



Mid-Atlantic Fishery Management Council
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 Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman
 Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: March 26, 2020
To: Council
From: Matthew Seeley, Staff
Subject: Review of 2021 Blueline Tilefish Specifications

As part of the 2019-2021 multi-year specification process for blueline tilefish, the Scientific and Statistical Committee (SSC) and Tilefish Monitoring Committee (MC) reviewed the most recent information to recommend 2021 specifications and management measures. Given recent fishery performance, no action is required to maintain the previously recommended specifications.

The following materials are enclosed:

1. Blueline Tilefish MC Summary (March 2020)
2. SSC Report – See Committee Reports – Tab 7 (March 2020)
3. Staff ABC Recommendation Memo to Chris Moore (February 2020)
4. Blueline Tilefish Fishery Performance Report (February 2020)
5. Blueline Tilefish Fishery Information Document (February 2020)

2021 Recommended Specifications

Specification	Recreational	Commercial
ABC	100,520 lbs	
ACLs	73,380 lbs	27,140 lbs
ACTs	73,380 lbs	27,140 lbs
TALs	71,912 lbs	26,869 lbs



Tilefish Monitoring Committee 2021 Blueline Tilefish Recommendations – Webinar Meeting Summary

March 2020

The Mid-Atlantic Fishery Management Council's (Council) Tilefish Monitoring Committee (MC) met via webinar on March 24, 2020 to review the most recent information to determine whether modifications to the current 2021 specifications are warranted. The primary purpose of this report is to summarize the Tilefish MC recommendations for the 2021 blueline tilefish specifications. Please note: MC comments described below are not necessarily consensus or majority statements.

Committee Members present: John Maniscalco (NYSDEC), Dan Farnham (Commercial), Paul Nitschke (NEFSC), Doug Potts (GARFO), Jeff Brust (NJ DFW), José Montañez and Matt Seeley (Council Staff).

Others present: Michael Auriemma (NJ DFW) and Laurie Nolan (Council Member).

Discussion

The MC was presented with a summary of the Scientific and Statistical Committee (SSC) deliberations of the March 2020 SSC meeting, where the SSC reviewed the 2020 Blueline Tilefish Advisory Panel Fishery Performance Report and the 2020 Blueline Tilefish Fishery Information Document. The SSC recommended no changes to the previously set blueline tilefish ABC of 100,520 pounds (45.60 mt) for 2021. Following this recommendation, the MC discussed different components of blueline tilefish catch and recent fishery trends to review 2021 management measures.

Monitoring Committee Comments and Recommendations

Annual Catch Targets and Landings Limits and Basis for Derivation

The recommendations in this section were in review of 2021 management measures originally set in 2018 for 2019-2021. The MC recommended the annual catch limit (ACL) equal the annual catch target (ACT; no adjustment for management uncertainty)¹ of 73,380 pounds (33.28 mt) for the recreational sector and 27,140 pounds (12.31 mt) for the commercial sector for 2020. The MC recommended a 2% and 1% reduction for recreational and commercial discards, respectively, which defines the total allowable landings (TAL). The recommended recreational

¹ The MC discussed industry concerns related to recreational blueline tilefish landings. The MC believes that the limited data available outside of MRIP is the best available science. The MC will continue to monitor this issue.

TAL is 71,912 pounds (32.62 mt) for 2021. The recommend commercial TAL is 26,869 pounds (12.19 mt) for 2021. All catch and landings limits are shown in Table 1.

Recreational Management Measures

The MC recommended no changes to the current recreational management measures. The recreational season is May 1 – October 31 with bag limits set at 7 fish for U.S. Coast Guard inspected vessels, 5 fish for uninspected vessels, and 3 fish for private vessels. The MC recommended to not use MRIP numbers to estimate recreational harvest of blueline tilefish as the intercepts are continuously low for (e.g. rare event species).

There is currently no system set in place to monitor the recreational ACL. In 2020, Council staff presented the blueline tilefish MRIP estimates and estimates generated using a multiplier identified in the 2016 Delphi method² to aid discussion. Also, an average weight of 3.65 pounds was used to estimate blueline tilefish landings and is consistent with the approach taken in Amendment 6 to the Tilefish Fishery Management Plan (FMP).

The MC questioned whether MRIP detectability issues for estimating blueline private recreational catch and harvest have improved enough to warrant the use of the MRIP survey in monitoring the recreational component. The MC recommends using the Delphi percentage of 105.16% of charter vessel landings to estimate landings for the private angler (Table 2). This is an interim fix to not having private recreational landings and will be used until more data is available or an improved method is developed. Party/charter landings will continue to be monitored using the most updated VTRs to assess the catch and landings in numbers of fish since MRIP estimates are consistently associated with very high percent standard errors. Overall recreational fishery performance is presented in Table 3 detailing the MC recommendations.

The MC shares the SSC's concern over the poorly described level of recreational catch for blueline tilefish. The MC notes that recreational effort and landings by party/charter vessels have increased in recent years and that private vessel activity has the potential to greatly alter total landings. Therefore, there is need for collection of recreational data that would help the monitoring component of the fishery. The MC supports the permitting and reporting requirements for tilefish that have been approved under Amendment 6 to the Tilefish FMP, which includes new permitting and reporting requirements for private recreational vessels (for both tilefish species). These measures are scheduled to be implemented by May 1, 2020.

Commercial Management Measures

The MC recommended no changes to the commercial trip limit which starts at 500 pounds per trip on January 1 of the fishing year until 70% (18,808 pounds or 8.53 mt) of the commercial

² The Delphi method was run in 2016 and offered recreational landings for charter, headboat, and private anglers. The Delphi method was used to develop a recreational time series for blueline tilefish through extrapolation of survey results. A ratio was used to back calculate private recreational landings in relation to charter landings from vessel trip reports. This method had been peer reviewed and accepted as best available science by SEDAR 50 (<https://sedarweb.org/sedar-50>) and further recommended by the MC.

TAL has been met. Then, the commercial trip limit may be reduced to 300 pounds per trip for the remaining 30% (8061 pounds or 3.66 mt) of the commercial TAL. Increasing the trip limit offered a greater chance of reaching optimum yield, while the reduction to 300 pounds at 70% of the TAL offered a buffer to reduce the likelihood of exceeding the commercial TAL and further spreads landings throughout the year.

Discards

The MC recommended no changes to the 2% recreational and 1% commercial reduction from ACT to TAL regarding blueline tilefish discards. The current measures were developed using the average percentage of discards from 2011-2015. According to VTR data, discards in the recreational and commercial fisheries were both ~1%. Due to the uncertainty in landings within the recreational fishery and the continued increased trip limit for the commercial fishery, the MC recommended a status quo reduction from the ACT to TAL.

