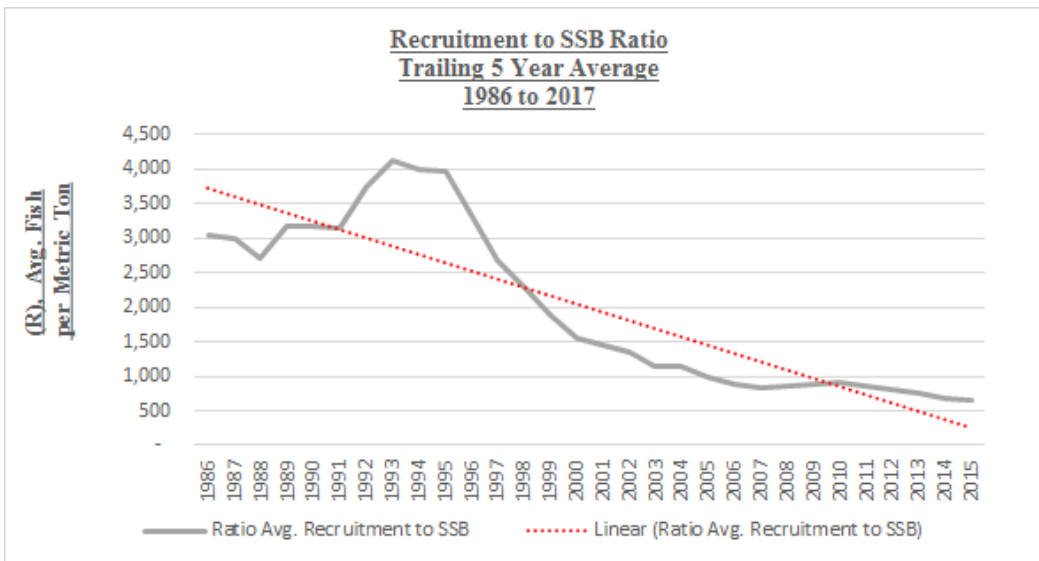
As far as getting people involved, I started this journey by meeting with RFA and SSFFF Members two years ago, specifically Jim Hutchinson Jr, Greg Hueth, Nick Cicero, Dave Arbeitman, Gerry Zagorski. and Dave Daley. Adam Nowalski is the Chairman of the RFA NJ Chapter. My analysis was initially published in RFA's 2017 "Spring Making Waves" edition which Adam is fully aware of. Jim Donofrio, Executive Director and Founder of RFA, described the article and my analysis, communicated by Jim Hutchinson Jr. to me, as "the best representation of the facts in this fishery he's ever seen". They described it as the smoking gun of why the fishery was failing. A similar article was subsequently run in the Fisherman Magazine by Jim Hutchinson Jr. with the same foundation of my conclusions and analysis today. I forwarded my work to NJDEP back in 2017 to David L. Glass, Deputy Commissioner DEP who replied "Extremely insightful, I have shared your information with our team from Fish & Wildlife, thank you for passing it along" never to hear back.. In September, based on the advise of Dustin Leaning who has been an absolute pleasure to work with in his new role, I forwarded my Executive Summary and Analysis for the Durham North Carolina meeting to Adam Nowalski, Joe Cimino and Tom yourself, New Jersey's representatives, prompting a reply from Adam which I would characterize as anything but being open minded, and essentially no reply from Mr. Cimino or yourself. Running into dead ends over the last two years and being shunned from public commentary is what led me to forward my analysis directly to the Commission, Council, Technical Committee and AP Members as well as others to share information I've worked countless hours developing and analyzing. For that matter, Pat Sullivan who you mentioned in your reply was very aware and involved in my initial analysis and conclusions as SSFFF used it in their failed effort to incorporate sex and gender variables in future fisheries models as it failed Peer Review. At the time, Pat completely agreed with my findings and conclusions so I'm not sure why the implication in your reply is he wouldn't agree with them today. I can only reach out to people for assistance and advise them on my work which I did, I can't contribute to the management of this resource if my work falls on deaf ears which to a large degree it has.

As far as your comment ***"The average recreational caught fish in the late eighties and early nineties was 1 1/2 pounds not the over 3 pound fish it is now. That meant the recreational community is bringing home fewer but bigger fish."*** I completely agree with that statement with one caveat. That means the recreational community is bringing home fewer but bigger fish, **if any at all**. And your assuming that's what the recreational community is most interested in which I would disagree with. I believe what's most important to them is length of season and higher possession limits, the polar opposite of what the regulations have mandated. I also believe, as my thesis states, the increased harvest of females and older age classes is leading to a decline in the fishery. I know based on your reply you disagree with that thesis. I would venture to say most party boat fares today are leaving the boat with empty coolers due to the existing regulations. Average trip costs including fares, travel, sometimes lodging, food and beverages, ice, tips, equipment etc. probably range between \$200 - \$250. How long does anyone believe the party boat / for hire business will last with the current regulations in place. If we don't address the economic impacts these decisions are having on that community, they don't stand a chance.

Your comment **"When the stock was pronounced recovered with age classes going out to over 12 years old, recruitment started collapsing."** Correct me if I'm wrong but the stock was declared rebuilt in 2009, recruitment in the absolute



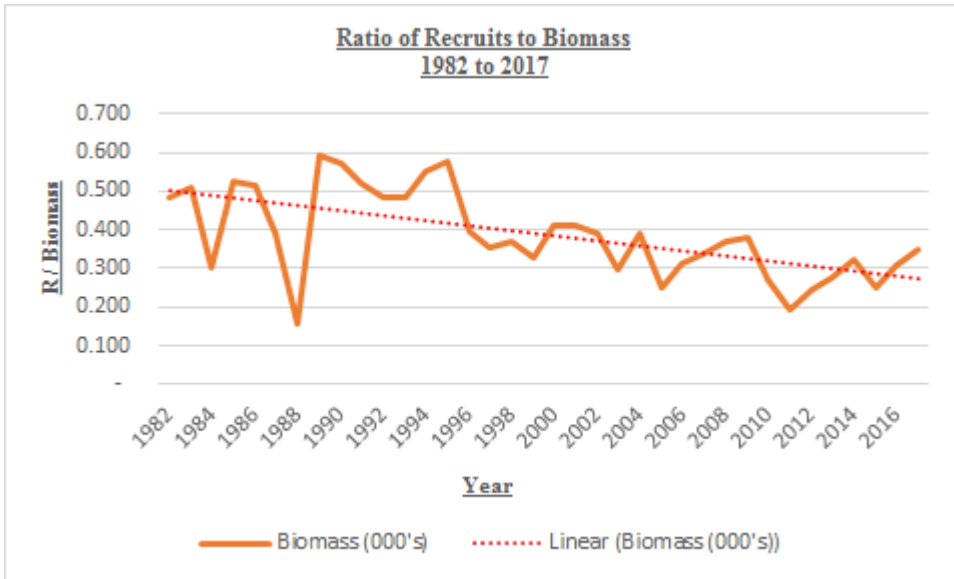
and relative to SSB



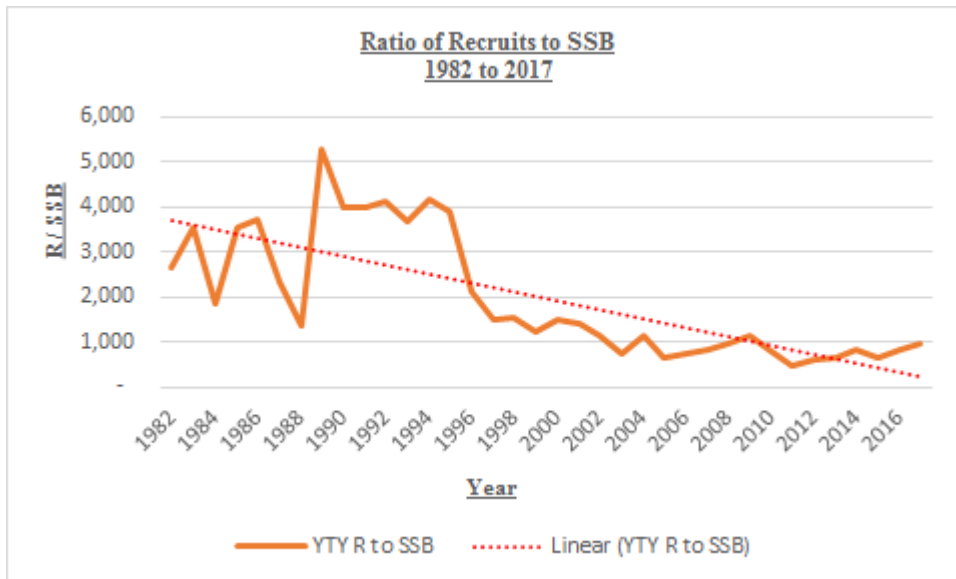
started declining well before 2009 so your statement is not only incorrect it's very misleading.

Your words, " *When the stocks reached an all time high, recruitment dropped off. Dr. Pat Sullivan, who was working on the West Coast Halibut Commission at the time, suggested that they try fishing down the stock and see what happens with recruitment. It took 5 years of tough persuasion to get to implementation but when they did, recruitment jumped up. As we see in land based wildlife, when a species gets over crowded and the food sources get scarce, they stop reproducing. That is why many people are questioning your hypothesis.*"

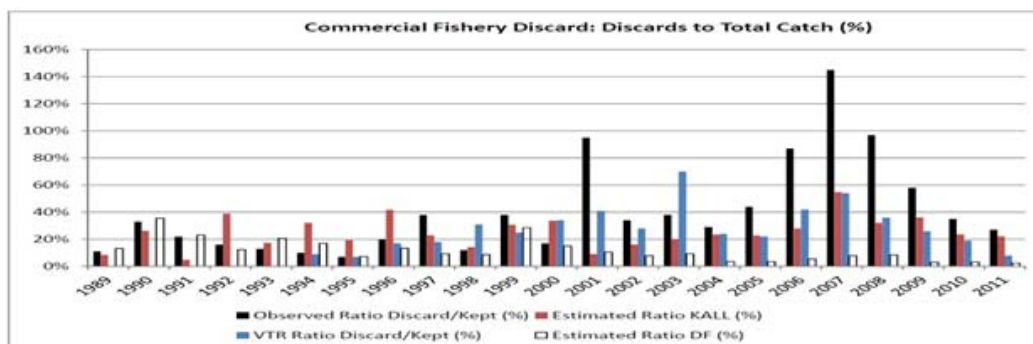
So in other words the Commission and Council want the stock to decline to bolster recruitment even though the data states recruitment and the biomass have each declined 41% and 32% respectively over the last 15-yr period. Interesting perspective. And if what you say is true, please explain the following relationships between recruitment and the biomass and recruitment and SSB which absolutely refutes your statement.



The ratio of new recruits to biomass has decreased substantially over the last 35 years which is the exact opposite of your theory. Recruitment in 1982 was 102 million new recruits relative to a biomass of 202 million fish. In 2017, recruitment was approximately 42 million on a biomass population of 121 million. 60% decrease in recruitment or 60 million less recruits based on a biomass population decrease of 40% or 80 million less fish. I would argue the concept of "density dependence" is not applicable since the same relationship repeats over the last 35 year period. If you relate R to SSB, the ratio is even worse and further from the case you present based on the following:



If biomass and SSB are decreasing and your theory had merit, we should be seeing increasing and historically high recruitment levels over the last decade and we're not. What we're seeing is the reverse and it's all due to the gender imbalance created in the biomass, the result of the over harvest of older age classes with higher levels of dead discard both recreationally and commercially and you can't rule out the potentially disastrous effects the commercial harvest is having on the spawn as larger sexually mature fish are being targeted than in years past. That plus as my analysis states the commercial winter harvest of the most highly concentrated biomass on record (40% occurring in the months Jan thru March per ACCSP) and the impact it's potentially having on even more elevated dead discard rates as illustrated in the following 57Th SAW graph.



That is exactly why many people should be considering my thesis as opposed to questioning it because the statements you outlined in your reply are 100% not supported by marine fisheries data, are wrong based on the data being used to make policy decisions and extremely misleading. As Jim Lovegren himself said **"Even a moron knows you can't kill all the mommy's and expect a species to survive, how come the ASMFC and the MAFMC can't figure that out?"** That statement is directly from an AP Member and I couldn't agree more. We're misinterpreting the data and allowing 50 year old legislation dictate bad policy decisions. We're all better than that, but not if we keep to the path we're on.

The decision made today on the AP webinar to maintain status quo and not consider a single slot per state is the wrong decision for the health and future of this fishery. It would have been a start to reverting back to the regulations that caused a 900% increase in this fishery. It would have given for hire and party boat owners much needed relief. One slot would have made all the difference in the world in changing the trajectory of this fishery and we completely overlooked the benefits. More males harvested, more egg capacity from harvesting less females, lower levels of discards etc. the start of repairing a damaged SSB, higher recruitment levels, all the things broken in this fishery. Status quo regulations for 2020 and 2021 will result in a continuation of the same failing trend lines. How that isn't being acknowledged in a fishery which has been declining since 2003 is truly incomprehensible.

I apologize if people take this as being bold, brass, unprofessional, disrespectful whatever but my analysis, conclusions and beliefs are based on facts contrary to at least one person on this thread with the involvement and acknowledgment of some pretty smart people in this industry.

Greg Hueth, if the MC doesn't believe increased harvest of females is at the root of all evils in this fishery, catch composition as I've mentioned which has caused unintended negative consequential impacts to the fishery, you might as well stop working on your sex and gender based model because it's dead on arrival.

Sincerely,

Tom .

## Kiley Dancy

---

**From:** Tom Smith <smith.tom560@gmail.com>  
**Sent:** Saturday, November 23, 2019 8:29 AM  
**To:** Fote, Tom  
**Cc:** Lovgren, Jim; Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; Meserve, Nichola (FWE); White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Snellbaker, Jason; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; Starks, Caitlin; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; Peter Clarke; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; JEFFEUTSLER@me.com; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Gregory DiDomenico; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFOOD@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; Ec Newellman; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan  
**Subject:** Re: December ASMFC Joint Mtg - Annapolis MD

**Categories:** SFSCBSB

Ladies and Gentlemen,

Just one last point to make regarding the summer flounder fishery and the trajectory it's on. The below charts are from the winter flounder 2017 Stock Assessment. Note the relationships between the Biomass, recruitment and catch levels. The trend are almost identical to the summer flounder fishery and unless regulatory change are made as recommended to change catch composition and protect SSB, the female breeders and the spawn, summer flounder will have the same fate as the winter flounder fishery which has all but disappeared.

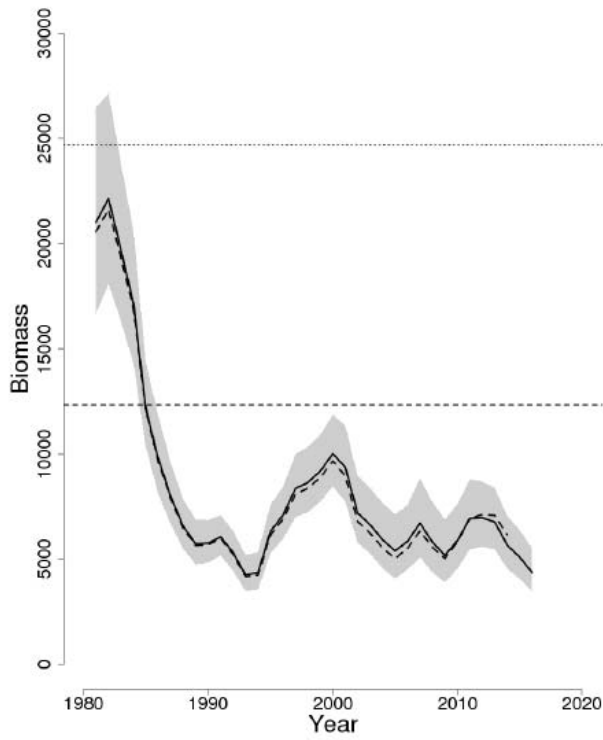


Figure 1: Trends in spawning stock biomass of Southern New England Mid-Atlantic winter flounder between 1981 and 2016 from the current (solid line) and previous (dashed line) assessment and the corresponding  $SSB_{threshold}$  ( $\frac{1}{2} SSB_{MSY proxy}$ ; horizontal dashed line) as well as  $SSB_{target}$  ( $SSB_{MSY proxy}$ ; horizontal dotted line) based on the 2017 assessment. The approximate 90% lognormal confidence intervals are shown.

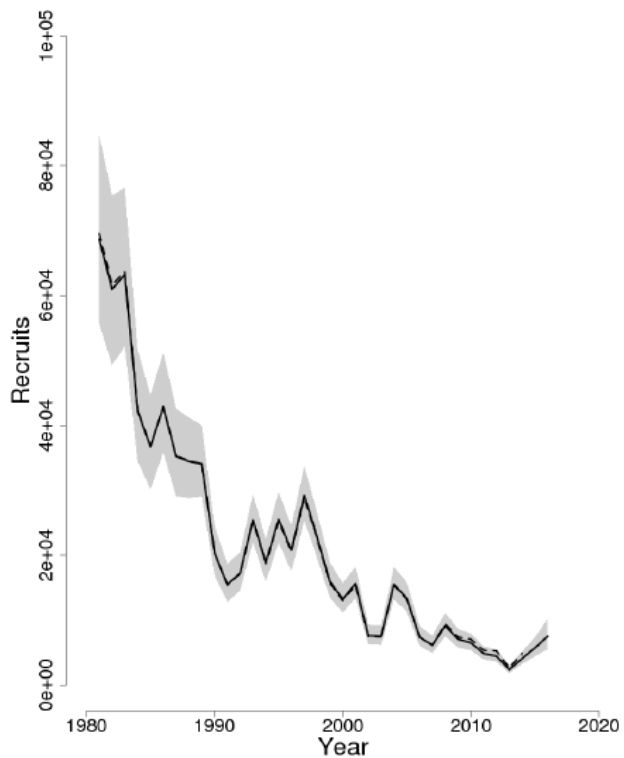


Figure 3: Trends in Recruits (age 1) (000s) of Southern New England Mid-Atlantic winter flounder between 1981 and 2016 from the current (solid line) and previous (dashed line) assessment. The approximate 90% lognormal confidence intervals are shown.

Cell issue on the Y axis of the chart in the SAW report but the trend line speaks for itself. Recruitment levels were destroyed.



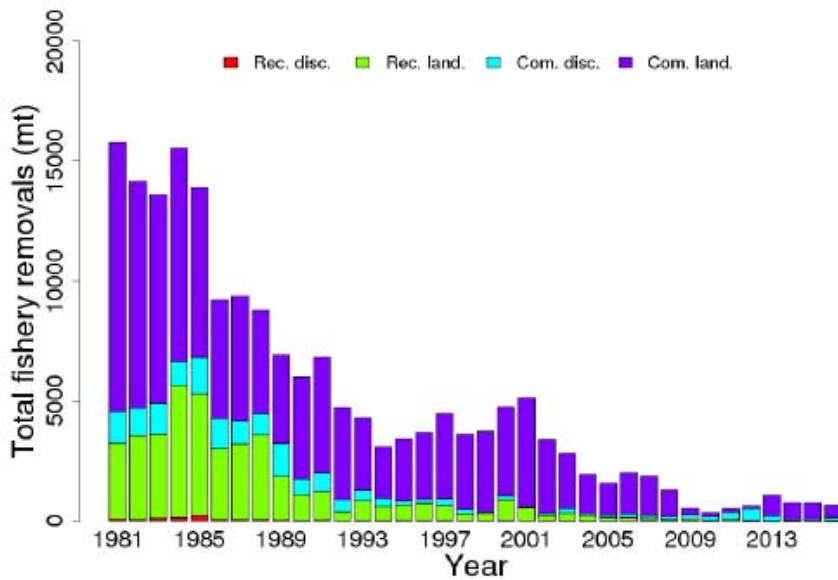


Figure 4: Total catch of Southern New England Mid-Atlantic winter flounder between 1981 and 2016 by fleet (commercial, recreational) and disposition (landings and discards).

A biomass 5 times greater in the 80's than today, catch levels which have plummeted to the point there really all that remains is a negligible commercial harvest which pales in comparison to the last four decades, the 80's in particular. Essentially no recreational fishery remains and recruitment levels in spite of a substantial drop in the biomass were crushed and never recovered. Again density differential didn't apply to this fishery either. The fishery for all practical purposes is gone. This is the same course we're on with summer flounder largely due to the same reasons. Two fisheries which in the 70's and 80's most people would have said will never falter, one has already failed and one very much on it's way to the same fate if remedial measures aren't adopted as recommended. I would imagine the MC also said the continued harvest of large female breeders offshore wasn't negatively impacting this fishery either yet the results would appear to prove otherwise. Catch cut substantially, the biomass and SSB decimated both in the absolute and I would assume from a gender perspective, recruitment levels destroyed in the process. Sound familiar to everyone? It should, I could change the titles on the charts to summer flounder as it directionally mirrors the same trends we're seeing in the summer flounder fishery and with status quo regulations there's no reason those trends will change meaning the fishery will continue on the 17-yr declining trend it's been on and more likely than not end up in the same situation the winter flounder fishery has. .

Food for thought before December's Joint Meeting.

Tom

## Kiley Dancy

---

**From:** Jeffrey Eutsler <jeffeutsler@me.com>  
**Sent:** Saturday, November 23, 2019 9:18 AM  
**To:** Tom Smith  
**Cc:** Fote, Tom; Lovgren, Jim; Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; Meserve, Nichola (FWE); White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Snellbaker, Jason; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; Starks, Caitlin; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; Peter Clarke; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Gregory DiDomenico; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFOOD@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; Ec Newellman; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan  
**Subject:** Re: December ASMFC Joint Mtg - Annapolis MD  
**Categories:** SFSCBSB

For the sake of argument everyone makes good points but don't you think the Trawl surveys need to be handled differently if they're basing off the Bigelow's survey work, not a good idea ,I think we need a better mouse trap!!! lets put it in the fishermen's hands and not someone who is a retired fisherman!!!! there are reasons at he is retired!!! I've been actively fishing for 40 years and can honestly say that there are more fluke around today back in the 80's we actually counted fish per tow, now we leave tows what would have been big tows then, because we know there are more somewhere else.

I just want to say be very careful with who are doing the survey's!!!!!!! We need Active professionals, not retirees



Thanks  
Jeff

Sent from my iPhone

## Kiley Dancy

---

**From:** Tom Smith <smith.tom560@gmail.com>  
**Sent:** Saturday, November 23, 2019 10:48 AM  
**To:** Jeffrey Eutsler  
**Cc:** Fote, Tom; Lovgren, Jim; Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; Meserve, Nichola (FWE); White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Snellbaker, Jason; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; Starks, Caitlin; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; Peter Clarke; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Gregory DiDomenico; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFOOD@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; Ec Newellman; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan  
**Subject:** Re: December ASMFC Joint Mtg - Annapolis MD  
**Categories:** SFSCBSB

Jeffrey,

I absolutely agree if the data is wrong or there's reason to believe it's not representative of what's happening in the fishery, alternate means of collection need to be employed. **BUT** there hasn't been other than MRIP which everyone questions and as a result policy decisions are being made based on questionable data which is hurting commercial interests and in my opinion to a larger degree recreational interests. People are losing their livelihoods over these regulations, businesses are going under and instead of changing the process if the data is in fact uncertain or questionable, we simply make the same bad decisions every year on flawed data. If that's the consensus of the Commission and Council, it's an issue they need to address and resolve.

At the same time as mentioned, we need to be sure the appearance of a healthier biomass by commercial operators isn't the result of approximately 35 million more fish (based on my calculations) being removed from harvest potential recreationally because of the inequity different size limits created. Those fish in years past would have been harvested

by the recreational community, today they're being released. And in the process, recreational anglers are penalized 32% for discard mortality and at minimum commercial's proportionate share of the harvestable biomass (fish over 14") has increased exponentially. What your seeing might be a direct result of that shift again in catch composition as opposed to an indication of a growing fishery. 35 million more fish in the most highly concentrated biomass on record would certainly give that illusion.

In general I agree with the points you raise in your post, bad or questionable inputs result in bad or questionable outputs which typically leads to ineffective decision making. But as I said, that data is the data policy decisions are being based on and simply adjusting catch downward every year is not addressing that problem. This again is a trend in the making for 17 years minimum and more likely 22-years started in 1997. If we're concerned about how the data is being generated, I would think the largest most powerful institution in the world would have had ample time to address that issue and if it hasn't all we have to address is the data as it exists in the stock assessments which is precisely why I approached this in the manner I have.

Thanks for your reply, well said and very practical.

Regards,

Tom

**Name:** Ryan Landolfi

**Email:** [landolfi.rr@gmail.com](mailto:landolfi.rr@gmail.com)

**Topic(s):** Tab 12: Summer Flounder 2020 Recreational Specifications

**Comments:** The quality of the fishing in the NY Bight for summer flounder has been steadily declining, with the only observable changes for recreational anglers like myself being the increasing size limits and decreasing bag limits. The philosophy that removing the larger spawning females from the population, with a relatively much lower percentage of large male fish, seems to have put this fishery into a tailspin. While I understand there are many factors at play, I believe the regulations are not functioning as intended (to protect the stock) and are having a deleterious effect on the overall health of the fishery. Several factors have contributed to the decline of this fishery including commercial discards, commercial harvest of spawning stock biomass during spawning months prior to dropping eggs, recreational discard mortality, etc. I ask that you please consider implementing a recreational slot limit to protect not only the future of the summer flounder fishery, but also the future of recreational fishing for the generations to follow. Many anglers like myself would be happy to take a photo with that fish of a lifetime and return her back to continue to spawn while keeping a couple smaller fish for the table; however, with the regulations as they are, we are forced to remove these large breeding females if we want to enjoy a fresh caught meal. It just doesn't make sense.

(Sent via [Mid-Atlantic Fishery Management Council](#))

---

**Name:** Timothy Anfuso

**Email:** [cnplanners@optonline.net](mailto:cnplanners@optonline.net)

**Topic(s):** Tab 12: Summer Flounder 2020 Recreational Specifications

**Comments:** To Whom It May Concern;

Please accept the following when considering the 2020 Summer Flounder regulations.

1. In New Jersey the 18" minimum size limit primarily results in the harvesting of female fish.
2. To increase recruitment or young of the year we need to stop harvesting female fish and need to harvest a balance between male and female fish.
3. Implement a slot requirement which is designed to harvest male fish.
4. Finally and most importantly, stop all fishing during spawning periods. It make no sense to allow fishing when the fish are stacked up for a spawn and to remove these fish from the population immediately prior to breeding. Having a larger population which actually breeds will only result in more eggs being hatch and increase the young of the year. During spawning periods all fishing should be closed and remain closed until after the eggs are released.

Thank you for your time and consideration.

Tim Anfuso

50 Society Hill Way

Tinton Falls, NJ 07724

(Sent via [Mid-Atlantic Fishery Management Council](#))

## **Comments for the Mid-Atlantic Fishery Management Council's December meeting regarding Conservational equivalency in the summer flounder and black sea bass fisheries.**

My name is Michael Plaia and I am an advisor to both the Mid-Atlantic Fishery Management Council (MAFMC) and the Atlantic States Marine Fishery Commission (ASMFC) for summer flounder, scup and black sea bass. I am writing to you today to urge you to refuse to adopt conservational equivalency for both the 2020 summer flounder and black sea bass fisheries.

My comments today will mirror the comments I have previously submitted to the Greater Atlantic Fisheries Office in response to their general request for comments on including conservational equivalency as an option in the fishery management plan for black sea bass. I have attached those comments to this missive for your reading pleasure.

I do not believe that it is either legal or wise for the council to vote in favor of using conservational equivalency in either of those fisheries. The Magnesson-Stevens act requires that all actions taken by the council be based on the best available science. The best available science in this case being the Marine Recreational Information Program and its estimate of each states' recreational catch during 2019. I have also attached an excel worksheet which shows the MRIP state-by-state catch estimates through wave 4, along with the associated percent standard error (PSE) and calculates the weighted average PSE for waves 3 and 4 (including waves 1 and 2 would only increase the PSEs for these estimates).

If the council were to choose to use conservational equivalency in either of these fisheries the ASMFC would use these MRIP estimates to formulate their conservational equivalent regulations. The problem is that these estimates, by their own internal criteria, are not the best available science.

As you can see on the Excel worksheet, the harvest estimates (A + B1) for summer flounder during 2019 in at east three states, MA, RI and NC, carry PSEs of 40% or greater and the PSE for the state of MD is closely approaching 40%. If you subscribe to what I will, with all due respect, refer to as the John Boreman school of thought (since he was the first one to tell me about it) any MRIP estimate which carries a PSE of over 40% should not be relied on for management purposes. Therefore, if the council were to vote to use conservational equivalency it would be voting to use what the best available science says are unreliable figures to manage the 2020 fishery.

For black sea bass the case is even stronger. The 2019 harvest estimates (A + B1) for the states of MD and VA are well over 50%, which means that those estimates are more likely wrong than correct. Also, the estimates for the states of DE and NC have associated PSEs of over 40%, which should not be used for management purposes. Therefore, any vote to use conservational

equivalency for black sea bass would be a vote to use data to manage the fishery which the best available science says is bad data.

Normally I would be in favor of using conservational equivalency to account for local conditions which may vary from the coastwide norms. However, I do think we need good data to do that, and the best available science, e.g. the PSEs, tell us that the data we would have to use to implement conservational equivalency is at best, unusable for management purposes and, in the case of black sea bass, that data is more likely wrong, and thus directly against the Magnuson-Stevens directive to use the best available science.

**From:** Bruce corrnine <[brewlugger@gmail.com](mailto:brewlugger@gmail.com)>  
**Sent:** Tuesday, November 26, 2019 8:04 AM  
**To:** Moore, Christopher <[cmoore@mafmc.org](mailto:cmoore@mafmc.org)>  
**Subject:** Summer Flounder

As a lifelong resident of New Jersey and a recreational saltwater angler for over 50 years. I am asking the council to take a proactive approach to protect the Summer Flounder spawning stock biomass. The information provided by Tom Smith clearly shows the current regulations will not bring recovery to this fishery and will continue the decline of our Summer Flounder fishery.

---

**From:** Hart, Larry <[larry.hart@credit-suisse.com](mailto:larry.hart@credit-suisse.com)>  
**Sent:** Tuesday, November 26, 2019 9:15 AM  
**To:** Moore, Christopher <[cmoore@mafmc.org](mailto:cmoore@mafmc.org)>  
**Subject:** Fluke 2020

Resending attached:

Please consider a "slot" regulation for Fluke this year so that recreational anglers are no longer forced to remove the larger female breeders from the stock. Also please consider a commercial ban on Fluke landings during their winter Spawn off-shore. . . Thanks, Larry Hart (New Jersey recreational fisherman)

Larry Hart  
**CREDIT SUISSE SECURITIES (USA) LLC**  
CS Sec USA LLC | EM OPS IT - Princeton, MIOM 87  
Princeton Forrestal | Princeton NJ 08540-6689 | Americas  
Phone +1 212 325 9992  
[larry.hart@credit-suisse.com](mailto:larry.hart@credit-suisse.com) | [www.credit-suisse.com](http://www.credit-suisse.com)

---

Name: Tom Trageser  
Email: [ttrageser@oceanmhs.org](mailto:ttrageser@oceanmhs.org)  
Topic(s): Tab 12: Summer Flounder 2020 Recreational Specifications, Tab 14: Black Sea Bass 2020 Recreational Specifications, Tab 16: Summer Flounder, Scup, and Black Sea Bass Commercial/ Recreational Allocation Amendment  
Comments: Recreational anglers have been abiding by summer flounder regulations for over 30 years! During that time, harvest limits have been reduced and minimum size have increased. The increased regulations are having the opposite effect on our fisheries than what was intended by the Magnuson-Stevens act. Recent data has been presented to the councils and SSC showing undeniable proof the regulations are helping to decimate the SSB of summer flounder and other species as well (e.g. Black Sea bass). It is well past the time for a significant change in how we regulate the fisheries and the data used to measure fish stocks and the pressure we put upon them.  
Tom Smith, has studied the available data that provides evidence the increased minimum size of summer flounder is having a detrimental impact on the SSB. As minimum size increases, recreational anglers are being forced to harvest the breeding stock. Peer reviewed data (paid by recreational anglers) provides information that 90% of the fluke over 18" are female. It makes no sense to force the recreational community to remove only the breeding class of fish. A slot fishery is what is needed to help this fishery survive and thrive.  
I urge you to listen and take action on the analysis provided by Tom Smith on November 19, 2019 to Kiley Dancy and the AMFC. Failure to do so will result in another fluke fiasco by enraging the recreational community like you have never seen before.  
(Sent via Mid-Atlantic Fishery Management Council)



## Kiley Dancy

---

**From:** Dustin C. Leaning <DLeaning@asmfc.org>  
**Sent:** Tuesday, November 26, 2019 3:29 PM  
**To:** Kiley Dancy; Beaty, Julia; Coutre, Karson  
**Subject:** FW: Reminder: AP webinar this Friday

**From:** Conway Jr, JACK D [mailto:jack.d.conway.jr@lmco.com]  
**Sent:** Tuesday, November 26, 2019 2:59 PM  
**To:** Dustin C. Leaning <DLeaning@asmfc.org>  
**Subject:** [External] RE: Reminder: AP webinar this Friday

Greetings from CT,

I was on the conference call last Friday and did not provide any verbal comments since I wanted to absorb the entire meeting. Overall, having status quo regulations for all three species makes the most sense for CT Anglers fishing Long Island Sound waters for the 2020 Season.

Specific Comments:

Summer flounder: a slot limit does make a great deal of sense but I realize some of the Party Charter fleet (not based on CT) have specific fisheries for trophy summer flounder. From my perspective, the slot limit concept needs to be explored further and there may likely be a need for different regulations for different bodies of water (similar to Tautog management in Long Island Sound). Summer Flounder fishing in Long Island Sound has been going downhill in major fashion, in 2019 during the months of July and August my boat landed over 300 summer flounder. Out of the 300 we only landed 1 “keeper”. I was fishing in water from 80-130 feet in Central Long Island Sound (often drifting into NY waters). We landed many 17-18 inch fish. Anything over 19 was impossible to come by. Reducing recreational landings by increasing dead discards was a bad management decision made a long time ago.

Sea Bass: Sea bass have become one of the most important fish for recreational anglers based out of CT. They are available somewhat all year (moving from Central LIS to Eastern LIS over the course of the summer). They allow anglers to harvest fish when nothing else is available. Per my above comments the summer flounder fishery for “keepers” is dismal and CT waters used to have great striped bass fishing that has also disappeared with the downturn in that fishery. Sea Bass offer great opportunities and the ability to big a great eating fish home. The bluefish population in LIS has also “crashed”. The point being sea bass have somewhat filled the void left by other species in decline.

Scup: the other “go to” fish in LIS and are enjoying more popularity than ever before. Again, with the lack of striped bass and bluefish, this fishery is filling a void that needs to be filled.

MRIP Data: “Yikes” – this was a hot topic during the call and this really needs to be addressed. I was not aware of the crazy numbers associated with the shore based catch of scup in CT but something is really wrong with this data collection system.

The staff did a great job running the meeting.

Happy Thanksgiving

John (Jack) Conway

**From:** Alan <[kingofbdock@aol.com](mailto:kingofbdock@aol.com)>  
**Sent:** Tuesday, November 26, 2019 8:23 PM  
**To:** Moore, Christopher <[cmoore@mafmc.org](mailto:cmoore@mafmc.org)>  
**Subject:** summer flounder

Please consider a "slot" regulation for Fluke this year so that recreational anglers are no longer forced to remove the larger female breeders from the stock. Also please consider a commercial ban on Fluke landings during their winter spawn off-shore. Both need to be implemented at the same time. I am not asking for a reduction in the commercial quota, just that they don't fish during the breeding season.

In addition, there has to be a better methodology of estimating the recreational summer flounder catch other than a mailing. It is probably flawed and filled with unreliable information. Is it the best science to determine what is being caught? And every time you come up with a new way to estimate the total recreational take we get less and less. Over the past few years our allowable catch in New Jersey has dropped more than 60 percent. It is obvious and interesting that you do not take into consideration the economic impact of your actions as you do for the commercials, I wonder why that is.

**Alan Kenter (New Jersey recreational fisherman)**

---

**Name:** paul geelan

**Email:** [pggeelan@outlook.com](mailto:pggeelan@outlook.com)

**Topic(s):** Tab 02: 2020-2024 Strategic Plan, Tab 07: EAFM Summer Flounder Conceptual Model, Tab 12: Summer Flounder 2020 Recreational Specifications, Tab 16: Summer Flounder, Scup, and Black Sea Bass Commercial/Recreational Allocation Amendment

**Comments:** Please consider a slot fish smaller than 18inch. This would help taking less breeders out of the biomass and give all fisherman a chance to take home a fish for dinner

(Sent via [Mid-Atlantic Fishery Management Council](#))

---

**From:** Squarespace <[no-reply@squarespace.info](mailto:no-reply@squarespace.info)>  
**Date:** November 26, 2019 at 6:33:34 PM EST  
**To:** Mary Clark Sabo <[msabo@mafmc.org](mailto:msabo@mafmc.org)>  
**Subject:** Form Submission - December 2019 Public Comments  
**Reply-To:** [dave@ dneconsulting.com](mailto:dave@ dneconsulting.com)  
**Name:** Dave daly

**Email:** [dave@ dneconsulting.com](mailto:dave@ dneconsulting.com)

**Topic(s):** Tab 12: Summer Flounder 2020 Recreational Specifications, Tab 14: Black Sea Bass 2020 Recreational Specifications

**Comments:** With all due respect the councils , SSC, MC and TC. We need to discuss alternative methods of fisheries management and process in more open minded detail and debate. Mr Tom Smiths analysis obviously requires more discussion and debate

No one has figured the proper management out yet so no blame on anyone or institution but time has run out to continue on the same path as recreational fishing business are forced to close yearly. That means economic impact if even considered is not working,

Gender and Slots need to be a focus with a new look at the highly over estimated catch, discards by the new MRIP , broken trawl surveys and misinformation on release mortality / dead discards.

(Sent via [Mid-Atlantic Fishery Management Council](#))

---

**From:** Martin Smith <[mvsusaf@yahoo.com](mailto:mvsusaf@yahoo.com)>  
**Sent:** Tuesday, November 26, 2019 8:29 PM  
**To:** Moore, Christopher <[cmoore@mafmc.org](mailto:cmoore@mafmc.org)>  
**Subject:** Fluke

Sir: Please consider a slot regulation for fluke this year so that only breeders are harvested. While at it please consider a commercial hiatus on water fluke landings to allow spawning.

Sincerely yours,

Martin V Smith, Major, USAF (Ret)  
Recreational angler  
Sea Bright, NJ

---

From: Roger Naset <[roger@rogersdrivingschool.com](mailto:roger@rogersdrivingschool.com)> Sent:  
Wednesday, November 27, 2019 8:38 PM  
To: Moore, Christopher

Subject: Summer Flounder Management - Public Comment

To Whom it may concern,

As a recreational fisherman of mostly the northern NJ area, I am greatly concerned about the future of our summer flounder fishery here. The biomass seems to be in decline. Please consider a slot limit to protect the larger female breeders and tighter restrictions on commercial netting, especially during the winter offshore spawning period.

Some of our previously prosperous fisheries (winter flounder, weakfish) have been reduced to a fraction of what they once were. It's time to be proactive and try a new approach to summer flounder management to protect them from a similar fate.

Thank you for your consideration.

Roger Naset  
3 Condon Mt Road  
Tomkins Cove, NY 10986

---

**From:** Bonnie Montevechi <[bbmontevechi@gmail.com](mailto:bbmontevechi@gmail.com)>  
**Sent:** Wednesday, November 27, 2019 9:04 PM  
**To:** Moore, Christopher <[cmoore@mafmc.org](mailto:cmoore@mafmc.org)>  
**Subject:** Summer Flounder

I am a longtime resident from New Jersey and a recreational saltwater angler. I am urging the commission to please act on making regulations to protect our Summer Flounder spawning stock biomass.

