



Mid-Atlantic Fishery Management Council
800 North State Street, Suite 201, Dover, DE 19901-3910
Phone: 302-674-2331 | Toll Free: 877-446-2362 | FAX: 302-674-5399 | www.mafmc.org
Richard B. Robins, Jr., Chairman | Lee G. Anderson, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

DATE: March 31, 2016

TO: Council

FROM: Jason Didden *JTD*

SUBJECT: Blueline Tilefish Amendment

After consideration by the Tilefish Committee, the Council is scheduled to take final action on the Blueline Tilefish Amendment at the April Council meeting. In this Briefing Book Tab please find:

- Blueline Tilefish Public Hearing Document
- A summary of the public hearings
- The written comments received
- The Southwick Delphi Catch Estimate Report
- 2 relevant staff memos prepared for the SSC
- The Scientific and Statistical Committee (SSC) report for blueline tilefish Acceptable Biological Catch (ABC)

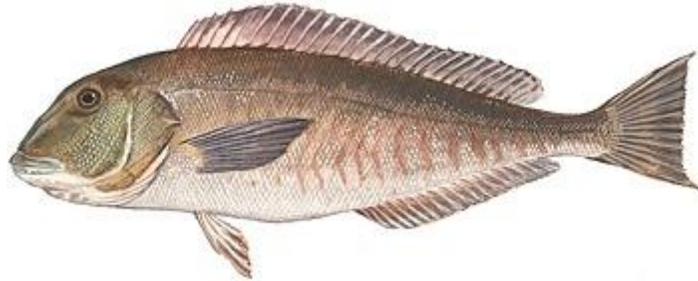
A report from the SSC's blueline tilefish subcommittee that developed ABC options is also available at: <http://www.mafmc.org/council-events/2016/march-29-ssc-webinar>.

The Tilefish Advisory Panel meets on April 5 to provide input and the technical group (Fishery Management Action Team – FMAT) for this Amendment meets on April 6 to provide input on how the ABC accepted by the SSC (87,031 lbs) on March 29 may need to be considered when the Council selects alternatives. Reports from those meetings will be forwarded to the Council as soon as possible. The FMAT report may include FMAT and/or Council staff recommendations.

Blueline Tilefish Amendment To The TILEFISH FISHERY MANAGEMENT PLAN

-Measures to Manage Blueline Tilefish-

-Public Information Document-



Credit: Duane Raver, Jr.

Prepared by the Mid-Atlantic Fishery Management Council
in cooperation with NOAA Fisheries



1.0 EXECUTIVE SUMMARY

Overview

This action is being considered by the Mid-Atlantic Fishery Management Council (Council) to add blueline tilefish (*Caulolatilus microps*) as a managed species in the Tilefish Fishery Management Plan, effectively turning that plan into the Golden and Blueline Tilefish Fishery Management Plan. This document’s purpose is to present a range of alternatives for management measures for the blueline tilefish fishery off the Mid-Atlantic and New England coasts (i.e. from the North Carolina/Virginia (NC/VA) border and to the north up to the Canadian boundary), along with a characterization of the environmental impacts of those alternatives. The public is invited to comment on the measures under consideration and their impacts. The measures, or a subset of them, are needed to constrain fishing mortality on blueline tilefish and effectively manage the blueline tilefish fishery in waters off the Mid-Atlantic and New England coasts. At its April 2016 meeting, the Council will select alternatives to recommend to NOAA Fisheries. The Council’s Scientific and Statistical Committee (SSC) is currently developing Acceptable Biological Catch (ABC) recommendations for blueline tilefish, and those recommendations will be available for the April 2016 meeting and included in the briefing book for that meeting, which will be posted at <http://www.mafmc.org/meetings>.

Alternative and Impact summary

The alternatives being considered and their likely impacts are summarized in Table 1 below. Section 5 describes the alternatives in additional detail and Section 7 describes the expected impacts of each alternative. Alternatives that were considered but rejected are also described in Section 5.

Table 1. Alternative and Impact Summary

Issue	Alternative	Summary of Alternative and Impacts
No action	1 - No action	The emergency measures currently in place will remain in effect until their expiration on June 5, 2016. Measures from this action would only be implemented on/after June 5, 2016. Thus taking no action would mean that on June 6, 2016 we would return to the situation where blueline tilefish are not managed with standard management measures north of the North Carolina/Virginia border (36.550278 N Latitude). <i>Impacts: Impacts would likely be negative for blueline tilefish if unrestricted fishing resumes. In the short run higher catches may benefit fishermen but in the long run lack of management would likely lead to overfishing and diminished catches.</i>
Management Unit and Objectives	2a - Blueline Tilefish Management Unit at NC/VA line (preferred)	This would establish a separate blueline tilefish management unit in the EEZ north of the North Carolina/Virginia border (36.550278 N Latitude) extending up to the boundary with Canada, which would be managed by the Mid-Atlantic Fishery Management Council. <i>Impacts: Positive for blueline tilefish and fishermen related to sustainable management in the long run, could restrict catches in short run.</i>
	2b - Blueline Tilefish Management Unit at Cape Hatteras	This would establish a separate blueline tilefish management unit in the EEZ north of Cape Hatteras <i>Impacts: Low positive for blueline tilefish and fishermen at this time related to sustainable management in the long run, could restrict catches in short run.</i>
	2c - Objectives	This would establish that the golden tilefish objectives apply to blueline tilefish with a modification <i>Impacts: Positive for blueline tilefish and fishermen related to sustainable management in the long run, could restrict catches in short run.</i>
Status Determination Criteria	3 - Use most recent peer-reviewed assessment	The Council would use the most recent peer-reviewed and accepted assessment. This is the standard approach in most Council FMPs, and is being added to all others via pending actions. If no assessment is available (e.g. <i>Illex</i> , Atl. Mackerel), then the status is documented as unknown by NMFS pending a future assessment. The Council’s Risk Policy has provisions for situations where overfishing levels can not be determined via an assessment. <i>Impacts: Positive for blueline tilefish and fishermen related to sustainable management</i>

Table 1 Continued

Issue	Alternative	Summary of Alternative and Impacts
Commercial Permitting & Reporting	4a - Use golden tilefish permits	Make permanent the emergency regulations that anyone with an open access commercial golden tilefish permit would be permitted to retain blue-line tilefish, subject to the applicable trip limit <i>Impacts: Positive for blue-line tilefish. Low short term negative for fishermen but positive long term related to sustainable management.</i>
	4b - Use separate permits	Require anyone landing any blue-line tilefish to get a new blue-line tilefish permit. Retention of blue-line tilefish would be subject to the applicable trip limit. <i>Impacts: Positive for blue-line tilefish. Low short term negative for fishermen but positive long term related to sustainable management.</i>
	4c - Reporting	Require standard reporting of catch for any vessel possessing a permit that allows them to land blue-line tilefish (like other federal permits). <i>Impacts: Positive for blue-line tilefish. Low short term negative for fishermen but positive long term related to sustainable management.</i>
	4d - Electronic VTR Reporting	Require Vessels to submit Vessel Trip Reports (VTRs) electronically if they have a golden tilefish or blue-line tilefish permit. <i>Impacts: Positive for blue-line tilefish. Low short term negative for fishermen but positive long term related to sustainable management.</i>
	4e - Dealer Permits and Reporting	Require standard dealer permitting reporting of catch for dealers (like other federal permits). <i>Impacts: Positive for blue-line tilefish. Low short term negative for fishermen but positive long term related to sustainable management.</i>
For-Hire Recreational Permitting and Reporting	5a - Use golden tilefish permits	Make permanent the emergency requirement for Any party or charter vessel must have been issued a Federal Charter/Party (golden) tilefish vessel permit to fish for blue-line tilefish in the EEZ with passengers for hire. <i>Impacts: Positive for blue-line tilefish. Low short term negative for fishermen but positive long term related to sustainable management.</i>
	5b - Use golden tilefish permits	Require any party or charter vessel to have a new Federal Charter/Party blue-line tilefish vessel permit to fish for blue-line tilefish in the EEZ with passengers for hire. <i>Impacts: Positive for blue-line tilefish. Low short term negative for fishermen but positive long term related to sustainable management.</i>
	5c - Reporting	Require standard reporting of catch for any vessel possessing a permit that allows them to fish for blue-line tilefish with passengers for hire. Any vessel with any Greater Atlantic federal party/charter must already report all catches (including discards) of all species of fish. <i>Impacts: Positive for blue-line tilefish. Low short term negative for fishermen but positive long term related to sustainable management.</i>
	5d - Electronic VTR Reporting	Require Vessels to submit Vessel Trip Reports (VTRs) electronically if they have a golden tilefish or blue-line tilefish permit. <i>Impacts: Positive for blue-line tilefish. Low short term negative for fishermen but positive long term related to sustainable management.</i>

Table 1 Continued

Issue	Alternative	Summary of Alternative and Impacts
Private Recreational Permitting and Reporting	6a - Private recreational tilefish permit.	Create a recreational fishing permit for private recreational anglers to catch golden or blueline tilefish, similar to how Highly Migratory Species (HMS) requires a separate permit. <i>Impacts: Positive for blueline tilefish. Low short term negative for fishermen but positive long term related to sustainable management.</i>
	6b - HMS permit requirement	Require that an HMS permit be obtained by any angler seeking to catch golden or blueline tilefish. It is likely that most anglers who fish for blueline tilefish already have an HMS permit. <i>Impacts: Positive for blueline tilefish. Low short term negative for fishermen but positive long term related to sustainable management.</i>
	6c - Reporting (HMS)	Require private fishermen to report golden and blueline tilefish catch through the HMS system (with catch cards like Maryland) <i>Impacts: Positive for blueline tilefish. Low short term negative for fishermen but positive long term related to sustainable management.</i>
	6d - Reporting (Online)	Require pre-landing online reporting of golden and blueline tilefish for recreational landings <i>Impacts: Positive for blueline tilefish. Low short term negative for fishermen but positive long term related to sustainable management.</i>
Monitoring Committee	7 - Use current golden tilefish Monitoring Committee	The golden tilefish monitoring committee has the needed expertise to monitor the blueline tilefish fishery and would provide recommendations to the Council and/or relevant committee to ensure that specifications are not exceeded and to address any other operational aspects of the fishery. <i>Impacts: Positive for blueline tilefish. No direct impacts for fishermen in this action.</i>
Framework Adjustment Process	8 - Frameworkable actions	Allow any existing or previously analyzed measure (within an FMP or amendment) to be frameworked. <i>Impacts: Positive for blueline tilefish. No direct impacts for fishermen in this action.</i>
Specifications Process and Risk Policy	9a - Specifications	Measures that may be considered by the Council during annual specifications include specifying overfishing levels (OFLs), Acceptable Biological Catches (ABC), Annual Catch Limits (ACLs), Annual Catch Targets, discard set-asides, total allowable landings, commercial and recreational quotas, trip limits, bag limits, seasons, size limits, retention requirements, and/or any measure needed to ensure that the specifications are not exceeded. <i>Impacts: Low Positive for blueline tilefish. No direct impacts for fishermen in this action.</i>
	9b - ABC Control Rule	Clarify that the existing ABC control rule would apply to blueline tilefish <i>Impacts: Positive for blueline tilefish. Short term impacts for fishermen depend on what allowable landings might result, long term impacts should be positive related to sustainable management.</i>
	9c - Risk Policy	Clarify that the existing ABC risk policy would apply to blueline tilefish <i>Impacts: Positive for blueline tilefish. Short term impacts for fishermen depend on what allowable landings might result, long term impacts should be positive related to sustainable management.</i>

Table 1 Continued

Issue	Alternative	Summary of Alternative and Impacts
Allocations	10a - no allocation	Do not set allocations but rely on adjusting the specifications to control relative catch between the commercial and recreational sectors. <i>Impacts: No impacts to blueline tilefish (allocation). No direct impacts for fishermen.</i>
	10b1 - 2009-2013 allocation (5-year)	Use best available data to set allocations based on catch from 2009-2013. Would use median of annual commercial-recreational ratios. <i>Impacts: No impacts to blueline tilefish (allocation). Impacts for fishermen depend on allocation and overall specifications.</i>
	10b2 - 2009-2013 allocation (5-year)	Use best available data to set allocations based on catch from 2009-2013. Would use mean of annual commercial-recreational ratios. <i>Impacts: No impacts to blueline tilefish (allocation). Impacts for fishermen depend on allocation and overall specifications.</i>
	10c1 - 2004-2013 allocation (10-year)	Use best available data to set allocations based on catch from 2004-2013. Would use median of annual commercial-recreational ratios. <i>Impacts: No impacts to blueline tilefish (allocation). Impacts for fishermen depend on allocation and overall specifications.</i>
	10c2 - 2004-2013 allocation (10-year)	Use best available data to set allocations based on catch from 2004-2013. Would use mean of annual commercial-recreational ratios. <i>Impacts: No impacts to blueline tilefish (allocation). Impacts for fishermen depend on allocation and overall specifications.</i>
	10d - Allocations and Specifications	If allocations are made, this alternative describes how the specifications process would handle allocations in terms of ABCs, ACLs, ACTs, etc. <i>Impacts: Positive for blueline tilefish. Short term impacts for fishermen depend on what allowable landings might result, long term impacts should be positive related to sustainable management.</i>
	10e - No Allocations and Specifications	If allocations are not made, this alternative describes how the specifications process would handle allocations in terms of ABCs, ACLs, ACTs, etc. <i>Impacts: Positive for blueline tilefish. Short term impacts for fishermen depend on what allowable landings might result, long term impacts should be positive related to sustainable management.</i>
Commercial Trip Limits (gutted weight)	11a - 275 pounds - emergency action	continue the emergency action's commercial trip limit of 275 pounds per trip gutted weight (head and fins must be attached) <i>Impacts: Would be part of overall management & conservation biologically. Short term negative for fishermen compared to no trip limit but should be long term positive related to supporting sustainable management. Lower trip limits should extend season.</i>
	11b - 200 pounds	reduce the trip limit from the emergency action's 275 pounds to a limit of 200 pounds per trip gutted weight (head and fins must be attached) <i>Impacts: Would be part of overall management & conservation biologically. Short term negative for fishermen compared to no trip limit but should be long term positive related to supporting sustainable management. Lower trip limits should extend season.</i>
	11c - 300 pounds	increase the trip limit from the emergency action's 275 pounds to a limit of 300 pounds per trip gutted weight (head and fins must be attached). <i>Impacts: Would be part of overall management & conservation biologically. Short term negative for fishermen compared to no trip limit but should be long term positive related to supporting sustainable management. Lower trip limits should extend season.</i>
	11d - 500 pounds	increase the trip limit from the emergency action's 275 pounds to a limit of 500 pounds per trip gutted weight (head and fins must be attached) <i>Impacts: Would be part of overall management & conservation biologically. Short term negative for fishermen compared to no trip limit but should be long term positive related to supporting sustainable management. Higher trip limits may shorten season.</i>
	11e - 900 pounds	increase the trip limit from the emergency action's 275 pounds to a limit of 900 pounds per trip gutted weight (head and fins must be attached) <i>Impacts: Would be part of overall management & conservation biologically. Short term negative for fishermen compared to no trip limit but should be long term positive related to supporting sustainable management. Higher trip limits may shorten season.</i>
	11f - 750 pounds	increase the trip limit from the emergency action's 275 pounds to a limit of 750 pounds per trip gutted weight (head and fins must be attached) <i>Impacts: Would be part of overall management & conservation biologically. Short term negative for fishermen compared to no trip limit but should be long term positive related to supporting sustainable management. Higher trip limits may shorten season.</i>

Table 1 Continued

Issue	Alternative	Summary of Alternative and Impacts
Recreational Bag/Possession Limits	12a - 7 fish per person - emergency action	This alternative would continue the emergency action's recreational bag limit of 7 fish <i>Impacts: Would be part of overall management & conservation biologically. Short term negative for fishermen compared to no limits, but should be long term positive related to supporting sustainable management.</i>
	12b - 5 fish per person	This alternative would reduce the bag limit from the emergency action's limit of 7 fish to 5 fish. <i>Impacts: Would be part of overall management & conservation biologically. Short term negative for fishermen compared to no limits, but should be long term positive related to supporting sustainable management.</i>
	12c - 9 fish per person	This alternative would increase the bag limit from the emergency action's limit of 7 fish to 9 fish. <i>Impacts: Would be part of overall management & conservation biologically, but higher possession limits increase management uncertainty & possibility of ABC/ACL overages. Short term negative for fishermen compared to no limits, but should be long term positive related to supporting sustainable management.</i>
	12d - 3 extra fish per person for trips greater than 36 hours	This alternative would allow a 3-fish higher bag limit on party boat trips that lasted longer than 36 hours from when the vessel leaves the dock to when a vessel returns to the dock. A call-out/call-in system would be necessary to assist enforcement of such a provision. <i>Impacts: Would be part of overall management & conservation biologically. Mixed impacts for fishermen.</i>
Essential Fish Habitat (EFH) Designation	13a - No EFH Designation in this action	Wait until the Council's EFH review action to designate EFH. <i>Impacts: Low Negative for blueline tilefish, low negative for fishermen</i>
	13b - Designate EFH	EFH would be all offshore waters with water depths from 46 meters to 256 meters from VA to Canadian boundary. <i>Impacts: Low Positive for blueline tilefish, low positive for fishermen</i>
Accountability Measures (AMs)	14a - AMs with allocations	if there are allocations, then AMs are only automatically triggered if the overall ACL is exceeded. Whichever sector, recreational or commercial or both, that caused the overall ACL overage would have added or modified measures to ensure that future overages do not occur in the future. The Council shall recommend such management measures, for the soonest year practicable, that analysis demonstrates should eliminate future overages. Such measures could include any measure that can be set via specifications. In addition, in the relevant specifications year, the overage would be deducted from what would otherwise be the sector ACLs, based on the recommendations of the Council's SSC. <i>Impacts: Positive for blueline tilefish. Possibly short term negative for fishermen but should be long term positive related to supporting sustainable management.</i>
	14b - AMs without allocations	if there are no allocations, then if the ACL is exceeded, the Council will recommend management measures (commercial and/or recreational), for the soonest year practicable, that analysis demonstrates should eliminate future overages. Such measures could include any measure that can be set via specifications. In addition, in the relevant specifications year, the overage would be deducted from what would otherwise be the ABC, based on the recommendations of the Council's SSC. <i>Impacts: Positive for blueline tilefish. Possibly short term negative for fishermen but should be long term positive related to supporting sustainable management.</i>
	14c - In-season closure authority	If NMFS determines that one sector's catch or the total catch will exceed 95% of a sector's ABC or the overall ABC, NMFS may close or adjust the season and/or trip/bag limits for either sector. <i>Impacts: Positive for blueline tilefish. Possibly short term negative for fishermen but should be long term positive related to supporting sustainable management.</i>

2.0 LIST OF ACRONYMS AND ABBREVIATIONS

ABC	Acceptable Biological Catch (Upper limit, set by SSC)
ACCSP	Atlantic Coastal Cooperative Statistics Program
ACL	Annual Catch Limit
ACT	Annual Catch Target
ASMFC	Atlantic States Marine Fisheries Commission
CFR	Code of Federal Regulations
Council	Mid-Atlantic Fishery Management Council
DOC	Department of Commerce
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
EO	Executive Order
ESA	Endangered Species Act
FMAT	Fishery Management Action Team
FMP	Fishery Management Plan
FR	Federal Register
GARFO	Greater Atlantic Regional Fisheries Office (formerly Northeast Regional Office/NERO)
MMPA	Marine Mammal Protection Act
MSA	Magnuson-Stevens Fishery Conservation and Management Act (as currently amended)
MT	Metric tons (=2204.6 pounds)
NEFMC	New England Fishery Management Council
NEFSC	Northeast Fisheries Science Center
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OFL	Overfishing Level
SAFMC	South Atlantic Fishery Management Council
SEDAR	SouthEast Data, Assessment, and Review
SSC	Scientific and Statistical Committee
TAL	Total Allowable Landings
US	United States
VMS	Vessel Monitoring System
VTR	Vessel Trip Report

3.0 CONTENTS, TABLES, AND FIGURES

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4.0 INTRODUCTION AND BACKGROUND

Blueline tilefish management was identified as a priority during a February 2015 Council meeting (<http://www.mafmc.org/briefing/2015/february-2014-blueline-tilefish-webinar-meeting>), and the Council is now considering management options for blueline tilefish north of the NC/VA border. Primary scoping was conducted in May, June, and July of 2015, and the scoping document and scoping comments may be found at <http://www.mafmc.org/actions/blueline-tilefish>. If blueline tilefish are added to the Tilefish Fishery Management Plan, then the Fishery Management Plan would effectively become the Golden and Blueline Tilefish Fishery Management Plan.

The Council is proposing this action because there is no permanent federal management of blueline tilefish north of North Carolina. In recent years catch has increased in the Mid-Atlantic without any restrictions in Federal waters, and the long-lived and sedentary nature of blueline tilefish likely make them susceptible to overfishing. Based on a Council request to address this issue (Appendix A), on June 4, 2015 NMFS implemented emergency regulations north of North Carolina, limiting commercial vessels to 300 pounds (whole weight) of blueline tilefish per trip and recreational fishermen to 7 blueline tilefish per person per trip, as well as requiring commercial and party/charter permitting for blueline tilefish (<http://www.greateratlantic.fisheries.noaa.gov/nr/2015/June/14tileblemergencyactionphl.pdf>). Emergency measures can generally only remain in effect for 366 days, and the emergency measures are set to expire June 3, 2016 (<http://www.gpo.gov/fdsys/pkg/FR-2015-11-30/pdf/2015-30320.pdf>).

The South Atlantic Fishery Management Council (SAFMC) manages blueline tilefish south of Virginia. The SAFMC requested its regulations be extended northward but NMFS deemed the Mid-Atlantic Council's request most appropriate. For reference, the current SAFMC regulations are described below (<http://www.safmc.net/FishIDandRegs/FishGallery/BluelineTilefish/>):

Commercial:

- **OPEN, effective January 1, 2016.**
- **NEW Regulations - effective March 30, 2015:**
 - **New Trip Limit:** 100-pound (gutted weight) trip limit.
 - **New 2015 commercial Annual Catch Limit:** 17,841-lbs (whole weight)
 - **These regulations are being implemented under [Snapper Grouper Amendment 32](#). See [Fishery Bulletin](#) and [FAQs](#) on Snapper Grouper Amendment 32.**
- **Size Limit: CLOSED: Otherwise, no size limit**
- **Trip Limit: CLOSED: Otherwise, when the season is open - NEW! Effective March 30, 2015 - 100-pound gutted weight trip limit.**
- **Regulatory Remarks:**
 - All species must be landed with head and fins intact.
 - Recreational and commercial fishermen are required to use dehooking tools when fishing for snapper grouper species.
 - The use of non-stainless steel circle hooks (offset or non-offset) is required for all species in the snapper grouper complex when using hook-and-line gear with natural baits in waters North of 28 degrees N. latitude.
 - After the commercial quota is met, all purchase and sale is prohibited and harvest and/or possession is limited to the recreational bag limit. This prohibition does not apply to fish

- harvested, landed, and sold prior to the quota being reached and held in cold storage by a dealer. Quotas are given in gutted weights.
- Commercial snapper grouper vessels must have onboard NMFS approved sea turtle release gear and follow smalltooth sawfish release protocol. See the [Handling and Release Protocol](#) from NOAA Fisheries or call 727-824-5312.
- **Annual Catch Limit (ACL)** – This species is managed under an ACL. See current information on [Commercial ACLs \(quotas\)](#) from NOAA Fisheries.

Recreational:

- **CLOSED June 10, 2015. The fishery will reopen May 1, 2016. See [Fishery Bulletin](#)**
- **When the fishery is open - NEW Regulations - effective March 30, 2015:**
 - New Bag Limit: One (1) fish per VESSEL per DAY (when the fishery is open; fishery is currently closed).
 - New Season:
 - May through August - fishery is open to harvest with a bag limit of one fish per VESSEL per day from May through August;
 - September through April - fishery closed to recreational harvest.
 - New 2015 recreational Annual Catch Limit: 17,791-lbs (whole weight)
 - These regulations are being implemented under [Snapper Grouper Amendment 32](#). See [Fishery Bulletin](#) and [FAQs](#) on Snapper Grouper Amendment 32.
- **Size Limit: CLOSED June 10, 2015, Otherwise, no size limit.**
- **Regulatory Remarks:**
 - All species must be landed with head and fins intact.
 - Recreational and commercial fishermen are required to use dehooking tools when fishing for snapper grouper species.
 - The use of non-stainless steel circle hooks (offset or non-offset) is required for all species in the snapper grouper complex when using hook-and-line gear with natural baits in waters North of 28 degrees N. latitude.
 - The sale of bag-limit caught snapper grouper species is prohibited.
 - **Annual Catch Limit (ACL)** - This species is managed under an ACL. See current information on [Recreational ACLs](#) from NOAA Fisheries

The SAFMC has continued to address management measures for blueline tilefish after receiving a report from its Scientific and Statistical Committee that would allow an increase in the total annual catch limit – see <http://safmc.net/meetings/september-2015-council-meeting>. This increase came after its SSC concluded that the projections for blueline tilefish provided by the NMFS' Southeast Fisheries Science Center do not represent the Best Scientific Information Available and were not adequate to support blueline tilefish fishing level recommendations for either current or future years. Instead, the SSC recommended setting the acceptable biological catch at the equilibrium yield at 75% of the fishing mortality associated with maximum sustainable yield (224,100 pounds).

In December 2015 the SAFMC approved a related Regulatory Amendment (#25) to the Snapper Grouper Fishery Management Plan that will specify new annual catch limits for blueline tilefish in the

South Atlantic, allowing the recreational bag limit to increase from 1 fish per vessel/per day from May through August to a 3 fish per person/day May through August within the 3-fish aggregate grouper bag limit. Recreational harvest is prohibited the remainder of the year. The amendment would also increase the commercial trip limit from 100 pounds (gutted weight) to 300 pounds.

Two Mid-Atlantic states, Virginia (VA) and Maryland, earlier enacted tilefish regulations that apply to vessels landing in their states, with both implementing 300 pound incidental commercial trip limits and a 7-fish recreational possession limit for all tilefish species combined. These measures were designed to proactively prevent a large directed commercial fishery and constrain fishing mortality in the recreational fishery for blueline tilefish that emerged in the early 2000s. The Council expressed concern to the other Mid-Atlantic and southern New England states that the lack of Federal management off the Mid-Atlantic posed a threat to the sustainability of the region's blueline tilefish resource. Since then, Delaware implemented regulations similar to Maryland/Virginia, and New Jersey implemented regulations similar to the emergency federal regulations. However, the lack of coordinated Federal management tailored to the characteristics of the fishery off the Mid-Atlantic has undermined effective conservation thus far. Blueline tilefish are likely susceptible to overfishing due to their life history (relatively long-lived and sedentary), so the Council is considering developing management measures for blueline tilefish in this action.

4.1 PURPOSE AND NEED FOR ACTION

The lack of coordinated Federal management tailored to the characteristics of the fishery off the Mid-Atlantic is likely to undermine effective conservation. Blueline tilefish are likely susceptible to overfishing due to their life history (relatively long-lived and sedentary), so the purpose of this action is to consider conservation and management measures for blueline tilefish north of the NC/VA border.

4.2 REGULATORY AUTHORITY

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) as currently amended (http://www.nmfs.noaa.gov/sfa/laws_policies/msa/documents/msa_amended_2007.pdf) requires a Council, “for each fishery under its authority that requires conservation and management, prepare and submit to the Secretary (A) a fishery management plan, and (B) amendments to each such plan that are necessary from time to time (and promptly whenever changes in conservation and management measures in another fishery substantially affect the fishery for which such plan was developed).” The Council has concluded that the blueline tilefish fishery north of the NC/VA border is in need of conservation and management via an amendment to the Tilefish Fishery Management Plan.

4.3 MANAGEMENT OBJECTIVES AND FMP HISTORY

Objectives- Golden Tilefish FMP

The overall goal of this FMP is to achieve optimum yield. To meet the overall goal, the following objectives have been adopted:

1. Prevent overfishing and rebuild the resource to the biomass that would support MSY.
2. Prevent overcapitalization and limit new entrants.
3. Identify and describe essential tilefish habitat.
4. Collect necessary data to develop, monitor, and assess biological, economic, and social impacts of management measures designed to prevent overfishing and to reduce bycatch of tilefish in all fisheries

An alternative in this action proposes to use these objectives for blueline tilefish as well, with a modification specific to blueline tilefish (see Alternative 2c).

FMP History - <http://www.mafmc.org/tilefish/>

The golden tilefish (*Lopholatilus chamaeleonticeps*) fishery is managed under the Tilefish Fishery Management Plan (FMP) that was prepared cooperatively by the Mid-Atlantic Fishery Management Council (Council) and the National Marine Fisheries Service (NMFS).

The FMP which initiated the management for this species became effective November 1, 2001 (66 FR 49136; September 26, 2001) and included management and administrative measures to ensure effective management of the tilefish resource. The FMP established total allowable landings (TAL) as the primary control on fishing mortality. The FMP also implemented a limited entry program and a tiered commercial quota allocation of the TAL. There are three fishing categories, an incidental, a part-time, and a full-time (with two different tiers or subcategories) for division of the quota under the tilefish limited access program. Under the FMP, the "target" estimate of landings for the incidental category (5 percent of the TAL) is first deducted from the overall TAL, and then the remainder of the TAL is divided among the full-time tier 1 category, which receives 66 percent; the full-time tier 2 category, which receives 15 percent; and, the part-time category, which receives 19 percent. Trip limits are currently only imposed in the incidental permit category (open access) to achieve a "target" or soft quota. Other elements of the original FMP included: a stock rebuilding strategy; permits and reporting requirements for commercial vessels, operators, and dealers; a prohibition on the use of gear other than longline gear by limited-access tilefish vessels (later amended see discussion below); and a framework adjustment process.

In October 26, 2001, the Natural Resources Defense Council (NRDC) filed a complaint with the Southern District Court of New York alleging that the lack of any restrictions on bottom tending mobile gear fishing gear (e.g., otter trawl nets) in essential fish habitat for tilefish rendered the FMP and its implementing regulations arbitrary and capricious. A Federal Court order in *Natural Resources Defense Council v. Evans* (March 31, 2003) upheld the agency action because there was no scientific evidence

supporting the conclusion that bottom tending mobile fishing gear is having an identifiable adverse impact on tilefish essential fish habitat. Under the regulations in existence at the time the FMP was prepared, only an "identifiable" adverse effect on essential fish habitat from a fishing practice required consideration of measures to mitigate, minimize or prevent the impacts resulting from such fishing practice. The Judge concluded that plaintiffs' reliance on marks across parts of the ocean bottom caused by the fishing gear as evidence of an adverse impact was misplaced. While such marks may reflect a physical disruption of the bottom, there is no information according to the tilefish experts to demonstrate that this disruption had any effect to reduce the quality or quantity of tilefish essential fish habitat. Consequently, such physical disruption did not fit the definition of "adverse effect" in the regulations. In light of the absence of scientific information on the effects of fishing gear on tilefish essential fish habitat, the Judge found that the agency's analysis of the environmental impacts in the EIS was reasonable and a good faith presentation of the best information available under the circumstances.

A Federal Court Order in *Hadaja v. Evans* (May 15, 2003) set aside the permit requirements on the grounds that the FMP violated National Standard 2 of the MSFCMA because it was not based on the best scientific information available. This decision vacated the regulations that implemented sub-quotas for the various limited access categories. In addition, the Federal Court Order in *Hadaja v. Evans* also set aside the restriction on the use of all gear other than longline gear for limited access tilefish vessels due to the lack of scientific information to support this ban. The Federal Court Order in *Hadaja v. Evans* held that "the Secretary must adopt a plan that is based on the best scientific information available, which may be the existing plan, but only if the evidence in the administrative record (record) clearly supports it" (69 CFR 22454; April 26, 2004).

After the Council submitted additional detailed information that supported the limited access condition established under the FMP, the NMFS reinstated the permit requirements for commercial tilefish vessels on May 31, 2004. More specifically, in doing so, the NMFS reinstated the vessel permit requirements; the vessel reporting requirements; the observer coverage regulations; and the incidental catch limit. In addition to reinstating the permit requirements, NMFS also removed the prohibition of the use of all gear other than longline gear for limited access vessels, which had previously been struck down by the Federal Court Order in *Hadaja v. Evans*. NMFS removed this prohibition due to the fact that scientific information to support reinstating the ban on the use of all gear other than longline gear in the directed tilefish fishery was lacking (69 CFR 22454; April 26, 2004).

Framework 1 to the FMP added provisions for a research set-aside quota (not currently utilized).

Amendment 1 to the FMP implemented an Individual Fishing Quota in the directed golden tilefish fishery. It also implemented new reporting requirements and gear modifications, addressed recreational fishing issues, and reviewed the EFH components of the FMP, including implementing gear restricted areas to prevent bottom trawling in habitat areas of particular concern.

Amendment 2 was an Omnibus Amendment that implemented a Standardized Bycatch Reporting Methodology, and Amendment 3 was an Omnibus Amendment that implemented Acceptable Biological Catches (ABCs) and Annual Catch Limits (ACLs) to avoid overfishing and ensure accountability. Amendment 4 was another Omnibus Amendment that implemented a new Standardized Bycatch Reporting Methodology to address a legal challenge. Additional details on previous actions can be found at <http://www.mafmc.org/fisheries/fmp/tilefish>.

4.4 MANAGEMENT UNIT AND SCOPE OF ALTERNATIVES

The current management unit for this FMP is defined as all golden tilefish under United States jurisdiction in the Atlantic Ocean north of the NC/VA border. Golden tilefish south of the NC/VA border are managed by the South Atlantic Fishery Management Council. This action proposes to add a blue-line tilefish management unit and associated management measures for the same waters as the current plan uses for golden tilefish (from north of the NC/VA border to the Canadian boundary).