Other

The MC indicated that the following research recommendations be included in the Council's research priorities for tilefish. Collect representative discard and kept length frequency data for golden and blueline tilefish in the for-hire fishery. The MC indicated that improvements in the mean weight estimates are needed for more accurate catch estimation in the recreational fishery, which will also improve monitoring/management of golden and blueline tilefish. Furthermore, collection of catch per unit effort data may be very important and will help with tracking this stock.

Table 1. Summary of SSC and MC recommendation for catch and landings limits for blueline tilefish for 2019-2021.

Specification	Recreational	Commercial
ABC	100,520 lbs (45.60 mt)	
ACLs	73,380 lbs (33.28 mt)	27,140 lbs (12.31 mt)
ACTs	73,380 lbs (33.28 mt)	27,140 lbs (12.31 mt)
TALs	71,912 lbs (32.62 mt)	26,869 lbs (12.19 mt)

Table 2. Recreational time series for ME-VA (numbers of fish) from 2003-2015 constructed from the Delphi Method (Memo to Chris Moore from Jason Didden on February 23, 2016).

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

Table 3. Recreational time series for ME-VA from 2015-2020 using the VTRs and Delphi-estimated private recreational estimates and a 3.65-pound average weight multiplier. *Private rental estimates are presented for comparison purposes and are not incorporated in the total values.

	Party - VTR (Numbers)	Charter - VTR (# of fish)	*Private Rental (MRIP # of fish)	Private Rental (Delphi - # of fish 105.16% of charter)	Total (Numbers)	Total (Pounds)
2015	12,138	2,253	4,663	2,369	16,760	61,174
2016	13,476	2,017	116,833	2,121	17,614	64,291
2017	8,564	1,600	12,122	1,683	11,847	43,242
2018	4,702	7,730	2,989	8,129	20,561	75,048
2019	3,183	7,528	4,839	7,916	18,627	67,989



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

MEMORANDUM

Date: February 21, 2020
To: Dr. Chris Moore, Executive Director
From: Matthew Seeley, Staff
Subject: 2021 Blueline Tilefish Specifications Review

Summary

As part of the 2019-2021 multi-year specifications process for blueline tilefish, the Scientific and Statistical Committee (SSC), Tilefish Monitoring Committee, and Council will review the most recent information to determine whether modifications to the current 2021 specifications are warranted. The 2021 Acceptable Biological Catch (ABC) recommended in 2018 by the SSC for the Mid-Atlantic management area was 100,520 pounds (45.60 mt). Based on recent fishery performance, Council staff recommend status quo blueline tilefish specifications for 2021.

Introduction

The Magnuson-Stevens Act requires each Council's SSC to provide, among other things, ongoing scientific advice for fishery management decisions, including recommendations for ABCs. The SSC recommends ABCs to the Mid-Atlantic Fishery Management Council (Council) that address scientific uncertainty such that overfishing is unlikely to occur per the Council's risk policy. The Council's ABC recommendations to NMFS for the upcoming fishing year(s) cannot exceed the ABC recommendation of the SSC. As such, the SSC's ABC recommendations form the upper limit for catches of Council-managed species.

Once the SSC meets and decides on an ABC, the Tilefish Monitoring Committee will convene to discuss if changes to other management measures should be recommended. These measures include annual catch limits (ACL), annual catch targets, discard calculations, management measures and accountability measures. The Council will then make recommendations to the National Marine Fisheries Service (NMFS) Northeast Regional Administrator based on the SSC and Monitoring Committee recommendations.

Regulatory Review

In June of 2015 emergency regulations were put into place in the Mid-Atlantic to temporarily constrain fishing effort on the blueline tilefish stock. These regulations consisted of a 300-pound

commercial trip limit and a recreational seven fish bag limit and were extended through the 2016 fishing year.

In 2016, based on the output of the DLM Toolkit, which simulates stock responses to different harvest strategies, the SSC recommended a 2017 bluefin tilefish ABC of 87,031 pounds as meeting the Council's risk policy to best avoid overfishing when guidance from a standard stock assessment is not available. This toolkit has been used previously by the SSC to develop ABC recommendations for black sea bass and Atlantic mackerel. Details on the analysis and rationale of the SSC can be found in the working group's report, available [here](#)¹ (see subcommittee report and SSC presentation). This document also notes that due to the limited information on recreational bluefin tilefish catch, the recreational catch histories used in the toolkit resulted from a Delphi Approach workshop with fishermen to develop an approximation of 2015 recreational catch. Then, a time series was created based on the Delphi Approach estimate and other available data.

In Spring 2017 the SSC recommended a status quo ABC of 87,031 pounds for 2018. Specifications were only recommended for one year as the 50th Southeast Data, Assessment, and Review benchmark assessment was anticipated to be completed late in 2017, which could change the biological reference points.

The SEDAR 50 benchmark assessment for bluefin tilefish occurred in late 2017. Within the assessment, bluefin tilefish were split into two separate stocks, north and south of Cape Hatteras, North Carolina. ABC recommendations were set for the region south of Cape Hatteras (not overfished, overfishing not occurring), but data limitations restricted an ABC recommendation for the region north of Cape Hatteras, which encompasses part of the South Atlantic and the Mid-Atlantic management areas. To assist in developing an ABC recommendation, the Mid- and South Atlantic Councils/SSCs, as well as staff from the Northeast and Southeast Fisheries Science Centers developed a joint subcommittee to rerun the DLMTool for the region north of Cape Hatteras. The results were partitioned at the Council boundaries using coastwide catch data from the pilot tilefish survey funded by the MAFMC out of SUNY Stony Brook.

Biological Reference Points, Stock Status, and Projections

At the March 2018 SSC meeting, the SSC reviewed the output from the most recent bluefin tilefish DLMTool runs (as recommended by the Joint Mid- and South Atlantic Bluefin Tilefish Subcommittee) as well as the output from the SEDAR 50 benchmark stock assessment and provided recommendations for annual OFL and ABC levels for 2019-2021². The SSC also concluded that the MSY estimate based on the DLMTool analysis for the region north of Cape Hatteras is an estimate of the OFL, not the ABC (as recommended by the joint subcommittee), which enabled the SSC to use the P* approach and the Council's risk policy in setting ABC specifications. This was considered a reasonable recommendation for 2019-2021 (with annual reviews) due to limited data and broad uncertainties (e.g. max age, short time series, no estimate of recruitment, etc.) within the fishery. Since the SSC lacked information on the estimate of stock

¹ <http://www.mafmc.org/briefing/april-2016>

² The March 2018 SSC meeting report is available at: <http://www.mafmc.org/ssc>.

biomass relative to B_{MSY} , a ratio of $B/B_{MSY} = 1$ was applied as a default value for the P^* (i.e., $P^* = 0.4$ under the MAFMC's risk policy). The SSC also assumed a typical life history (similar to golden tilefish). Based on this application of the Council's risk policy, the resulting SSC-recommended ABC was 179,500 pounds for 2019-2021 for the region north of Cape Hatteras. The SSC then followed the recommendation of the joint Mid- and South Atlantic Blueline Tilefish Subcommittee to allocate 56% of that ABC to the MAFMC (VA/NC border – north) and 44% to the South Atlantic Fishery Management Council. The basis for this percentage breakdown came from the catch results and random stratified design of the Pilot Blueline Tilefish Longline Survey (SUNY Stony Brook-Frisk et al. 2018). Using the 56% allocation, the MAFMC ABC for 2019-2021 is 100,520 pounds.