---

## Kiley Dancy

---

**From:** Tom Smith <smith.tom560@gmail.com>  
**Sent:** Wednesday, November 27, 2019 9:10 PM  
**To:** Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; Meserve, Nichola (FWE); White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Fote, Tom; Snellbaker, Jason; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; Starks, Caitlin; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; Peter Clarke; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; Jeffrey Eutsler; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Lovgren, Jim; Gregory DiDomenico; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFOOD@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; Ec Newellman; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan  
**Subject:** Re: December ASMFC Joint Mtg - Annapolis MD

Ladies and Gentlemen,,

Kiley, thanks again for all your work pulling a tremendous amount of information together for the upcoming December meeting. In particular, thank for the inclusion of various documents and analysis provided as well as the email exchanges with Commission, Council and other Members of various other Summer Flounder Committees. I believe it's important to get opposing thoughts on the table and discussed in order for this fishery to recover and have a sustainable future. If I get this email in by the 11:59 briefing materials deadline tonight, please include it if possible. I want to be completely clear in my last email to the governing bodies prior to the meeting addressing 2020 regulations. This fishery has experienced declines in every attribute for the last 17-yr. period, 2003 to 2019. Declines from 35% to 50% in the last 17 years in just about every aspect of the fishery including the overall biomass population, spawning stock biomass, catch levels, egg production, recruitment statistics, gender composition etc. The only components of the fishery increasing are size fish being harvested and as a result higher discard rates, the result of ineffective regulatory decisions over the last two decades. Decisions and a track record which is impossible to view in any other manner than causing damage to this fishery. Status quo, if that's indeed the decision made by the Commission and Council, is admittance by every Member that failure is an acceptable option and accountability of Sub-Committees is non-existent as regulations based on their data and recommendations have led to material declines across the board. 2020 and beyond will have

have but one option if status quo is elected which is the continuation of those declines in all future years until regulations needed to address the causes are acknowledged and implemented.

Excerpts from the November 27, 2019 Memorandum to the Board and Council:

There are several ongoing changes currently being observed in the stock in terms of growth rates, sex ratios, and other dynamics. Growth rates for both sexes have slowed, and the sex ratio for larger fish has been shifting closer to 50/50. The biggest fish, over about 24 inches, are still mostly all females, but up to that point the sex ratio in the survey data is closer to 50/50. There have been several changes in stock dynamics over the last 10-15 years, including decreased mortality rates, slower growing fish, and male fish living to older ages.

**"Sex ratio for larger fish has been shifting closer to 50/50"**. On the surface, that is being carefully worded to give the appearance of balance in the biomass, particularly in SSB. In actuality, moving closer to a 50 / 50 sex ratio is a strong decline as stated in the 66th SAW, page 61.

In the fall survey, the proportion of females shows no trend for age 0 and the mean proportion was 0.3. For ages 1-3 the proportion has decreased from about 0.5-0.6 in the 1980s to 0.4-0.5 by 2012-2016. The proportions at ages 4 to 7 have strongly decreased from about 0.8 through the late 1990s to about 0.3-0.8 by 2012-2016; proportions at age 8 are highly variable (Figure A80).

The following data from the 66th SAW, page 319, from the spring index should provide all the evidence needed that the female proportion of SSB is being irreparably destroyed under current regulations and moving towards a 50 / 50 sex ratio of older age classes is a material decrease over the last two decades from historical levels outlined in the charts below.

Ages 1 to 2, somewhat stable. Age 3 surprisingly has increased. Ages 4 through 8+ the female proportion is down anywhere from 30% to 80% dependent on the age class. Those declines are beyond statistically significant and will only worsen under current regulations.

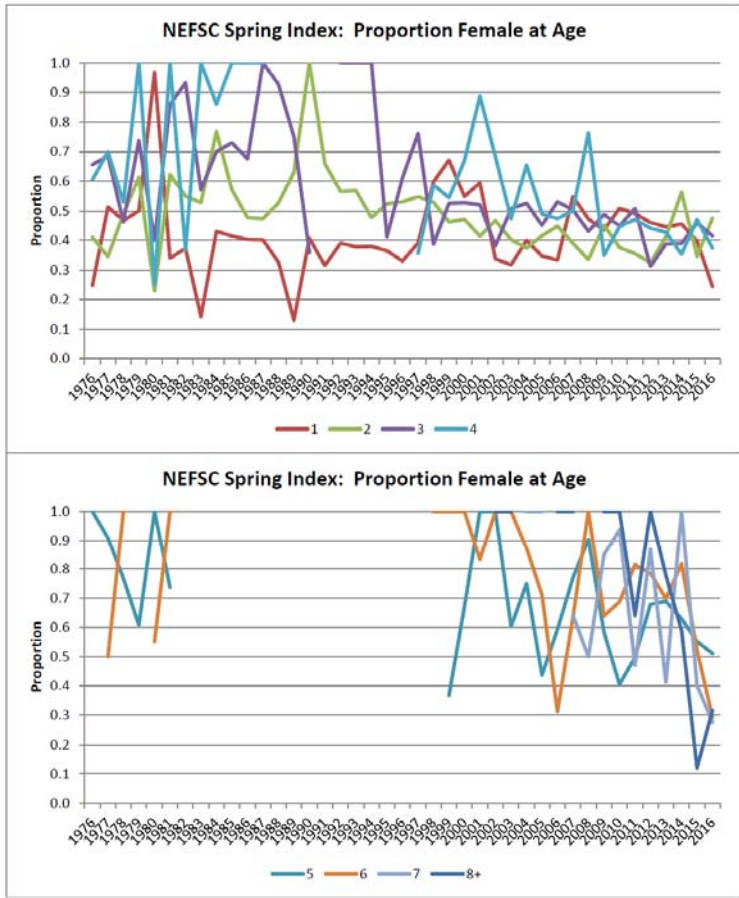


Figure A79. Northeast Fisheries Science Center (NEFSC) spring survey index proportion female by age.

Following is comparable information from the fall index and equally revealing and bleak.

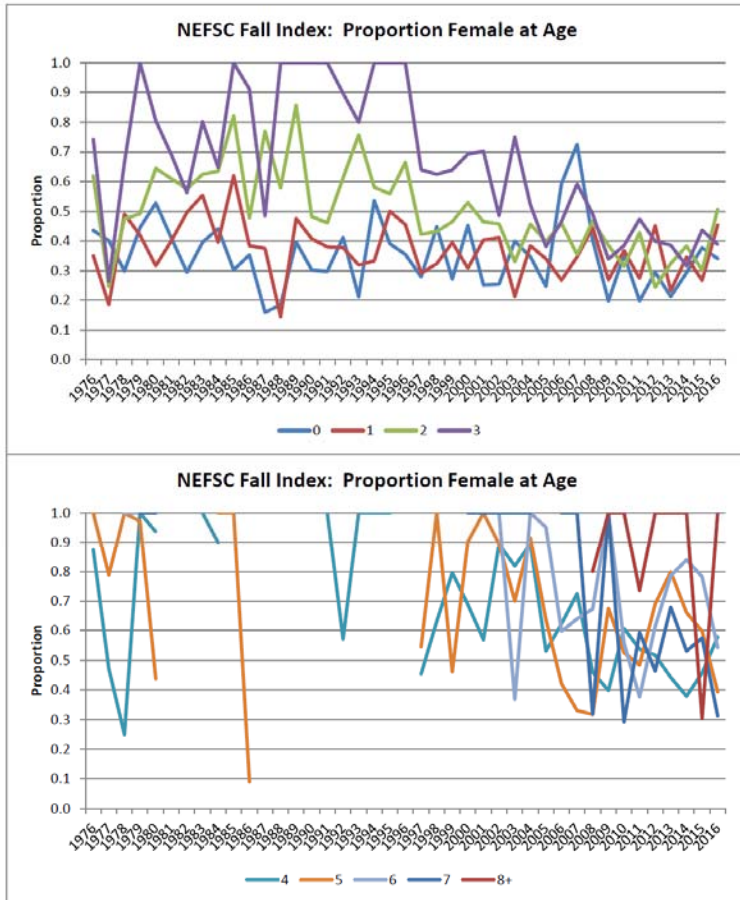


Figure A80. Northeast Fisheries Science Center (NEFSC) fall survey index proportion female by age.

Similar trend although in the fall index, while age classes 0 thru 2 are relatively unchanged, age 3 is down substantially as are ages 4 thru 8+. Take notice of the fact that the declines became significantly more pronounced again in the 1997 time frame when harvest composition transitioned to larger older age classes. The female population has been impaired yet the MC and AP state the female breeders are not being "wiped out". A declining SSB in the absolute (weight) combined with a significant decline in the female gender composition involving the percentage declines illustrated above constitutes the female composition of SSB being well on its way to being "wiped out".

Additional excerpt:

Another important point about moving to a slot limit is that protecting larger fish in the recreational fishery does not reduce access to these fish in the commercial fishery, and in fact is likely to increase the availability of larger fish available for the offshore commercial trawl fishery.

As mentioned in my recommendations, the inclusion of a recreational slot can't be at the expense of an increase in larger fish commercially harvested resulting in even higher discard rates so I agree with the above statement. Both recreational and commercial size fish being harvested need to be reduced. Recreational is accomplished completely through size limit mandates. Reduce sizes and the gender composition of recreational harvest will take care of itself while materially lowering discard rates. Commercial since it was an elective decision to increase harvest of larger size older age class fish, needs to be an elective decision to revert back to the harvest of younger age classes representative of the 80's and 90's. If that selective decision isn't forthcoming, per the Original FMP of 1987, consider seasonal and or area closures now that the biomass is highly concentrated and technology is available today to support enforcement efforts.



The benefits of slot limits for summer flounder would appear to be mostly related to angler satisfaction, including increased retention opportunity and potentially reduced discards. The MC also discussed the belief that many anglers are not likely to support slot limits given that they also eliminate the possibility of keeping the larger "trophy" fish. The group agreed that there is no system of constraining harvest with size limits that will make all anglers happy, given that there are segments of the fishery focused on targeting the largest fish and others that are more concerned with the opportunity to retain fish to eat.

All recreational possession limits in 2020 being subject to a slot size would kill the recreational community and should never been given consideration as an option. The entire party boat and for hire fleet would be put out of business. What I recommended was "one fish " from the 2019 possession limits be converted to a slot size and the remaining fish remain at their 2019 size limit. So New York in other words would go from a 4 fish, 19" limit to one slot at a designated size (preferably lower than 17" - 19.99" so more males are harvested and the remaining three fish remain at 19" for 2020. So still a four possession bag limit, one slot (size to be determined) and three fish at 2019's size regulations. That would be the start or bridge to of transition back to lower size minimums (not slot limits) as was the case between 1989 and 2003 which promoted 900% growth in SSB. Making only one fish of the recreational possession limit subject to the slot should eliminate any concerns associated with the harvest of larger trophy fish. That said, that risk exists even more so today under the current regulations as a minimum size has been established but no maximum size for any fish. Same is true of the regulations in place between 1989 and 2003. The possibility of one less female fish being harvested per angler and the potential increase in egg production is absolutely enormous and appears to be completely ignored in the decision making process by the MC and AP.

To quantify the impact this would have, average recreational possession limit between NJ, NY, RI and Ct. is 4.3 per angler. Those four states make up close to 90% of the recreational harvest. One fish converted to a slot would represent about a 25% reduction potentially in the harvest of a female versus a male. Split the difference and take just half that percentage and assume 12.5% to be ultra-conservative. 5.7 million fish were landed recreationally in 2017. Convert 12.5% of those fish from females to males and that's 714,000 less females harvested. Since these are larger age groups due to regulations, assume the egg capacity of each female is conservatively 1,000,000 eggs. **THAT WOULD TRANSLATE 714 BILLION MORE EGGS PRODUCED, THINK ABOUT THE IMPLICATIONS ON RECRUITMENT AS LONG AS THE SPAWN IS PROTECTED FROM COMMERCIAL HARVEST DURING THE FISHERIES OFF-SHORE MIGRATION. IF AVERAGE EGG PRODUCTION IS 2,000,000 PER FISH, ADDITIONAL EGG PRODUCTION WOULD PROJECT OUT TO ALMOST 1.4 TRILLION ADDITIONAL EGGS ANNUALLY.** Someone please help me understand how that would not be a good start to address the existing recruitment and gender composition problem of SSB in reversing this fisheries 17-yr decline..

There's ample research available regarding the positive impacts slot limits have on fisheries. As I mentioned, regulatory decisions which do not address harvest composition, size limits and discard rates will prolong the decline in this fishery. **Status quo will continue the 17-yr decline and ultimately destroy this fishery for both commercial and recreational concerns.** It's unimaginable there's so much concern from the MC and AP regarding potential increase in catch relative to the adoption of one slot fish since 1989 thru 2003 and the historic 900% growth we experienced during that period for the majority of that time frame had size limits in place of 13" or 14" with catch levels and possession limits twice if not more than what we have today. Think about that statement and the state of affairs in today's process when we literally can't make a decision for one slot fish without fisheries management suggesting the sky is falling while we have history on our side that proves that wouldn't be the case. As a management team, we're in stasis. If we reduce catch through further recreational size increases, we harvest more females, create more disparity in access between recreational and commercial concerns, increase discard rates, further impair gender composition and reduce recruitment levels more than today. If we reduce size limits, MC and AP believe the fishery will be further harmed because all we do is focus on catch in the sense of weight and not catch composition and the associated impacts on gender make up and egg production not to mention discard rates.

Kiley, please do what you can to include this in the briefing materials. I want to be on record as stating the decision to stick with status quo is the absolute wrong decision if it's what's ultimately decided by the Commission and Council for

2020. Cutting catch levels as mentioned has not stemmed the declines so simply reducing catch in the absolute weight wise is also not the answer. Decisions need to be made that change harvest composition, reduce the harvest of female breeders and older age classes in general, reduce discard rates in the process and protect the spawn as well as the larger sexually mature fish during their wintering months offshore. Failure to address each of these will move this fishery one step closer to failure.

There's a lot more I could say, much which has already been said. My sole reason to get involved is to help this fishery rebound from 17-yrs of failure. For the fisheries fate to change and commercial and recreational interests be protected and preserved, tough short term decisions need to be made to secure the fishery for our long-term benefits. If status quo prevails, we put one more nail in the coffin of this extremely vital fishery.

It's 9:10 by my clock, Kiley I believe I beat the 11:59 deadline so please again I'd appreciate this email being added to Tab 12 in the briefing materials.

Hope everyone has a Happy Thanksgiving!

Regards

Tom Smith

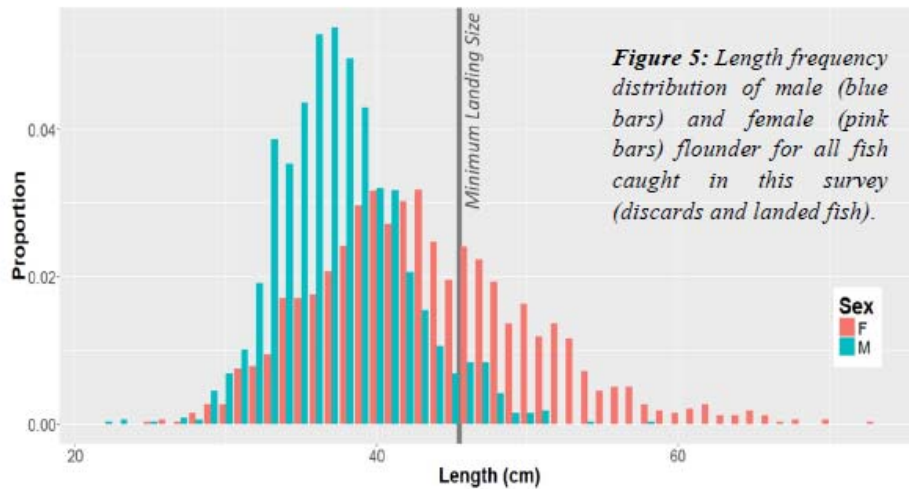
## Kiley Dancy

---

**From:** Tom Smith <smith.tom560@gmail.com>  
**Sent:** Wednesday, November 27, 2019 10:37 PM  
**To:** Gregory Wojcik; CRAIG.MINER@cga.ct.gov; MELISSA.ZIOBRON@cga.ct.gov; WILLIAM.A.HYATT@snet.net; Davis, Justin; CRABMAN31@aol.com; Saveikis, David; FISHMASTER70@comcast.net; JOHN.CLARK@delaware.gov; WILLIAM.CARSON@delaware.gov; MJDIZE@verizon.net; MBRASSIL@house.state.md.us; Luisi, Michael; Langley, Phil; BILL.ANDERSON@maryland.gov; SARAHKPEAKE@gmail.com; RAY@capecodfishermen.org; Ruccio, Michael; Meserve, Nichola (FWE); White, Sherry; McKiernan, Dan; Capt. Adam; Cimino, Joseph; Fote, Tom; Snellbaker, Jason; SENANDRZEJCZAK@njleg.org; Davidson, Maureen; Gilmore, Jim; Hasbrouck Jr, Emerson C.; KAMINSKY@nysenate.gov; STEVE.MURPHEY@ncdenr.gov; MBLANTON9394@gmail.com; BOB.STEINBURG@ncleg.net; Batsavage, Chris; JMANNEN@yfmlaw.com; Ballou, Robert; Reid, Eric; Borden, David; SEN-SOSNOWSKI@rilin.state.ri.us; Rootes-Murdy, Kirby; DISTRICT01@senate.virginia.gov; Bowman, Steven; BPLUMLEE@pbp-attorneys.com; MARTINGARY.PRFC@gmail.com; Starks, Caitlin; Leaning, Dustin Colson; PAT.GEER@mrc.virginia.gov; Wong, Richard; Muffley, Brandon; Kiley Dancy; Beaty, Julia; Coutre, Karson; STEVE.DOCTOR@maryland.gov; Terceiro, Mark; Gilbert, Emily; Truesdell, Samuel; Peter Clarke; Maniscalco, John; VanMiddlesworth, Todd; Jason McNamee; JKIPP@asmfc.org; ALEX.ASPINWALL@mrc.virginia.gov; JACK.D.CONWAY.JR@lmco.com; KYLE@jbtackle.com; Townsend, Wes; LUREFEST@gmail.com; PGFVIKING1@gmail.com; SELBYSUZI1121@aol.com; Jeffrey Eutsler; Jesien, Roman; BUNTING904@gmail.com; BUDDYSCRN@gmail.com; PKCARUSO@comcast.net; PATRIOTTOO@aol.com; JOSEPH@meganet.net; TIMEBANDIT100@hotmail.com; Lovgren, Jim; Gregory DiDomenico; CAPTBOB626@comcast.net; BUCKTAIL8@aol.com; D713K@aol.com; MKHOFFMAN@optonline.net; RBUSBY@optonline.net; MARCIALOM@msn.com; Ruhle, James; ARTSMITH@gotricounty.com; BJSEAFOOD@earthlink.net; Blount, Frank; MHALL@towndock.com; NBF05@verizon.net; TRAVISBARAO@gmail.com; DCRABBE@crabbescharterfishing.com; DRNEILL3@hotmail.com; Hodges, Mark L.; CAPTSTV@yahoo.com; Amory, C. Meade; KEVIN.SMITH@suez.com; Elliott, G. Warren; Bolen, Ellen; Stewart.Michels@state.de.us; Shiels, Andrew L.; Pentony, Mike; Wilke, Kate; Lenox, Scott; Heins, Stephen; Gwin, Sonny; Hughes, Peter B.; Winslow, Sara; deFur, Peter; Nolan, Laurie; Hemilright Jr, Dewey; dave; Ec Newellman; Jim Hutchinson; Cicero, Nick; Gregory Hueth; John depersenaire; Mike Waine; tony@rocketcharters.com; Gutman, Jeffrey; Zemeckis, Douglas; Caputi, Gary; Gerry Zagorski; Rocky McGuigan; Patrick J. Sullivan  
**Subject:** Re: December ASMFC Joint Mtg - Annapolis MD  
**Attachments:** Rutgers Sex and Length Study.pdf

Ladies and Gentlemen,

I'm adding a copy of Rutgers's Sex and Length Study which also references Morson et al 2012 and Morson et al 2015) The following conversion of centimeters to inches chart is on page 7 of the Rutgers study which was conducted in 2016. The minimum landing size is 18". Rutgers study was conducted from 8 ports ranging in depths from 5 to 95 feet covering latitudinal ranges covering the coast of Delaware to the coast of Rhode Island. Samples were collected in each port every two weeks from the beginning of the fishing season to the end. The following chart reflects the relationship between female and male proportions based on the study between length in cm's. 18" equals 45.72 centimeters for reference purposes.



There are several ongoing changes currently being observed in the stock in terms of growth rates, sex ratios, and other dynamics. Growth rates for both sexes have slowed, and the sex ratio for larger fish has been shifting closer to 50/50. The biggest fish, over about 24 inches, are still mostly all females, but up to that point the sex ratio in the survey data is closer to 50/50. There have been several changes in stock dynamics over the last 10-15 years, including decreased mortality rates, slower growing fish, and male fish living to older ages.

Much of the discussion about sex ratios and sex-specific mortality in the recreational fishery is based on the work of Morson et al. (2015)<sup>1</sup>, the sampling for which was conducted in 2010 and 2011. This study compared recreational and commercial fishery sampling data to trawl survey data and found that the sex ratio and the sizes and ages in the commercial fishery closely matched that of the trawl surveys. In contrast, the length and age frequency and sex ratio in recreational fishery, especially in the southern region, didn't closely align with that of the trawl surveys or commercial fishery, and was more heavily weighted toward females. This study unfortunately represents a limited snapshot in time. During development of the last stock assessment, survey data was used to determine the sex of commercial and recreational fishery catch to test the application of sex-specific models. The result was that most catch in these fisheries are now male, due to the factors described above including changes in growth rates and sex ratios. However, this is based on using the trawl survey data to determine the sex of the recreational catch which makes an assumption about survey and fishery equivalency.

24" is almost 61 centimeters and based on the above Rutgers chart would represent almost entirely females. At 18", proportion is almost 3:1 females. At 19.5", female proportion is almost 10:1. The statement above to the Board and Council which states **"The biggest fish, over about 24 inches, are still mostly all females, but up to that point the sex ratio in the survey data is closer to 50/50."** is extremely disparate in their conclusions and of major significance to how this fishery is being managed. The below chart from the 55th SAW, page 413 would completely refute the statement fish under 24 inches are almost 50 / 50 males to females.

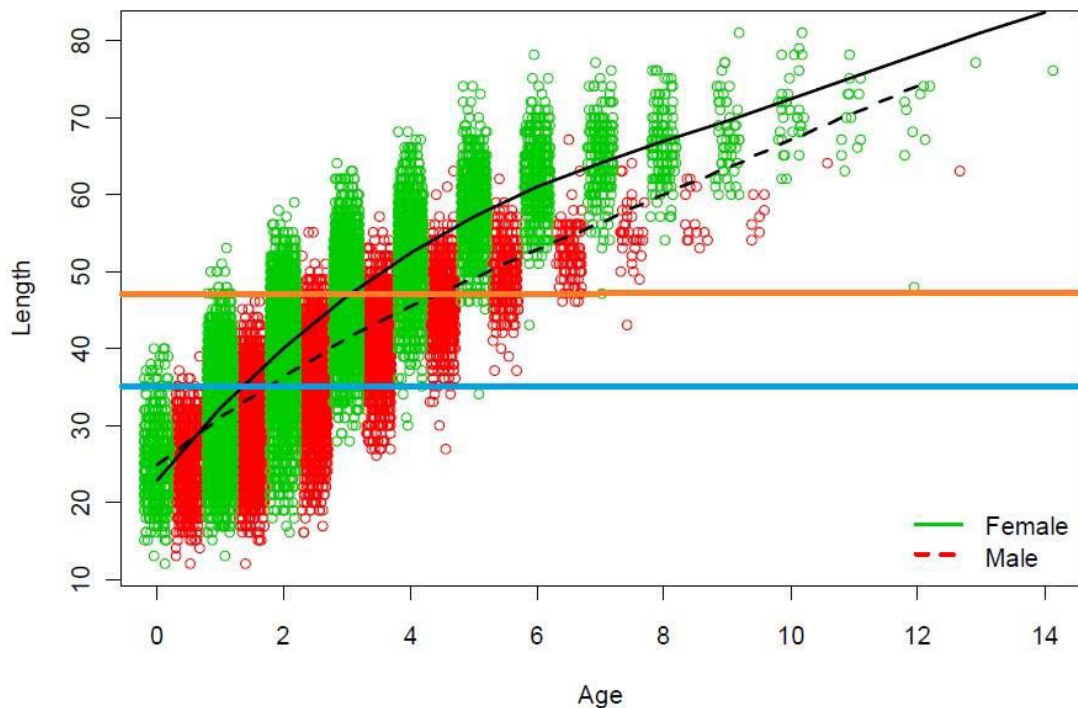


Figure A175. Model fit to sex stratification, i.e. female and male data. Female estimates:  $L_{inf} = 83.6$ ,  $k = 0.17$ ,  $t_0 = -1.9$ . Male estimates:  $L_{inf} = 86.3$ ,  $k = 0.10$ ,  $t_0 = -3.3$

Remember 24" is almost 61 centimeters. You can see from marine fisheries own data in the 57th SAW the disproportionate ratio of females to males in older age classes and longer lengths based on the above chart. I would be amazed if that ratio changed that much per the above statement to the Board and Council that much in a matter of maybe five years compared to the 57th SAW and only 2 -3 years to the Rutgers study conducted in 2016.

Anecdotal evidence which I don't like using but will share for purposes of this discussion. I personally went on seven trips in 2019 including party boats, two for-hire with one of the best for-hire captains in New Jersey and private boats. **In total for 7 trips only slightly over 90 fish were harvested.** Don't even want to comment on the amount of discards as it was and continues to be obscene due to the regulations. In total there were about 120 anglers covered under all trips which means each angler harvested on average less than one fish per trip which is also obscene. I personally witnessed every fish being filleted and of the 90 plus harvested, three were males. So at least in my experience, I don't believe for a second based on Rutgers study, the 57th SAW report and personal experience that larger fish over 18" are remotely close to a 50 / 50 ratio. A way of finding out would be to have for hire and party boats start reporting males and females in their catch and maybe for commercial start requiring fish processing houses to do the same. Most of the trips I personally went on this year, not one male was harvested on the trip and I'd imagine the same was true with most northern states as well as a majority of the commercial harvest.

This speaks to the heart of the problem and if the information being given to the Board and Council to base decisions on is wrong in this respect as well as MRIP, there's absolutely no chance decisions being made to manage this fishery are in the best interest of the fishery. There's also zero chance of the fishery ever recovering.

Kiley, since this is also within the 11:59 cutoff, I'd ask for this email as well please be included in the briefing materials.

Thanks in advance,

Tom



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 27, 2019  
**To:** Council and Board  
**From:** Karson Coutre, Staff  
**Subject:** Scup Recreational Measures for 2020

On Wednesday, December 11, the Council and Board will consider 2020 federal recreational management measures for scup. Materials listed below are provided for the Council and Board's discussion of this agenda item.

- 1) Monitoring Committee recommendation summary from their November 13-14, 2019 meeting (*behind Tab 12*)
- 2) Staff memo on 2020 recreational scup measures dated November 7, 2019
- 3) Additional comments from Advisory Panel members on 2020 recreational scup measures

Additional materials will be posted as supplemental prior to the meeting, including:

- 4) Advisory Panel recommendations from their Friday, November 22, 2019 meeting
- 5) Any public comments received after November 29 and before the supplemental comment deadline of December 5, 2019.



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 7, 2019  
**To:** Chris Moore, Executive Director  
**From:** Karson Coutre, Staff  
**Subject:** Scup Recreational Management Measures for 2020

### Background and Summary

The information provided in this memo is intended to assist the Monitoring Committee, Advisory Panels, the Mid-Atlantic Fishery Management Council (Council) and the Atlantic States Marine Fisheries Commission's (Commission's) Summer Flounder, Scup, and Black Sea Bass Management Board (Board) in developing recommendations for federal waters scup size limits, possession limits, and open/closed seasons for 2020.

In October 2019, the Mid-Atlantic Fishery Management Council (Council) and the Atlantic States Marine Fisheries Commission's (Commission's) Summer Flounder, Scup, and Black Sea Bass Board (Board) approved scup recreational harvest limits (RHLs) of 6.51 million pounds for 2020 and 5.43 million pounds for 2021. The RHLs are based on the 2019 scup operational stock assessment and the advice of the Scientific and Statistical Committee (SSC) and Monitoring Committee.

According to the 2019 operational assessment, the scup stock was not overfished, and overfishing was not occurring in 2018 relative to the updated biological reference points calculated through the assessment. Spawning stock biomass (SSB) was estimated to be about 411 million pounds (186,578 mt) in 2018, about 2 times the  $SSB_{MSY}$  proxy reference point (i.e.  $SSB_{40\%}$ ) of 207 million pounds (94,020 mt). Fishing mortality on fully selected age 3 scup was 0.158 in 2018, about 73% of the  $F_{MSY}$  proxy reference point ( $F_{40\%}$ ) of 0.215. Spawning stock biomass is projected to decrease toward the target unless above average year classes recruit to the stock.

Each year, the Council and Board agree to federal waters recreational management measures for scup for the upcoming year, consisting of a minimum fish size limit, a possession limit, and open/closed seasons that apply throughout federal waters from Maine through North Carolina. State waters measures will be determined through the Commission process in early 2020.

2020 will be the first year that scup catch and landings limits and management measures will account for changes to the recreational data provided by the Marine Recreational Information Program (MRIP). In July 2018, MRIP released revisions to their time series of recreational catch and harvest estimates based on adjustments for a revised angler intercept methodology and a new

effort estimation methodology, namely, a transition from a telephone-based effort survey to a mail-based effort survey. The revised estimates for most years are several times higher than the previous estimates for shore and private boat modes, substantially raising the overall scup catch and harvest estimates (e.g., Table 1). The revised MRIP estimates were incorporated into the 2019 scup operational stock assessment. Because the new MRIP data show that scup harvest is much higher than previously thought, a 59% reduction in recreational harvest compared to 2019 could be required to prevent an overage of the 2020 RHL.

In order to prevent an RHL overage in 2020, significant restrictions to management measures would be needed such as a coastwide 3 fish bag limit or an open season of June 26-September 5. However, given challenges associated with transitioning to management based on the new MRIP data, high availability of scup, and a very healthy stock status, there may be a consideration that recreational management measures remain unchanged in 2020 compared to 2019 to allow more time for the Council and Board to consider changes to the management system to account for changes in the MRIP data. Status quo harvest would be expected to result in a 2% ABC overage and a 11% OFL underage and overfishing would not be expected to occur. This would be intended as a short-term approach to allow the Council and Board more time to consider any potential modifications to the current management system in light of the implications of the changes in the MRIP estimates.

### **Past RHLs and Management Measures**

Scup RHLs were first implemented in 1996. Since then, the RHL varied from a low of 1.24 million pounds in 1999 and 2000 to a high of 8.45 million pounds in 2012. As previously stated, the RHLs are 6.51 million pounds in 2020 and 5.43 million pounds in 2021 (Table 1).

Until 2002, the recreational scup fishery was managed with coastwide measures as dictated by the FMP. These measures included a common minimum fish size, possession limit, and open season that were implemented in both state and federal waters. Since 2003, the Commission has applied a regional management approach to recreational scup fisheries in state waters, where New York, Rhode Island, Connecticut, and Massachusetts develop regulations intended to achieve 97% of the RHL. In federal waters, regulations have been unchanged since 2015 and include a minimum size of 9 inches total length, a year-round open season, and a possession limit of 50 scup (Table 1). Management measures in state waters vary by state, mode (e.g., private, for-hire), and season. State waters measures remained unchanged from 2015 through 2017. The states of Massachusetts through New York reduced their recreational minimum size limits and New Jersey extended their recreational fishing season to the full year in 2018. In 2019, Massachusetts through New York increased their party/charter bag limit from 45 to 50 fish during a portion of their open season. Rhode Island through New York extended their recreational fishing season to the full year (opening fishing during waves 1 and 2) and Massachusetts extended theirs by 18 days. All other state waters measures remained unchanged from 2018 to 2019 (Table 2 and Table 3).

### **Recreational Catch and Harvest Trends and 2019 Projections**

Since 1981, estimated recreational scup catch fluctuated from a peak of 37.31 million fish in 1986 to a low of 6.60 million fish in 1997. Estimated harvest fluctuated from a high of 14.18 million pounds and 30.43 million fish in 1986 to a low of 1.82 million pounds and 2.74 million fish in 1998. In 2018, recreational harvest was about 14.55 million fish and 12.98 million pounds, and approximately 30.37 million scup were caught, with a release rate of 52% (Table 3).

Recreational catch and landings data from MRIP are currently available as preliminary estimates



for the first four waves (January - August) of 2019. The Council and Board develop federal waters recreational management measures for the next year late in the current year after reviewing preliminary wave 1-4 (i.e., January - August) MRIP data for the current year. Preliminary MRIP estimates indicate that through August 2019, 18.89 million scup were caught and 10.10 million scup, corresponding to about 9.31 million pounds, were harvested from Maine through North Carolina (Table 5).

Preliminary wave 1-4 data for 2019 were used to project harvest in weight and numbers of fish for the entire year by assuming the same proportion of landings by wave and state as in 2018 (with the exception of Maryland, Delaware and Virginia, as described below; Table 7 and Table 8). A single year was used instead of a multiple year average because changes to the open seasons and bag limits in 2018 and 2019 in some state waters likely impacted the proportion of harvest by wave compared to previous years. Federal recreational scup regulations were unchanged from 2015 to 2019 while some states had minor changes (Table 1 and Table 2). In 2019, Rhode Island through New York extended their season to waves 1 and 2, however they did not have scup catch during those waves in 2019 based on preliminary estimates.

In 2015-2017, 100% of estimated harvest in Maryland occurred during waves 5 and 6. In 2018, 98% of the estimated harvest occurred in wave 4. Preliminary estimates for 2019 show no scup harvest in Delaware, Maryland, and Virginia during waves 1 – 4. Projected 2019 Maryland, Delaware and Virginia harvest values were calculated as the sum of preliminary wave 1-4 harvest in 2019 and 2018 wave 5 and 6 harvest (Table 7 and Table 8).

Based on the methodology outlined in the previous two paragraphs, projected 2019 harvest from Maine through North Carolina is 16.03 million pounds and 17.13 million fish. For comparison purposes, 2019 projected annual harvest was also calculated using the coastwide (i.e., Maine through North Carolina) proportions of harvest by wave in 2018, rather than projecting by state. This resulted in a projected 2019 harvest of 14.55 million pounds and 15.78 million fish. This methodology does not account for varying proportions of harvest by wave by state so was not used to inform 2020 harvest.

During 2014-2018 about 4% of recreational scup harvest (in pounds) originated in federal waters and 96% came from state waters (Table 10). Recreational scup landings in Massachusetts through New Jersey and Virginia were predominantly from state waters and landings in Delaware and North Carolina mostly originated in federal waters. The landings were split evenly between federal and state waters in Maryland (Table 11).

Neither the preliminary 2019 wave 1-4 estimates nor the projected values should be compared to the 2019 RHL as the 2019 RHL did not account for the revisions to the MRIP data. These projections should be used as a starting point for discussion of potential 2020 recreational management measures.

### **Predicting 2020 Harvest and the Impacts of Management Measures**

The Monitoring Committee must consider and recommend management measures to ensure that landings in 2020 will not exceed the 2020 RHL. Recreational possession limits, minimum fish size limits, and seasons can be modified to achieve this goal.

Projected 2019 harvest is used as a proxy for 2020 harvest when considering such measures under the assumption that conditions in 2020 will be similar to those in 2019 if no changes are made to the management measures.

Changes in fishing site characteristics (e.g., catch rates, available species, water quality), fishery management measures (e.g., possession limits, size restrictions, closed seasons), and angler demographics affect recreational fishing effort. This poses challenges for predicting changes in angler behavior under any potential changes in management measures. Typically, the Monitoring Committee assumes that fishing behavior in the upcoming year will be similar to recent years; however, this assumption does not always hold true.

The 2015 year class was estimated to be the largest in the time series at 326 million fish, while the 2016-2018 year classes were estimated to be below average.<sup>1</sup> Scup reach the minimum size for retention in the recreational fishery (9 inches total length in federal waters and 8 inches in some states, Table 3) when they are two or three years old.<sup>2</sup> Availability of scup to anglers was likely high during 2016-2019 due to the abundant 2015 year class. Availability may slightly decline in 2020 due to lower than average recruitment from 2016-2018.

### **Accountability Measures**

Federal regulations include proactive accountability measures (AMs) to prevent the scup ACL from being exceeded and reactive AMs to respond when an ACL is exceeded. Proactive recreational AMs include adjusting management measures (bag limits, size limits, and season) for the upcoming fishing year, if necessary, to prevent the RHL and ACL from being exceeded. The NMFS Regional Administrator no longer has in-season closure authority for the recreational fishery if the RHL or ACL is expected to be exceeded. For reactive AMs, paybacks of ACL overages may be required in a subsequent fishing year, depending on stock status and the magnitude of the overage, as described below. ACL overages in the recreational fishery are evaluated by comparing the most recent 3-year average recreational ACL against the most recent 3-year average of recreational dead catch (i.e., landings and dead discards). If average catch exceeds the average ACL, then the appropriate AM is determined based on the following criteria:

1. If the stock is overfished ( $B < \frac{1}{2} B_{MSY}$ ), under a rebuilding plan, or the stock status is unknown: The exact amount, in pounds, by which the most recent year's recreational ACL has been exceeded will be deducted in the following fishing year, or as soon as possible once catch data are available.
2. If biomass is above the threshold, but below the target ( $\frac{1}{2} B_{MSY} < B < B_{MSY}$ ), and the stock is not under a rebuilding plan:
  - a. If only the recreational ACL has been exceeded, then adjustments to the recreational bag, minimum fish size, and/or season limits will be made in the following year, or as soon as possible once catch data are available. These adjustments will take into account the performance of the measures and conditions that precipitated the overage.
  - b. If the Acceptable Biological Catch is exceeded in addition to the recreational ACL, then a single year deduction will be made as a payback, scaled based on stock biomass. The calculation for the payback amount is: (overage amount)\*  $(B_{msy}-B)^{1/2} B_{msy}$ .

---

<sup>1</sup> A prepublication copy of the 2019 operational stock assessment is available at: [http://www.mafmc.org/s/Operational-Assessments-for-Black-Sea-Bass\\_Scup\\_Bluefish.pdf](http://www.mafmc.org/s/Operational-Assessments-for-Black-Sea-Bass_Scup_Bluefish.pdf)

<sup>2</sup> Northeast Fisheries Science Center. 2015. 60th Northeast Regional Stock Assessment Workshop (60th SAW) Assessment Report. U.S. Department of Commerce, Northeast Fisheries Science Center Reference Document 15-08. Available at: <http://www.nefsc.noaa.gov/saw/>

3. If biomass is above the target ( $B > B_{MSY}$ ): Adjustments to the recreational bag, minimum fish size, and/or season limits will be considered for the following year, or as soon as possible once catch data are available. These adjustments will take into account the performance of the measures and conditions that precipitated the overage.

AMs have not been triggered for the recreational scup fishery based on a comparison of average 2016-2018 catch to the 2016-2018 average ACL.

### **Staff Recommendation**

Based on the harvest projections of 16.03 million pounds, significant changes to management measures would be needed to prevent the 2020 harvest from exceeding the RHL of 6.51 million pounds. The need for this 59% reduction is largely driven by the transition to the new MRIP estimation methodology which resulted in a major change in our understanding of the scale of recreational harvest (e.g., Table 1). The new MRIP estimates have been incorporated into the 2019 scup operational stock assessment as well.

In order to achieve an estimated 59% reduction in harvest to prevent exceeding the RHL, bag limit reductions, size restrictions, and/or season closures could be used. Changing the bag limit from 50 fish to 3 fish in state and federal waters would result in an estimated 57% decrease in total harvest (Table 11). Bag limit analyses assume that levels of non-compliance with a revised bag limit would be identical to levels of non-compliance with the 2019 bag limit.