5.0 MANAGEMENT ALTERNATIVES

15 alternatives or sets of alternatives are presented below, primarily for the purpose of establishing blue-line tilefish management north of the NC/VA border (there are also some provisions that apply to golden tilefish):

- 1) No action
- 2) Management Unit and Objectives
- 3) Status Determination Criteria
- 4) Commercial Permitting and Reporting
- 5) For-Hire Recreational Permitting and Reporting
- 6) Private Recreational Permitting and Reporting
- 7) Monitoring Committee
- 8) Framework Adjustment Process
- 9) Specifications Process and Risk Policy
- 10) Allocations and Specifications
- 11) Commercial Trip Limits
- 12) Recreational Bag/Possession Limits
- 13) Essential Fish Habitat (EFH) Designation
- 14) Accountability Measures (AMs)
- 15) Considered but Rejected Alternatives

5.1 ALTERNATIVE 1: NO ACTION

The emergency measures currently in place will remain in effect until their expiration on June 3, 2016 (see <http://www.gpo.gov/fdsys/pkg/FR-2015-11-30/pdf/2015-30320.pdf>). Measures considered in this document would only be implemented on/after June 4, 2016. Thus taking no action would mean that on June 4, 2016 we would return to the situation where blue-line tilefish are not managed with Federal management measures north of the NC/VA border (36.550278 N Latitude). As such, with no action it is likely that at least for some time there would be no management of blue-line tilefish in Federal waters north of the NC/VA border.

While the emergency measures expire on June 3 and therefore do not represent what the no action alternative would result in, since they are currently in effect the emergency measures are summarized

below for reference (refer to the federal register or individual states for detailed current regulations) (<http://www.greateratlantic.fisheries.noaa.gov/nr/2015/June/14tileblemergencyactionphl.pdf>).

For Charter/Party Vessels: Now must hold a valid Greater Atlantic Region open access tilefish charter/party vessel permit to possess or land blueline tilefish, and must follow all recordkeeping and reporting requirements. This includes reporting all catch of all fish on Vessel Trip Reports. The recreational possession limit for charter/party and private recreational anglers is seven blueline tilefish per person, per trip. Note: any vessel with any Federal charter/party permit is already required to report all fish caught on for-hire trips.

For Commercial Vessels: Now must hold a valid Greater Atlantic Region open access commercial tilefish vessel permit to possess or land blueline tilefish, and must follow all related recordkeeping and reporting requirements. This includes reporting all catch of all fish on Vessel Trip Reports. The commercial blueline tilefish possession limit is 300 pounds whole weight per trip, which is 275 pounds of gutted, head-on fish. Upon expiration of the emergency rule, the possession/trip limits would cease in Federal waters. Landings would be limited in states with relevant regulations (VA, MD, DE, and NJ) but not further north and management would not be coordinated throughout the region.

5.2 ALTERNATIVE SET 2: MANAGEMENT UNIT AND OBJECTIVES

2a. (**Preferred**) This would establish a separate blueline tilefish management unit in the EEZ north of the NC/VA border (36.550278 N Latitude) extending up to the boundary with Canada, which would be managed by the Mid-Atlantic Fishery Management Council. The Council is funding genetics research to gain more information on the stock structure of blueline tilefish, but given that the SAFMC's jurisdiction ends at the NC/VA border and the Council's SSC has found that the most recent blueline tilefish assessment (SEDAR 32) is insufficient for management advice north of the NC/VA border, the Council proposes to manage blueline tilefish north of the NC/VA border. If future research suggests that a different management unit would be more appropriate, the management unit could be changed via a framework adjustment. This alternative is preferred because it is consistent with the current SAFMC management boundaries and aligns with the golden tilefish stock definition (absent other information and given the similarity between the species, golden tilefish is likely to be a species that provides relevant information regarding an appropriate blueline tilefish management unit).

2b. This would establish a separate blueline tilefish management unit in the EEZ north of Cape Hatteras (35.253167 N. lat., the latitude of Cape Hatteras Light), extending up to the boundary with Canada, which would be managed by the Mid-Atlantic Fishery Management Council. While 2a is the preferred alternative for reasons described above, Cape Hatteras is a general mixing zone between more northern and more southern areas, and does serve as the stock and management unit boundary for black sea bass, so this option is considered in this action.

2c. This alternative would establish that the objectives for blueline tilefish are the same as for golden tilefish, with the addition that "Management will reflect blueline tilefish's susceptibility of overfishing and the need of an analytical stock assessment."

5.3 ALTERNATIVE 3: STATUS DETERMINATION CRITERIA

The Council would use the most recent peer-reviewed and accepted assessment as applicable to blueline tilefish in its management unit. This is the standard approach in most Council FMPs, and is being added to all others via other ongoing actions. If no assessment is available (e.g. *Illex*, Atl. Mackerel), then the status is documented as unknown by NMFS pending a future successfully-reviewed assessment. In addition, the Council's Risk Policy (see below) has provisions for situations where overfishing levels cannot be determined via an accepted assessment.

5.4 ALTERNATIVE SET 4: COMMERCIAL PERMITTING AND REPORTING

4a. Alternative 4a would make permanent the emergency regulations that anyone with a commercial open access golden tilefish permit would be permitted to retain for sale blueline tilefish subject to the applicable trip limit. This would create a joint golden/blueline tilefish open access permit.

4b. Alternative 4b would require anyone landing any blueline tilefish for sale to get a newly-created commercial open access blueline tilefish permit. Retention of blueline tilefish for sale would be subject to the applicable trip limit.

4c. Alternative 4c would require standard reporting of catch for any commercial vessel possessing a permit that allows them to land blueline tilefish (like other federal permits). These include (from golden tilefish requirements):

Vessels landing tilefish for sale will be required to have Federal Vessel permits. A dealer permit is required for dealers purchasing tilefish harvested from the exclusive economic zone (EEZ) in addition to dealers purchasing tilefish from permitted vessels. Dealers issued a tilefish dealer permit must report all fish purchases along with information required at section 648.7 (1)(i).

Operators of commercial vessels (vessels with permits to sell tilefish) will be required to obtain Operator permits.

Vessels landing tilefish for sale would need to submit vessel logbook/trip reports (VTRs). Dealers would need to submit dealer reports.

The current vessel logbook requires vessels to report everything they catch including bycatch.

Vessels also would be required to take observers if requested.

4d. Alternative 4d would require Federally-permitted commercial blueline tilefish vessels to submit Vessel Trip Reports (VTRs) electronically. A new ACCSP mobile application facilitates electronic submission of VTRs. If a combined golden/blueline tilefish permit is used, then all commercial vessels with golden/blueline tilefish permits would have to submit VTRs electronically.

4e. Dealer Permits and Reporting – This alternative would institute dealer requirements similar to golden tilefish, i.e. that Federally-permitted vessels can only sell blueline tilefish to Federally-permitted dealers, and that dealers must have a federal permit to buy blueline tilefish. In addition, the following reporting requirements (excerpted from §648.7) for federal dealers would apply:

Dealers—Detailed report. Federally permitted dealers, and any individual acting in the capacity of a dealer, must submit to the Regional Administrator or to the official designee a detailed report of all fish purchased or received for a commercial purpose, other than solely for transport on land, by one of the available electronic reporting mechanisms approved by NMFS, unless otherwise directed by the Regional Administrator. The following information, and any other information required by the Regional Administrator, must be provided in each report:

Required information—All dealers issued a dealer permit under this part must provide: Dealer name; dealer permit number; name and permit number or name and hull number (USCG documentation number or state registration number, whichever is applicable) of vessel(s) from which fish are purchased or received; trip identifier for each trip from which fish are purchased or received from a commercial fishing vessel permitted under this part; date(s) of purchases and receipts; units of measure and amount by species (by market category, if applicable); price per unit by species (by market category, if applicable) or total value by species (by market category, if applicable); port landed; cage tag numbers for surfclams and ocean quahogs, if applicable; disposition of the seafood product; and any other information deemed necessary by the Regional Administrator. If no fish are purchased or received during a reporting week, a report so stating must be submitted.

System requirements—All persons required to submit reports are required to have the capability to transmit data via the Internet. To ensure compatibility with the reporting system and database, dealers are required to utilize a personal computer, in working condition that meets the minimum specifications identified by NMFS. The affected public will be notified of the minimum specifications via a letter to all Federal dealer permit holders.

Annual report—All persons issued a permit under this part are required to submit the following information on an annual basis, on forms supplied by the Regional Administrator. All dealers and processors issued a permit under this part must complete all sections of the Annual Processed Products Report for all species that were processed during the previous year. Reports must be submitted to the address supplied by the Regional Administrator.

5.5 ALTERNATIVE SET 5: FOR-HIRE RECREATIONAL PERMITTING AND REPORTING

5a. Alternative 5a would make permanent the emergency requirement that any party or charter vessel must have been issued a Federal Charter/Party (golden) tilefish vessel permit to fish for blueline tilefish in the EEZ with passengers for hire. This would create a joint golden/blueline tilefish permit.

5b. Alternative 5b would require any party or charter vessel to have a newly-created Federal Charter/Party blueline tilefish vessel permit to fish for blueline tilefish in the EEZ with passengers for hire.

5c. Alternative 5c would require standard reporting by Vessel Trip Reports (VTRs) of catch for any vessel possessing a permit that allows them to fish for blueline tilefish with passengers for hire. Note: currently any vessel with any Federal Greater Atlantic federal party/charter must already report all catches (including discards) of all species of fish. While limited information is generally used from for-

hire VTRs (<http://www.mafmc.org/s/For-Hire-Fact-Sheet.pdf>), there are a variety of research efforts underway that could lead to additional utility of VTR information.

5d. Alternative 5d would require for-hire vessels to submit Vessel Trip Reports (VTRs) electronically if they have a golden tilefish or blueline tilefish permit. A new ACCSP mobile application facilitates electronic submission of VTRs. If a combined golden/blueline tilefish permit is used, then all for-hire vessels with golden/blueline tilefish permits would have to submit VTRs electronically.

5.6 ALTERNATIVE SET 6: PRIVATE RECREATIONAL PERMITTING AND REPORTING

6a. Alternative 6a would create and require a dedicated recreational fishing permit for private recreational anglers to catch golden or blueline tilefish, similar to how Highly Migratory Species (HMS) require a separate permit. Establishment of a separate recreational permit would likely require a follow-up rulemaking to achieve full implementation.

6b. Alternative 6b would require that a NMFS Highly Migratory Species (HMS) permit be obtained by any vessel owner/operator seeking to catch golden or blueline tilefish. While blueline tilefish are not highly migratory, it is likely that most anglers who fish for tilefish already obtain HMS permits. With this alternative, the Council would also attempt to add tilefish as a species asked directly for information about during the NMFS large pelagics survey (LPS). NMFS' HMS division has indicated that this option should be feasible as a rapid way to add a private permitting option for blueline tilefish, and there is already a web-access platform designed to facilitate the acquisition of HMS permits by private anglers (pers. com M. Schulze-Haugen). No additional programming would have to occur – private fishermen would need to have an HMS permit to possess blueline tilefish. A concerted outreach effort would be undertaken to communicate the new requirement.

6c. Alternative 6c would require private fishermen to report golden and blueline tilefish catch through the HMS reporting system, complemented by catch cards and tags as done in Maryland (<http://dnr2.maryland.gov/fisheries/Pages/coastal/tagging.aspx>). HMS reporting compliance is low except when catch cards and tags are required, as they enable enforcement. Modification of the HMS reporting system would likely require addressing additional implementation issues (e.g. Federal vendor contract modifications), and might need a follow-up rulemaking to achieve full implementation (pers. com M. Schulze-Haugen). Private reporting is considered due to the rare-event nature of blueline tilefish catches.

6d. Alternative 6d would require a mobile reporting (via a modified SAFIS application) of golden and blueline tilefish for private recreational fishermen before any tilefish are removed from a vessel, or before a trailered vessel is removed from the water. Requiring such reporting could help improve compliance if enforcement personnel can confirm that a report has been made. ACCSP has indicated that they can quickly provide a modified SAFIS application with minimal additional resources (pers. Com M. Cahall). Private reporting is considered due to the rare-event nature of blueline tilefish catches.

5.7 ALTERNATIVE 7: MONITORING COMMITTEE

The Golden Tilefish Monitoring Committee has the needed expertise to monitor the blueline tilefish fishery and this alternative would establish that the same Monitoring Committee would provide recommendations to the Council and/or relevant committee to ensure that blueline tilefish specifications are not exceeded and to address any other operational aspects of the fishery. This would essentially create a Golden/Blueline Tilefish Monitoring Committee.

5.8 ALTERNATIVE 8: FRAMEWORK ADJUSTMENTS

This alternative would establish that any action that is frameworkable for golden tilefish would also be frameworkable for blueline tilefish. It would also establish that generally, any action that has been previously considered in the FMP or in an amendment to the FMP may be modified via a framework action. The unit of management may also be modified via a framework action.

The current list of frameworkable actions in the fishery management plan is:

(1) *Specific management measures.* The following specific management measures may be adjusted at any time through the framework adjustment process:

- (i) Minimum fish size;
- (ii) Minimum hook size;
- (iii) Closed seasons;
- (iv) Closed areas;
- (v) Gear restrictions or prohibitions;
- (vi) Permitting restrictions;
- (vii) Gear limits;
- (viii) Trip limits;
- (ix) Adjustments within existing ABC control rule levels;
- (x) Adjustments to the existing Council risk policy;
- (xi) Introduction of new AMs, including sub ACTs;
- (xii) Annual specification quota setting process;
- (xiii) Tilefish FMP Monitoring Committee composition and process;
- (xiv) Description and identification of EFH;
- (xv) Fishing gear management measures that impact EFH;
- (xvi) Habitat areas of particular concern;
- (xvii) Set-aside quotas for scientific research;
- (xviii) Changes, as appropriate, to the SBRM, including the CV-based performance standard, the means by which discard data are collected/obtained, fishery stratification, the process for prioritizing observer sea-day allocations, reports, and/or industry-funded observers or observer set aside programs;

(xix) Recreational management measures, including the bag limit, minimum fish size limit, seasons, and gear restrictions or prohibitions; and

(xx) Golden tilefish IFQ program review components, including capacity reduction, safety at sea issues, transferability rules, ownership concentration caps, permit and reporting requirements, and fee and cost-recovery issues.

(xxi) Measures that require significant departures from previously contemplated measures or that are otherwise introducing new concepts may require a formal amendment of the FMP instead of a framework adjustment.

Framework actions facilitate expedient modifications to certain management measures. Framework actions can modify existing measures and/or those that have been previously considered in a fishery management plan (FMP) or FMP amendment. While amendments may take several years to complete and address a variety of issues, frameworks generally can be completed in 6-8 months and address one or a few issues in a fishery. An "omnibus framework" may address the same/similar issue(s) across multiple FMPs. More details on how frameworks are done is provided below.

FRAMEWORK PROCESS

If appropriate, the Council may at any time initiate a framework action to add or adjust management measures within an FMP per the goals and objectives of the FMP. Usually a motion at one meeting will initiate development and consideration of a framework at the following two Council meetings (with decision making at the last meeting). This involves three Council meetings with just initiation at the first meeting, but a separate initiation meeting is not explicitly required. Initiation could occur at one meeting with decision making at the next, but in this case relevant management options and analyses would need to be presented at the meeting when initiation took place. Per the applicable regulations, the Council must provide the public with advance notice of the availability of the recommendation(s), appropriate justification(s) and economic and biological analyses, and the opportunity to comment on the proposed adjustment(s) at the first Council meeting and prior to and at the second Council meeting.

Coordination with NMFS is primarily achieved by communication between Council staff and NMFS plan coordinators and NMFS National Environmental Policy Act (NEPA) staff. Other NMFS staff may become involved depending on the nature of the action and required analyses. The Council-NMFS Operating Agreement specifies that the Council will develop "Action Plans" for frameworks that delineate required analyses and responsibilities for framework development.

1st Framework Meeting

A committee meeting can count as the first framework meeting, but to maximize transparency and opportunities for public input, NMFS has recommended that both framework meetings be full Council meetings. Alternatively, a noticed full Council meeting via webinar between regularly scheduled in-person Council meetings could constitute the first framework meeting if time is of the essence.

Council staff develops initial alternatives with preliminary analyses before the first framework meeting. The documentation for the first framework meeting should at a minimum include: a Purpose and Need Statement, a timeline for action, a description of the alternatives, a description of the relevant fisheries, relevant constituent communications, and any staff recommendations. Staff works with the Council to

come out of the first framework meeting with a clear range of alternatives. The Council should identify preliminary preferred alternatives if possible.

2nd Framework Meeting

Staff may suggest minor changes for alternatives leading up to the second meeting, as long as the changes match the intent of alternatives discussed at the first framework meeting. Minor modifications to alternatives may also be made by the Council during the final framework meeting. However, the analysis supporting Council decision-making must be complete before decision-making.

The environmental analyses supporting a framework action usually take the form of an Environmental Assessment (EA), but sometimes a Categorical Exclusion (CE) can be utilized if the action is primarily administrative in nature. This document is usually presented in near-final form to the Council at the 2nd framework meeting, but additional document perfection typically occurs via review with NMFS staff before finalization.

As part of the Council's recommendations regarding any management measures, the Council must also specify whether the measures should be implemented via a final rule or proposed rule, along with supporting rationale.

Issues that require significant departures from previously contemplated measures or that are otherwise introducing new concepts may require an amendment of an FMP instead of a framework adjustment. So even if an action is identified as generally frameworkable, if it creates enough change or impacts, Council staff or NMFS staff may advise that the action should be undertaken via an FMP amendment versus a framework. Also, each FMP contains a list of measures that may be modified via annual specifications, and the applicable regulations can be consulted when deciding whether actions should be undertaken via an amendment, framework, or annual specifications.

5.9 ALTERNATIVE SET 9: SPECIFICATIONS PROCESS AND RISK POLICY

9a. This alternative would specify what measures can be set during specifications. Measures that may be considered by the Council during annual specifications include specifying overfishing levels (OFLs), Acceptable Biological Catches (ABC), Annual Catch Limits (ACLs), Annual Catch Targets (ACTs), discard set-asides, total allowable landings (TALs), commercial and recreational quotas, trip limits, bag limits, seasons, size limits, retention requirements, and/or any measure needed to ensure that the specifications are not exceeded. The fishing year would be aligned with the golden tilefish fishing year, i.e. November 1 to October 31.

9b. This alternative establishes that the Council's current control rules for ABC-setting would apply to blueline tilefish, as described below:

Control Rule Related to SSC's Decision Regarding How Uncertainty is Handled in Assessments and the Impact on ACB-Setting

The SSC shall review the following criteria, and any additional relevant information, to assign managed stocks to one of four control rule types based on the species' assessment and its treatment of uncertainty when developing ABC recommendations. The SSC shall review the ABC control rule type assignment for stocks each time an ABC is recommended. The ABC may be recommended for up to 3 years for all stocks, with the exception of 5 years for spiny dogfish. The SSC may deviate from the control rule methods and recommend an ABC that differs from the result of the standard ABC control rule calculation; however, any such deviation must include the following: A description of why the deviation is warranted, a description of the methods used to derive the alternative ABC, and an explanation of how the deviation is consistent with National Standard 2. The ABC control rule types (underlined) are described below.

(a) ABC control rule for a stock with an OFL probability distribution that is analytically-derived and accepted by the SSC. (1) Generally means the SSC determines the assessment OFL and the assessment's treatment of uncertainty are acceptable, and requires the SSC to determine the following:

- (i) All important sources of scientific uncertainty are captured in the stock assessment model;
- (ii) The probability distribution of the OFL is calculated within the stock assessment and provides an adequate description of the OFL uncertainty;
- (iii) The stock assessment model structure and treatment of the data prior to use in the model includes relevant details of the biology of the stock, fisheries that exploit the stock, and data collection methods;
- (iv) The stock assessment provides the following estimates: Fishing mortality rate (F) at MSY or an alternate maximum fishing mortality threshold (MFMT) to define OFL, biomass, biological reference points, stock status, OFL, and the respective uncertainties associated with each value; and
- (v) No substantial retrospective patterns exist in the stock assessment estimates of fishing mortality, biomass, and recruitment.

(2) *ABC determination* for stocks with an accepted analytically derived OFL probability distribution: The ABC will be derived by applying the acceptable probability of overfishing from the Council's risk policy found in §648.21(a) through (d) to the probability distribution of the OFL.

(b) ABC control rule for a stock with an OFL probability distribution that is modified by the assessment team and accepted by the SSC. (1) Generally means the SSC determines the assessment OFL is acceptable and the SSC accepts the assessment team's modifications to analytical uncertainty results, and requires the SSC to determine the following:

- (i) Key features of the stock biology, the fisheries that exploit it, and/or the data collection methods for stock information are missing from the stock assessment;
- (ii) The stock assessment provides reference points (which may be proxies), stock status, and uncertainties associated with each; however, the uncertainty is not fully promulgated through the stock assessment model and/or some important sources of uncertainty may be lacking;
- (iii) The stock assessment provides estimates of the precision of biomass, fishing mortality, and reference points; and
- (iv) The accuracy of the minimum fishing mortality threshold and projected future biomass is estimated in the stock assessment using ad hoc methods.

(v) The modified OFL probability distribution provided by the assessment team acceptably addresses the uncertainty of the assessment.

(2) *ABC determination* for stocks with an accepted assessment team-modified OFL probability distribution: The ABC will be derived by applying the acceptable probability of overfishing from the Council's risk policy found in §648.21(a) through (d) to the probability distribution of the OFL as modified by the assessment team and accepted by the SSC.

(c) ABC control rule for a stock with an OFL probability distribution that is modified by the SSC. (1) Generally means the SSC determines the assessment OFL is acceptable but the SSC needs to determine the appropriate uncertainty for OFL based on meta-analysis and other considerations. This requires the SSC to determine that the stock assessment does not contain an estimated probability distribution of OFL or the stock assessment-provided OFL probability distribution is judged by the SSC to not adequately reflect uncertainty in the OFL estimate.

(2) *ABC determination* for stocks which need an SSC-modified probability distribution: The SSC will derive the ABC by applying the acceptable probability of overfishing from the Council's risk policy found in §648.21(a) through (d) to an SSC-adjusted OFL probability distribution. The SSC will use default assignments of uncertainty in the adjusted OFL probability distribution based on literature review and evaluation of control rule performance; or,

(ii) If the SSC cannot develop an OFL distribution, a default control rule of 75 percent of the F_{MSY} value will be applied to derive ABC.

(d) ABC control rule for when an OFL cannot be specified. (1) In this case the SSC determines that the OFL cannot be specified given the current state of knowledge.

(2) *ABC determination* if the OFL cannot be determined: The SSC will derive ABCs using control rules developed on a case-by-case basis by the SSC based on biomass and catch history and application of the Council's risk policy found in §648.21(a) through (d).

9c. This alternative establishes that the Council's current risk policy for ABC-setting would apply to blueline tilefish, as described below:

The risk policy shall be used by the SSC in conjunction with the ABC control rules to ensure the Council's preferred tolerance for the risk of overfishing is addressed in the ABC development and recommendation process.

(a) *Stocks under a rebuilding plan.* The probability of not exceeding the F necessary to rebuild the stock within the specified time frame (rebuilding F or $F_{REBUILD}$) must be at least 50 percent, unless the default level is modified to a higher probability for not exceeding the rebuilding F through the formal stock rebuilding plan. A higher probability of not exceeding the rebuilding F would be expressed as a value greater than 50 percent (e.g., 75-percent probability of not exceeding rebuilding F, which corresponds to a 25-percent probability of exceeding rebuilding F).

(b) *Stocks not subject to a rebuilding plan.*

(1) For stocks determined by the SSC to have an atypical life history, the maximum probability of overfishing as informed by the OFL distribution will be 35 percent for stocks with a ratio of biomass (B) to biomass at MSY (B_{MSY}) of 1.0 or higher (*i.e.*, the stock is at B_{MSY} or higher). The maximum probability of overfishing shall decrease linearly from the maximum value of 35 percent as the B/B_{MSY} ratio becomes less than 1.0 (*i.e.*, the stock biomass less than B_{MSY}) until the probability of overfishing becomes zero at a B/B_{MSY} ratio of 0.10. An atypical life history is generally defined as one that has greater vulnerability to exploitation and whose characteristics have not been fully addressed through the stock assessment and biological reference point development process.

(2) For stocks determined by the SSC to have a typical life history, the maximum probability of overfishing as informed by the OFL distribution will be 40 percent for stocks with a ratio of B to B_{MSY} of 1.0 or higher (*i.e.*, the stock is at B_{MSY} or higher). The maximum probability of overfishing shall decrease linearly from the maximum value of 40 percent as the B/B_{MSY} ratio becomes less 1.0 (stock biomass less than B_{MSY}) until the probability of overfishing becomes zero at a B/B_{MSY} ratio of 0.10. Stocks with typical life history are those not meeting the criteria in paragraph (b)(1) of this section.

(c) For instances in which the application of the risk policy approaches in either paragraph (b)(1) or (2) of this section using OFL distribution, as applicable given life history determination, results in a more restrictive ABC recommendation than the calculation of ABC derived from the use of $F_{REBUILD}$ at the Council-specified overfishing risk level as outlined in paragraph (a) of this section, the SSC shall recommend to the Council the lower of the ABC values.

(d) *Stock without an OFL or OFL proxy.*

(1) If an OFL cannot be determined from the stock assessment, or if a proxy is not provided by the SSC during the ABC recommendation process, ABC levels may not be increased until such time that an OFL has been identified.

(2) The SSC may deviate from paragraph (d)(1) of this section, provided that the following two criteria are met: Biomass-based reference points indicate that the stock is greater than B_{MSY} and stock biomass is stable or increasing, or if biomass based reference points are not available, best available science indicates that stock biomass is stable or increasing; and the SSC provides a determination that, based on best available science, the recommended increase to the ABC is not expected to result in overfishing. Any such deviation must include a description of why the increase is warranted, description of the methods used to derive the alternative ABC, and a certification that the ABC is not likely to result in overfishing on the stock.

5.10 ALTERNATIVE SET 10: ALLOCATIONS AND SPECIFICATIONS

10a. This alternative would not set allocations but the Council would rely on adjusting the specifications to control relative catch between the commercial and recreational fisheries. The catch of each fishery would have to be reviewed each year to determine if additional or modified measures are needed to control catch across the commercial and recreational blueline tilefish fisheries.

Catch time series (pounds)

While commercial blueline tilefish data is available from standard sources (dealer/vessel trip reports), blueline tilefish are almost totally absent from MRIP data and it is believed that considerable underreporting has occurred in for-hire vessel trip reports (VTRs). To address this, the Council held a facilitated workshop with individuals knowledgeable about the recreational blueline tilefish fishery to develop recreational blueline tilefish catch estimates through an iterative Delphi technique approach. The report from this workshop (Southwick Associates 2016) is available at <http://www.mafmc.org/ssc-meetings/2016/march-15-16>, and it was used to develop the time series below (also see Council staff memos at the same site under Blueline Tilefish). This time series was used to populate the percentages in the alternatives below. The Council's SSC is currently developing ABCs for blueline tilefish (will be available before the April Council meeting) and while acknowledging the uncertainty of the recreational estimates, the SSC concluded that these estimates are the best available given the limited data circumstances. A fish to weight conversion of 3.65 pounds per fish was used for recreationally-caught fish, primarily based on data collected by Old Dominion University via donations of carcasses from recreational anglers through the Virginia Marine Resources Commission's Marine Sportfish Collection Program and research collections from fish caught on Virginia headboats and charter boats.

As described in the above referenced staff memos, the commercial catch includes blueline tilefish caught off Virginia and to the north. Some of those fish may have been landed in North Carolina, but were included given the focus is on where the fish were, i.e. off Virginia and to the north.

Table 2. Blueline Tilefish Time Series Used for Allocation Percentages (pounds)

	Rec	Com	Total	Rec %	Com %
2004	51,098	7,406	58,504	87%	13%
2005	51,098	4,206	55,304	92%	8%
2006	51,098	28,437	79,535	64%	36%
2007	61,487	26,095	87,582	70%	30%
2008	56,078	7,881	63,959	88%	12%
2009	58,243	39,205	97,448	60%	40%
2010	54,805	7,439	62,244	88%	12%
2011	66,097	17,670	83,767	79%	21%
2012	67,888	41,268	109,157	62%	38%
2013	90,604	33,611	124,215	73%	27%

10b1. This alternative would use the best available data to set allocations based on median catch percentages from **2009-2013** (see considered but rejected section as to why 2014 is not included). Using the median down-weights atypical years. For example, if a fishery had 20%, 21%, 22%, 20%, and 90% of the catch over 5 years, the median would be 21% while the mean would be 35%. The median of the catch percentages from 2009-2013 is 73% recreational and 27% commercial.

10b2. This alternative would use the best available data to set allocations based on mean catch percentages from **2009-2013** (see considered but rejected section as to why 2014 is not included). Using the median down-weights atypical years. For example, if a fishery had 20%, 21%, 22%, 20%, and 90%

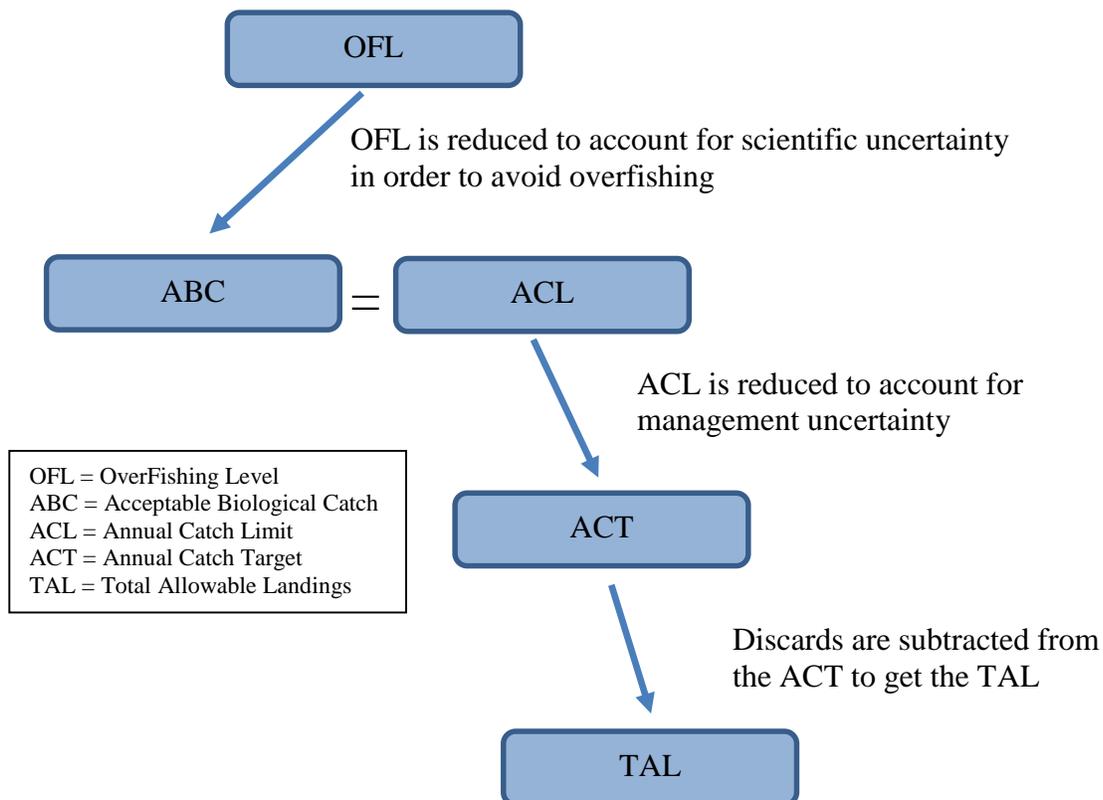
of the catch over 5 years, the median would be 21% while the mean would be 35%. The mean of the catch percentages from 2009-2013 is 72% recreational and 28% commercial.

10c1. This alternative would use the best available data to set allocations based on median catch percentages from **2004-2013** (see considered but rejected section as to why 2014 is not included). Using the median down-weights atypical years. For example, if a fishery had 20%, 21%, 22%, 20%, and 90% of the catch over 5 years, the median would be 21% while the mean would be 35%. The median of the catch percentages from 2004-2013 is 76% recreational and 24% commercial.

10c2. This alternative would use the best available data to set allocations based on mean catch percentages from **2004-2013** (see considered but rejected section as to why 2014 is not included). Once the catches are determined, then the mean of the annual percentages would be used. Using the median down-weights atypical years. For example, if a fishery had 20%, 21%, 22%, 20%, and 90% of the catch over 5 years, the median would be 21% while the mean would be 35%. The mean of the catch percentages from 2004-2013 is 76% recreational and 24% commercial.

