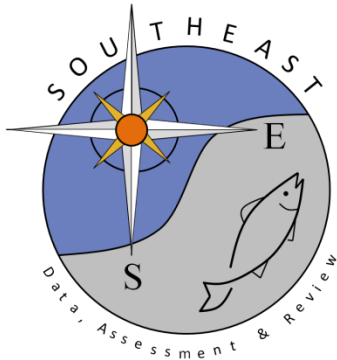


Blueline Tilefish Fishery Information Document

MAFMC

SEDAR92-RD-06

August 2024



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Blueline Tilefish Fishery Information Document

June 2024 – revised August 2024

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 2023. Data sources for Fishery Information Documents are generally from unpublished National Marine Fisheries Service (NMFS) dealer, vessel trip report (VTR), permit, Catch Accounting and Monitoring System (CAMS), and Marine Recreational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 stock status (unknown) since the 2017 SEDAR assessment.
- Recreational permitting/reporting requirements are in place for private tilefish anglers.
- In 2023, the ABC was set at 100,520 pounds, Commercial ACL at 27,140 pounds, and Recreational ACL was 73,380 pounds.
- The commercial fishery has a trip limit of 500 pounds gutted (heads and fins attached) weight. Once 70% of the quota has been landed, the trip limit decreases to 300 pounds.
- The recreational fishery is open from May 15 – November 14. Bag limits are as follows: 3 fish for private recreational; 5 fish for non-USCG inspected for-hire vessels; 7 fish for USCG inspected for-hire vessels.
- Commercial landings increased by 66% from 2022 to 2023 (18,914 to 31,456 pounds) and the price per pound increased by about 23% (\$2.48 to \$3.05).
- In 2023, headboat/charter VTR data indicated about a 9% increase in blueline tilefish landings compared to 2022 (14,546 to 15,914 fish).
- Using the Delphi method and headboat/charter VTR data, estimated recreational landings for 2023 were about 22,109 fish.

Basic Biology

Blueline tilefish are primarily distributed from Campeche, Mexico northward through the Mid-Atlantic (Dooley 1978). Several recently completed studies suggest that blueline tilefish from the eastern Gulf of Mexico through the Mid-Atlantic are comprised of one genetic stock (SEDAR 50 Data Workshop). 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.; Sedberry et al. 2006 and Ross and Huntsman 1982). They are sedentary in nature and burrow into sandy areas in close association with rocky outcroppings (SEDAR 2017).

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 (SEDAR 50).

Status of the Stock

Prior to management of blueline tilefish in the Mid-Atlantic, NMFS listed blueline tilefish as overfished, but overfishing was not occurring based on the Southeast Data, Assessment, and Review (SEDAR) 32 conducted in 2013. 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 but does not suggest what catch may be appropriate off various parts of the coast. In SEDAR 50, the blueline tilefish stock was split, north and south of Cape Hatteras. 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 stock north of Cape Hatteras, which includes the Mid-Atlantic management area, due to insufficient data. The next SEDAR operational stock assessment for blueline tilefish is underway and is expected to undergo peer review later in 2024. This operational assessment will be used to inform the next multiple year blueline tilefish specifications package starting in 2026.

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.¹ In 2016, initial measures were set using a data limited approach and the Delphi Method (Southwick and Associates 2016).

Following SEDAR 50, no stock status or catch limit recommendations were made for the region north of Cape Hatteras due to data limitations. Given that the region north of Cape Hatteras extends beyond MAFMC's management area, the MAFMC and South Atlantic Fishery Management Council (SAFMC) formed a joint blueline tilefish subcommittee. The subcommittee agreed to use the Data Limited Model (DLM) Toolkit to develop acceptable biological catch (ABC) recommendations. Using the DLM Toolkit the ABC recommendation for the stock north of Cape Hatteras was 179,500 pounds. This ABC was split proportionally, with 56% allocated to the Mid-Atlantic management region and 44% to the South Atlantic management region, based on the 2017 Mid-Atlantic pilot tilefish survey.²

In March 2018, the MAFMC's Scientific and Statistical Committee (SSC) developed a 2019-2021 blueline tilefish ABC recommendation of 100,520 pounds. The SAFMC's SSC proposed an ABC

¹Source: https://www.mafmc.org/s/Blueline-Tilefish-Amendment_Final-EA_09-12-2017.pdf

²Source: https://www.mafmc.org/s/FRISK_TILEFISH_MAFMC_finalreport_jan2018.pdf

of 55,968 pounds for the area between Cape Hatteras, NC, and the Virginia border. This ABC was then combined with the ABC south of Cape Hatteras, which was 178,000 pounds, resulting in a total ABC of 233,968 pounds for the entire SAFMC blueline tilefish management unit. This was implemented through the Abbreviated Framework Amendment 3 to the Snapper Grouper Fishery Management Plan for the South Atlantic Region.