Reducing harvest through seasonal closures could also be considered. Currently, the scup recreational fishery is open year-round in federal waters and in most state waters. Based on 2018 estimates, waves 3-5 comprise >99% of the total recreational scup harvest (Table 6). An open season coastwide from June 26 to September 5, would keep wave 4 open while closing the majority of waves 3 and 5, and would result in a 59% reduction in harvest. This approach may also require closing waves 1, 2, and 6 (<1% of harvest) to prevent the transfer of fishing effort due to the closure of waves 3 and 5, resulting in a 71-day open season. Closures by wave would not apply harvest reductions equitably across the states with high harvest (e.g., Table 6 and Table 9). Season closure calculations assume full compliance with season regulations and evenly distributed harvest throughout each wave.

While considering changes to federal measures it is important to note that only 4% of scup recreational harvest occurred in federal waters based on the most recent 5-year average (Table 10). Because of this, the MC may decide that it's more appropriate to recommend the bulk of the 59% reduction occur in state waters where the majority of harvest is occurring. To achieve a 59% reduction, a 10 fish bag limit with status quo size limit and season in federal waters in 2020 could result in a 20% coastwide harvest reduction. These measures take some reduction in federal waters while allowing states flexibility to develop measures that would further reduce harvest. These measures are meant to prevent large differences in state and federal measures, implement an equitable reduction across states, and allow states to address their specific needs (e.g., different seasonal availability). Note however, in combination with these federal measures states would need to further restrict harvest to meet the full 59% reduction needed.

The assumptions of full compliance under seasonal closures and identical levels of non-compliance under a bag limit reduction may not be accurate due to the degree of restriction these measures would impose on the recreational fishery compared with the current year-round open season and 50 fish bag limit.

Restrictions such as decreasing the bag limit by 47 fish or closing up to 5 waves raise concern over the negative socioeconomic impacts to the recreational sector resulting from changes in the MRIP estimation methodology rather than a conservation need. The scale of these impacts could not be accurately predicted prior to completion of the operational stock assessment in the summer of 2019. This left the Council and Board with little time to consider how to most appropriately respond to the changes in the MRIP estimates before they must be used in management. In addition, the scup stock is healthy with SSB estimated to be about 2 times the  $SSB_{MSY}$  proxy reference point in 2018. Because of this situation, the Council and Board may consider status quo recreational management measures in state and federal waters in 2020 to allow time to transition to management based on the new MRIP estimates.

If status quo measures are implemented, the projected total scup catch (i.e., commercial and recreational landings and dead discards) estimates in 2020 would be 36.53 million pounds, which is 2% above the 2020 ABC of 35.77 million pounds and 11% below the 2020 OFL of 41.17 million pounds. These total catch estimates use 2020 projected total discards from the stock assessment, 2018 commercial harvest, and the 2020 recreational harvest projections described on pages 2-3 of this document. The SSC recommended 2020 and 2021 ABCs included an OFL CV of 60% as a buffer to account for uncertainty in the OFL. The SSB projections assuming the ABC would be caught predict that SSB will be 1.62 times the target in 2021. Given these projections, it is possible that a slight overage of the ABC could occur which would be expected to bring SSB closer to, but not below the target, suggesting that this level of catch is not a major conservation concern.

**Table 1:** Summary of federal management measures for the scup recreational fishery, 1997-2020. ABCs, TACs, ACLs, RHLs, and harvest are in millions of pounds. Recreational harvest values are for Maine through North Carolina and old and revised MRIP estimates are shown.

<b>Year</b>	<b>TAC/ABC</b>	<b>Rec. ACL</b>	<b>RHL</b>	<b>Rec. harvest (Old MRIP)</b>	<b>% over/under RHL</b>	<b>Rec. harvest (New MRIP)</b>	<b>Bag limit (# of fish)</b>	<b>Size limit (inches, total length)</b>	<b>Open season</b>
<b>1997</b>	9.10	-	1.95	1.20	-38%	2.54	-	7	1/1 - 12/31
<b>1998</b>	7.28	-	1.55	0.87	-44%	1.82	-	7	1/1 - 12/31
<b>1999</b>	5.92	-	1.24	1.89	+52%	4.63	-	7	1/1 - 12/31
<b>2000</b>	5.92	-	1.24	5.44	+339%	11.39	-	-	1/1 - 12/31
<b>2001</b>	8.37	-	1.76	4.26	+142%	9.77	50	9	8/15 - 10/31
<b>2002</b>	12.92	-	2.71	3.62	+34%	6.23	20	10	7/1 - 10/2
<b>2003</b>	18.65	-	4.01	8.48	+111%	17.21	50	10	1/1 - 2/28 7/1 - 11/30
<b>2004</b>	18.65	-	3.99	7.28	+82%	12.83	50	10	1/1 - 2/28 9/7 - 11/30
<b>2005</b>	18.65	-	3.96	2.69	-32%	4.30	50	10	1/1 - 2/28 9/18 - 11/30
<b>2006</b>	19.79	-	3.99	3.72	-7%	5.93	50	10	1/1 - 2/28 9/18 - 11/30
<b>2007</b>	13.97	-	2.74	4.56	+66%	7.10	50	10	1/1 - 2/28 9/18 - 11/30
<b>2008</b>	9.9	-	1.83	3.79	+107%	5.76	15	10.5	1/1 - 2/28 9/18 - 11/30
<b>2009</b>	15.54	-	2.59	3.23	+25%	6.28	15	10.5	1/1 - 2/28 10/1 - 10/31
<b>2010</b>	17.09	-	3.01	5.97	+98%	12.48	10	10.5	1/1 - 2/28 10/1 - 10/31
<b>2011</b>	31.92	-	5.74	3.67	-36%	10.32	10	10.5	6/6 - 9/26
<b>2012</b>	40.88	31.89	8.45	4.17	-51%	8.27	20	10.5	1/1 - 12/31
<b>2013</b>	38.71	30.19	7.55	5.37	-29%	12.57	30	10	1/1 - 12/31
<b>2014</b>	35.99	28.07	7.03	4.43	-37%	9.84	30	9	1/1 - 12/31
<b>2015</b>	33.77	26.35	6.8	4.41	-35%	11.93	50	9	1/1 - 12/31
<b>2016</b>	31.11	6.84	6.09	4.26	-30%	10.00	50	9	1/1 - 12/31
<b>2017</b>	28.4	6.25	5.50	5.42	-1%	13.54	50	9	1/1 - 12/31
<b>2018</b>	39.14	8.61	7.37	5.61	-24%	12.98	50	9	1/1 - 12/31
<b>2019</b>	36.43	8.01	7.37	-	-	16.03 <sup>a</sup>	50	9	1/1 - 12/31
<b>2020</b>	35.77	7.87	6.51	-	-	-	TBD	TBD	TBD

<sup>a</sup> Projected - methodology described on pages 2-3.

**Table 2:** State recreational fishing measures for scup in 2019.

State	Minimum Size (inches)	Possession Limit	Open Season
MA private & shore	9	30 fish; 150 fish/vessel with 5+ anglers on board	April 13-December 31
MA party/charter	9	30 fish	April 13-April 30; July 1-December 31
		50 fish	May 1-June 30
RI private & shore	9	30 fish	January 1-December 31
RI shore program (7 designated shore sites)	8		
RI party/charter	9	30 fish	January 1-August 31; November 1-December 31
		50 fish	September 1-October 31
CT private & shore	9	30 fish	January 1-December 31
CT shore program (45 designated shore sites)	8		
CT party/charter	9	30 fish	January 1-August 31; November 1-December 31
		50 fish	September 1-October 31
NY private & shore	9	30 fish	January 1-December 31
NY party/charter	9	30 fish	January 1-August 31; November 1-December 31
		50 fish	September 1- October 31
NJ	9	50 fish	January 1- December 31
DE	8	50 fish	January 1-December 31
MD	8	50 fish	January 1-December 31
VA	8	30 fish	January 1-December 31
NC, North of Cape Hatteras	8	50 fish	January 1-December 31

**Table 3:** State recreational fishing measures for scup in 2018.

State	Minimum Size (inches)	Possession Limit	Open Season
MA	9	30 fish; 150 fish/vessel with 5+ anglers on board	May 1-December 31
MA party/charter	9	45 fish	May 1-June 30
		30 fish	July 1-December 31
RI private & shore	9	30 fish	May 1-December 31
RI shore program (7 designated shore sites)	8		
RI party/charter	9	30 fish	May 1-August 31; November 1-December 31
		45 fish	September 1-October 31
CT private & shore	9	30 fish	May 1-December 31
CT shore program (46 designated shore sites)	8		
CT party/charter	9	30 fish	May 1-August 31; November 1-December 31
		45 fish	September 1-October 31
NY private & shore	9	30 fish	May 1-December 31
NY party/charter	9	30 fish	May 1-August 31; November 1-December 31
		45 fish	September 1- October 31
NJ	9	50 fish	January 1- December 31
DE	8	50 fish	January 1-December 31
MD	8	50 fish	January 1-December 31
VA	8	30 fish	January 1-December 31
NC, North of Cape Hatteras	8	50 fish	January 1-December 31

**Table 4:** Recreational scup catch and harvest by year, ME - NC, 1981-2019 based on new MRIP estimates. 2019 values are preliminary and are for waves 1-4 only.

<b>Year</b>	<b>Catch</b> (millions of fish)	<b>Harvest</b> (millions of fish)	<b>Harvest</b> (millions of pounds)	<b>% Released</b>	<b>Avg. weight of landed fish</b> (pounds)
1981	19.68	17.31	11.14	12%	0.64
1982	13.14	10.83	8.62	18%	0.80
1983	13.78	12.19	8.62	12%	0.71
1984	11.38	8.78	3.28	23%	0.37
1985	24.56	18.84	11.29	23%	0.60
1986	37.31	30.43	14.18	18%	0.47
1987	18.11	14.03	10.41	23%	0.74
1988	12.14	9.39	7.03	23%	0.75
1989	23.73	19.32	10.54	19%	0.55
1990	18.26	14.04	7.17	23%	0.51
1991	27.41	21.90	12.91	20%	0.59
1992	20.96	16.50	9.45	21%	0.57
1993	10.71	8.40	4.63	22%	0.55
1994	8.86	6.58	4.33	26%	0.66
1995	6.78	4.06	2.27	40%	0.56
1996	10.38	6.27	4.42	40%	0.70
1997	6.60	3.64	2.54	45%	0.70
1998	6.86	2.74	1.82	60%	0.66
1999	10.99	7.41	4.63	33%	0.62
2000	22.06	14.94	11.39	32%	0.76
2001	21.93	11.13	9.77	49%	0.88
2002	17.36	7.07	6.23	59%	0.88
2003	28.63	17.52	17.21	39%	0.98
2004	26.79	12.94	12.83	52%	0.99
2005	13.19	4.49	4.30	66%	0.96
2006	20.07	5.52	5.93	72%	1.07
2007	17.80	7.46	7.10	58%	0.95
2008	19.51	5.65	5.76	71%	1.02
2009	20.75	6.06	6.28	71%	1.04
2010	25.13	10.60	12.48	58%	1.18
2011	18.52	7.60	10.32	59%	1.36
2012	21.24	7.33	8.27	65%	1.13
2013	25.79	11.49	12.57	55%	1.09
2014	20.37	9.17	9.84	55%	1.07
2015	24.87	11.33	11.93	54%	1.05
2016	31.49	9.14	10.00	71%	1.09
2017	41.20	13.84	13.54	66%	0.98
2018	30.37	14.55	12.98	52%	0.89
2019 (w1-4 only)	18.89	10.10	9.31	47%	0.92



**Table 5:** Recreational scup catch and harvest, waves 1-4 (January - August), 2015-2019, Maine through North Carolina, based on MRIP data downloaded October 22, 2019. 2019 values are preliminary.

<b>Year</b>	<b>Wave 1-4 catch (millions of fish)</b>	<b>Wave 1-4 harvest (millions of fish)</b>	<b>Wave 1-4 harvest (millions of pounds)</b>
<b>2015</b>	12.78	6.32	6.72
<b>2016</b>	21.30	6.69	7.71
<b>2017</b>	27.59	9.35	9.06
<b>2018</b>	19.58	9.50	8.39
<b>2019</b> (preliminary)	18.89	10.10	9.31

**Table 6:** Percent of scup harvest (in weight) by wave and state in 2018, based on MRIP data downloaded October 22, 2019. Only North Carolina has MRIP sampling during wave 1. Values may not add to 100% due to rounding.

<b>State</b>	<b>Wave 1</b>	<b>Wave 2</b>	<b>Wave 3</b>	<b>Wave 4</b>	<b>Wave 5</b>	<b>Wave 6</b>
ME	0%	0%	0%	0%	0%	0%
NH	0%	0%	0%	0%	0%	0%
MA	0%	0%	53%	34%	13%	0%
RI	0%	0%	23%	53%	25%	0%
CT	0%	0%	29%	39%	31%	0%
NY	0%	0%	19%	31%	50%	1%
NJ	0%	0%	0%	10%	85%	5%
DE	0%	0%	0%	1%	2%	97%
MD	0%	0%	0%	98%	0%	1%
VA	0%	0%	0%	0%	0%	0%
NC	0%	90%	2%	0%	8%	0%
Total	0%	0%	29%	36%	35%	1%

**Table 7:** 2019 projected recreational harvest (**in pounds**) by state and values used to calculate projections. Values are based on new MRIP estimates. Projections were calculated using methodology outlined on pages 2-3.

State	2018 wave 1-4 harvest as % of annual harvest	2019 wave 1-4 harvest	2018 annual harvest	2019 projected annual harvest	% of projected 2019 total harvest
ME	0%	0	0	0	0%
NH	0%	0	0	0	0%
MA	87%	1,030,370	3,021,961	1,180,577	7%
RI	75%	1,703,835	2,030,259	2,267,281	14%
CT	69%	1,377,875	2,574,307	2,010,040	13%
NY	49%	5,194,213	4,906,043	10,552,583	66%
NJ	10%	1,298	443,699	12,763	0%
DE	1%	0	362	357	0%
MD	98%	0	369	6	0%
VA	0%	0	0	0	0%
NC	92%	2,526	420	2,734	0%
<b>Total</b>	<b>64%</b>	<b>9,310,117</b>	<b>12,977,420</b>	<b>16,026,341</b>	<b>100%</b>

**Table 8:** 2019 projected recreational harvest (**in numbers of fish**) by state and values used to calculate projections. Values are based on new MRIP estimates. Projections were calculated using methodology outlined on pages 2-3.

State	2018 wave 1-4 harvest as % of annual harvest	2019 wave 1-4 harvest	2018 annual harvest	2019 projected annual harvest	% of projected 2019 total harvest
ME	0%	0	0	0	0%
NH	0%	0	0	0	0%
MA	88%	1,063,769	3,265,715	1,205,180	7%
RI	76%	1,990,340	2,376,849	2,626,301	15%
CT	68%	1,571,705	3,071,109	2,322,036	14%
NY	50%	5,469,029	5,370,588	10,967,968	64%
NJ	14%	1,406	460,134	10,262	0%
DE	2%	0	329	323	0%
MD	99%	0	418	6	0%
VA	0%	0	0	0	0%
NC	90%	1,786	349	1,985	0%
<b>Total</b>	<b>64%</b>	<b>10,098,035</b>	<b>14,545,491</b>	<b>17,134,062</b>	<b>100%</b>

**Table 9:** Recreational scup harvest (in numbers of fish) by state, waves 1-6 (January – December), 2010-2019, based on new MRIP estimates. 2019 values are preliminary waves 1-4 (January – August) estimates.

State	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 (w1-4)
ME	0	0	0	0	0	0	0	0	0	0
NH	0	0	0	0	0	0	0	1,893	0	0
MA	2,349,088	2,124,508	2,548,922	3,783,126	2,802,294	1,977,462	1,790,614	2,110,443	3,265,715	1,063,769
RI	838,992	1,195,957	1,031,964	2,490,473	2,663,951	1,218,822	1,550,667	1,384,182	2,376,849	1,990,340
CT	2,217,056	1,940,332	1,839,883	1,837,524	1,184,119	1,179,608	1,352,121	1,693,871	3,071,109	1,571,705
NY	3,276,823	2,141,028	1,636,283	2,907,277	2,469,479	6,865,853	3,644,607	6,495,758	5,370,588	5,469,029
NJ	1,896,905	160,409	271,957	464,299	44,640	84,131	655,391	2,154,157	460,134	1,406
DE	0	36	497	0	37	565	0	229	329	0
MD	18	12	0	0	0	319	186	15	418	0
VA	15,107	34,935	2,871	4,461	0	3,356	149,995	0	0	0
NC	4,656	1,020	2,453	760	1,783	3,474		359	349	1,786
<b>Total</b>	<b>10,598,645</b>	<b>7,598,237</b>	<b>7,334,830</b>	<b>11,487,920</b>	<b>9,166,303</b>	<b>11,333,590</b>	<b>9,143,581</b>	<b>13,840,907</b>	<b>14,545,491</b>	<b>10,098,035</b>

**Table 10:** Percentage of recreational scup harvest (in pounds) in state and federal waters, ME-NC, 2014-2018 based on new MRIP estimates. Area information is self-reported based on the area where the majority of fishing activity occurred on each trip.

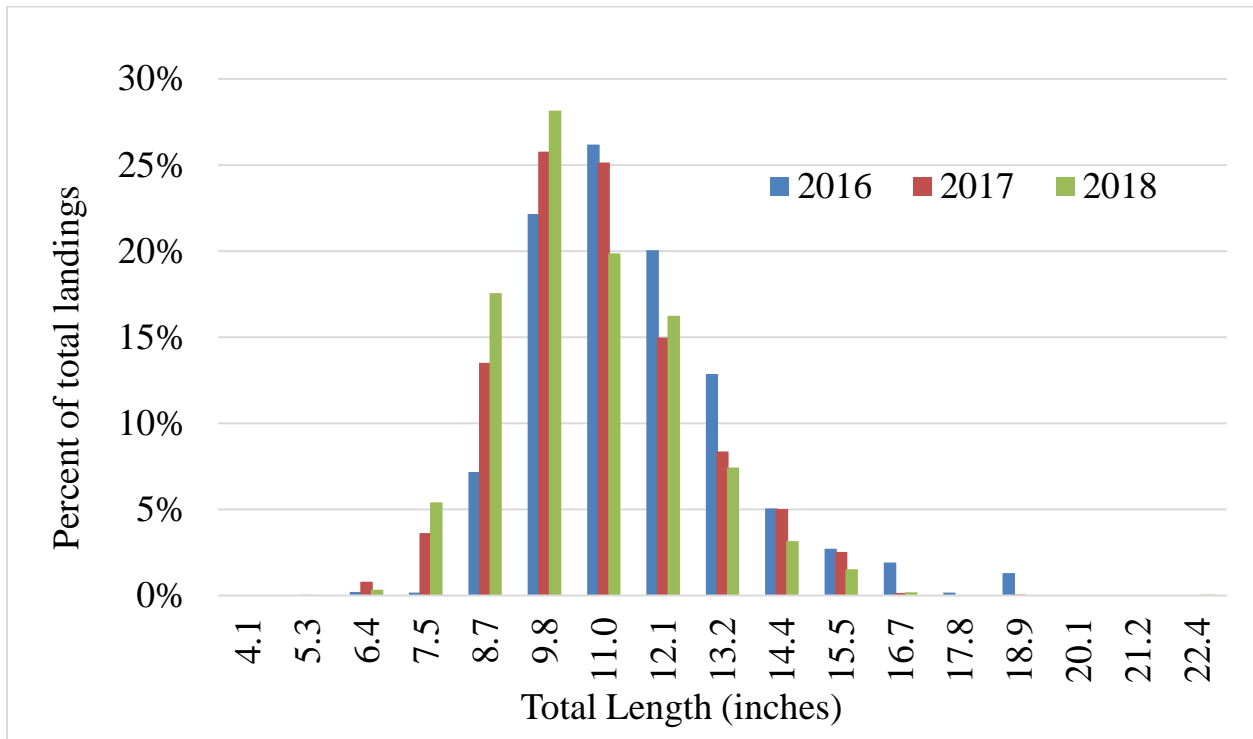
Year	State Waters (<= 3 miles)	EEZ (> 3 miles)
2014	96%	4%
2015	98%	2%
2016	95%	5%
2017	96%	4%
2018	95%	5%
Average	96%	4%

**Table 11:** Proportion of 2014-2018 recreational harvest (in pounds) from state and federal waters by state based on new MRIP estimates. Area information is self-reported based on the area where the majority of fishing activity occurred for each trip.

State	State Waters (<= 3 miles)	EEZ (> 3 miles)
MAINE	--	--
NEW HAMPSHIRE	100%	0%
MASSACHUSETTS	96%	4%
RHODE ISLAND	97%	3%
CONNECTICUT	98%	2%
NEW YORK	96%	4%
NEW JERSEY	91%	9%
DELAWARE	3%	97%
MARYLAND	50%	50%
VIRGINIA	100%	0%
NORTH CAROLINA	20%	80%

**Table 12:** Predicted percent change in total harvest under various bag limits based on new MRIP estimates from 2015-2019. Data for 2015-2018 include waves 1-6. Data for 2019 are preliminary and include only waves 1-4. During 2015-2019, the state and federal waters bag limits were 30-50 fish, depending on the state, mode, and time of year.

Bag Limit	Predicted Change in Harvest
25	-3%
15	-10%
10	-20%
5	-41%
3	-57%
2	-67%



**Figure 1:** Expanded length frequencies of scup landed, 2016-2018, from Maine through North Carolina, as a percent of total scup recreational landings. MRIP estimates length frequencies in fork length which was converted to total length based on Hamer 1979 ( $TL = 1.14 * FL - 0.44$ ).

## Kiley Dancy

---

**From:** Dustin C. Leaning <DLeaning@asmfc.org>  
**Sent:** Tuesday, November 26, 2019 3:29 PM  
**To:** Kiley Dancy; Beaty, Julia; Coutre, Karson  
**Subject:** FW: Reminder: AP webinar this Friday

**From:** Conway Jr, JACK D [mailto:jack.d.conway.jr@lmco.com]  
**Sent:** Tuesday, November 26, 2019 2:59 PM  
**To:** Dustin C. Leaning <DLeaning@asmfc.org>  
**Subject:** [External] RE: Reminder: AP webinar this Friday

Greetings from CT,

I was on the conference call last Friday and did not provide any verbal comments since I wanted to absorb the entire meeting. Overall, having status quo regulations for all three species makes the most sense for CT Anglers fishing Long Island Sound waters for the 2020 Season.

Specific Comments:

Summer flounder: a slot limit does make a great deal of sense but I realize some of the Party Charter fleet (not based on CT) have specific fisheries for trophy summer flounder. From my perspective, the slot limit concept needs to be explored further and there may likely be a need for different regulations for different bodies of water (similar to Tautog management in Long Island Sound). Summer Flounder fishing in Long Island Sound has been going downhill in major fashion, in 2019 during the months of July and August my boat landed over 300 summer flounder. Out of the 300 we only landed 1 “keeper”. I was fishing in water from 80-130 feet in Central Long Island Sound (often drifting into NY waters). We landed many 17-18 inch fish. Anything over 19 was impossible to come by. Reducing recreational landings by increasing dead discards was a bad management decision made a long time ago.

Sea Bass: Sea bass have become one of the most important fish for recreational anglers based out of CT. They are available somewhat all year (moving from Central LIS to Eastern LIS over the course of the summer). They allow anglers to harvest fish when nothing else is available. Per my above comments the summer flounder fishery for “keepers” is dismal and CT waters used to have great striped bass fishing that has also disappeared with the downturn in that fishery. Sea Bass offer great opportunities and the ability to big a great eating fish home. The bluefish population in LIS has also “crashed”. The point being sea bass have somewhat filled the void left by other species in decline.

Scup: the other “go to” fish in LIS and are enjoying more popularity than ever before. Again, with the lack of striped bass and bluefish, this fishery is filling a void that needs to be filled.

MRIP Data: “Yikes” – this was a hot topic during the call and this really needs to be addressed. I was not aware of the crazy numbers associated with the shore based catch of scup in CT but something is really wrong with this data collection system.

The staff did a great job running the meeting.

Happy Thanksgiving

John (Jack) Conway



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 27, 2019  
**To:** Council and Board  
**From:** Julia Beaty, Staff  
**Subject:** Black Sea Bass Recreational Measures for 2020

On Wednesday, December 11, the Council and Board will consider 2020 recreational management measures for black sea bass. Materials listed below are provided for the Council and Board's discussion of this agenda item. Please note that one document is behind the summer flounder recreational management measures tab (Tab 12).

- 1) Summary of November 13-14, 2019 Monitoring Committee meeting (*behind Tab 12*);
- 2) Staff memo on 2020 recreational black sea bass measures dated November 7, 2019;
- 3) Additional comments from Advisory Panel members on 2020 recreational black sea bass measures;

Additional materials will be posted online as supplemental materials prior to the meeting, including:

- 4) Summary of November 22, 2019 Advisory Panel meeting;
- 5) Any additional public comments received after November 29 and before the supplemental comment deadline of December 5, 2019.



## Mid-Atlantic Fishery Management Council

800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | [www.mafmc.org](http://www.mafmc.org)  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

# MEMORANDUM

**Date:** November 7, 2019  
**To:** Chris Moore, Executive Director  
**From:** Julia Beaty, Staff  
**Subject:** Black Sea Bass Recreational Management Measures for 2020

### Background and Summary

The information in this memo is intended to assist the Monitoring Committee, Advisory Panels, the Mid-Atlantic Fishery Management Council (Council) and the Atlantic States Marine Fisheries Commission's (Commission's) Summer Flounder, Scup, and Black Sea Bass Management Board (Board) in developing recommendations for federal waters black sea bass size limits, possession limits, and open/closed seasons for 2020.

In October 2019, the Council and Board approved a 5.81 million pound black sea bass recreational harvest limit (RHL) for 2020 and 2021. This represents a 59% increase from the 2019 RHL of 3.66 million pounds (Table 1). The 2020-2021 RHL is based on the Scientific and Statistical Committee's (SSC's) acceptable biological catch (ABC) recommendation using an averaged/constant ABC across the two years, the Monitoring Committee's recommendation that the annual catch target be set equal to the annual catch limit (ACL), and an assumption that the proportion of total landings vs. total discards and the proportions of commercial vs. recreational discards, will be the same as in 2016 - 2018.<sup>1</sup>

The SSC's 2020-2021 ABC recommendation is based on biomass projections provided with the 2019 operational stock assessment and application of the Council's ABC control rule and risk policy.<sup>2</sup> The 2019 operational stock assessment concluded that the stock was not overfished and overfishing was not occurring in 2018. Spawning stock biomass in 2018 was 2.4 times the target level. The fishing mortality rate in 2018 was 9% below the fishing mortality threshold reference point.<sup>3</sup>

Each year, the Council and Board agree to federal waters recreational management measures for black sea bass for the upcoming year, consisting of a minimum fish size limit, a possession limit, and open/closed seasons that apply throughout federal waters from Maine through Cape

---

<sup>1</sup> This assumption about discards differs from that recommended by the Monitoring Committee. For details on the Monitoring Committee's recommendations, see the September 2019 Monitoring Committee meeting summary, available at: [http://www.mafmc.org/s/Tab11\\_Scup-Specifications\\_2019-10.pdf/](http://www.mafmc.org/s/Tab11_Scup-Specifications_2019-10.pdf/) (pages 2-10)

<sup>2</sup> A summary of the SSC's recommendation is available at: <http://www.mafmc.org/ssc-meetings/2019/september-9-11>

<sup>3</sup> A prepublication copy of the 2019 operational stock assessment is available at: [http://www.mafmc.org/s/Operational-Assessments-for-Black-Sea-Bass\\_Scup\\_Bluefish.pdf](http://www.mafmc.org/s/Operational-Assessments-for-Black-Sea-Bass_Scup_Bluefish.pdf)



Hatteras, North Carolina. State waters recreational management measures are developed through a separate Commission process.

Framework 14/Addendum XXXI is pending approval by the National Marine Fisheries Service (NMFS) and would allow for use of slot limits (i.e., a maximum and minimum size limit) and conservation equivalency for black sea bass starting in 2020. Conservation equivalency would allow federal waters measures to be waived in favor of the measures in the states where anglers land their catch. If conservation equivalency is recommended by the Council and Board, they should also recommend a set of non-preferred coastwide measures and precautionary default measures. If implemented on a coastwide basis (i.e., in both state and federal waters from Maine through Cape Hatteras, North Carolina), the non-preferred coastwide measures should prevent harvest from exceeding the RHL. Individual states or regions would develop measures that, when taken as a whole, are the conservation equivalent of the non-preferred coastwide measures, meaning that they are expected to result in the same level of harvest as the non-preferred coastwide measures. The precautionary default measures are intended to be restrictive enough to deter states/regions from implementing measures which are not approved through the conservation equivalency process.

2020 will be the first year that black sea bass catch and landings limits and management measures will account for changes to the Marine Recreational Information Program (MRIP) data. In July 2018, MRIP released revisions to their time series of recreational catch and harvest estimates based on adjustments for a revised angler intercept methodology and a new effort estimation methodology, namely, a transition from a telephone-based effort survey to a mail-based effort survey. The revised estimates for most years are several times higher than the previous estimates for shore and private boat modes, substantially raising the overall black sea bass catch and harvest estimates (e.g., Table 1).

The revised MRIP estimates were incorporated into the 2019 black sea bass operational stock assessment and contributed to increased biomass estimates compared to the 2016 benchmark assessment. The impact of the MRIP data on the stock assessment is one of multiple factors which resulted in a 59% increase in the RHL in 2020 compared to 2019. However, because the new MRIP data show that black sea bass harvest is much higher than previously thought, this increase in the RHL will not allow for increased recreational harvest. In fact, a 29% reduction in harvest compared to 2019 would be required to prevent an overage of the 2020 RHL. This could be achieved by reducing the federal waters bag limit from 15 to 4 fish or by using an open season of August 15 through December 31 (previously May 15 - December 31). These limits would only apply to harvest in federal waters and in state waters from Delaware through Cape Hatteras, North Carolina. To achieve a coastwide harvest reduction of 29%, Massachusetts through New Jersey would need to also adjust their state waters measures to achieve a similar percent reduction in harvest.

Given challenges associated with transitioning to management based on the new MRIP data, high availability of black sea bass to anglers, and a very healthy stock status, there may be a consideration that recreational management measures remain unchanged in 2020 compared to 2019 to allow more time to gradually transition to a management system that accounts for these new changes in the MRIP data. However, *status quo* recreational management measures could result in a 18% ABC overage and a 7% underage of the overfishing limit (OFL). Given the SSC's concerns about uncertainty in the OFL, maintaining *status quo* recreational measures

could be too risky. Therefore, if an alternative to a 29% reduction in harvest is considered, Council staff recommend that the state and federal waters measures be modified such that recreational harvest is reduced by 15% compared to projected 2019 harvest. A 15% reduction in harvest would be expected to result in overages of the RHL and recreational ACL; however, it would be expected to result in a less than 1% ABC overage and a 22% OFL underage. Therefore, overfishing would not be expected to occur. This would be intended as a short-term approach to allow the Council and Board more time to consider any potential modifications to the current management system in light of the implications of the changes in the MRIP estimates.

### **Past RHLs and Management Measures**

The black sea bass RHLs have ranged from a low of 1.14 million pounds in 2009 to a high of 4.29 million pounds in 2017 (Table 1). Prior to approval of the 2016 benchmark stock assessment, the RHLs were based on a constant catch approach (the 2010-2015 RHLs) or a data-limited analysis (the 2016 RHL). Since 2017, the RHLs have been based on a peer reviewed and approved stock assessment.

Until 2010, the recreational black sea bass fishery was managed with identical management measures in state and federal waters, as dictated by the Fishery Management Plan. From 2011 through 2018, the Commission developed a series of addenda to enable state-specific and regional management measures to be used in state waters under a process referred to as “ad hoc regional management.” With approval of the Commission’s Addendum XXXII in 2018, an addendum is no longer needed each time the state measures change. The ad hoc approach has essentially resulted in two regions: the northern states of Massachusetts through New Jersey, which set state-specific measures, and the southern states of Delaware through North Carolina (north of Cape Hatteras), which typically set measures consistent with federal measures given that most harvest from those states is taken in federal waters (Table 2). Most recreational harvest in Massachusetts through New York occurs in state waters (Table 2) and the state waters measures in those states have generally been more restrictive than the federal waters measures (Table 3); thus, landings in those states have been constrained primarily by state measures rather than federal measures. Most New Jersey harvest occurs in federal waters (Table 2); however, the state waters measures in New Jersey are more restrictive than the federal measures (Table 3); therefore, anglers landing their catch in New Jersey are constrained more by the state waters measures than the federal measures.

Where state and federal measures differ, federal party/charter permit holders are bound by whichever regulations are more restrictive, regardless of where they fish. However, the federal black sea bass party/charter permit is an open access permit, which enables vessels to drop their federal permit for part of the year and later reapply for the permit. Some vessel owners will drop their federal waters permit when state waters are open but federal waters are closed, allowing them to fish in state waters during federal closures.

The approach used to modify management measures to prevent RHL overages has not been consistent from year to year. Reductions in recreational harvest were required each year from 2013 through 2015, requiring implementation of more restrictive bag, size, and/or season limits in some or all states and in federal waters, depending on the year. Most harvest in recent years (e.g., approximately 95% in weight and 93% in numbers of fish during 2010-2018) came from Massachusetts - New Jersey (Table 4, Figure 1); therefore, these states took greater reductions in 2015 and 2016 compared to Delaware - North Carolina and compared to federal waters. In 2016

and 2017, some minor changes were made to the measures in some states. Some liberalizations took place in 2018 (e.g., removal of the fall federal waters closure and liberalizations in some state waters seasons). State and federal waters measures remained virtually unchanged in 2019 compared to 2018 (Table 3).

In 2018, the Council and Board provided states the opportunity to open their recreational black sea bass fisheries during February for the first time since 2013 under specific constraints. They continued this approach for 2019 and 2020. States must opt in to this fishery. Participating states have a 12.5 inch minimum fish size limit and a 15 fish possession limit during February, identical to the federal waters measures during the rest of the year. Participating states may need to adjust their recreational management measures during the rest of the year to account for expected February harvest to help ensure that the coastwide RHL is not exceeded. Expected February harvest by state is defined as shown in Table 5. At this time, it is not known which states intend to participate in the February 2020 recreational fishery. In 2018 and 2019, only Virginia and North Carolina participated in this fishery. No black sea bass were harvested by recreational anglers off North Carolina in February 2018 and an estimated 55 pounds were harvested in February 2019. Estimated recreational harvest off Virginia in February 2018 was 4,826 - 5,206 pounds (depending on the assumption made about the weight of harvested fish). In February 2019, an estimated 10,082 pounds of black sea bass were harvested off Virginia. Both Virginia and North Carolina adjusted their open seasons later in the year to account for harvest in February 2018 and/or 2019.

### **Recreational Catch and Landings Trends and 2019 Projections**

Between 1981 and 2018, recreational black sea bass catch from Maine through Cape Hatteras, North Carolina was highest in 2017 at 41.00 million fish and lowest in 1984 at 4.73 million fish. Harvest in numbers of fish was highest in 1986 at 19.28 million fish and lowest in 1998 at 1.56 million fish. Harvest in weight was highest in 2016 at 12.05 million pounds and lowest in 1998 at 1.79 million pounds. On average during 2009-2018, 85% of black sea bass caught in the recreational fishery were released (Table 6).

MRIP data for 2019 are currently incomplete and preliminary. To date, only the first four waves (January - August) of data for 2019 are available. These data suggest that, from Maine through Cape Hatteras, North Carolina during January - August 2019, 17.36 million black sea bass were caught and 2.48 million black sea bass were harvested, corresponding to 5.27 million pounds of harvest. The preliminary 2019 wave 1-4 catch estimate is 7% higher than the final 2018 wave 1-4 catch estimate; however, the preliminary 2019 wave 1-4 estimate of harvest in numbers of fish is 7% lower than the final 2018 wave 1-4 estimate and the 2019 preliminary wave 1-4 estimate of harvest in pounds is 8% lower than the final wave 1-4 2018 estimate (Table 7).

Preliminary wave 1-4 data for 2019 were used to project catch and harvest for the entire year by assuming the same proportion of catch and landings by wave and state as in 2018. A single year was used instead of a multiple year average because changes to the open seasons in 2018 in federal waters and in some state waters likely impacted the proportion of harvest by wave compared to previous years (e.g., removal of the fall closure). As previously stated, recreational measures in state and federal waters remained virtually unchanged from 2018 to 2019 (Table 3). The wave 1 estimates for Virginia and North Carolina were modified to account for February harvest not sampled by MRIP (see previous section). Based on this methodology, projected 2019

black sea bass harvest from Maine through Cape Hatteras, North Carolina is 8.17 million pounds and 4.35 million fish.

For comparison purposes, annual 2019 harvest was also projected using the coastwide (i.e., Maine through Cape Hatteras, North Carolina) proportions of harvest by wave in 2018, rather than projecting by state. This resulted in a projected 2019 harvest of 7.33 million pounds and 3.79 million fish. This methodology does not account for varying proportions of harvest by wave by state.

Neither the preliminary 2019 wave 1-4 estimates nor the projected values should not be compared to the 2019 RHL as the 2019 RHL did not account for the revisions to the MRIP data. These projections should be used as a starting point for discussion of potential 2020 recreational management measures.

### **Predicting 2020 Harvest and the Impacts of Management Measures**

When developing recommendations for 2020 recreational management measures, it is typically assumed that if regulations remain unchanged, harvest in the upcoming year will be similar to harvest in the current year. It is also assumed that regulation changes will have direct and linear impacts on harvest. These assumptions do not always hold true. Harvest is impacted by many interacting factors including management measures, fish availability, fishing effort, weather, economic conditions, angler demographics, and availability and management measures for other recreational species. The impacts of these factors on harvest in future years can be difficult to accurately predict.

The number of directed recreational black sea bass trips estimated by MRIP has been generally increasing since 2011 but remained relatively stable during 2016-2018 (Table 9). During 2016-2018, availability of legal-sized black sea bass likely varied due to variations in year class strength. For example, according to the 2019 operational stock assessment, the 2011 year class was about four times the 1989-2018 average and was more prevalent off Massachusetts through New York than off the states of New Jersey south. This year class had a major impact on the fisheries over the past several years, though its contribution to recreational catch will have greatly diminished by 2020. The 2015 year class was more than double the 1989-2018 average and is more evenly distributed from Massachusetts through Cape Hatteras, North Carolina than the 2011 year class. As individuals in the 2015 year class increase in size, availability of fish larger than the recreational minimum size limits may continue to be high in 2020 despite the diminished influence of the 2011 year class. The 2016 year class was about 30% above average and the 2017 year class was about 72% below average; therefore, availability of black sea bass smaller than the minimum size limits may decline in 2020 compared to past years. These varying year class strengths may collectively result in an increase in recreational harvest and a decrease in recreational discards in 2020 compared to previous years. According to the 2016 benchmark stock assessment, black sea bass of both sexes reach 12.5 inches in length (the recreational minimum fish size in federal waters and in state waters in Delaware through Cape Hatteras, North Carolina) around age 4. They reach 15 inches in length (the recreational minimum fish size in state waters from Massachusetts through New York) around age 5.

The Monitoring Committee should consider these and other potentially relevant factors when discussing expected 2020 recreational harvest and any potential changes in management measures.

## Accountability Measures

Federal regulations include accountability measures (AMs) for when the recreational black sea bass ACL is exceeded as well as proactive AMs to help prevent the ACL from being exceeded. Proactive AMs include adjustments to the management measures (bag limits, size limits, and season) for the upcoming fishing year, if necessary, to prevent the RHL and ACL from being exceeded. The regulations do not allow for in-season closure of the recreational fishery if the RHL or ACL is expected to be exceeded. Paybacks of ACL overages may be required in a subsequent fishing year, depending on stock status and the scale of the overage, as described below. ACL overages in the recreational fishery are evaluated by comparing the most recent 3-year average recreational ACL against the most recent 3-year average of recreational catch (i.e., landings and dead discards). If average catch exceeds the average ACL, then the appropriate AM is determined based on the following criteria:

1. If the stock is overfished ( $B < \frac{1}{2} B_{MSY}$ ), under a rebuilding plan, or the stock status is unknown: The exact amount, in pounds, by which the most recent year's recreational ACL has been exceeded, will be deducted in the following fishing year, or as soon as possible once catch data are available.
2. If biomass is above the threshold, but below the target ( $\frac{1}{2} B_{MSY} < B < B_{MSY}$ ), and the stock is not under a rebuilding plan:
  - a. If only the recreational ACL has been exceeded, then adjustments to the recreational management measures (bag, size, and seasonal limits) would be made in the following year, or as soon as possible once catch data are available. These adjustments would take into account the performance of the measure and conditions that precipitated the overage.
  - b. If the ABC is exceeded in addition to the recreational ACL, then a single year deduction will be made as a payback, scaled based on stock biomass. The calculation for the payback amount is: (overage amount) \*  $(B_{msy} - B) / \frac{1}{2} B_{msy}$ .
3. If biomass is above the target ( $B > B_{MSY}$ ): Adjustments to the recreational management measures (bag, size, and seasonal limits) would be considered for the following year, or as soon as possible once catch data are available. These adjustments would take into account the performance of the measures and conditions that precipitated the overage.