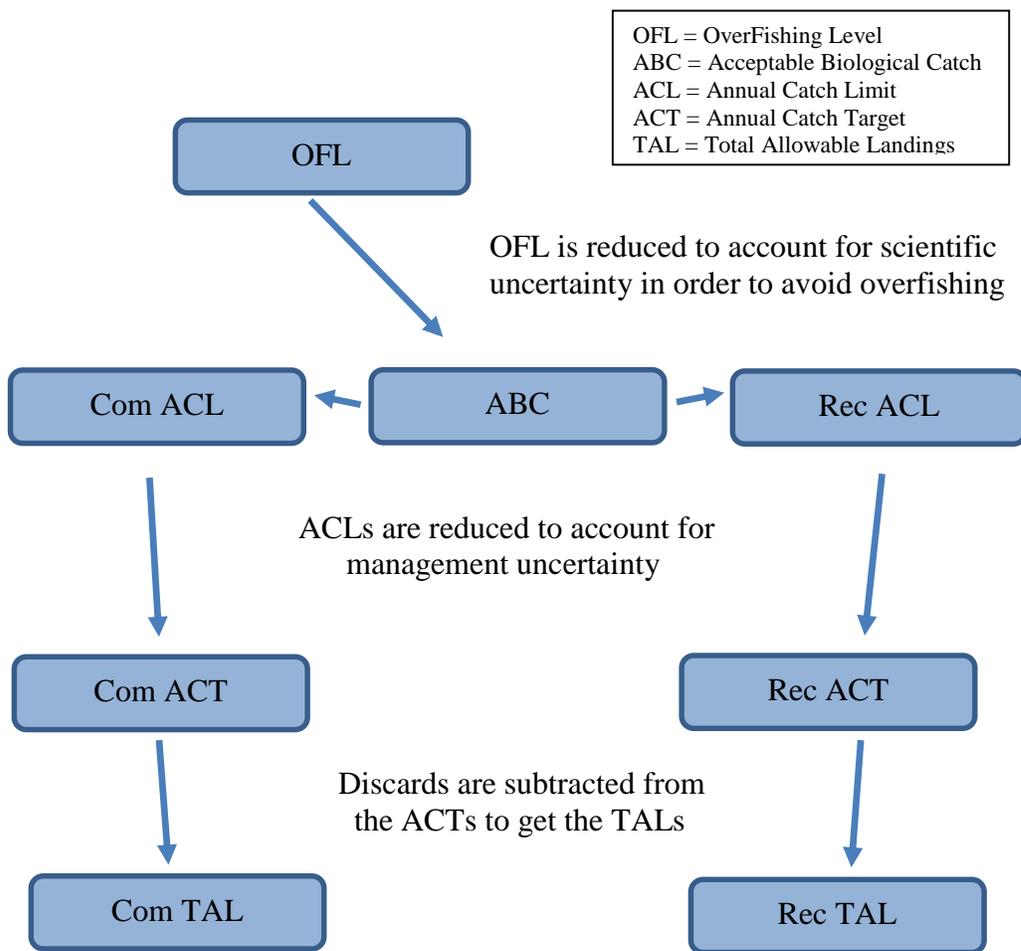
10d. If allocations are not made, this alternative describes how the specifications process would handle ABC, ACLs, ACTs, etc. In this case, a fishery wide ABC, ACL, and ACT would be set. ABC would be the catch recommended by the SSC to best avoid overfishing per the Council's risk policy regarding how uncertainty is handled. The ACL would equal the ABC and the ACT would be less than the ACL to account for management uncertainties. Anticipated discards would be subtracted to develop a total allowable landings (TAL) amount. The Council would then develop other management measures (seasons, trip limits, etc. as described above) that would be expected to meet ACT and not exceed the ABC/ACL. If the Council re-establishes a research set-aside program, that amount would be deducted from the TAL and could be up to 3% of the TAL.

Figure 1. 10d Flowchart



10e. If allocations are made, this alternative describes how the specifications process would handle allocations in terms of ABC, ACLs, ACTs, etc. The SSC would set the ABC as usual. First, the allocation would be used to establish fishery (commercial and recreational) ACLs. The addition of the two fishery ACLs would equal the ABC. ACTs would be set for each fishery to account for management uncertainty. Anticipated discards would be subtracted for each to develop a total allowable landings (TAL) amount for each. The Council would then develop other management measures (seasons, trip limits, etc. as described above) that would be expected to meet ACT and not exceed the ABC. If the Council re-establishes a research set-aside program, that amount would be deducted from the TAL and could be up to 3% of the TAL.

Figure 2. 10e Flowchart



5.11 ALTERNATIVE SET 11: COMMERCIAL TRIP LIMITS (GUTTED WEIGHT)

Note: with golden tilefish, the FMAT reports there has been confusion about whole and gutted weights. Some vessels have interpreted whole weight trip limits and quota allocations as gutted weight. This has led to some vessels landing their whole weight limit in gutted fish, which means some keep about 9% too much if at the trip limit (100 pounds of gutted fish is 109 pounds of live fish). To avoid this problem with blueline tilefish, the measures will be described as only gutted weight. The FMAT recommended selecting a measure that is a rounded weight in gutted pounds to facilitate compliance.

11a - This alternative would continue the emergency action's commercial trip limit of 275 pounds per trip gutted weight (head and fins must be attached).

11b – This alternative would reduce the trip limit from the emergency action's 275 pounds to a limit of **200** pounds per trip gutted weight (head and fins must be attached).

11c - This alternative would increase the trip limit from the emergency action's 275 pounds to a limit of **300** pounds per trip gutted weight (head and fins must be attached).

11d - This alternative would increase the trip limit from the emergency action's 275 pounds to a limit of **500** pounds per trip gutted weight (head and fins must be attached).

11e - This alternative would increase the trip limit from the emergency action's 275 pounds to a limit of **900** pounds per trip gutted weight (head and fins must be attached).

11f - This alternative would increase the trip limit from the emergency action's 275 pounds to a limit of **750** pounds per trip gutted weight (head and fins must be attached).

5.12 ALTERNATIVE SET 12: RECREATIONAL BAG/POSSESSION LIMITS

12a. This alternative would continue the emergency action's recreational bag limit of **7 fish**

12b. This alternative would reduce the bag limit from the emergency action's limit of 7 fish to **5 fish**.

12c. This alternative would increase the bag limit from the emergency action's limit of 7 fish to **9 fish**.

12d. If chosen, this alternative could only be chosen in combination with 12a, 12b, or 12c, and would allow an **additional 3** blueline tilefish per person on party boat trips (more than 6 passengers) that lasted longer than 36 hours from when the vessel leaves the dock to when a vessel returns to the dock. A call-out/call-in system would be necessary to assist enforcement of such a provision. A relatively small number of extra fish was chosen for this alternative so that the operation of this alternative and compliance could be evaluated at a relatively small scale after implementation.

5.13 ALTERNATIVE SET 13: ESSENTIAL FISH HABITAT (EFH) DESIGNATION

13a. Under this alternative, EFH designation would wait until the Council's pending overall EFH review action (2016-2017)

13b. This alternative would use the best available science to designate EFH in this action. If based on Sedberry et al. 2006, EFH for adults and juveniles would be all offshore waters with water depths from 46 meters to 256 meters. This was where blueline tilefish were collected in a study off South Carolina. Analysis of observer data north of the NC/VA border, from 2005-2014, found that 97% of blueline tilefish observations (by weight) occurred from 45 meters to 180 meters with very few observations less than 45 meters or greater than 225 meters (shallowest was 24 meters and deepest was 254 meters). Based on these observer data, 46-256 meters seems reasonable. It is anticipated that the EFH for eggs and larvae would be similar to that of golden tilefish: the water column on the outer continental shelf and slope from the U.S./Canadian boundary to the NC/VA boundary in mean water column temperatures between 7.5°C and 17.5°C (45.5oF to 63.5oF). Given what is known about blueline tilefish at this time, EFH would not extend northward up the Great South Channel, but the EFH designation could be changed in the future if appropriate.

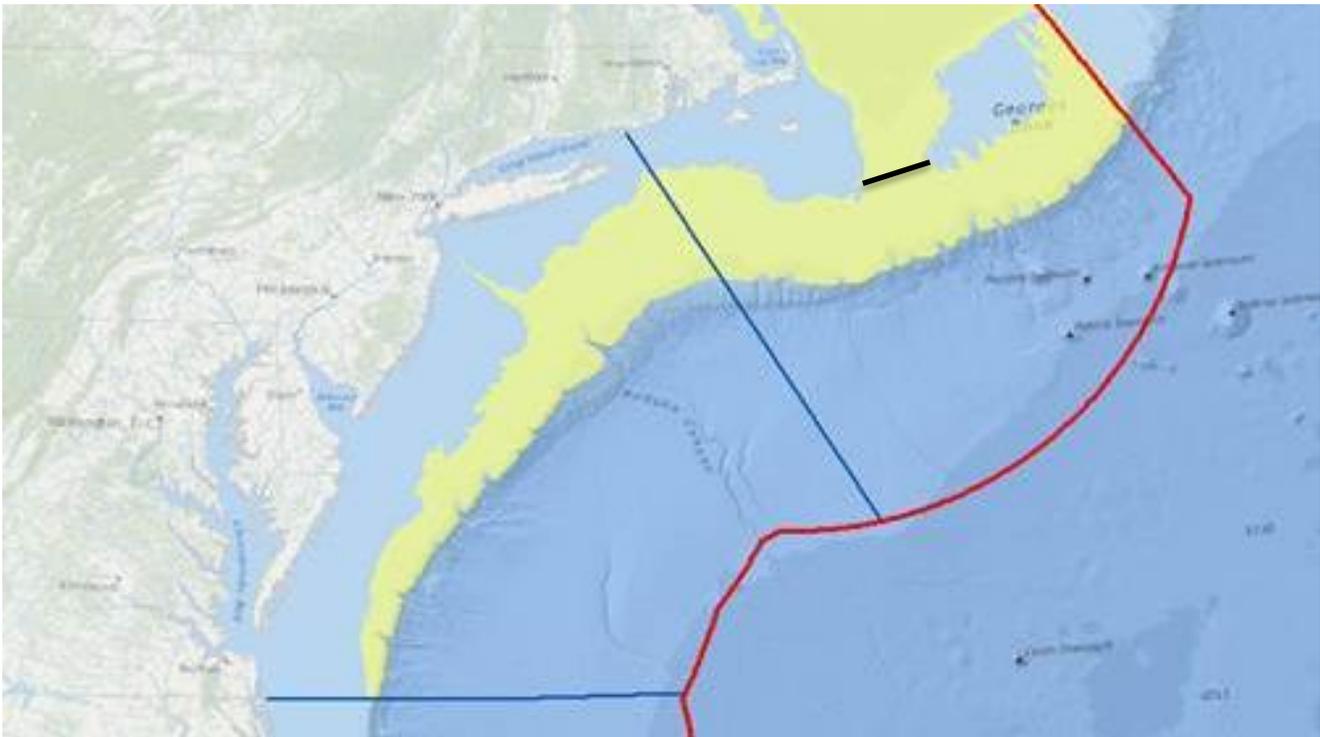


Figure 3. Proposed Blueline Tilefish EFH, showing Council boundaries.

5.14 ALTERNATIVE SET 14: ACCOUNTABILITY MEASURES (AMS)

14a. Under this alternative, used if there are allocations, then AMs are only automatically triggered if the overall ACL is exceeded. Whichever fishery, recreational or commercial or both, that caused the overall ACL overage would have added or modified measures to ensure that future overages do not occur in the

future. The Council shall recommend such management measures, for the soonest year practicable, that analysis demonstrates should eliminate future overages. Such measures could include any measure that can be set via specifications. In addition, in the relevant specifications year, the overage would be deducted from what would otherwise be the fishery ACLs, based on the recommendations of the Council's SSC.

14b. Under this alternative, used if there are no allocations, then if the ACL is exceeded, the Council will recommend management measures (commercial and/or recreational), for the soonest year practicable, that analysis demonstrates should eliminate future overages. Such measures could include any measure that can be set via specifications. In addition, in the relevant specifications year, the overage would be deducted from what would otherwise be the ABC, based on the recommendations of the Council's SSC.

14c. Under this alternative, if NMFS determines that one fishery's catch or the total catch will exceed 95% of a fishery's ACL or the overall ABC/ACL (depending on if there are allocations or not), NMFS may close or adjust the season and/or trip/bag limits for either fishery.

5.15 ALTERNATIVE SET 15: CONSIDERED BUT REJECTED ALTERNATIVES

For reasons described below, the following alternatives were considered but rejected for further analysis:

15a. Limited Access – Alternatives to consider implementing limited access were rejected because it was determined that the process for qualifying vessels for limited access (commercial and/or for-hire) would take too long given the action needs to be completed close to June 4, 2016. A control date has been published for this fishery however for the commercial and for-hire components:
https://www.greateratlantic.fisheries.noaa.gov/mediacenter/2015/december/14_control_date_of_december_14_2015_for_blueline_tilefish_fishery.html.

15b. Establish a separate blueline tilefish monitoring committee. This alternative was rejected because the golden tilefish monitoring committee has the needed expertise to monitor the blueline tilefish fishery and a separate committee would create unnecessary duplication.

15c. There was initial staff discussion of using the SAFMC allocations - 50.07% commercial and 49.93% recreational for any allocation. This was rejected as arbitrary.

15d. There was initial staff discussion of splitting the available quotas 50% commercial and 50% recreational. This was rejected as arbitrary.

15e. There was consideration of including 2014 as year for any allocations but 2014 was an unusual year for this fishery and not representative of the normal or historical operation of the fishery.

15f. There was consideration of using combination blueline/golden bag limits. This would be too complicated for this action given there could be various potential inter-related impacts with the golden tilefish fishery. Such an option could be considered in the future with additional analysis.

15g. There was consideration of establishing EFH protections for blueline tilefish in this action. However, blueline tilefish habitat likely is/will be protected to a degree by natural hard habitat features, existing golden tilefish closure areas, and pending coral protection areas.

15h. Initial discussions considered commercial trip limits of 150, 300, 450, 600, and 900 pounds, but the Council determined that the range currently considered in the document was most reasonable.

15i. The Council considered adding in other deep-water species (e.g. Snowy Grouper) but given the time constraints for this action and the limited catches of other deep-water species, decided to focus on blueline tilefish for this action.

15j. The Council considered a coastwide management unit but rejected this alternative because having the SAFMC manage blueline tilefish in the Mid-Atlantic would be counter to the purpose of this action and it would also be inappropriate for the Council to manage South-Atlantic blueline tilefish.

15k. The Council considered the blueline trip/bag limits currently in use or being considered by the SAFMC in a framework action but decided that the range of limits considered in this document was the most reasonable given the characteristics of the fishery in the Mid-Atlantic area. See http://safmc.net/sites/default/files/meetings/pdf/Public%20Hearings%20&%20Scoping/11-2015/Reg25PH_Nov2015.pdf for more information on the pending SAFMC action.

6.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT

The affected environment consists of those resources expected to experience environmental impacts if the actions under consideration in this amendment are implemented. The actions being considered are generally expected to restrict fishing effort to near current levels but some measures could lead to minor increases or decreases in fishing effort (commercial or recreational). From this perspective, the affected environment consists of those physical, biological, and human components of the environment that are or will be meaningfully connected to commercial fishing operations in those zones. These environmental components are described below.

6.1 PHYSICAL ENVIRONMENT

Detailed information on the affected physical and biological environments inhabited by the managed resource is available in Stevenson et al. (2004). Golden tilefish inhabit the Northeast U.S. Shelf Ecosystem, which has been described as including the area from the Gulf of Maine south to Cape Hatteras, extending from the coast seaward to the edge of the continental shelf, including the slope sea offshore to the Gulf Stream. Blueline tilefish inhabit the same area but at a slightly shallower depth range (46 meters to 256 meters for blueline tilefish vs. 100 meters to 300 meters for golden tilefish). The continental slope includes the area east of the shelf, out to a depth of 2000 m. Four distinct sub-regions comprise the NOAA Fisheries Greater Atlantic Region: the Gulf of Maine, Georges Bank, the Mid-Atlantic Bight, and the continental slope. The Gulf of Maine is an enclosed coastal sea,

characterized by relatively cold waters and deep basins, with a patchwork of various sediment types. Georges Bank is a relatively shallow coastal plateau that slopes gently from north to south and has steep submarine canyons on its eastern and southeastern edge. It is characterized by highly productive, well-mixed waters and strong currents. The Mid-Atlantic Bight is comprised of the sandy, relatively flat, gently sloping continental shelf from southern New England to Cape Hatteras, NC. The continental slope begins at the continental shelf break and continues eastward with increasing depth until it becomes the continental rise. It is fairly homogenous, with exceptions at the shelf break, some of the canyons, the Hudson Shelf Valley, and in areas of glacially rafted hard bottom.

The environment that could potentially be affected by the proposed action overlaps with the proposed EFH for blueline tilefish and the EFH for golden tilefish. The alternatives describe the proposed EFH for blueline tilefish. From SEDAR 32 (Southeast Data, Assessment and Review - <http://sedarweb.org/>), blueline tilefish inhabit the shelf edge and upper slope reefs at depths of 46-256m (Sedberry et al. 2006) and temperatures between 15-23°C, where they construct burrows in relatively soft, sandy sediments at 91-150m depth (Able, et al. 1987), in close association with rocky outcroppings. Primarily used for predator avoidance, burrows can be occupied by up to three individuals as well as other species.

Golden Tilefish EFH

The following sections describe where to find detailed information on EFH for golden tilefish and any past actions taken in the FMPs to minimize adverse EFH effects to the extent practicable. While less research has been done for blueline tilefish in the Mid-Atlantic, many of the concerns would be the same.

Information on golden tilefish habitat requirements can be found in the document titled, "Essential Fish Habitat Source Document: Tilefish, *Lopholatilus chamaeleonticeps*, Life History and Habitat Characteristics" (Steimle et al. 1999). An electronic version of this source document is available at the following website: <http://www.nefsc.noaa.gov/nefsc/habitat/efh/>.

The current designation of EFH by life history stage for is provided here:

Eggs and Larvae: EFH for golden tilefish eggs and larvae is the water column on the outer continental shelf and slope from the U.S./Canadian boundary to the NC/VA boundary in mean water column temperatures between 7.5°C and 17.5°C (45.5oF to 63.5oF).

Juveniles and Adults: EFH for golden tilefish juveniles and adults is semi-lithified clay substrate on the outer continental shelf and slope from the U.S./Canadian boundary to the NC/VA boundary in bottom water temperatures which range from 9°C to 14°C (48.2oF to 57.2oF), which generally occur in depths between 100 and 300 meters (328 to 984 ft). Golden tilefish create horizontal or vertical burrows in semi-lithified clay sediments, a substrate type with cohesive properties that allow the burrows to maintain their shape. Golden tilefish may also utilize rocks, boulders, scour depressions beneath boulders, and exposed rock ledges as shelter.

Although the revised designations emphasize temperature and substrate type (clay) over depth as being indicative of EFH, depth was used for the purposes of mapping the EFH designations. Depth is fixed and not seasonally variable, therefore the depth ranges that define the area where the preferred bottom temperatures conditions typically prevail (100 to 300 meters, or 328 ft to 984 ft) were used to create

maps of benthic EFH for juvenile and adult golden tilefish on the outer continental shelf and slope from the U.S./Canadian boundary to the NC/VA boundary.

Golden Tilefish EFH Fishery Impact Considerations

The directed commercial fishery for golden tilefish is largely by bottom longline gear. Otter trawls may also be used, but have limited utility because of the habitat preferred by tilefish. Otter trawls are only effective where the bottom is firm, flat, and free of obstructions. Soft mud bottom, rough or irregular bottom, or areas with obstructions, which are those that are most frequented by tilefish, are not conducive to bottom trawling. However, golden tilefish are often taken incidental to other directed fisheries, such as the trawl fisheries for lobster and flounder (Freeman and Turner 1977) and hake, squid, Atlantic mackerel and butterfish (NMFS, unpublished landings data).

A panel of experts who participated in a 2001 workshop to evaluate the potential habitat impacts of fishing gears used in the Northeast region concluded that longlines (which land the bulk of the tilefish) cause some low degree impacts in mud, sand, and gravel habitats. Bottom trawls, which account for nearly all of the rest of the landings, and which are mostly incidental catches, had the greatest impacts which occur in low and high energy gravel habitats and in hard clay outcroppings (NEFSC 2002). Golden tilefish are restricted to the continental shelf break south of the Gulf of Maine (Steimle et al. 1999). They occupy a number of habitats, including scour basins around rocks or other rough bottom areas that form burrow-like cavities, and pueblo habitats in clay substrate. The dominant habitat type is a vertical burrow in a substrate of semi-hard silt-clay, 6 to 10 feet deep and 12 to 16 feet in diameter with a funnel shape. These burrows are excavated by tilefish, secondary burrows are created by other organisms, including lobsters, conger eels, and galatheid crabs. Golden tilefish are visual daytime feeders on galatheid crabs, mollusks, shrimps, polychaetes, and occasionally fish. Mollusks and echinoderms are more important to smaller tilefish. Little is known about juveniles of this species. A report to the Mid-Atlantic Fishery Management Council (Able and Muzeni 2002), based upon a review of archived video surveys in areas of golden tilefish habitat, did not find visual evidence of direct impacts to burrows due to otter trawls. The Northeast Region EFH Steering Committee Workshop (NEFSC 2002) concluded that there was the potential for a high degree of impact to the physical structure of hard clay outcroppings (pueblo village habitat) by trawls that would result in permanent change to a major physical feature which provides shelter for golden tilefish as well as their benthic prey. Although Able and Muzeni's (2002) review did not offer any evidence of this type of negative effect, their sample size for this habitat type was very small. Due to the tilefish's reliance on structured shelter and benthic prey, as well as the benthic prey's reliance on much of the same habitat, and the need for further study, the vulnerability of golden tilefish EFH to otter trawls was ranked as high (Stevenson et al. 2004). Clam dredges operate in shallow, sandy waters typically uninhabited by golden tilefish (Wallace and Hoff 2005), so EFH vulnerability was rated as none for this gear. Scallop vessel monitoring data indicate that scallop dredges operate to a small extent in areas overlapping golden tilefish EFH; therefore, EFH vulnerability to scallop dredges was ranked as low (Stevenson et al. 2004). Golden tilefish eggs and larvae are pelagic: therefore, EFH vulnerability to gear is not applicable.

Amendment 1 to the Golden tilefish FMP (Council 2009) prohibited the use of bottom-tending mobile gear within specific areas of the Oceanographer, Lydonia, Veatch, and Norfolk canyons. The gear restricted areas in these four canyons were chosen to providing protection to areas that are known to have clay outcrop/pueblo habitats.

It is anticipated that blueline tilefish habitat would be similarly affected by different gear types as golden tilefish, though as a slightly shallower depth range. Blueline tilefish habitat likely is/will be protected to a degree by natural hard habitat features (near rocky outcroppings), existing golden tilefish closure areas, and pending coral protection areas so no additional measures need to be considered at this time. The upcoming Council action to review all EFH and impacts on EFH would review these findings within the next two years. It is also expected that gear used for blueline tilefish would have similar impacts on habitat, but to a much lesser degree than for golden tilefish given the smaller scope of the blueline tilefish fishery. The proposed measures also seek to continue to limit the blueline tilefish fishery to a level below that observed in 2014 when fishery activity suddenly increased, so it is expected that blueline tilefish fishing under the proposed measures would have minimal impacts on habitat.

6.2 BIOLOGICAL ENVIRONMENT

6.2.1 Description of the Managed Resource

The only alternatives that relate to golden tilefish in this amendment consider requiring permitting and reporting of private golden tilefish catch along with private blueline tilefish catch. Given these alternatives are only administrative in nature and should have no direct impact on catches, readers are referred to the most recent golden tilefish specifications environmental assessment (2015-2017 Specifications) for details on the golden tilefish fishery beyond the biological description below.

Blueline tilefish

Blueline tilefish are primarily distributed from Campeche, Mexico northward to Virginia (Dooley 1978) with reports of catches as far north as Maine. There is no known information on different stock structures throughout the geographic range, but several studies are underway to further examine blueline tilefish genetics in order to develop better information on stock structure. Blueline tilefish inhabit the shelf edge and upper slope reefs at depths of 46-256m (Sedberry et al. 2006) and temperatures between 15-23°C. Blueline tilefish are considered opportunistic predators that feed on prey associated with substrate (crabs, shrimp, fish, echinoderms, polychaetes, etc.) (Ross 1982). They are considered relatively sedentary, and thought not to undertake north-south migrations along the coast. The species constructs burrows in sandy areas in close association with rocky outcroppings.

Blueline tilefish, like other tilefish species, is a large, long-lived fish, ranging up to about 900 mm FL and 43 years. This species also exhibits dimorphic growth with males attaining larger size-at-age than females. Males are predominant in the size categories greater than 650 mm FL. They are classified as indeterminate spawners, with up to 110 spawnings per individual based on the estimates of a spawning event every 2 days during a protracted spawning season from approximately March through October.

The SAFMC's SSC has provided an updated blueline tilefish ABC (224,100 pounds whole weight for 2016-2017) and the SAFMC has approved a framework action to use that ABC. Their SSC did not accept updated projections but concluded that "the assessment estimates of reference points (BMSY, FMSY) based on historic stock production remain to be the best scientific information available and can be used for management advice." This is the source for the 224,100 pound ABC. Given the differences between the blueline fisheries off the Mid and South Atlantic, and the gaps in information on blueline

tilefish off the Mid-Atlantic incorporated in the last blueline tilefish stock assessment (SEDAR 32), the Council's SSC found that SEDAR 32's results are not sufficient for management off the Mid-Atlantic.

The Council is also strongly recommending that a survey for blueline and golden tilefish be conducted in the Mid-Atlantic to develop better information about the state of the blueline and golden tilefish stocks off the Mid-Atlantic.

Golden Tilefish

Reports on stock status, including Stock Assessment Workshop (SAW) reports, and Stock Assessment Review Committee (SARC) reports, and assessment update reports are available online at the Northeast Fisheries Science Center (NEFSC) website: <http://www.nefsc.noaa.gov/>. The EFH Source Document, which includes details on stock characteristics and ecological relationships, is available at the following website: <http://www.nefsc.noaa.gov/nefsc/habitat/efh/>.

The tilefish stock assessment was peer reviewed and approved for use by management at Stock Assessment Workshop 58 (SAW 58). A statistical catch at age model called ASAP (Age Structured Assessment Program) was used in this assessment to incorporate newly available length and age data to better characterize the population dynamics of the stock. The tilefish resource is not overfished and overfishing is not occurring in 2012. SSB was estimated to be 11.53 million lb (5,229 mt) in 2012, about 101% of the biomass target SSB_{MSY} proxy = SSB_{25%} = 11.36 million lb (5,153 mt). The fishing mortality rate was estimated to be 0.275 in 2012, below the fishing mortality threshold F_{MSY} proxy = F_{25%} = 0.370.

The reference points from the previous 2009 SAW 48 assessment were based on the ASPIC surplus production model and cannot be compared to the current assessment ASAP (SAW 58) model results and biological reference points (NEFSC 2014). The tilefish reference points derived from SAW 48 and prior assessments were based on B_{MSY} and F_{MSY} values, and these values were used as the specific basis for the rebuilding program in the FMP. Since new reference points were developed in SAW 58, these would have to be updated in the FMP in a following action.

6.3 ESA-LISTED SPECIES AND MMPA PROTECTED SPECIES

There are numerous species of fish, marine mammals, and sea turtles which may inhabit the environment within the management unit of this FMP that are afforded protection under the Endangered Species Act (ESA) of 1973 (i.e., for those designated as threatened or endangered) and/or the Marine Mammal Protection Act (MMPA) of 1972 (see table below). For additional information on the species provided in the table below (e.g., life history, distribution, stock status), please visit:

<http://www.greateratlantic.fisheries.noaa.gov/Protected/> and
<http://www.nmfs.noaa.gov/pr/sars/region.htm>.

Like golden tilefish, any directed blueline tilefish commercial fishery in the Mid-Atlantic would be prosecuted with bottom longline gear in approximately the same areas. There are no documented interactions with ESA-listed and MMPA protected species with bottom longline gear in the golden tilefish fishery, and the same would be expected for the blueline tilefish fishery in the Mid-Atlantic.

There are also no documented interactions with ESA-listed and MMPA protected species in the Mid-Atlantic recreational tilefish fishery.

Cusk, a NMFS "species of concern," and a "candidate species" under the ESA, occurs in the affected environment. Candidate species are those petitioned species that NMFS is actively considering for listing as endangered or threatened under the ESA and those species for which NMFS has initiated an ESA status review through an announcement in the *Federal Register*. Candidate species receive no substantive or procedural protection under the ESA; however, NMFS recommends that project proponents consider implementing conservation actions to limit the potential for adverse effects on candidate species from any proposed project. Given that cusk receive no substantive or procedural protection under the ESA (due to its candidate species status), this species will not be discussed further in this document.

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Table 3. Species Protected Under the ESA and/or MMPA that May Occur in the Affected Environment of the FMP

Species	Status	Potentially affected by this action?
Cetaceans		
North Atlantic right whale (<i>Eubalaena glacialis</i>)	Endangered	No
Humpback whale (<i>Megaptera novaeangliae</i>)	Endangered	No
Fin whale (<i>Balaenoptera physalus</i>)	Endangered	No
Sei whale (<i>Balaenoptera borealis</i>)	Endangered	No
Blue whale (<i>Balaenoptera musculus</i>)	Endangered	No
Sperm whale (<i>Physeter macrocephalus</i>)	Endangered	No
Pygmy sperm whale (<i>Kogia breviceps</i>)	Protected	No
Dwarf sperm whale (<i>Kogia sima</i>)	Protected	No
Minke whale (<i>Balaenoptera acutorostrata</i>)	Protected	No
Pilot whale (<i>Globicephala spp.</i>) ¹	Protected	No
Risso's dolphin (<i>Grampus griseus</i>)	Protected	No
Atlantic white-sided dolphin (<i>Lagenorhynchus acutus</i>)	Protected	No
Short Beaked Common dolphin (<i>Delphinus delphis</i>) ²	Protected	No
Atlantic Spotted dolphin (<i>Stenella frontalis</i>)	Protected	No
Striped dolphin (<i>Stenella coeruleoalba</i>)	Protected	No
Beaked whales (<i>Ziphius</i> and <i>Mesoplodon spp.</i>) ³	Protected	No
Bottlenose dolphin (<i>Tursiops truncatus</i>) ⁴	Protected	No
Harbor porpoise (<i>Phocoena phocoena</i>)	Protected	No
Sea Turtles		
Leatherback sea turtle (<i>Dermochelys coriacea</i>)	Endangered	No
Kemp's ridley sea turtle (<i>Lepidochelys kempii</i>)	Endangered	No
Green sea turtle (<i>Chelonia mydas</i>)	Endangered ⁵	No
Loggerhead sea turtle (<i>Caretta caretta</i>), Northwest Atlantic DPS	Threatened	No
Hawksbill sea turtle (<i>Eretmochelys imbricate</i>)	Endangered	No

Species	Status	Potentially affected by this action?
Fish		
Shortnose sturgeon (<i>Acipenser brevirostrum</i>)	Endangered	No
Atlantic salmon (<i>Salmo salar</i>)	Endangered	No
Atlantic sturgeon (<i>Acipenser oxyrinchus</i>)		
<i>Gulf of Maine DPS</i>	Threatened	No
<i>New York Bight DPS, Chesapeake Bay DPS, Carolina DPS & South Atlantic DPS</i>	Endangered	No
Cusk (<i>Brosme brosme</i>)	Candidate	No
Pinnipeds		
Harbor seal (<i>Phoca vitulina</i>)	Protected	No
Gray seal (<i>Halichoerus grypus</i>)	Protected	No
Harp seal (<i>Phoca groenlandicus</i>)	Protected	No
Hooded seal (<i>Cystophora cristata</i>)	Protected	No
Critical Habitat		
North Atlantic Right Whale ⁶	ESA-listed	No
Northwest Atlantic DPS of	ESA-listed	No
Loggerhead Sea Turtle		
<i>Notes:</i>		
¹ There are 2 species of pilot whales: short finned (<i>G. melas melas</i>) and long finned (<i>G. macrorhynchus</i>). Due to the difficulties in identifying the species at sea, they are often just referred to as <i>Globicephala spp.</i>		
² Prior to 2008, this species was called "common dolphin."		
³ There are multiple species of beaked whales in the Northwest Atlantic. They include the cuvier's (<i>Ziphius cavirostris</i>), blainville's (<i>Mesoplodon densirostris</i>), gervais' (<i>Mesoplodon europaeus</i>), sowerbys' (<i>Mesoplodon bidens</i>), and trues' (<i>Mesoplodon mirus</i>) beaked whales. Species of <i>Mesoplodon</i> ; however, are difficult to identify at sea, and therefore, much of the available characterization for beaked whales is to the genus level only.		
⁴ This includes the Western North Atlantic Offshore, Northern Migratory Coastal, and Southern Migratory Coastal Stocks of Bottlenose Dolphins (see Waring <i>et al.</i> 2014 for further details).		
⁵ Green turtles are currently listed in U.S. waters as threatened except for the Florida breeding population which is listed as endangered. Due to the inability to distinguish between these populations away from the nesting beach, green turtles are considered endangered wherever they occur in U.S. waters. On March 23, 2015, a proposed rule was issued to remove the current range-wide listing and, in its place, list eight DPSs as threatened and three as endangered (80 FR 15272).		
⁶ Originally designated June 3, 1994 (59 FR 28805); Newly proposed February 20, 2015 (80 FR 9314).		

6.4 NON TARGET SPECIES

It is believed that there are minimal non-target interactions and/or discarding in the targeted golden tilefish fishery (MAFMC 2014), and the same would be expected for the blue-line tilefish fishery. Blue-line tilefish are occasionally landed incidentally on trips targeting other species, especially squid (longfin or *Illex*), per the table below.

Table 4. Landings composition of trips landing at least one lb of blue-line tilefish in the Northeast region, 2014 (only species with more than 500 pounds listed).

Species	LB
SQUID (LOLIGO)	453,036
TILEFISH, GOLDEN	316,752
TILEFISH, BLUELINE	217,015
SQUID (ILLEX)	198,328
FLOUNDER, SUMMER	137,264
SCUP	134,941
CROAKER, ATLANTIC	129,306
HAKE, SILVER	100,985
BUTTERFISH	33,567
ANGLER	30,242
HAKE, RED	23,233
SEA BASS, BLACK	13,423
SKATES	9,030
CUTLASSFISH, ATLANTIC	6,764
BLUEFISH	6,348
JOHN DORY	5,715
SKATE, WINTER(BIG)	4,667
MACKEREL, ATLANTIC	4,008
SKATE, CLEARNOSE	2,270
DOGFISH SMOOTH	1,943
SCALLOP, SEA	1,776
EEL, CONGER	1,631
LOBSTER	1,438
WEAKFISH, SQUETEAGUE	1,200
GROUPE	941
ROSEFISH, BLK BELLIED	907
TUNA, YELLOWFIN	694
BARRELFISH	634
MACKEREL, CHUB	569

6.5 HUMAN COMMUNITIES AND ECONOMIC ENVIRONMENT

Information on South Atlantic catch information can be found in the public hearing document for the SAFMC's Regulatory Amendment 25, at:

http://safmc.net/sites/default/files/meetings/pdf/Public%20Hearings%20&%20Scoping/11-2015/Reg25_Summary_PH_11042015.pdf. This document generally focuses on describing catch reported to NMFS from Virginia and to the north except where otherwise noted. Preliminary 2015 data is reported when practicable; with 2015 data, readers should be aware that the emergency rules limiting blue-line tilefish catch in Federal waters north of the NC/VA border went into effect on June 4, 2015.