The Mid-Atlantic ABC of 100,520 pounds, initially adopted in 2019, was again adopted in 2021 for the 2022-2024 fishing years.

In the Mid-Atlantic, commercial vessels are limited to a 500 pounds gutted (heads and fins attached) weight trip limit until 70% of the commercial total allowable landings (TAL) has been landed. Once 70% of the TAL is landed, the trip limit is reduced to 300 pounds gutted weight. In 2023, the commercial annual catch limit (ACL) was 27,140 pounds and the TAL was 26,868 pounds (Table 1).

For recreational vessels, NMFS recently adopted a modified recreational blueline tilefish season from May 15 to November 14 ([89 FR 19760](#)). The recreational possession limit depends on the type of vessel being used. Anglers fishing from private/rental 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 Headboat/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 Headboat/Charter Permit and a current U.S. Coast Guard safety inspection sticker can retain up to seven blueline tilefish per person per trip. In 2023, the recreational ACL was 73,380 pounds and the TAL was 71,912 pounds (Table 1).

Table 1. Summary of commercial and recreational catch and landings limits set for 2017-2024. Source: NMFS unpublished CAMS data.

Management Measures	2017	2018	2019	2020	2021	2022	2023	2024
ABC	87,031	87,031	100,520	100,520	100,520	100,520	100,520	100,520
Com. ACL/ACT	23,498	23,498	27,140	27,140	27,140	27,140	27,140	27,140
Com. TAL	23,263	23,263	26,869	26,869	24,924 ^a	26,869	26,869	22,399 ^b
Com. landings	10,734	13,068	22,759	33,861	27,332	18,914	31,456	--
Com. ACL over/under	-54%	-44%	-16%	+25%	+0.7%	-30%	+16%	--
Rec. ACL/ACT	63,533	63,533	73,380	73,380	73,380	73,380	73,380	73,380
Rec. TAL	62,262	62,262	71,912	71,912	71,912	71,912	71,912	71,912

^a2021 commercial TAL was adjust by 1,965 lbs. due to the previous year's overage

^b2024 commercial TAL was adjust by 4,470 lbs. due to the previous year's overage

Commercial Fishery

Prior to 2013, blueline tilefish commercial landings from Maine through Virginia were on average less than 20,000 pounds. However, in 2014 blueline tilefish landings significantly increased when

more restrictive regulations south of Virginia were implemented, and there was a lack of management measures in federal waters north of Virginia, therefore, driving effort northward (Figure 1; Table 2). Commercial landings then significantly decreased in 2016 after blueline tilefish was added to the MAFMC Tilefish FMP. Since 2016, annual commercial landings have been on average around 21,545 pounds, with peaks in 2020 and 2023.

In 2023, 1,616 open access commercial/incidental tilefish permits (valid for both golden and blueline tilefish) were issued³ and total blueline tilefish landings were about 31,456 pounds (Figure 1; Table 1). Since last year, there has been a slight shift in what states are contributing to the majority of blueline tilefish landings. In 2023, most landings came from Maryland followed by New Jersey, New York, Rhode Island, and Virginia (Table 3).

As proposed by the SSC during Amendment 6 to the Tilefish Fishery Management Plan, blueline tilefish commercial discards are calculated as 1% of overall commercial landings resulting in about 314 pounds for 2023. Thus, total commercial catch was approximately 31,771 pounds, about 17% over the ACL (27,140 pounds). Beyond 2023, commercial blueline tilefish landings have only exceeded the ACL once, in 2020. Typically, landings have been below the commercial ACL each year since management was established in the Mid-Atlantic region.

