

## TOR 2: Golden Tilefish Recreational Data Collection and Analysis

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*“TOR 2: Estimate catch from all sources including landings and discards. Describe the spatial and temporal distribution of landings, discards, and fishing effort. Characterize the uncertainty in these sources of data.”*

### 1 Recreational Data Information

This section discusses various golden tilefish recreational data sources.

#### 1.1 Marine Recreational Information Program (MRIP)

NOAA Fisheries’ Marine Recreational Information Program (MRIP), which was formerly the Marine Recreational Fisheries Statistical Survey (MRFSS), is the state-regional-federal partnership that develops, implements, and continually improves a national network of recreational fishing surveys to estimate total recreational catch. The MRFSS data collection program began in 1979, though estimates of recreationally caught golden tilefish are not available until 1981.

Golden tilefish is generally referred to as a rare event species as they are only sought by a relatively small proportion of the marine recreational angler fishing trips made in the Northeast Region. The likelihood of National Marine Fisheries Service’s (NOAA) Access Point Angler Intercept Survey (APAIS), which is used to collect catch-per-trip data from anglers fishing from shore, private boats, and for-hire vessels; intercepting a fishing trip that directed on tilefish is relatively low and therefore the resulting angler catches are generally not estimated very precisely by MRIP.

##### 1.1.1 Recreational harvest and discards

Recreational harvest in numbers of fish has been low for the 1981-2022 period, ranging from zero for most years to approximately 200,000 fish in 2010 (Table 1). On average, 13,753 fish per year have been harvested for the 1981-2022 period. Recreational harvest in weight has been low for the 1981-2022 period, ranging from zero for most years to approximately 835 mt in 2002 (Table 2). Recreational harvest and/or release in number of fish by mode, state, and/or wave are presented in Tables 1 and 3–12. Table 13 summarizes the state/wave data used to generate recreational harvest presented in Table 1. In general terms, Table 13 shows that most of the recreational harvest estimates present in Table 1, came from a low number of intercepts. Tables 1–12 show that MRIP catches are sporadic and highly variable across the 1981-2022 time series.

Estimates of golden tilefish harvest (AB1) and releases (B2) are sporadic and highly variable for the reasons noted above. On an annual basis, the majority of strata have no recorded catch and

strata with estimated catch have very large Percent Standard Errors (PSEs) associated with that catch (>50) suggesting that golden tilefish catch is below detection of the survey design.

### 1.1.2 MRIP Landings Lengths

For the 1981-2022 period, only 317 length measurements have been collected (Table 14 and Figure 1). The average mean weight for the 317 tilefish was 4.473 kg per fish (9.861 pounds) based on the length-weight relationship that is used in the stock assessment.

## 1.2 Vessel Trip Report (VTR)

### 1.2.1 Party and charter boats

The party and charter boat vessel trip report (VTR) program was initiated in 1994. The VTR is a fishermen logbook report that is required for each trip for any federally permitted vessel when fish are caught or when operations include activities that would support fishing, even if no landings are made. Party and charter boats are required to report the count of all species kept and discarded. In 2018 a party/charter electronic reporting system (eVTR) was implemented. Recreational reporting in the VTR system is made in numbers of fish (count) while the commercial fishery reports in weight (pounds).

#### 1.2.1.1 Party and charter boat catch

Party and charter boat VTRs catches range from a low of less than 1,000 fish each year for the 1995-2006 period to 8,545 fish in 2015. From 2016-2022, catches have ranged from 3,466 fish in 2020 to 7,110 fish in 2018. In 2022, the catch was estimated at 5,781 fish (Table 15).

The number of golden tilefish discarded by party and charter recreational anglers is low. On average, approximately 7 fish per year were discarded by party/charter recreational anglers for the 1996-2022 period (201 discarded fish in total). The quantity of golden tilefish discarded by party/charter recreational anglers ranged from zero in most years to 60 in each 2015 and 2021.

Most of the party and charter boat catch comes from 5 boats, accounting for 79% of the catch, on average, for the 2013-2022 period (Table 16).

A detailed analysis of the commercial VTR landings a few years after the program was implemented in 1994 indicated that there were a substantial number of errors in the database, and that the database was not likely to accurately reflect the information of the original logbooks due to errors in the pre-processing, data entry, and/or audit stages (NEFSC 1996). While an analysis of the recreational VTR landings was not conducted at that time, it is possible that the same issues were present in the recreational VTRs in the early years of the program implementation (circa 1994-1996). The increase in the number of fish reported in the late 2000s may be reflective of increases in reporting rates (NEFSC 2014) and perhaps some increase in recreational effort.