Landings

Commercial dealer landings through 2019 are presented in Table 1. Commercial landings (Maine-Virginia) were generally very low (less than 20,000 pounds) throughout the time series except for 2013-2015, when regulations south of Virginia, the lack of regulations in federal waters from Virginia north, and the lack of state regulations in New Jersey drove effort northward and into New Jersey. Following implementation of Amendment 6 to the Tilefish Fishery Management Plan, landings remain constrained within the ACLs. In 2018, the Council approved an increase in trip limit from 300 to 500 pounds. However, a trigger to reduce the commercial trip limit back to 300 pounds was implemented to assist in ensuring the ACL was not exceeded within this new data limited fishery. As indicated by the advisors, this approach worked well in 2019 because there was an opportunity for fishermen to target more fish without creating a large directed fishery.

Recreational catch described by combined party/charter vessel trip reports (VTRs) is reported in Table 2. Reported catch and discards have remained consistent since 2012. Previous work with the advisors and other blueline tilefish recreational fishermen has suggested VTR reporting compliance began to encompass at least the primary headboats in 2012. Private recreational angler landings are available from the Marine Recreational Information Program, but blueline tilefish intercepts are rare occurrences and the estimates are often associated with very high percent standard errors. As an alternative approach to estimating private angler performance, the Monitoring Committee previously recommended using the Delphi³ percentage of 105.16% of charter vessel landings to estimate private angler landings. This approach will be revisited again at the upcoming March Monitoring Committee meeting. Finally, pounds are estimated using a 3.65 pound accepted average weight (Amendment 6 to the Tilefish FMP) (Table 3).

OFL/ABC Recommendations

Following the approach detailed above (section: Biological Reference Points, Stock Status, and Projections), in 2018, **the SSC recommended an ABC of 100,520 pounds (45.60 mt)** to the Mid-

³ The Delphi method was run in 2016 and offered recreational landings for charter, headboat, and private anglers. The Delphi method was used to develop a recreational time series for blueline tilefish through extrapolation of survey results. A ratio was used to back calculate private recreational landings in relation to charter landings from vessel trip reports. This method had been peer reviewed and accepted as best available science by SEDAR 50 and further recommended by the MC in 2019.

Atlantic management area for 2019-2021. Considering this recommendation and recent fishery performance, **Council staff recommend no changes to the current specifications for the 2021 fishing year.**

Private Recreational Permitting and Reporting

To improve tilefish management, the Greater Atlantic Regional Fisheries Office (GARFO) is initiating private recreational permitting and reporting for tilefish anglers. This action was approved in late 2017, but with delayed implementation. A final rule is expected to be published by May 1, 2020 in line with the opening of the recreational blueline tilefish fishing season. Extensive outreach will be provided by GARFO and the Council leading up to the final rule.

Table 1. Commercial blueline tilefish landings (live weight) from Maine-Virginia. Source: NMFS unpublished dealer data.

Year	Landings (Pounds)
2000	2,446
2001	955
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	73,668
2016	14,203
2017	11,485
2018	13,083
2019	22,483

Table 2. Blueline tilefish party/charter VTR landings and reported discards from Maine-Virginia, 2012-2019. Source: NMFS unpublished VTR data.

Year	Number of Trips	Catch (Numbers of Fish)	Reported Discards (Numbers of Fish)
2012	103	10,051	338
2013	120	11,838	128
2014	138	15,849	254
2015	170	14,391	292
2016	158	15,493	246
2017	129	10,164	115
2018	221	12,432	99
2019	167	10,711	176

Table 3. Recreational blueline tilefish catch (ME-VA) using VTRs (party/charter) and estimating private/rental with assumed weights (Delphi – 105.16% of charter). The grey boxes represent the private rental estimates staff recommend using for a given year. Pounds are generated using an accepted average weight of 3.65 pounds (Amendment 1 to the Tilefish FMP).

	Party (Numbers)	Charter (Numbers)	Private Rental (MRIP- Numbers)	Private Rental (Delphi - Numbers)	Total (Numbers)	Total (Pounds)
2015	12,138	2,253	4,663	2,369	19,054	69,547
2016	13,476	2,017	116,833	2,121	132,326	482,990
2017	8,564	1,600	12,122	1,683	22,286	81,344
2018	4,702	7,730	2,989	8,129	20,561	75,048
2019	3,183	7,528	4,839	7,916	18,627	67,989



Blueline Tilefish Fishery Performance Report

February 2020

The Mid-Atlantic Fishery Management Council's (Council) Tilefish Advisory Panel (AP) met via webinar on February 20, 2020 to review the Fishery Information Document and develop the following Fishery Performance Report. The primary purpose of this report is to contextualize catch histories by providing information about fishing effort, market trends, environmental changes, and other factors. A series of trigger questions listed below were posed to the AP to generate discussion of observations in the blueline tilefish fishery. Please note: Advisor comments described below are not necessarily consensus or majority statements.

Advisory Panel members present: Fred Akers (Private), David Arbeitman (Bait and tackle), Ron Callis (Private), Dan Farnham (Commercial), Carl Forsberg (For-hire), Gregory Hueth (Private/For-hire), and Michael Johnson (Fisherman).

Others present: Paul Nitschke (NEFSC), Laurie Nolan (Council Member), Doug Potts (GARFO), Paul Rago (SSC), John Boreman (SSC), Andy Loftus (Loftus Consulting), Matthew Seeley (Council Staff), and José Montañez (Council Staff).

Trigger questions

1. What factors have influenced recent catch (markets/economy, environment, regulations, other factors)?
2. Are the current fishery regulations appropriate? How could they be improved?
3. What would you recommend as research priorities?
4. What else is important for the Council to know?

Factors Influencing Catch

AP members confirmed that no major changes have been observed for blueline tilefish in terms of catch rates/composition. Once blueline tilefish limits are met, recreational trips search for other targets (often golden tilefish). However, there is a sense from some AP members that the fishery restrictions are/will be benefiting recreational catch per unit effort.