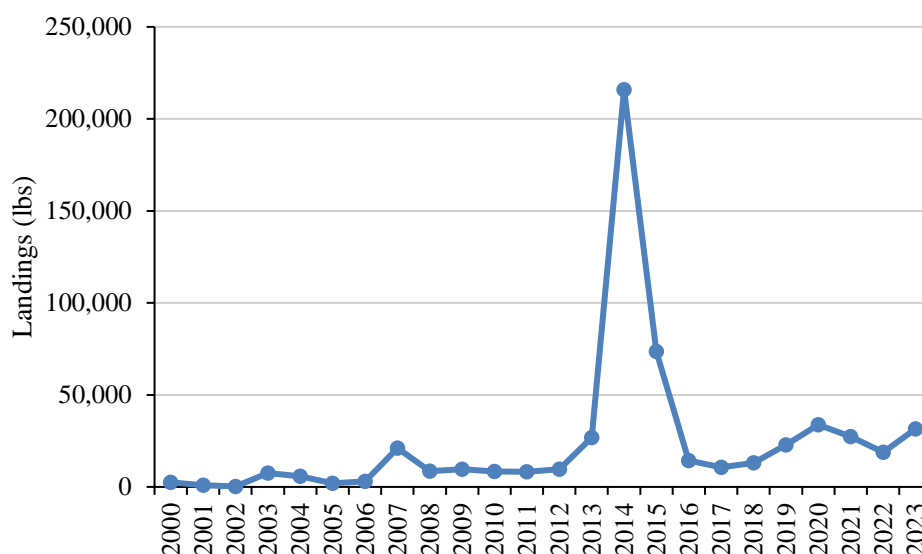


Figure 1. Commercial blueline tilefish landings (live weight) from Maine-Virginia by year from 2000-2023. Source: NMFS unpublished dealer (2000-2019) and CAMS (2020-2023) data.

³ Source: <https://www.greateratlantic.fisheries.noaa.gov/public/public/web/NEROINET/aps/permits/data/index.html>

Table 2. Commercial blueline tilefish landings from Maine-Virginia by year from 2000-2023. Source: NMFS unpublished dealer (2000-2019) and CAMS (2020-2023) data.

Year	Landings (pounds)
2000	2,446
2001	955
2002	269
2003	7,601
2004	5,827
2005	2,031
2006	3,039
2007	21,068
2008	8,495
2009	9,626
2010	8,388
2011	8,179
2012	9,624
2013	26,781
2014	215,928
2015	73,644
2016	14,235
2017	10,734
2018	13,068
2019	22,759
2020	33,861
2021	27,332
2022	18,914
2023	31,456

Table 3. Commercial blueline tilefish landings (live weight in pounds) from Maine-Virginia by state in 2022-2023. Source: NMFS unpublished CAMS data.

State	2022	2023
MA	65	203
RI	4,866	1,504
CT	79	136
NY	2,292	2,038
NJ	6,553	6,418
MD	3,543	19,903
VA	1,516	1,254
Total	18,914	31,456

The primary gear type used to commercially land blueline tilefish varies from year to year. In past years bottom longlines, trawls, and handlines accounted for the majority of landings. In 2023, about 55% of the commercial blueline tilefish landings (by weight) reported by CAMS data were caught with longline gear and about 24% with handline gear. Bottom trawls accounted for 16% of landings, while all other gear types accounted for about 5% of 2023 commercial blueline tilefish landings (Table 4).

As shown in Table 5, the majority of trips harvesting blueline tilefish are landing less than 200 pounds which is consistent with previous years. However, in 2023 there was an overall increase in the total number of trips landing blueline tilefish as well as in the number of trips landing more than 400 pounds of blueline tilefish.

Table 4. Commercial blueline tilefish landings (live weight in pounds) in 2023 by gear from Maine-Virginia. Source: NMFS unpublished CAMS data.

Gear	2023	
	Landings	Percentage of total landings
Longline	17,227	55%
Handline	7,490	24%
Trawl	5,176	16%
Other (i.e. traps/pots, troll line, etc.)	1,563	5%
Total	31,456	100%

Table 5. Number of commercial trips catching blueline tilefish in 2022 and 2023 by specific pound bins from Maine-Virginia. Source: NMFS unpublished CAMS data.