Commercial Data

The tables below report blueline tilefish landings in pounds and dollars from and including Virginia (VA) though Massachusetts (MA) from 2000-2015, and the figure below compares VA-MA landings with North Carolina (NC) landings.

Table 5. 2000-2015 Blueline Tilefish Landings (pounds) VA-MA

YEAR	Pounds
2002	269
2003	7,601
2004	5,829
2005	2,032
2006	3,039
2007	20,459
2008	8,749
2009	9,635
2010	8,360
2011	8,182
2012	9,624
2013	26,780
2014	217,016
2015	73,637

Table 6. 2000-2015 Blueline Tilefish Landings (\$) VA-MA

YEAR	Dollars
2002	\$415
2003	\$7,985
2004	\$6,163
2005	\$1,914
2006	\$4,012
2007	\$36,381
2008	\$12,107
2009	\$16,989
2010	\$12,875
2011	\$13,535
2012	\$16,435
2013	\$53,575
2014	\$457,414
2015	\$155,012

source: unpublished NMFS dealer data (2015 preliminary)

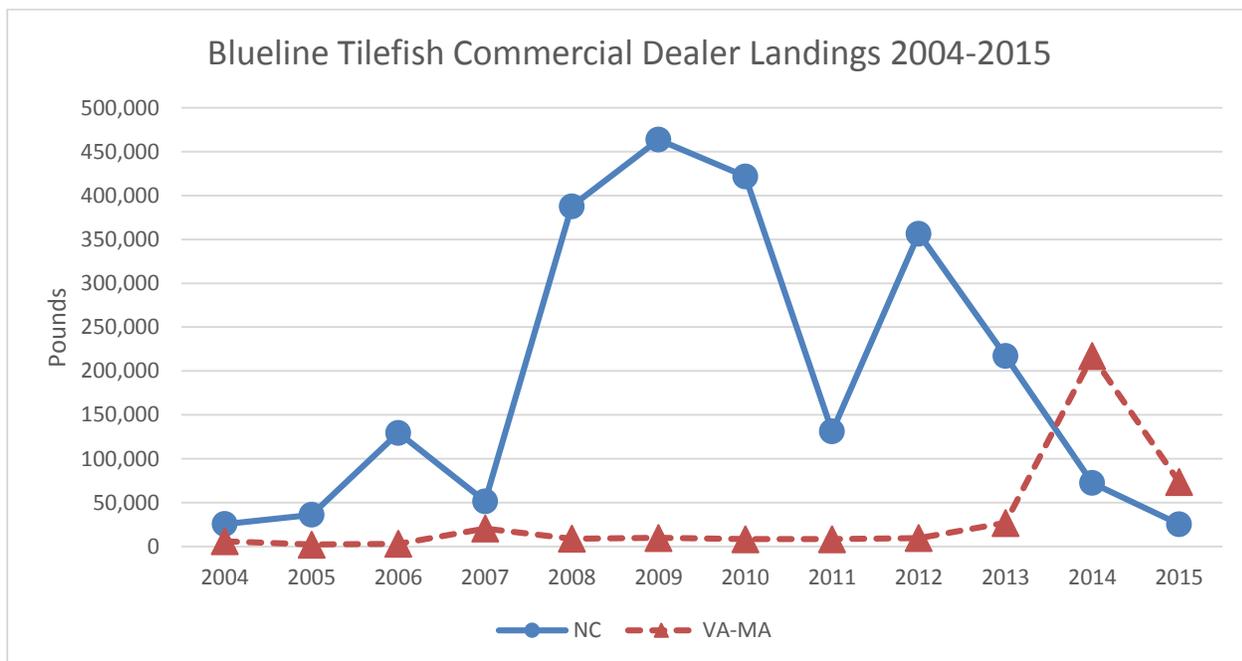


Figure 4. Commercial Blueline Landings 2004-2015, NC vs. VA-MA

The tables below report blueline tilefish catch from NMFS Vessel Trip Reports (VTRs). Since in this case the focus is on where catch is coming from, all VTRs, including those from trips that may have landed in North Carolina were included. Table 7 reports commercial VTR catch (pounds) and Table 8 reports for-hire VTR catch (fish). The figure below illustrates the VTR statistical areas' locations. Any vessel with any Federal permit should have been reporting blueline tilefish over this time period.

Figure 5. NMFS Northeast Statistical areas used on Vessel Trip Reports (VTRs)

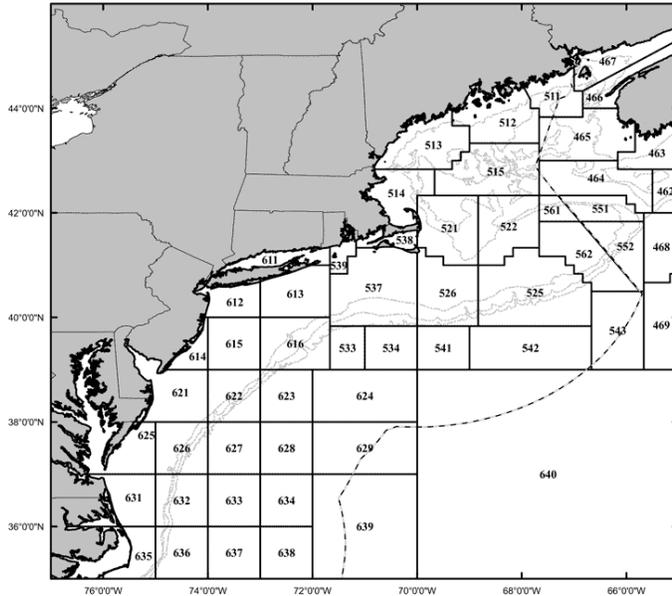


Table 7. Blueline tilefish NE VTR commercial kept catch in pounds by statistical area and year, 2002-2014 (source: unpublished NMFS NE VTR data)

YEAR	Statistical Areas			Total
	635, 636, 631, 632	625, 626, 621, 622	Other	
2002	18,131	28	1,326	19,485
2003	23,853	2,574	3,181	29,608
2004	1,435	1,882	5,330	8,647
2005	2,209	592	983	3,784
2006	9,958	1,334	489	11,781
2007	6,806	12,459	638	19,903
2008	9,910	6,905	1,404	18,219
2009	12,502	2,659	1,825	16,986
2010	65,838	4,020	1,713	71,571
2011	28,029	4,588	2,324	34,941
2012	39,290	4,063	4,423	47,776
2013	42,994	17,416	4,010	64,420
2014	44,116	146,347	5,181	195,644

Table 8. Blueline tilefish NE VTR recreational party-charter kept fish by statistical area and year, 2002-2014 (numbers of fish) (source: unpublished NMFS NE VTR data)

YEAR	Statistical Areas			Total
	635, 636, 631, 632	625, 626, 621, 622	Other	
2002	2,564	0	0	2,564
2003	1,683	1	0	1,684
2004	25	0	0	25
2005	780	21	0	801
2006	1,002	27	0	1,029
2007	3,421	1,160	83	4,664
2008	1,038	495	7	1,540
2009	1,215	3,811	2	5,028
2010	513	2,101	68	2,682
2011	719	3,232	118	4,069
2012	115	9,844	207	10,166
2013	814	10,576	496	11,886
2014	1,408	13,975	460	15,843

Table 9 categorizes dealer data trips from VA-ME generally in terms of the trip limits being considered by the Council. 2009-2013 was chosen to get a range of years and 2014 was not included since it was such an unusual year - Table 10 describes the kinds of trips seen in 2014 separately. From Table 9, there have typically been very few trips per year above the emergency action's trip limit of 275 pounds gutted weight (8 per year over 2009-2013) while there were 45 trips over 900 pounds in 2014 (Table 10). Table 11 describes how many vessels with Federal permits had annual landings over 1,000 and 5,000 pounds 2002-2014. Figure 6 describes 2014 and 2015 blueline tilefish landings by month – it appears that the June 4, 2015 emergency action had the desired effect of reducing landings, and that had the emergency rule not been implemented, 2015 landings could have been well above 2014's landings.

Table 9. VA-ME 2009-2013 Trip Characterization

Trip Size	# Trips	avg # trips/year
≤ 200 landed pounds	604	121
201-275 pounds	30	6
276-300 pounds	11	2
301-500 pounds	12	2
501-900 pounds	10	2
901 or more pounds	10	2

source: unpublished NMFS dealer data

Table 10. VA-ME 2014 Trip Characterization

Trip Size	# Trips
≤ 200 landed pounds	151
201-275 pounds	6
276-300 pounds	5
301-500 pounds	9
501-900 pounds	5
901 or more pounds	45

source: unpublished NMFS dealer data

Table 11. Vessels landing more than 1,000/5,000 pounds of blueline tilefish ME-VA

YEAR	Vessels With Federal Permits Landing More than 1,000 pounds (landed weight) blueline tilefish per year ME-VA	Vessels With Federal Permits Landing More than 5,000 pounds (landed weight) blueline tilefish per year ME-VA
2002	0	0
2003	1	0
2004	1	0
2005	0	0
2006	0	0
2007	6	1
2008	1	0
2009	1	0
2010	2	0
2011	2	0
2012	1	0
2013	7	1
2014	11	5

source: unpublished NMFS dealer data

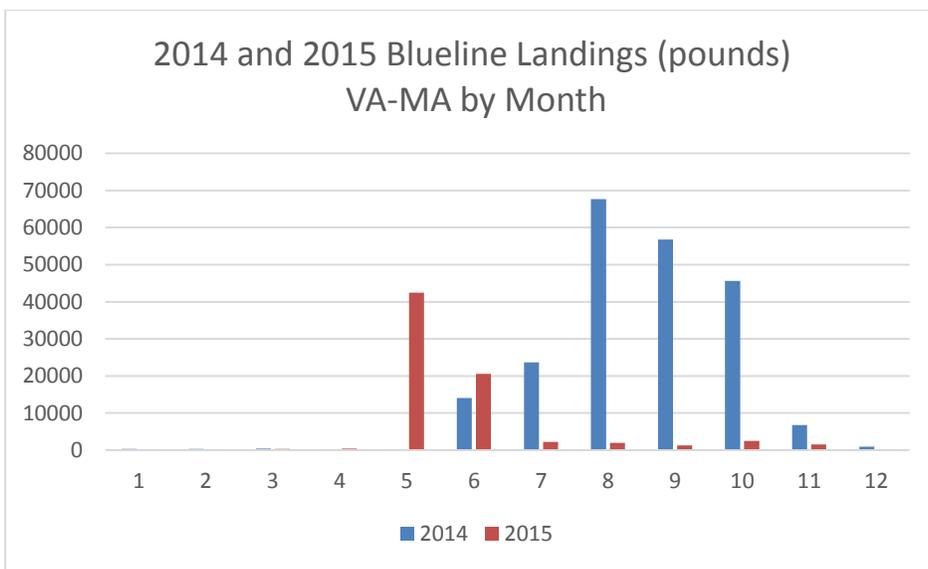


Figure 6. 2014 and 2015 Blueline Landings (pounds) VA-MA by Month

source: unpublished NMFS dealer data

Recreational Data

Blueline tilefish are almost totally absent from MRIP data and it is believed that considerable underreporting has occurred in for-hire vessel trip reports (VTRs). To address this, the Council held a facilitated workshop with individuals knowledgeable about the recreational blueline tilefish fishery to develop recreational blueline tilefish catch estimates through an iterative Delphi technique approach. The report from this workshop is available at <http://www.mafmc.org/ssc-meetings/2016/march-15-16>, and it was used to develop the time series used for the allocation alternatives (see above) and is being used by the SSC to develop an ABC recommendation.

The corollary of commercial trip analysis for recreational catch is typically a bag limit analysis. Again, there are minimal blueline tilefish MRIP data, even when MRIP data are combined across years (pers com John Foster, NMFS Office of Science and Technology). NMFS' Large Pelagic Survey does show increasing blueline tilefish landings in recent years, but intercepts are still relatively rare and the Large Pelagic survey is not designed to capture targeted blueline tilefish landings - it only records blueline tilefish catch by those who target large pelagics for some part of their trip.

Although blueline tilefish catches are rare in NMFS' recreational survey data, Northeast vessel trip reports (VTRs) for party/charter vessels indicate an increase from an average of about 2,400 fish per year (2002-2011) to between 10,000-16,000 fish per year in 2012-2014 (Table 8 above). Several for-hire vessels have focused some effort on blueline tilefish in recent years, as evidenced by multiple recent trips landing 10 or more blueline tilefish per person (the highest fish per person averages were from 2014 trips in New Jersey). During the period of this data description, there was no permit required for blueline tilefish but anyone with any Federal party-charter permit should have been reporting all of their catch, including blueline tilefish. It is likely that most party-charter vessels that fish for blueline tilefish would have other Federal permits, such as for black sea bass. However, comments during scoping and at Council meetings have revealed that this requirement is neither universally understood nor complied with, so it is likely that the party-charter VTR records are a subset of the total for-hire catch. Nevertheless, the VTR catch information does provide some recreational catch information, and is described below for the same time periods as commercial trips but related to the recreational catch alternatives under consideration. As with commercial activity, 2014 appeared to be an above average year for party-charter blueline tilefish activity, and Table 14 demonstrates that blueline tilefish catch occurrences across the party-charter fleet appear to be on the increase in terms of numbers of vessels with some blueline tilefish catch, though changes in reporting compliance could account for part of any changes. It also appears that outside of 2014, the emergency regulation of 7 blueline tilefish per person should affect only a small portion of trips based on recent activity (Tables 12 and 13).

Table 12. 2009-2013 Party-Charter Average Retained Fish per Angler on Trips Reporting at Least 1 Blueline Tilefish

Trip Size	# Trips	avg # trips/year
≤ 5 fish	386	77
6-7 fish	72	14
8-9 fish	17	3
more than 9 fish	22	4

Table 13. 2014 Party-Charter Average Retained Fish per Angler on Trips Reporting at Least 1 Blueline Tilefish

Trip Size	# Trips
≤ 5 fish	84
6-7 fish	29
8-9 fish	5
more than 9 fish	23

Table 14. Numbers of party/charter vessels reporting at least one blueline tilefish 2002-2014.

YEAR	vessels
2002	2
2003	3
2004	1
2005	4
2006	3
2007	17
2008	14
2009	15
2010	16
2011	20
2012	15
2013	22
2014	25

The other data source queried for this document was the NMFS observer database. The observer information is primarily provided to get a sense of the area and depth ranges over which blueline tilefish have been observed, as well as any temporal trends. For waters north of the NC/VA border, Tables 15 and 16 describe blueline tilefish catch observations (all gear types) by area and Table 17 describes the same observations by depth. See Figure 5 above for locations of statistical areas. While catch observations are impacted by how observer coverage is allocated, they should still provide an approximate indication of the range of where blueline tilefish are being encountered in the Mid-Atlantic and southern New England by area and depth.

Table 15. Observer observations of blueline tilefish by area 2005-2009, greater than 50 pounds

Statistical Area	Observations	Pounds Caught
626	21	225
622	39	697
616	26	317
621	2	122
537	23	328

Table 16. Observer observations of blueline tilefish by area 2009-2014, greater than 50 pounds

Statistical Area	Observations	Pounds Caught
626	69	10,229
622	109	1,497
616	173	1,262
621	6	231
537	13	152
623	8	52

Table 17. Observer observations of blueline tilefish by depth.

depth (meters)	pounds observed in depth range
<45	73
45-90	3,931
90-135	10,515
135-180	979
180-225	313
225+	62

7.0 IMPACTS OF THE ALTERNATIVES

Typically analysis of the impacts from a fishery action proceeds through analysis of five “valued ecosystem components” or “VECs” for each alternative. The VECs are generally the managed resources (golden and blueline tilefish in this case), habitat (and EFH), protected resources (ESA and MMPA protected species), non-target species, and human communities. As described in Section 6, habitat, protected resources, and non-target species appear to be negligibly impacted by either the golden or blueline tilefish fishery because of the nature and scale of gear used, and this would be true for the no action or any of the action alternatives. Thus the remainder of this section focuses on the impacts to the managed resources and human communities. Further, since management of golden tilefish adheres to the Acceptable Biological Catches set by the Council’s SSC and accounts for incidental catch in other fisheries, it is expected that any of the alternatives which do not directly impact golden tilefish would have a negligible impact on golden tilefish. Since the status of blueline tilefish off the mid-Atlantic is unknown, the biological impacts are described qualitatively based on how protective of the blueline resource they are expected to be.

National Oceanic and Atmospheric Administration Administrative Order 216-6 (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action and it includes the possibility of introducing or spreading a nonindigenous species. There is no evidence or indication that these fisheries have ever resulted or would ever result in the introduction or spread of nonindigenous species.

7.1.1 MANAGED SPECIES IMPACTS - ALTERNATIVE 1: NO ACTION

Impacts: Taking no action would mean that on June 4, 2016 we would return to the situation where blueline tilefish are not managed with Federal management measures north of the NC/VA border (36.550278 N Latitude). Given that no action is assumed to include the expiration of the emergency regulations, with no action it is likely that at least for some time there would be no management of blueline tilefish in Federal waters north of the NC/VA border. This is likely to have a negative impact on blueline tilefish. Due to their life history (long lived and sedentary), blueline tilefish are likely to be susceptible to overfishing and lack of Federal management would be likely to lead to overfishing, especially if states relax their landings limits or landings shift farther north beyond states with regulations (i.e. north of New Jersey). The lack of designating EFH for blueline tilefish would likely have a distinct low negative impact because other actions would not consider their impacts on blueline tilefish EFH if there is no blueline tilefish EFH. The impact is likely low because there are not likely to be substantial impacts on blueline tilefish habitat regardless, or impacts that would be avoided had EFH been designated.

For the action alternatives below, the impact comparison is the alternative compared to no action, which means no Federal management.

7.1.2 MANAGED SPECIES IMPACTS - ALTERNATIVE SET 2: MANAGEMENT UNIT AND OBJECTIVES

2a. (***Preferred***) This would establish a separate blueline tilefish management unit in the EEZ north of the NC/VA border (36.550278 N Latitude) extending up to the boundary with Canada, which would be managed by the Mid-Atlantic Fishery Management Council.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because management would be tailored to the nature and state of the blueline tilefish resource north of the NC/VA border through the other management alternatives considered in this action, given the best available scientific information.

2b. This would establish a separate blueline tilefish management unit in the EEZ north of Cape Hatteras (35.253167 N. lat., the latitude of Cape Hatteras Light), extending up to the boundary with Canada, which would be managed by the Mid-Atlantic Fishery Management Council.

Impacts: Compared to no action, this alternative would be expected to have low positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because management would be tailored to the nature and state of the blueline tilefish resource north of Cape Hatteras through the other management alternatives considered in this action. Since blueline tilefish are already managed from Cape Hatteras to the NC/VA border, this would not add any positive impacts compared to 2a, and could actually complicate/delay sustainable management given it would cause additional conflict with the SAFMC's management area, so impacts may be less positive than 2a.

2c. This alternative would establish that the objectives for blueline tilefish are the same as for golden tilefish, with the addition that "Management will reflect blueline tilefish's susceptibility of overfishing and the need of an analytical stock assessment."

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because the management objectives should help ensure that overfishing does not occur.

7.1.3 MANAGED SPECIES IMPACTS - ALTERNATIVE 3: STATUS DETERMINATION CRITERIA

The Council would use the most recent peer-reviewed and accepted assessment as applicable to the blueline tilefish in its management unit.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because it should help ensure that overfishing does not occur.

7.1.4 MANAGED SPECIES IMPACTS - ALTERNATIVE SET 4: COMMERCIAL PERMITTING AND REPORTING

4a. Alternative 4a would make permanent the emergency regulations that anyone with a commercial open access golden tilefish permit would be permitted to retain for sale blueline tilefish subject to the applicable trip limit.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because requiring a permit should help track effort and catch of blueline tilefish.

4b. Alternative 4b would require anyone landing any blueline tilefish for sale to get a newly-created commercial open access blueline tilefish permit. Retention of blueline tilefish for sale would be subject to the applicable trip limit.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because requiring a permit should help track effort and catch of blueline tilefish. Impacts would be similar to 4a.

4c. Alternative 4c would require standard reporting of catch for any commercial vessel possessing a permit that allows them to land blueline tilefish (like other federal permits).

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because it should help track catch of blueline tilefish. Impacts would be in addition to any from 4a or 4b.

4d. Alternative 4d would require Federally-permitted commercial blueline tilefish vessels to submit Vessel Trip Reports (VTRs) electronically.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because it should help track catch of blueline tilefish. Impacts would be expected to be slightly more positive than 4c because electronic submission of VTRs does make possible some additional quality control at the time of entry and should also speed the availability of data.

4e. Dealer Permits and Reporting – This alternative would institute dealer requirements similar to golden tilefish, i.e. that Federally-permitted vessels can only sell blueline tilefish to Federally-permitted dealers, and that dealers must have a federal permit to buy blueline tilefish. In addition, the standard reporting requirements (§648.7) for federal dealers would apply.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because it should help track catch of blueline tilefish.

7.1.5 MANAGED SPECIES IMPACTS - ALTERNATIVE SET 5: FOR-HIRE RECREATIONAL PERMITTING AND REPORTING

5a. Alternative 5a would make permanent the emergency requirement that any party or charter vessel must have been issued a Federal Charter/Party (golden) tilefish vessel permit to fish for blueline tilefish in the EEZ with passengers for hire. This would create a joint golden/blueline tilefish permit.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because requiring a permit should help track effort and catch of blueline tilefish.

5b. Alternative 5b would require any party or charter vessel to have a newly-created Federal Charter/Party blueline tilefish vessel permit to fish for blueline tilefish in the EEZ with passengers for hire.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because requiring a permit should help track effort and catch of blueline tilefish. Impacts would be similar to 5a.

5c. Alternative 5c would require standard reporting by Vessel Trip Reports (VTRs) of catch for any vessel possessing a permit that allows them to fish for blueline tilefish with passengers for hire.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because it should help track catch of blueline tilefish. Impacts might be low since party/charter VTRs are not directly used for catch monitoring at this time, but given the rare event nature of blueline tilefish catches, party/charter VTRs could be important for blueline tilefish catch data. The degree of positive impacts would likely be directly associated with the degree of compliance.

5d. Alternative 5d would require for-hire vessels to submit Vessel Trip Reports (VTRs) electronically if they have a golden tilefish or blueline tilefish permit.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because it should help track catch of blueline tilefish. Impacts would be expected to be slightly more positive than 5c because electronic submission of VTRs does make possible some additional quality control at the time of entry and should also speed the availability of data. The degree of positive impacts would likely be directly associated with the degree of compliance.

7.1.6 MANAGED SPECIES IMPACTS - ALTERNATIVE SET 6: PRIVATE RECREATIONAL PERMITTING AND REPORTING

6a. Alternative 6a would create and require a dedicated recreational fishing permit for private recreational anglers to catch golden or blueline tilefish, similar to how Highly Migratory Species (HMS) require a separate permit.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because requiring a permit should help track effort and catch of blueline tilefish. This alternative would also have similar impacts for golden tilefish.

6b. Alternative 6b would require that a NMFS Highly Migratory Species (HMS) permit be obtained by any owner/operator seeking to catch golden or blueline tilefish.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because requiring a permit should help track effort and catch of blueline tilefish. Impacts would be similar to 6a. This alternative would also have similar impacts for golden tilefish.

6c. Alternative 6c would require private fishermen to report golden and blueline tilefish catch through the HMS reporting system, complemented by catch cards and tags as done in Maryland (<http://dnr2.maryland.gov/fisheries/Pages/coastal/tagging.aspx>).

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because it should help track catch of blueline tilefish. The degree of positive impacts would likely be directly associated with the degree of compliance. This alternative would also have similar impacts for golden tilefish.

6d. Alternative 6d would require an online reporting (via a modified SAFIS application) of golden and blueline tilefish for private recreational fishermen before any tilefish are removed from a vessel, or before a trailered vessel is removed from the water.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because it should help track catch of blueline tilefish. The degree of positive impacts would likely be directly associated with the degree of compliance. This alternative would also have similar impacts for golden tilefish.

7.1.7 MANAGED SPECIES IMPACTS - ALTERNATIVE 7: MONITORING COMMITTEE

This alternative would establish that the same Monitoring Committee would provide recommendations to the Council and/or relevant committee to ensure that blueline tilefish specifications are not exceeded and to address any other operational aspects of the fishery. This would essentially create a single Golden/Blueline Tilefish Monitoring Committee.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because the Monitoring Committee should help ensure that the management measures have their intended effects and that the ACLs/ABCs are not exceeded.

7.1.8 MANAGED SPECIES IMPACTS - ALTERNATIVE 8: FRAMEWORK ADJUSTMENTS

This alternative would establish that any action that is frameworkable for golden tilefish would also be frameworkable for blueline tilefish. It was also establish that generally, any action that has been previously considered in the FMP or in an amendment to the FMP may be modified via a framework action. The unit of management may also be modified via a framework action.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because frameworks allow the Council to be responsive to changing conditions in the fishery. Specific measures would be analyzed separately in any future framework action.

7.1.9 MANAGED SPECIES IMPACTS - ALTERNATIVE SET 9: SPECIFICATIONS PROCESS AND RISK POLICY

9a. This alternative would specify what measures can be set during specifications. The fishing year would be aligned with the golden tilefish fishing year, i.e. November 1 to October 31.

Impacts: The delineation of specifications measures and fishing year designation are administrative issues and should have no direct impacts on the managed resources. To the degree this supports overall management the impacts can be described as low positive.

9b. This alternative establishes that the Council's current control rules for ABC-setting would apply to blueline tilefish.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because the control rules help ensure overfishing is avoided by explicitly accounting for our understanding of uncertainty in blueline tilefish assessments or other information used to set ABCs.

9c. This alternative establishes that the Council's current risk policy for ABC-setting would apply to blueline tilefish, as described below:

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because the risk policy helps ensure that ABCs will be set so as to avoid overfishing.

7.1.10 MANAGED SPECIES IMPACTS - ALTERNATIVE SET 10: ALLOCATIONS AND SPECIFICATIONS

10a. This alternative would not set allocations but the Council would rely on adjusting the specifications to control relative catch between the commercial and recreational fisheries. The catch of each fishery would have to be reviewed each year to determine if additional or modified measures are needed to control catch across the commercial and recreational blueline tilefish fisheries.

Impacts: This is an allocation decision and should have no impact on blueline tilefish.

10b1. This alternative would use the best available data to set allocations based on catch from 2009-2013 (median of percentages) (see considered but rejected section as to why 2014 is not included).

Impacts: This is an allocation decision and should have no impact on blueline tilefish.

10b2. This alternative would use the best available data to set allocations based on catch from 2009-2013 (mean of percentages) (see considered but rejected section as to why 2014 is not included).

Impacts: This is an allocation decision and should have no impact on blueline tilefish.

10c1. This alternative would use the best available data to set allocations based on catch from 2004-2013 (median of percentages) (see considered but rejected section as to why 2014 is not included).

Impacts: This is an allocation decision and should have no impact on blueline tilefish.

10c2. This alternative would use the best available data to set allocations based on catch from 2004-2013 (mean of percentages) (see considered but rejected section as to why 2014 is not included).

Impacts: This is an allocation decision and should have no impact on blueline tilefish.

10d. If allocations are not made, this alternative describes how the specifications process would handle ABC, ACLs, ACTs, etc.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because it facilitates implementation of specifications, which include ABCs/ACLs, which should avoid overfishing.

10e. If allocations are made, this alternative describes how the specifications process would handle allocations in terms of ABC, ACLs, ACTs, etc.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because it facilitates implementation of specifications, which include ABCs/ACLs, which should avoid overfishing. Impacts would be similar to 10d.

7.1.11 MANAGED SPECIES IMPACTS - ALTERNATIVE SET 11: COMMERCIAL TRIP LIMITS (GUTTED WEIGHT)

Regardless of the particular commercial trip limits that are set, it is expected that the Council would set an array of commercial and recreational measures that limit overall catch to the ABC in the long run. Thus in the context of overall management, commercial trip limits would not have a direct impact on blueline tilefish but do have an indirect impact to the degree they serve the overall goal of constraining catch to an ABC. Higher or lower trip limits would more affect other measures (a higher commercial trip limit might lead to a shorter commercial season or a lower recreational bag limit might be needed to constrain catch to the ABC/ACL), but the trip limits should not directly impact blueline tilefish within the context of overall management.

7.1.12 MANAGED SPECIES IMPACTS - ALTERNATIVE SET 12: RECREATIONAL BAG/POSSESSION LIMITS

Regardless of the particular bag limits that are set, it is expected that the Council would set an array of commercial and recreational measures that limit overall catch to the ABC. Thus in the context of overall management, recreational bag limits would not have a direct impact on blueline tilefish but do have an indirect impact to the degree they serve the overall goal of constraining catch to an ABC. Higher or lower bag limits would more affect other measures (a higher recreational bag limit might require a shorter season or a lower commercial trip limit to constrain catch to the ABC/ACL), but the bag limits should not directly impact blueline tilefish within the context of overall management. Higher bag limits may however increase management uncertainty and thus the possibility of ABC/ACL overages.

7.1.13 MANAGED SPECIES IMPACTS - ALTERNATIVE SET 13: ESSENTIAL FISH HABITAT (EFH) DESIGNATION

13a. Under this alternative, EFH designation would wait until the Council's pending overall EFH review action (2016-2017)

Impacts: This would continue the no action alternative as it pertains to EFH, which would continue the low negative impacts of not having blueline tilefish habitat designated as EFH.

13b. This alternative would use the best available science to designate EFH in this action.

Impacts: Compared to no action, this alternative would be expected to have low positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because other actions would have to consider their impacts on blueline tilefish EFH.

7.1.14 MANAGED SPECIES IMPACTS - ALTERNATIVE SET 14: ACCOUNTABILITY MEASURES (AMS)

14a. Under this alternative, used if there are allocations, then AMs are only automatically triggered if the overall ACL is exceeded. Whichever fishery, recreational or commercial or both, that caused the overall ACL overage would have added or modified measures to ensure that future overages do not occur in the future. The Council shall recommend such management measures, for the soonest year practicable, that analysis demonstrates should eliminate future overages. Such measures could include any measure that can be set via specifications. In addition, in the relevant specifications year, the overage would be deducted from what would otherwise be the fishery ACLs, based on the recommendations of the Council's SSC.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because accountability measures should minimize the chance of overfishing.

14b. Under this alternative, used if there are no allocations, then if the ACL is exceeded, the Council will recommend management measures (commercial and/or recreational), for the soonest year practicable, that analysis demonstrates should eliminate future overages. Such measures could include any measure that can be set via specifications. In addition, in the relevant specifications year, the overage would be deducted from what would otherwise be the ABC, based on the recommendations of the Council's SSC.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because accountability measures should minimize the chance of overfishing. Impacts would be similar to 14a.

14c. Under this alternative, if NMFS determines that one fishery's catch or the total catch will exceed 95% of a fishery's ACL or the overall ABC/ACL (depending on if there are allocations or not), NMFS may close or adjust the season and/or trip/bag limits for either fishery.

Impacts: Compared to no action, this alternative would be expected to have positive impacts for blueline tilefish in the Mid-Atlantic (and southern New England) because it should minimize the chance of overfishing by allowing NMFS to make in-season closures or adjustments to the season and/or trip/bag limits for either fishery. 14c should make the overages addressed in 14a/b less likely.

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7.2.1 HUMAN COMMUNITY IMPACTS - ALTERNATIVE 1: NO ACTION

Impacts: Taking no action would mean that on June 4, 2016 we would return to the situation where blue-line tilefish are not managed with Federal management measures north of the NC/VA border (36.550278 N Latitude). As such, with no action it is likely that at least for some time there would be no management of blue-line tilefish in Federal waters north of the NC/VA border. Especially if states relax their landings limit or landings shift farther north beyond states with regulations (i.e. north of New Jersey), in the short run this may lead to higher revenues/benefits for both commercial and recreational fisheries (and associated support services), because more blue-line tilefish might be caught than if management was in place. However, in the medium to long run it would be expected that the blue-line tilefish stock would likely become depleted. This would have negative long term human community impacts related to failure to achieve optimum yield. Because it is difficult to predict how states may change their regulations or how landings may shift in the future, a qualitative approach is used. However, readers may refer to Section 6.5 for information on revenues that have been generated by blue-line tilefish in recent years – for example in 2014 approximately \$457,000 in blue-line tilefish (ex-vessel revenues) were landed in states from Virginia north, primarily in New Jersey, which had no regulations at the time. This may be indicative of the short-term revenues that are possible without regulation, but it is not believed that such landings could be sustained over the long term, and would cause blue-line tilefish to become depleted.

For the action alternatives below, the impact comparison is the alternative compared to no action, which means no Federal management.

7.2.2 HUMAN COMMUNITY IMPACTS - ALTERNATIVE SET 2: MANAGEMENT UNIT AND OBJECTIVES

2a. (***Preferred***) This would establish a separate blue-line tilefish management unit in the EEZ north of the NC/VA border (36.550278 N Latitude) extending up to the boundary with Canada, which would be managed by the Mid-Atlantic Fishery Management Council.

Impacts: While this should not have direct human community impacts compared to no action, because it would support sustainable management of blue-line tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts. Because indirectly this alternative would likely lead to more restrictions on fishing compared to no action, short-term revenues related to blue-line fishing would likely be reduced – see Section 6.5 for recent ex-vessel revenues from blue-line tilefish.

2b. This would establish a separate blue-line tilefish management unit in the EEZ north of Cape Hatteras (35.253167 N. lat., the latitude of Cape Hatteras Light), extending up to the boundary with Canada, which would be managed by the Mid-Atlantic Fishery Management Council.

Impacts: While this should not have direct human community impacts compared to no action, because it would support sustainable management of blue-line tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts. Since blue-line tilefish are already managed from Cape Hatteras to the NC/VA border, this would not add any positive impacts compared to 2a, and could actually complicate/delay sustainable management given it would cause additional conflict with the SAFMC's

management area, so impacts may be less positive than 2a. Because indirectly this alternative would likely lead to more restrictions on fishing compared to no action, short-term revenues related to blueline fishing would likely be reduced – see Section 6.5 for recent ex-vessel revenues from blueline tilefish.