When targeting other species, trip limits restrict commercial fishermen from targeting areas where blueline tilefish are present. The increase in trip limit to 500 pounds from 300 pounds was beneficial because the areas where advisors interact with blueline tilefish usually results in healthy interactions with other species. Some trips went over 300 pounds, but not regularly targeting blueline tilefish. Very localized in heavy concentrations especially in the Hudson Canyon. At times, it is hard to get away from the bluelines when targeting golden and it's nice to be able to not have to discard any bluelines especially when catching more goldens. Trip limits

do not seem to be causing discarding issues. The Council should consider implementing a trigger to keep more than 500 pounds of blueline tilefish when targeting large quantities of golden tilefish that result in high incidental landings of blueelines. However, do not create a situation where people are going to direct on them since the commercial quota is so low.

AP members indicated that the majority of the time they target blueline tilefish they land the recreational trip limits. They also indicated that the 3 fish limit is definitely limiting. Additionally, the seasonal closure at October 31 could potentially depress catch and effort, which may be beneficial to the stock. Often AP members try to target golden and find that blueline abundance is limiting.

Regulations are keeping harvest where they should be since we currently do not have an accepted stock assessment in the Mid-Atlantic. Advisors agreed that they want to see how the current specifications and management measures play out since this is still a newly managed fishery in the Mid-Atlantic.

Recreational effort decreased this year as it does not make economic sense to target blueline tilefish when tuna are not present. Moderate tuna availability in deeper water translates into the highest effort (enough tuna to create effort, but not so much as to occupy interest for a whole trip). Tuna fishing was good in the Hudson until about October, but AP members could not speak to locations much further south. When compared to 2018, tuna fishing (which leads to tilefish fishing) was better, but still not great.

Market/Economic Conditions

Advisors indicated that in New York (Hunts Point) they were receiving approximately \$2.85 per pound, and occasionally as high as \$3.00 per pound for larger fish. Advisors remain confident that there is continued demand for blueline tilefish, but this demand is driven by low and sporadic supply.

Management Issues

To avoid regulatory discarding, anglers often shift effort away from blueline tilefish once the limit is reached. Small amounts of discards do occur as incidental interactions when targeting golden tilefish. But multiple advisors indicated they often know where blueline tilefish are and they know how to avoid them. Thus, the trip limit did not really affect the incidental fishery.

AP members advocate to maintain the 3 (private), 5 (U.S. Coast Guard *uninspected* vessel), 7 (U.S. Coast Guard *inspected* vessel) bag limits in place since there is currently limited reporting for private anglers and we are still learning how the fishery responds to management in the Mid-Atlantic. Additionally, head boat captains indicated that if bag limits drop lower than **7 fish** the head boat community will have greater difficulty filling their trips. They confirmed that the larger bag limit is necessary to encourage anglers to come out.

Some AP members would like the Council to consider a higher trip limit for longer recreational trips, structured after Gulf of Mexico regulations (makes filling trips easier). Other AP members were concerned about the impact of higher recreational limits on the overall fishery especially

given low ABC and recreational catch uncertainty. Advisors want to avoid creating a directed fishery especially with the uncertainty of the overall stock.

Regarding the recreational measures in Amendment 6 to the Tilefish FMP: Advisors recommended multi-day considerations for head boat trips. Following this recommendation, one advisor recommended staying with the current system as it is very important to keep the recreational and commercial sector within the ABC.

For-hire advisors indicated they would like to see captain and crew included in the bag limits.

Hurricanes and shifts in climate conditions drastically reduced the number of days (effort) vessels were able to fish.

Research Priorities

Discussion focused on the need to improve the understanding of biological and life history traits. Specifically, age validation, maturity, post-release mortality, and movement. One advisor stated that a defined sampling program has the potential to hit on multiple priorities. For example, developing a tagging program (using applied and natural tags) offers insight into movement, age, maturity, and habitat preference. Additionally, no recommendations were provided on future fishery dependent or independent surveys. More bluesines now than 6 years ago. Bluesines are in places they have never been before in waters as shallow as 60-80 feet.

One AP member indicated that it was beneficial the Pilot Tilefish Survey was completed, so it could be compared to the results from the ongoing tilefish survey work being conducted by Coonamessett Fam Foundation (Developing a method for assessing tilefish stocks using a baited underwater video system).

The AP remained unanimous in their recommendation that permitting and reporting be developed for private recreational anglers. This information will offer insight into the impacts private anglers have on the recreational fishery for catch/landings and effort. Furthermore, the Council approved private permitting and reporting requirements for tilefish in 2017 through Amendment 6 to the Tilefish Fishery Management Plan (FMP) (added bluesine tilefish to the FMP) and are now awaiting implementation. One advisor suggested that NMFS target the HMS permit holders to identify the greater private recreational tilefish community.



Blueline Tilefish Fishery Information Document

February 2020

This Fishery Information Document provides a brief overview of the biology, stock condition, management system, and fishery performance for blueline tilefish with an emphasis on 2019. Data sources for Fishery Information Documents are generally from unpublished National Marine Fisheries Service (NMFS) survey, dealer, vessel trip report (VTR), permit, and Marine Recreational Information Program (MRIP) databases and should be considered preliminary. For more resources, including previous Fishery Information Documents, please visit <http://www.mafmc.org/tilefish/>.

Key Facts

- There has been no change to the unknown stock status for blueline tilefish since the 2017 assessment.
- ABC = 100,520 lbs, Commercial TAL = 26,869 lbs, Recreational TAL = 71,912 lbs
- The commercial fishery is open year-round with a trip limit of 500 pounds gutted (heads and fins attached) weight that will be reduced back to 300 pounds once 70% of the quota has been landed.
- The recreational fishery is open from May 1 – October 31. Bag limits are as follows: private vessels: 3-fish, for-hire vessel (no USCG inspection): 5-fish, for-hire vessel (with USCG inspection): 7-fish.
- Commercial landings increased by 72% from 2018 to 2019 (13,083 to 22,483 pounds) while the price per pound increased by ~14% from \$2.32 to \$2.64 from 2018 to 2019.
- In 2019, party/charter anglers reported a ~31% increase in catch compared to 2018 (5,393 to 7,064 pounds).