Pound Range	2022 – Number of Trips	2023 - Number of Trips
400+	4	162
300-399	6	51
200-299	12	86
100-199	19	168
1-99	174	698
Total	231	1,165

Statistical areas 621, 626, 622, and 616 account for the majority of 2023 commercial blueline landings (Figure 2; Table 6).

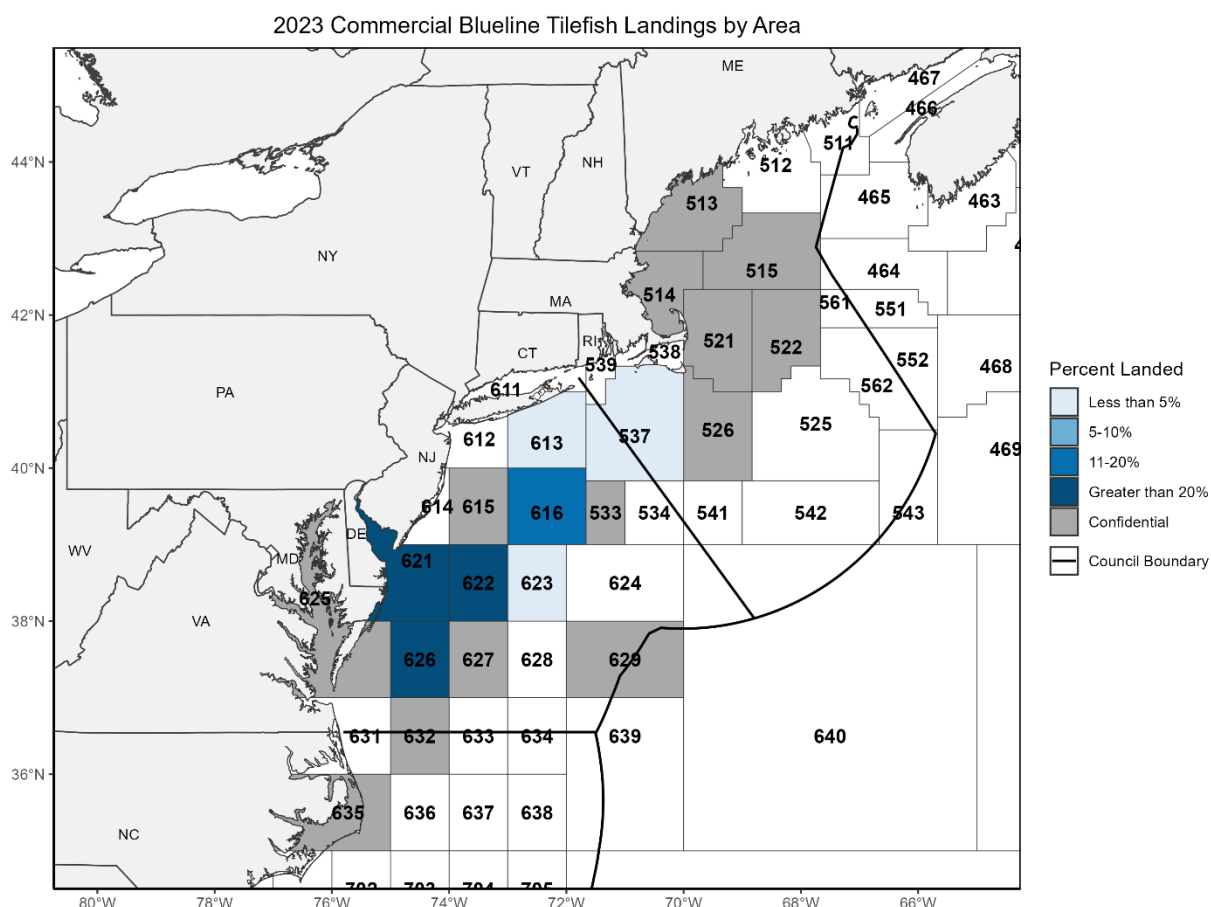


Figure 2. Tilefish landings shown as a percentage of total landings by NMFS statistical area. Source: NMFS unpublished CAMS data.

Table 6. Top statistical areas summarizing blueline tilefish landings greater than 4,000 pounds from Maine-Virginia for 2023. Source: NMFS unpublished CAMS data.