The 2016-2018 recreational ACLs did not account for the recent revisions to the MRIP estimation methodology; therefore, it is necessary to use catch estimates based on the old MRIP estimation methodology to compare recreational catch to the ACLs. According to these estimates, recreational catch in 2016-2018 averaged 6.86 million pounds, about 52% higher than the average recreational ACL of 4.50 million pounds (Table 10). This overage is driven by 2016, when the RHL was set based on a data limited methodology and not a peer reviewed and approved stock assessment, as was the case for the 2017 and 2018 RHLs. Previous Monitoring Committee comments on this issue indicated that the 2016 overage occurred when the stock was rapidly expanding and availability to anglers was very high. At the same time, due to the lack of an approved stock assessment, the RHLs were set at levels that were not reflective of actual stock abundance. The results of the 2016 benchmark stock assessment suggest that the 2016 recreational ACL could have been much higher if a peer reviewed and approved stock

assessment had been available at the time, and recreational overages would likely not have occurred to the same degree.<sup>4</sup>

When considering only 2017-2018, when RHLs were set based on a peer reviewed and approved stock assessment, average recreational catch exceeded the average recreational ACL by 4%. Given that biomass is currently above the target, the AM regulations require consideration of adjustments to the recreational bag, size, and/or season limits in response to the ACL overage, taking into account the performance of the measures and conditions that precipitated the overage. The Monitoring Committee should consider this when developing recommendations for 2020 recreational measures.

### **Staff Recommendation for 2020 Federal Recreational Measures**

As previously stated, projected 2019 recreational harvest from Maine through Cape Hatteras, North Carolina is 8.17 million pounds. The 2020 RHL is 5.81 million pounds. If it is assumed that 2020 harvest will equal projected 2019 harvest if no changes are made to the management measures, then recreational harvest would need to be reduced by 29% to prevent the 2020 RHL from being exceeded.

A 29% reduction in harvest could be achieved by closing the federal season during all of wave 3 and 45 days in wave 4, resulting in an open season of August 15 through December 31 (Table 11). A 29% reduction could also be achieved by reducing the federal waters bag limit from 15 to 4 fish and leaving the season and minimum size limit unchanged (Table 12).

The analysis supporting these measures assumes that the state waters measures in Delaware through Cape Hatteras, North Carolina will continue to match the federal waters measures and the state waters measures in Maine through New Jersey will continue to be more restrictive than the federal waters measures. For this reason, only the impacts to harvest off Delaware through Cape Hatteras, North Carolina were considered when developing these measures. To achieve a coastwide 29% reduction in harvest, Maine through New Jersey would need to modify their measures to achieve a similar reduction in harvest. As previously stated, state waters measures will be developed through a separate Commission process. If the Council and Board approve changes to the federal waters measures to achieve a certain percentage reduction in harvest, they could also consider approving a set of backstop measures to be implemented coastwide if the states do not take action through the Commission process to address the needed reduction.

Additionally, the analysis supporting these measures relies on assumptions of full compliance with the season regulations, no shift in effort from newly closed days to days that remain open, evenly distributed harvest throughout each wave, and identical levels of non-compliance with a revised bag limit as under the 2016-2018 federal bag limit of 15 fish. These assumptions are necessary given the available data and the difficulty in predicting changes in fishing behavior.

Information on the length frequencies of harvested black sea bass is provided for informational purposes (Figure 2); however, changes in the minimum fish size were not analyzed and are not recommended, given strong opposition to increases in minimum fish sizes in the past.

---

<sup>4</sup> For example, see January 26, 2017 Monitoring Committee meeting summary, available at: [http://www.mafmc.org/s/Tab06\\_BSB-Specifications.pdf](http://www.mafmc.org/s/Tab06_BSB-Specifications.pdf), pages 2-9.

The need for any reduction in harvest is challenging to communicate given that the 2020 RHL is 59% higher than the 2019 RHL, biomass was more than double the target level in 2018, and availability to anglers is expected to continue to be high in 2020. The need for a 29% reduction in harvest despite a 59% increase in the RHL is driven in large part by the transition to the new MRIP estimation methodology which resulted in a major change in our understanding of the scale of recreational harvest (e.g., Table 1). The increased harvest estimates are not due to changes in fishing effort, but rather due to changes in the estimation methodology. Now that the new MRIP estimates have been incorporated into a stock assessment, they must be used in the management process. The scale of these impacts (i.e., the percent change in the RHL compared to the reduction in harvest needed) could not be accurately predicted prior to completion of the operational stock assessment in the summer of 2019. This left the Council and Board with little time to consider how to most appropriately respond to these changes before the new MRIP estimates must be used in management.

For all these reasons, there may be a consideration that the 2020 recreational management measures in state and federal waters remain unchanged from 2019 to allow the Council and Board time to transition to a management system that accounts for the new MRIP estimates in a more gradual fashion. However, status quo recreational management measures in 2020 could pose an unacceptably high risk of exceeding the OFL. As previously stated, 2020 recreational harvest under *status quo* management measures is expected to be 8.17 million pounds. Recreational discards can only be projected in numbers of fish. Using the projection methodology described on pages 4-5, projected 2019 discards are 24.36 million fish. This is 16% greater than the final 2018 discard estimate in numbers of fish. MRIP does not estimate the size or weight of discarded fish. The black sea bass stock assessment estimates recreational dead discards in weight based on discard length frequencies derived from a variety of sources and an assumed 15% discard mortality rate. If the 2018 recreational dead discard estimate in weight from the 2019 operational stock assessment is increased by 16% to account for the 16% difference between 2019 projected discards in numbers of fish compared to final 2018 estimated discards, this results in 2.64 million pounds of dead discards in the recreational fishery in 2020. Commercial landings closely follow the commercial quota;<sup>5</sup> therefore, it can be assumed that 2020 commercial landings will be approximately 5.58 million pounds (i.e., the 2020 commercial quota). In October 2019, the Council and Board recommended an expected commercial discards value of 1.40 million pounds for calculating the commercial ACL and quota, though the Monitoring Committee agreed that this is likely an underestimate. Based on these assumptions, total 2020 catch is projected to be 17.79 million pounds under *status quo* recreational management measures. The 2020 OFL is 19.39 million pound and the ABC is 15.07 million pounds. Therefore, under status quo recreational management measures, total catch in 2020 could exceed the ABC by 18% and could be 7% below the OFL.

The SSC recommended the 2020 ABC after considering uncertainty in the OFL. They agreed that the greatest sources of uncertainty include the strong retrospective bias in the assessment

---

<sup>5</sup> For example, see Table 1 in the 2019 Black Sea Bass Fishery Information Document, available at: <http://www.mafmc.org/sf-s-bsb>.

results, differing directions of retrospective bias between the two spatial sub-areas in the model, and the degree to which the model relies on MRIP estimates.<sup>6</sup>

The 2019 operational stock assessment concluded that spawning stock biomass was 2.40 times the target level in 2018, though it is projected to decline to 1.68 times the target in 2020 if catch in 2019 and 2020 is equal to the ABCs in those years. If catch exceeds the ABC, biomass could decline further towards the target level. The stock has withstood multiple years of ABC overages in the past and has maintained a high biomass level; however, the 2011, 2015, and 2016 year classes were all at least 30% above the 1989-2017 average. The 2017 year class was 72% below average. It cannot be assumed that future year class strengths will be above average. Therefore, it is not appropriate to assume that because the stock has maintained a high biomass despite several past ABC overages it will continue to do so if 2020 catch exceeds the ABC. For these reasons, maintaining *status quo* recreational management measures in 2020 poses a conservation concern.

Taking all this information into consideration, if an alternative to a 29% reduction in harvest is considered, Council staff recommend that recreational management measures in state and federal waters be modified to achieve a 15% reduction in harvest in 2020. This would address concerns about negative socioeconomic impacts driven by changes in the MRIP estimation methodology rather than a conservation need, while also preventing an OFL overage. Based on the assumptions about catch described above, a 15% reduction in recreational harvest would be expected to result in an ABC overage of less than 1% and a 22% underage of the OFL. Staff recommend that a 15% reduction in harvest in federal waters be achieved by reducing the federal waters bag limit from 15 to 8 fish (Table 12). Alternatively, a 15% reduction in federal waters harvest could be achieved by closing at least 38 days in wave 3, resulting in an open season of June 8 (or later) to December 31. Staff also recommend that states work through the Commission process to develop 2020 recreational management measures to achieve a 15% reduction in state waters harvest.

Pending NMFS approval of Framework 14/Addendum XXXI, the 2020 federal recreational measures for black sea bass fishery could include a maximum fish size, which would allow for use of a slot limit, and the Council and Board could also have the option of recommending that the federal waters measures be waived in favor of state measures through conservation equivalency. Council staff do not recommend use of a slot limit for black sea bass in 2020 due to concerns raised by Advisory Panel, Council, and Board members about barotrauma of larger discarded fish. If the Council and Board wish to recommend conservation equivalency, they must also approve a set of non-preferred coastwide measures which would be expected to prevent harvest from exceeding the RHL if they were implemented in federal waters and in all state waters. Analysis of potential non-preferred coastwide measures is complicated by the wide variations in minimum fish sizes, bag limits, and open seasons across different states and federal waters (Table 3). The Monitoring Committee should discuss the appropriate way to calculate a set of non-preferred coastwide measures for black sea bass. An appropriate set of precautionary default measures could include a minimum fish size of 15 inches, a 5 fish bag limit, and an open season of June 1 to August 31. These measures are more restrictive than any of the existing state measures (Table 3).

---

<sup>6</sup> See the September 2019 SSC meeting summary, available at: <http://www.mafmc.org/ssc-meetings/2019/september-9-11>



Table 1: ABCs, recreational ACLs, RHLs, recreational harvest based on old and revised MRIP data, and federal waters management measures for the black sea bass recreational fishery, 1997-2020. All measures are in millions of pounds, unless otherwise noted.

Year	ABC	Rec. ACL	RHL <sup>a</sup>	Harvest (old MRIP) <sup>b</sup>	% over/under RHL (old MRIP)	Harvest (revised MRIP) <sup>c</sup>	Bag limit (# fish)	Size limit	Open season
1997	-	-	-	4.4	-	6.34	-	9"	1/1-12/31
1998	-	-	3.15	1.29	-59%	1.77	-	10"	1/1-7/30 8/16-12/31
1999	-	-	3.15	1.7	-46%	2.16	-	10"	1/1-12/31
2000	-	-	3.15	4.12	+31%	4.65	-	10"	1/1-12/31
2001	-	-	3.15	3.6	+14%	6.24	25	11"	1/1-2/28 5/10-12/31
2002	-	-	3.43	4.44	+29%	5.67	25	11.5"	1/1-12/31
2003	-	-	3.43	3.45	+1%	5.67	25	12"	1/1-9/1 9/16-11/30
2004	-	-	4.01	1.97	-51%	3.09	25	12"	1/1-9/7 9/22-11/30
2005	-	-	4.13	1.88	-54%	3.21	25	12"	1/1-9/7 9/22-11/30
2006	-	-	3.99	1.8	-55%	2.74	25	12"	1/1-12/31
2007	-	-	2.47	2.17	-12%	3.34	25	12"	1/1-12/31
2008	-	-	2.11	2.03	-4%	3.57	25	12"	1/1-12/31
2009	-	-	1.14	2.56	+125%	5.70	25	12.5"	1/1-12/31
2010	4.50	-	1.83	3.19	+74%	8.07	25	12.5"	1/1-10/5
2011	4.50	-	1.84	1.17	-36%	3.27	25	12.5"	5/22-10/1 11/1-12/31
2012	4.50	-	1.32	3.18	+141%	7.04	15 or 25 <sup>d</sup>	12.5"	1/1-2/29 5/19-10/14 11/1-12/31
2013	5.50	2.90	2.26	2.46	+9%	5.68	20	12.5"	5/19-10/14 11/1-12/31
2014	5.50	2.90	2.26	3.67	+62%	6.93	15	12.5"	5/19-9/21 10/18-12/31
2015	5.50	2.90	2.33	3.79	+63%	7.82	15	12.5"	5/15-9/21 10/22-12/31
2016	6.67	3.52	2.82	5.19 <sup>e</sup>	+84%	12.05	15	12.5"	5/15-9/21 10/22-12/31
2017	10.47	5.38	4.29	4.16 <sup>e</sup>	-3%	11.48	15	12.5"	5/15-9/21 10/22-12/31
2018	8.94	4.59	3.66	3.82	+4%	7.92	15	12.5"	5/15-12/31
2019	8.94	4.59	3.66	-	-	8.17 <sup>f</sup>	15	12.5"	5/15-12/31
2020	15.07	8.09	5.81	-	-	-	TBD	TBD	TBD

<sup>a</sup> RHLs for 2006-2014 are adjusted for Research Set Aside.

<sup>b</sup> Values prior to 2004 are for ME-NC and for 2004-2018 are for Maine through Cape Hatteras, North Carolina.

<sup>c</sup> All values are for Maine through Cape Hatteras, North Carolina.

<sup>d</sup> 15 fish from 1/1-2/29; 25 fish from 5/19-10/14 and 11/1-12/31.

<sup>e</sup> The Technical Committees agreed that the 2016 and 2017 estimates are outliers driven by the impact of implausible estimates for New York in wave 6 in 2016 (all modes) and the private/rental mode in New Jersey in wave 3, 2017.

<sup>f</sup> Projected using the methodology described on pages 4-5.

Table 2: Average proportion of black sea bass recreational harvest from federal waters, 2014-2018. Maine and New Hampshire had no estimated black sea bass harvest during 2014-2018.

State	Proportion of harvest from federal waters (numbers of fish)	Proportion of harvest from federal waters (weight of fish)
MA	9%	11%
RI	21%	21%
CT	8%	8%
NY	45%	49%
NJ	68%	66%
DE	94%	93%
MD	75%	74%
VA	63%	74%
NC <sup>a</sup>	87%	87%
ME-NC <sup>a</sup>	39%	37%
ME-NJ	36%	35%
DE-NC <sup>a</sup>	77%	79%

<sup>a</sup> Through Cape Hatteras

Table 3: State waters black sea bass recreational measures in 2018 and 2019. All measures remained unchanged from 2018 to 2019 except for the season in Massachusetts.

State	Min. Size	Possession Limit	Open Season
ME	13"	10 fish	May 19 - Sept 21; Oct 18 - Dec 31
NH	13"	10 fish	Jan 1 - Dec 31
MA	15"	5 fish	2018: May 19 - Sept 12
			2019: May 18 - Sept 8
RI	15"	3 fish	Jun 24 - Aug 31
		7 fish	Sept 1 - Dec 31
CT private & shore	15"	5 fish	May 19 - Dec 31
CT authorized party/charter monitoring program vessels	15"	5 fish	May 19 - Aug 31
		7 fish	Sept 1 - Dec 31
NY	15"	3 fish	Jun 23 - Aug 31
		7 fish	Sept 1 - Dec 31
NJ	12.5"	10 fish	May 15 - Jun 22
		2 fish	Jul 1 - Aug 31
		10 fish	Oct 8 - Oct 31
	13"	15 fish	Nov 1 - Dec 31
DE	12.5"	15 fish	May 15 - Dec 31
MD	12.5"	15 fish	May 15 - Dec 31
VA	12.5"	15 fish	Feb 1-28; May 15- Dec 31
NC, North of Cape Hatteras (35° 15'N)	12.5	15 fish	Feb 1-28; May 15- Dec 31

Table 4: Proportion of total coastwide black sea bass harvest from Maine through New Jersey or Delaware through North Carolina (through Cape Hatteras) each year, 2010-2019.

Year	% of ME-NC harvest (lb)		% of ME-NC harvest (numbers of fish)	
	ME-NJ	DE-NC	ME-NJ	DE-NC
2010	96%	4%	96%	4%
2011	85%	15%	83%	17%
2012	94%	6%	92%	8%
2013	97%	3%	95%	5%
2014	96%	4%	95%	5%
2015	96%	4%	95%	5%
2016	95%	5%	93%	7%
2017	95%	5%	93%	7%
2018	94%	6%	92%	8%
2019 (proj)	87%	13%	81%	19%
2010-2018	95%	5%	93%	7%

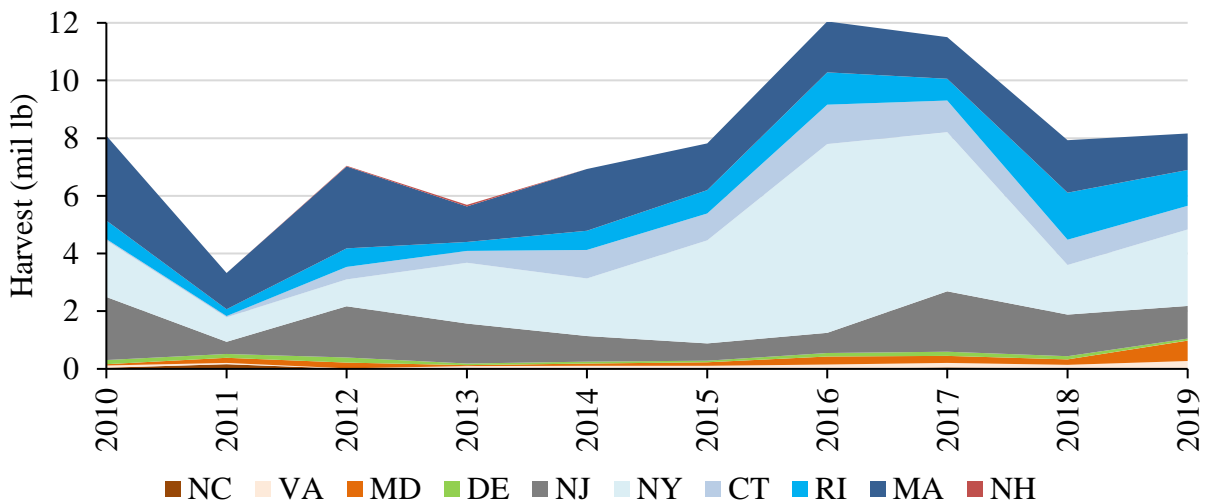


Figure 1: Percentage of coastwide recreational black sea bass harvest by state, 2010-2019. 2019 values are projected.

Table 5: State allocations of 100,000 pounds of expected February black sea bass harvest.

State	Proportion of Wave 1 Catch	Allocation of 100,000 pounds
RI	0.29%	288
CT	0.06%	57
NY	9.41%	9,410
NJ	82.85%	82,850
DE	1.30%	1,297
MD	0.54%	541
VA	5.50%	5,496
NC <sup>a</sup>	0.06%	62
<b>Total</b>	<b>100.00%</b>	<b>100,000</b>

<sup>a</sup> North of Cape Hatteras

Table 6: Recreational black sea bass catch and harvest by year, Maine through Cape Hatteras, NC, 1982-2019. 2019 values are preliminary and are for waves 1-4 only.

<b>Year</b>	<b>Catch</b> (millions of fish)	<b>Harvest</b> (millions of fish)	<b>Harvest</b> (millions of lb)	<b>% Released</b>	<b>Avg. weight of landed fish (lb)</b>
1982	12.90	10.72	10.36	17%	0.97
1983	9.05	5.16	5.03	43%	0.97
1984	4.73	2.51	1.97	47%	0.79
1985	9.33	4.53	3.73	51%	0.82
1986	29.71	19.28	11.07	35%	0.57
1987	5.59	2.57	1.88	54%	0.73
1988	10.29	3.51	3.73	66%	1.06
1989	11.65	6.66	5.48	43%	0.82
1990	14.46	5.12	3.97	65%	0.78
1991	15.14	6.16	5.03	59%	0.82
1992	11.92	4.70	3.90	61%	0.83
1993	12.22	7.11	5.70	42%	0.80
1994	10.74	4.18	3.82	61%	0.91
1995	19.27	6.88	5.33	64%	0.78
1996	14.05	7.20	7.99	49%	1.11
1997	15.65	6.56	6.35	58%	0.97
1998	8.42	1.56	1.79	81%	1.15
1999	14.49	1.64	2.21	89%	1.34
2000	25.65	4.26	4.66	83%	1.09
2001	20.86	4.27	6.25	80%	1.46
2002	24.98	4.58	5.68	82%	1.24
2003	18.28	4.08	5.71	78%	1.40
2004	12.90	2.35	3.09	82%	1.32
2005	12.50	2.00	3.20	84%	1.60
2006	13.09	1.80	2.76	86%	1.53
2007	14.58	2.14	3.32	85%	1.55
2008	24.19	2.46	3.59	90%	1.46
2009	23.12	3.92	5.70	83%	1.45
2010	26.42	5.10	8.09	81%	1.59
2011	12.47	1.78	3.32	86%	1.86
2012	34.95	3.69	7.04	89%	1.91
2013	25.71	3.01	5.69	88%	1.89
2014	23.29	3.81	6.94	84%	1.82
2015	23.17	4.39	7.82	81%	1.78
2016	35.80	5.84	12.05	84%	2.06
2017	41.00	5.70	11.50	86%	2.02
2018	24.99	3.99	7.93	84%	1.99
2019 (w1-4 only)	17.36	2.48	4.87	86%	1.97

Table 7: Recreational black sea bass catch and harvest, waves 1-4 (January - August), 2015-2019, Maine through Cape Hatteras, North Carolina. 2019 values are preliminary.

<b>Year</b>	<b>Wave 1-4 catch (millions of fish)</b>	<b>Wave 1-4 harvest (millions of fish)</b>	<b>Wave 1-4 harvest (millions of pounds)</b>
<b>2015</b>	14.61	2.84	5.03
<b>2016</b>	18.30	3.11	6.27
<b>2017</b>	21.24	3.31	6.34
<b>2018</b>	16.24	2.61	5.27
<b>2019</b>	17.36	2.48	4.87

Table 8: 2019 harvest projections by state in pounds. All projections were based on preliminary 2019 wave 1-4 estimates and the proportion of harvest by wave and state in 2018. Virginia and North Carolina harvest in 2018 and 2019 was adjusted to account for February harvest not sampled by MRIP (see page 4). Average annual harvest during 2016-2018 is provided for comparison purposes only.

<b>State</b>	<b>Avg 2016-2018 w1-6 harvest</b>	<b>2018 w1-6 harvest</b>	<b>2018 w1-4 harvest</b>	<b>2018 w1-4 as % of annual harvest</b>	<b>2019 w1-4 harvest</b>	<b>2019 projected w1-6 harvest</b>	<b>% of projected 2019 w1-6 harvest</b>
<b>ME</b>	0	0	0	N/A	0	0	0%
<b>NH</b>	0	0	0	N/A	0	0	0%
<b>MA</b>	1,676,189	1,818,682	1,730,559	95%	1,203,200	1,264,469	15%
<b>RI</b>	1,167,752	1,628,876	789,314	48%	602,352	1,243,050	15%
<b>CT</b>	1,113,340	873,056	660,635	76%	620,517	820,038	10%
<b>NY</b>	4,596,494	1,726,553	856,552	50%	1,315,315	2,651,282	32%
<b>NJ</b>	1,407,732	1,440,762	1,086,432	75%	853,298	1,131,593	14%
<b>DE</b>	129,026	109,365	40,039	37%	26,501	72,386	1%
<b>MD</b>	234,622	189,712	21,503	11%	79,918	705,083	9%
<b>VA</b>	144,924	129,143	81,872	63%	171,585	270,654	3%
<b>NC<sup>a</sup></b>	6,708	4,307	1,882	44%	3,700	8,467	0%
<b>Total</b>	<b>10,476,788</b>	<b>7,920,456</b>	<b>5,268,788</b>	<b>67%</b>	<b>4,876,386</b>	<b>8,167,024</b>	<b>100%</b>

<sup>a</sup>Through Cape Hatteras

Table 9: Number of recreational fishing trips for which black sea bass was the primary target species, Maine - North Carolina.

<b>Year</b>	<b>Number of Directed Black Sea Bass Trips</b>	<b>Directed Black Sea Bass Trips As Percent of All Recreational Trips</b>
<b>2009</b>	886,770	0.9%
<b>2010</b>	1,105,355	1.1%
<b>2011</b>	464,202	0.5%
<b>2012</b>	705,492	0.7%
<b>2013</b>	675,330	0.8%
<b>2014</b>	831,222	0.9%
<b>2015</b>	1,263,828	1.5%
<b>2016</b>	1,115,446	1.3%
<b>2017</b>	1,173,894	1.4%
<b>2018</b>	1,170,462	1.7%

Table 10: AM evaluation for the recreational black sea bass fishery, comparing recreational catch from Maine through Cape Hatteras, North Carolina based on the old MRIP estimates to the recreational ACL. All values are in millions of pounds. All values shown in this table may differ from those ultimately used by NMFS for ACL evaluation.<sup>7</sup>

<b>Year</b>	<b>Rec. ACL</b>	<b>Rec. landings</b>	<b>Rec. dead discards</b>	<b>Rec. Catch</b>	<b>% Over/Under ACL</b>
2016	3.52	5.19	3.45	8.64	+145%
2017	5.38	4.16	1.27	5.43	+1%
2018	4.59	3.82	1.10	4.92	+7%
Average	4.50	4.39	1.94	6.86	+52%

<sup>7</sup> Recreational harvest is based on “pre-calibration” 2016-2017 MRIP estimates downloaded in July 2018 and back-calibrated 2018 estimates provided by MRIP staff. Recreational dead discard estimates were calculated by NMFS staff by applying the ratio of new to old MRIP estimates in each year to the dead discard estimates provided with the 2019 operational stock assessment. These discard values should be considered rough estimates.

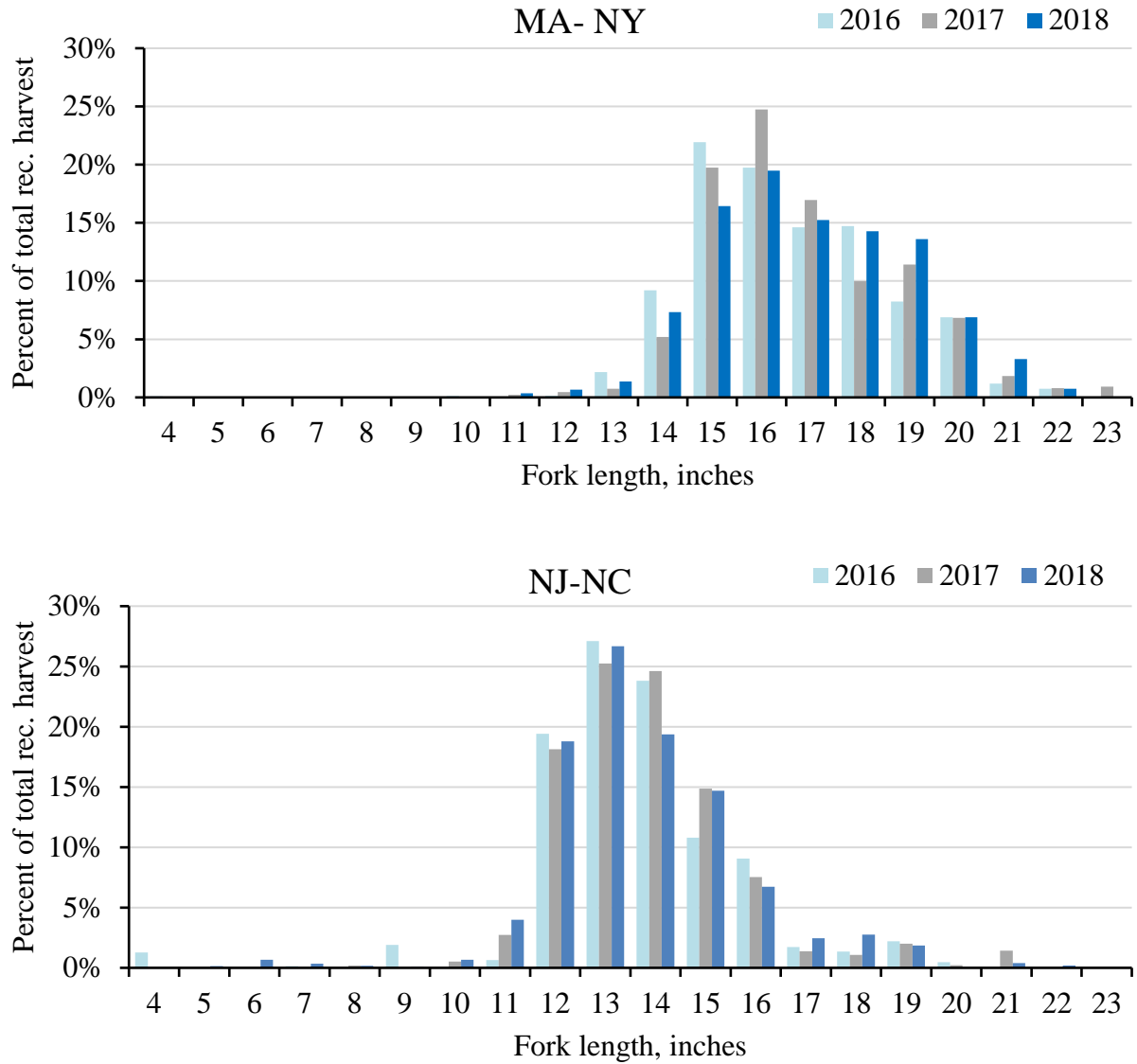


Figure 2: Expanded length frequencies of harvested black sea bass during 2016-2018 as a percent of landed fish. MA-NY had a minimum size limit of 15 inches during 2016-2018 and NJ-NC (north of Cape Hatteras) had a minimum size limit of 12.5 inches, with the exception of a 13 inch size limit in NJ during wave 6.

Table 11: Percent of Delaware through North Carolina (north of Cape Hatteras) black sea bass harvest (in weight) by wave and day per wave, in 2018.

Wave	Days open in 2018	% of 2018 DE-NC harvest	% of 2018 DE-NC harvest per day in wave
1 Jan-Feb	DE & MD: 0 VA & NC: 28	1.2%	0.0%
2 Mar-Apr	0	0.0%	0.0%
3 May-Jun	47	20.2%	0.4%
4 Jul-Aug	62	12.3%	0.2%
5 Sept-Oct	61	51.1%	0.8%
6 Nov-Dec	61	15.2%	0.2%

Table 12: Percent reduction in recreational harvest in numbers of fish under bag limits of 1-10 black sea bass, compared to the current 15 fish bag limit, from Delaware through Cape Hatteras, North Carolina.

Bag Limit	2016	2017	2018	Average
10	1%	11%	16%	9%
9	2%	13%	19%	11%
8	2%	15%	23%	13%
7	3%	18%	27%	16%
6	4%	21%	32%	19%
5	7%	26%	38%	24%
4	10%	34%	44%	29%
3	13%	43%	52%	36%
2	28%	55%	61%	48%
1	49%	73%	79%	67%



## **Comments for the Mid-Atlantic Fishery Management Council's December meeting regarding Conservational equivalency in the summer flounder and black sea bass fisheries.**

My name is Michael Plaia and I am an advisor to both the Mid-Atlantic Fishery Management Council (MAFMC) and the Atlantic States Marine Fishery Commission (ASMFC) for summer flounder, scup and black sea bass. I am writing to you today to urge you to refuse to adopt conservational equivalency for both the 2020 summer flounder and black sea bass fisheries.

My comments today will mirror the comments I have previously submitted to the Greater Atlantic Fisheries Office in response to their general request for comments on including conservational equivalency as an option in the fishery management plan for black sea bass. I have attached those comments to this missive for your reading pleasure.

I do not believe that it is either legal or wise for the council to vote in favor of using conservational equivalency in either of those fisheries. The Magnesson-Stevens act requires that all actions taken by the council be based on the best available science. The best available science in this case being the Marine Recreational Information Program and its estimate of each states' recreational catch during 2019. I have also attached an excel worksheet which shows the MRIP state-by-state catch estimates through wave 4, along with the associated percent standard error (PSE) and calculates the weighted average PSE for waves 3 and 4 (including waves 1 and 2 would only increase the PSEs for these estimates).

If the council were to choose to use conservational equivalency in either of these fisheries the ASMFC would use these MRIP estimates to formulate their conservational equivalent regulations. The problem is that these estimates, by their own internal criteria, are not the best available science.

As you can see on the Excel worksheet, the harvest estimates (A + B1) for summer flounder during 2019 in at east three states, MA, RI and NC, carry PSEs of 40% or greater and the PSE for the state of MD is closely approaching 40%. If you subscribe to what I will, with all due respect, refer to as the John Boreman school of thought (since he was the first one to tell me about it) any MRIP estimate which carries a PSE of over 40% should not be relied on for management purposes. Therefore, if the council were to vote to use conservational equivalency it would be voting to use what the best available science says are unreliable figures to manage the 2020 fishery.

For black sea bass the case is even stronger. The 2019 harvest estimates (A + B1) for the states of MD and VA are well over 50%, which means that those estimates are more likely wrong than correct. Also, the estimates for the states of DE and NC have associated PSEs of over 40%, which should not be used for management purposes. Therefore, any vote to use conservational

equivalency for black sea bass would be a vote to use data to manage the fishery which the best available science says is bad data.

Normally I would be in favor of using conservational equivalency to account for local conditions which may vary from the coastwide norms. However, I do think we need good data to do that, and the best available science, e.g. the PSEs, tell us that the data we would have to use to implement conservational equivalency is at best, unusable for management purposes and, in the case of black sea bass, that data is more likely wrong, and thus directly against the Magnuson-Stevens directive to use the best available science.

## M. Plaia Comments to NMFS on Black Sea Bass Conservation Equivalency

This is in response to your solicitation for comments on the inclusion of conservational equivalency as an option in the Mid-Atlantic fishery management council's options for managing the black sea bass fishery. While these comments are in response for your solicitation regarding the black sea bass fishery they would equally apply to the use of conservational equivalency in the summer flounder and scup fisheries.

I am an advisor to the New England fishery management council on their recreational advisory panel and an advisor to the Mid-Atlantic fishery management council as well as the ASMFC for summer flounder, black sea bass and scup.

I believe that conservational equivalency should only be an alternative to coastwide regulations when the Marine Recreational Information program generates data that can be reliably used to manage the state by state or regional data. Recent history has shown that in many cases conservational equivalency has been used when the required data does not meet the Magnesson-Stevens act requirement of being the "best available science." In fact, some of the data being used by the Atlantic States Marine Fisheries Commission to manage conservational equivalency is show by the "best available science" to be more likely wrong than right.

I am referring to the state by state data, or regional data produced by the Marine Recreational Information Program which carries a Percent Standard Error of over 50%. As you know, the Percent Standard Error (PSE) is a measure of the precision of the MRIP estimate, and any value over 50% indicates that the data is more likely incorrect than it is correct.

While not the subject of your request for comments a quintessential example of this can be found in the 2017 scup fishery. The following table is a summary of the state by state catch estimates for 2017 scup fishery:

2017:

Estimate status	Year	State	Species	Total Catch	PSE
Final	2017	Connecticut	Scup	6,344,008	28.1
Final	2017	Delaware	Scup	287	59.1
Final	2017	Maryland	Scup	331	85.1
Final	2017	Massachusetts	Scup	5,565,309	17.2
Final	2017	Newhampshire	Scup	1,893	40.1
Final	2017	New Jersey	Scup	4,230,871	50.5
	2017	New York	Scup	21,803,501	19.7
Final	2017	North Carolina	Scup	359	79.2

## M. Plaia Comments to NMFS on Black Sea Bass Conservation Equivalency

Final	2017	Rhode Island	Scup	3,247,863	19.1
Final	2017	South Carolina	Scup	4,411	100.2
Final	2017	Virginia	Scup	2,024	103

The ASMFC manages scup based on regions and it also does the same, with the same regions as black sea bass. However, in 2017, the entire southern region of the ASMFC's scup management plan had a PSE of well over 50%. This would indicate that, if conservational equivalency was used to manage the scup fishery for 2017, contrary to the requirements of the Magnesson-Stevens act, the fishery would have been managed based on data that was most likely wrong.

There are similar, but less egregious examples in the data for all three species, i.e. summer flounder, black sea bass and scup. For example, see the 2018 MRIP estimate for summer flounder in the state of Maryland, which had a PSE of 51.4%. Yet the Mid-Atlantic council voted for conservational equivalency for the 2018 fishing year, based on data which was most likely incorrect.

While a similar situation has not arisen in the black seabass fishery yet, there is absolutely nothing to prevent it happening in that fishery.

I believe that it is against the Magnesson-Stevens Act's explicit and implicit requirements that council actions should be based on the "best available science." If the council votes to adopt conservational equivalency when the data required to implement a conservational equivalent program is, by the MRIP's own terms, more likely wrong than right, then they have violated the Act's direction that council actions be based on the "best available science". The council should not have the option to turn over the management of any species when the MRIP data for any state has an accompanying PSE of over 50%. If conservational equivalency is to be adopted on a regional basis, then it should only be allowed if MRIP produces data for the region that has a PSE of less than 50%.

As always, if you wish to discuss these comments further I would be more than happy to do so. GARFO, the NEFMC, the MAFMC and the ASMFC all have my phone number. I have also attached an Excel spreadsheet with the results of my MRIP database queries for all three species for your convenience.

I support the idea of making the current Block Island Transit Zone for striped bass a safe haven for state only registered fishing vessels transiting with any species on board that were caught in Rhode Island State waters and the vessel is returning non-stop to state waters.

### **M. Plaia Comments to NMFS on Black Sea Bass Conservation Equivalency**

I do not support the inclusion of a maximum size limit for summer flounder and black sea bass. The biology of the black sea bass, in particular the fact that black sea bass are protogynous hermaphrodites calls into question the utility of a maximum size limit.