Basic Biology

Blueline tilefish are primarily distributed from Campeche, Mexico northward through the Mid-Atlantic.¹ Several recently-completed studies suggest that blueline tilefish from the eastern Gulf of Mexico through the Mid-Atlantic are comprised of one genetic stock.² This homogenous stock inhabits the shelf edge and upper slope reefs at depths of 150-840 feet (46-256 m) and temperatures between 59-73°F (15-23°C) where they are considered opportunistic predators that feed on prey associated with substrate (crabs, shrimp, fish, echinoderms, polychaetes, etc.).^{3,4} They are sedentary in nature and burrow into sandy areas in close association with rocky outcroppings.⁵

Blueline tilefish are long-lived fish reaching sizes up to about 36 inches (91 cm) and exhibit dimorphic growth with males attaining larger size-at-age than females. Males are predominant in

the size categories greater than 26 inches (66 cm) fork length. Blueline tilefish are classified as indeterminate spawners, with up to 110 spawns per individual based on the estimates of a spawning event every 2 days during a protracted spawning season from approximately February through November. Additionally, an aging workshop conducted to support the blueline tilefish assessment has called into question the ability to accurately age blueline tilefish, so previous age determinations may no longer be accurate.⁵

Status of the Stock

Prior to management of blueline tilefish in the Mid-Atlantic, NMFS listed blueline tilefish as overfished, but not overfishing from the Southeast Data, Assessment, and Review (SEDAR) 32 conducted in 2013.⁶ More recently, updated stock status information was identified through the 2017 benchmark assessment, SEDAR 50. Genetic work conducted for SEDAR 50 suggests a genetically homogenous population off the entire Atlantic coast yet does not suggest what catch may be appropriate off various parts of the coast. In SEDAR 50, the blueline tilefish stock was split in two, north and south of Cape Hatteras to allow each Council (Mid and South Atlantic) to set their own specifications. The stock south of Cape Hatteras was determined to be not overfished with overfishing not occurring. The assessment did not provide stock status information relevant to the Mid-Atlantic management area due to insufficient data.

Management System and Fishery Performance

Management

The Mid-Atlantic Fishery Management Council (Council or MAFMC) established management of blueline tilefish north of the Virginia/North Carolina border through Amendment 6 to the Tilefish Fishery Management Plan. In 2016, initial measures were set using a data limited approach and the Delphi Method.⁷

Following the 2017 SEDAR 50 assessment where no recommendations were made for the region north of Cape Hatteras, which extends beyond the Council management areas of the Virginia/North Carolina border, the MAFMC and South Atlantic Fishery Management Council (SAFMC) formed a joint blueline tilefish subcommittee. The subcommittee used the Data Limited Toolkit to develop acceptable biological catch (ABC) recommendations for the respective Scientific and Statistical Committees (SSC). This offered an opportunity to partition blueline tilefish ABCs that crossed the two management areas (north of Cape Hatteras). *The MAFMC SSC developed the 2019-2021 blueline tilefish ABC recommendation of 100,520 pounds at its March 2018 meeting.* The SAFMC's SSC recently proposed blueline tilefish ABCs of 233,968 for 2020-2022.⁸

In the Mid-Atlantic, commercial vessels can fish year-round and are limited to 500 pounds gutted (heads and fins attached) weight until 70% of the quota (Commercial Total Allowable Landings = 26,869 pounds) has been landed, then the trip limit is reduced to 300 pounds gutted (heads and fins attached) weight.

The recreational blueline tilefish season is open from May 1 through October 31 and the possession limit depends on the type of vessel being used (Recreational Total Allowable Landings = 71,912 pounds). Anglers fishing from private vessels are allowed to keep up to three blueline tilefish per person per trip. Anglers fishing from a for-hire vessel that has been issued a

valid federal Tilefish Party/Charter Permit but does not have a current U.S. Coast Guard safety inspection sticker can retain up to five blueline tilefish per person per trip. Finally, anglers on for-hire vessels that have both a valid federal Tilefish Party/Charter Permit and a current U.S. Coast Guard safety inspection sticker can retain up to seven blueline tilefish per person per trip.

Commercial Fishery

Commercial landings (in Maine-Virginia) were generally very low (less than 20,000 pounds) throughout the time series except for 2013-2015, when regulations south of Virginia, the lack of regulations in federal waters from Virginia north, and the lack of state regulations in New Jersey drove effort northward and into New Jersey (Figure 1 and Table 1). Further breakdown by year/state may violate data confidentiality rules (especially for 2016 and 2017). In 2019, 1,984 individuals held federal commercial tilefish permits (valid for both golden and blueline tilefish) and landed 21,272 pounds (Table 2).