Stat Area	2023 Landings (pounds)
621	10,647
626	7,355
622	6,461
616	4,634
632	C

Commercial blueline tilefish ex-vessel value and price are described in Figure 3. Since 2000, the ex-vessel value has averaged at about \$64,818 per year with a high in 2014 at about \$576,893 and a low in 2002 at about \$672. However, since the implementation of blueline tilefish management by the Council through secretarial interim action in 2016, the ex-vessel value has averaged at about \$65,514 per year and about \$3.01 per pound. In 2023, the ex-vessel value was \$95,837 at about \$3.05 per pound. All revenue and price values were adjusted to the 2023 dollar to account for inflation.

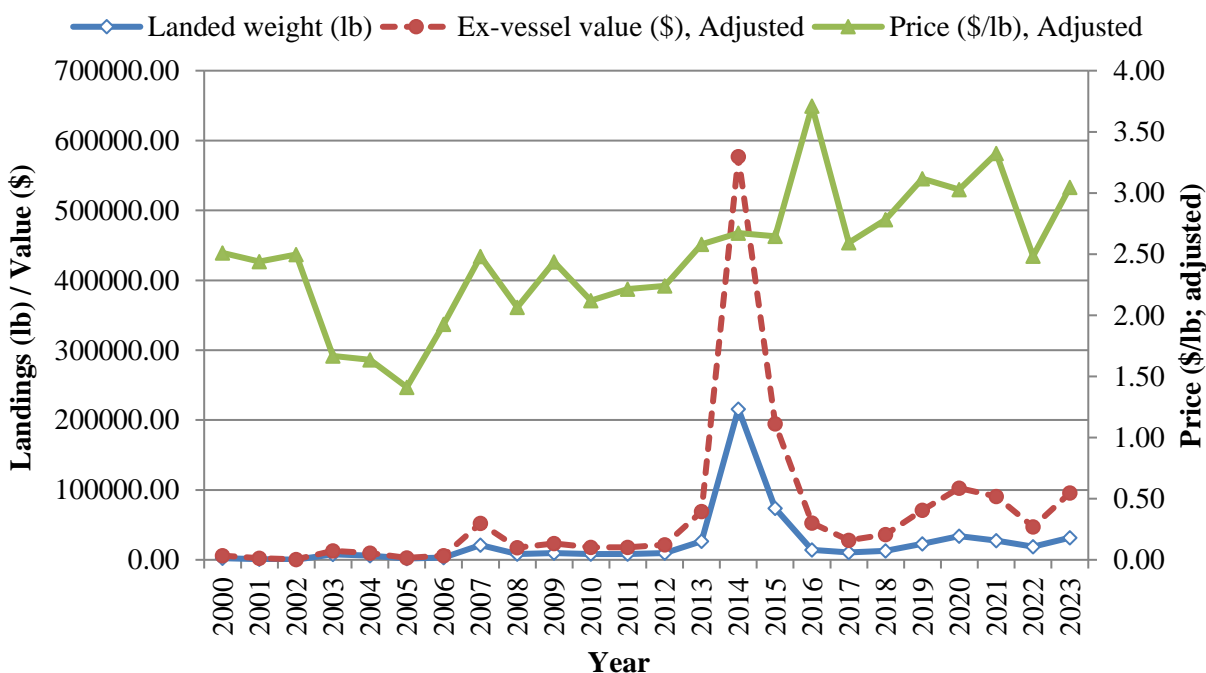


Figure 3. Landings, ex-vessel value, and price for blueline tilefish from Maine through Virginia combined, 2000-2023. Ex-vessel value and price are inflation-adjusted by the Gross Domestic Product Price Deflator indexed for 2023 (<https://fred.stlouisfed.org/>). NMFS unpublished dealer (2000-2019) and CAMS (2020-2023) data.

Recreational Fishery

In 2023, 779 open access tilefish permits (valid for both blueline and golden tilefish) were issued to headboat/charter vessels.⁴ Permitted tilefish headboat/charter vessels are required to submit vessel trip reports (VTR); however, in past years, stakeholders believe that VTR reporting compliance for blueline tilefish was especially low for headboats prior to 2012 and in general for charter vessels.

