



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 Data sources for Fishery Information Documents are generally from unpublished National Marine Fisheries Service (NMFS) survey, dealer, vessel trip report (VTR), permit, and Marine Recreational Information Program (MRIP) databases and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).

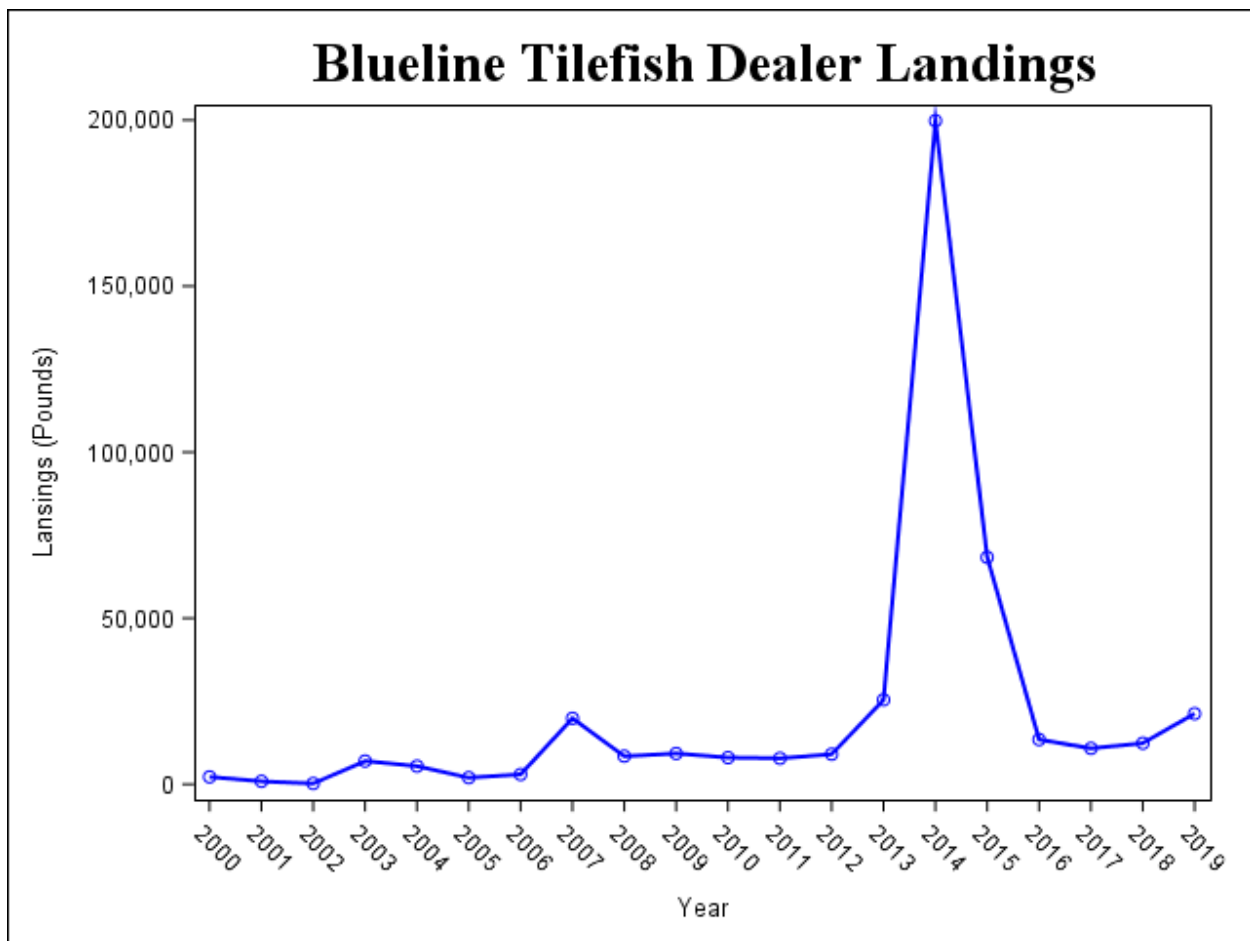


Figure 1. Commercial blueline tilefish landings (live weight) from Maine-Virginia, 2000-2019. Source: NMFS unpublished dealer data.

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.