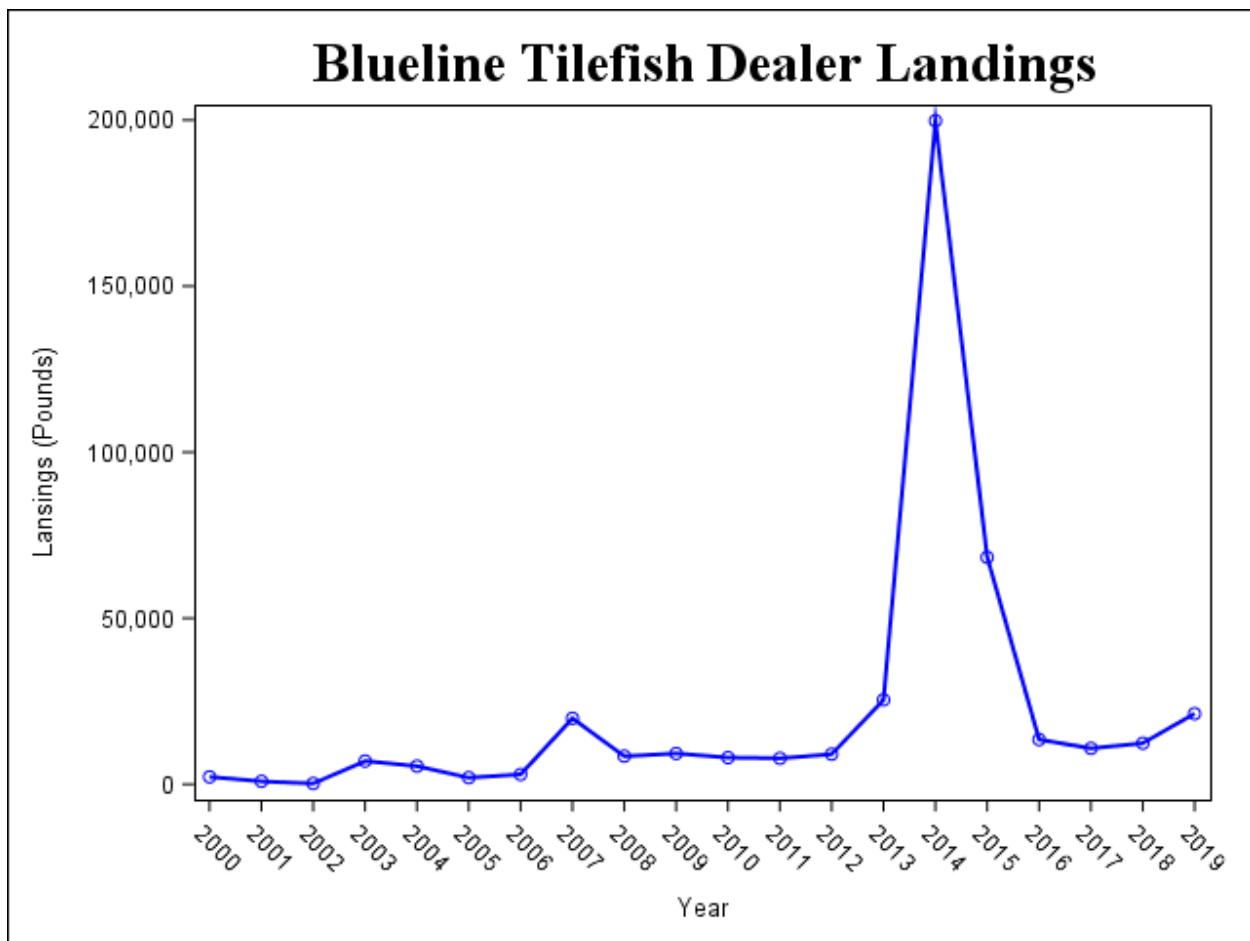


Figure 1. Commercial blueline tilefish landings (live weight) from Maine-Virginia, 2000-2019. Source: NMFS unpublished dealer data.

Table 1 and Table 2. Commercial blueline tilefish landings (live weight) from Maine-Virginia, 2000-2019 (Table 1) and 2019 by state (Table 2). Source: NMFS unpublished dealer data. Confidential means less than 3 vessels landed blueline tilefish.

(1)

Year	Pounds
2000	2,446
2001	955
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	73,668
2016	14,203
2017	11,485
2018	13,083
2019	22,483

(2)

State	Pounds (2019)
CT	Confidential
DE	Confidential
MD	Confidential
MA	Confidential
NJ	4,650
NY	4,120
RI	3,069
VA	10,257
Total	22,483

Aggregate landings from the 2000-2019 time-series are approximately 64% from bottom longline, with most of the remaining landings coming from bottom trawl and handline. Over half of all landings in the time series were bottom longline into New Jersey in 2013-2015 prior to Mid-Atlantic management. Landings from all other gear types are low and variable from year to year. The breakdown of commercial landings by gear for 2019 are presented in Table 3.

Table 3. Commercial blueline tilefish landings (live weight) by gear in 2019 from Maine-Virginia. Source: NMFS unpublished dealer data.

Gear	Pounds	Percent
Bottom Trawl	8,574	38%
Handline	6,056	27%
Bottom Longline	4,563	20%
Unknown	2,164	10%
Gill Net	713	3%
Midwater Trawl	362	2%
Pot/Trap	51	<1%
Total	22,483	100%

Statistical Areas 626, 632, 616, 622 and 621 accounts for the majority of catch from 1994-2019 (Figure 2 and Table 4) and 2019 as the terminal year. A further breakdown by year/area may violate data confidentiality rules.

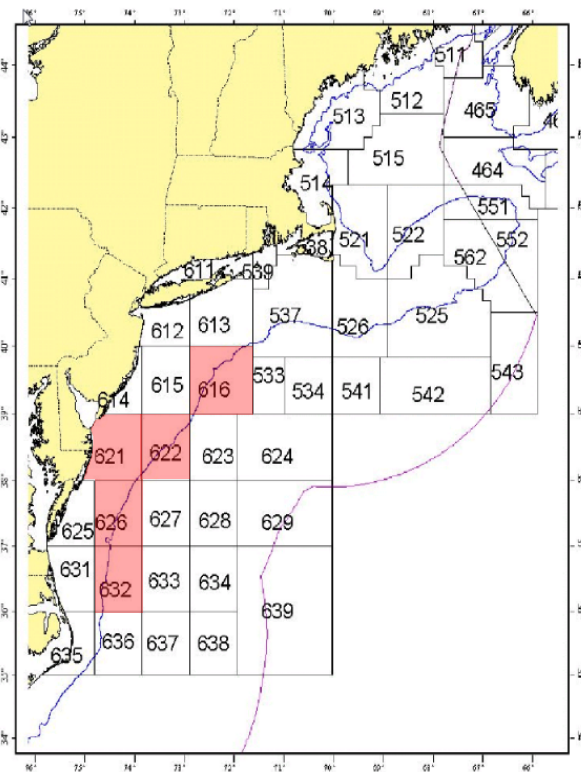


Table 4. Top statistical areas summarizing blueline tilefish landings in numbers of fish from Maine-Virginia for 1994-2019. Source: NMFS unpublished VTR data.

Stat Area	1994 to 2019 (Pounds)
626	223,489
632	48,264
616	36,975
622	29,679
621	27,686

Figure 2. NMFS statistical areas accounting for Landings of more than 10,000 blueline tilefish identified with commercial vessel trip reports (VTRs), 1994-2019. Source: NMFS unpublished VTR data.

Commercial blueline tilefish ex-vessel revenues (nominal) and price (inflation adjusted to 2018 dollars) are described in Figures 3 and 4. Since blueline tilefish have been managed by the Council (secretarial interim action in 2016), the ex-vessel value has averaged \$39,188 at approximately \$2.52 per pound. For 2019, the ex-vessel value was \$59,401 at \$2.64 per pound.