Advisors and other blueline tilefish recreational fishermen have suggested that starting in 2012, VTR reporting compliance began to encompass at least the primary headboats targeting tilefish. Table 7 provides the available VTR landings for blueline tilefish since 2012. In 2023, headboat/charter vessels reported landing 15,914 blueline tilefish. Based on previous SSC input, for-hire discards are calculated as 2% of overall landings resulting in 318 fish for 2023. Thus, total

⁴ Source: <https://www.greateratlantic.fisheries.noaa.gov/public/public/web/NEROINET/aps/permits/data/index.html>

for-hire catch was about 16,232 fish (Table 7). Recreational blueline tilefish landings are also estimated through MRIP, however intercepts in MRIP are an exceedingly rare event with an associated high level of uncertainty (PSE ranging from over 110-30%; Table 8).

Table 7. Blueline tilefish headboat/charter VTR landings and reported discards from Maine-Virginia, 2012-2023. Estimated discards were calculated as 2% of total reported headboat/charter landings Source: NMFS unpublished CAMS data.

Year	Number of Trips	Landings (Numbers of Fish)	Reported Discards (Numbers of Fish)	Estimated Discards^a (Numbers of Fish)
2012	102	10,935	338	219
2013	120	12,875	128	258
2014	138	17,243	254	345
2015	169	15,653	292	313
2016	158	16,857	246	337
2017	129	11,056	115	221
2018	220	13,530	99	271
2019	160	11,656	176	233
2020	146	10,517	174	210
2021	216	14,831	69	297
2022	243	14,546	63	291
2023	317	15,914	484	318

^a Estimated discards are calculated as 2% of total for-hire reported VTR landings.

Table 8. Recreational blueline tilefish MRIP landing estimates from Maine-Virginia by mode.

	Charter (number of fish)	Headboat (number of fish)	Private/Rental (number of fish)
2015	-	-	4,663
2016	1,222	-	97,477
2017	-	-	12,122
2018	2,083	6	2,989
2019	2,272	-	4,839
2020*	1,062	41	481
2021	5,772	-	44,199
2022	23,885	-	65,715
2023	18,159	-	45,918

*2020 MRIP estimates were likely impacted by limited sampling efforts due to the COVID-19 pandemic.

Private Recreational Data Challenges and Estimates

To improve tilefish management and reporting, GARFO implemented mandatory private recreational permitting and reporting for tilefish anglers in August 2020. This action was approved in late 2017, but with delayed implementation. Outreach materials and webinars were provided by GARFO and the Council leading up to the final rule.

Although these mandatory permitting and reporting requirements were implemented several years ago, based on annual reviews of the private recreational tilefish permit and reported landings it is evident that angler reporting rates have been very low since the requirements were implemented. In response to the low reporting rates, the Council has been working with a contractor to improve the awareness of and compliance with the private recreational tilefish permitting and reporting requirement as well as a program evaluation of the requirements that was designed to identify compliance barriers and opportunities for improvement. A final report on this work will be provided to the Council later this year and will inform potential next steps.

For additional information on the tilefish permitting and reporting requirements please visit the Council's [Recreational Tilefish Permitting and Reporting webpage](#).

In 2023, 946 federal tilefish permits were issued for private recreational anglers. This tilefish permit allows recreational anglers to land both golden and blueline tilefish. In 2023, 541 blueline tilefish were reported landed by 22 boats on 37 private recreational trips.

Currently, there is minimal information available to inform an appropriate average weight that can be applied to blueline tilefish along the coast from Maine through Virginia. Thus, recreational catch is summarized in numbers of fish. For 2023, MRIP reported 45,918 blueline tilefish landed through the private/rental mode (Table 8), however, only 541 fish were reported through the new private angler permitting/reporting requirements. VTR data indicated that 15,914 fish were landed (Table 7) via the for-hire fleet. Therefore, total landings are estimated to be 61,832 fish based on private/rental MRIP data and for-hire VTR data or 16,455 fish based on private recreational and for-hire VTR data.

A conversion from landings in number of fish to pounds of fish can be estimated using a range of accepted weights. In previous years, Advisory Panel members have indicated blueline tilefish landed in New York through Virginia range from 3-6 pounds. As shown in Table 9, estimated recreational landings using various data sources (i.e., VTRs, MRIP) have been converted to pounds of fish.