M. Plaia Attachment 11-25-19

Fluke:

	March/April		May/June		July/August		May/June Harvest X PSE	July/ Aug Harvest X PSE	Total	Average PSE
	Harvest A + B1	PSE	Harvest A + B1	PSE	Harvest A + B1	PSE				
MA			5,731	66.9	46,824	36.7	383403.9	1718440.8	2101844.7	39.9932395
RI			114,383	53.3	77,108	33	6096613.9	2544564	8641177.9	45.1257652
CT			25,156	51.3	51,474	25.6	1290502.8	1317734.4	2608237.2	34.0367637
NY			134,363	26	345,740	24.4	3493438	8436056	11929494	24.8477806
NJ			235,314	29.4	608,075	22.1	6918231.6	13438457.5	20356689.1	24.1367733
DE			14,202	27.3	66,030	23.6	387714.6	1558308	1946022.6	24.2549432
MD			13,288	37.3	22,261	39.8	495642.4	885987.8	1381630.2	38.8655152
VA	1,569	103.1	49,318	41.1	96,716	29.7	2026969.8	2872465.2	4899435	33.549961
NC	356	92.1	13,550	39.3	12,471	48.6	532515	606090.6	1138605.6	43.7571807
Totals	1,925		605,305		1,326,699		1,933,929	21625032	33378104.3	55003136.3

In numbers of fish

Scup:

	March/April		May/June		July/August		May/June Harvest X PSE	July/ Aug Harvest X PSE	Total	Average PSE	
	Harvest A + B1	PSE	Harvest A + B1	PSE	Harvest A + B1	PSE					
MA			564,048	14.8	499,722	21.6	1,063,770	8347910.4	10793995.2	19141905.6	17.9944025
RI			764,169	30.4	1,226,171	22.3	1,990,340	23230737.6	27343613.3	50574350.9	25.4099053
CT			593,393	78.2	978,311	35.5	1,571,704	46403332.6	34730040.5	81133373.1	51.6212805
NY			2,073,852	23.2	3,395,176	19.8	5,469,028	48113366.4	67224484.8	115337851	21.0892779
NJ			282	101.6	1,124	72.1	1,406	28651.2	81040.4	109691.6	78.0167852
DE			0	????	101	99.5	101		10049.5	10049.5	99.5
MD			0	????	0	????	0				
VA			0	????	0	????	0				
NC	1,568	84.3	205	82.8	13	100.7	1,786	16974	1309.1	18283.1	
Totals	1,568		3,995,949		6,100,618		10,098,135	126140972.2	140184532.8	266325505	

Sea bass:

	January/February	March/April		May/June		July/August	May/June Harvest X PSE	July/ Aug Harvest X PSE	Total	Average PSE			
		Harvest A + B1	PSE	Harvest A + B1	PSE	Harvest A + B PSE							
ME						0							
NH													
MA				305,325	31.4	154,705	21.5	9587205	3326157.5	12913362.5	28.0706965		
RI				7,260	64.1	242,203	21.7	465366	5255805.1	5721171.1	22.9339465		
CT				61,786	44.8	200,763	17.9	2768012.8	3593657.7	6361670.5	24.2304122		
NY			13	126.9	81,202	45.8	600,196	19.8	3719051.6	11883880.8	15602932.4	22.8984124	Does not include wave 1
NJ				458,846	22.8	189,370	27.4	10461688.8	5188738	15650426.8	24.1438453		
DE				8,293	49.9	11,203	38.4	413820.7	430195.2	844015.9	43.291747		
MD				54,341	56.7	15,720	48.9	3081134.7	768708	3849842.7	54.949868		
VA				16,305	63.9	64,271	65.1	1041889.5	4184042.1	5225931.6	64.8571734		
NC	68443	95.7	56,124	68	14,570	47.7	8,358	39.4	694989	329305.2	1024294.2	44.6743807	Does not include wave 1
Totals	68443		56,124		1,007,928		1,486,789		32,233,158	34960489.6			

## Kiley Dancy

---

**From:** Dustin C. Leaning <DLeaning@asmfc.org>  
**Sent:** Tuesday, November 26, 2019 3:29 PM  
**To:** Kiley Dancy; Beaty, Julia; Coutre, Karson  
**Subject:** FW: Reminder: AP webinar this Friday

**From:** Conway Jr, JACK D [mailto:jack.d.conway.jr@lmco.com]  
**Sent:** Tuesday, November 26, 2019 2:59 PM  
**To:** Dustin C. Leaning <DLeaning@asmfc.org>  
**Subject:** [External] RE: Reminder: AP webinar this Friday

Greetings from CT,

I was on the conference call last Friday and did not provide any verbal comments since I wanted to absorb the entire meeting. Overall, having status quo regulations for all three species makes the most sense for CT Anglers fishing Long Island Sound waters for the 2020 Season.

Specific Comments:

Summer flounder: a slot limit does make a great deal of sense but I realize some of the Party Charter fleet (not based on CT) have specific fisheries for trophy summer flounder. From my perspective, the slot limit concept needs to be explored further and there may likely be a need for different regulations for different bodies of water (similar to Tautog management in Long Island Sound). Summer Flounder fishing in Long Island Sound has been going downhill in major fashion, in 2019 during the months of July and August my boat landed over 300 summer flounder. Out of the 300 we only landed 1 “keeper”. I was fishing in water from 80-130 feet in Central Long Island Sound (often drifting into NY waters). We landed many 17-18 inch fish. Anything over 19 was impossible to come by. Reducing recreational landings by increasing dead discards was a bad management decision made a long time ago.

Sea Bass: Sea bass have become one of the most important fish for recreational anglers based out of CT. They are available somewhat all year (moving from Central LIS to Eastern LIS over the course of the summer). They allow anglers to harvest fish when nothing else is available. Per my above comments the summer flounder fishery for “keepers” is dismal and CT waters used to have great striped bass fishing that has also disappeared with the downturn in that fishery. Sea Bass offer great opportunities and the ability to big a great eating fish home. The bluefish population in LIS has also “crashed”. The point being sea bass have somewhat filled the void left by other species in decline.

Scup: the other “go to” fish in LIS and are enjoying more popularity than ever before. Again, with the lack of striped bass and bluefish, this fishery is filling a void that needs to be filled.

MRIP Data: “Yikes” – this was a hot topic during the call and this really needs to be addressed. I was not aware of the crazy numbers associated with the shore based catch of scup in CT but something is really wrong with this data collection system.

The staff did a great job running the meeting.

Happy Thanksgiving

John (Jack) Conway



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | [www.mafmc.org](http://www.mafmc.org)  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** December 2, 2019  
**To:** Council  
**From:** Jason Didden, Staff  
**Subject:** Seized catch and quota accounting

The question of how seized catch is treated for quota monitoring purposes (and annual catch limit accounting) has arisen recently, and will be discussed. Additional supplemental materials may be posted later.





**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 26, 2019  
**To:** Council and Board  
**From:** Kiley Dancy, Julia Beaty, and Karson Coutr , staff  
**Subject:** Summer Flounder, Scup, and Black Sea Bass Commercial/Recreational Allocation Amendment Scoping Document

In October 2019, the Council and Board initiated an FMP amendment to reconsider the summer flounder, scup, and black sea bass commercial/recreational sector allocations. On Wednesday, December 11, the Council and Board will consider approval of a draft scoping document for a planned early 2020 scoping process. Materials listed below are provided for the Council and Board's discussion of this agenda item.

- 1) A draft action plan for the amendment as of November 19, 2019;
- 2) A draft scoping document for approval.



**Action Plan for Commercial/Recreational Allocation Amendment to the Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan  
Draft as of 11/19/19**

<http://www.mafmc.org/actions/sfsbsb-allocation-amendment>

**Amendment Goal:** The purpose of this amendment is to review and consider revisions to the commercial/recreational sector allocations for the summer flounder, scup, and black sea bass fisheries. This action aims to address the allocation-related impacts of the revised recreational catch and landings data provided by the Marine Recreational Information Program (MRIP). This is a joint amendment of the Mid-Atlantic Fishery Management Council and Atlantic States Marine Fisheries Commission.

**Type of NEPA Analysis Expected:** To be determined - Environmental Assessment (EA) or Environmental Impact Statement (EIS); depends on scope of action and alternatives considered.

**Additional Expertise Sought:** The Fisheries Management Action Team (FMAT) for this action will be composed of Council and Commission staff and management partners from the Greater Atlantic Regional Fisheries Office and Northeast Fisheries Science Center, with input from other organizations as appropriate.

<b>Agency</b>	<b>FMAT Role</b>	<b>Person(s)</b>
MAFMC	Council Staff (Summer Flounder)	Kiley Dancy
MAFMC	Council Staff (Scup)	Karson Coutre
MAFMC	Council Staff (Black Sea Bass)	Julia Beaty
ASMFC	Commission Staff (Summer Flounder and Scup)	Dustin Colson Leaning
ASMFC	Commission Staff (Black Sea Bass)	Caitlin Starks
NMFS GARFO	Sustainable Fisheries	TBD
NMFS GARFO	NEPA	TBD
NMFS GARFO	Other NMFS roles TBD	TBD
NMFS NEFSC	Socioeconomics	TBD
NMFS NEFSC	Other NMFS roles TBD	TBD
NMFS GARFO	General Counsel (consulted as needed)	John Almeida

**Types of Measures Expected to be Considered:** The Council and Board will review and consider revisions to the commercial/recreational sector allocations for summer flounder, scup, and black sea bass. Specific possible reallocation approaches have not yet been identified. Following the scoping process, the Council and Board will confirm the issues to be addressed and the scope of the amendment. The FMAT is expected to develop a range of management options specific to commercial/recreational allocation for the Council and Board to consider, potentially including, but not limited to the following approaches:

- No action/*status quo*;
- Updating the current allocation percentages using the existing base years but with revised MRIP data;
- Using alternative base years to derive new allocation percentages;
- Using different allocation approaches which do not rely on base years;
- Considering whether each allocation should be catch based or landings based;
- Using socioeconomic data or evaluations to consider modifying the allocations based on optimization of economic efficiency and socioeconomic benefits from each fishery;
- Considering separate allocations to modes within the recreational fishery (for-hire vs. private/shore fisheries);
- Considering whether a transfer of allocation from one sector to another should be allowed through specifications or a framework action;
- Considering whether allocations should be made in pounds and/or numbers of fish;
- Considering whether future allocation changes could be made through a framework/addendum rather than an amendment;
- Considering whether allocations should be static or dynamic, including possible approaches that evaluate these allocations on a more frequent basis;
- Other approaches to be determined.

**Applicable laws/issues:**

Magnuson-Stevens Act	Yes
Administrative Procedures 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, if necessary, depends on the actions taken
Marine Mammal Protection Act	Possibly; depends on 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
Information Quality Act	Yes

**Expected Amendment Timeline (as of November 2019; assuming EA; subject to change):**

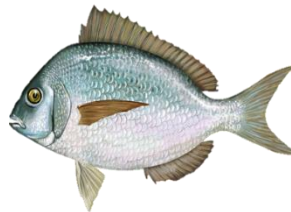
<b>October 2019</b>	Amendment initiated
<b>December 2019/Early 2020</b>	FMAT formed
<b>December 2019</b>	Council and Board approve a scoping document for public comment
<b>January/February 2020</b>	Scoping hearings and comment period
<b>March/April 2020</b>	Staff summarize scoping comments; FMAT reviews scoping comments and provides recommendations to Council and Board on scope of action and possible approaches
<b>May 2020</b>	Council and Board review scoping comments and FMAT recommendations; identify scope of action
<b>May 2020</b>	FMAT meeting to develop draft alternatives
<b>June 2020</b>	Summer Flounder, Scup, Black Sea Bass Committee/subset of Board meeting to refine draft alternatives
<b>June/July 2020</b>	Continued FMAT development and analysis of alternatives
<b>August 2020</b>	Council and Board approve a range of alternatives for inclusion in a public hearing document
<b>Fall 2020</b>	Development of public hearing document and hearing schedule
<b>December 2020</b>	Council and Board approve public hearing document
<b>January/February 2021</b>	Public hearings
<b>Spring 2021</b>	Final action
<b>Summer 2021</b>	EA finalized and submitted; NMFS and other agencies review; final edits completed
<b>Summer/Fall 2021</b>	Rulemaking and comment periods (4-7 months from after EA finalized)
<b>Late 2021</b>	Final rule effective



## Summer Flounder, Scup, and Black Sea Bass Commercial/Recreational Allocation Amendment

### *DRAFT Scoping and Public Information Document*

November 2019



### What is scoping?

Scoping is the process of identifying issues, potential impacts, and a reasonable range of alternatives associated with new fisheries management actions. **Scoping provides the first and best opportunity for the public to make suggestions and raise concerns about new actions.** Your comments early in the development of this action will help the Mid-Atlantic Fishery Management Council (Council or MAFMC) and the Atlantic States Marine Fisheries Commission (Commission or ASFMC) identify issues of concern and determine which types of management alternatives should be further developed.

The management changes outlined in this document are not a list of preferred alternatives, nor will they necessarily be included in this action. The Commission and Council have not yet analyzed any management measures for their effectiveness or impacts. At this early stage, all reasonable options will be considered.

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 and Commission should consider as part of this action.

## Contents

List of acronyms and abbreviations .....	2
1) Introduction .....	2
2) What are the current allocations between the commercial and recreational sectors for summer flounder, scup and black sea bass? .....	3
3) Why are the Commission and Council considering changes to these allocations? .....	3
4) Issues for consideration .....	3
5) How to get involved .....	4
6) Next steps .....	5
7) Stock status .....	6
8) Commercial and recreational landings and discard trends .....	7
9) Additional resources .....	13

## List of acronyms and abbreviations

ACCSP	Atlantic Coastal Cooperative Statistics Program
ASMFC or Commission	Atlantic States Marine Fisheries Commission
FMP	Fishery Management Plan
MAFMC or Council	Mid-Atlantic Fishery Management Council
MRIP	Marine Recreational Information Program
NMFS	National Marine Fisheries Service
RHL	Recreational Harvest Limit

### 1) Introduction

The Atlantic States Marine Fisheries Commission (Commission or ASFMC) and the Mid-Atlantic Fishery Management Council (Council or MAFMC) jointly manage commercial and recreational summer flounder, scup, and black sea bass fisheries from Maine through North Carolina.<sup>1</sup> The Council develops regulations for federal waters while the Commission and member states develop regulations for state waters. The National Marine Fisheries Service (NMFS) serves as the federal implementation and enforcement agency.

As described in more detail below, the Council and Commission are seeking public input on a developing management action which will consider potential modifications to the allocations of catch or landings between the commercial and recreational sectors for summer flounder, scup, and black sea bass.

---

<sup>1</sup> The Council and Commission manage summer flounder throughout all of North Carolina. They manage scup and black sea bass through Cape Hatteras, North Carolina.

## 2) What are the current allocations between the commercial and recreational sectors for summer flounder, scup and black sea bass?

For summer flounder, 60% of the annual total allowable landings is allocated to the commercial fishery and 40% to the recreational fishery based on 1980-1989 landings data. These allocations were implemented in 1993 through Amendment 2 to the Fishery Management Plan (FMP).

For scup, 78% of the annual total allowable catch (landings plus dead discards) is allocated to the commercial fishery and 22% to the recreational fishery based on catch data from 1988-1992. These allocations were implemented through Amendment 8 to the FMP, which was approved in 1996.

For black sea bass, 49% of the annual total allowable landings is allocated to the commercial fishery and 51% to the recreational fishery based on landings data from 1983-1992. These allocations were implemented through Amendment 9 to the FMP, which was approved in 1996.

## 3) Why are the Commission and Council considering changes to these allocations?

The commercial and recreational allocations for all three species were based on historical proportions of landings (for summer flounder and black sea bass) or catch (for scup) from each sector. Recreational catch and harvest data are provided by the Marine Recreational Information Program (MRIP). In July 2018, MRIP released revisions to their time series of catch and harvest estimates based on adjustments for a revised angler intercept methodology and a new effort estimation methodology (i.e., a transition from a telephone-based effort survey to a mail-based effort survey). These revisions resulted in much higher recreational catch estimates compared to previous estimates, affecting the entire time series of data going back to 1981. This has management implications due to the fixed commercial/recreational allocation percentages defined in the FMP for all three species. These allocation percentages do not reflect the revised understanding of the recent and historic proportions of catch and landings from the two sectors based on new MRIP data. Because these allocation percentages are defined in the Council and Commission FMPs, they cannot be modified without an FMP amendment. In addition, the current allocations were set in the mid-1990s and have not been revised since that time. The amendment process will allow for consideration of whether the allocations are still appropriate and meeting the objectives of the FMP.

### Amendment Objective

- Consider modifications to the current allocations between the commercial and recreational sectors for summer flounder, scup, and black sea bass.

## 4) Issues for consideration

The Commission and Council are soliciting public input on all aspects of this action. Specific management alternatives have not yet been identified. After reviewing public comments received through the scoping process, the Council and Commission will determine the issues to be addressed and the scope of the amendment. A range of management options for commercial/

recreational allocations will be developed, potentially including, but not limited to the following approaches:

- No action/status quo;
- Updating the current allocation percentages using the existing base years but with revised MRIP data;
- Using alternative base years to derive new allocation percentages;
- Using different allocation approaches which do not rely on base years;
- Considering whether each allocation should be catch based or landings based;
- Using socioeconomic data, analysis, or other socioeconomic considerations to modify the allocations based on optimization of economic efficiency and socioeconomic benefits from each fishery;
- Considering separate allocations to modes within the recreational fishery (for-hire vs. private/shore fisheries);
- Considering whether a transfer of allocation from one sector to another should be allowed through specifications or a framework action;
- Considering whether allocations should be made in pounds and/or numbers of fish;
- Considering whether allocations should be static or dynamic;
- Considering whether future allocation changes could be made through a framework/addendum (i.e., a shorter and more efficient action than an amendment);
- Other approaches to be determined.

Please comment on the suitability of any potential commercial/recreational allocation approaches and describe your reasoning.

The Commission and Council will develop a range of alternatives for further consideration after reviewing public comments.

## 5) How to get involved

The Council and Commission are in the early stages of developing this amendment. You will have additional opportunities to provide comments; however, now is the best time to provide input and raise concerns about the general scope of the amendment.

### ***Attend a scoping hearing***

Public scoping hearings will be held at the following dates and locations. Scoping hearings provide an opportunity to learn more about the amendment, ask questions, and provide verbal and/or written comments.

*[A table with dates and locations of scoping hearings will be added here at a later date. Staff will work with the states to determine the dates and locations of hearings. Council and Commission staff recommend that all hearings take place from late January through the end of February 2020.]*



### ***Submit written comments***

You may submit written comments at a public scoping hearing, or through one of the following methods:

1) **Online** at: *[link to be added]*

2) **Email** to: *[address to be added]*

3) **Mail or Fax** to:

Dr. Chris Moore, Executive Director  
Mid-Atlantic Fishery Management Council  
800 North State Street, Suite 201  
Dover, DE 19901  
Fax: 302-674-5399

**Written comments must be received by 11:59 pm Eastern Standard Time on [DATE TBD], 2020.**

Please include “summer flounder, scup, black sea bass 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 shared with the Commission and Council and will be made publicly available on their respective websites.

### ***Stay informed***

For additional information and updates on development of this amendment, please visit:

<http://www.mafmc.org/actions/sfsbsb-allocation-amendment>.

The Council and Commission will publish announcements about future opportunities for public comment in the Federal Register and at [www.mafmc.org](http://www.mafmc.org) and [www.asmfc.org](http://www.asmfc.org).

If you have any questions, please contact:

- Julia Beaty, Mid-Atlantic Fishery Management Council, at [jbeaty@mafmc.org](mailto:jbeaty@mafmc.org) or 302-526-5250, or
- Dustin Colson Leaning, Atlantic States Marine Fisheries Commission, at [dleaning@asmfc.org](mailto:dleaning@asmfc.org) or 703-842-0740.

## **6) Next steps**

Scoping is the initial phase of information gathering and public comment, after which the Commission and Council will develop and evaluate potential management alternatives. There will be several additional opportunities for public input on development of these management alternatives. Table 1 describes the major expected next steps in development of this amendment. Announcements of relevant public meetings will be posted to the Council and Commission websites ([www.mafmc.org](http://www.mafmc.org) and [www.asmfc.org](http://www.asmfc.org)).

After development and consideration of management alternatives and analysis of their impacts, the Council will choose preferred management measures for submission to the National Marine Fisheries Service for review and consideration for approval. Approved management measures will

be implemented through publication of proposed and final rules in the Federal Register, which will include additional public comment periods. Commission recommendations are final and not subject to an additional rulemaking process.

**While there will be many additional opportunities for public comment on this amendment, the scoping period is particularly important for assisting the Council and Commission in establishing the overall focus and direction of the amendment.**

**Table 1:** General expected timeline for amendment next steps. This timeline is subject to change. For example, depending on the level of analysis required under the National Environmental Policy Act, the timeline could be extended beyond that shown here.

<b>January/February 2020</b>	Scoping hearings and comment period
<b>March/April 2020</b>	Scoping comments summarized
<b>May 2020</b>	Council and Board review scoping comments and identify potential categories of alternatives to consider
<b>May-July 2020</b>	Initial development of draft management alternatives
<b>August 2020</b>	Council and Board approve a range of alternatives for inclusion in a public hearing document
<b>December 2020</b>	Council and Board approve public hearing document
<b>Early 2021</b>	Public hearings
<b>Spring 2021</b>	Final action
<b>Summer 2021</b>	Federal rulemaking and comment periods
<b>Late 2021/Early 2022</b>	Final rule effective

## 7) Stock status

According to the 2018 benchmark stock assessment, the summer flounder stock was not overfished, and overfishing was not occurring in 2017. Spawning stock biomass in 2017 was estimated to be about 22% below the target level, but 56% above the threshold which defines an overfished condition. Fishing mortality in 2017 was estimated to be about 25% below the threshold level that defines overfishing. Summer flounder recruitment, measured as the number of age 0 fish, has been below the 1982-2017 average since 2011.

According to the 2019 operational stock assessment, the scup stock was not overfished, and overfishing was not occurring in 2018. Spawning stock biomass in 2018 was estimated to be about 2.0 times the target level and fishing mortality was about 27% below the threshold level that defines overfishing. The 2015 year class (i.e., those scup spawned in 2015) was the largest scup year class since at least 1984, while the 2016-2018 year classes were below average.

According to the 2019 operational stock assessment, the black sea bass stock was not overfished, and overfishing was not occurring in 2018. Spawning stock biomass in 2018 was estimated to be

about 2.4 times the target level and fishing mortality was about 9% below the threshold level that defines overfishing. The 2011 year class was the largest black sea bass year class since at least 1989. The 2015 year class was also well above average; however, the 2017 year class is 72% below the 1989-2017 average.

## **8) Commercial and recreational landings and discard trends**

### ***Summer flounder***

Using the base years of 1980 to 1989 (Table 2), the FMP currently allocates 60% of the summer flounder total allowable landings to the commercial fishery and 40% to the recreational fishery. These allocations were implemented through Amendment 2 to the FMP in 1993.

Commercial landings peaked in 1984 at 37.77 million pounds before declining throughout the 1980s to 9.26 million pounds in 1990. In 1993, a coastwide (i.e., Maine through North Carolina) commercial quota was implemented for the first time. Since then, commercial landings have been limited by the quota and ranged from approximately 5.83 million pounds in 2017 to 17.37 million pounds in 2004. Commercial landings have declined over the past 5 years, in large part due to reductions in the commercial quota, which dropped from approximately 11.07 million pounds in 2015 to 5.66 million pounds in 2018. Commercial dead discards since 1989, the first year for which discard estimates are available, varied from an estimated 0.48 million pounds in 1991 to 4.74 million pounds in 1992. Commercial dead discards averaged 8% of total catch from 2009 to 2018.

Recreational harvest (under revised MRIP data) peaked in 1983 at an estimated 36.74 million pounds. Similar to the commercial landings, recreational harvest dropped in the 1980s to a low of 5.66 million pounds in 1989, corresponding with a decline in overall stock biomass over the same time frame. Starting in 1993, coastwide recreational harvest limits (RHLs) were implemented for the recreational fishery. Recreational harvest generally increased throughout the 1990s, and then began to decline after about 2000, in part due to decreases in the RHL. In 2018, recreational anglers harvested 7.60 million pounds of summer flounder. From 2009-2018, an average of 88% of the harvest (in pounds) originated from private/rental boats, while party/charter boats and shore-based anglers accounted for an average of 5% and 7% of the harvest, respectively. Recreational dead discards ranged from 0.19 million pounds in 1989 to 5.98 million pounds in 2011. Recreational dead discards averaged 14% of total catch from 2009 to 2018 (Figure 1).

**Table 2:** Comparison of Amendment 2 data and current data for commercial and recreational summer flounder landings in millions of pounds and percentages for 1980-1989. These years were used to calculate the sector allocations implemented in Amendment 2.

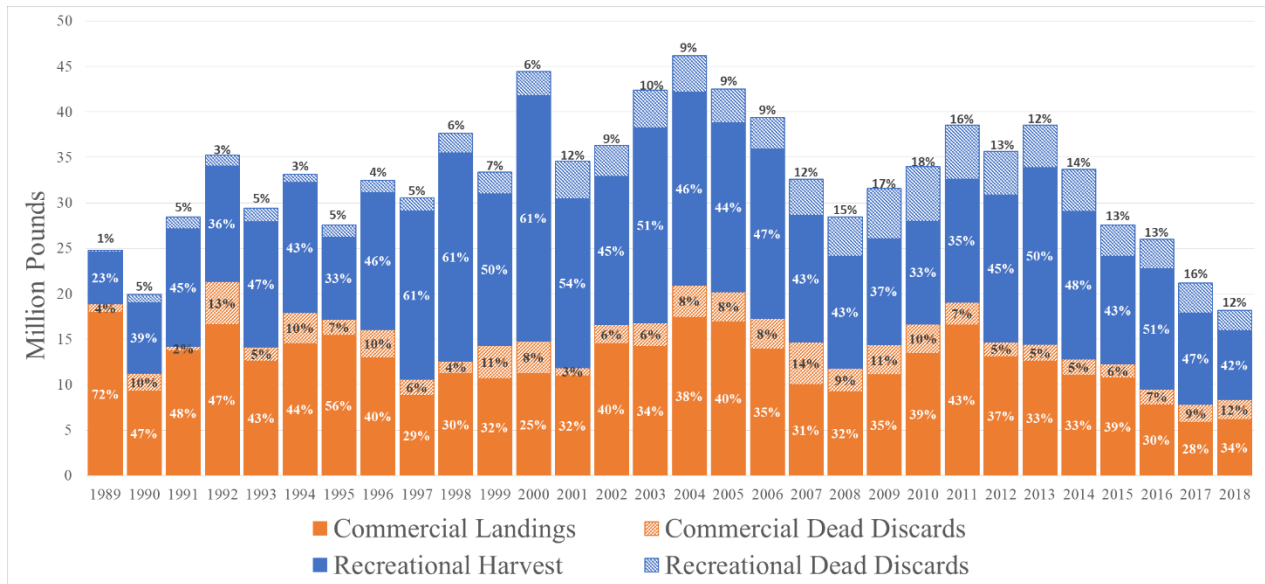
<b>Summer Flounder</b>								
	<b>Amendment 2 (1993)</b>				<b>Current Data (2018 Benchmark Assessment)</b>			
<b>Year</b>	<b>Com. landings<sup>a</sup></b>	<b>Rec. landings<sup>a</sup></b>	<b>% Com.</b>	<b>% Rec.</b>	<b>Com. landings</b>	<b>Rec. landings<sup>b</sup></b>	<b>% Com.</b>	<b>% Rec.</b>
<b>1980</b>	31.22	25.84	55%	45%	31.22	N/A	N/A	N/A
<b>1981</b>	21.06	11.30	66%	35%	21.06	15.85	57%	43%
<b>1982</b>	22.93	18.90	55%	45%	22.93	23.72	49%	51%
<b>1983</b>	29.55	35.65	45%	55%	29.55	36.74	45%	55%
<b>1984</b>	37.77	28.88	57%	43%	37.77	28.23	57%	43%
<b>1985</b>	32.35	17.09	65%	35%	32.35	25.14	56%	44%
<b>1986</b>	26.87	17.57	60%	40%	26.87	26.47	50%	50%
<b>1987</b>	27.05	13.13	67%	33%	27.05	23.45	54%	46%
<b>1988</b>	32.38	18.42	64%	36%	32.38	20.79	61%	39%
<b>1989</b>	17.91	3.19	85%	15%	17.91	5.66	76%	24%
<b>Avg</b>	27.91	19.00	<b>59%<sup>d</sup></b>	<b>41%<sup>d</sup></b>	27.54 <sup>c</sup>	22.89 <sup>c</sup>	<b>55%<sup>d</sup></b>	<b>45%<sup>d</sup></b>

<sup>a</sup> The source of commercial landings used in Amendment 2 was "NMFS General Canvas Data," while the source of recreational data used in Amendment 2 was "unpublished NMFS Marine Recreational Fisheries Statistics Survey (MRFSS) Data." MRFSS was a precursor to MRIP.

<sup>b</sup> Recreational harvest data in the 2018 assessment are provided back to 1982. The value for 1981 is from a query of MRIP data. Current recreational data for 1980 are not available as the MRIP estimates only go back to 1981.

<sup>c</sup> Average for recent data includes only 1981-1989, given that revised MRIP data for 1980 are not available for.

<sup>d</sup> These averages are derived by calculating the percent split of the total landings over the time period (1981-1989 for new data or 1980-1989 for the Amendment 2 data). In Amendment 2, this table lists the averages percentages by sector as 62% commercial and 38% recreational, which is calculated by taking the average of the annual sector percent values. The Amendment 2 document states that "the commercial share averaged about 60% of the combined total landings of summer flounder from 1980-1989," and references a "distribution (60/40) of landings between the commercial and recreational fisheries." Explicit information on the exact methods and rationale for the 60/40 split is largely lacking in the amendment documents.



**Figure 1:** Commercial and recreational summer flounder landings and dead discards, 1982-2018. Data retrieved from the Northeast Fisheries Science Center 2019 data update. Commercial discard estimates prior to 1989 are not available.

### Scup

Amendment 8 (1996) specified that the annual total allowable catch for scup would be allocated to the commercial and recreational fisheries based on the proportions of commercial and recreational catch (landings and dead discards) during 1988-1992 (Table 3). Based on these data, 22% of the total allowable catch is allocated to the recreational fishery and 78% is allocated to the commercial fishery. At the time, the Council and Commission determined that allocating based on catch instead of landings was fair and equitable to both the commercial and recreational fisheries given that each sector would receive the full effect of a change in the rate of discards (e.g., the commercial quota could be higher under lower levels of commercial discards).

Commercial scup landings peaked in 1981 at 21.73 million pounds and reached a low of 2.66 million pounds in 2000 (Figure 2). In 2018, commercial fishermen landed 13.37 million pounds of scup. A coastwide (i.e., Maine through Cape Hatteras, North Carolina) commercial scup quota was first implemented in 1997; however, unlike summer flounder and black sea bass, in recent years the commercial fishery appears to be more limited by market factors than by the quota. The commercial fishery has not harvested their full quota since 2007.

From 1989 to 2018, commercial scup discards fluctuated widely. They increased from 2014-2017, peaking at about 10.42 million pounds in 2017. This was the highest amount of commercial scup discards since at least 1981 and was likely driven in large part by a record high 2015 year class (i.e., those scup spawned in 2015). In 2017, these scup were very abundant, but mostly too small to be landed in the commercial fishery due to the commercial minimum fish size of 9 inches total length.

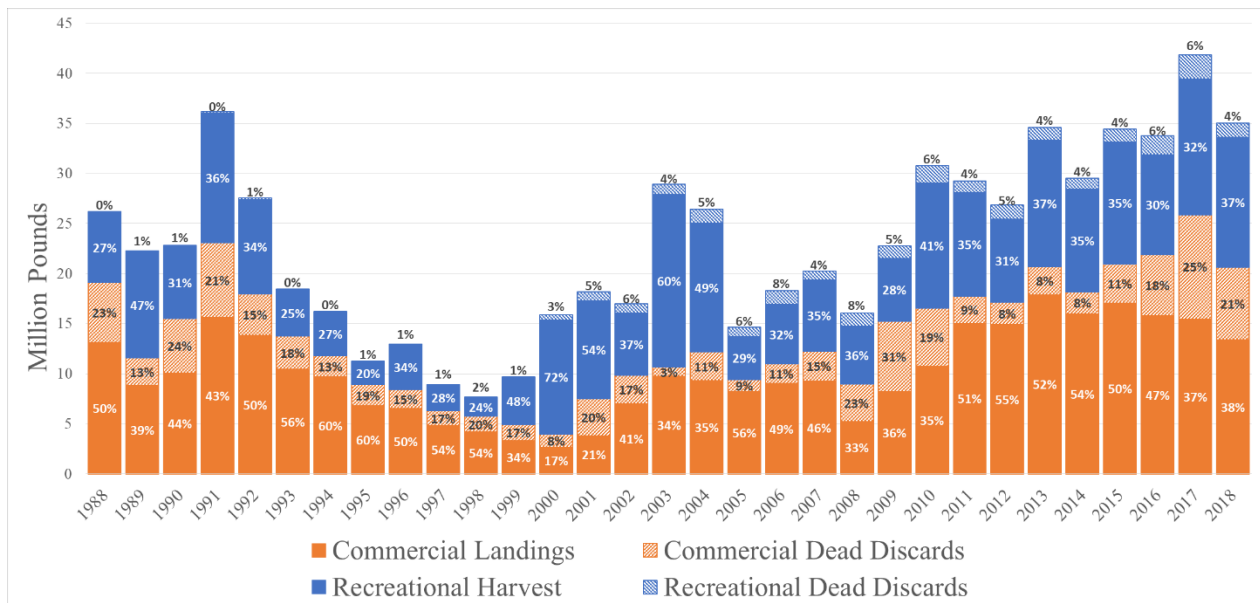
Based on the revised MRIP data, recreational scup harvest from 1981-2018 fluctuated from a high of 14.18 million pounds in 1986 to a low of 1.82 million pounds in 1998. In 2018, recreational

harvest was about 12.98 million pounds (Figure 2). Recreational dead discards ranged from 0.07 million pounds in 1999 to 2.38 million pounds in 2017. Recreational dead discards averaged 5% of total catch from 2009 to 2018. Over the past ten years (2009-2018), the proportion of recreational harvest by mode averaged 12% from the party/charter boat mode, 67% from the private/rental boat mode, and 21% from the shore mode. Like the commercial quota, the coastwide scup RHL was first implemented in 1997.

**Table 3:** Comparison of commercial and recreational scup catch in million pounds and percentages for 1988-1992 based on the 2019 operational assessment and the analysis conducted for Amendment 8. These years were used to calculate the sector allocations implemented in Amendment 8.

Year	Scup							
	Amendment 8 (1996) <sup>a</sup>				Current Data (2019 Operational Assessment)			
	Com. Catch	Rec. Catch	% Com. Catch	% Rec Catch	Com. Catch	Rec. Catch	% Com. Catch	% Rec. Catch
1988	16.29	4.69	78%	22%	19.08	7.12	73%	27%
1989	12.98	5.79	69%	31%	11.60	10.66	52%	48%
1990	18.07	4.30	81%	19%	15.51	7.30	68%	32%
1991	22.93	8.29	73%	27%	23.08	13.08	64%	36%
1992	25.86	4.58	85%	15%	17.95	9.59	65%	35%
<b>Avg</b>	<b>19.23</b>	<b>5.53</b>	<b>78%</b>	<b>22%</b>	<b>17.44</b>	<b>9.55</b>	<b>65%</b>	<b>35%</b>

<sup>a</sup> Data sources used in Amendment 8 include NMFS commercial fish dealer weighout, MRFSS, and Northeast Fisheries Science Center data.



**Figure 2:** Commercial and recreational scup landings and dead discards, 1981-2018. Data retrieved from the 2019 Northeast Fisheries Science Center Scup Operational Assessment.

### ***Black sea bass***

Amendment 9 (1996) specified that the annual total allowable landings for black sea bass would be allocated 49% to the commercial fishery and 51% to the recreational fishery based on the proportions of commercial and recreational landings during 1983-1992 (Table 4). Like summer flounder, this is a landings-based allocation, rather than a catch-based allocation.

Since 1981, commercial landings ranged from a low of 1.18 million pounds in 2009 to a high of 3.99 million pounds in 2017. In 2018, commercial landings totaled 3.42 million pounds. Commercial landings have been constrained by the commercial quota since 1998, when the coastwide (i.e., Maine through Cape Hatteras, North Carolina) commercial quota system was implemented. State-by-state allocations were introduced in 2003. According to the 2019 operational stock assessment, commercial dead discards in 2018 totaled 1.59 million pounds. On average, commercial discards were greater during 2014-2018 compared to earlier years, likely influenced in part by high availability in recent years coupled with quota and minimum fish size limitations. Over the past 10 years (2009-2018), commercial dead discards averaged 7% of total catch.

Based on the revised MRIP data, between 1981 and 2018, recreational catch of black sea bass from Maine through Cape Hatteras, NC was highest in 2016 at 12.05 million pounds and lowest in 1981 at 1.53 million pounds. Recreational harvest in 2018 was estimated at 7.91 million pounds. A coastwide RHL was first implemented in 1998. Over the past ten years (2009-2018), the proportion of recreational harvest by mode averaged 12% from the party/charter boat mode, 87% from the private/rental boat mode, and 1% from the shore mode.

Recreational dead discards averaged about 460,800 pounds during 1989-1997, prior to implementation of joint Council and Commission management. Since 1998, recreational dead discards have generally increased. For example, they averaged 2.42 million pounds during 2012-2018 and totaled 2.28 million pounds in 2018. As with commercial discards, these trends were likely at least partially driven by increasing availability, recreational possession limits, and recreational minimum fish sizes. Over the past 10 years (2009-2018), recreational dead discards averaged 15% of total catch.

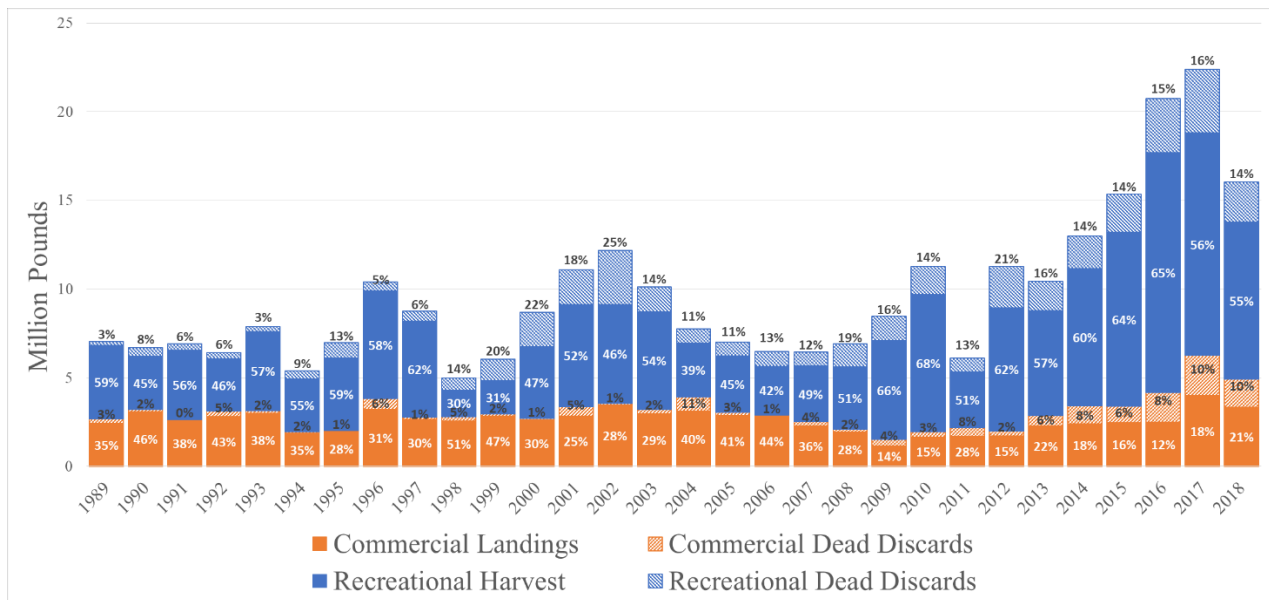
**Table 4:** Comparison of commercial and recreational black sea bass landings, in millions of pounds, and percentages for 1983-1992 based on the analysis conducted for Amendment 9, and current data (i.e., preliminary ACCSP commercial data and revised MRIP data). These years were used to calculate the sector allocations implemented in Amendment 9.

<b>Black Sea Bass</b>								
	<b>Amendment 9<sup>a</sup></b>				<b>Current Data<sup>b</sup></b>			
<b>Year</b>	<b>Com. landings</b>	<b>Rec. landings</b>	<b>% Com.</b>	<b>% Rec.</b>	<b>Com. landings</b>	<b>Rec. landings</b>	<b>% Com.</b>	<b>% Rec.</b>
<b>1983</b>	3.34	4.08	45%	55%	3.34	4.86	41%	59%
<b>1984</b>	4.33	1.45	75%	25%	4.33	1.91	69%	31%
<b>1985</b>	3.42	2.10	62%	38%	3.42	3.66	48%	52%
<b>1986</b>	4.19	12.39	25%	75%	4.19	11.02	28%	72%
<b>1987</b>	4.17	1.92	68%	32%	4.17	1.83	70%	31%
<b>1988</b>	4.14	2.87	59%	41%	4.14	3.58	54%	46%
<b>1989</b>	2.92	3.29	47%	53%	2.92	5.3	36%	64%
<b>1990</b>	3.50	2.76	56%	44%	3.50	3.91	47%	53%
<b>1991</b>	2.81	4.19	40%	60%	2.81	4.84	37%	63%
<b>1992</b>	3.01	2.71	53%	47%	3.01	3.77	44%	56%
<b>Avg</b>	<b>3.58</b>	<b>3.78</b>	<b>49%</b>	<b>51%</b>	<b>3.58</b>	<b>4.47</b>	<b>45%</b>	<b>55%</b>

<sup>a</sup> The data sources identified in Amendment 9 include MRFSS and NMFS general canvass data.