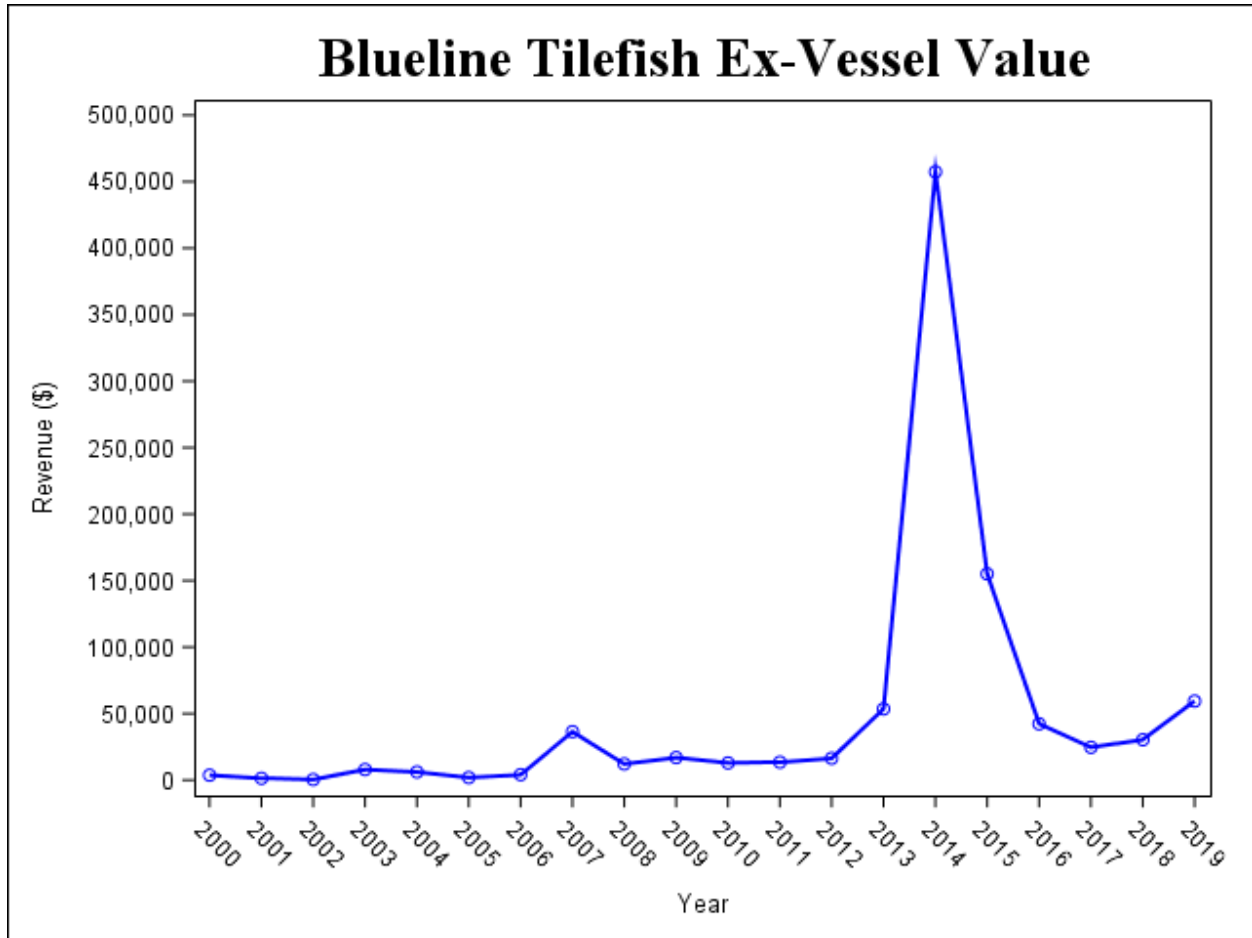


Figure 3. Ex-vessel revenues for blueline tilefish, Maine to Virginia combined, 2000-2019. Source: NMFS unpublished dealer data.

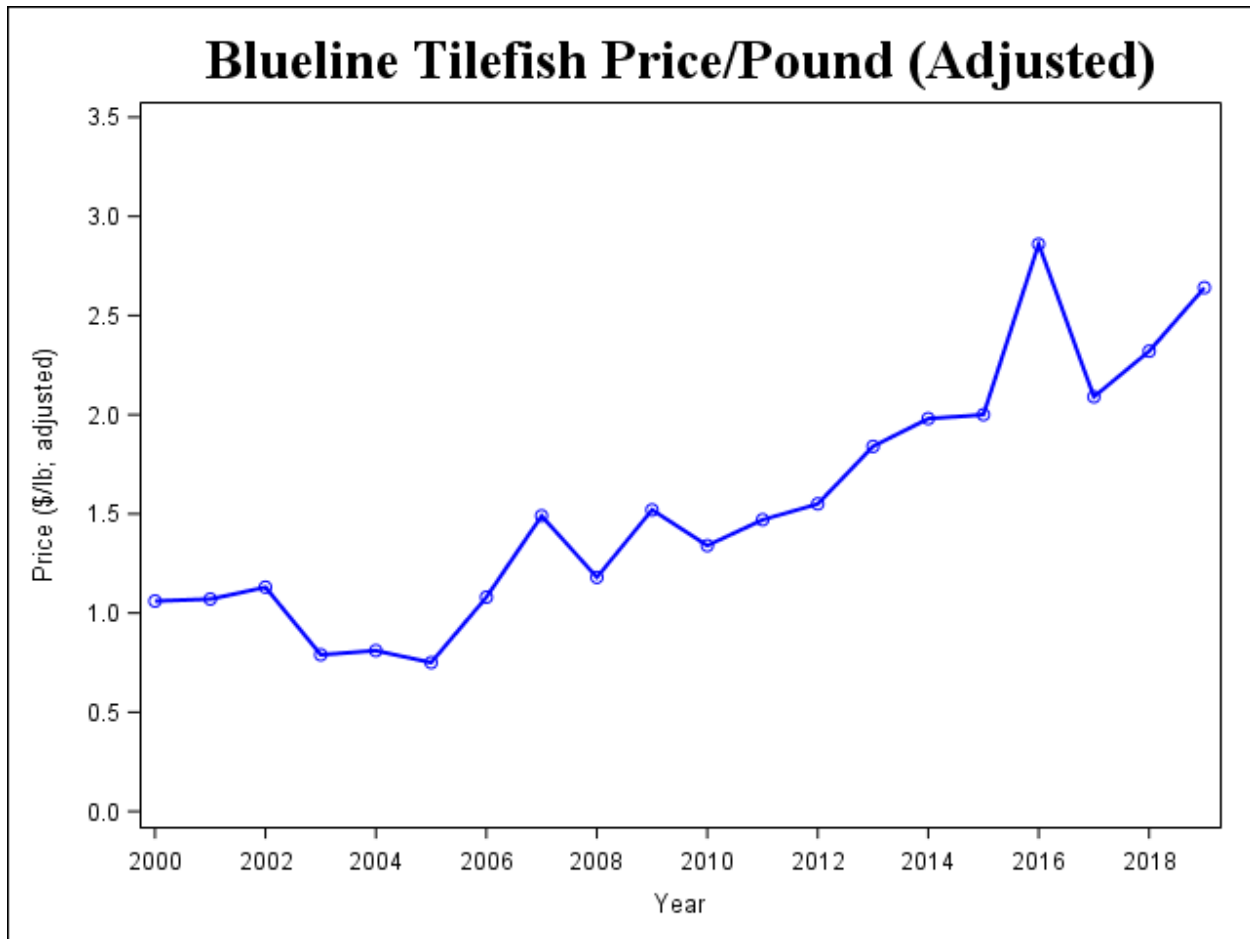


Figure 4. Price for blueline tilefish, Maine through Virginia combined, 2000-2019. Note: Price data have been adjusted by the GDP deflator indexed for 2018 (2019 – unadjusted). Source: NMFS unpublished dealer data.