Table 9. Coastwide total recreational blueline tilefish catch (in pounds) calculated using reasonable assumed weights. Blueline tilefish catch from 2015-2019 and 2021-2022 uses headboat/charter VTRs and private/rental MRIP data. Blueline tilefish catch from 2020-2022 was also calculated using VTRs from headboat, charter, and private/rental boats. Private/rental VTR reporting requirement were implemented by GARFO in August 2020. Note 2020 MRIP estimates were likely impacted by limited sampling efforts due to the COVID-19 pandemic, therefore catch in pounds for 2020 was calculated using VTR data only.

Year	3 Pounds	4 Pounds	5 Pounds	6 Pounds
2015	59,186	78,915	98,643	118,372
2016	405,866	541,154	676,443	811,731
2017	68,817	91,756	114,695	137,634
2018	47,949	63,932	79,915	95,898
2019	48,239	64,318	80,398	96,477
2020 <i>(with private/rental VTR)</i>	32,066	42,754	53,443	64,131
2021 <i>(with private/rental MRIP)</i>	161,687	215,583	269,479	323,375
2021 <i>(with private/rental VTR)</i>	27,206	36,275	45,344	54,413
2022 <i>(with private/rental MRIP)</i>	219,934	293,246	366,557	439,869
2022 <i>(with private/rental VTR)</i>	19,872	26,496	33,119	39,743
2023 <i>(with private/rental MRIP)</i>	159,937	213,249	266,562	319,874
2023 <i>(with private/rental VTR)</i>	21,083	28,111	35,139	42,167

Over the past several years, members of the Tilefish Monitoring Committee have debated the accuracy of MRIP's blueline tilefish landing estimates. They have also discussed the appropriateness of relying on MRIP estimates to monitor recreational catch, given the fluctuating nature of MRIP's year-to-year estimates and the significant uncertainty associated with these estimates. Additionally, the Monitoring Committee discussed the inability to use the private recreational VTR data due to the current low reporting rates. In 2023, the Monitoring Committee recommended the continued use of the Delphi method⁵ for estimating private angler landings. However, the Monitoring Committee emphasized that while the Delphi method serves as an interim solution, it was developed several years ago, and consideration to either update this method or adopt an improved alternative may be warranted. VTR data from headboat/charter vessels continue to be the best available information to monitor for-hire landings. Therefore, in 2023,

⁵ The Delphi method was utilized 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 through 202.

using the Delphi method and headboat/charter VTRs, total recreational landings accounted for approximately 22,109 fish. Applying a presumed discard rate of 2%, the total blueline tilefish recreational catch was about 22,551 fish. (Table 10).

Table 10. Headboat and charter blueline tilefish landings (number of fish) from VTR data as well as private recreational landings estimated through MRIP data from 2015-2023, VTR data from 2020-2023, as well as using the Delphi method (Delphi=105.16% of charter). All data includes landing estimates from Maine – Virginia. Total recreational catch estimated using for-hire VTR data and the private recreational Delphi estimate.

Year	Headboat Landings (#of fish)	Charter Landings (#of fish)	Private Rental Landings (Number of fish)	Private Rental Landings using Delphi Approach (#of fish)	Total Rec. Landings- Headboat/charter VTRs and Delphi estimates (#of fish)
2015	13,203	2,450	4,663	2,576	18,229
2016	14,659	2,198	116,833	2,311	19,168
2017	9,312	1,744	12,122	1,834	12,890
2018	5,113	8,417	2,989	8,851	22,381
2019	3,461	8,195	4,839	8,618	20,274
2020	6,573	3,944	MRIP = 481* Private VTR = 90	4,148	14,665
2021	11,001	3,830	MRIP = 44,199 Private VTR = 356	4,028	18,859
2022	10,301	4,245	MRIP = 65,715 Private VTR = 448	4,464	19,010
2023	10,023	5,891	MRIP = 45,918 Private VTR = 541	6,195	22,109

*2020 MRIP estimates were likely impacted by limiting sampling efforts due to the COVID-19 pandemic.