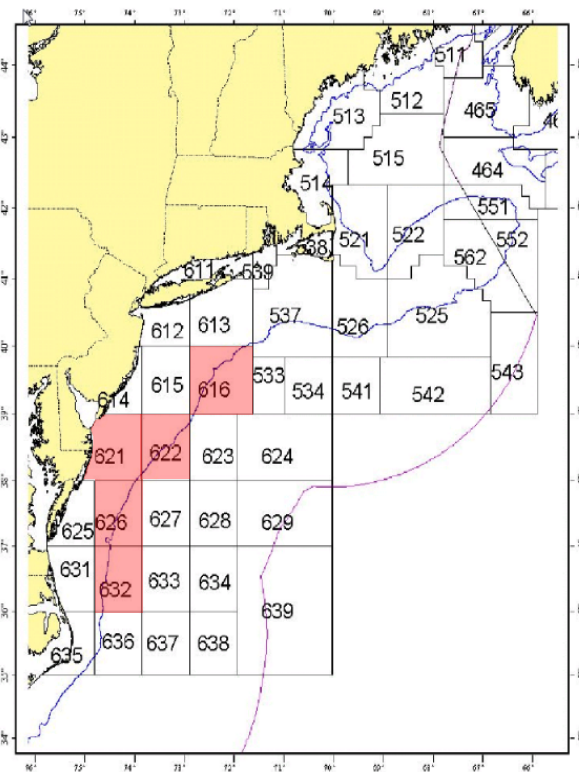


Table 4. Top statistical areas summarizing blueline tilefish landings in numbers of fish from Maine-Virginia for 1994-2019. Source: NMFS unpublished VTR data.

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.

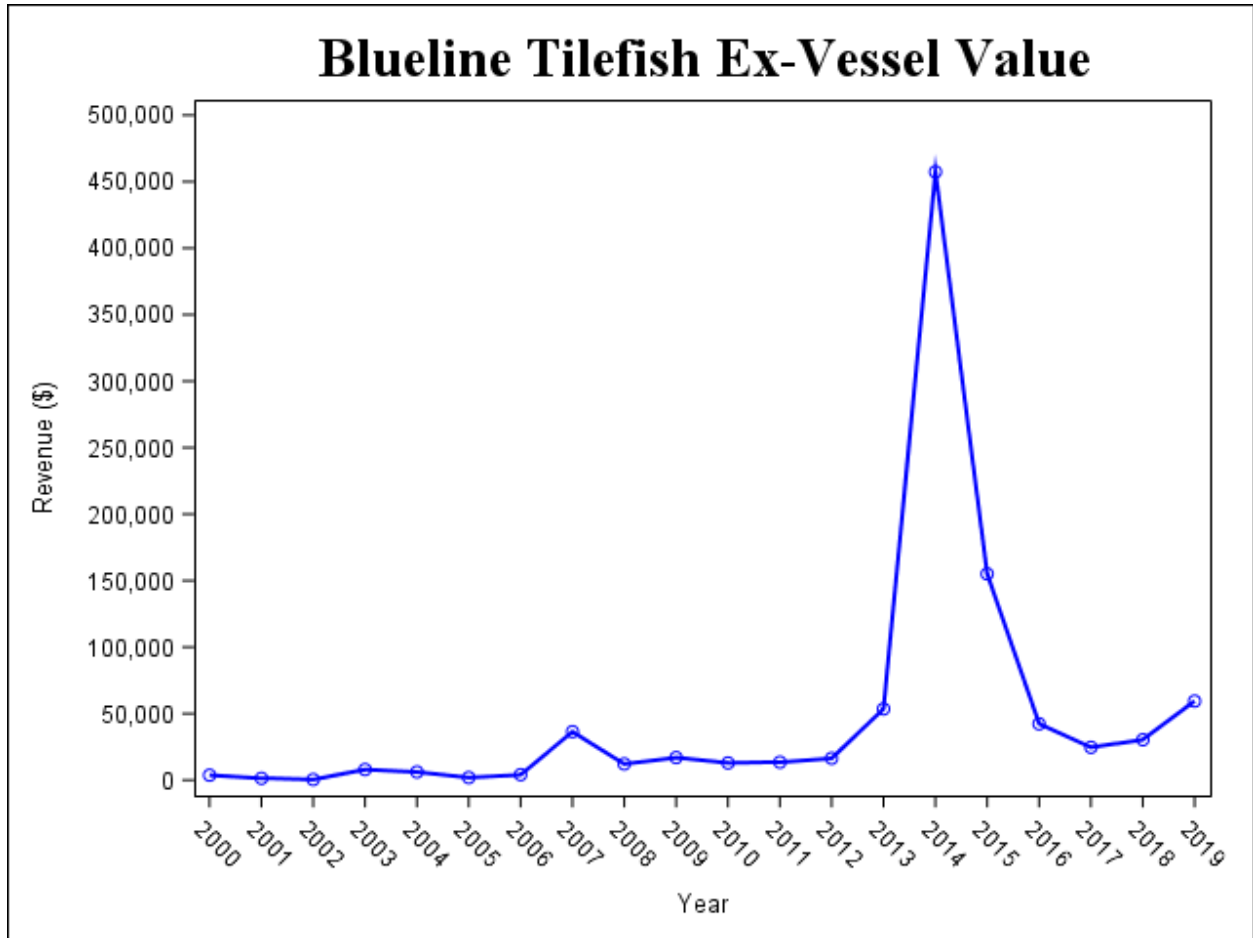


Figure 3. Ex-vessel revenues for blueline tilefish, Maine to Virginia combined, 2000-2019. Source: NMFS unpublished dealer data.