2c. This alternative would establish that the objectives for blueline tilefish are the same as for golden tilefish, with the addition that “Management will reflect blueline tilefish’s susceptibility of overfishing and the need of an analytical stock assessment.”

Impacts: While this should not have direct human community impacts compared to no action, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts. Because indirectly this alternative would likely lead to more restrictions on fishing compared to no action, short-term revenues related to blueline fishing would likely be reduced – see Section 6.5 for recent ex-vessel revenues from blueline tilefish.

7.2.3 HUMAN COMMUNITY IMPACTS - ALTERNATIVE 3: STATUS DETERMINATION CRITERIA

The Council would use the most recent peer-reviewed and accepted assessment as applicable to the blueline tilefish in its management unit.

Impacts: While this should not have direct human community impacts compared to no action, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts.

7.2.4 HUMAN COMMUNITY IMPACTS - ALTERNATIVE SET 4: COMMERCIAL PERMITTING AND REPORTING

4a. Alternative 4a would make permanent the emergency regulations that anyone with a commercial open access golden tilefish permit would be permitted to retain for sale blueline tilefish subject to the applicable trip limit.

Impacts: Compared to no action, there would likely be a low short term negative impact due to administrative burden and cost (but anyone could get a permit). However, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts related to improved tracking of fishing effort and catch of blueline tilefish.

4b. Alternative 4b would require anyone landing any blueline tilefish for sale to get a newly-created commercial open access blueline tilefish permit. Retention of blueline tilefish for sale would be subject to the applicable trip limit.

Impacts: Compared to no action, there would likely be a low short term negative impact due to administrative burden and cost (but anyone could get a permit). However, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive

long-term impacts related to improved tracking of fishing effort and catch of blueline tilefish. Compared to 4a the impact would be more negative since this alternative requires a separate permit.

4c. Alternative 4c would require standard reporting of catch for any commercial vessel possessing a permit that allows them to land blueline tilefish (like other federal permits).

Impacts: Compared to no action, there would likely be a low short term negative impact due to administrative burden and cost. However, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts related to improved tracking of fishing effort and catch of blueline tilefish. Most vessels would likely already have to report catch due to other permits.

4d. Alternative 4d would require Federally-permitted commercial blueline tilefish vessels to submit Vessel Trip Reports (VTRs) electronically.

Impacts: Compared to no action, there would likely be a low short term negative impact due to administrative burden and cost. However, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts related to improved tracking of fishing effort and catch of blueline tilefish. Also, in the long run using electronic VTRs may be less of a burden on vessels.

4e. Dealer Permits and Reporting – This alternative would institute dealer requirements similar to golden tilefish, i.e. that Federally-permitted vessels can only sell blueline tilefish to Federally-permitted dealers, and that dealers must have a federal permit to buy blueline tilefish. In addition, the standard reporting requirements (§648.7) for federal dealers would apply.

Impacts: Compared to no action, there would likely be a low short term negative impact due to administrative burden and cost. However, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts related to improved tracking of fishing effort and catch of blueline tilefish. Also, most dealers would likely already have to report catch due to other permits.

7.2.5 HUMAN COMMUNITY IMPACTS - ALTERNATIVE SET 5: FOR-HIRE RECREATIONAL PERMITTING AND REPORTING

5a. Alternative 5a would make permanent the emergency requirement that any party or charter vessel must have been issued a Federal Charter/Party (golden) tilefish vessel permit to fish for blueline tilefish in the EEZ with passengers for hire. This would create a joint golden/blueline tilefish permit.

Impacts: Compared to no action, there would likely be a low short term negative impact due to administrative burden and cost (but anyone could get a permit). However, because it would support

sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts related to improved tracking of fishing effort and catch of blueline tilefish.

5b. Alternative 5b would require any party or charter vessel to have a newly-created Federal Charter/Party blueline tilefish vessel permit to fish for blueline tilefish in the EEZ with passengers for hire.

Impacts: Compared to no action, there would likely be a low short term negative impact due to administrative burden and cost (but anyone could get a permit). However, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts related to improved tracking of fishing effort and catch of blueline tilefish. Compared to 5a the impact would be more negative since this alternative requires a separate permit.

5c. Alternative 5c would require standard reporting by Vessel Trip Reports (VTRs) of catch for any vessel possessing a permit that allows them to fish for blueline tilefish with passengers for hire.

Impacts: Compared to no action, there would likely be a low short term negative impact due to administrative burden and cost. However, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts related to improved tracking of fishing effort and catch of blueline tilefish. Most relevant vessels would likely already have to report all catch due to other permits.

5d. Alternative 5d would require for-hire vessels to submit Vessel Trip Reports (VTRs) electronically if they have a golden tilefish or blueline tilefish permit.

Impacts: Compared to no action, there would likely be a low short term negative impact due to administrative burden and cost. However, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts related to improved tracking of fishing effort and catch of blueline tilefish. Also, in the long run using electronic VTRs may be less of a burden on vessels.

7.2.6 HUMAN COMMUNITY IMPACTS - ALTERNATIVE SET 6: PRIVATE RECREATIONAL PERMITTING AND REPORTING

6a. Alternative 6a would create and require a dedicated recreational fishing permit for private recreational anglers to catch golden or blueline tilefish, similar to how Highly Migratory Species (HMS) require a separate permit.

Impacts: Compared to no action, there would likely be a low short term negative impact due to administrative burden and cost (but anyone could get a permit). However, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts related to improved tracking of fishing effort and catch of blueline tilefish.

6b. Alternative 6b would require that a NMFS Highly Migratory Species (HMS) permit be obtained by any owner/operator seeking to catch golden or blueline tilefish.

Impacts: Compared to no action, there would likely be a low short term negative impact due to administrative burden and cost (but anyone could get a permit). However, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts related to improved tracking of fishing effort and catch of blueline tilefish. Since most anglers who fish for blueline tilefish likely obtain HMS permits already, any negative administrative burden impacts should be less than 6a. HMS permits cost \$20/vessel.

6c. Alternative 6c would require private fishermen to report golden and blueline tilefish catch through the HMS reporting system, complemented by catch cards and tags as done in Maryland (<http://dnr2.maryland.gov/fisheries/Pages/coastal/tagging.aspx>).

Impacts: Compared to no action, there would likely be a low short term negative impact due to administrative burden and cost. However, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts related to improved tracking of fishing effort and catch of blueline tilefish.

6d. Alternative 6d would require an online reporting (via a modified SAFIS application) of golden and blueline tilefish for private recreational fishermen before any tilefish are removed from a vessel, or before a trailered vessel is removed from the water.

Impacts: Compared to no action, there would likely be a low short term negative impact due to administrative burden and cost. However, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts related to improved tracking of fishing effort and catch of blueline tilefish. If an efficient application can be developed, the reporting burden may be less under 6d compared to 6c.

7.2.7 HUMAN COMMUNITY IMPACTS - ALTERNATIVE 7: MONITORING COMMITTEE

This alternative would establish that the same Monitoring Committee as golden tilefish would provide recommendations to the Council and/or relevant committee to ensure that blueline tilefish specifications are not exceeded and to address any other operational aspects of the fishery. This would essentially create a single Golden/Blueline Tilefish Monitoring Committee.

Impacts: This should have no direct impacts compared to the status quo. However, because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive indirect long-term impacts.

7.2.8 HUMAN COMMUNITY IMPACTS - ALTERNATIVE 8: FRAMEWORK ADJUSTMENTS

This alternative would establish that any action that is frameworkable for golden tilefish would also be frameworkable for blue-line tilefish. It was also established that generally, any action that has been previously considered in the FMP or in an amendment to the FMP may be modified via a framework action. The unit of management may also be modified via a framework action.

Impacts: This should have no direct impacts compared to the status quo. However, because it would support sustainable management of blue-line tilefish in the Mid-Atlantic by the Council, there should be positive indirect long-term impacts. Framework adjustments allow more rapid responses to changing fishing conditions, which should have positive indirect impacts.

7.2.9 HUMAN COMMUNITY IMPACTS - ALTERNATIVE SET 9: SPECIFICATIONS PROCESS AND RISK POLICY

9a. This alternative would specify what measures can be set during specifications. The fishing year would be aligned with the golden tilefish fishing year, i.e. November 1 to October 31.

Impacts: The setting of specifications, including ABC and other measures, should have no direct impacts compared to the status quo. If stock conditions dictate catch reductions, there could be indirect short term negative impacts but because it would support sustainable management of blue-line tilefish in the Mid-Atlantic by the Council, there should be indirect positive long-term impacts.

9b. This alternative establishes that the Council's current control rules for ABC-setting would apply to blue-line tilefish.

Impacts: The setting of specifications, including ABC and other measures, should have no direct impacts compared to the status quo. If stock conditions dictate catch reductions, there could be indirect short term negative impacts but because it would support sustainable management of blue-line tilefish in the Mid-Atlantic by the Council, there should be indirect positive long-term impacts.

9c. This alternative establishes that the Council's current risk policy for ABC-setting would apply to blue-line tilefish, as described below:

Impacts: The setting of specifications, including ABC and other measures, should have no direct impacts compared to the status quo. If stock conditions dictate catch reductions, there could be indirect short term negative impacts but because it would support sustainable management of blue-line tilefish in the Mid-Atlantic by the Council, there should be indirect positive long-term impacts.

7.2.10 HUMAN COMMUNITY IMPACTS - ALTERNATIVE SET 10: ALLOCATIONS AND SPECIFICATIONS

10a. This alternative would not set allocations but the Council would rely on adjusting the specifications to control relative catch between the commercial and recreational fisheries. The catch of each fishery would have to be reviewed each year to determine if additional or modified measures are needed to control catch across the commercial and recreational blueline tilefish fisheries.

Impacts: Not setting allocations should have no direct impacts compared to the status quo. However, without allocations, it may be difficult to control catch within the recreational and commercial fisheries and even more difficult to determine how to respond to any catch overages in terms of management measures on the different fisheries.

10b1. This alternative would use the best available data to set allocations based on median catch percentages from **2009-2013**

Impacts: For new allocations, the allocations themselves would not have direct impacts compared to the status quo. It is really the level of catch assigned to the allocations that determines the impact. Nevertheless, allocations certainly have indirect impacts for the same reason. A range of years and approaches was used to derive allocations, but all resulted in similar recreational/commercial allocations of 72%-76% for the recreational fishery and 24%-28% for the commercial sector. See the alternative description in Section 5 for details.

10b2. This alternative would use the best available data to set allocations based on mean catch percentages from **2009-2013**

Impacts: For new allocations, the allocations themselves would not have direct impacts compared to the status quo. It is really the level of catch assigned to the allocations that determines the impact. Nevertheless, allocations certainly have indirect impacts for the same reason. A range of years and approaches was used to derive allocations, but all resulted in similar recreational/commercial allocations of 72%-76% for the recreational fishery and 24%-28% for the commercial sector. See the alternative description in Section 5 for details.

10c1. This alternative would use the best available data to set allocations based on median catch percentages from **2004-2013**

Impacts: For new allocations, the allocations themselves would not have direct impacts compared to the status quo. It is really the level of catch assigned to the allocations that determines the impact. Nevertheless, allocations certainly have indirect impacts for the same reason. A range of years and approaches was used to derive allocations, but all resulted in similar recreational/commercial allocations of 72%-76% for the recreational fishery and 24%-28% for the commercial sector. See the alternative description in Section 5 for details.

10c2. This alternative would use the best available data to set allocations based on mean catch percentages from *2004-2013*

Impacts: For new allocations, the allocations themselves would not have direct impacts compared to the status quo. It is really the level of catch assigned to the allocations that determines the impact. Nevertheless, allocations certainly have indirect impacts for the same reason. A range of years and approaches was used to derive allocations, but all resulted in similar recreational/commercial allocations of 72%-76% for the recreational fishery and 24%-28% for the commercial sector. See the alternative description in Section 5 for details.

10d. If allocations are not made, this alternative describes how the specifications process would handle ABC, ACLs, ACTs, etc.

Impacts: The setting of specifications, including ABC and other measures, should have no direct impacts compared to the status quo. If stock conditions dictate catch reductions, there could be indirect short term negative impacts but because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be indirect positive long-term impacts.

10e. If allocations are made, this alternative describes how the specifications process would handle allocations in terms of ABC, ACLs, ACTs, etc.

Impacts: The setting of specifications, including ABC and other measures, should have no direct impacts compared to the status quo. If stock conditions dictate catch reductions, there could be indirect short term negative impacts but because it would support sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be indirect positive long-term impacts.

7.2.11 HUMAN COMMUNITY IMPACTS - ALTERNATIVE SET 11: COMMERCIAL TRIP LIMITS (GUTTED WEIGHT)

*These impacts focus on the Federal trip limits, but vessels would be bound by any state limits whose waters they enter or whose ports they land in. As such, the impacts generally assume that states mirror the action taken by the Council since it is not possible to predict what various states may do subsequent to various Council actions.

11a - This alternative would continue the emergency action's commercial trip limit of 275 pounds per trip gutted weight (head and fins must be attached). Since the emergency action expires June 3, 2016, no action would mean no trip limit in Federal waters.

Impacts: Compared to no action (no trip limits in federal waters), a trip limit of 275 pounds per trip gutted weight would be more restrictive and could cause lower short term revenues, so this alternative could have negative short term impacts compared to no action. However, because it would be used in support of sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts. As described in Table 9, in recent typical operation of this fishery (i.e.

not including 2014), very few trips per year (8 trips) would have been impacted by this trip limit over 2009-2013, so even short term negative impacts should be low compared to the typical operation of this fishery. If the comparison is done relative to 2014, more trips are impacted (see Table 10). Staff examined 2015 landings from VA-MA, which had relatively high landings in May and June, low landings before May, moderate landings July-Nov, and low landings in December (the emergency regulations were in effect after June 4, 2015) (see Figure 6). If the high May and June landings are replaced with the average of the moderate landings from July-Nov after the emergency rule, the total landings would be approximately 14,500 pounds. In other words, had the emergency regulations been in effect for all of 2015, commercial landings may have been about 14,500 pounds from VA-MA, and absent other information, 14,500 pounds may be a reasonable approximate value of landings to expect if a trip limit of 275 pounds per trip is chosen and implemented and the fishery operates similarly to 2015. The 2004-2013 average commercial landings from areas north of North Carolina is approximately 21,300 pounds (range is approx. 4,200-41,300 pounds).

11b – This alternative would reduce the trip limit from the emergency action's 275 pounds to a limit of 200 pounds per trip gutted weight (head and fins must be attached). Since the emergency action expires June 3, 2016, the no action would mean no trip limit in Federal waters.

Impacts: Compared to the no action (no trip limits in federal waters), a trip limit of 200 pounds per trip gutted weight would be more restrictive and could cause lower short term revenues, so this alternative could have negative short term impacts. However, because it would be used in support of sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts. As described in Table 9, in recent typical operation of this fishery (i.e. not including 2014), few trips per year (14 trips) would have been impacted by this trip limit over 2009-2013, so even short term negative impacts should be low compared to the typical operation of this fishery. If the comparison is done relative to 2014, more trips would be impacted (see Table 10). Related to the analysis for Alternative 11a above, a trip limit of 200 pounds may be expected to result in less than 14,500 pounds of annual commercial landings, but the degree is difficult to predict given the impact on targeting incentive that can result from trip limit changes.

11c - This alternative would increase the trip limit from the emergency action's 275 pounds to a limit of 300 pounds per trip gutted weight (head and fins must be attached). Since the emergency action expires June 3, 2016, the no action would mean no trip limit in Federal waters.

Impacts: Compared to the no action (no trip limits in federal waters), a trip limit of 300 pounds per trip gutted weight would be more restrictive and could cause lower short term revenues, so this alternative could have negative short term impacts. However, because it would be used in support of sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts. As described in Table 9, in recent typical operation of this fishery (i.e. not including 2014), very few trips per year (6 trips) would have been impacted by this trip limit over 2009-2013, so even short term negative impacts should be low compared to the typical operation of this fishery. If the comparison is done relative to 2014, more trips would be impacted (see Table 10). Related to the analysis for Alternative 11a above, a trip limit of 300 pounds may be expected to result in slightly more than 14,500 pounds of annual commercial landings.

11d - This alternative would increase the trip limit from the emergency action's 275 pounds to a limit of 500 pounds per trip gutted weight (head and fins must be attached). Since the emergency action expires June 3, 2016, the no action would mean no trip limit in Federal waters.

Impacts: Compared to the no action (no trip limits in federal waters), a trip limit of 500 pounds per trip gutted weight would be more restrictive and could cause lower short term revenues, so this alternative could have negative short term impacts. However, because it would be used in support of sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts. As described in Table 9, in recent typical operation of this fishery (i.e. not including 2014), very few trips per year (4 trips) would have been impacted by this trip limit over 2009-2013, so even short term negative impacts should be low compared to the typical operation of this fishery. If the comparison is done relative to 2014, more trips would be impacted (see Table 10). Related to the analysis for Alternative 11a above, a trip limit of 500 pounds may be expected to result in more than 14,500 pounds of annual commercial landings, but the degree is difficult to predict given the impact on targeting incentive that can result from trip limit changes.

11e - This alternative would increase the trip limit from the emergency action's 275 pounds to a limit of 900 pounds per trip gutted weight (head and fins must be attached). Since the emergency action expires June 3, 2016, the no action would mean no trip limit in Federal waters.

Impacts: Compared to the no action (no trip limits in federal waters), a trip limit of 900 pounds per trip gutted weight would be more restrictive and could cause lower short term revenues, so this alternative could have negative short term impacts. However, because it would be used in support of sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts. As described in Table 9, in recent typical operation of this fishery (i.e. not including 2014), very few trips per year (2 trips) would have been impacted by this trip limit over 2009-2013, so even short term negative impacts should be low compared to the typical operation of this fishery. If the comparison is done relative to 2014, more trips would be impacted (see Table 10). Related to the analysis for Alternative 11a above, a trip limit of 900 pounds may be expected to result in more than 14,500 pounds of annual commercial landings, but the degree is difficult to predict given the impact on targeting incentive that can result from trip limit changes. This alternative would be expected to increase landings the most relative to a 14,500 pound baseline compared to other action alternatives.

11f - This alternative would increase the trip limit from the emergency action's 275 pounds to a limit of 750 pounds per trip gutted weight (head and fins must be attached). Since the emergency action expires June 3, 2016, the no action would mean no trip limit in Federal waters.

Impacts: Compared to the no action (no trip limits in federal waters), a trip limit of 750 pounds per trip gutted weight would be more restrictive and could cause lower short term revenues, so this alternative could have negative short term impacts. However, because it would be used in support of sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts. As described in Table 9, in recent typical operation of this fishery (i.e. not including 2014), very few trips per year (2-4 trips) would have been impacted by this trip limit over 2009-2013, so even short term negative impacts should be low compared to the typical operation of this fishery. If the comparison is done relative to 2014, more trips would be impacted (see Table 10). Related to the

analysis for Alternative 11a above, a trip limit of 750 pounds may be expected to result in more than 14,500 pounds of commercial landings, but the degree is difficult to predict given the impact on targeting incentive that can result from trip limit changes. This alternative would be expected to increase landings the 2nd most relative to a 14,500 pound baseline compared to other action alternatives.

7.2.12 HUMAN COMMUNITY IMPACTS - ALTERNATIVE SET 12: RECREATIONAL BAG/POSSESSION LIMITS

*These impacts focus on the Federal trip limits, but vessels would be bound by any state limits whose waters they enter or whose ports they land in. As such, the impacts generally assume that states mirror the action taken by the Council since it is not possible to predict what various states may do subsequent to various Council actions.

12a. This alternative would continue the emergency action's recreational bag limit of 7 fish. Since the emergency action expires June 3, 2016, the no action would mean no limits in Federal waters.

Impacts: Compared to the no action (no bag limits in federal waters), a recreational bag limit of 7 blueline tilefish per person would be more restrictive and could cause lower short term revenues, so this alternative could have negative short term impacts. However, because it would be used in support of sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts. As described in Table 12, in recent typical operation of this fishery (i.e. not including 2014), a relatively small portion of trips per year retaining blueline tilefish (7 trips out of 98) would have been impacted by this trip limit over 2009-2013 (considering average kept fish per angler on VTR reports), so even short term negative impacts should be low compared to the typical operation of this fishery. If the comparison is done relative to 2014, more trips would be impacted (see Table 13).

12b. This alternative would reduce the bag limit from the emergency action's limit of 7 fish to 5 fish. Since the emergency action expires June 3, 2016, the no action would mean no limits in Federal waters.

Impacts: Compared to the no action (no bag limits in federal waters), a recreational bag limit of 5 blueline tilefish per person would be more restrictive and could cause lower short term revenues, so this alternative could have negative short term impacts. However, because it would be used in support of sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts. As described in Table 12, in recent typical operation of this fishery (i.e. not including 2014), a relatively small portion of trips per year retaining blueline tilefish (21 trips out of 98) would have been impacted by this trip limit over 2009-2013 (considering average kept fish per angler on VTR reports), so even short term negative impacts should be low compared to the typical operation of this fishery. If the comparison is done relative to 2014, more trips would be impacted (see Table 13). Comments received during scoping indicated that for some party boats, bag limits less than 7 fish would cause many of their clients to not take trips for blueline tilefish due to the relatively high costs associated with the extended run offshore required for blueline tilefish in their region. 12b would likely be more negative than 12a/c for recreational fishing interests.

12c. This alternative would increase the bag limit from the emergency action's limit of 7 fish to 9 fish. Since the emergency action expires June 3, 2016, the no action would mean no limits in Federal waters.

Impacts: Compared to the no action (no bag limits in federal waters), a recreational bag limit of 9 blueline tilefish per person would be more restrictive and could cause lower short term revenues, so this alternative could have negative short term impacts. However, because it would be used in support of sustainable management of blueline tilefish in the Mid-Atlantic by the Council, there should be positive long-term impacts. As described in Table 12, in recent typical operation of this fishery (i.e. not including 2014), a relatively small portion of trips per year retaining blueline tilefish (4 trips out of 98) would have been impacted by this trip limit over 2009-2013 (considering average kept fish per angler on VTR reports), so even short term negative impacts should be low compared to the typical operation of this fishery. If the comparison is done relative to 2014, more trips would be impacted (see Table 13). 12c would likely be more positive than 12a/b for recreational fishing interests.

12d. If chosen, this alternative could only be chosen in combination with 12a, 12b, or 12c, and would allow an additional 3 blueline tilefish per person on party boat trips (more than 6 passengers) that lasted longer than 36 hours from when the vessel leaves the dock to when a vessel returns to the dock. A call-out/call-in system would be necessary to assist enforcement of such a provision.

Impacts: Since this alternative would only be chosen in combination with 12a, 12b, or 12c, it only makes sense to consider the impact of an additional 3 blueline tilefish for longer trips. Comments received during scoping highlighted that some vessels who make longer trips would benefit from such a provision, because the higher limit would help them attract customers who have to pay more for longer trips (vessels in more northern states must travel farther to get off shore). This alternative would be expected to have positive impacts for those vessels, but their higher catches could cause additional, more restrictive management measures for other vessels, especially if any ABC/ACL overages occur.

7.2.13 HUMAN COMMUNITY IMPACTS - ALTERNATIVE SET 13: ESSENTIAL FISH HABITAT (EFH) DESIGNATION

13a. Under this alternative, EFH designation would wait until the Council's pending overall EFH review action (2016-2017)

Impacts: This alternative would maintain the no action, which would mean no identification of EFH, so impacts would likely be low negative. As described under the no-action alternative's impact analysis described in section 7.1., no action could have low negative EFH impacts for blueline tilefish, and if that impedes sustainable management then human community impacts could be low negative. The impact is low because it is not expected that EFH issues are a major problem for blueline tilefish.

13b. This alternative would use the best available science to designate EFH in this action.

Impacts: Compared to no action, this action would be expected to have low positive impacts. If EFH identification led to better sustainable management of blueline tilefish, human communities should also benefit. The impact is low because it is not expected that EFH issues are a major problem for blueline tilefish and there are unlikely to be federal actions in the proposed blueline tilefish EFH in the near future that would benefit from EFH consultations.

7.2.14 HUMAN COMMUNITY IMPACTS - ALTERNATIVE SET 14: ACCOUNTABILITY MEASURES (AMS)

14a. Under this alternative, used if there are allocations, then AMs are only automatically triggered if the overall ACL is exceeded. Whichever fishery, recreational or commercial or both, that caused the overall ACL overage would have added or modified measures to ensure that future overages do not occur in the future. The Council shall recommend such management measures, for the soonest year practicable, that analysis demonstrates should eliminate future overages. Such measures could include any measure that can be set via specifications. In addition, in the relevant specifications year, the overage would be deducted from what would otherwise be the fishery ACLs, based on the recommendations of the Council's SSC.

Impacts: Compared to no action, accountability measures can have negative impacts in the short run because catches are limited more than would otherwise occur, but there should be positive long term impacts because accountability measures should help ensure maintenance of a sustainable fishery.

14b. Under this alternative, used if there are no allocations, then if the ACL is exceeded, the Council will recommend management measures (commercial and/or recreational), for the soonest year practicable, that analysis demonstrates should eliminate future overages. Such measures could include any measure that can be set via specifications. In addition, in the relevant specifications year, the overage would be deducted from what would otherwise be the ABC, based on the recommendations of the Council's SSC.

Impacts: Compared to no action, accountability measures can have negative impacts in the short run because catches are limited more than would otherwise occur, but there should be positive long term impacts because accountability measures should help ensure maintenance of a sustainable fishery.

14c. Under this alternative, if NMFS determines that one fishery's catch or the total catch will exceed 95% of a fishery's ACL or the overall ABC/ACL (depending on if there are allocations or not), NMFS may close or adjust the season and/or trip/bag limits for either fishery.

Impacts: Compared to no action, accountability measures can have negative impacts in the short run because catches are limited more than would otherwise occur, but there should be positive long term impacts because accountability measures should help ensure maintenance of a sustainable fishery. This alternative would be used in conjunction with either 14a or 14b, and should minimize ABC/ACL overages.

8.0 APPENDIX

Appendix A – Council Emergency Action Request to NMFS



Mid-Atlantic Fishery Management Council

800 North State Street, Suite 201, Dover, DE 19901
Phone: 302-674-2331 | Toll Free: 877-446-2362 | FAX: 302-674-5399 | www.mafmc.org
Richard B. Robins, Jr., Chairman | Lee G. Anderson, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

March 10, 2015

Mr. John Bullard
Regional Administrator
NMFS, NERO
55 Great Republic Drive
Gloucester, MA

Dear Mr. Bullard:

During a webinar meeting on Wednesday February 25, 2015, the Mid-Atlantic Fishery Management Council (Council) voted to request that the National Marine Fisheries Service (NMFS) implement emergency rules to restrict commercial and recreational landings of blue-line tilefish in the Mid-Atlantic (<http://www.mafmc.org/briefing/2015/february-2014-blue-line-tilefish-webinar-meeting>). The Council's recommendations include a 300 pound (whole weight) commercial trip limit and a seven fish per-person recreational trip limit. These measures are intended to reduce the risk of depletion of the blue-line tilefish stock on an interim basis while the Council develops long-term management measures. The full motion is as follows:

I move to request that the US Secretary of Commerce implement emergency or interim rules, as appropriate under 305 (c) of the Magnuson-Stevens Fishery Conservation and Management Act, to curtail the risk of depletion of the blue-line tilefish stock within the jurisdictional boundaries of the Mid-Atlantic Fishery Management Council while the Council develops long term management measures for the species through the normal rulemaking process. For the commercial blue-line tilefish fishery, the Council requests emergency or interim rules including a 300 pound possession limit (whole weight) in the Council's jurisdiction. For the recreational blue-line tilefish fishery, the Council requests emergency or interim rules including a possession limit of 7 fish per person in the Council's jurisdiction.

Commercial landings of blue-line tilefish have unexpectedly and rapidly increased in the Mid-Atlantic primarily due to landings in New Jersey. Landings from Virginia and farther north increased from approximately an 11,000 pound average (2005-2013) to about 217,000 pounds in 2014. Most of these fish were caught in statistical areas off the coast of Delmarva. Also, Northeast vessel trip reports (VTRs) for party/charter vessels indicate a recent unexpected increase from an average of about 2,400 fish per year (2002-2011) to between 10,000-16,000 fish per year in 2012-2014. Party/charter increases in the last two years were mostly from statistical area 622, which is accessible from Delaware and New Jersey – two states currently without regulations.



In fact, there are no federal regulations for blueline tilefish north of North Carolina. Two states, Virginia and Maryland, have enacted tilefish regulations that apply to vessels landing in their states, with both implementing 300 pound incidental commercial trip limits and a 7-fish tilefish species recreational possession limit. These measures were designed to proactively prevent a large directed commercial fishery and constrain fishing mortality in the recreational fishery for blueline tilefish that emerged in the early to mid-2000s. The Council recently expressed concern to the other Mid-Atlantic and southern New England states that the unmanaged loophole fishery for blueline tilefish in the Mid-Atlantic poses a threat to the sustainability of this resource due to the recent unmanaged increases in landings.

Blueline tilefish are non-migratory and we believe that the request for emergency rulemaking should be considered in light of information specific to the Mid-Atlantic. From a fishery point of view, the number of fishery participants and history of fishing pressure is very different in the Mid-Atlantic compared to the South Atlantic. For example, while there are 1,020 snapper/grouper charter permits in the South-Atlantic, approximately 25 party/charter vessels reported any blueline tilefish on Northeast Region VTRs in 2014. As noted above, large-scale commercial catches are also a recent occurrence in the Mid-Atlantic.

Blueline tilefish likely have a high susceptibility to overfishing given their biology (long-lived and relatively sedentary) and have been characterized as a species facing high risk based on a 2009 productivity susceptibility analysis performed by MRAG. A recent report on the population dynamics of blueline tilefish and other deep-water species (Schmidtke et al. 2015, VMRC Grant F-132-R-2, available at <https://mafmc.squarespace.com/s/F132-Tilefish-Final-Report.pdf>) found that the growth rate of blueline tilefish off Virginia is “similar to that observed off the Carolinas during the 1970s, when the Atlantic stock was considered lightly exploited.” Growth in these Mid-Atlantic fish is also different from growth rates seen recently in more heavily-exploited South Atlantic fish. Age and reproductive data from this study indicate a locally spawning, resident population of blueline tilefish off the coast of Virginia with fishing mortality rates that are uncertain but substantially lower than the SEDAR 32 findings for overall blueline tilefish mortality. While the Schmidtke et al. study suggests a better population status for blueline tilefish off the Mid-Atlantic, the study also notes that “the slow growth of this population could leave it ill-equipped to sustainably support a sizeable fishery.”

We recognize that blueline tilefish is a data-limited stock and look forward to facilitating the advancement of the state of the science on this species (e.g., improved commercial and recreational catch information, and stock identification). We also question the applicability of SEDAR 32 to the Mid-Atlantic because several Mid-Atlantic data inputs were not used including catch per unit effort north of Cape Hatteras, NC and Northeast Region party/charter VTR data. There is also private vessel catch in the Mid-Atlantic that is not currently quantified due to the low occurrence of blueline tilefish in Marine Recreational Information Program (MRIP) dockside intercepts.

A continuation of a large scale, unmanaged fishery in 2015 likely poses both a biological risk to the resource and an economic risk for the existing, historical fisheries in the Mid-Atlantic. These include those fisheries that evolved under the proactive regulatory regimes of Virginia and Maryland. Given the uncertainty regarding the status and productivity of blueline tilefish in general and especially off the Mid-Atlantic, the Council determined that the actions proposed in the motion are the most reasonable



while the Council develops long-term and regionally-appropriate management measures for the species through the normal rulemaking process.

Thank you for your consideration of this request. We look forward to working with you and our other management partners to achieve effective management of this fishery. Please call me or Chris Moore if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "R B Robins, Jr." with a stylized flourish at the end.

Richard B. Robins, Jr.
Chairman

cc: Council, R. Crabtree, B. Mahood, S. Rauch

9.0 SELECTED REFERENCES

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Waring et al. 2014. Waring, G.T., E. Josephson, K. Maze-Foley, and P.E. Rosel, editors. 2014. U.S. Atlantic and Gulf of Mexico marine mammal stock assessments—2013. NOAA Tech Memo NMFS-NE-228. 475 pp.

Blueline Tilefish Amendment Public Hearings Summary

(March 2016)

Hearing Dates/Locations

March 21, 2016 – Manteo, NC
March 22, 2016 – Virginia Beach, VA
March 28, 2016 – Ocean City, MD
March 29, 2016 – Lakewood, NJ (Near Pt. Pleasant)

Summaries

March 21, 2016 – Manteo, NC

Attendance:

Jason Didden (MAFMC Staff)
Chris Batsavage (Hearing Officer, MAFMC, NJ Div Marine Fisheries)
Mike Daniels (Wanchese Fish Company)
Kait Daniels
Buddy Coppersmith (F/V Emily Shay)
Dewey Hemilright (MAFMC, F/V Tar Baby)
James Taylor (F/V Windy Gale)
William Spence (F/V Ms. Madeline)
Greg Mayer – fishin' frenzy
John Canning – Reliance Charters
Bailey Daniels

Summary Comments:

B. Coppersmith: This whole action started because some people, got upset about the landings that occurred in 2014. 300 Pounds is not any directed commercial fishery – only incidental. This exercise is window-dressing because the Council appears headed to an incidental-only commercial fishery and giving the recreational fishery 7 fish per person. Giving that to a headboat with 40 people means 280 fish and for a charter with 6 people plus 2 crew means 56 fish at 10 pounds is 560 pounds for a charter boat while commercial vessels only get 274 pounds gutted weight. Tell me how that is fair. This meeting will be the only meeting with substantial commercial blueline interests and we have the most to lose. The commercial landings in 2014-2015 show you have a lot more stock than you think – people are just worried that we've decimated the stock and the statistics from the committees don't add up.