<sup>b</sup> Current commercial data is based on ACCSP data which should be considered preliminary as they have not been validated by all states. Current recreational data is based on MRIP data accessed in August 2019. The data shown here are not derived from the most recent stock assessment (i.e., the 2019 operational assessment) because the black sea bass stock assessment does not incorporate data prior to 1989.





**Figure 3:** Commercial and recreational black sea bass landings and discards, 1989-2018. Data retrieved from the 2019 Northeast Fisheries Science Center Black Sea Bass Operational Assessment.

## 9) Additional resources

- Fishery information documents for all three species, describing trends in the fisheries, including information by gear type, area, and mode (e.g., for-hire vs. private recreational fishing), as well as and a brief overview of management measures, can be found at: <http://www.mafmc.org/sf-s-bsb>.
- Council Fishery Management Plan and subsequent amendments and framework action documents are available at: <http://www.mafmc.org/sf-s-bsb>.
- Commission Fishery Management Plan and subsequent amendment and addendum documents are available at the following links:
  - Summer flounder: <http://www.asmfc.org/species/summer-flounder>
  - Scup: <http://www.asmfc.org/species/scup>
  - Black sea bass: <http://www.asmfc.org/species/black-sea-bass>
- Most recent stock assessment information:
  - 2018 benchmark stock assessment for summer flounder: <https://www.nefsc.noaa.gov/publications/crd/crd1908/>
  - 2019 operational stock assessments for scup and black sea bass (prepublication copy): [http://www.mafmc.org/s/Operational-Assessments-for-Black-Sea-Bass\\_Scup\\_Bluefish.pdf](http://www.mafmc.org/s/Operational-Assessments-for-Black-Sea-Bass_Scup_Bluefish.pdf)
- Information on how MRIP estimates of recreational catch and harvest are generated and how the estimation methodology has changed in recent years is available at: <https://www.fisheries.noaa.gov/recreational-fishing-data/how-marine-recreational-information-program-has-improved>



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 27, 2019  
**To:** Council and Board  
**From:** Julia Beaty, staff  
**Subject:** Black Sea Bass Commercial Allocation Addendum/Amendment

### **Background**

The black sea bass commercial quota is managed on a coastwide basis under the Mid-Atlantic Fishery Management Council's (Council's) Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan (FMP). The Atlantic States Marine Fisheries Commission (Commission) divides the coastwide quota into state-by-state shares based on allocations percentages defined in their FMP. Three states - Delaware, Maryland, and Virginia - further divide their state allocations into individual fishing quotas (IFQs).

During the October 2019 joint meeting of the Council and the Commission's Summer Flounder, Scup, and Black Sea Bass Management Board (Board), the Board initiated an addendum to consider modifications to the state allocations. The Council put forward a motion to "activate" a previously initiated Council amendment on black sea bass commercial issues. The intent of this motion was to consider, through an FMP amendment, the Council's role in state-by-state allocation decisions and to address the implications of coastwide quota management on states, as described in more detail below. The Council postponed a vote on their motion until the December 2019 joint meeting. At the December meeting, the Council should discuss their preferred next steps, including whether further development of a Council amendment is needed or if certain changes should be considered through a framework action or the specifications process.

### **Coastwide Quota Management Issue**

Under the Council's FMP and the federal regulations, the National Marine Fisheries Service Greater Atlantic Regional Fisheries Office (GARFO) has the authority to close the commercial fishery prior to the end of the year if the coastwide quota is projected to be fully harvested. This closure would apply to all federal waters in the management unit and all federal moratorium permit holders, regardless of where they fish. Federally permitted dealers would be prohibited from purchasing black sea bass during this closure. Board members have raised concerns about the potential for quota overages in some states resulting in a coastwide federal closure that would impact all states, including those which did not fully harvested their allocations. This could be especially problematic for IFQ states because IFQ holders may choose to harvest their individual

allocations late in the year due to market reasons. This puts them at risk of not being able to fully utilize their IFQs if the commercial fishery closes in-season.

To date, the black sea bass commercial fishery has not closed in-season, though landings have approached the quota prior to the end of the year. States closely monitor their landings and can request a quota transfer from another state if needed to account for minor overages. Typically, states implement measures (e.g., fishery closures, reduced trip limits) to prevent their black sea bass fisheries from exceeding their state allocation.

Recently, the Council and Board have expressed an interest in considering additional approaches to help prevent in-season coastwide closures from impacting states which have not fully harvested their allocations. Some consideration has been given to the differences between black sea bass and summer flounder quota management. Unlike black sea bass, the summer flounder state allocations are jointly managed by the Council and the Commission. GARFO has the authority to close the federal commercial summer flounder fishery in-season if it is determined that the inaction of one or more states will cause the commercial annual catch limit (ACL) to be exceeded. Closing once the ACL has been reached, rather than once the quota has been reached, could be considered for black sea bass; however, dead discards count towards the ACL and it is not currently possible to accurately estimate dead discards in a timely manner for in-season management. In addition, as discards are not currently evaluated for in-season management, it is not known if closing at the ACL, rather than the quota, would make it less or more likely that the black sea bass fishery would close in-season.

Another difference between black sea bass and summer flounder quota management is that states must pay back overages of their summer flounder allocations in a following year, regardless of whether or not the coastwide quota was exceeded. Under the Commission's FMP, states must pay back overages of their black sea bass allocations only if the coastwide quota is exceeded.<sup>1</sup> Compared to summer flounder, this could create a lesser incentive for states to avoid exceeding their allocations; however, as previously stated, the states have been successful in preventing a coastwide black sea bass quota overage.

An additional option could be to change the in-season closure regulations such that the commercial black sea bass fishery would close in-season in federal waters when 105% of the coastwide quota has been harvested, rather than 100%. This would provide an additional buffer to allow states which have not harvested their full allocations to come closer to doing so, while also preventing large coastwide quota overages. This assumes that states which exceed their allocations in-season will close their fisheries. GARFO has indicated that it may be possible to make such a change to the regulations through the specifications process.

### **Council Role In State Allocations**

As previously stated, the state commercial allocations are included in the Commission's FMP, but not the Council's FMP. At the October joint meeting, the Commission initiated an addendum to consider modifications to these allocations. They also agreed that all future Board discussion of this addendum would occur at joint meetings with the Council to allow for Council input during all stages of the process. This is currently a Commission-only action. If the Council wishes to have

---

<sup>1</sup> The Commission's process for reconciling quota overages and applying paybacks as needed is described in Addendum XX.

a voting say in any changes to the state allocations, and if they wish to consider adding these allocations to the Council FMP, a joint action would be needed.

The Council initiated an amendment to address commercial black sea bass issues in March 2019. They agreed that the purpose of initiating this amendment was to dedicate staff time to these issues, but they decided to delay scoping and alternative development until after the Commission had further developed their alternatives. At the October 2019 joint meeting with the Commission, the Council discussed whether to “activate” this amendment and make it a joint action with the Commission addressing the state allocations and the coastwide quota management implications outlined above. They agreed to postpone a vote on activating the amendment until the December 2019 joint meeting with the Board. Through this amendment, the Council could consider a range of state allocation alternatives, including a no action alternative, which would allow changes to these allocations to continue to be made through a Commission-only process. If the Council were to take up an action to consider the state allocations, this would need to be done through an FMP amendment rather than a framework action. This would delay the Commission’s planned timeline for developing their addendum.

### **Decision Point**

As previously stated, the state commercial allocations are included in the Commission’s FMP, but not the Council’s FMP. At the October joint meeting, the Commission initiated an addendum to consider modifications to these allocations. They also agreed that all future Board discussion of this addendum would occur at joint meetings with the Council to allow for Council input during all stages of the process. However, this would still be considered a Commission-only action and even though the Council could be involved in the discussions they would not be able to vote on alternatives to be considered in the public hearing document or on any final action. Staff recommend that if the Council wants to be able to vote on alternatives, including alternatives that consider adding these allocations to the Council’s FMP, then they should move forward with a joint action at the December meeting.

If the Council decides to move forward with joint action, the Commission could continue to develop the addendum with consideration of a federal alternative. As part of the joint process, the Council would help choose alternatives for public hearings and vote on final action. If final action involved adding allocations to the Council’s FMP, Council staff would begin the process to add them to federal regulations.



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 26, 2019  
**To:** Chris Moore, Executive Director  
**From:** Karson Coutre, Staff  
**Subject:** Commercial eVTR Omnibus Framework Final Action

On Wednesday, December 11, the Council will take final action on the Omnibus Framework to consider requiring electronic vessel trip reporting (eVTR) for commercially permitted vessels. This is a joint action with the New England Fishery Management Council (NEFMC).

**Meeting Materials** listed below are provided for the Council's discussion of this agenda item:

- 1) This memo, including the decision point and staff recommended alternative
- 2) Commercial eVTR Omnibus Framework (*draft as of November 26, 2019*)
- 3) Fishery Management Action Team meeting summaries (*October 25 and May 10, 2019*)
- 4) Advisory Panel meeting summary (*July 23, 2019*)
- 5) Public Meeting summary (*November, 20, 2019*)
- 6) Public comments (*received between April 11 and November 26, 2019*)

### **Decision Point**

Select a MAFMC preferred alternative for commercial eVTR requirements and corresponding reporting deadline. The NEFMC will select their preferred alternative at their Council Meeting in January 2020.

### **Staff Recommendation**

Staff recommend alternative 1e, which would require that VTRs be submitted electronically with a weekly deadline following the completion of a fishing trip. Weekly reporting is defined as

submission by midnight of the Tuesday following the reporting week (Sunday through Saturday). Requiring eVTRs will increase the quality and timeliness of VTR data while reducing the reporting redundancies for vessel owners and operators. Electronic reporting is a crucial step in moving the Greater Atlantic region towards one stop shop reporting. This alternative unifies the reporting deadline for all commercial permit holders in the Greater Atlantic region to weekly. Currently, reporting deadlines vary from weekly to monthly across commercial permit types in the Mid-Atlantic and New England regions. Operators are currently required to have a VTR filled out with all required information, except for information not yet ascertainable, prior to entering port. Once they sell their catch to a dealer, the VTR can be completed and submitted. Many commercial operators that submitted electronically in 2018 did so within 24 hours after the fishing trip ended, however some fishing ports do not have Wi-Fi available for immediate eVTR submission. Based on FMAT and AP discussion during action development, staff believe that a weekly reporting timeframe is sufficient for management needs, aligns with electronic dealer reporting, and provides vessel operators time to review data entry, correct errors, and reach an area with internet connection or cellular data to submit their report. Operators holding commercial permits for Squid, Atlantic Mackerel, Butterfish, Surfclam, Ocean Quahog (MAFMC managed), Atlantic Herring, and Northeast Multispecies (NEFMC managed) are already required to report weekly, therefore, under this alternative their reporting method would change to electronic, however their reporting deadline would remain *status quo*.



New England  
Fishery Management  
Council



**MID-ATLANTIC**  
FISHERY MANAGEMENT COUNCIL

# Regulatory Omnibus Framework Adjustment to Modify Reporting Requirements for Electronic Vessel Trip Reports (eVTRs) by Commercial Vessel Operators Holding Federal Permits for Species Managed by the MAFMC and NEFMC

## Joint Action

*(Draft as of 11/26/2019)*

## Prepared by:

**Mid-Atlantic Fishery Management Council (MAFMC) in collaboration with the  
New England Fishery Management Council (NEFMC) and the  
National Marine Fisheries Service (NMFS)**

# 1 Contents

1	Contents .....	i
2	Introduction.....	3
3	Purpose and Need for Action.....	3
3.1	Purpose of the Action.....	3
3.2	Need for the Action .....	3
3.3	Timeline for Action.....	4
4	Background.....	4
4.1	Summary of Current Reporting Regulations.....	4
4.1.1	Electronic Reporting.....	6
4.2	Users Affected.....	8
4.2.1	Implementation Considerations .....	10
5	Proposed Management Measures and Alternatives .....	11
	Alternative 1: .....	11
	Alternative 1a:.....	11
	Alternative 1b: .....	11
	Alternative 1c:.....	11
	Alternative 1d: .....	12
	Alternative 1e:.....	12
	Alternative 2: .....	12
6	Impacts of the Proposed Action and Alternatives.....	12
6.1	Impacts on Fishery Resources (including non-Target species).....	12
6.2	Impacts on Habitat .....	13
6.3	Impacts on Protected Resources.....	13
6.4	Economic Impacts .....	13
7	Consistency with Applicable Laws.....	15
7.1	Magnuson-Stevens Fishery Conservation and Management Act .....	15
7.1.1	Compliance with the National Standards.....	15
	National Standard 1.....	15
	National Standard 2.....	15
	National Standard 3.....	15
	National Standard 4.....	15
	National Standard 5.....	16
	National Standard 6.....	16



National Standard 7.....	16
National Standard 8.....	16
National Standard 9.....	16
National Standard 10.....	17
7.1.2 Compliance with Other Requirements of the Magnuson-Stevens Act.....	17
7.2 National Environmental Policy Act .....	21
7.3 Initial Regulatory Flexibility Analysis and Regulatory Impact Review .....	21
7.4 Executive Order (E.O.) 12866 (Regulatory Planning and Review).....	21
7.5 Executive Order (E.O.) 13132 (Federalism).....	21
7.6 Endangered Species Act.....	21
7.7 Marine Mammal Protection Act (MMPA).....	21
7.8 Administrative Procedures Act (APA) and Paperwork Reduction Act (PRA).....	21
7.9 Coastal Zone Management Act.....	22
7.10 Data Quality Act.....	22
7.10.1 Utility .....	22
7.10.2 Integrity.....	22
7.10.3 Objectivity.....	23

THIS SPACE INTENTIONALLY LEFT BLANK

## **2 Introduction**

Commercial fishing vessels with federal permits for Mid-Atlantic Fishery Management Council (MAFMC) and New England Fishery Management Council (NEFMC) managed species are required to submit Vessel Trip Reports (VTRs) documenting all fishing activity and catches. Electronic Vessel Trip Reports (eVTRs), which allow direct entry of data by the vessel operator using an electronic device, have been available as an option for all Greater Atlantic Region federally permitted fisheries since 2013. Electronic submission of VTRs has been required for vessels with Federal for-hire permits for species managed under MAFMC Fishery Management Plans (FMPs) since March 12, 2018. According to Greater Atlantic Regional Fisheries Office (GARFO), “A well-designed eVTR program or application has the ability to significantly reduce the amount of time required for a vessel operator to comply with their VTR reporting requirements by eliminating the need to fill out redundant information (e.g., vessel permit, registration, gear type).” Requiring electronic submission would be intended to increase the timeliness and accuracy of fisheries data submitted to NMFS while also reducing the burden on the commercial fishing fleet.

Due to the administrative nature of the regulations that would result from the proposed action, this action is categorically excluded from the requirement to prepare an environmental assessment, in accordance NOAA Administrative Order 216-6. The proposed action is a change to a regulation which does not result in a substantial change in any of the following: Fishing location, timing, effort, authorized gear types, access to fishery resources or harvest levels.

## **3 Purpose and Need for Action**

### **3.1 Purpose of the Action**

The purpose of this action is to require commercial vessels with Federal permits for species managed by the Council to submit currently required VTRs to NOAA through electronic means and change the VTR reporting deadline to 24/48/72 hours/weekly (see alternatives) after entering port at the conclusion of the trip. This action does not change any other existing requirements associated with VTRs but would be an administrative modification in the method and timing for submitting VTRs.

### **3.2 Need for the Action**

This action is needed to: 1) increase the timeliness (availability) of data submitted through VTRs; 2) reduce the reporting burden on data providers (commercial vessel operators) by eliminating the need for paper-based reporting, and; 3) increase the accuracy and quality of data by reducing recall bias associated with delayed completion and submission of paper forms. According to NOAA Fisheries, “electronic reporting will make the collection of important data on fishing vessel activity more efficient, convenient, and timely” for fishery managers, and other data users. Transitioning to electronic reporting is a crucial step in transitioning to more consolidated reporting.

### **3.3 Timeline for Action**

This action was initiated by the MAFMC in December 2018 with the approval of the 2019 Implementation Plan. A Fishery Management Action Team (FMAT) was formed and held meetings on March 19, 2019 and May 10, 2019. Consultation with the MAFMC's Advisory Panels and interested public occurred on March 25, 2019. Framework meeting 1 occurred during the MAFMC meeting on April 10, 2019 in Avalon, NJ. In June 2019, the NEFMC initiated a joint action with the MAFMC to include all their species along with the two jointly managed plans, spiny dogfish and monkfish. Another Advisory Panel meeting occurred on July 23, 2019 via webinar. Framework meeting 1 for the NEFMC occurred in September 2019. An evening public meeting via webinar was held November 20, 2019 to provide a demo of two eVTR applications and information before final action. MAFMC's Framework meeting 2 with the intent of final action will occur at the December 2019 Council meeting and the NEFMC will take final action in January 2020. If the Councils select to require electronic reporting, NMFS indicated that they would have an extended implementation deadline of up to a year after the final rule for adequate preparation and training for software developers, managers, and affected users.

## **4 Background**

In 1992, NOAA Fisheries began mandating reporting of catch, landings, and trip information through Vessel Trip Reports (VTRs) for federally permitted vessels holding summer flounder permits. This requirement was expanded during 1994-96 to include all vessels with federal fishing permits. In 2004, mandatory electronic reporting by federally permitted dealers was implemented for almost all federally managed species. Requirements for weekly reporting were implemented in 2010 for fisheries under catch shares, with weekly reporting later expanded to herring, mackerel, surf clam/ocean quahog IFQ fisheries. In July 2011, the NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO) approved the use of electronic reporting of VTRs on a limited, voluntary basis for a segment of the groundfish fleet, and in 2013 for all vessels issued a Federal Northeast fishing permit. In 2018, mandatory electronic submission of VTRs was implemented for party/charter vessels with permits for MAFMC managed species.

### **4.1 Summary of Current Reporting Regulations**

Under current VTR regulations, commercial operators must submit a separate VTR for each chart area, gear type, and/or mesh size fished, potentially requiring multiple paper forms for a single trip. Owners and operators are required to submit a VTR for every commercial, party, or charter trip taken, regardless of where they fish (state or federal waters) or what they catch. VTR submission deadlines are not consistent across MAFMC and NEFMC managed commercial permits, with some plans reporting weekly and others reporting monthly (Table 1), and operators with multiple permits are held to the permit with the strictest reporting requirements. Operators must have a trip report filled out with all required information, except for information not yet ascertainable, prior to entering port.

**Table 1.** Greater Atlantic Region Federal VTR Requirements by vessel permit type. Table retrieved from GARFO Vessel Trip Report (VTR) Reporting Instructions.

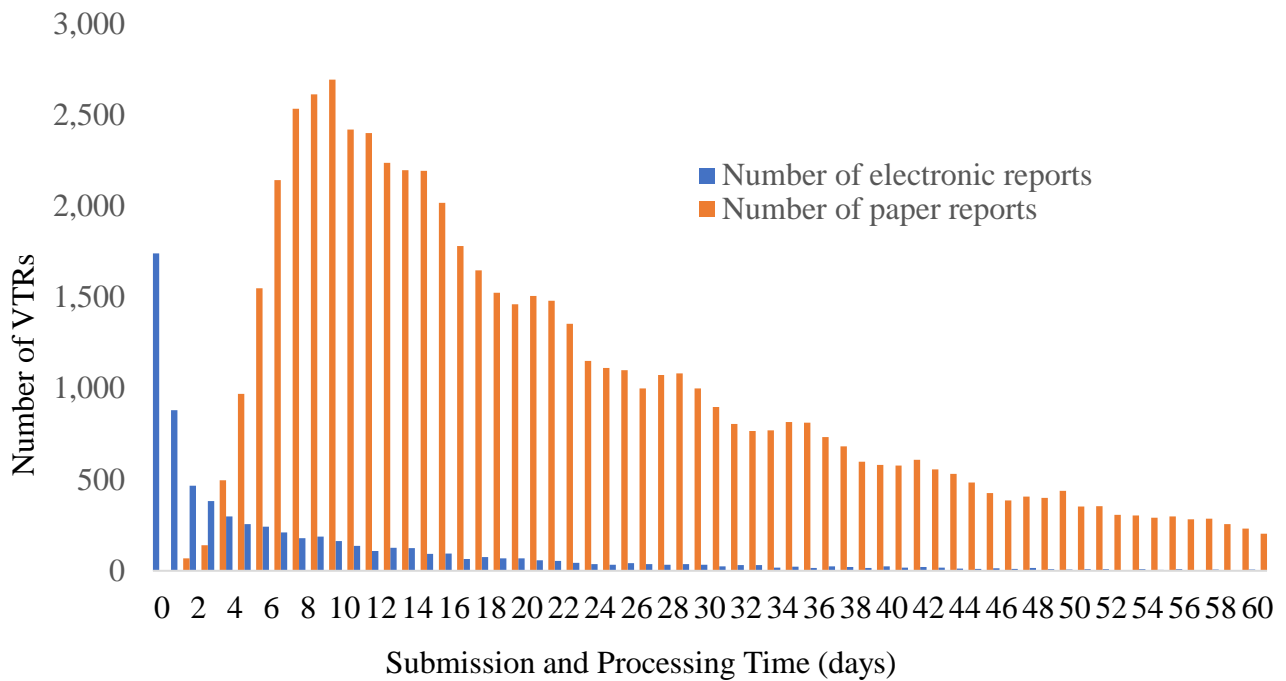
Permit Type	Frequency of Reporting	Reporting Deadline
If a vessel is issued a <b>Party/Charter</b> permit for: *Summer Flounder; *Scup *Black sea bass *Bluefish *Squid/Atlantic mackerel/Butterfish *Tilefish	Then the owner/operator must <b>electronically</b> submit trip reports within 48 hours of landing for <b>all Party/Charter trips regardless of species targeted.</b>	Reports must be electronically submitted using an approved eVTR reporting application within 48 hours of landing.  <b>This requirement applies to all Party/Charter trips regardless of species targeted otherwise use the below guidance.</b>
If a vessel is issued a permit for: *Atlantic herring; *Atlantic mackerel; *Illex squid; *Longfin squid/butterfish; *Northeast multispecies; *Ocean quahogs; *Surfclams	Then the owner/operator must submit trip reports weekly	Reports must be postmarked or received by midnight of the Tuesday following the reporting week (Sunday through Saturday). If a trip starts in one week, and offloads in the next, it should be reported in the week the catch was offloaded.
If a vessel is issued a permit for: *Atlantic bluefish *Atlantic deep-sea red crab *Atlantic sea scallop *Black sea bass *Monkfish *Northeast skate *Scup *Spiny dogfish *Summer flounder *Tilefish	Then the owner/operator must submit trip reports monthly	Reports must be postmarked or received within 15 days of the end of the month. If a trip starts in one month, and offloads in the next, it should be reported for the month in which the catch was offloaded
If a vessel is issued a permit for American lobster <b>and</b> no other Greater Atlantic Region vessel permit	Then the owner/operator is not required to submit trips reports (check with your state, which may require reporting).	

With the advent and ubiquitous availability of high-speed internet, paper forms are no longer the most efficient method for permit holders to submit the required information, nor for NOAA Fisheries to process it. As previously stated, NOAA Fisheries considers that electronic reporting “will make the collection of important data on fishing vessel activity more efficient, convenient, and timely” for fishery managers and other data users. At present, paper-based reports often create a substantial time delay between the time when fishing activity occurs and when the data

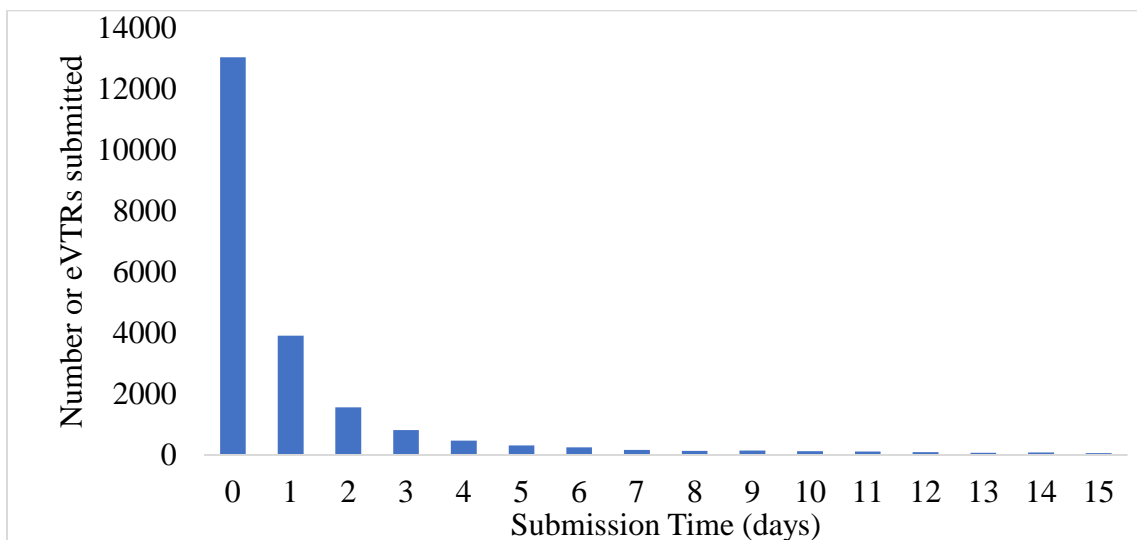
are available to fisheries managers (Figure 1 and Figure 2). Reports may not be mailed (or faxed) to NOAA Fisheries for up to six weeks after the fishing activity occurs (if regulations are followed). Following receipt of paper forms, data must be entered into the system and checked for anomalies and errors (creating further delay if contact must be made with the operator for clarification or correction). Paper reports may also suffer from illegible handwriting or messy forms that further impede accurate data entry.

#### **4.1.1 Electronic Reporting**

Electronic submission of VTRs has been authorized for all Northeast Region federally permitted vessels and approximately 10% of commercial VTRs in the Greater Atlantic region were submitted electronically in 2018. While eVTRs still require reporting of fishing activity in each area fished, eVTRs eliminate the paper associated with such reporting and ease the reporting associated with multiple areas. With eVTR, additional effort and catch records for each area and/or gear/mesh fished can be added instead of filling out multiple reports. Additionally, vessel operators may be faced with duplicate reporting if they are fishing in another region or for a species that also requires reporting through a separate system. Several states also require reporting from vessels with information that is identical, or similar, to that provided through VTRs. As electronic data entry by vessel operators is established, application providers such as GARFO and ACCSP are working towards “one-stop shop” reporting. For example, ACCSP’s eVTR application eTrips/Mobile has been designed to send reports to GARFO and SERO to fulfill a dual permit holder’s reporting requirement. Electronic submission of VTRs eliminates the need for operators to physically mail in paper forms, and once an eVTR is successfully submitted, it is available in GARFO’s VTR database nearly instantaneously.



**Figure 1.** Commercial VTR submission time frequency distribution, January-December 2018. Submission time is the number of days between trip completion and the arrival of the VTR into GARFO’s VTR database. Through eVTR, this process is nearly instantaneous once the user submits the eVTR through their selected application. Paper reports need to be scanned and entered into the database after received by GARFO.



**Figure 2.** For-hire eVTR submission time frequency distribution from April-December 2018. Submission time is the number of days between trip completion and the arrival of the VTR into GARFO’s VTR database. Through eVTR, this process is nearly instantaneous once the user submits the eVTR through their selected application. The for-hire sector is included for informational purposes as they will not be impacted by this action.

There are several options currently available for submitting eVTRs outlined in Tables 2 and 3, below. Operators have a choice of which NMFS-approved eVTR application to use and can switch at any time. Additional systems may be developed and, upon approval by NOAA for submitting VTRs, would be added to this list. All eVTR applications provide the ability for reports to be completed at sea and saved on the computer/tablet for submission at a later time.

**Table 2.** Free NMFS-approved eVTR applications and compatible devices. These applications are maintained at no cost to the user and cover all common types of electronic devices.

Application (provider)	Compatible Devices
eTrips Mobile v1 and v2 (ACCSP)	Windows computer, Android, Windows, and Apple smartphones or tablets
eTrips Online (ACCSP)	Web browser
Fish Online (GARFO)	iPhone/iPad
FLDRS (NEFSC) <sup>a</sup>	Windows computer
Elog (Ecotrust) <sup>b</sup>	Windows computer, iPhone, Windows tablet

<sup>a</sup> FLDRS is a program to collect high resolution fisheries data for research that also satisfies eVTR requirements

<sup>b</sup>This program is currently used by a small number of vessels which are all involved in electronic monitoring

**Table 3.** NMFS-approved eVTR applications<sup>a</sup> that charge fees and compatible devices. These applications generally have installation fees and monthly or annual fees.

Application (provider) <sup>a</sup>	Compatible Devices
FACTS (Electric Edge)	Windows computer
DDL (Olrac)	Web browser, Windows computer, Windows tablet

<sup>a</sup> As of 11/19/2019 these applications were listed as “pending recertification” by NMFS on their eVTR webpage: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/resources-fishing/vessel-trip-reporting-greater-atlantic-region>.

## 4.2 Users Affected

This joint omnibus framework will affect all vessels with Federal commercial permits for species managed by the MAFMC (Atlantic bluefish, black sea bass, scup, summer flounder, tilefish, squid, Atlantic mackerel, butterfish, surfclam, ocean quahog, spiny dogfish) and the NEFMC (Atlantic herring, northeast multispecies, Atlantic deep-sea red crab, Atlantic sea scallop, monkfish, and northeast skate). If a vessel holds a permit for American lobster and no other Greater Atlantic Region vessel permit, they are not required to submit VTRs and will not be affected by this action. This action does not consider any changes to VTR requirements for the recreational for-hire sector.

The permit holder and VTR information described in tables 4-8 were reported by GARFO and accessed on 11/25/2019. The NEFMC and MAFMC are taking joint action due to the high degree of overlap in permit holders between regions and the joint management of dogfish and

monkfish. Table 4 describes this permit holder overlap between regions while tables 5-8 represent information across both regions combined.

**Table 4.** Permit holder numbers for vessels issued a MAFMC or NEFMC commercial permit in 2018 (data accessed 11/25/2019). Dogfish permit holders were included in the MAFMC permit numbers and Monkfish permit holders were included in NEFMC permit numbers.

<b>Summary of Affected Users</b>	<b>2018</b>
# of vessels issued a MAFMC commercial permit	2,726
# of the above vessels that submitted VTRs for commercial trips	1,648
# of vessels issued a NEFMC commercial permit	2,723
# of vessels issued both a MAFMC commercial permit and NEFMC commercial permit	2,520
# of MAFMC or NEFMC commercial permit holders	2,929
# of above vessels that submitted VTRs for commercial trips	1,723

**Table 5.** Number of paper and electronic commercial VTRs submitted in 2018. VTR numbers were reported by GARFO for vessels issued a MAFMC or NEFMC commercial permit in 2018.

<b># of Commercial VTRs Submitted in 2018</b>	
Paper	73,132
Electronic	7,727

**Table 6.** The estimated number of MAFMC and NEFMC permitted vessels that submitted eVTRs in 2018 summarized by application provider. The for-hire sector shows overall higher application use due to their regulatory requirement of electronic submission starting in March 2018. The for-hire sector is included below for informational purposes and will not be impacted by this action. Note that the some eVTR reporting applications have been available for multiple years while others are more recently developed, impacting the number of users.

<b>Provider (app)</b>	<b>For-hire</b>		<b>Commercial</b>	
	<b>VTRs</b>	<b>Vessels</b>	<b>VTRs</b>	<b>Vessels</b>
ACCSP (eTrips/Mobile)	16,351	292	1,065	81
GARFO (Fish Online)	6,847	141	760	44
NEFSC (FLDRS)			5,750	92
ECOTRUST (Elog)			152	7



**Table 7.** Proportion of all commercial VTRs for each gear type that were submitted electronically in 2018. VTR numbers were reported by GARFO for vessels issued a MAFMC or NEFMC commercial permit in 2018.

<b>Gear Type</b>	<b>% eVTR</b>
<b>Trawl</b>	15%
<b>Pot/Trap</b>	4%
<b>Gill net</b>	19%
<b>Dredge</b>	4%
<b>Hand line/ Rod and Reel</b>	20%
<b>Longline</b>	10%
<b>Other</b>	14%

**Table 8.** Proportion of all commercial VTRs for each state that were submitted electronically in 2018. VTR numbers were reported by GARFO for vessels issued a MAFMC or NEFMC commercial permit in 2018.

<b>Landing State</b>	<b>% eVTR</b>
<b>ME</b>	9%
<b>NH</b>	21%
<b>MA</b>	10%
<b>RI</b>	16%
<b>CT</b>	12%
<b>NY</b>	7%
<b>NJ</b>	4%
<b>DE</b>	0%
<b>MD</b>	1%
<b>VA</b>	1%
<b>NC</b>	1%

#### **4.2.1 Implementation Considerations**

Trainings on how to use eVTR applications will be conducted in-person throughout the geographic range of affected users and via webinar. Demos of the most popular free apps will be recorded and made available on the MAFMC eVTR webpage. After final action, 4-7 in-person workshops in the Mid-Atlantic and New England regions will be held with the help of industry liaisons. More workshops/webinars will be planned and conducted as needed. Resources will be compiled from application providers and made available on the Council website. Any video-based training provided by software providers will also be posted to the Council’s website. NMFS indicated that they would have an extended implementation deadline of up to a year after the final rule for adequate preparation and training for software developers, managers, and affected users.

## 5 Proposed Management Measures and Alternatives

### **Alternative 1: Modify administrative requirements to require commercial fishing vessels with Federal permits for MAFMC and NEFMC managed species to submit VTRs through electronic means.**

There are multiple sub-options under alternative 1 that address different reporting deadlines for eVTR submission, with alternatives 1b-1e unifying the reporting deadline across MAFMC and NEFMC-managed commercial FMPs (current reporting deadlines by species are summarized in Table 1). None of the options under alternative 1 would change any of the requirements for data elements that are currently reported through paper based VTRs. Due to the electronic accessibility of VTR information to managers and law enforcement, copies of VTRs would no longer be federally required to be retained for 1 year on board the vessel and 3 years after the date the fish were last possessed, landed, and sold.

Because this proposed action deals entirely with the administrative mechanisms by which commercial fishing vessel permit holders submit reports, the alternative would not result in a substantial change in any of the following: Fishing location, timing, effort, authorized gear types, access to fishery resources or harvest levels. Therefore, there would be no impacts from the proposed action on any fishery resources or habitat managed under a Council FMP, or on any associated protected resources.

### **Alternative 1a: Reports will be required to be submitted electronically with no change to reporting deadline.**

This alternative addresses the need for action by requiring eVTR, however it would not unify reporting deadline requirements across commercial permit holders or increase the timeliness of data availability to the same extent as alternatives 1b-1e. For current reporting deadlines, see Table 1 in section 4.1.

### **Alternative 1b: Reports will be required to be submitted electronically within 24 hours following the completion of the fishing trip.**

This alternative changes the NOAA-mandated reporting deadlines from the current requirement (either the Tuesday following the reporting week or the 15<sup>th</sup> of the month following the reporting month depending on the species fished; see Table 1) to 24 hours after the fishing trip is completed. This alternative would unify the reporting deadline across MAFMC and NEFMC managed commercial FMPs and further expedite data availability for fisheries management purposes. Since all eVTR applications provide the ability for reports to be completed at sea and saved on the electronic device, reports should be ready for submission upon reaching the dock since under current regulations they must be completed prior to entering port. The 24-hour period is to provide vessel operators time to review data entry, correct any errors, and have time to reach an area with internet connection or cellular data to submit their report.

### **Alternative 1c: Reports will be required to be submitted electronically within 48 hours following the completion of the fishing trip.**

Similar to alternative 1b, this alternative would change the reporting deadlines, with alternative 1c requiring submission within 48 hours after completion of a trip. A 48-hour eVTR reporting

deadline is already in place for the MAFMC for-hire sector so this alternative would unify reporting deadlines across all MAFMC FMPs and commercial NEFMC FMPs.

**Alternative 1d: Reports will be required to be submitted electronically within 72 hours following the completion of the fishing trip.**

Similar to alternatives 1b and 1c, this alternative would change the reporting deadlines, with alternative 1d requiring submission within 72 hours after completion of a trip.

**Alternative 1e: Reports will be required to be submitted electronically weekly following the completion of the fishing trip.**

Similar to alternatives 1b-1d, this alternative would change the reporting deadlines, with alternative 1e requiring submission by midnight of the Tuesday following the reporting week (Sunday through Saturday). Operators holding permits for Squid, Atlantic Mackerel, Butterfish, Surfclam, Ocean Quahog (MAFMC managed), Atlantic Herring, and Northeast Multispecies (NEFMC managed) are already required to report weekly, therefore, under this alternative their reporting deadline would remain *status quo*. This alternative would also unify the reporting deadline across MAFMC and NEFMC managed commercial FMPs and commercial dealers.

**Alternative 2: No Action, *status quo*.**

Under this alternative, VTRs would continue to be submitted by paper or optionally through an approved eVTR application. This *status quo* would perpetuate the delay of the availability of VTR data for managers and the burden on permit holders to fill out and maintain paper VTR records. Continued use of paper VTRs would not facilitate the development of integrated systems with state agency partners and other federally mandated reporting programs to provide a single point of data entry by permit holders to satisfy multiple reporting requirements, thus indefinitely continuing the burden of multiple reporting requirements for some users. The continued use of paper VTRs would necessitate the maintenance of administrative resources to accept, process, and manage paper forms.

## **6 Impacts of the Proposed Action and Alternatives**

As described below, this action is administrative in nature and will not result in a substantial change in any of the following: Fishing location, timing, effort, authorized gear types, access to fishery resources or harvest levels. As such, it qualifies for a categorical exclusion from NEPA requirements to conduct an Environmental Assessment (EA) or Environmental Impact Assessment (EIS)

### **6.1 Impacts on Fishery Resources (including non-Target species)**

Because the alternatives deal entirely with the administrative mechanisms by which Federal permit holders in Council-managed commercial fisheries would report currently-required VTRs, and would not affect fishing vessel effort, operations, species targeted, or areas fished, there would be no direct impacts of the proposed action on any fishery resources managed under Council FMPs. This action may have indirect, low (not significant, individual or cumulative) positive impacts on the management capabilities for fishery resources by improving data available to fishery scientists and managers. There are no differences between the alternatives as

far as direct impacts on fishery resources. Alternatives 1b-1e are more likely to produce improved data compared to alternatives 1a and 2 due to the reduction of reporting lag.

## **6.2 Impacts on Habitat**

Due to the administrative nature of the measures under consideration, there would be no impacts on habitat, including essential fish habitat (EFH). The alternatives would not result in a substantial change in any of the following: Fishing location, timing, effort, authorized gear types, access to fishery resources or harvest levels. There are no differences between the alternatives as far as impacts on habitat/ EFH.

## **6.3 Impacts on Protected Resources**

Similar to the impacts on habitat, due to the administrative nature of the measures under consideration, there would be no impact on protected resources. The alternatives would not result in a substantial change in any of the following: Fishing location, timing, effort, authorized gear types, access to fishery resources or harvest levels. There are no differences between the alternatives as far as impacts on any protected resources.

## **6.4 Economic Impacts**

Table 2 summarizes the free NMFS-approved eVTR applications and compatible devices. Complying with eVTR submission requirements (Alternative 1) can be accomplished for no cost under multiple scenarios. For example, a user who has a smartphone, tablet or laptop and access to internet or cellular data can use one of the approved free applications to submit their eVTRs. The ubiquitous nature of electronic devices, cellular data, and internet availability in private homes and businesses, as well as free access to internet in public libraries and other locations, provides a free to minimal cost means for permit holders to access electronic submission of VTRs.