Recreational Fishery

In 2019, 579 tilefish permits were issued to party/charter vessels within the relatively small recreational fishery where the only mandatory reporting is a VTR. Stakeholders believe that VTR reporting compliance for blueline tilefish has been low, especially historically and for charter vessels. Table 4 provides the available VTR reports for blueline tilefish since 2012, when previous work with the advisors and other blueline tilefish recreational fishermen has suggested VTR reporting compliance began to encompass at least the primary head boats. Additionally, blueline tilefish intercepts in the MRIP are an exceedingly rare event (Table 5).

Table 4. Blueline tilefish party/charter VTR landings and reported discards from Maine-Virginia, 2012-2019. Source: NMFS unpublished VTR data.

Year	Number of Trips	Catch (Numbers of Fish)	Reported Discards (Numbers of Fish)
2012	103	10,051	338
2013	120	11,838	128
2014	138	15,849	254
2015	170	14,391	292
2016	158	15,493	246
2017	129	10,164	115
2018	221	12,432	99
2019	167	10,711	176

Table 5. Recreational blueline tilefish re-calibrated MRIP estimates (2019 – preliminary) by state and mode. Source: NMFS unpublished MRIP data.

Year	State	MRIP¹ (Numbers of fish)	Mode
2015	DE	4,663	Private/Rental
2016	MD	46,106	Private/Rental
2016	NJ	9,924	Private/Rental
2016	VA	1,222	Charter
2016	VA	60,803	Private/Rental
2017	VA	12,122	Private/Rental
2018	DE	19	Charter
2018	MD	11	Party
2018	VA	2,373	Charter
2018	VA	2,989	Private/Rental
2019	MD	4,839	Private/Rental
2019	VA	2,225	Charter

Currently, there is no average weight that can be applied to blueline tilefish across the coast as average weights vary significantly. Thus, recreational catch is summarized in numbers of fish. MRIP reported 4,839 blueline tilefish landed through the private/rental mode and the VTRs presented 10,711 fish caught via the for-hire fleet. Total recreational removals are then estimated to be 15,550 fish. Catch in pounds is then estimated using a range of accepted weights (3-6 pounds from NY to NC, as indicated by the tilefish advisors) across the coast (Table 6).

¹ Re-calibrated MRIP numbers are presented for reference. They should not be directly compared to the current or past ABCs as the re-calibrated MRIP numbers have not yet been incorporated into any assessment.

To improve tilefish management and reporting, the Greater Atlantic Regional Fisheries Office (GARFO) is initiating recreational reporting for private tilefish anglers. This action was approved in late 2017, but with delayed implementation. A final rule is expected to be published by May 1, 2020 in line with the opening of the recreational blueline tilefish fishing season. Extensive outreach will be provided by GARFO and the Council leading up to the final rule.

Table 6. Coastwide recreational blueline tilefish catch using VTRs (party/charter) and MRIP (private/rental) with assumed weights.

	3 Pounds	4 Pounds	5 Pounds	6 Pounds
2015	57,162	76,216	95,270	114,324
2016	396,978	529,304	661,630	793,956
2017	66,858	89,144	111,430	133,716
2018	46,263	61,684	77,105	92,526
2019	46,650	62,200	77,750	93,300

In 2019, Monitoring Committee members questioned whether MRIP detectability issues for estimating blueline tilefish private recreational harvest have improved enough to warrant the use of the MRIP survey in monitoring the recreational component. To monitor the recreational fishery, the MC recommended using the Delphi² percentage of 105.16% of charter vessel landings to estimate landings for the private angler. However, staff recommends using the MRIP estimates for 2015-2017, which represents the time when regulations were in development. This is an interim fix to not having private recreational landings and will be used until more data is available or an improved method is developed. Party/charter landings will continue to be monitored using the most updated VTRs to assess the catch and landings in numbers of fish (Table 7).

Table 7. Recreational blueline tilefish catch (ME-VA) using VTRs (party/charter) and estimating private/rental with assumed weights (Delphi – 105.16% of charter). The grey boxes represent the private rental estimates staff recommend using for a given year. Pounds are generated using an accepted average weight of 3.65 pounds (Amendment 1 to the Tilefish FMP).

	Party (Numbers)	Charter (Numbers)	Private Rental (MRIP- Numbers)	Private Rental (Delphi - Numbers)	Total (Numbers)	Total (Pounds)
2015	12,138	2,253	4,663	2,369	19,054	69,547
2016	13,476	2,017	116,833	2,121	132,326	482,990
2017	8,564	1,600	12,122	1,683	22,286	81,344
2018	4,702	7,730	2,989	8,129	20,561	75,048
2019	3,183	7,528	4,839	7,916	18,627	67,989

² The Delphi method was run in 2016 and offered recreational landings for charter, headboat, and private anglers. The Delphi method was used to develop a recreational time series for blueline tilefish through extrapolation of survey results. A ratio was used to back calculate private recreational landings in relation to charter landings from vessel trip reports. This method had been peer reviewed and accepted as best available science by SEDAR 50 and further recommended by the MC.

References

- ¹ Dooley J.K. 1978. Systematic and biology of the tilefishes (Perciformes: Branchiostegidae and Malacanthidae), with description of two new species. NOAA Tech. Rep. NMFS 411. NOAA, National Marine Fisheries Service. 78 p.
- ² <http://sedarweb.org/sedar-50-data-workshop>.
- ³ Sedberry, G.R. and Pashuk, O. and Wyanski, D.M. and Stephen, J.A. and Weinbach, P. (2006) Spawning locations for Atlantic reef fishes off the southeastern U.S. In: Proceedings of the Gulf and Caribbean Fisheries Institute, 57, pp. 463-514.
- ⁴ Ross, J. L., G. R. Huntsman. 1982. Age, growth, and mortality of blueline tilefish from North Carolina and South Carolina. Transactions of the American Fisheries Society 111:585-592.
- ⁵ SEDAR. 2017. SEDAR 50 – Atlantic Blueline Tilefish Assessment Report. SEDAR, North Charleston SC. 542 pp. available online at: <http://sedarweb.org/sedar-50>.
- ⁶ SEDAR. 2013. SEDAR 32 – South Atlantic blueline tilefish Stock Assessment Report. SEDAR, North Charleston SC. 378 pp. available online at: http://www.sefsc.noaa.gov/sedar/Sedar_Workshops.jsp?WorkshopNum=32.
- ⁷ Southwick and Associates 2016. Estimated Catch of Blueline Tilefish in the Mid-Atlantic Region. Application of the Delphi Survey Process. Available at: <http://www.mafmc.org/ssc-meetings/2016/march-15-16>.
- ⁸ Draft Abbreviated Framework Amendment 3 to the FMP for the Snapper grouper Fishery of the South Atlantic Region. Annual Catch Limit and Annual Catch Target Adjustment for South Atlantic Blueline Tilefish. South Atlantic Fishery Management Council. November 2010.