The whole thing is stacked against us from the start. Laurie Nolan is supposed to be a commercial representative and voted for this closure against us. Golden tilefish IFQ holders

have a conflict of interest in voting on this at the Council because they have incentive to limit blueline tilefish landings so that golden tilefish prices are not negatively impacted by more tilefish being on the market. What will happen with bluelines that golden tilefish IFQ boats catch? Will they have to throw over bluelines? Is that fisheries management? I've talked to guys on those boats and they might not want you to think this, but they have a lot of interactions with bluelines while golden tilefishing.

The commercial guy should get a fair amount to catch each trip instead of just 274 pounds because all you are doing is following the VA/MD state limits and where you are right now. I thought when this started it was supposed to be about getting us a small portion to have some directed fishery but it seems like that is not the case now. This action is being rushed to meet the end of the emergency closure and I think it should be slowed down so that the commercial side gets a fairer result.

K. Daniels: Since 2014 and 2015 were used by the SSC, they should be considered when allocating fish between the commercial and recreational fishery even if it's uncharacteristic of the rest of the time series. Not including 2014/2015 for allocations is unfair & unjust. You should not guess that the stock is like porgy for setting the ABC and you are guessing about the fleet and recreational catch. For that to determine how much fish my husband can catch that's a lot "out there" and not valid or reliable science, especially given all the variables that are unclear in the ABC calculation.

M. Daniels: You got to make a living and you can't go out there and fish for just 300 pounds. You need to help these guys out if you can. You don't have to do everything so fast.

D. Hemilright: I don't like this scenario at all – not using 2014/2015 (with higher commercial catches) but using Delphi Process to get up to 75% for the recreational industry that had zeros in the data for history. How do we know what golden tilefish boats are discarding besides what we're told? If they do 1,500 pounds a year of bluelines, that's almost a commercial allocation right there. How would their discards be tracked? I'm worried about that.

I'm not a fan of this fast-track process of doing an amendment in one year, with the commercial fishery losing out on history that may affect things for 5-10 years until there's a stock assessment. Another 6 month emergency action would be better to buy time to figure this out better than what we have here. We have a lot of unknowns impacting people's livelihoods that have fished here when it was open and the ones that fished and reported are the ones who are going to lose out.

VA and MD trip limits had nothing to do with science/biology, they had to do with making it a recreational-only fishery and the present commercial alternatives are going to do the same thing. Some people's concern about the larger directed golden tilefish commercial fishery may be affecting perspectives on what to do with bluelines. On the recreational side, even with 100% required reporting, because of under-reporting they will not be impacted but the commercial

industry is limited to an incidental catch and NC commercial industry deserves an opportunity to give access to the resource to all Americans. What we're presented with is not a viable commercial fishery. So this is window-dressing. At 500-900 pounds you could have a viable commercial fishery even if it is limited to a certain time of year (e.g. June-August). You could also add sampling requirements.

The cart is way ahead of the horse - The SSC numbers are based on the Delphi process also and it's like five leaps of faith. And there's no leap of faith but actual data on the commercial side. We need to consider what's going to be done for surveys and recreational reporting to get data for blueline tilefish. It doesn't make sense that there have been enough fish over time for the recreational fishery (per Delphi estimates) but there aren't enough now for the commercial. You are changing a fishery without reports on the recreational side, and how will that stand up in court?

G. Mayer: I agree with B. Coppersmith – if you are using a trip limit at least make it sustainable – 275 pound is nothing. In the summertime 500-900 pounds you can make a trip. I'm also concerned about the charter fishery. At the Virginia line you can catch 7 fish and we can't catch any and all this came down because a few boats went up to Jersey and found a lot of fish and people panicked. If you have more landings then obviously there are more fish around so why are we looking at this as an emergency closure and hurting the fishery – make a stock assessment. Don't hurt the folks who are reporting all their fish. The recreational fishery is not 100% accountable, if we were then you can make regulations but you can't fault the commercial fishery because they have been in compliance and they're telling you what they did.

We need an accurate stock assessment, and without landings what do you have for a stock assessment? You can't look at 2015's lower landings that are skewed by the closure and be worried that the fishery is collapsing, which is what the general public will do. Relative to the commercial limits the recreational limits seem high – you can get 500 pounds with charter boats – we can make it on 3 fish per person – 20-25 tilefish is plenty for anybody. You have 100s or 1000s of recreational boats (for-hire and private) that could be catching 500 pounds at 7-fish per person. If you can do that for that many boats you're not worried about the stock – you're controlling fishermen and going after the group that has been reporting. It's ridiculous to give the recreational side that much more, basically more per boat than the commercial limit, so basically you're saying commercial fishing is out, it's like the CCA is in charge.

W. Spence: I wish the Council would be up front that the reason this started was the 2014/2015 landings – the way it's presented it seems like this is something that the Council has been working on for 5-6 years. This is all because we caught some fish and the rest is smoke and mirrors. If a person who wasn't a fishermen walked in they wouldn't understand that this all just has to do with the 2014 landings.

J Taylor: Could commercial fishermen have a weekly quota? A weekly quota of 1,000 pounds with a season could be something to help us get through this rough spot, and provide some work for a period (like black sea bass in South Atlantic).

March 22, 2016 – Virginia Beach, VA

Attendance:

Jason Didden (MAFMC Staff)
Rick Robins (Hearing Officer, MAFMC VA)
Dewey Hemilright (MAFMC, F/V Tar Baby)
Jeffrey Eckert (VIMS)
Jameson Gregg (VIMS)
Mike Avery (Seaduction Charters)
Skip Feller (Rudee Angler)
Steve Ellis

Summary Comments:

M. Avery: I like 2b (Cape Hatteras line for management area), because if you launch out of Rudee Inlet but go south then you quickly get into the South Atlantic area if the line is at the VA/NC border.

I would like to get away from paper forms. It doesn't matter whether it's one permit or two – it's just checking one box or two. Outside of HMS it would be precedent setting to require a private permit. Compliance will be a major issue with mandatory private reporting – a lot of people just won't report and you won't know if they fished or not. Could you use the large pelagic survey to gather information on tilefish? Most people will tell the truth when they get surveyed, but won't report. The state of Virginia knows they have issues with their reporting and they don't have confidence in the reports. Requiring fish to be reported before fish leave a boat may be precedent-setting. Private Federal reporting could create a duplicate reporting issue in Virginia unless something is done.

I support 12a, 7 fish per person. If you add more fish for longer trips, it should apply to charter boats also.

Regarding accountability measures, don't want to get into a situation like with cobia where an overage causes drastic changes the next year. It can have a huge economic impact. Is there an ability to reduce limits if we think we're getting close to the limit but before a total closure happens? Also, if some parts of the fishery access the fishery later in the fishing year they are disproportionately impacted by in-season closures, and unexpected closures are especially economically damaging.

S. Feller: I would prefer 2b but the South Atlantic Council won't give it up and it will open up a can of worms and I don't want that to jeopardize anything else. Requiring mandatory reporting for everyone is kind of like requirements for hunting. If you know you have to report and it's part of the process and there's good outreach, outside of the outlaws, over time you can get a good majority of people who will report. Need to show people that reporting will not just hurt them.

12a, 7 fish per person is a must. For the headboat industry in this area, I'm selling a trip for 7 fish, and the sea bass closure is critical – as long as sea bass is closed people are going out for 7 blue-line tilefish. People won't buy a trip for 5 fish. Our customer base is oriented around 7 fish, and to survive with less than 7 fish something would have to be done with black sea bass. This is a \$250,000 industry for me in terms of sales (not profits). Other boats have gone out of business with 7 fish but we have survived. This is a very important fishery for the for-hire fishery, especially in the months when black sea bass is closed.

I think that blue-lines grow much faster than golden tilefish. We see a variety of sizes and we see areas recover after letting them rest. The aging also seems off – fish do not seem as old as the aging work suggests. We've been fishing successfully at the 7 fish trip limit for a long time.

If you are closing the recreational fishery, need to be using e-reporting.

S. Ellis: The ABC seems super-conservative given recent catches.

D. Hemilright: The ABC will not support even the low estimate of the most recent recreational catches. There likely won't be any recreational closures because people won't report. The Council may have to do a Delphi process every year until stringently-enforced reporting occurs.

March 28, 2016 – Ocean City, MD

Attendance:

Jason Didden (MAFMC Staff)
Howard King (Hearing Officer, MAFMC MD)
Ron Callis (Charter Capt, Bill\$ 4 Bills)
Tony Battista (Charter Capt, Fugitive)
Steve Doctor

Summary Comments:

Ron Callis: It seems like where we are at is sustainable but the stock can't take much more. Not against it, but you may not get high compliance with private reporting. Our long trips are 28-30 hours and I would like us included in extra fish for longer trips like the party-boats but at a shorter time period to account for our 28-30 hour "stretch trips."

Nobody should keep 7-8 golden tilefish per person. 2 or 3 golden tilefish would be adequate.

If a stock is in good shape requiring a payback is not necessary. You should close the fishery in season at a target to ensure the future of the fishery.

Tony Battista: The "public grounds" like we call them are depleted but there are other areas without pressure and have plenty of fish. I'm not dependent on tilefish but there are those who are. At some point those who do depend on them will lose customers. I'd rather be able to catch bluefish for the next 30 years at some sustainable number rather than get into a situation where we substantially deplete the resource. Our long trips are 28-30 hours and I would like us included in extra fish for longer trips like the party-boats but at a shorter time period to account for our 28-30 hour "stretch trips." I will be disappointed at 5 fish but it won't kill me (but a 7 fish combined limit is OK). Allowing 8 Golden Tilefish is ridiculous.

If you want to know the real numbers you have to have everybody report, and make it easy to report (via phone). It only takes making an example of a few folks (fines) to get the word out and people will fall in line. If you can do the reporting on an app let's do it. Our phones start beeping at 7 miles out and it wouldn't be that hard to take 2 minutes to report. If you don't report and get caught you shouldn't get a permit.

You should close the fishery in season at a target to ensure the future of the fishery.

S. Doctor: You should go 75%/25% on the allocations to make things round/easy. I would like to see a 7-fish combined limit (including golden tilefish & snowy groupers). The golden tilefish cannot handle that kind of pressure – you can destroy that fishery. It's a pain when there are different federal and state regulations.

The worst thing you can do is open a fishery one year and close it the next. You should use the system you have in black sea bass where you don't have recreational paybacks when the stock size is sufficient. You should close the fishery in season at a target to ensure the future of the fishery.

A daily electronic reporting system/requirement will facilitate better reporting (including for-hire). Having VTRs come in @ 30 days is a problem. It should be 24 or 48 hours.

March 29, 2016 – Lakewood, NJ

Attendance:

Jason Didden (MAFMC Staff)
Tom Baum (Hearing Officer, MAFMC, NJDEP)
Rick Englesbe
Dave Arbeitman (The Reel Seat)
Mel Deak
Jeff Gutman (Tilefish AP, Voyager Headboat)
Josh O'Connor
Dan Kulsar (F/V Anna Eileen)
Greg Bulifant (F/V Y Knot)
Daniel Sarter (F/V Y Knot)
Adam Nowalsky (MAFMC)

Summary Comments:

M. Deak: Why require electronic VTRs? It seems like you are getting all the data now but just not using it. It bothers me that you require the VTRs for the for-hire fleet but when asking people (private anglers) who have nothing at stake what they caught, they may say anything. Regarding permitting, why would you want to cripple yourself more by not getting more targeted permitting – a separate golden permit and a separate blueline permit is best. A median is more appropriate to use for allocations than a mean.

Jeff Gutman: Why do you think eVTRs will be better? Unless you have in-season closure authority what do you need this data for? Especially when you don't really use this? I think there's some unconfirmed lore that e-reporting will result in better data. You are getting that information anyway and not using it now.

Regarding 5a/5b, I think there should be a separate blueline permit for-hire and private so there is a positive step for people to take so we start to get a handle on the population, especially if we're going to have such a low quota (separate for bluelines and goldens). I think the worst thing to do is to lump it in with the HMS permit because it increases the chance of being subjected to a huge multiplier related to all the people who get HMS permits but don't fish for bluelines – it won't show the true participation/effort/catch and we will get penalized at some

point. It's most relevant for private boats but also for charter boats. Separate permits will better show what the true participation/effort is. Looking down the road the call may come for sector separation.

3 fish may not affect an offshore tuna trip deep dropping for a couple of tilefish fillets but will put me out of business – I can't sell a trip for 3 fish. It's very hard to get anyone excited (or spend money) about catching 5 or fewer fish. The emergency regulations didn't destroy the fishery and did constrain the fishery compared to 2014. Please provide a breakdown of recreational catch by month. People aren't happy with even 7 fish. Could a May-September type season work? 3 fish is a non-amount... better to have some season with a higher amount than a trivial amount year round. In the winter there's a dogfish problem and areas become unfishable, but dogfish thin out after May 1. I haven't fished since the 2nd week of January – there's nothing to fish for since sea bass is closed. It's hard to get out in the winter and have customers have a good experience.

It is unfair for folks to the north who have to travel so far and make a 2-day trip to have the same trip limit as folks in VA/MD who can catch the same amount of fish for a 1-day trip. In the Gulf of Mexico they can catch 40 blues on a 2-day trip. It puts us at a disadvantage to folks to the south unless we have a multi-day trip limit. If we go to lower than 7 fish I'd like to see a 2-day limit. In 12d, the call in requirements are unnecessary because we report time in/time out on our VTRs and it is easy to know when we leave/return.

I recommend using the median catch over a longer time series to dampen the effect of outliers while considering a longer period of activity in the fishery.

I'm against an in-season closure for the same reasons as D. Arbeitman (see below). I understand the benefit of not getting hit next year but you just never know when it's going to end.

The 87,000 pound number is just [expletive]. We had unlimited fishing for years and there have been lots of fish caught. And then we had the higher commercial/recreational landings and even after that "Wild West" we still were able to usually catch whatever we were allowed to catch. So the stock wasn't obliterated by even the "Wild West" time and the 87,000 is ridiculous and not near the Delphi catch estimate. We are setting ourselves up to fail and corkscrew into the ground with overages and deductions. With setting it so low there will be no way to go but down due to overage deductions. How can blues be so low compared to Golden Tilefish? Seems to be a stretch to conclude that there are only 5% as many blues vs. goldens – that doesn't seem reasonable. Opening seabass again would take some pressure off. There also seems to be no hope in terms of getting a stock assessment that uses surveys to really know what's going on. The document is now outdated because of the low ABC.

The private recreational fishery initially should have a lower limit than any of the for-hire sector since we know least about what they are catching – maybe they get a couple fish per person until we figure out their catch. They don't require as high a limit as the directed for-hire fishery.

The blues are much more aggressive than goldens – they probably grow faster than goldens.

How much is the recreational ACL going to be reduced to account for recreational uncertainty? The end result could be ridiculous. What would a typical deduction be? What about discards?

We are happy to help and try to provide data/samples/etc.

D. Kulsar: I was the only one longlining for these for a while and at 275 pounds I didn't even bother with them last year.

I think there are more recreational guys fishing for bluelines than you think – some days I couldn't fish (commercial) in some areas there were so many vessels. Compliance with reporting is likely to be an issue and you won't know if people at private docks are reporting.

If recreational fishermen are allowed a higher multi-day trip limit, then commercial fishermen should get a higher multi-day trip limit also. I had 30,000 pounds of fish in two months in 2014 and this year I had maybe 1,500 pounds – it's not worth me going. To make it worthwhile, a 500 pound limit of gutted fish would not be asking that much.

People just haven't known that these fish are here – you don't know how many there really are. The bluelines are much more aggressive than goldens – they probably grow faster than goldens.

I try to communicate with samplers on every trip to provide information. The fish are there. I'm happy to try and take observers or provide any data I can.

A. Nowalsky: what is the proposed Rec. catch estimation methodology? What are the calculations for the numbers of recreationally caught fish? You need to consider how regulations may impact discards.

J. O'Connor: You can fill out eVTRs while you're out and it will submit when you get back in.

D. Arbeitman: I'm totally against 14c for the recreational sector. In-season closures create economic hardships for the for-hire fleet and the tackle shops/bait dealers, who have ordered tackle and bait that they've paid for but suddenly can't sell. An in-season closure also disrupts the individual angler who may have booked trips and made other arrangements. With VTRs there shouldn't be a big surprise about high landings. If you close it in-season we may be done that season and the next also if we went over.

Landing have been going up – recreational and commercial landings going up should tell you that there are a lot of fish out there. Now the SSC has determined that 87,000 pounds is all we can take. We've gone from unlimited to 87,000 pounds with no indication of decline – that's very frustrating. If I had known that at the Delphi meeting our data would be used against us I would not have participated. We told the truth and then the SSC cut that in half. That and my

participation on the Tilefish AP seems futile. At the end of the day, everyone on the Council and SSC gets a paycheck but now we don't.

Multiple Individuals: The size you are using for fish seems too small given all the world records that are being set. The only way to create substantial discards in this fishery is to use a size limit, which would be crazy for this fishery since you can't return fish to the water alive given they come up from so deep. We are being set up to fail.

My name is David Arbeitman. I own The Reel Seat Tackle Shop in Brielle, NJ since 1982. I am also a recreational tilefisherman since 2006 and a member of the MAFMC Golden Tilefish advisory panel.

Thank you for the opportunity to comment on The Blueline Tilefish Amendment to the Tilefish Fishery Management Plan.

I am strongly in favor of #2a from Table 1 that would establish a separate blueline tilefish management unit in the EEZ north of the NC/Va border.

I also favor alternative 5b under For Hire Recreational Permitting and Reporting. This would require Charter and Party Boats to have a new Federal Charter/Party Boat blueline tilefish vessel permit. Along with this, I favor the next alternative 5c which would require standard catch reports using VTRs and not EVTRs.

I believe 6a is very important. Creating a recreational fishing permit for private recreational anglers to catch golden and blueline tilefish will help establish a way to determine recreational landings other than those from party & charter boats. In order to make this work 6c is essential. This would require private fishermen to report golden and blueline tilefish catches through the HMS system.

As for recreational bag/possession limits, I am in favor of continuing the emergency action bag limit of 7 but modifying it to read as a daily limit and not a trip limit. It is not fair for those of us that fish from ports north of Cape May, NJ. We travel on average 100 – 110 miles to catch blueline tilefish. These trips take 2 days while the boats from Cape May and south are much closer to the fishing grounds and only need to do single day trips. In other words, if I travel to Rudee Inlet and fish on 2 single day trips I can take home 14 blueline tilefish. But if I fish on the Voyager out of Pt Pleasant Beach, NJ on a 2 day trip I can only take home 7 blueline tilefish for the same amount of fishing time. Changing to a daily limit rather than a trip limit is not a new or radical idea. The Gulf of Mexico Fishery Management Council utilizes a daily bag limit. Their policy states that persons on qualified head boats or charter vessels with 2 captains for trips in excess of 24 hours may possess a 2 day bag limit of reef fish (both golden and blueline tilefish are classified by that council as reef fish).

As both a fisherman and a member of the recreational fishing industry, I am totally against 14c dealing with In season closure authority within the recreational sector. Any in season closure would create economical hardships for the party boats and charter boats already booked to do blueline tilefish trips as well as tackle shops and bait dealers who must order tackle and bait well in advance for the season. An in season closure would also affect the quality of life for the anglers who booked and paid for these trips in advance. It would deny them a chance of participating in this fishery.

Finally I would like to talk about possible quotas. I don't see how the Council can establish one based on only using commercial landings and party boat/charter boat VTRs. As of now there is no peer reviewed and accepted stock assessment for blueline tilefish north of the NC/Va border. In addition with the landings of both commercial and recreational fishermen increasing with no apparent decline one could speculate that the stocks are robust and yet all indications lead us to believe the quota will be far less than the quota for golden tilefish. If both of these species are deemed to be sedentary and slow growing then shouldn't the quotas for both species be similar. The last golden tilefish stock assessment determined they were not overfished and overfishing was not occurring and NOAA declared the stock fully rebuilt in 2014.

From: [Fred Akers](#)
To: [Didden, Jason](#)
Subject: Blueline Tilefish Comments
Date: Wednesday, March 30, 2016 3:06:06 PM
Attachments: [Akers Blueline PID Comments.pdf](#)

Dear Jason,

Attached please find my blueline tilefish management comments.

Thank you very much for inviting me to participate in the Recreational Blueline Tilefish Delphi process and for this opportunity to provide public comments for the future protection of blueline tilefish.

I find your Blueline Tilefish Public Information Document to be both comprehensive and very well written, and I look forward to continuing to work with you on their future sustainability.

Best Regards,

Fred Akers, Recreational Tilefish fisherman

March 30, 2016

Fred Akers
P.O. Box 395
Newtonville, NJ 08346

Mr. Jason Didden
Mid-Atlantic Fisheries Management Council
Sent by email to: jdidden@mafmc.or

RE: Blueline Tilefish Comments

Dear Jason:

Thank you very much for inviting me to participate in the Recreational Blueline Tilefish Delphi process. I find your Blueline Tilefish Public Information Document to be both comprehensive and very well written, and I offer comments in support of the following alternatives:

- 5.2a - Establish a separate blueline tilefish management unit in the EEZ north of the NC/VA border (36.550278 N Latitude) extending up to the boundary with Canada, which would be managed by the Mid-Atlantic Fishery Management Council.
- 5.3 Alternative 3 - Use the most recent peer-reviewed and accepted assessment as applicable to blueline tilefish in its management unit.
- 5.6b - Require that a NMFS Highly Migratory Species (HMS) permit be obtained by any vessel owner/operator seeking to catch golden or blueline tilefish.
- 5.6c - Require private fishermen to report golden and blueline tilefish catch through the HMS reporting system.
- 5.7 Alternative 7 - Create a Golden/Blueline Tilefish Monitoring Committee from the existing Golden Tilefish Monitoring Committee.
- 5.8 Alternative 8 - Establish that any action that is frameworkable for golden tilefish would also be frameworkable for blueline tilefish.
- 5.9b - Establish that the Council's current control rules for ABC-setting would apply to blueline tilefish.
- 5.9c - Establish that the Council's current risk policy for ABC-setting would apply to blueline tilefish.
- 5.10a - Council would rely on adjusting the specifications to control relative catch between the commercial and recreational fisheries.
- 5.10d - Set a fishery wide ABC, ACL, and ACT.
- 5.12a - Continue the emergency action's recreational bag limit of **7 fish**.
- 5.14b - If the ACL is exceeded, the Council will recommend management measures (commercial and/or recreational).

Thank you for this opportunity to provide public comments for the future protection of blueline tilefish, and I look forward to continuing to work with you on their future sustainability.

Best Regards,

A handwritten signature in dark brown ink that reads "Fred Akers". The signature is written in a cursive, slightly slanted style.

Fred Akers, Recreational Fisherman

From: [Jameson W Gregg](#)
To: [Didden, Jason](#)
Subject: blueline tilefish comments
Date: Thursday, March 24, 2016 11:30:32 AM

Jason,

Thank you again for the informative session the other night on tilefish. As a follow up, I found the report to VMRC from ODU on age and growth and population dynamics. So that report answered several of my questions about the number of biological samples processed for that assessment but I will have to contact ODU directly about their processing and ageing methodology. Since that particular study was limited to samples from only 1 year I think it would behoove management to look at other years for comparison, especially from the years of 2014 and 2015 when the most blueline tilefish were caught to date. Despite the sample size being sufficient for most publications, more recent data and additional data to compare would provide the SSC with some other options. I know this is probably too late for this go around but I believe this should be reevaluated for future management.

Thank you for your time.

Jameson Gregg

Jameson Gregg

Marine Scientist Senior | Multispecies Research Group
NEAMAP, ChesMMAP and Shark Longline Surveys
804.684.7321 | jgregg@vims.edu | <http://www.vims.edu>
PO Box 1346 | Rt. 1375 Greate Rd., Gloucester Pt., VA 23062



From: [Beverly Lynch](#)
To: [Didden, Jason](#)
Subject: blueline tile fish
Date: Sunday, March 13, 2016 1:25:16 PM

I couldn't access the public hearing document for blue line tile fish.

My comments anyway.

My husband is retiring from black sea bass pot fishing after 43 years due to back and knee problems. He intends to hand line his VA sea bass quota and land tautog, wahoo, tile fish and other species. He has landed them in the past, but usually ate the tile fish. He doesn't want any more restrictions as this is his future income.

From: [Regina E Sportfishing](#)
To: [Didden, Jason](#)
Subject: Blueline tilefish hearings
Date: Thursday, March 10, 2016 11:03:48 AM

Good morning Mr Didden,

I see that there is an intention of making a combined blueline and golden tilefish management plan. I'd like to ask does that mean that the bag limits will be combined for both recreational/for-hire and commercial operations? If that is the case I would like to object to that, being that it would constrict my opportunities as well as my customers ability to harvest fish on any given day. Especially with the unpredictable nature of offshore fishing. Additionally have any realistic surveys or research been conducted on the actual biomass of the blue line and golden tilefish? Not assumptions made by persons who have little to no hands on experience in the fishery.

I appreciate your time in this matter and look forward to joining the conversation in regards to tilefish management in the Northeast.

Captain Chet O'Leary
Regina E Sportfishing
917-686-4515
www.ReginaEsportfishing.com

From: [James Riggs](#)
To: [Didden, Jason](#)
Subject: Blueline Tilefish
Date: Thursday, March 10, 2016 9:26:21 AM

Sir,

I support any legislation that would help protect and grow this important species Blueline Tilefish.....Thank you JR



Virginia Saltwater Sportfishing Association, Inc. (VSSA)
P.O. Box 28898, Henrico, VA 23228
<http://www.ifishva.org>
A Non-Profit 501-C3 Organization
Representing All Virginia Recreational Saltwater Anglers

Mike Avery
President

Curtis Tomlin
Vice President

Kevin Smith
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Kevin Smith

Curtis Tomlin

Jerry Hughes

Mike Ruggles

Dr. Christopher Moore
Executive Director, MAFMC
(Blueline Tilefish Comments – Jason Didden)
800 North State St., Suite 201
Dover, DE 19901

Dear Sir,

March 30, 2016

Thank you for the opportunity to comment on the Blueline Tilefish Fishery Management Plan (FMP). The Virginia Saltwater Sportfishing Association (VSSA) is a growing organization of recreational fisherman in the Commonwealth of Virginia. Our mission includes representing the interests of Virginia's recreational saltwater anglers, ensuring the long-term sustainability of Virginia's fisheries, while protecting Virginia's marine, boat, and tackle industry jobs.

Virginia recreational anglers support this FMP to help ensure the long term sustainability of Blueline Tilefish in the Mid-Atlantic waters. VSSA offers the following recommendations:

Management Unit: 2b -- Cape Hatteras.

For Hire Permit: 5a -- Combine with Golden Tilefish permit.

For Hire Reporting: 5c -- Status Quo use GARFO VTR reporting.

Private Permit: 6b -- Combine with existing HMS permit.

Private Reporting: 6c -- Report like other HMS reporting. Do not support pre-landing reporting. Do not support dual reporting to both state and federal agencies.

Rec Limits: 12a -- 7 fish per person.

Regarding Accountability Measures (AM). We do not support AMs with automatic triggers. We are learning hard lessons now with cobia that automatic triggers, while intentions may be good, can have severe negative consequences. MRIP reporting will be of zero usefulness with Bluelines as actual intercepts are highly unlikely given the low number of anglers that target bluelines. Therefore, with mandatory reporting, the landings should be near-real time so AMs should be done in-season to prevent automatic triggers like shut-downs.

Request the SSC look hard at the allocations. The numbers briefed at the public hearing seemed low which could result in exceeding any ACL in the first year after the FMP is implemented.

If you have any questions or comments, the best way to contact us is through our website or email, ifishva@gmail.com, or my phone: 757-329-5137

Sincerely,

Mike Avery

Mike Avery, President

CF: VMRC

Estimated Catch of Blueline Tilefish in the Mid-Atlantic Region

Application of the Delphi Survey Process

Prepared for the:



MID-ATLANTIC | FISHERY
MANAGEMENT
COUNCIL

Tom Allen, Southwick Associates
Andrew Loftus, Loftus Consulting
Rob Southwick, Southwick Associates

Produced by:



PO Box 6435
Fernandina Beach, FL 32035
Tel (904) 277-9765

March 2016

Executive Summary

Recognizing a potentially increasing demand for blueline tilefish in the recreational fishery, the Mid-Atlantic Fishery Management Council initiated emergency measures in 2015 to control harvest. Due to historically low catches of blueline tilefish by private recreational anglers, and lack of reporting among the for-hire sector (due to no mandates or misunderstanding of reporting requirements), few data exist on recreational effort or harvest within traditional data sources. To develop an initial estimate of blueline tilefish landings, the Council employed a modified version of the Delphi technique. This technique is a scientifically accepted method for gathering data from a group with expert knowledge, but has not commonly been applied to developing quantitative estimates such as fisheries catch or effort. Through an initial anonymous survey, charterboat and headboat operators, individual private anglers, and tackle shop owners with intimate knowledge of recreational blueline tilefish fishing in the Mid-Atlantic region provided detailed estimates of effort and catch for boats fishing from most ports in the region. This was followed by an in-person meeting to combine the collective knowledge of the expert panel to refine the initial estimates and a final follow-up survey after the meeting to confirm the refined estimates.

Based on an analysis of the collected information, the expert panel confirmed (general consensus) an estimate of total regional catch ranging from 32,340 to 50,645 blueline tilefish in 2015.

Estimated number of blueline tilefish landed by components of the recreational fishing sector in the Mid-Atlantic during 2015.

	Number of Fish Caught in 2015	
	Low	High
Charter Boats	10,770	17,000
Headboats	15,410	17,152
Private anglers	6,160	16,493
Total	32,340	50,645

More than half of the panel used personal or boat fishing logs to provide the data used as a basis for generating these estimates; others used best estimates based on recollection and all were confident to some degree in the accuracy of their numbers. Nobody expressed little or no confidence in the numbers that they provided.

It is not clear that catches have increased or decreased in the past one and five years. The responses were somewhat evenly distributed in reporting decreased, increased or no change in catches. However, effort directed toward blueline tilefish did seem to present a clear increasing trend and, noticeably, the number of private recreational boats seeking blueline tilefish seems to be on the increase.

There was a high degree of satisfaction with the use of the modified Delphi process to generate these estimates, with 85% of respondents indicating support for using this process for other data-poor fisheries in the Mid-Atlantic region. Responses to open ended questions also indicated substantial support for using this process for other aspects of fisheries management, such as management options for specific fisheries and allocations.

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Background

Blueline tilefish are a non-migratory species susceptible to overfishing due to long lifespan and relatively sedentary nature. The Mid-Atlantic Fishery Management Council has begun developing management measures for blueline tilefish for the Mid-Atlantic region. This follows the implementation in June 2015 of federal (NOAA) emergency management measures for the blueline tilefish fishery in the Greater Atlantic Region. Since the announcement by NOAA, the Council has undertaken the following steps toward development of a long-term management plan:

- June 1-18, 2015: Scoping hearings were held throughout the Mid-Atlantic region to gather public input on blueline tilefish management.
- August 2015: The Council reviewed scoping comments and voted to proceed with an Amendment to the Golden Tilefish Fishery Management Plan to temporarily address blueline tilefish management issues.
- October 2015: The Council reviewed a preliminary set of alternatives for blueline tilefish management and endorsed development of a range of alternatives in a full Environmental Assessment to be reviewed at a future Council meeting.

The emergency measures will end in June of 2016, at which time the Council will implement the management amendment. Currently, little is known about the recreational catch, harvest, or effort statistics needed for developing the recreational component of this amendment. To aid the Council in the development of its long-term management plan for blueline tilefish, Southwick Associates coordinated a modified Delphi process involving selected experts in the fishery to establish consensus on recreational catch estimates, including recreational effort.

About the Delphi Method

The Delphi technique is a scientifically accepted method for gathering data from a group with expert knowledge when the issue in question, such as recreational catch, has limited empirical data on which to draw. The Delphi technique was originally developed by the RAND Corporation in the 1950s to assess the potential effects of military strategies when historic data on possible reactions by other countries were not available. Since then, the process has been refined and applied to assess the potential effects of many different types of government and private sector activities, decisions, and policies.

The classic Delphi process aims to achieve consensus across a range of people and opinions through the use of anonymous questionnaires delivered over multiple rounds of surveys. In a Delphi study, the answers to specific questions - such as best estimates of recreational catch - are processed, summarized and sent back to the panelists in a new questionnaire. The panelists can reinforce, change or modify their previous responses based on the response and input from the rest of the group. The questionnaires are administered anonymously and panelists are not aware of the identity of the other participants, to prevent bias.

Goal

To estimate the total catch by the recreational sector (private anglers, charter boats, and headboats) of blueline tilefish in the Mid-Atlantic region during 2015.

Methods

This project applied a modified Delphi process to arrive at a best expert consensus of blueline tilefish recreational landings in the Mid-Atlantic region. A panel of experts with an understanding of fishery management strategies in the Mid-Atlantic region and specific knowledge of blueline tilefish was identified and contacted by the Council for participation in this process. Information was collected from these experts through four primary and iterative mechanisms:

- A confidential survey (Survey 1) to ascertain catch (average and annual), effort (trips), and estimated number of charterboats, headboats, and private boats observed in the marina/port and on the water that were presumed to be fishing for blueline tilefish. This survey was administered prior to the in-person meeting
- In-person group discussion, including a second-round survey (Survey 2) to determine the appropriate means to clarify data collected in Survey 1.
- In-person group exercise to determine catch and effort of charter boats, by port, in the mid Atlantic.
- A third and final round of surveys (Survey 3) following the workshop to finalize consensus on the results developed with the information collected throughout the process.

The results of Survey 1 (pre-meeting survey) and Survey 3 (post-meeting survey) are discussed in the individual sections below. The survey conducted during the in-person meeting (termed “Survey 2”) presented the overall coastwide estimates of landings and effort derived from Survey 1 and asked participants to react to them. As is typical in a Delphi process, participants’ opinions were still being formed based on the feedback from their fellow participants and review of others’ responses to the survey question. Subsequently, the results of Survey 2 were mixed but generally indicated that while participants were comfortable with their responses at an *individual* level they were less confident in judging the coastwide estimates resulting from the aggregated individual responses. Additionally, Survey 2 clearly indicated that calculation of coastwide landings estimates based on coastwide averages of catch and trips was less reliable than estimating catch and effort on a port-by-port basis and aggregating those to a coastwide level. This approach inherently accounts for varying degrees of effort and success in different geographic areas of the region. The input from Survey 2 formed the basis for the in-meeting exercise of analyzing charterboat catch and effort (based on avidity and skill level) on an individual port basis, the results of which are discussed in the Charterboat section below.