Stakeholders will only need to purchase a device if they do not already have any of the compatible electronic devices or are unable to take them on their vessel. Low-cost portable electronic devices such as WiFi-capable tablets can be purchased for \$75-130. Although a free or low-cost option is available, users may voluntarily choose a different reporting mechanism, additional services, or upgraded hardware options that would increase their costs to varying degrees at their discretion.

In addition to the free options, NOAA-approved systems encompass a range of subscription fees and/or equipment costs (Table 9). Not all vendors of NOAA-approved systems provided exact pricing structures (or are only able to provide approximate anticipated pricing) since their business models were built around bulk sales to cover many users in entire fisheries (or sales of complete systems to organizations and government agencies).

**Table 9.** Minimum costs for various NOAA-approved eVTR systems and necessary equipment.

eVTR System	Software cost	Minimum equipment cost	Optional additions cost	Notes
eTrips mobile	<b>\$0</b>	If user has smartphone or tablet: <b>\$0</b>	Waterproof case: <b>\$15-100</b>	Assumes access to Wi-Fi within reporting deadline if no data plan is used
Fish Online				
DDL	\$500/year	Wi-Fi capable tablet: <b>\$70-\$130</b>	Low cost cellular data plan: <b>\$15/month</b>	
FACTS	Unknown			
eLog	Included as part of electronic monitoring service			
FLDRS	<b>\$0</b>	Windows Laptop: <b>\$150</b>		Available to those already using it, those participating in NEFSC study fleet, and those needing to report from the ocean quahog and clam fishery
Note: All costs are approximate and reflect lower cost options from multiple retailers/providers researched November 2019. Higher end equipment and data plans are available and likely vary by area.				

There may be minor and temporary increased reporting burden as permit holders transition to electronic submission, but in the long run electronic submission should reduce reporting burden because reports can be pre-configured with lists of favorites and some data fields automatically filled-in. As these applications progress, electronic reporting can help reduce duplicate reporting because the reporting applications can be configured to submit data to multiple agencies. The ability to use electronic reporting programs also eliminates the time and cost of mailing in paper forms.

The ability to use electronic reporting programs to automatically fill in some reporting fields may reduce the reporting burden and save time and cost over mailing in paper forms.

In the long term, government resources for administering this program are expected to be reduced resulting from efficiencies gained in data processing. Individual VTRs would not need to be manually scanned and error checked. There were 73,132 paper VTRs submitted by commercial permit holders in 2018 and each one was scanned and entered into the database. If there are errors, managers must mail VTRs back to operators. In time, the paper forms would no longer be printed and mailed. Further, improved and expedited availability of the data is

expected to expand the utility of the data currently collected to fisheries management, research, and law enforcement purposes.

## **7 Consistency with Applicable Laws**

### **7.1 Magnuson-Stevens Fishery Conservation and Management Act**

#### **7.1.1 Compliance with the National Standards**

*National Standard 1.* Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the OY from each fishery for the U.S. fishing industry.

The proposed action is limited to a modification of the mechanisms by which federally permitted commercial owners/operators report their fishing activity. The management measures associated with this action would have no direct impacts on overfishing or obtaining optimum yield in any fishery. However, the proposed action should provide higher resolution and more timely data on fish landings and effort, which should assist conservation and management.

*National Standard 2.* Conservation and management measures shall be based upon the best scientific information available.

The analyses conducted in support of the proposed action were conducted using information from the most recent complete year, 2018. The data used in the analyses provide the best available information on the number of federally permitted vessels in New England and the mid-Atlantic, the number of vessels submitting VTRs, the number of VTRs submitted by those vessels, and the extent of use of electronic VTRs.

*National Standard 3.* To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.

The proposed action has no effect on the management units of any stocks of fish included in a Mid-Atlantic FMP.

*National Standard 4.* Conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various U.S. fishermen, such allocation shall be: (1) Fair and equitable to all such fishermen. (2) Reasonably calculated to promote conservation. (3) Carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.

The proposed action does not allocate or assign fishing privileges among various U.S. fishermen. The management measures associated with the proposed action would apply equally to all federally permitted commercial vessels in the Mid-Atlantic, regardless of the state in which they operate.

*National Standard 5.* Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.

Improving the efficiency of the submission of VTRs by commercial operators and the processing of the resulting data by NOAA Fisheries is the primary objective of this action. The intent is that this action would also improve the efficiency of NOAA Fisheries in monitoring and managing all fisheries. Economic allocation was not a factor in the development of this action, nor of the selection of the proposed action from among the alternatives.

*National Standard 6.* Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.

The proposed action has no direct impact on any fishery, fishery resource, or catch. Variations among, and contingencies in, fisheries, fishery resources, and catches were considered to the extent that the development of the proposed action addressed the ways in which these variations and contingencies affect commercial operators and their submission of VTRs, and the use of resulting landings data by NOAA Fisheries and cooperating state fishery management agencies.

*National Standard 7.* Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.

By providing several options for how federally permitted commercial operators may report their VTRs including free applications, NOAA Fisheries has strived to minimize the costs to commercial operators associated with complying with the proposed action.

*National Standard 8.* Conservation and management measures shall, consistent with the conservation requirements of the Magnuson-Stevens Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to: (1) Provide for the sustained participation of such communities; and (2) To the extent practicable, minimize adverse economic impacts on such communities.

None of the measures in the proposed actions are likely to diminish in any way the sustained participation of any fishing community. The economic impacts of the proposed action on fishing communities is minimized by the nature of the action itself: The proposed action applies only to commercial operators, and only on the mechanisms and frequency by which they report their fishing activity. There are no measures proposed that would directly affect fishing harvest.

*National Standard 9.* Conservation and management measures shall, to the extent practicable: (1) Minimize bycatch; and (2) To the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

The proposed action has no bearing or relevance regarding the minimization of bycatch, as it is concerned solely with the administrative mechanisms by which federally-permitted commercial operators in the Mid-Atlantic report fishing activity to NOAA Fisheries.

*National Standard 10.* Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.

The proposed action is focused entirely on the administrative mechanisms by which federally-permitted for-hire operators in the Mid-Atlantic report fishing activity to NOAA Fisheries. The safety of human life at sea is not affected by this action.

#### 7.1.2 Compliance with Other Requirements of the Magnuson-Stevens Act

Section 303 of the Magnuson-Stevens Act contains 15 additional required provisions for FMPs, which are discussed below. Any FMP prepared by any Council, or by the Secretary, with respect to any fishery, must comply with these provisions.

*(1) contain the conservation and management measures, applicable to foreign fishing and fishing by vessels of the United States, which are-- (A) necessary and appropriate for the conservation and management of the fishery to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term health and stability of the fishery; (B) described in this subsection or subsection (b), or both; and (C) consistent with the National Standards, the other provisions of this Act, regulations implementing recommendations by international organizations in which the United States participates (including but not limited to closed areas, quotas, and size limits), and any other applicable law*

The proposed action is focused entirely on the administrative mechanisms by which federally-permitted commercial operators in the Mid-Atlantic and New England report fishing activity to NOAA Fisheries. For a description of the proposed measures and management alternatives intended to improve the management of the fisheries affected by this action, see section 5 of this document. For a discussion of consistency with the National Standards, see section 7.1.1. For a discussion of the consistency with other applicable laws, see sections 7.2-7.10. Previous Amendments to the relevant FMPs, available at <http://www.mafmc.org/fishery-management-plans>, and the current regulations (<http://www.ecfr.gov/cgi-bin/text-id.x?c=ecfr&SID=1e9802ffddb05d0243d9c657fade956c&rgn=div5&view=text&node=50:12.0.1.1.5&idno=50>) can be consulted for the relevant conservation and management measures.

*(2) contain a description of the fishery, including, but not limited to, the number of vessels involved, the type and quantity of fishing gear used, the species of fish involved and their location, the cost likely to be incurred in management, actual and potential revenues from the fishery, any recreational interest in the fishery, and the nature and extent of foreign fishing and Indian treaty fishing rights, if any.*

For a description of the vessels affected, see Section 4. The proposed action does not directly affect quantity of fishing gear used; therefore, a description of these aspects of the fishery is not applicable. Recreational interests, foreign fishing, and Indian treaty fishing rights are not affected by this action. Previous Amendments to the relevant FMPs, available at <http://www.mafmc.org/fishery-management-plans>, provide additional fishery descriptions.



*(3) assess and specify the present and probable future condition of, and the maximum sustainable yield and optimum yield from, the fishery, and include a summary of the information utilized in making such specification.*

The proposed action is limited to a modification of the existing mechanisms by which federally permitted commercial operators in the Mid-Atlantic and New England report their fishing activity. Maximum sustainable yield and optimum yield of any fishery for which these reporting requirements are addressed in this action are not affected by the proposed management measures, but have been addressed in previous Amendments (<http://www.mafmc.org/fishery-management-plans>).

*(4) assess and specify--(A) the capacity and the extent to which fishing vessels of the United States, on an annual basis, will harvest the optimum yield specified under paragraph (3); (B) the portion of such optimum yield which, on an annual basis, will not be harvested by fishing vessels of the United States and can be made available for foreign fishing; and (C) the capacity and extent to which United States fish processors, on an annual basis, will process that portion of such optimum yield that will be harvested by fishing vessels of the United States.*

The proposed action does not affect the capacity or extent to which fishing vessels of the U.S. would harvest the optimum yield of any fishery, the portion of such optimum yield which would not be harvested by U.S. fishing vessels and could be made available for foreign fishing, or the capacity and extent to which U.S. processors would process that portion of such optimum yield harvested by U.S. fishing vessels; therefore, a description of these aspects of the fisheries is not applicable to this action, but have been addressed in previous Amendments (<http://www.mafmc.org/fishery-management-plans>).

*(5) specify the pertinent data which shall be submitted to the Secretary with respect to commercial, recreational, and charter fishing in the fishery, including, but not limited to, information regarding the type and quantity of fishing gear used, catch by species in numbers of fish or weight thereof, areas in which fishing was engaged in, time of fishing, number of hauls, and the estimated processing capacity of, and the actual processing capacity utilized by, United States fish processors.*

For a discussion of the reporting requirements associated with this action, see the description of the proposed action in section 5.

*(6) consider and provide for temporary adjustments, after consultation with the Coast Guard and persons utilizing the fishery, regarding access to the fishery for vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safe conduct of the fishery; except that the adjustment shall not adversely affect conservation efforts in other fisheries or discriminate among participants in the affected fishery.*

The proposed action does not affect the access of any fishing vessel to any fishery because of weather, ocean conditions, or any other potential concern; therefore, this element of the Magnuson-Stevens Act does not apply, but has been addressed in previous Amendments (<http://www.mafmc.org/fishery-management-plans>).

*(7) describe and identify essential fish habitat for the fishery based on the guidelines established by the Secretary under section 305(b)(1)(A), minimize to the extent practicable adverse effects on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat*

EFH is described and identified for the affected fisheries in prior FMPs and amendments to those FMPs. The proposed action makes no changes to any EFH of any species. Section 6.2 describes the effects the proposed action, and the alternatives to the proposed action, is likely to have on the habitat, including EFH, of any fishery resources managed under a Mid-Atlantic or New England FMP. Due to the administrative nature of the measures in the proposed action, there would be no direct impacts on any habitat or EFH; therefore, an EFH consultation is not required.

*(8) in the case of a fishery management plan that, after January 1, 1991, is submitted to the Secretary for review under section 304(a) (including any plan for which an amendment is submitted to the Secretary for such review) or is prepared by the Secretary, assess and specify the nature and extent of scientific data which is needed for effective implementation of the plan.*

All the FMPs covered by this action identify landings information as key data needed for effective monitoring and implementation of said FMPs. The proposed action is intended to improve the quality, timeliness, and reliability of data collected from commercial operators. For a complete description of the need for these data, see sections xx.

*(9) include a fishery impact statement for the plan or amendment (in the case of a plan or amendment thereto submitted to or prepared by the Secretary after October 1, 1990) which shall assess, specify, and describe the likely effects, if any, of the conservation and management measures on--(A) participants in the fisheries and fishing communities affected by the plan or amendment; and (B) participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants.*

For a description of the participants in the fisheries affected by the proposed action, see sections xx.

*(10) specify objective and measurable criteria for identifying when the fishery to which the plan applies is overfished (with an analysis of how the criteria were determined and the relationship of the criteria to the reproductive potential of stocks of fish in that fishery) and, in the case of a fishery which the Council or the Secretary has determined is approaching an overfished condition or is overfished, contain conservation and management measures to prevent overfishing or end overfishing and rebuild the fishery.*

The proposed action makes no changes or has any effect on the approved overfishing definitions for any fishery managed under a Mid-Atlantic or New England FMP.

*(11) establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and include conservation and management measures that, to the extent practicable and in the following priority--(A) minimize bycatch; and (B) minimize the mortality of bycatch which cannot be avoided.*

This action deals only with the administrative mechanisms through which commercial operators report their fishing activity; therefore, this provision of the Magnuson-Stevens Act does not apply to this action.

*(12) assess the type and amount of fish caught and released alive during recreational fishing under catch and release fishery management programs and the mortality of such fish, and include conservation and management measures that, to the extent practicable, minimize mortality and ensure the extended survival of such fish.*

This action proposes no related measures.

*(13) include a description of the commercial, recreational, and charter fishing sectors which participate in the fishery and, to the extent practicable, quantify trends in landings of the managed fishery resource by the commercial, recreational, and charter fishing sectors.*

The only sector of the fisheries affected by this proposed action is the commercial sector. A description of those affected by this proposed action is provided in section 4. Additional details on the fishing sectors is available in previous Amendments (<http://www.mafmc.org/fishery-management-plans>).

*(14) to the extent that rebuilding plans or other conservation and management measures which reduce the overall harvest in a fishery are necessary, allocate any harvest restrictions or recovery benefits fairly and equitably among the commercial, recreational, and charter fishing sectors in the fishery.*

The proposed action includes no management measures that could reduce the overall harvest in a fishery. Therefore, the allocation of harvest restrictions or recovery benefits among the commercial, recreational, and charter fishing sectors, beyond any allocations of such already made in the FMPs, is not necessary.

*(15) establish a mechanism for specifying annual catch limits in the plan (including a multiyear plan), implementing regulations, or annual specifications, at a level such that overfishing does not occur in the fishery, including measures to ensure accountability.*

The proposed action includes no measures related to catch limits and only relates to the administrative mechanism through which commercial operators submit already required Vessel Trip reports.

## **7.2 National Environmental Policy Act**

Due to the administrative nature of the regulations that would result from the proposed action, this action is categorically excluded from the requirement to prepare an environmental assessment, in accordance NOAA Administrative Order 216-6. The proposed action is a change to a regulation which does not result in a substantial change in any of the following: Fishing location, timing, effort, authorized gear types, access to fishery resources or harvest levels.

## **7.3 Initial Regulatory Flexibility Analysis and Regulatory Impact Review**

TO BE COMPLETED AFTER PREFERRED ALTERNATIVE IS SELECTED

## **7.4 Executive Order (E.O.) 12866 (Regulatory Planning and Review)**

TO BE COMPLETED

## **7.5 Executive Order (E.O.) 13132 (Federalism)**

TO BE COMPLETED

## **7.6 Endangered Species Act**

Section 7 of the ESA requires Federal agencies conducting, authorizing, or funding activities that affect threatened or endangered species to ensure that those effects do not jeopardize the continued existence of listed species. Based on the administrative nature of the action, the Council has concluded is that there would be no direct or indirect impacts on protected resources, including endangered or threatened species or critical habitats.

## **7.7 Marine Mammal Protection Act (MMPA)**

Based on the administrative nature of the action, the Council has concluded that there would be no direct or indirect impacts on marine mammals, that the proposed action is consistent with the provisions of the MMPA, and that the proposed action would not alter existing measures to protect the species likely to inhabit the management units of the subject fisheries. None of the proposed specifications are expected to significantly alter fishing methods or activities or result in substantially increased effort that would impact species afforded protection under the Marine Mammal Protection Act of 1972 (MMPA).

## **7.8 Administrative Procedures Act (APA) and Paperwork Reduction Act (PRA)**

TO BE COMPLETED

## **7.9 Coastal Zone Management Act**

Section 307(c)(1) of the Federal Coastal Zone Management Act of 1972 requires that all Federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. Pursuant to the Coastal Zone Management Act regulations at 15 CFR 930.35, a negative determination may be made if there are no coastal effects and the subject action: (1) Is identified by a state agency on its list, as described in ' 930.34(b), or through case-by-case monitoring of unlisted activities; or (2) which is the same as or is similar to activities for which consistency determinations have been prepared in the past; or (3) for which the Federal agency undertook a thorough consistency assessment and developed initial findings on the coastal effects of the activity. This action would have no effect on any coastal use or resources of any state.

## **7.10 Data Quality Act**

Pursuant to NOAA guidelines implementing section 515 of Public Law 106-554 (the Data Quality Act), all information products released to the public must first undergo a Pre-Dissemination Review to ensure and maximize the quality, objectivity, utility, and integrity of the information (including statistical information) disseminated by or for Federal agencies. The following section addresses these requirements.

### **7.10.1 Utility**

The information presented in this document should be helpful to the intended users (the affected public) by presenting a clear description of the purpose and need of the proposed action, the measures proposed, and the impacts of those measures. A discussion of the reasons for selecting the proposed action is included so that intended users may have a full understanding of the proposed action and its implications, as well as the Councils' rationale.

Until a proposed rule is prepared and published, this document is the principal means by which the information contained herein is available to the public. The information provided in this document is based on the most recent available information from the relevant data sources. The development of this document and the decisions made by the Councils to propose this action are the result of a multi-stage public process. Thus, the information pertaining to management measures contained in this document has been improved based on comments from the public, the fishing industry, members of the Council, and NMFS.

The Federal Register notice that announces the proposed rule and the final rule and implementing regulations will be made available in printed publication, on the website for the Greater Atlantic Regional Fisheries Office, and through the Regulations.gov website. The Federal Register documents will provide metric conversions for all measurements.

### **7.10.2 Integrity**

Prior to dissemination, information associated with this action, independent of the specific intended distribution mechanism, is safeguarded from improper access, modification, or destruction, to a degree commensurate with the risk and magnitude of harm that could result from the loss, misuse, or unauthorized access to or modification of such information. All electronic information disseminated by NOAA Fisheries adheres to the standards set out in Appendix III, Security of Automated Information Resources, of OMB Circular A-130; the Computer Security Act; and the Government Information Security Act. All confidential information (e.g. Vessel Trip Reports) is safeguarded pursuant to the Privacy Act; Titles 13, 15, and 22 of the U.S. Code (confidentiality of census, business, and financial information); the Confidentiality of Statistics provisions of the Magnuson-Stevens Act; and NOAA Administrative Order 216-100, Protection of Confidential Fisheries Statistics.

### 7.10.3 Objectivity

For purposes of the Pre-Dissemination Review, this document is considered to be a Natural Resource Plan. Accordingly, the document adheres to the published standards of the Magnuson-Stevens Act; the Operational Guidelines, FMP Process; the EFH Guidelines; the National Standard Guidelines; and NOAA Administrative Order 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act.

This information product uses information of known quality from sources acceptable to the relevant scientific and technical communities. The policy choices are clearly articulated in the management alternatives considered in this action. The supporting data upon which the policy choices are based, are described in Section 4 of this document. All supporting materials, information, data, and analyses within this document have been, to the maximum extent practicable, properly referenced according to commonly accepted standards for scientific literature to ensure transparency.

The review process used in preparation of this document involves the responsible Councils and the Greater Atlantic Regional Fisheries Office. Review by staff at the Regional Office is conducted by those with expertise in fisheries management and policy, fisheries data collection (and electronic data collection), and compliance with the applicable law. Final approval of the action proposed in this document and clearance of any rules prepared to implement resulting regulations is conducted by staff at NOAA Fisheries Headquarters, the Department of Commerce, and the U.S. Office of Management and Budget.

THIS IS THE FINAL PAGE OF THIS DOCUMENT



## Commercial eVTR Framework Joint Action

### FMAT Webinar Meeting Summary

October 25, 2019

**FMAT Members Present:** Sam Asci (NEFMC), Josh Moser (NEFSC), Jay Hermsen (GARFO), Moira Kelly (GARFO), Karson Coutre (Council Staff)

**Others Present:** Barry Clifford (GARFO), Andy Loftus (eVTR Outreach Contractor)

The FMAT met via webinar to discuss and provide feedback on analyses to inform the Councils' final action decisions and to be included in the framework document. The FMAT also discussed the considerations of the different alternatives and which were preferred. Lastly, the FMAT received an update on the next steps before final action.

### **The following comments and recommendations were made by the eVTR FMAT**

#### **Analyses**

NEFMC staff provided feedback from presenting an eVTR action update to the NEFMC Advisory Panels and Committees ahead of their September council meeting. One AP member was interested in seeing a table documenting which eVTR applications are currently being used by gear type within the commercial sector. This led to discussion of how breaking down eVTR application use by gear type can be useful but can also be misleading if used to inform which applications would be used in the future. For example, some of the first eVTR adopters in the commercial fleet were participants in study fleet through the NEFSC and those participants were using the program FLDRS to report finer scale scientific information as well as fulfill their VTR requirements. The NEFSC cooperative research branch has indicated that FLDRS will remain a tool for participants in cooperative research through study fleet but will not be expanded for large scale use as stand-alone eVTR application. Another consideration when presenting application use by sector is that NOAA's Fish Online mobile application was developed the most recently, while eTrips mobile has been around for several years, so there will be different app use patterns that require context. Historical numbers may not be a helpful guide to dictate what operators use moving forward.

The FMAT also discussed the best way to describe the different commercial permit holders throughout the region in the 'affected users' section of the framework document. The description of overlap between the NEFMC and MAFMC permit holders can be briefly discussed however FMAT members felt that because it is a joint action document, the numbers can be discussed as a regional summary.

The FMAT discussed the economic section of the document and a request from an advisor for a more robust description of the economic benefits to GARFO. The FMAT discussed that the potential benefits of moving to eVTR are about data quality, efficiency, and a key step towards future modernization rather than cost savings. Some of the cost savings to GARFO would be in contract staff time, data entry, postage, printing and FTE time. However, there are costs up front during application development and other IT resources. It was also noted that economic reasons can't be the only reason to take management action according to National Standard 5. Multiple members of the FMAT felt the benefits and costs to the agency could be described qualitatively in the document and one member did not want to include numbers that may not be accurate depending on the temporal scale pre and post-implementation. In the for-hire eVTR action document, the focus was more on the economic benefit/cost to the user.

### Alternatives

The FMAT discussed the 5 sub-alternatives under the eVTR alternative that propose different reporting deadlines. The FMAT members generally felt that it makes sense to change the reporting deadlines in order to unify them across commercial permits in the region. Currently, some permits require monthly and some require weekly VTR submission, however permit-holders are held to their strictest reporting requirement.

One FMAT member suggested that weekly reporting was the most justifiable deadline because it aligns with dealer reporting and is the current deadline for many permit holders. This alternative has the benefit of aligning reporting across commercial permit holders while still being the closest to status quo. They also felt it was important to think about accessibility to the internet and noted that there are ports where there is no internet and no cell service. Another FMAT member added that in terms of quota monitoring, weekly reporting has been successful. The reasoning to select a shorter reporting deadline would be reducing recall bias or reducing error.

The FMAT discussed the definition of weekly reporting. Weekly reporting for dealers is Sunday through Saturday and they must report within 3 days of the end of the reporting week. Weekly reporting for commercial VTRs also has a reporting week from Sunday through Saturday. If a trip starts in one week and offloads in the next, then that trip must be reported during the week that the catch was offloaded. Paper vessel trip reports must be postmarked or received by the Tuesday following the reporting week. Alternatively, operators may instead submit vessel trip reports electronically using approved electronic vessel trip report software.

One FMAT member pointed out that having the same deadline for those that participate in both the commercial and for hire sector allows for simplicity in reporting, compliance, and enforcement. Another member noted that having equity in the reporting deadline for both sectors should also be considered, and the for-hire sector deadline is 48 hours. They also wondered whether it was worth considering what deadline might be needed to have in place to coincide with future reporting improvements. One member added that there is a future where more frequent reporting could eliminate the need for other requirements (consolidating reporting) but that is theoretical at this point. Another FMAT member felt that if there was need for more frequent reporting under one commercial permit, it should not necessarily dictate the deadline requirement throughout the region.



While discussing reporting deadlines, the FMAT looked at frequency distributions for submission time in 2018 for vessels submitting electronically in both the for-hire sector and commercial sector. The FMAT discussed that for both sectors the majority of the eVTR submissions occurred the same day that the trip ended. In 2018 (April-December), 82% of the eVTRs from the for-hire sector were submitted within the 48-hour deadline after the trip ended, showing high compliance. The FMAT felt that these distributions could help inform alternative selection and should be included in the information distributed and presented to the Councils.

One FMAT member asked whether changing the MAFMC for-hire eVTR deadline in this action/document was a possibility if the Councils were to choose a reporting deadline other than 48 hours. Other FMAT members responded that it would have to be added to the action by the Councils and there has been desire from leadership to keep this action specific to the MAFMC and NEFMC commercial sector.

The FMAT discussed the different considerations between reporting in the commercial and for hire sectors. There is no dealer reporting to validate or serve as an additional data stream in the for-hire sector so reducing recall bias may be more of a concern. One additional step for a commercial trip compared with a for-hire trip is filling out the dealer name and number before submission. An FMAT member noted that the vast majority of the time the boat already knows which dealer they will be going to, so this information is not a large concern when considering submission deadlines. They also clarified that if a vessel is selling to a trucking company that is going to sell to multiple dealers, it is that trucking company's responsibility to submit who they sell to, while the vessel would list that trucking company as the dealer.



## Commercial eVTR Framework

### FMAT Webinar Meeting Summary

May 10, 2019

**FMAT Members Present:** Sam Asci (NEFMC), Josh Moser (NEFSC), Jay Hermsen (GARFO), Moira Kelly (GARFO), Karson Coutre (Council Staff)

**Others Present:** Special Agent Todd Smith (OLE), Andy Loftus (eVTR Outreach Contractor)

The FMAT met via webinar and received an update on the discussion during the MAFMC and NEFMC April Council Meetings and subsequent framework development. Law enforcement was invited to participate in discussion of the enforcement considerations of potential regulatory changes. The FMAT provided feedback on the presented information and discussed framework development.

**The following comments and recommendations were made by the eVTR FMAT**

#### Enforcement Considerations

In day to day dockside patrol, enforcement doesn't often use the 1-year and 3-year record keeping regulations, however it is useful to see VTRs from the last few trips. There is a lot of value in the requirement that fishermen maintain records for some period of time, but we need to better understand what that looks like in an electronic age. Ultimately, enforcement would like to be cooperative with changing technology but would rather see nothing changed with the record keeping requirements. Enforcement cares more about making sure vessel operators can bring up their VTR information when asked.

The FMAT agreed that it makes sense to have a standardized form to present to enforcement so that individual officers don't have to understand each application interface. Currently, the NMFS Northeast Region eVTR technical requirements<sup>1</sup> for software to be approved addresses this with the following language: "When requested by authorized personnel, a vessel must present for inspection vessel trip reports from the previous twelve months. Thus, the product must have the capability to display a facsimile of the paper VTR form with a separate 'page' for each sub-trip." However, the way users download their own information and how it is stored varies by application.

---

<sup>1</sup>National Marine Fisheries Service Northeast Region Electronic Vessel Trip Reporting (eVTR) Technical Requirements [chrome-extension://oemmndcbldboiebfnladdacbfdmadadm/https://www.greateratlantic.fisheries.noaa.gov/aps/evtr/doc/evtr\\_tech\\_requirements.pdf](https://www.greateratlantic.fisheries.noaa.gov/aps/evtr/doc/evtr_tech_requirements.pdf)

Enforcement is also concerned that in some instances there are discrepancies between the VTR and dealer reports, as well as other cases of potential misreporting. To remedy this, all versions of a submitted VTR should be tracked by managers. This may already be done but that will need to be investigated. One FMAT member said that tracking all submitted versions of an eVTR should be written into the framework document.

The FMAT also discussed the issue that attempts to submit an eVTR aren't documented, and an eVTR is only timestamped when a record is successfully submitted and accepted. Users in the for-hire sector have brought this up and have asked that their attempts to submit be timestamped in order to prove they tried to be compliant. Based on discussions during the for-hire action, eVTR records are retained on the device, so users wanting to login to a different device with their eVTR app would not have their past VTR records available. However, if a device goes overboard, app providers can restore their past VTRs onto a new device.

One FMAT member recommended consulting NOAA's general counsel (GC) on how GARFO is going to handle documentation and record retention in the electronic age. Their guidance would be helpful especially if electronic record keeping has already been taken up by GC in different regions or contexts.

### **Framework Alternatives**

The FMAT discussed the difference between an alternative that has a 7-day reporting deadline versus a weekly deadline and felt this was worth clarifying. Weekly reporting can be anywhere from 3-9 days and is the current requirement for many of the Mid-Atlantic FMPs, so a weekly alternative would mean *status quo* reporting deadlines for many permit holders. This may have been the intent behind the motion that added alternatives during the MAFMC meeting in April although the wording was "7 days". Weekly electronic reporting is also the current requirement for dealers. One FMAT member noted that monthly reporting is antiquated and creates quite a data lag.

The FMAT also felt it was worth considering that the for-hire fleet wants to move to a 72-hour deadline from 48 hours because in practice, there were times that they failed to comply. One FMAT member said that 72 hours was appealing on the commercial side and that it felt attainable. In their experience, successful electronic reporting works best when an operator incorporates their reporting into an established routine.

One FMAT member wondered if we should use this action to align the for-hire reporting deadline. Another member thought that we should not muddy the waters by adding the for-hire sector to this action due to the number of affected commercial users and the potential for joint action with the New England Council. However, it makes sense to consider a reporting deadline right now that can work towards future alignment of all sectors if possible.

One FMAT member preferred weekly across dealers and commercial vessels and would argue for as much consistency as possible. Another FMAT member commented that a weekly reporting requirement is closer to the idea of switching from paper to electronic with everything else *status quo*, while still achieving some alignment in reporting.

### **Analyses**

It would be helpful to know how many permit holders currently only have permits that require monthly reporting and the FMAT thought that this is likely a small number. This would help show the impacts of different reporting deadline changes.

For the upcoming June NEFMC Council meeting some FMAT members felt it would be worthwhile to have a breakdown of the different scenarios (joint action, no joint action, action only on dogfish plan, etc) and the number of users affected under each scenario.

### **Applications/Outreach**

Due to public comments received at both April Council meetings, the FMAT discussed the importance of communicating that FLDRS is not available for full scale eVTR deployment during this action. Staff in charge of FLDRS have been actively referring vessels interested in eVTR to eTrips Mobile or Fish Online, as they are more user friendly. One exception to this is the Surfclam and Ocean Quahog fleet because eClams/FLDRS is the only eVTR app that accommodates their reporting requirements. During outreach it will also be important to be clear that people currently using FLDRS to submit eVTRs that are already compliant.



## Combined Advisory Panel Meeting Summary

### Commercial Electronic Vessel Trip Report (eVTR) Omnibus Framework

July 23, 2019

The Mid-Atlantic Fishery Management Council's (Council) Advisory Panels (AP) for species requiring commercial permits met via webinar July 23, 2019 to review and comment on the upcoming Commercial eVTR Omnibus Framework. These APs include Spiny Dogfish, Tilefish, Mackerel, Squid, Butterfish, Summer Flounder, Scup, Black Sea Bass, Bluefish, and Surfclam and Ocean Quahog. The Council will consider feedback provided by the APs at its December 2019 meeting.

**Attendees:** Alan Bianchi (NC DMF), Barry Clifford (GARFO), Bill Duffy (GARFO), Bob Gatewood, Bonnie Brady (LIFA), Caitlin Starks (ASMFC), Carrie Kennedy (MDNR), Chris Batsavage (MAFMC), Claire Fitz-Gerald (GARFO), Dom St. Amand (NEFSC), Eric Reid (NEFMC, MAFMC), Ed Martino (ACCSP), Emerson Hasbrouck (Cornell), Geoff White (ACCSP), Hank Soule (Saving Seafood), Heidi Henninger (AOLA), Jay Hermsen (GARFO), Jeff Kaelin (Lund's Fisheries), Jennifer Couture (NEFMC), Joanne Pellegrino (GARFO), John Hoey (NEFSC), John Maniscalco (NY DEC), Josh O'Connor (GARFO), Julie Defilippi Simpson (ACCSP), June Lewis (AP member), Karen Holmes (ACCSP), Katherine Wilson (NMFS), Katie Almeida (Towne Dock), Kevin Staples (CSSF), Kiley Dancy (MAFMC Staff), Libby Etrie (NEFMC), Maggie Raymond, Matthew Heyl (NJ DFW), Meghan Lapp (Seafreeze Ltd.), Melanie Griffin (MA DMF), Michael Luisi (MAFMC), Michelle Duval, Mike Carroll, Mike Plaia, Mimi Spain (Harbor Light Software), Moira Kelly (GARFO), Anna Mercer (NEFSC), Nichola Meserve (MA DMF), Peter Hughes (MAFMC), Rich Malinowski (SERO), Robert Cericola, Scott Curatolo-Wagemann (Cornell), Sam Ascii (NEFMC), Simon Dick, Steve Lockhart (NEFSC), Wes Townsend (MAFMC), "Alexa K"

**Presenters:** Andrew Loftus (MAFMC Outreach Contractor), Karson Coutre (MAFMC Staff)

#### General eVTR questions and comments

A Council member and an advisor both stated that any approved application should accommodate different state reporting to reduce redundancies. Greater Atlantic Regional Fisheries Office (GARFO) staff noted that while it is not a requirement, many states defer to the federal VTR. Additionally, GARFO is working with ACCSP to accommodate fulfilling both requirements.

One participant also asked about fees associated with the different eVTR applications. Staff referenced that eTrips mobile, Fish Online, and FLDRS are all free, while other systems have associated fees. An AP member asked whether the different applications would be able to integrate with the GARFO database. Staff and GARFO responded that all applications are required to meet

technical standards that include sending the data in a compatible format, so on the front end they use different operating systems, but on the back end they are standardized.

One participant questioned how data handling has gone since the implementation of eVTR for the MAFMC for-hire sector in March 2018. GARFO stated data handling has gone well with no noticeable drop in compliance and that the VTR data has been available in real time through the database. Additionally, the necessary tools are in place so industry can verify receipt of a submitted VTR.

One advisor asked what types of vessels are already doing eVTRs and which applications are preferred. Staff provided a summary table of eVTR use by application and by sector. Top eVTR apps are FLDRS, eTrips mobile, and Fish Online. Multiple advisors felt that more fine scale, tow-by-tow information should be collected, and this action is an opportunity to do that. They also questioned why FLDRS was not being expanded and felt it should be given more resources. The Chief of the Northeast Fishery Science Center (NEFSC) Cooperative Research Branch clarified that they will support all current FLDRS users and expand to fleets that are interested in using FLDRS as a data collection tool. She added that eVTR using FLDRS is a side benefit to those participating in cooperative research. Staff noted that this would be clarified in outreach documents moving forward.

One AP member asked if the GARFO licensed operator or the permit holder is responsible for VTR submission. GARFO clarified that the regulations state either the owners or operators can submit VTRs but ultimately the permit holder is responsible.

A Council Member noted that under eVTR, there still must be a transfer of the VTR number from the vessel to the dealer. GARFO staff added that a primary objective of the Fishery Dependent Data Initiative (FDDI) is to have these numbers more integrated in the future so that information will be transferred systematically, and the operator will no longer have to do it.

An advisor asked what the timeline is for FDDI and questioned if that is relevant to the timing of this action. GARFO staff noted that there are multiple steps to FDDI and the FDDI partners are working on a roadmap with timelines to be sent out in the next few months.

Multiple participants felt that the eVTR editing process needs to be streamlined and made more user friendly.

One advisor wanted a better understanding of what the eVTR benefits are for the government.

One advisor said that GARFO needs to do their due diligence with training because this is a big undertaking. Another added that all the major ports need to be covered for workshops.

One participant noted that their company was developing software to combine a hail out system that is already developed with an eVTR component in the same program and hope to have it completed in 2020.

## Alternatives Discussion

Advisors discussed the current reporting deadlines for quota managed species and sector reporting. They then questioned what an effective eVTR reporting timeline looks like for managers. Another

advisor questioned whether a specific submission deadline may be too frequent for GARFO to handle. GARFO clarified that eVTRs are available in a matter of minutes after submission and are not limited by volume, so the Council does not need to consider this when choosing a reporting deadline. One Council Member asked which report (dealer or VTR) drives the quota monitoring reports. GARFO clarified that dealer data is used for the landings in pounds while VTR data is used for area and effort information.

One advisor and one person experienced with vessels participating in cooperative research felt that the deadline for submission could be 48 hours, and one person added that this would create consistency with the for-hire sector's eVTR deadline.

One participant noted that his vessels are paid after they turn in a VTR, so the office will need some way of verifying they have been submitted electronically. Thus, the operators will likely submit within 24 hours of ending a trip.

One New England Fishery Management Council member noted that in the groundfish fishery, sectors may need a reporting deadline of 24 hours for quota monitoring.

One advisor felt that a reporting deadline of 72 hours after a trip is complete is plenty of time.



## Public Meeting Summary

Commercial eVTR Omnibus Framework Action: Review of Common Reporting Applications for Electronic Vessel Trip Reports and How to Get Started

**November 20, 2019**

**5:30 pm -7:30 pm**

### Webinar Participants

Presenters: Karson Coutre (MAFMC Staff), Andy Loftus (MAFMC Outreach Contractor), Fran Karp (Harbor Light Software), Jay Hermsen (GARFO)

Attendees: Barry Clifford (GARFO), Bonnie Brady (LIFA), Christopher McGuire, CJ Schlick, David Leveille, Doug Potts, Gerry O'Neill, Greg DiDomenico (GSSA), Greg Power (GARFO), Gretchen Hanshew (NMFS), Hank Soule, Joanne Pellegrino (GARFO), Julie Simpson (ACCSP), K. Gross, Karen Holmes (ACCSP), Kaycee Coleman (US FWS), Lange Solberg, Laura Versaggi (ACCSP), Laurie Nolan (MAFMC), Matt Heyl (NJ DFW), O'Connor, Pam Thames (GARFO), Sonny Gwin (MAFMC), Stephanie Iverson (VMRC), Walter Anoushian (GARFO), James Fletcher (AP Member), Sam Asci (NEFMC Staff), "Peter", "Bryan", "Mary", "PT", "J"

### Summary

The purpose of this webinar was to summarize the proposed action, provide information on how commercial fishing operators can get started using eVTRs, and provide demonstrations for two commonly used eVTR applications. MAFMC staff provided a brief overview of the proposed action and the MAFMC eVTR outreach coordinator provided information on frequently asked questions and how to get started with eVTR. Harbor Light Software staff demonstrated ACCSP's eTrips mobile, and GARFO staff demonstrated NOAA's Fish Online. All presenters and demonstrators answered questions regarding the software and the eVTR action in general.

### Questions from the Public and Corresponding Answers

1. Will people be allowed to complete a paper form at sea and fill out the electronic form to submit on their computer at home?  
No. A VTR number is needed to provide to a dealer when you sell your catch and this number is generated when the permit holder begins an eVTR trip. Therefore, an electronic device is necessary to begin the trip and have the VTR number when they return to port to sell their catch. Over time, the paper forms will be completely phased out.



2. What if a captain changes the dealer who they were originally intending to sell their catch to after they return to port? How do you change that in the system?

Federal regulations require that only the parts of the VTR that can be completed before returning to port be filled out and completed at the time that the vessel enters port. The dealer information is not available until a sale is made and therefore is not required to be filled out until that sale happens. Since eVTRs will not be required to be *submitted* until sometime after entering port (deadline to be determined during final action) this should provide captains time to enter the correct dealer information before submitting their report. Should changes or corrections need to be made to an already submitted, eVTR, the user may simply retrieve the eVTR on their mobile device, make the necessary changes, and resubmit. Alternatively, any previously submitted eVTR, regardless of the software or application used to originally submit, can be retrieved, amended, and resubmitted using GARFO's Fish Online web portal.