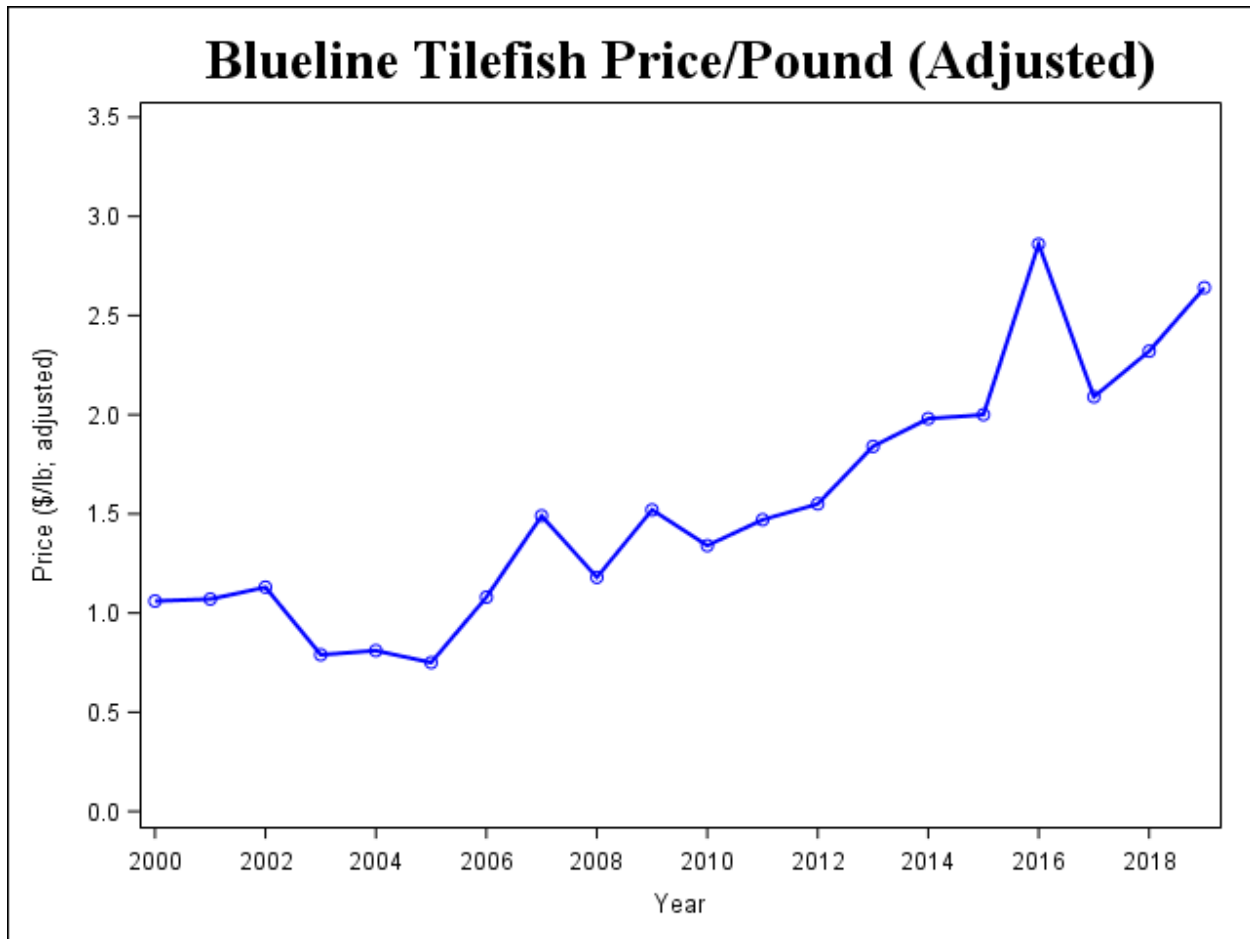


Figure 4. Price for blueline tilefish, Maine through Virginia combined, 2000-2019. Note: Price data have been adjusted by the GDP deflator indexed for 2018 (2019 – unadjusted). Source: NMFS unpublished dealer data.

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.