Results

Note: Throughout this document, the terms “primary” and “fallback” blueline tilefish trips are used. Primary indicates a trip where catching blueline was the primary purpose at the outset of the trip; fallback indicates a trip where the primary target was another species but blueline

tilefish were subsequently targeted as a secondary objective. For purposes of classifying and enumerating the number of charterboats and headboats in the survey, participants were asked to a) enumerate the number of boats that took one or more primary trips each year and b) enumerate boats that never took a primary blue-line trip but engaged in blue-line fishing as a secondary objective

Eight charterboat operators, seven headboat operators, one tackle shop operator, and four recreational anglers were contacted and invited to participate in the process. All twenty participants completed the initial survey for a 100% response rate, coming from Virginia, Maryland, Delaware, New Jersey, and New York (Figure 1). Ten respondents indicated that they used personal or boat fishing logs to complete the survey questions; five used best estimates based on recollection. Eight expressed very high confidence in the accuracy of their numbers, two were fairly confident, and three were somewhat confident. Nobody expressed little or no confidence in the numbers that they provided.

Figure 1. Ports represented in the MAFMC blue-line tilefish modified Delphi process.



Charterboat Estimates

Results of Survey 1

Annual “catch” and “kept” estimates for each respondent were calculated as follows:

- a) Typical (average) catch per primary trip x number of primary trips in 2015 x number of charterboats in that port that targeted blueline tilefish.
- b) Typical (average) catch per fallback trip x number of fallback trips in 2015 x number of charterboats in that port that conducted fallback but not primary trips for blueline tilefish .
- c) Total catch (or kept) was the sum of the estimates for primary and fallback trips, and provided an estimate of the number of blueline tilefish caught by charterboat operators in each port in 2015.

In three ports where no charterboat operator participated in the survey but where a headboat operator reported the number of charterboats, the charterboat catch for that port was calculated as follows:

- a) Number of charterboats conducting primary trips x coastwide charterboat average catch per primary trip x coastwide charterboat number of primary blueline tilefish trips.
- b) Number of charterboats conducting fallback trips x coastwide charterboat average catch per fallback trip x coastwide charterboat number of fallback blueline tilefish trips.
- c) Total catch (or kept) was the sum of the fallback and primary estimates.

Coastwide catch estimates were derived by summing the individual port-specific estimates. In two cases where more than one respondent came from a single port, their total catch estimates were averaged to obtain a single port-specific estimate.

Using this methodology, it is estimated that the total number of blueline tilefish kept (landed) by charterboats 2015 in the Mid-Atlantic region was 17,152 fish.

In-Meeting Exercise

During the in-meeting group exercise, participants applied their knowledge of charterboat effort in each major port to enumerate the number of charterboats fishing for blueline tilefish classified by fishing effort (number of trips each year) and average catch per trip as in the matrix below (Figure 2). A separate matrix was produced for each port.

Figure 2. Template for in-meeting estimation of port-specific effort and catch for blueline tilefish by charterboats.

Trips per year:	Catch per Trip		
	0-10 fish	11-20 fish	21+ fish (avg=30)
1-2 trips	# of boats	# of boats	# of boats
3-6 trips	# of boats	# of boats	# of boats
7+ trips (avg=10)	# of boats	# of boats	# of boats

This had the advantage of capturing the personal experience and knowledge of the charterboat operators of their unique community in the Mid-Atlantic. Ports evaluated were identical to those identified through the survey ensuring that direct personal knowledge was brought into the analysis by operators within those ports. Ports analyzed spanned the entire range of the Mid-Atlantic (Figure 1).

Once port-by-port estimates were gathered, they were used to estimate blueline tilefish landed on an annual basis. Despite the high level of confidence of the respondents in their responses and the iterative approach to increase the accuracy of total catch, there remains a level of uncertainty around “average” estimates. As a result, low and high catch estimates are developed to enumerate the potential range around the average.

Low estimates applied the lowest value for each of the variables in a cell to calculate the number of fish landed. For example, in the cell represented by “1-2 trips” and “0-10 fish,” the cell value (number of boats identified by participants) were multiplied by 1 trip and by 1 fish (it was assumed that each trip caught at least 1 fish for this purpose). Likewise, the cell represented by “11-20 fish” and “1-2 trips” multiplied the cell value (number of boats identified by participants) by 1 trip and by 11 fish. In this manner, the “low estimate” of total number of fish landed was the sum of the low estimates of the cell-by-cell calculations.

High estimates were developed in a similar way, but using the high value of the range for each element constituting the cell multiplied by the number of boats identified by participants in that cell. For the two open-ended highest categories (21+ fish and 7+ trips), an average number identified by participants (30 fish and 10 trips respectively) were used to calculate average landing estimates. Average estimates were calculated by applying the midpoint of each cell element multiplied by the number of boats identified by participants for that cell.

Total number of fish landed in the mid Atlantic was calculated as the sum of the total fish landed in each port. The total number of boats was calculated as the sum of all boats identified in each port.

Table 1. Number of blueline tilefish landed by charterboats in 2015, based on in-meeting port evaluation.

	Low Estimate	High Estimate	Average Estimate
Number of boats	na	na	119
Total fish landed	5,223	18,597	10,770

Although this presents a range of possible values, for either the low value or the high value to be true assumes that all charterboats take the fewest trips and catch the fewest fish, or conversely take the greatest number of trips and catch the highest number of fish, in each category. We believe that while this could technically be possible, the true value is likely closer to the midpoint between the low and high (11,910) or the calculated average (10,770) for this methodology.

Analysis

The results from the on-line survey and the in-meeting port-by-port analysis are generally consistent with each other. The survey reflects the *catch rate* and the number of trips that survey participants reported in 2015 multiplied by the total number of estimated charterboats per port. If the project participants are the more avid or more successful among their charterboat peers, then this number could be expected to be on the high end of the range. The in-meeting port-by-port analysis represents the best estimate of the number of boats classified by perceived avidity and success, and if accurate could be expected to represent the entire range of success and avidity across all charterboats. Given the differences in these approaches, the degree to which the estimates are in the same approximate range is likely indicative of their general validity. ***Based on these results, and the confidence expressed by the survey respondents, we believe that 10,770-17,000 is a reasonable estimate of blueline tilefish landed by the Mid-Atlantic charterboat community in 2015.***

Results of Survey 3: Confirmation of Estimates

The third round of surveys was conducted post-meeting and asked respondents to provide their input into the estimated values for number of fish landed and number of boats operating in the 2015 blueline charterboat fishery in the Mid-Atlantic that were based on their input during the earlier phases of this project. Four out of eight charterboat operators responded to this survey and were almost unanimous in the opinion that the numbers of boats and numbers of fish were reasonable. One respondent felt that both numbers should be slightly lower than calculated, but not substantially different from the lower end of the calculated range (Table 2). In response to questions to pinpoint the numbers at the lower or upper ends of the ranges, the number of responses is too low to draw definitive conclusions but in general there was a tendency toward the lower end.

Table 2. Charterboat consensus on calculated values of number of charterboats fishing for blueline tilefish and number of blueline tilefish landed in the Mid-Atlantic during 2015.

		Yes	No
Is 80-119 charter boats reasonable?		3	1
If <u>yes</u> , is it closer to.....	80 boats	2	-
	119 boats	1	-
If <u>no</u> , what is a reasonable number of boats?		-	50
Is 10,770- 17,152 fish landed by charter boats reasonable?		3	1
If <u>yes</u> , is it closer to	10,770 fish	2	-
	14,000 fish (midpoint)	1	-
	17,152 fish	-	-
If <u>no</u> , what is a reasonable number of fish?		-	10,000

Headboat Estimates

The headboat community fishing for blueline tilefish in the Mid-Atlantic as either a primary or fallback species is fairly small. As a result, the seven headboat operators who participated in this process very likely account for the vast majority of landings. During the in-meeting discussion, participants concluded that using the Vessel Trip Reports (VTRs) that most headboats in the region are required to complete and submit to NOAA Fisheries could provide a good indication of blueline tilefish landings for 2015. However, due to confusion about the need for reporting blueline tilefish on the VTRs (and incomplete coverage of these reports among the fleet), entries for past years and for all boats may not completely reflect the true landings, so VTRs should be viewed as a minimum catch estimate. Therefore, results of the survey were used to fill in where data were not available.

It is important to note that three headboats operate from a single port in Virginia, all operated by the same captain. In communications with this captain, it was determined that it was rare for even two of these vessels to have operated offshore at a single time in 2015 and therefore, for purposes of extrapolating responses into landings, this port was considered to have only a single headboat.

Results of Survey 1

Due to the small number of vessels operating in the headboat blueline tilefish fishery, survey results and VTR submissions are not discussed in detail to preserve confidentiality. However, through a comparison of the combined landings reported by several vessels on VTRs and the combined landings reported for those same vessels in the survey, we concluded that the survey responses were a good surrogate for VTRs and for helping to fill in some of the data gaps from headboats who either did not report or were not required to report blueline tilefish via VTRs.

Survey results were used in two ways: 1) the cumulative total of blueline tilefish directly reported to have been landed in 2015 by the seven headboat operator respondents, and 2)

summation of individual responses for the average catch per trip multiplied by the number of trips in 2015 and multiplied by the number of headboats in each port (identical to the methodology outlined earlier for charterboats, but using headboat reported data). As with the charterboat analysis, in one case a headboat was reported by charterboat respondents in a port where no headboats were represented among the project participants, and their catches were determined using the average coastwide catch and trips reported for other headboats (although the end contribution to the total estimate was fairly minimal).

Analysis

Through these techniques, total landings of blueline tilefish by headboats in the Mid-Atlantic in 2015 are estimated to be 15,410 (reported) to 17,152 (extrapolated) fish based on survey responses. Again, based on the strong agreement between the cumulative VTR landings data and corresponding survey response data we view this estimate to be a very close approximation to the actual landings.

Results of Survey 3: Confirmation of Estimates

The third round of surveys was conducted post-meeting and asked respondents to provide their input into the values for number of fish landed and number of boats operating in the 2015 blueline headboat fishery in the Mid-Atlantic based on their input during the earlier phases of this project. Four (out of seven) headboat operators responded. Due to the narrow range between the upper and lower bounds of the estimates, respondents were not asked to provide input on whether the true value was closer to one or the other. As with the charterboats, there was general consensus to the number of headboats and number of blueline tilefish landed by headboats in 2015, with the only dissension still falling within the general range (number of boats).

Table 3. Headboat consensus on calculated values of number of headboats fishing for blueline tilefish and number of blueline tilefish landed in the Mid-Atlantic during 2015.

	Yes	No	No Opinion
Is 6 primary-trip and 6 fallback-trip headboats reasonable?	3	1	-
If no, what is a reasonable number of headboats:	<i>Primary</i>	4	-
	<i>Fallback</i>	4	-
Is 15,410 to 17,152 fish landed by headboats reasonable?	3	-	1

To try to develop a further comparison between the 2015 averages and historical trends in landings, headboat operators were asked to provide their best estimate of the number of blueline tilefish landed during three historical time periods. The numbers in Table 4 reflect the average catch per vessel in each time period.

Table 4. What was your average catch (numbers) of blueline tilefish per year in each of the following time periods (mean value of respondents)?

Time period	Avg. catch
2004 to 2007	5,337
2008 to 2011	3,628
2012 to 2015	4,753

**Note: results do not include a reported value of 10 fish per year that was deemed an outlier. Note that fishing restrictions were put in place latter half of 2015 and may affect the results.*

Private Boat Estimates

There is little in the traditional recreational landings surveys to indicate the extent of private recreational angler effort or landings on blueline tilefish. The data that are available is very sporadic. Blueline tilefish are not easily accessible to recreational anglers due to their distance from shore. This is especially true for private individuals who must have large seaworthy vessels to venture the required distance. To ascertain the extent of recreational blueline tilefish landings, we relied on analysis and extrapolation of the survey results.

Results of Survey 1

The number of private boats that fish for blueline tilefish was estimated in two ways. First, a baseline number was determined by asking charterboat and headboat operators to estimate the number of private vessels docked in their port that caught blueline tilefish. We did not ask charter or headboat respondents to delineate whether these private vessels were primarily targeting blueline tilefish or whether they caught them as a fallback species. This estimate provides a very baseline estimate as it does not account for private vessels that dock at small marinas, private docks, or are trailered. Second, we asked all charterboat, headboat, and private boat respondents to estimate the number of vessels of each type that they observed presumably fishing for blueline tilefish on a typical trip when they fished for this species. Again, given the distance from shore and location of blueline tilefish grounds, it is reasonable to assume that vessels in the same vicinity are fishing for blueline tilefish and not another species (except perhaps golden tilefish).

The ratio of private “blueline tilefish” boats observed in port to blueline tilefish charterboats in that same port, and the ratio of private blueline tilefish boats to charterboats observed fishing on a typical trip were then used to extrapolate the total number of private boats based on the number of charterboats.

The average ratio of private boats observed *fishing* for blueline tilefish to charterboats fishing for blueline tilefish was as follows:

Charterboat respondents:	1.0 private boat per charterboat
Headboat respondents:	1.8 private boats per charterboat
Private boat respondents:	1.1 private boats per charterboat

The average ratio of observed private boats to charterboats *docked* in a port (including only boats that were believed to fish for blueline tilefish) averaged 0.8 for charterboat respondents and 0.5 for headboat respondents.

The lower ratio of private boats observed docked in port than those fishing seemingly provides in an indication that the in-port observations are a minimum number but the proximity of this ratio to those observed fishing provides a degree of comfort that the ratios observed fishing may be reasonable to use to extrapolate for purposes of determining overall numbers.

To estimate blueline tilefish landings per boat, private recreational anglers on our panel were asked the same questions as others related to number of trips taken to fish for blueline tilefish as a primary or fallback species, catch on their last trip, and average catch per trip in 2015. Results of those questions are shown in Table 5

Table 5. Estimated annual catch per boat of blueline tilefish by private anglers

Private anglers	
Primary Trips	
Catch on typical trip	11.8
Number of trips per year	4.5
Total annual catch per boat per year	53
Fallback Trips	
Catch on typical trip	6.0
Number of trips per year	4.0
Total annual catch per boat per year	24
Total annual catch per boat per boat per year	77

Analysis

Using a range of the ratio of private boats observed fishing for blueline tilefish to charterboats fishing on the same trip can provide an estimate of total landings (1.0 to 1.8). This ratio can be applied to the estimated number of charterboats as reported in the survey (80) and the estimated number of charterboats reported during the in-meeting port-by-port analysis (119). ***The resulting number of blueline tilefish caught by private individual anglers ranges from 6,160 fish to 16,493 fish.***

Estimate 1: $1.0 \times 80 \text{ boats} \times 77 \text{ fish/boat/year} = 6,160 \text{ fish.}$

Estimate 2: $1.8 \times 80 \text{ boats} \times 77 \text{ fish/boat/year} = 11,088 \text{ fish.}$

Estimate 3: $1.0 \times 119 \text{ boats} \times 77 \text{ fish/boat/year} = 9,163 \text{ fish.}$

Estimate 4: $1.8 \times 119 \text{ boats} \times 77 \text{ fish/boat/year} = 16,493 \text{ fish.}$

Based on the discussions at the meeting, the private recreational anglers on the panel (whose catch and trip estimates are used for the basis of these calculations) are likely more avid than the

typical blue-line tilefish angler and therefore these estimates may be slightly on the high side. However, based on those same discussions, blue-line tilefish are not easily accessible to the casual angler and therefore *any* private angler fishing for blue-line tilefish is likely above the average in terms of avidity.

Results of Survey 3: Confirmation of Estimates

The third round of surveys was conducted post-meeting and asked respondents to provide their input into the values for number of blue-line tilefish landed and the ratio of private boats to charterboats that was used to calculate number of private boats operating in the 2015 blue-line private boat fishery in the Mid-Atlantic. All four of the private recreational anglers participating in this process responded and were unanimous in their agreement with the estimates that were calculated (Table 6).

Table 6. Private angler consensus on calculated values of ratio of private to charterboats and number of blue-line tilefish caught by private anglers during 2015.

	Yes	No
Is the range 1.0 to 1.8 private boats for every charterboat fishing reasonable?	4	0
Is 6,160 fish to 16,493 blue-line tilefish landed by private anglers reasonable?	4	0

Overall Results

Landings for 2015

Assembling all of the calculated results and survey responses together across the three groups of recreational participants, we estimate the total regional catch of blue-line tilefish in the Mid-Atlantic to range from 32,340 to 50,645 fish in 2015 (Table 7).

Table 7. Estimated number of blue-line tilefish landed by components of the recreational fishing sector in the Mid-Atlantic during 2015.

	Number of Fish Caught in 2015	
	Low	High
Charter Boats	10,770	17,000
Headboats	15,410	17,152
Private anglers	6,160	16,493
Total	32,340	50,645

When asked if the total estimate range (from 32,340 to 50,645 fish) was reasonable, nine out of thirteen respondents agreed, and two had no opinion. The remaining two respondents felt that the estimate should be slightly below the lower end of the range (Table 8).

Table 8. Participant consensus on the estimate of the total number of blueline tilefish landed by all recreational anglers in the Mid-Atlantic region in 2015.

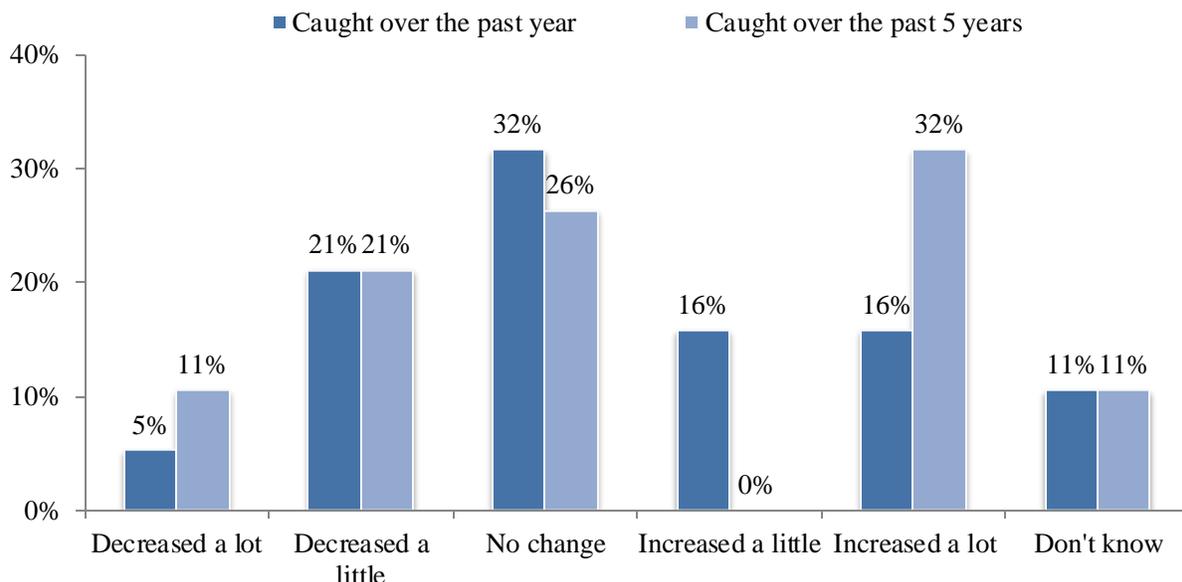
	Yes	No	No opinion
Is 32,340 to 50,645 a reasonable estimate?	9	2	2
If no, what is a reasonable estimate?		30,000 (two responses)	

The fact that there is significant agreement on the estimates whether asked as individual groups about their group estimates or asked to provide opinions on the total recreational landings across all groups lends support that these estimates are in the general range of the true tilefish harvest. In circumstances where individuals did not agree, they tended to feel that the estimates fell close to the lower end of the ranges.

Trends

Several questions during Survey 1 were designed to ascertain qualitative trends in fishing participation and landings of blueline tilefish from the previous one and five year periods. (Similar trend questions were also asked of tackle shop owners on the panel, but results are not presented due to low sample sizes that would result in a breach of confidentiality). Overall, there was no discernible trend in catches across all groups *based on this qualitative assessment*; just as many indicated no change or increased catches and those indicating no change or decreased catches (Figure 3). However, it is noticeable that one-third indicated that catches “increased a lot” over the past five years.

Figure 3. Your change in catch



*Includes principal respondent groups

However, effort directed toward blueline tilefish did seem to present a clear increasing trend. The graphs for both the number of primary and the number of fallback trips are skewed to the higher

end (Figures 4 and 5). Noticeably, the number of private recreational boats seeking blueline tilefish seems to be on the increase (Figure 6).

Figure 4. Your change in trips when blueline tilefish was primary target

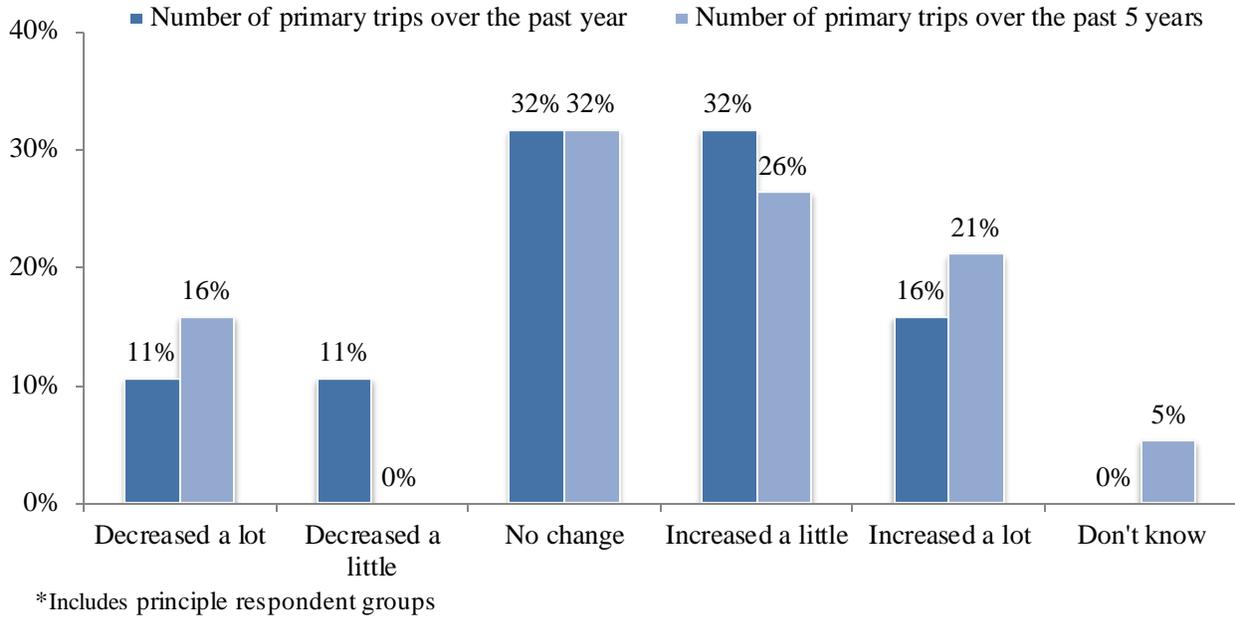


Figure 5. Your change in trips when blueline tilefish was fallback target

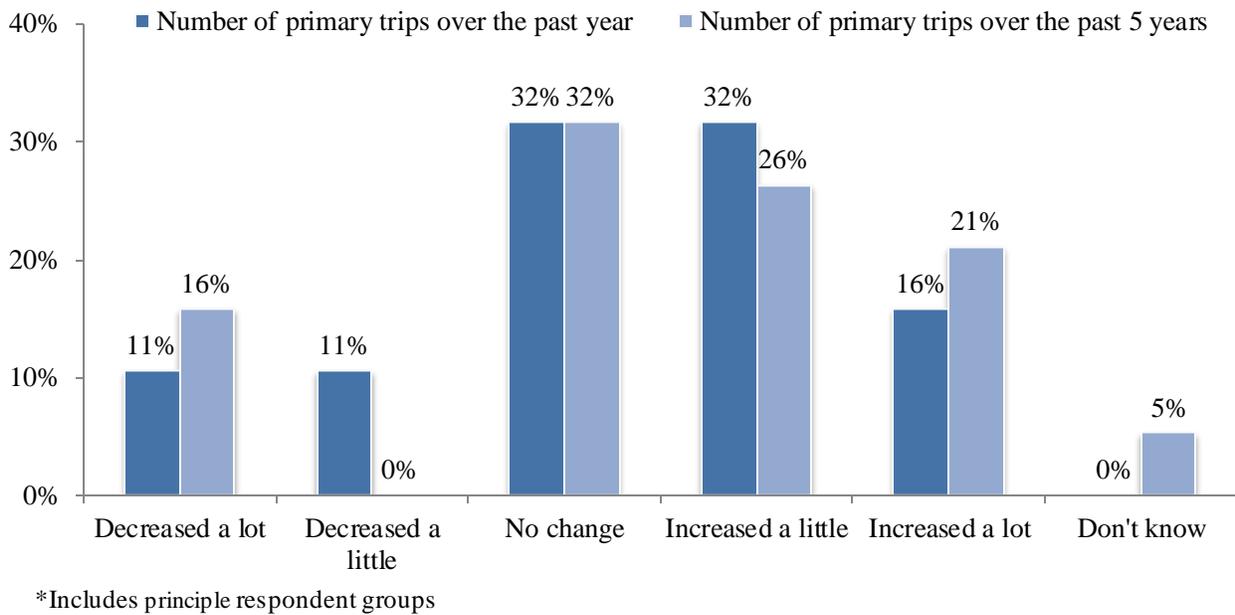
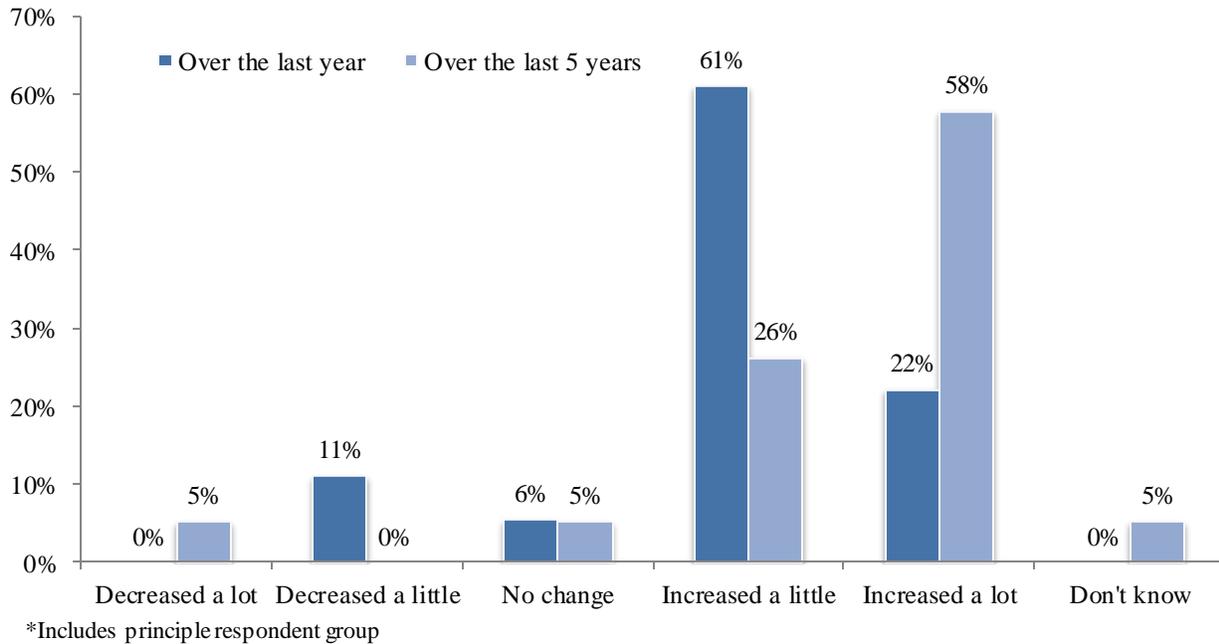


Figure 6. Change in the number of private boats



Evaluation

Since application of the modified Delphi technique was a new approach for the Mid-Atlantic Fishery Management Council, respondents to the final survey were asked to provide their input into a) whether they would support its use in developing catch estimates in other data-poor fisheries (including an opportunity to provide free-form comments) and b) whether this type of approach would be useful in other aspects of the fishery management process. Although not unanimous, there was strong support by the respondents for applying this process to both aspects (Tables 9-12).

Table 9. Would you support using this process for other data-poor fisheries in the Mid-Atlantic region?

	Count
I would mostly support its use with little or no changes.	10
I would support its use with some changes.	1
I don't think it should be used.	2
No opinion.	0
Total	13

Table 10. How do you feel about the process that was used and in which you participated to estimate landings of blueline tilefish?

Open comment
<ul style="list-style-type: none">• Very accurate and trustworthy estimate• I feel this process was not only effective, but I also appreciate the way the information was gathered. I wish more fisheries management went to the fishermen like this for data and input• I feel the estimates for charterboats participating in the fishery is too high as well as the catch estimates• This was as an accurate first hand calculation from people who know, thanks• It can be described as a good try guess-timate which has high probability of accuracy when looking at headboats, diminishing with charter boats and questionable at best accuracy when looking at private effort and estimated harvest.• For lack of a better process and in such a small fishery it was a good starting point.• The best available• I feel confident with the numbers obtained.• Good• Given the almost total absence of any recreational blueline tilefish landings data, this process was the next best thing to estimate total recreational catch.• I like the idea of communicating and using the opinions of the core fisherman in a fishery. They are the best chance for the most accurate data possible. The sit down discussion to let them collaborate and use their conclusions' is great. The "highliners" in a fishery understand and are the most knowledgeable in that fishery. I like to see more of this and groups like this one's conclusions to carry more weight in other fishery's management decisions.• I think it was a place to start but I think going forward there needs to be an accurate method for recording recreational catches.

Table 11. What changes would you recommend to improve the process and the accuracy of the results?

Recommended changes
<ul style="list-style-type: none">• I just feel that it can work with Blueline Tile because there are so few anglers. I think the data gets much more questionable as the pool of participants expands. Black Sea Bass are data poor but there are tens of thousands of participants in the fishery.• It might be the best method for deep water species due to the difficulties involved with actual stock assessments but should not be used in data poor fisheries such as black sea bass.

Table 12. How do you feel about using this process for other aspects of fisheries management in the Mid-Atlantic region, such as management options for specific fisheries, allocations, etc?

Comments about process
<ul style="list-style-type: none"> • GREAT IDEA!!!!!! YES, YES, YES • I feel this is an effective process. • I don't think it should be used as a stand-alone process. • Yes, it is spot on and not extrapolated from data that is only a guess based on number of permits • From years of being around the process, this is by far the best way to get stakeholder input to lay out the groundwork on estimating effort and estimated harvest. There is no other way to do this unless gathering stakeholders together and have each bounce information and questions back and forth to get a better idea on whatever fishery is being discussed. • I feel similarly to my above response. Possibly OK in this type of small fishery. • At least they're talking to the right people and using our VTR • I think it would be a good tool with some species- especially Black Sea bass. • Good, especially for small, specialized fisheries like this one. • Like blueline tilefish, there are a number of other unmanaged fish species in the Mid-Atlantic that are recreational targets with no management accountability. Red Hake and Cunner are 2 examples. This process is a viable way to start collecting total catch estimates that can be used to protect the species and begin the creation of a sustainable management process. • I like then idea of communicating and using the opinions of the core fisherman in a fishery. They are the best chance for the most accurate data possible. The sit down discussion to let them collaborate and use their conclusions' is great. The "highliners" in a fishery understand and are the most knowledgeable in that fishery. I like to see more of this and groups like this one's conclusions to carry more weight in other fishery's management decisions. • Would not favor this method...too much room for inaccurate catch data



Mid-Atlantic Fishery Management Council
 800 North State Street, Suite 201, Dover, DE 19901-3910
 Phone: 302-674-2331 | Toll Free: 877-446-2362 | FAX: 302-674-5399 | www.mafmc.org
 Richard B. Robins, Jr., Chairman | Lee G. Anderson, Vice Chairman
 Christopher M. Moore, Ph.D., Executive Director

M E M O R A N D U M

DATE: February 23, 2016
TO: Chris Moore
FROM: Jason Didden *JDD*
SUBJECT: Blueline Tilefish Catch Time Series

To help develop a Mid-Atlantic blueline tilefish catch time series, the Council contracted with Southwick Associates to conduct a modified Delphi Process with individuals familiar with the Mid-Atlantic blueline recreational tilefish fishery. The goal was to estimate recent blueline tilefish landings. The Delphi Process produced blueline tilefish landings estimates for 2015 for the headboat, charter, and private blueline tilefish fisheries. A report is forthcoming, but this memo summarizes the Delphi Process findings, as well as staff’s recommended use of the results to create a blueline tilefish catch time series. This memo also uses the NMFS Northeast Dealer reports to develop a commercial landings time series. Staff intends for this memo to inform work being conducted regarding potential blueline tilefish Acceptable Biological Catches (ABCs), and all information should be considered preliminary.

The Delphi workshop resulted in the following estimates for 2015 blueline tilefish catch:

	Number of Fish Caught in 2015	
	Low	High
Charter Boats	10,770	17,000
Headboats	15,410	17,152
Private anglers	6,160	16,493
TOTAL	32,340	50,645

For a single number for 2015, staff recommends using the following for each part of the fishery:

Charter boats: 10,770 fish – this was the estimate generated during the Delphi meeting, and represented the participants’ best estimates of how many charter boats participated in the blueline tilefish fishery at various intensities and catch success rates. The participants’ pre-meeting survey results were higher (approximately 17,000), but that may have been the result of their extrapolating their own “hi-liner” experiences to other vessels rather than considering the activity of other vessels more directly, as was done during the meeting (on an area by area basis - Virginia Beach through Long Island). For comparison, the 2015 Vessel Trip Report (VTR) landings of blueline tilefish by charter boats was 1,798 fish.