Through Amendment 6 to the Tilefish FMP, a standardized average weight of 3.65 pounds for blueline tilefish was identified as an acceptable average weight. This average pound multiplier was based on data collected by Old Dominion University through a recreational fish carcass donation program. Based on this metric, the cumulative 2023 recreational landings were 80,689 pounds and total catch was 82,312 pounds (Figure 4). Using these methodologies results in a recreational total allowable landing (TAL) and annual catch limit (ACL) overage of about 12%. The 2023 recreational TAL is 71,912 pounds and the ACL is 73,380 pounds. However, it is important to note that although the average 3.65 pound multiplier was seen as an acceptable average weight during the development of Amendment 6, there has been recent concern raised by the SSC, Monitoring Committee, and Tilefish Advisory Panel that this average pound weight no longer accurately represents the recreational blueline tilefish fishery off the mid-Atlantic coast and that it would be more accurate to convert numbers of fish to pounds using a length-weight frequency calculation.

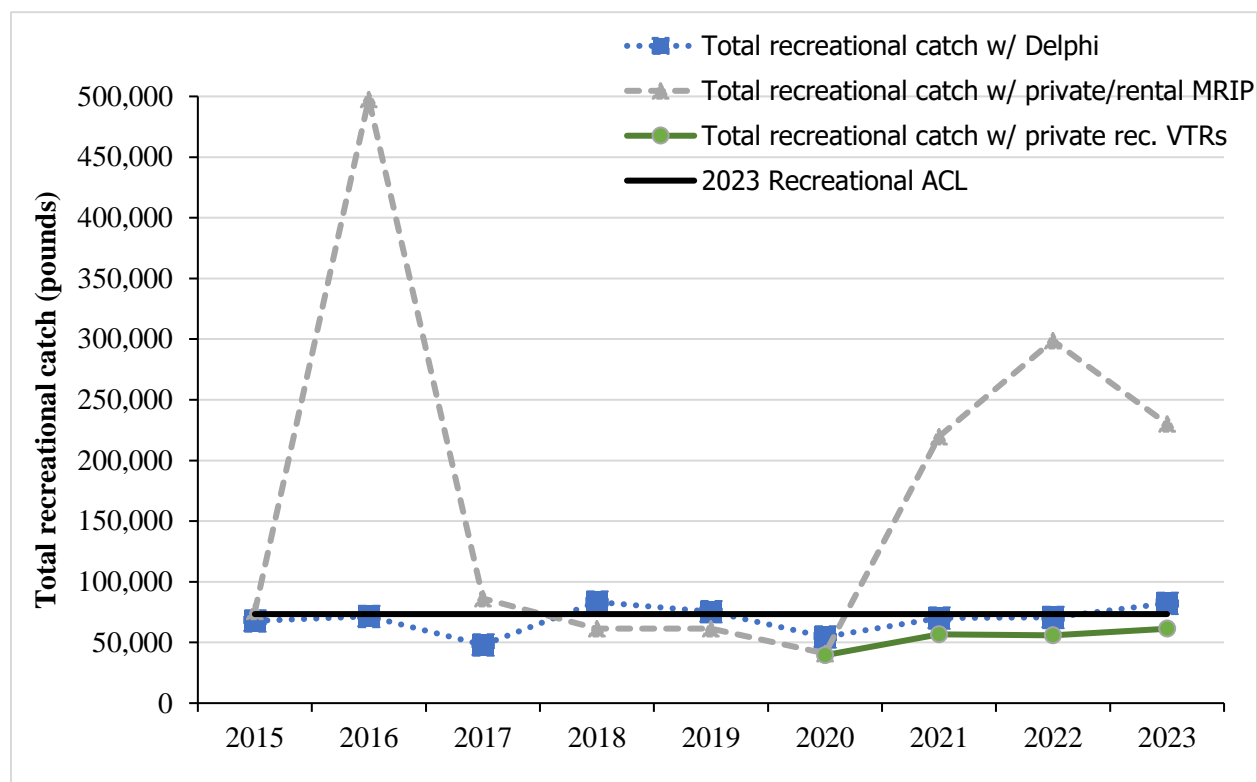


Figure 4. Total recreational catch (in pounds) from 2015-2023. The dotted blue line represents total recreational catch using for-hire VTRs and the Delphi method for private/rental catch, dashed grey line uses for-hire VTRs and private/rental MRIP estimates, and the solid green line uses VTR data for all recreational modes. The 2023 recreational ACL is represented by the black line. All catch was converted to pounds of fish using an average weight of 3.65 pounds.

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