3. If people don't have a device already, does this mean that they will need to buy a smartphone or tablet?

Yes. An economic analysis of cost will be included in the final action. At the low-cost end, wi-fi capable tablets can be purchased for \$150 or less and can connect to any public or private wi-fi system to submit the reports within the reporting timeframe that is chosen and there would be no recurring monthly cost. On the high end, captains who choose to purchase a new smartphone and a monthly cellular data plan would incur higher costs for this option.

4. Will NOAA be providing vouchers or compensation to captains to purchase equipment? At present, there are no plans for any compensation or a cost reimbursement plan.

5. What about captains who can't read or write? How do they learn the system?

Captains who cannot read or write will likely need similar assistance to what they are currently obtaining to fill out paper VTR reports. The Council and NOAA will be hosting a series of workshops to provide hands-on training, and each of the software vendors has videos and documents to teach captains how to use their specific system. Additionally, GARFO's regionally based Port Agents are available to offer support.

6. Can you change an eVTR after it has been submitted?

Yes. Each system provides a means to edit an electronic VTR after it has been submitted and to submit/certify a new version.

7. Can owners manage eVTR reports for multiple captains in their fleet?

Yes, there is an option when using GARFO Fish Online web portal for an owner/permit holder to manage the all the submitted VTRs/eVTRs through a web-based portal.

Enhancements to the Fish Online web portal are planned in order to streamline the functionality and convenience of the web portal for fleet owners and sector managers.

8. Will participants in FLDRS need to change to a new system?

No. FLDRS is, first and foremost, a system for participating captains to contribute detailed scientific data for fisheries management and research purposes. Secondly, it provides the capability to submit VTRs electronically directly to GARFO. So, participants in the Northeast Study Fleet who are already using FLDRS to submit their VTRs will continue to do so. FLDRS will not be offered to new users who are not participating in Study Fleet or research programs.

9. Why don't recreational anglers need to report electronically?

Since March of 2018, for-hire operators holding federal permits to fish for species managed by the Mid-Atlantic Council have been required to use these same electronic systems to submit their VTRs. Additionally, there is a small-scale effort to collect data electronically from some recreational anglers using these systems beginning in mid-2020.

10. What are the protocols for systems to get recertified? (note: this question only pertains to software developers, not captains)

Technical requirements can be found at

<https://www.fisheries.noaa.gov/webdam/download/99074552>

11. Can eVTRs be printed or emailed?

If a user logs in to Fish Online or eTrips on the web, the eVTR can be printed. The eVTR can be also saved as a pdf (portable document format) and emailed.

12. Does this action apply to Highly Migratory Species (HMS) permits?

This eVTR action only applies to commercial permits for NEFMC and MAFMC managed species. If someone who has an HMS permit also holds a MAFMC or NEFMC managed species permit, this action applies to them and are therefore required to submit an eVTR for all trips regardless of waters fished or targeted species. If they only have an HMS permit, this action does not apply to them.

13. How will this action translate into more fish?

This action is focused on changing from paper to electronic reporting with the goal of improving data quality, reducing errors, and increasing efficiency for fishermen and managers. More accurate data allows for better science and management, however it may not translate directly to more fish. Transitioning to eVTR is essential in working towards the longer-term goal of one-stop shop reporting and data modernization.

14. In both eTrips/Mobile2 and FishOnline, there is a reference to 'effort'. What is meant by 'effort' in the reporting applications?

Effort in the eVTR reporting applications refers the section of a report that describes what, where, how much, and for how long fishing activity took place. On the paper form, these are questions 7 through 16, which include fishing gear, mesh/ring size, gear quantity, gear size, fishing depth (fathoms), number of hauls, chart area, latitude, longitude, and tow/soak time. If the vessel changes gear, mesh or ring size, and/or chart area during a trip, a new 'effort' must be recorded in the app, similar to the way a vessel operator would need to complete an additional VTR page when submitting a VTR on paper.

## Other Comments

One participant commented that people will not have time to attend workshops and this is asking too much for those still using flip phones. Two participants commented that the Council or NMFS should pay for the electronic devices or there should be a voucher system for those who cannot afford an electronic device. One participant added that the recreational sector should be required to fill out VTRs and that is where better data is needed.

**From:** Mark Phillips <[mark.st.phillips@gmail.com](mailto:mark.st.phillips@gmail.com)>

**Sent:** Saturday, November 9, 2019 10:38 AM

**To:** Moore, Christopher <[cmoore@mafmc.org](mailto:cmoore@mafmc.org)>

**Subject:**

I have some questions and thoughts on EVTRs. First I am not anti Evtrs but I am not sure they are for everybody, I am in studyfleet and I take it to heart I try to do the best job I can, I hated the paper VTRs because I had to find a post office wherever I was that's the good point.

I do tow by tow and it is a lot of work and when things are going wrong on the boat it can be a nightmare, I have learned how to rebuild the data when the computer crashes or power failure on the boat remember we go 24 hours a day and don't have access to an IT guy.

When VTRs were pushed we were told they would never be used for enforcement that lasted about 2 years then people were getting threatened or penalized for falsifying information some justified most not justified.

With EVTRs I make mistakes all the time because some of the stuff is automated most times not a big deal but other times it takes multiple phone calls and months to correct. All of these innocent mistakes are falsifying information if OLE wants you.

One big problem I see is having multiple formats and multiple companies, too complicated for captains that move around a lot. too many outside people having access to fisherman's information. I remember an incident I had with someone in the Coast Guard that was showing my boatracs information around to people and offered to let me know where other boats were fishing if I wanted. I fear if an environmental group gets this information they will use it to push more regulations.

I fear that when I carry an observer and my data doesn't match his I will get a NOVA, don't laugh because it has happened. I had an observer that falsified data on a trip of mine he got a reprimand of sorry you got caught don't get caught next time. I got a year of hell trying to get my discards back that I didn't catch.

I am not a fan of big government but I don't think EVTRs should be outsourced. I think the observer program has gotten much worse since it was outsourced and wish it would go back to NMFS running it. I know you are not talking about tow by tow now but it keeps popping up, so it will be. Enforcement was talked about with Illex tow by tow EVTRs so my fears of enforcement are justified.

Thanks Mark S Phillips F/V Illusion

**From:** James Fletcher <[unfa34@gmail.com](mailto:unfa34@gmail.com)>

**Sent:** Thursday, November 21, 2019 11:51 AM

**To:** Moore, Christopher <[cmoore@mafmc.org](mailto:cmoore@mafmc.org)>; Didden, Jason <[jdidden@mafmc.org](mailto:jdidden@mafmc.org)>

**Subject:** ELECTRONIC VTR

CAN COUNCIL MANDATE ELECTRONIC VTR REPORTING BY ALL RECREATIONAL VESSELS FISHING IN THE EEZ? I SPOKE WITH Carson ASK THE NOAA ATTORNEY IF IN PROTEST THE COMMERCIAL INDUSTRY HOLDS THE PAPER VTR'S UNTIL COUNCIL & NMFS IMPLEMENTS ELECTRONIC VTR'S ON RECREATIONAL VESSELS IN EEZ. MAGNUSON 101-627 (8)

Council should be given 101-627, 104-297 **CAN COUNCIL MANDATE ELECTRONIC VTR REPORTING BY RECREATIONAL VESSELS IN EEZ? LOG IN PRIOR TO ENTERING EEZ & LOG OUT UPON RETURNING TO STATE WATERS?**

**I AM UPSET!**

--

James Fletcher  
United National Fisherman's Association  
123 Apple Rd.  
Manns Harbor, NC 27953  
252-473-3287

**From:** [Moore, Christopher](#)  
**To:** [Coutre, Karson](#)  
**Subject:** FW: public comment EVTR  
**Date:** Tuesday, July 23, 2019 10:27:29 AM

---

**From:** Beverly Lynch <braelynych@gmail.com>  
**Sent:** Tuesday, July 23, 2019 10:16 AM  
**To:** Moore, Christopher <cmoore@mafmc.org>  
**Subject:** public comment EVTR

Regarding electronic vessel trip reporting

My husband fishes and I do most of the paperwork, including our complicated income taxes, which I do on paper. I do them on paper because I read and comprehend paper better a screen. Maybe this is because I'm 68 and we didn't have computers when I was in school.

My husband is 62 and has never used a computer. He manages to fill the NE and SE paper trip reports, after I showed him how. He did not finish highschool and definately has ADHD. Commercial fishing suited him because there WAS no paper work. If you think workshops can teach someone like him how to fill electronic reports, think again.

When he sold lobsters at the dock, I filed the electronic dealer reports. Our dealer recommended a program that was easier than the SAFIS program he and his wife used. She was educated in and experienced with tech stuff and hated this system. I don't know if they ever got the kinks out of it. I see SAFIS is one of the programs you want to use for trip reports.

Anyhow, I used this "easy" dealer reporting program. I found it confusing, but by the end of the season, I could remember what to do. Each season, I had to learn all over again. My mind couldn't retain the complex steps and pages to follow. I never figured out how to fix mistakes and there were always unfinished reports due to that. The program would tell me when I'd missed something or filled something wrong, but often I sat there trying to figure out how to do it right or find the missing info. Meanwhile, feeling this was a waste of life, for time is life, isn't it? And what possible difference does it make what kind of lobsters and how many were sold at what price in Wachepreague, VA, that day? Does the government have to know that when it doesn't have to know how many non-citizens are in the country?

My husband goes out in rough weather that isn't good for expensive electronics. You say he could file these reports on a smart phone. His thick fingers wouldn't be able to pick out the keys on such a device on a good day let alone a bad one. Maybe he could find a way to secure a laptop. But will he be able to fill in the report when he can barely stand up?

I just received back some SE reports I had filled out for him. I studied them for half an hour trying to figure out what they meant about duplicate reports or start date being wrong, etc. I didn't see anything wrong. Then I realized I'd filled out the trip for the last day first. The trip report numbers weren't in the correct order! What difference does that make? I wonder what would have happened if they had been electronic. Alarms would have gone off, I suppose, and I still wouldn't know what I'd done wrong.

Please give us a choice of paper or electronic. Maybe young fishermen, if there are any, would prefer electronic and old ones paper. When the old ones retire, you'd have all young ones using their electronic devices. In fact most of them will be better at using their electronic devices than catching fish.



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** 11/26/2019  
**To:** Council  
**From:** Mary Sabo  
**Subject:** 2020 Implementation Plan – Proposed Actions and Deliverables

Each year, the Council develops an annual implementation plan which identifies the activities and actions the Council expects to work on during the upcoming year. Implementation plans are designed for use as a planning tool by the Council and staff and as a way to update the public on progress toward achieving the goals and objectives of the strategic plan. These plans are intended to provide a comprehensive and realistic framework for merging the Council's ongoing projects with new initiatives. At the core of each implementation plan is a section entitled "Proposed Actions and Deliverables," which includes the specifications, amendments and frameworks, special projects, and other initiatives the Council has prioritized for the upcoming year.

Because the Council is still in the process of finalizing its next five-year strategic plan (approval is expected at the December Council Meeting), staff recommends postponing Council review of the full 2020 Implementation Plan until the next meeting in February 2020. This will allow staff adequate time to ensure that the proposed implementation plan effectively addresses the Council's strategic goals and objectives.

Behind this memo is a list of proposed actions and deliverables for 2020. The Council will review and consider approval of this list at the December Meeting. Staff will then develop a complete implementation plan for Council consideration at the February 2020 meeting in Duck, NC.



## 2020 Proposed Actions and Deliverables

### SUMMER FLOUNDER, SCUP, BLACK SEA BASS

1. Review 2021 specifications for summer flounder, scup, and black sea bass
2. Develop and approve 2021 recreational management measures for summer flounder, scup, and black sea bass
3. Develop advisory panel fishery performance reports
4. Initiate action to revise recreational management system for summer flounder, scup, and black sea bass to allow for greater stability and flexibility
5. Evaluate commercial scup discards and gear restricted areas
6. Conduct scoping and develop alternatives for Recreational/Commercial Allocation Amendment
7. Continue development of Black Sea Bass Commercial Amendment
8. Initiate EAFM management strategy evaluation for summer flounder

### BLUEFISH

9. Review 2021 bluefish specifications
10. Develop and approve 2021 bluefish recreational measures
11. Develop advisory panel fishery performance report
12. Continue development of Bluefish Allocation and Rebuilding Amendment

### GOLDEN AND BLUELINE TILEFISH

13. Develop and approve 2021-2022 golden tilefish specifications
14. Review 2021 blueline tilefish specifications
15. Develop advisory panel fishery performance reports
16. Support efforts to address private recreational permitting and reporting issues (GARFO lead)
17. Tilefish survey (ongoing)

### MACKEREL, SQUID, BUTTERFISH

18. Develop and approve 2021-2023 specifications for Atlantic mackerel, squids, and butterfish
19. Develop advisory panel fishery performance reports
20. Review butterfish cap performance report
21. Take final action on *Illex* Permit and MSB Goals and Objectives Amendment
22. Review recommendations of working group for real time *Illex* management to consider stock assessment information
23. *Illex* growth and maturity data project
24. Review 2020-2021 chub mackerel specifications
25. HMS/chub mackerel diet study (final report)

### RIVER HERRING AND SHAD

26. Develop and approve RH/S cap for Atlantic mackerel fishery for 2021-2023
27. Develop RH/S discussion papers (e.g. biological caps, New England alignment, hotspots)

### SPINY DOGFISH

28. Review 2021 spiny dogfish specifications



29. Develop advisory panel fishery performance report

## SURFCLAMS AND OCEAN QUAHOGS

30. Develop and approve 2021-2024 surfclam specifications and 2021-2026 ocean quahog specifications
31. Develop advisory panel fishery performance reports
32. Initiate Commingling/Discarding Issues Action<sup>1</sup>
33. Surfclam genetic study (contract; ongoing)

## SCIENCE AND RESEARCH

34. Initiate a workshop to review and consider redevelopment of the RSA program
35. Continue to support the Fishery Dependent Data Initiative (GARFO lead)
36. Identify new SSC membership
37. Convene joint Council-SSC meeting
38. Maryland Recreational Ocean Effort Video Estimation project (contract)
39. Develop a process to track progress toward addressing the Council's research priorities.

## ECOSYSTEM AND OCEAN PLANNING/HABITAT

40. Coordinate Northeast Regional Habitat Assessment (NRHA)
41. Continue work on EFH Redo
42. Update the EAFM risk assessment
43. Develop habitat- and fishery-related comments on offshore energy development
44. Maintain joint MAFMC-NEFMC Offshore Wind web page and Offshore Wind Notices to Mariners web page
45. Initiate climate change and distribution shift scenario planning

## GENERAL

46. Complete the Commercial Fisheries eVTR Framework
47. Track relevant MSA/fisheries legislation and develop comments as requested

## COMMUNICATION AND OUTREACH

48. Continue to implement Council communication and outreach plan
49. Develop and maintain Council action web pages
50. Develop fact sheets and outreach materials as needed
51. Complete website update and improvement project
52. Establish a Communication/Outreach Advisory Panel

## POSSIBLE ADDITIONS

53. Expand summer flounder recreational management strategy evaluation to cover scup and black sea bass (contract)
54. Review red crab and lobster fishery exemptions for discrete deep sea coral protected zones
55. Develop a white paper on fixed/variable costs and employment information (all Northeast fisheries)
56. Initiate action to address right whale issues
57. Modify list of ecosystem component species from Unmanaged Forage Amendment (e.g., addition of cancer crabs)
58. Review RH/S annual progress update
59. Convene a workshop to discuss the impacts of pollutants on Mid-Atlantic fisheries

---

<sup>1</sup> Additional details and background on these proposed deliverables:  
[http://www.mafmc.org/s/NextStepsITQReview\\_Input\\_2019-10-02.pdf](http://www.mafmc.org/s/NextStepsITQReview_Input_2019-10-02.pdf)



# 2019 Planned Council Meeting Topics

Updated 11/25/19

## December 10-12, 2019 – Annapolis, MD

- Bluefish Allocation Amendment – Review and approve supplemental scoping document for additional scoping hearings ~~Approve Range of Alternatives~~
- Summer Flounder 2020 Recreational Management Measures – Develop and Approve
- Scup 2020 Recreational Management Measures – Develop and Approve
- Black Sea Bass 2020 Recreational Management Measures – Develop and Approve
- Summer Flounder, Scup, and Black Sea Bass Commercial/Recreational Allocation Amendment – Approve scoping ~~plan~~ document
- EAFM Summer Flounder Conceptual Model – Review Results and Next Steps
- 2020-2024 Comprehensive Research Priorities – Review and Approve
- Risk Policy Framework – Framework Meeting 2 (Final Action)
- Review of New SSC Membership
- 2020 Implementation Plan – ~~Approve~~ Discuss (final approval in February)
- 2020-2024 Strategic Plan – Approve
- Atlantic Surfclam and Ocean Quahog Excessive Shares Amendment – Final Action
- ~~Summer Flounder Commercial/Recreational Allocation Study Update (postponed)~~
- Commercial eVTR Omnibus Framework – Framework Meeting 2 (Final Action)
- Update on Habitat Activities
- ~~Illex Permitting & MSB FMP Goals Amendment – Review Public Hearing Document and Select Any Preliminary Preferred Alternatives~~

## February 11-13, 2019 – Duck, North Carolina

- Review and approve new SSC membership
- Illex Permitting & MSB FMP Goals Amendment – Review Public Hearing Document and Select Any Preliminary Preferred Alternatives (moved from December)
- Update on GARFO/NEFSC Fishery Dependent Data Initiative (FDDI)
- NEFSC Survey and Data Collection Program Overview
- Scenario planning as a tool to evaluate climate change and governance issues
- 2020 Implementation Plan – Approve
- RSA Workshop – Initial Planning Discussion

## MAFMC 2020 COUNCIL MEETINGS

February 11-13, 2020	The Sanderling Resort 1461 Duck Road Duck, NC 27949 855-412-7866
April 7-9, 2020	Stockton Seaview 401 South New York Road, Galloway, NJ 08205 609-652-1800
May 4-7, 2020	ASMFC & MAFMC Joint Meeting Westin Crystal City 1800 Richmond Hwy Arlington, VA 22202
<b>DATE CHANGE</b>  June 16-18, 2020	Hilton Virginia Beach Oceanfront 3001 Atlantic Avenue Virginia Beach, VA 23151 757-213-3000
August 10-13, 2020	The Notary Hotel 21 N. Juniper St. Philadelphia, PA 19107 215-496-3200
October 6-8, 2020	Hyatt Place Long Island East End 451 East Main St. Riverhead, NY 11901 631-208-0002
December 14-17, 2020	Royal Sonesta Harbor Court Baltimore 550 Light St. Baltimore, MD 21202 410-234-0550



# Status of Council Actions Under Development

AS OF 11/26/19

FMP	Action	Description	Status	Staff Lead
Mackerel, Squid, Butterfish	<i>Illex</i> Permit and MSB Goals and Objectives Amendment	To ensure optimal management and fishery operation, the Council is considering modifications to the <i>Illex</i> permitting system as well as revisions to the goals and objectives for the MSB FMP. <a href="http://www.mafmc.org/actions/illex-permitting-msb-goals-amendment">http://www.mafmc.org/actions/illex-permitting-msb-goals-amendment</a>	The Council reviewed comments in June, and development is expected through 2019 and in to 2020.	Didden
Summer Flounder, Scup, Black Sea Bass	Commercial/Recreational Allocation Amendment	This joint Council/ASMFC amendment will reevaluate and potentially revise the commercial and recreational sector allocations for summer flounder, scup, and black sea bass. This action was initiated in part to address the allocation-related impacts of the revised recreational data from MRIP. <a href="http://www.mafmc.org/actions/sfsbsb-allocation-amendment">http://www.mafmc.org/actions/sfsbsb-allocation-amendment</a>	The Council and Board initiated this action at their October 2019 joint meeting. A draft scoping document will be considered for approval at the December joint meeting.	Beaty/Coutre/Dancy
Bluefish	Bluefish Allocation and Rebuilding Amendment	This joint Council/ASMFC amendment considers potential revisions to the allocation of Atlantic bluefish between the commercial and recreational fisheries and the commercial allocations to the states. This action will also review the goals and objectives of the bluefish FMP and the quota transfer processes and establish a rebuilding plan for bluefish. <a href="http://www.mafmc.org/actions/bluefish-allocation-amendment">http://www.mafmc.org/actions/bluefish-allocation-amendment</a>	At the October meeting the Council and Board agreed to add rebuilding to this action. At the December meeting the Council and Board will review a supplemental scoping document for additional scoping hearings	Seeley
Surfclams and Ocean Quahogs	Excessive Shares Amendment	This amendment considers options to ensure that no individual, corporation, or other entity acquires an excessive share of the Surfclam and Ocean Quahog Individual Transferable Quota (ITQ) privileges. In addition, the goals and objectives for the SCOQ FMP will be reviewed and potentially revised. <a href="http://www.mafmc.org/actions/scoq-excessive-shares-amendment">http://www.mafmc.org/actions/scoq-excessive-shares-amendment</a>	Council will review public comments and input from the SCOQ AP and SCOQ Committee at its December 2019 Council meeting, when the Council discusses the final action/approval of the Excessive Shares Amendment.	Montañez

<b>FMP</b>	<b>Action</b>	<b>Description</b>	<b>Status</b>	<b>Staff Lead</b>
Omnibus	Risk Policy Framework	The purpose of this framework action is to provide for a review of the ABC control rule framework and Council Risk Policy established in 2010 and to recommend any changes.	The Council held Framework Meeting 1 at the August 2019 meeting. Staff, along with a workgroup, is currently evaluating nine different control rule alternatives approved by the Council that consider both biological and economic factors and trade-offs. The Council will take final action on the risk policy framework at their December meeting.	Muffley
	Omnibus Amendment for Data Modernization	This amendment will address the regulatory changes needed to fully implement the Agency's Fishery-Dependent Data Initiative.	The Council received an update at the October 2018 meeting.	GARFO/ NEFSC
	Commercial eVTR Framework	This framework considers requiring commercial fishing vessels with federal permits for species managed by the Council to submit VTRs electronically. <a href="http://www.mafmc.org/actions/commercial-evtr-framework">http://www.mafmc.org/actions/commercial-evtr-framework</a>	The first Framework meeting for this action was held in April 2019. In June the NEFMC initiated a joint eVTR action with the MAFMC and chose to expand the framework action to include all NEFMC-managed fisheries. The Council will take final action at the December 2019 meeting.	Coutre
Non-FMP	Golden and Blueline Tilefish Private Recreational Permitting and Reporting Issues	This action will develop permitting and reporting regulations for private recreational tilefish vessels. The action was approved in a final rule amending the golden tilefish FMP to include blueline tilefish in November 2017 with delayed implementation.	The Council will receive a status update at the February Council meeting. Implementation and outreach is expected by May 1, 2020.	GARFO lead  MAFMC Contact: Seeley

## Timeline and Status of Recent MAFMC Actions and Amendments/Frameworks Under Review

As of 11/22/2019

The table below summarizes the status of actions after they have been approved by the Council. For information about the status of Council actions under development, please see the document titled "Status of Council Actions Under Development."

Status	Amendment/Framework	Action Number	Council Approval	Initial Submission	Final Submission	NOA Published	Proposed Rule Published	Approval/Disapproval Letter	Final Rule Published	Regs Effective
Complete	Squid Amendment	MSB AM 20	6/7/17	12/12/17	7/20/18	7/27/18	8/31/18	10/23/18	12/14/18	3/1/19
Open	Atlantic Mackerel Rebuilding Framework	MSB FW 13	8/13/18	9/27/18	2/28/19	N/A	6/7/19		10/30/19	11/29/19
Open	Summer Flounder, Scup, and Black Sea Bass Framework on Conservation Equivalency, Block Island Sound Transit, and Slot Limits	SFSBSB FW 14	12/11/18	3/21/19	5/8/19	N/A	8/8/19			
Open	Summer Flounder Commercial Issues and Goals and Objectives Amendment	TBD	3/6/19							
Open	Chub Mackerel Amendment	TBD	3/7/19	5/31/19	10/25/19					

# Timeline and Status of Current and Upcoming Specifications for MAFMC Fisheries

As of 11/22/2019

Current Specifications	Year(s)	Council Approval	Initial Submission	Final Submission	Proposed Rule	Final Rule	Regs Effective	Notes
Golden Tilefish	2018-2020	4/11/17	6/5/17	8/16/17	9/7/17	11/7/17	11/2/17	2019 specs were reviewed in April 2018. No changes were recommended.
Surfclam and Ocean Quahog	2018-2020	6/6/17	8/14/17	9/22/17	12/8/17	2/6/18	3/8/18	2020 specs were reviewed in June 2019. No changes were recommended.
Longfin Squid and Butterfish	2018-2020	6/7/17		8/24/17	12/13/17	3/1/18	4/2/18	2019 specs were reviewed in October 2018. No changes were recommended.
<i>Illex</i> Squid	2019-2021	10/3/18	12/4/18	2/11/19	5/1/19	8/2/19	8/1/19	
Atlantic Mackerel (MSB FW 13)	2019-2021	8/13/18	9/27/18	2/28/19	6/7/19	10/30/19	11/29/19	
Atlantic Mackerel (including RH/S cap)	2020	6/5/19	8/22/19	9/30/19				
Chub mackerel	2020-2022	3/7/19	5/31/19	10/25/19				
Scup	2018-2019	8/8/17	10/2/17	12/1/17	11/7/17	12/22/17	12/22/17	
Scup	2020	10/8/19						Revised specifications based on the 2019 operational stock assessment
Blueline Tilefish	2019-2021	4/11/18	8/17/18		11/19/18	2/12/19	2/12/19	
Bluefish	2019	8/15/18			12/26/18	3/12/19	3/12/19	
Bluefish	2020	3/7/19	6/11/19	7/24/19	7/26/19			Interim specs to be replaced as soon as possible after results of 2019 operational assessment are available
Summer Flounder	2019 (interim)	8/15/18	10/12/18	11/28/18	11/15/18	12/17/18		
Summer Flounder	2019 (revised)	3/6/19	4/12/19	4/12/19	N/A	5/17/19	5/17/19	
Summer Flounder	2020-2021	3/6/19	6/25/19	7/18/19	7/26/19			
Black Sea Bass	2020	10/8/19						Revised specifications based on the 2019 operational stock assessment

Spiny Dogfish	2019-2021	10/2/18	11/30/18	3/5/19	3/29/19	5/15/19	5/15/19	
---------------	-----------	---------	----------	--------	---------	---------	---------	--

***Recreational Management Measures***

Current Management Measures	Year(s)	Council Approval	Initial Submission	Final Submission	Proposed Rule	Final Rule	Regs Effective	Notes
Summer flounder recreational measures	2019	3/6/19	4/18/19	4/18/19	5/17/19	7/3/19	7/3/19	
Black sea bass recreational measures	2019	2/14/18	3/5/18	4/10/18	4/11/18	5/31/18	5/31/18	Reviewed in 2018. No changes from previous year's measures.
Scup recreational measures	2019	12/10/14	3/20/15		5/5/15	6/19/15	6/19/15	Reviewed in 2018. No changes from previous year's measures.





**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, MD 20910

Dr. Christopher M. Moore  
Executive Director  
Mid-Atlantic Fishery Management Council  
800 N. State Street, Suite 201  
Dover, Delaware 19901

Dear Dr. Moore:

We received a letter on November 15, 2019, from the Atlantic States Marine Fisheries Commission which officially notified the Secretary of Commerce that the Commonwealth of Virginia is out of compliance with Amendment 3 to the Atlantic Menhaden Interstate Fishery Management Plan. The Commission's letter is enclosed. Under the provisions of the Atlantic Coastal Fisheries Cooperative Management Act, 16 U.S.C. §§ 5101 *et seq.*, the Commission's determination of non-compliance could lead to a federally imposed moratorium on fishing for Atlantic menhaden in Virginia waters.

The Act requires the Secretary to make findings on (1) whether Virginia has failed to carry out its responsibilities under a Commission Plan; and (2), if so determined, whether the measures in the Plan that Virginia has failed to implement and enforce are necessary for the conservation of the fishery in question. The Secretary's finding must be made no later than 30 days after receiving a notification of noncompliance from the Commission. The Act further requires that the Secretary, in making a finding on non-compliance, solicit and consider the comments from Virginia, the Commission, and the applicable Councils. The responsibility for carrying out the provisions of the Act has been delegated from the Secretary to NOAA's National Marine Fisheries Service (NOAA Fisheries Service).

This letter solicits comments from the Mid-Atlantic Fishery Management Council so that NOAA Fisheries Service may further consider those comments as it proceeds in this matter. Because of the tight statutory timeline, we request you submit any comments on this matter to Alan Risenhoover, Director, Sustainable Fisheries, 1315 East West Highway, Silver Spring, MD 20910 [alan.risenhoover@noaa.gov], as soon as possible, but no later than December 6, 2019. Our intention is to complete our evaluation and make necessary findings by December 17, 2019.

Sincerely,

Chris Oliver  
Assistant Administrator for Fisheries

Enclosure (letter)

## 2019 FALL NRCC MEETING AGENDA

The Bostonian – 26 North St., Boston, MA

*All times are approximate*

### Wednesday, November 20

10:00 a.m. - 10:15 a.m.

1. Welcome, Introductions, Announcements  
(Beal, Gilbert)

10:15 a.m. - 11:30 a.m.

2. Discuss NMFS Policy Directive 01-101-10 “Framework for determining that stock status determination and catch specifications are based on the best scientific information available (BSIA)”

Discussion leader: Pentony

- Discuss best way to develop a regional BSIA framework, which is required in the next 3 years

11:30 a.m. - 12:15 p.m.

3. Data Management Update

Discussion leader: Gouveia/McCarty

- Update on electronic monitoring, electronic reporting, and Fishery Dependent Data Initiative topics
- Update on a shared GARFO-NEFSC Catch Accounting and Monitoring System project

12:15 p.m. – 1:15 p.m. *Lunch*

1:15 p.m. – 3:15 p.m.

4. Jurisdictional Issues and Shifting Stocks: Introduction to Scenario Planning

Discussion leader: Pentony

- Diane Borggaard (GARFO Protected Resources Division) will offer an overview of scenario planning, followed by NRCC discussion on this tool as it relates to jurisdictional issues.
- Update on “FMP Inventory” action item from the Spring 2019 meeting *The Councils and Commission were each going to select an FMP and describe what is in those plans that facilitates and/or hinders the ability to react to climate change.*

3:15 p.m. – 3:30 p.m. *Break*

3:30 p.m. – 5:00 p.m.

5. Priorities Discussions

NEFMC, MAFMC, ASMFC, GARFO, and NEFSC outline priorities

- Discuss prioritization and coordination of resources, as needed.

5:00 p.m. *Adjourn Day 1*

6:45 p.m. – Dinner at Euno, 119 Salem Street (0.3 miles from the hotel)  
www.eunorestaurant.com

## **Thursday, November 21**

8:30 a.m. – 11:30 a.m. *(Break as needed)*

6. Stock Assessment Schedule and Related Topics

Discussion leader: Simpkins, unless otherwise noted

- Review of 2019 implementation of management track assessments, including processes that may need to be adjusted
- Review of management and research track schedules: 2020-2021
- Update on the Assessment Communications Framework (Discussion Leader: Beal)

11:30 a.m. – 12:00 p.m.

7. Update on the Ecosystem Roadmap Implementation Plan

Discussion leaders: Simpkins

- Brief update on the Ecosystem Roadmap Implementation Plan and discuss current coordination across NRCC partners.

12:00 p.m. – 1:00 p.m. *Lunch*

1:00 p.m. – 3:00 p.m.

8. Offshore Wind Energy

Discussion leaders: Pentony/Hare

- Discuss any updates and strategies for continued engagement
- Discuss how NRCC wants to move forward with considering changes to the NEFSC surveys and how NEFSC should engage with partners

3:00 p.m. – 3:30 p.m.

9. Meeting wrap-up and Other Business

- Complete any unfinished discussions or unresolved new business
- Review action items and assignments
- Identify Spring 2020 meeting date (MAFMC chair/host)
- Adjourn meeting

3:30 p.m. *Meeting adjourns*

## NRCC Spring Meeting 2019 Action Items

May 16-17, 2019 Frances Marion Hotel, Charleston SC

---

1. Add Continued Wind Energy Discussion to Fall NRCC Agenda  
Lead: **NRCC staff and NRCC Chair** (Beal)  
Appointees needed:  
Next step(s):  
Due date(s): Fall 2019 NRCC meeting
2. GARFO to investigate options for workshop/meeting/symposium to discuss wind development issues with States, etc.  
Lead: **GARFO**  
Appointees needed:  
Next step(s): Discuss with GARFO wind energy leads  
Due date(s): Fall 2019 NRCC Meeting
3. Focus draft Assessment Communications Framework on the new assessment process, how to communicate results, and how to promote stakeholder engagement.  
Lead: **ASMFC**  
Appointees needed:  
Next step(s): ASMFC will work with communications staff to revise the current draft framework and then distribute to NRCC for review.  
Due date(s): Prior to Fall 2019 NRCC meeting
4. Center to Rollout New Assessment Schedule  
Lead: **NEFSC**  
Appointees needed:  
Next step(s): In addition, the NEFSC and NEFMC will post the new assessment schedule on their respective websites.  
Due date(s): ASAP
5. Add Briefing on Scenario Planning experiences from GARFO staff to Fall 2019 NRCC Agenda  
Lead: **GARFO**  
Appointees needed:  
Next step(s): Identify Presenter (Update: Diane Borggaard (GARFO PRD) is prepared to provide an overview at the next NRCC meeting)  
Due date(s): Prior to Fall 2019 NRCC Meeting

6. Inter-jurisdictional Issues Inventory (Pick FMPs and describe issues and opportunities)

Leads: **ASMFC**, **MAFMC**, and **NEFMC**

Appointees needed:

Next step(s): Each partner will select one FMP to look at what facilitates or hinders reactions to climate change.

Due date(s): Report out on at the next NRCC meeting

Fall 2019 NRCC Meeting (ASMFC Host) - November 20-21, 2019

Location - TBD

# FIFTH COAST GUARD DISTRICT ENFORCEMENT REPORT



**01 October 2019 – 25 November 2019**

*Presented to the Mid-Atlantic Fisheries Management Council*

*Prepared By:*

*Enforcement Branch*

*Fifth Coast Guard District*

## **Table of Contents**

**Page**

---

I. Mid-Atlantic Fisheries Enforcement and Marine Protected Species Operations .....	1
II. Commercial Fishing Vessel Safety Efforts .....	2
III. Search and Rescue Highlights .....	2
IV. Outreach Information.....	3

## **List of Abbreviations**

---

CFVS – Commercial Fishing Vessel Safety	SAR – Search and Rescue
HC-130 – USCG Fixed-Wing Aircraft	WLB – 225’ Buoy Tender
WPB – 87’ Patrol Boat	P/C – Pleasure Craft
STA – USCG Small Boat Station	F/V – Fishing Vessel
EPIRB – Emergency Position Indicating Radio Beacon	A/S – Air Station
WMEC – 210’ or 270’ Medium Endurance Cutter	SEC - Sector
M/V – Motor Vessel	M/T – Motor Tanker
FRC – 154’ Fast Response Cutter	

# I. Mid-Atlantic Fisheries Enforcement and Marine Protected Species Operations

## Operations Summary

During this period, major cutters, patrol boats and stations conducted fisheries patrols in the Mid-Atlantic in an effort to curtail illegal fishing and promote safety of life at sea within D5’s AOR. Throughout this period, units conducted 178 boarding’s.

## Boarding Statistics (Note: “This Period” data should be considered preliminary and is subject to change)

01 October 2019 – 25 November 2019 Activities	Comparison to FY19
Fisheries Boarding’s .....	178..... 201
Fisheries Boarding’s w/Fishery Violations.....	8..... 18
Violation Rate .....	4.4%..... 8.9%
Activities Fiscal Year 2020	Comparison to FY19
Fisheries Boarding’s .....	178..... 201
Fisheries Boarding’s w/Fishery Violations.....	8..... 18
Violation Rate .....	4.4%..... 8.9%

## Violation Summary

CGC LAWRENCE LAWSON issued 01 EAR violation for illegal gear configuration. The commercial fishing vessel was cited for fishing with the dredge and distance between minor appendage and the cutting bar less than 12 inches. Also, units under Sector Delaware Bays control cited 7 different boaters with illegally possessing striped bass in the EEZ. Those case packages are currently being reviewed before being released to NOAA OLE.

## Marine Protected Species Support Summary

1. Operation RIGHT SPEED began on 01 November. This seasonal operation is primarily for Sector Command Center watchstanders, and targets vessels 65’ or greater exceeding speed restrictions through migratory whale zones.

# II. Commercial Fishing Vessel Safety Efforts

(October 1, 2019 –November 25, 2019)

Fishing Vessel Dockside Safety Examinations.....	This Period.....	Fiscal Year to Date
Dockside Exams.....	25.....	25
Decals Issued .....	22.....	22
Commercial Fishing Vessel Safety Terminations.....	02.....	02

# III. Search and Rescue Highlights



From October 1, 2019 – November 25, 2019, there were 17 marine casualties reported involving commercial fishing vessels:

- Allision – 0
- Capsize – 0
- Collision – 0
- Damage to Environment (Pollution/Hazmat) – 4
  - SHARON G II (O.N. 650401) 02 NOV 19 – F/V SHARON G II was taking on water and discharging hydraulic oil into the water creating a sheen observed by the USCGC VIGOROUS.
  - BETTY RAE II (O.N. 583093) 03 NOV 19 – F/V BETTY RAE II was found partly submerged in the water at the Somers Cove Marina and discharged diesel fuel into the water.
  - FISHERMAN’S DREAM (O.N. 553468) 18 NOV 19 – F/V FISHERMAN’S DREAM discharged approximately 40 gals of diesel fuel into the water resulting from a failed transfer hose.
  - MD9199CH (O.N. MD9199CH) 19 NOV 19 – F/V MD9199CH discharged approximately 1 gallon of oily bilge water into Town Creek.
- Death – 0
- Fire – 1
  - EAGLE (O.N. 1055423) 03 OCT 19 – the F/V EAGLE caught fire from an unknown source.
- Flooding – 0
- Fouling – 0
- Grounding – 1
  - NC6439AB (O.N. NC6439AB) 02 OCT 19 – The F/V NC6439AB grounded while towing a S/V.
- Injury – 3
  - MISS LESLIE (O.N. 1037848) 01 NOV 19 – NMFS observer onboard the F/V MISS LESLIE fell overboard, hitting his head and showed signs of a concussion.

- VENGENGE (O.N. 608464) 07 NOV 19 – NMFS observer onboard the F/V VENGENGE fell overboard, hitting his head and showed signs of a concussion.
- JOANN B (O.N. 508901) 20 NOV 19 – a crewmember onboard the F/V JOANN B suffered swelling of his left hand while working on the deck.
- Loss of Propulsion/Steering – 4
  - CAPT CARL (O.N. 596153) 09 OCT 19 – F/V CAPT CARL became disabled due to blown head gasket on main engine.
  - JUST ONE MORE (O.N. 924092) – 09 OCT 19 - F/V JUST ONE MORE became disabled as a result of a transmission failure.
  - LANDON BLAKE (O.N. 974746) 13 OCT 19 – F/V LANDON BLAKE became disabled resulting from the rudder key backing out of the keyway in the rudder post.
  - PACIFICS (O.N. 1026244) 21 OCT 19 – F/V PACIFICS became disabled due to thumping sounds coming from the main engine.
- MEDEVAC – 1
  - CAPT JIMMY (O.N. CG1302117) 28 OCT 19 – a crewmember onboard the F/V CAPT JIMMY was MEDVAC due to tingling and numbness in his left arm.
- Fall(s) Overboard – 1
  - MISS LESLIE (O.N. 1037848) 01 NOV 19 – NMFS observer onboard the F/V MISS LESLIE fell overboard.
- Sinking – 0
- Terminations – 2
  - EVERETT GENE (O.N. 622692) 14 NOV 2019- F/V EVERETT GENE was terminated due to inoperable fire extinguishers, not properly serviced buoyant apparatus, and expired flares.
  - STACEY LYNN (O.N. MD6833DB) 19 NOV 2019 – F/V STACEY LYNN was terminated due to not properly registered EPIRB, expired EPIRB hydrostatic release, insufficient number of PFDs, life raft not properly serviced, and expired hydrostatic release for life raft.

## **IV. Outreach - CFVS Information**

NSTR.