Headboats: 16,281 fish. This is the midpoint of the participants’ reports from themselves and an extrapolation to account for headboats not included among the Delphi participants but identified by the participants. For comparison, the 2015 VTR landings of blueline tilefish by head boats was 11,636 fish. Given that the majority of headboat vessels with substantial blueline tilefish landings were at the Delphi panel, that their landings are recorded in VTR reports, and that the other headboats would be expected to have lower landings than the primary participants, a middle value is recommended.

The nearly 6-fold increase (5.99) in results from the Delphi process for charter boats and 40% greater findings for headboats is consistent with staff’s understanding of under-reporting issues in the blueline tilefish fishery based on public input at meetings and personal communications with fishery participants. Up until June 2015, vessels with other Northeast permits should have been reporting blueline tilefish but there was no specific permit needed for blueline tilefish.

While the additional attention to blueline tilefish in 2015 has been followed closely by some fishery participants, it does not appear to staff that reporting has dramatically changed for blueline tilefish – similar numbers of charter and headboats reported some blueline tilefish landings in both 2014 and 2015 (15 charters in both years, 9 headboats in 2014 and 8 headboats in 2015). Therefore it appears reasonable to staff to carry the 2015 ratios of Delphi results to VTR data back in time for when blueline charter/party VTRs exist (beginning in 2003 – see below). Staff did switch some trips from one vessel in 2007 from charter to head boat because that vessel’s landings created an outlier, and most trips from that vessel in 2007 appeared to be more consistent with headboat-type fishing.

Staff reviewed the Delphi process results regarding private vessel fishing, which produced a range of 6,160 to 16,493 fish. Staff also reviewed results from the large pelagic survey, which found that from 2011-2015, private boats kept 59% of what charter boats kept for blueline tilefish, but this is only from trips targeting HMS species. Applying this percentage to the recommended 10,770 fish charter boat number would result in 6,354 fish. The Delphi participants also concluded during the workshop that there were 119 charter boats that catch blueline tilefish to some degree (as part of the charter estimate suggested above), and averaging the results of headboat (1.8), charter (1.0), and private (1.1) Delphi participants' collective group estimates of the ratio of private boats to charter boats results in 1.3 private boats for each charter boat. The workshop also found that the typical private boat caught 77 fish per year: $119 \text{ boats} * 1.3 * 77 \text{ fish} = 11,912 \text{ fish}$.

Southwick Associates indicated that their range for private catch may tend slightly toward the high side given the avidity of the participants, so considering the above information, staff suggests using the midpoint of 11,326 fish, which is slightly below the calculated 11,912 fish described above. The ratio of private to charter boat catch would thus be $11,326/10,770 = 1.0516$.

Staff also considered discarding in the blueline tilefish fishery. Delphi participants report that minimal discarding occurs (all fish would be dead) and VTR reports over the last 5 years suggest a 2% discard rate. The table below combines the charter, headboat, private, and discard information to construct a recreational catch time series.

Table 1. Proposed 2003-2015 Recreational Time Series for VA-MA (numbers of fish)

Year	Charter VTR	Headboat VTR	Adjusted Charter (5.99X)	Adjusted Headboat (1.40X)	Private (105.16% of Charter)	Total landings	Total Catch (2% Discards)
2003	Confidential but low - 2003-2006 data averaged for annual total amounts					211	215
2004						211	215
2005						211	215
2006						211	215
2007	500	2,498	2,995	3,495		6,490	6,623
2008	216	391	1,294	547		1,841	1,878
2009	313	3,861	1,875	5,402		7,277	7,426
2010	159	2,127	952	2,976		3,928	4,009
2011	324	3,261	1,941	4,563	2,041	8,544	8,719
2012	381	9,670	2,282	13,530	2,400	18,212	18,584
2013	711	11,127	4,259	15,569	4,479	24,306	24,802
2014	983	14,866	5,888	20,800	6,192	32,881	33,552
2015	1,798	11,636	10,770	16,281	11,326	38,377	39,160

Staff also examined dealer weighout data to develop a commercial time series for landings north of the North Carolina-Virginia border. For years with blue-line tilefish data (1999-2014), staff examined the NMFS dealer weighout “AA” tables. The “AA” tables have area information integrated via a matching process with VTR information. Staff removed landings from statistical areas south of the North Carolina-Virginia border and landings without area information landed in North Carolina. Virginia landings without area information were multiplied by .89 because commercial VTR information suggested that 89% of Virginia VTR catch with area information came from areas north of the North Carolina-Virginia border. Landings into states north of Virginia without area information were included fully as being from north of the North Carolina-Virginia border. Landings coming from statistical areas 631 and 632 (which straddle the North Carolina-Virginia border) were apportioned half to north of the North Carolina-Virginia border and half south. While VTR data suggest that 67% percent of catch in these areas comes from north of the North Carolina-Virginia border, the VTR information does not capture all of the landings from these areas, 81% of which went into North Carolina, so staff judged that lowering the percent from 67% to 50% seemed reasonable. Also, in terms of latitude, the 631 and 632 statistical areas are 55% off of North Carolina. All 2015 preliminary landings (they have not been added to the AA tables yet) from Virginia north were included as being north of the North Carolina-Virginia

border, which should be a reasonable proxy for 2015 given the existing management measures in place for waters south of the North Carolina-Virginia border. The resulting time series is presented below, and represents the landings in the NE dealer weighout database that can be attributed to the areas north of the North Carolina-Virginia border. Reported VTR discards of 1% are also included (bluefin tilefish discards are not estimated in the SBRM). Minimal discarding incentive should exist, but staff will perform additional analyses of observer data to see if additional information can be obtained on discarding.

Table 2. Commercial Landings from North of North Carolina/Virginia Border.

YEAR	Pounds Landed	Pounds Caught
1999	33	33
2000	2,446	2,471
2001	935	944
2002	304	307
2003	6,212	6,274
2004	7,332	7,406
2005	4,164	4,206
2006	28,153	28,437
2007	25,835	26,095
2008	7,803	7,881
2009	38,813	39,205
2010	7,365	7,439
2011	17,494	17,670
2012	40,856	41,268
2013	33,275	33,611
2014	201,977	204,017
2015	73,637	74,381



Mid-Atlantic Fishery Management Council
800 North State Street, Suite 201, Dover, DE 19901-3910
Phone: 302-674-2331 | Toll Free: 877-446-2362 | FAX: 302-674-5399 | www.mafmc.org
Richard B. Robins, Jr., Chairman | Lee G. Anderson, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

DATE: March 14, 2016

TO: Chris Moore

FROM: Jason Didden *JDD*

SUBJECT: Blueline Tilefish Catch Time Series

As part of the Delphi Process, follow-up survey work with the blueline tilefish Delphi headboat participants has caused staff to reconsider the previous recommendation for the blueline tilefish catch series. Three headboats that appear to account for the majority of blueline tilefish headboat catches, and have been pioneers in this fishery in the Mid-Atlantic, provided their average catches of blueline tilefish for the time periods 2012-2015, 2008-2011, and 2004-2007. The vessels began fishing for blueline tilefish in 2004, 2005, and 2011. Accounting for the years they started fishing, their responses suggest that especially from 2004-2011, the existing headboat VTR records may not provide a reasonable account of headboat landings. Given other vessels also caught blueline tilefish during this period, including this updated information as a minimum estimate appears reasonable to staff, and staff believes these vessels have engaged in a good-faith effort to estimate their historical catch. Incorporating this additional data from the follow-up component of the Delphi Process results in the following updated table (next page) for recreational blueline tilefish catch, which staff believes to likely be more representative of the actual history of exploitation off the mid-Atlantic. The averaged 4-year period catches are used to maintain data confidentiality. Please refer to the previous memo for how the other fields were calculated.

Year	Charter VTR	Headboat VTR	Adjusted Charter (5.99*VTR for 2003-2014)	Adjusted Headboat: (1.40)*(VTR) used for 2012-2014; Delphi follow-up used for 2004-2011	Private (105.16% of Charter)	Total landings	Total Catch (2% Discards)
2003	Conf. but low, average 35	na	Conf. but low, average 208	0	na	208	212
2004		na		13,500	na	13,708	13,988
2005		na		13,500	na	13,708	13,988
2006		na		13,500	na	13,708	13,988
2007	500	2,498	2,995	13,500	na	16,495	16,832
2008	216	391	1,294	13,750	na	15,044	15,351
2009	313	3,861	1,875	13,750	na	15,625	15,944
2010	159	2,127	952	13,750	na	14,702	15,002
2011	324	3,261	1,941	13,750	2,041	17,732	18,094
2012	381	9,670	2,282	13,530	2,400	18,212	18,584
2013	711	11,127	4,259	15,569	4,479	24,306	24,802
2014	983	14,866	5,888	20,800	6,192	32,881	33,552
2015	1,798	11,636	10,770	16,281	11,326	38,377	39,160



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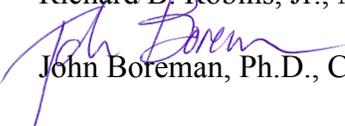
Richard B. Robins, Jr., Chairman | Lee G. Anderson, Vice Chairman

Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

DATE: 30 March 2016

TO: Richard B. Robins, Jr., MAFMC Chairman

FROM:  John Boreman, Ph.D., Chair, MAFMC Scientific and Statistical Committee

SUBJECT: Report of the March 2016 Meeting and Follow-up Webinar of the MAFMC SSC

The SSC met in Baltimore, MD, on 15-16 March 2016 for the main purpose of reviewing ABC recommendations for Golden Tilefish and determining the best way forward for developing an ABC recommendation for Blueline Tilefish in the mid-Atlantic region. The SSC also received and discussed a review panel report on stock structure related to the upcoming Black Sea Bass assessment, an SSC working group outline for developing consistent and scientifically-justified probability distribution functions for overfishing limits of mid-Atlantic stocks, and discussed future membership composition for the SSC. The final meeting agenda is attached (Attachment 1). Note that a follow-up webinar on 29 March 2016 was necessary to continue discussion of and finalize the ABC recommendation for Blueline Tilefish.

A total of 8 SSC members were in attendance on March 15th, 10 on March 16th, and 12 on March 29th, which constituted a quorum on all three days (Attachment 2). Also in attendance were staff from the NMFS Northeast Fisheries Science Center (by phone), and staff from the Council, NMFS Headquarters, the fishing industry, and the general public. Documents cited in this report can be accessed via the MAFMC SSC website (<http://www.mafmc.org/ssc-meetings/2016/march-15-16>).

Golden Tilefish

The SSC received the following background documents related to Golden Tilefish prior to the meeting: the 2016 Tilefish Fishery Performance Report and associated 2016 Golden Tilefish Advisory Panel Information Document prepared by Council staff; the Golden Tilefish Data Update Through 2015, provided by the Northeast Fisheries Science Center; and the Council staff memo on 2017 Golden Tilefish Specifications.

José Montañez reviewed the background documents for the SSC. Since the ABC for 2017 is part of a three-year recommendation already specified by the SSC, the SSC discussed whether or not any revisions to the 2017 ABC specification are necessary. The SSC noted that better accounting of the recreational catch of Golden Tilefish would be useful. Currently, there are estimates of recreational catch of Golden Tilefish based on vessel trip reports, so the party/charter component of the catch is fairly well estimated; information from the large pelagic species survey indicates that catches are in the neighborhood of 500 to 1000 fish per year. However, information is lacking that describes catch and

effort in the private recreational fishery. The upcoming amendment to the Golden Tilefish FMP includes a provision for data collection for Blueline Tilefish, which may have ancillary benefits with respect to estimating catch of the recreational component of the Golden Tilefish Fishery.

The SSC noted the unusual pattern and variability (four fold) in the catch-per-unit-effort (CPUE) index, which is of concern. There was also concern expressed by participants in the commercial tilefish fishery about the expanding recreational component in this fishery. They concluded that there appears to be expanding effort in both the head boat and private boat fleets who fish for tuna or mahi and also drop on tilefish. The industry members present at the SSC meeting also expressed concern that some of the private catch is being sold.

The SSC discussed the spatial distribution of the stock and fishery. One major question is whether or not there has been a change in the distribution of commercial fishing effort by area. Industry members attending the SSC meeting responded that some areas are saturated with lobster gear offshore and that these areas are not accessible to the commercial tilefish fleet industry. They also noted that CPUE has always been variable throughout the history of the fishery, and lack of participation by all boats, market conditions, and bad weather could have all contributed to the decline in CPUE in 2015. The variability in CPUE could also reflect pulses in recruitment – the industry is currently seeing younger fish. The SSC noted that there could be two large year classes coming into the fishery, followed by a sharp decline in recruitment, but the change in CPUE is not what you would expect. It might also be useful to look at the size and age distribution of the stock in the updated assessment being planned for next year.

Based on the lack of any compelling evidence to the contrary, however, the SSC concluded that there was no basis to change its ABC recommendation for fishing year 2017.

Criteria for OFL CV Specification

An SSC working group was established at the September 2015 SSC meeting to begin developing criteria for using different overfishing limit (OFL) coefficient of variation (CV) levels for SSC-modified OFL probability distribution (formerly Level 3) stocks. In general, the Council's risk policy and ABC framework have worked relatively well in cases where adequate information is available. The SSC established a default 100% CV for stocks in this category, but has set lower CVs (60%) for individual stock assessments with improved consideration of uncertainty. The Council has concerns about a lack of transparency in how levels of CV below hundred percent were chosen by the SSC; the Council would welcome a more structured approach by the SSC. The Council is currently reviewing its risk policy and this work dovetails nicely with the SSC's effort.

The working group developed and circulated a draft outline for establishing the criteria prior to the SSC meeting (see the web link provided above). Sarah Gaichas walked the SSC through the draft and led the subsequent discussion.

Although this work is still in progress, SSC discussion framed a potential process to be outlined in more detail in a working paper. Reasonable upper and lower bounds for the OFL CV would be established based on research results, and assessment teams would be encouraged to address a specified list of uncertainties. The working group suggested 36% as an initial starting point the lower bound of OFL CV, based on Ralston et al.'s (2011) recommendation for a "best case" for West Coast fish stocks. The upper bound could remain the default OFL CV of 100%, based on the meta-analysis by Mike Wilberg that has been used by the SSC to date. Categories could then be established within these bounds, preferably no more than two. These categories would reflect intermediate levels of uncertainty in OFL.

To determine how to align stock assessments with OFL CV categories, several options are available and will be explored. One would assign stock assessment to a higher or lower OFL CV category if it quantified fewer or more, respectively, of the specified uncertainties within the assessment. [If all specified uncertainties were quantified within the assessment and the resulting assessment-estimated OFL CV fell between the reasonable upper and lower bounds, that CV would likely be accepted and the stock would then be in either (formerly) Level 2 or Level 1.] Another approach would be to define a best possible OFL CV that an assessment could produce and then compare each assessment under evaluation to that standard. In other words, compared to the best possible assessment, how many criteria does any particular assessment meet? Thus, a framework would be established that would set tiers of CVs between the upper and lower bounds. Ralston et al. (2011) used life history attributes to help establish appropriate tiers of CV, based on the premise that one would expect different levels of CVs based on life history types. A retrospective analysis of forecast error might also be a means for developing a CV tier within the pre-set bounds. Whatever means is used by the SSC to establish tiers of CV values, the basis for the tiers needs to be communicated to the scientists developing the stock assessments so that information contained in the assessment can be used by the SSC.

The SSC concluded that a list of assessment uncertainties that fully characterize the OFL CV should be developed and communicated clearly to the Northeast Fisheries Science Center. Assessment scientists at the Center could then evaluate the list to determine what is feasible. The CV subgroup will start with the list provided in the second paragraph of the draft outline prepared by the working group and then add to that list as part of a white paper, which the SSC will review at its next meeting.

Reference Cited

Ralston, S., Punt, A. E., Hamel, O. S., DeVore, J. D., and Conser, R. J. 2011. A meta-analytic approach to quantifying scientific uncertainty in stock assessments. *Fishery Bulletin*, 109: 217–232.

Black Sea Bass Review Panel Report

It is anticipated that the Southern Demersal Working Group will complete a new assessment for Black Sea Bass by the end of 2016. A central issue for the team conducting this new assessment will be to respond to concerns raised in the SARC panel report concerning the most recent benchmark assessment. Accordingly, the chair of the Southern Demersal Working Group (SDWG, John Maniscalco) and the chair of the Stock Assessment Workshop (SAW; Dr. James Weinberg) requested that the Mid-Atlantic Fishery Management Council's Scientific and Statistical Committee (SSC) provide a critical review of the SDWG's January 2016 report, which proposed a partitioning of the northern Black Sea Bass stock for the purposes of trying to develop assessment models that incorporate stock spatial structure.

In response to this request, the SSC formed a four-member *ad hoc* review panel comprising Drs. Thomas Miller (Vice Chair, SSC), Robert Latour (SSC), Katie Drew (Atlantic States Marine Fisheries Commission), and John Wiedenmann (Rutgers University). The Review Panel was charged with a single term of reference:

Determine whether the spatial partitioning of the black sea bass stock proposed by the BSB SAW WG is reasonable and appropriate to use as a starting point for developing stock assessment models. In making this determination consider whether available scientific data have been taken into account and analyzed properly, and whether the conclusions based on those data are reasonable given the current fisheries data.

On 16 February 2016, the Review Panel received a copy of the Working Group's report (SAW/SARC

Black Sea Bass Working Group, 2016) developed as result of its 16 December 2015 meeting. The Review Panel met with the Working Group assessment lead (G. Shepherd, NOAA Fisheries NEFSC), the chair of the SDWG, and the chair of the SAW on 23 February 2016 to receive a briefing of the Working Group's recommendations of a proposed spatial segregation of the Black Sea Bass stock. The Review Panel considered four components of its charge in reaching its conclusions: (1) justification for the spatial structure; (2) inclusion of data; (3) data analysis, and (4) appropriateness of conclusions.

The Review Panel concluded that the separation proposed by the Working Group into a northern and southern sub-unit of the northern stock of Black Sea Bass, with a dividing line approximating the position of the Hudson Canyon, is reasonable and appropriate to use as a starting point for developing stock assessment models. However, the Review Panel noted that the justification is not based on overwhelming biological evidence of a difference in stock characteristics north and south of this dividing line. The principal justification for the division is a parsimonious one – in that it provides sufficient data in both putative sub-units for parameter estimation in stock assessment modeling while aligning broadly with potential physical and biological characteristics related to life history characteristics and life history trajectories.

The SSC concurred with the findings of the Review Panel and noted that the division into sub-units is not necessarily based on biology of the species, so caution should be used in any interpretation of conclusions drawn based on the division. The next step is for the SAW/SARC Working Group to develop catch data time series by sub-unit, while simultaneously developing a simulated data set to formulate an assessment model. The Working Group will conduct a data meeting in late spring, and the model meeting will occur during the summer. The SSC emphasized that the first Term of Reference (TOR 1) for the upcoming SAW/SARC review, which relates to the potential influence of stock structure on the assessment outcome, is not finished. Although the Working Group now has a working definition of a northern and southern sub-unit that has been supported by the Review Panel and SSC, the Working Group still needs to explore the implications of this putative stock structure on the assessment outcome (the second part of TOR 1).

Reference Cited

SAW/SARC Black Sea Bass Working Group. 2016. Proposed partitioning of the northern black sea bass stock for purposes of developing spatial stock assessment models. 33 pp.

SSC Membership

The Council is seeking feedback from the SSC on which scientific disciplines should be considered in filling three SSC vacancies that currently exist. Based on the Council's work plan for the upcoming year, Council Chairman Robins suggested that scientists with expertise in ecosystems modeling and risk assessment be considered along with adding additional expertise in stock assessments. If the SSC will be getting more involved in management strategy evaluations, then expertise in social sciences will also be needed. SSC members also identified the need for expertise in: biological sciences beyond stock assessment; oceanography coupled with ecosystems and habitat ecology; and larval fish ecology.

The SSC members agreed that social sciences should be fully integrated into the SSC, rather than be treated as a separate entity. Additional social sciences expertise would be useful if the SSC is going to be asked to become more involved in management strategy evaluations, adding economic performance measures to data-limited approaches to setting ABCs, assessing the effects of climate change on the fishing sector, and determining how to use research set-aside funding to address science and

management needs more effectively.

Chairman Robins agreed to provide the SSC with questions that the Council could be asking the SSC to address in the near future, based on the Council's visioning document and annual work plan. The SSC can then provide the Council with the types of scientific expertise that would round out the SSC's current expertise to help address the anticipated questions.

Blueline Tilefish

The MAFMC requested the SSC to form a working group to evaluate knowledge of the status of Blueline Tilefish in mid-Atlantic waters. The Working Group was given the following term of reference:

TOR #1. Review data-poor approaches that can (or cannot) be used for developing an ABC for Blueline Tilefish north of NC. Based on the review, the SSC will then determine what data-poor method is most suitable to use.

The SSC Working Group appointed to review the approaches on data-poor approaches to establish catch advice for Blueline Tilefish comprised Thomas Miller (Working Group Chair, and Vice Chair MAFMC SSC), Michael Schmidtke (Old Dominion University), Cynthia Jones (MAFMC SSC), and David Tomberlin (MAFMC SSC).

The SSC Working Group applied DLMTTool to Blueline Tilefish in the mid-Atlantic. A full description of the approach used by the Working Group, including the data and life history characteristics used and evaluation of the model outputs, is included in the memo from the chair of the Working Group to the chair of the SSC (Miller 2016). A similar approach has been used previously by the SSC in developing ABC advice for Black Sea Bass, based on an analysis by McNamee et al. (2015). In its review of the McNamee et al. report, a sub-committee of the SSC noted that, as applied in the McNamee et al. (2015), DLMTTool conflated the two approaches to establishing ABCs identified in the MAFMC's Risk Policy regarding the ability to estimate an OFL (Miller et al., 2015). In considering the application of DLMTTool to Blueline Tilefish, the SSC recommends maintaining a clear distinction between those DL management procedures that estimate OFL and those that provide a direct estimate of ABC.

Application of DLMTTool is a two-stage process. In the first stage, a simulation model is used, which represents the species under consideration, its fisheries, and sampling. The simulation model is used to compare the performance of alternative DL management procedures. Using predetermined measures of performance, DL management procedures for application to the species under consideration are selected based on the simulation model results. In the second stage, OFL and/or ABC levels are calculated for the selected DL management procedures.

The Working Group considered Blueline Tilefish as a supporting a single sub-unit of the stock north of the NC/VA border. No spatial differences or refuges from fishing were defined. The simulation model was parameterized with information from samples of Blueline Tilefish taken in the Norfolk Canyon area (Schmidtke et al. 2015). Preliminary modeling indicated that 14 management procedures could be developed from the data available for Blueline Tilefish in the mid-Atlantic. Based on performance measures determined before simulations were conducted (i.e., a $P(\text{overfishing}) < 50\%$, $P(\text{overfished}) < 50\%$, and relative yields between 30 – 100%), only two management procedures were selected as the basis for providing ABC advice: (1) MCD (simple catch depletion method); and (2) MCD4010 (simple catch depletion method that employs the 40-10 harvest rule).

The Working Group also ran simulations employing increasing and constant effort scenarios. However, the same management procedures, MCD and MCD4010, were the only realistically implementable procedures that met the *a priori* selected performance measures, regardless of the effort scenario.

At its meeting on March 16th, the SSC reviewed a preliminary draft of the Working Group report and agreed that use of the DLMTool is the most appropriate approach for developing an ABC recommendation for Blueline Tilefish. The SSC also emphasized that the ABC would be for a sub-unit of Blueline Tilefish located in the mid-Atlantic region, and would not be applicable to the entire coast. The SSC noted several areas in the draft where additional details and clarification were needed to improve the document and decided to charge the working group with making those changes, then follow up with a webinar on March 29th to finalize the ABC recommendation.

During the webinar, Tom Miller walked the SSC through the changes that were made to the original draft Working Group report in response to the SSC's suggestions. Dr. Miller also noted that, after the revised memo was prepared, the Working Group reconsidered and decided to remove its application of a restriction on the amount of depletion the stock has undergone since the fishery developed, since no evidence is available to support such a restriction. This added two more management procedures that met the selected performance measures: average catch and average catch in the last five years. Thus, the SSC Blueline Tilefish Working Group recommended an ABC calculated as the average of the median ABCs derived from the average catch, average catch in the last five years, MCD, and MCD 4010 management procedures as **39,477 kg (87,031 lbs)**, which is slightly higher than the ABC value recommended in the 22 March memo. This value was accepted by the SSC during the 29 March 2016 webinar, and a revised memo reflecting changes to the original draft and the removal of the restriction on stock depletion will be posted to the SSC website.

SSC responses to the Council's terms of reference for Blueline Tilefish are, therefore, as follows:

For Blueline Tilefish (north of the Virginia-North Carolina border), the SSC will provide a written report that identifies the following for fishing year 2017 (1 November 2016 – 31 October 2017):

1) The level of uncertainty that the SSC deems most appropriate for the stock assessment information upon which the ABC determination was made, using the criteria listed in the Omnibus Amendment.

The SSC determined that the approach to estimating the ABC for Blueline Tilefish qualifies as a stock for which there is **no accepted OFL** (Level 4), and thus the SSC used methods that do not rely on biological reference points.

2) If possible, the level of catch (in weight) and the probability of overfishing associated with the overfishing limit (OFL) based on the maximum fishing mortality rate threshold or, if appropriate, an OFL proxy.

No OFL could be calculated for this stock.

3) The level of catch (in weight) and the probability of overfishing associated with the acceptable biological catch (ABC) for the stock.

The SSC recommends an ABC for 2017 of **39,477 kg (87,031 lbs)**. The ABC was calculated using the DLMTool as described in the SSC Blueline Tilefish Working Group report (Miller 2016).

4) *The most significant sources of scientific uncertainty associated with determination of OFL and/or ABC.*

- The model assumes that the Blueline Tilefish in MAFMC waters represents a distinct sub-unit with limited exchange with a sub-unit to the south. We have little information on rates of exchanges between fish in the two areas, and little information on which to make a determination of stock structure.
- The catch time series was developed from a Delphi method and remains uncertain
- The steepness of the stock recruitment relationship was based on estimates from the SEDAR 32 assessment and the Shertzer and Conn (2012) paper, but remains highly uncertain.
- The DLMTTool assumes that the carrying capacity and productivity of Blueline Tilefish in MAFMC waters is constant. It is unclear whether the spatial expansion of the fishery since its inception represents increasing awareness of the fish as a target or increasing spatial range of its population as result of climate change (and hence increasing productivity).
- The SSC notes that the von Bertalanffy growth parameters are different between the northern sub-unit and the southern sub-unit.
- The extent of the depletion of the northern sub-unit is unknown and assumptions regarding the level of depletion influence the estimated ABC.
- The DLMTTool cannot represent fisheries with substantially different selectivities, such as may be present in the recreational and commercial fisheries, which may affect the conversion of catch numbers to catch weight.

5) *Ecosystem considerations accounted for in the stock assessment information presented, and any additional ecosystem considerations that the SSC took into account in selecting the ABC, including the basis for those additional considerations.*

No data were available to allow the SSC to include specific ecosystem considerations in determining ABC.

6) *Prioritized research or monitoring recommendations that would reduce the scientific uncertainty in the ABC recommendation and/or improve the assessment information level.*

1. More accurate catch time series would be an important enhancement to estimating ABCs in the future.
2. The lack of fishery-independent sampling restricts both our understanding of the dynamics of the stock and the range of management procedures that can be applied in estimating ABC.
3. The nature of stock structure within Blueline Tilefish is necessary to determine connectivity among sub-units within the spatial range of this species; this could include exploring the potential of larval exchange through an examination of EcoMon and other data sources. The selectivity of the commercial fishery in the northern part of the range needs to be determined
4. The value of the steepness of the stock-recruitment relationship is uncertain and warrants further investigation.
5. The SSC notes that the von Bertalanffy growth parameters are different between the northern sub-unit and the southern sub-unit and warrant further exploration.

7) *The materials considered in reaching its recommendations.*

The information used by the Working Group in developing this recommendation is fully documented in

the SSC Blueline Tilefish Working Group report. In addition, the SSC referred to the following documents during its discussion:

- Allen, T., A. Loftus, and R. Southwick. 2016. Estimated catch of Blueline Tilefish in the Mid-Atlantic Region: application of the Delphi process. Southwick Associates, Fernandina Beach, FL. 19pp.
- Carruthers, T. R., A. E. Punt, C. J. Walters, A. MacCall, M. K. McAllister, E. J. Dick, and J. Cope. 2014a. Evaluating methods for setting catch limits in data-limited fisheries. *Fisheries Research*, 153: 48-68.
- Carruthers, T. R., A. E. Punt, C. J. Walters, A. MacCall, M. K. McAllister, E. J. Dick, and J. Cope. 2014b. Supplemental material: Evaluating methods for setting catch limits in data-limited fisheries. *Fisheries Research*, 153: 48-68: Supplement.
- Didden, J. 2016a. Memo to Chris Moore, dated 23 February 2016, entitled: "Blueline Tilefish Catch Time Series." 5pp.
- Didden, J. 2016b. Memo to Chris Moore, dated 14 March 2016, entitled: "Blueline Tilefish Catch Time Series." 2pp.
- McNamee, J., G. Fay, and S. X. Cadrin. 2015. Data Limited Techniques for Tier 4 Stocks: An Alternative Approach to Setting Harvest Control Rules Using Closed Loop Simulations for Management Strategy Evaluations. 57 pp.
- Miller, T. J. 2016. Memo to John Boreman, Chair, Mid-Atlantic Fishery Management Council SSC, dated 22 March 2016, entitled: "Proposed BLT Subcommittee Report." 23pp.
- Miller, T. J., O. P. Jensen, J. Wiedenmann, and K. Drew. 2015. Review of the McNamee, et al. "Data Limited Techniques for Tier 4 Stocks: An Alternative Approach to Setting Harvest Control Rules Using Closed Loop Simulations for Management Strategy Evaluations." 7 pp.
- Schmidtke, M., K. Kirch and Jones, C. M. 2015. The population dynamics of blueline and golden tilefish, snowy and Warsaw grouper and wreckfish. Grant F-132-R-2, Report to Virginia Marine Resources Commission, February 18, 2015.
- Shertzer, K. W., and P. B. Conn. 2012. Spawner-recruit relationships of demersal marine fishes: prior distribution of steepness. *Bulletin of Marine Science*, 88: 39-50.
- Southeast Data Assessment and Review. 2013. South Atlantic blueline tilefish: stock assessment report. 378. Edited by South Atlantic Fishery Management Council. SEDAR, North Charleston, SC. 378pp.

8) A certification that the recommendations provided by the SSC represent the best scientific information available.

To the best of the SSC's knowledge, these recommendations are based on the best available scientific information.

cc: SSC Members, Lee Anderson, Chris Moore, Rich Seagraves, José Montañez, Jason Didden, M. Schmidtke, Paul Nitschke, Amy Schueller, Alexei Sharov, John Carmichael

Mid-Atlantic Fishery Management Council
Scientific and Statistical Committee Meeting
March 15-16, 2016

Agenda

Tuesday March 15, 2016

0900 Review Golden Tilefish Multi-year ABC Specification (Montañez /Nitschke)

1030 Report of CV Subgroup (Gaichas et al)

1200 Lunch

1300 BSB ToR 1 Review (Miller/Latour)

1600 SSC membership needs (Boreman/Seagraves)

Wednesday March 16, 2016

0900 Develop Blueline Tilefish ABC Specification (Miller/Didden/Schmidtke)

1200 Other business

1300 Adjourn

MAFMC Scientific and Statistical Committee
15-16 March 2016 Meeting
Baltimore, MD

<u>Name</u>	<u>Affiliation</u>	
<i>SSC Members in Attendance:</i>		
John Boreman (SSC Chairman)	NC State University	
Tom Miller (SSC Vice-Chair)	University of Maryland - CBL	
David Tomberlin	NMFS Office of Science and Technology	
Doug Lipton (3/16 only)	NMFS	
Mark Holliday	NMFS (Retired)	
Cynthia Jones (3/16 only)	Old Dominion University	
Mike Frisk	Stony Brook University	
Sarah Gaichas	NMFS Northeast Fisheries Science Center	
David Secor	University of Maryland – CBL	
Brian Rothschild	UMass – Dartmouth	
<i>Others in attendance:</i>		
Rich Seagraves	MAFMC staff	
José Montañez	MAFMC staff	
Rick Robins	MAFMC Chair	
Jason Didden (3/16 only)	MAFMC staff	
Paul Nitschke (by phone, 3/15 only)	NMFS Northeast Fisheries Science Center	
Gary Shepherd (by phone, 3/16 only)	NMFS Northeast Fisheries Science Center	
Laurie Nolan (3/15 only)	MAFMC member	
Dan Farnum (3/15 only)	F/V Seacapture	
Stephanie Hunt	NMFS Office of Sustainable Fisheries	
Debra Lambert (3/16 only)	NMFS Office of Sustainable Fisheries	
Susanna Wingard Brian		
Michael Schmidtke (3/16 only)	Old Dominion University	
Alexei Sharov (3/16 only)	Maryland DNR (SAFMC SSC)	
Amy Schueller (3/16 only)	NMFS Southeast Fisheries Science Center (SAFMC SSC)	
Skip Feller (3/16 only)	Rudee Tours	
<u>29 March 2016 Webinar</u>		
<i>SSC members in Attendance:</i>		
John Boreman	Mike Frisk	Brian Rothschild
Tom Miller	Olaf Jensen	Doug Lipton
Mark Holliday	Rob Latour	Dave Secor
Ed Houde	Cynthia Jones	Sarah Gaichas
<i>Others in Attendance:</i>		
Alexei Sharov	Stephanie Hunt	Mark Terceiro
Amy Schueller	Chris Batsavage	Kate Wilke
Jason Didden	Chip Collier	
Rich Seagraves	Julia Byrd	
Michael Schmidtke	Mike Errigo	
Erin S.	Doug Potts	
Rich Seagraves	Rick Robins	