## 1.2.2 Private anglers

To improve tilefish management and reporting, mandatory private recreational permitting and reporting for tilefish anglers was implemented in August 2020. Under this rule, private recreational vessels (including for-hire operators using their vessels for non-charter, recreational trips) are required to obtain a federal vessel permit to target or retain golden or blueline tilefish north of the Virginia/North Carolina border. These vessel operators would also be required to submit VTRs electronically within 24 hours of returning to port for trips where tilefish were targeted or retained.

### 1.2.2.1 Private catch

Since the new private reporting requirements were implemented, private catch has ranged from 64 fish in 2020 to 298 fish in 2022 (Table 15). Reported private catch values prior to 2020 are considered misreported or data errors. Some stakeholders have indicated that the reported private tilefish catch appears to be too low given their observations while on the water. NMFS's Greater Atlantic Regional Fisheries Office (GARFO) and the Mid-Atlantic Fishery Management Council (MAFMC) continue to conduct outreach efforts to ensure that private anglers are aware of the recently implemented permitting and reporting requirements for this fishery. More recently, the MAFMC initiated efforts to better understand how the permitting and reporting requirements for tilefish are working; and for the 2024 Proposed Actions and Deliverables,<sup>1</sup> the Council initiated the following project: "Development of Strategies to Improve Compliance with Recreational Tilefish Permitting and Reporting Requirements." This project is expected to reach out to not only tilefish anglers but also Highly Migratory Species (HMS) anglers (see section 1.3 for additional details regarding fishing effort for tilefish and HMS).

### 1.2.3 Recreational catch by state, statistical area, and quarter

Most of the reported party and charter boat landings are coming from New Jersey (Tables 17 and 18).

The Northeast Region is divided into 46 statistical areas for Federal fisheries management. According to VTR data, golden tilefish were recreationally caught by party and charter boats in 16 statistical areas in 2022. However, a greater proportion of the reported recreational catch and effort is further south in statistical area 622 relative to the commercial longline fleet that fishes more in 537 (Tables 19, 20 (below), and Table 2 (of Working Paper 2, Nitschke 2024), and Figure 2 (below)). In 2022, 77% of the party and charter boat catch came from statistical areas 622, 537, and 616 (Table 20).

Quarters 2 and 3 accounted for 97% of the party and charter boat catch in 2022 (Table 21).

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<sup>1</sup> Activities, amendments, frameworks, specifications, and other projects the Council expects to initiate, continue, or complete during the year.

### 1.3 Large Pelagic Survey (LPS)

Since large pelagic species (e.g., tunas, billfish, swordfish, and sharks) are only sought on a relatively small proportion of the total marine recreational angler fishing trips made in the Northeast Region, the fishing effort directed at such species, and the resulting angler catches are generally not estimated very precisely by the MRIP. Therefore, the LPS was designed as a specialized survey that would focus specifically on the recreational fishery directed at large pelagic species. This specialization has enabled higher levels of sampling needed to provide more precise estimates of pelagic fishing effort and catches of large pelagic species.<sup>2</sup>

The NMFS has administered the LPS since 1992, and prior to that the Bluefin Tuna Survey was conducted between 1992 and 1998. Angler participation in the LPS is mandatory and is a condition of obtaining a National Marine Fisheries Service HMS permit. The LPS includes two independent, yet complementary, types of surveys which provide the effort and average catch per trip estimates needed to estimate total catch by species. The Large Pelagics Intercept Survey (LPIS) is a dockside survey of fishing access sites, primarily designed to collect catch data from private and charter boat captains who have just completed fishing trips directed at large pelagic species. LPIS data are used to estimate the average recreational catch per large pelagic boat trip by species. The Large Pelagics Telephone Survey (LPTS) collects data used to estimate the total number of boat trips on which anglers fished with rod and reel or handline for large pelagic species. See Figure 3 for a graphical representation of the LPS design to estimate total catch by species.

The Private vessel portion of the LPTS is conducted from QuanTech Headquarters in Rockville, Maryland using a custom-designed Computer Assisted Telephone Interviewing system. The LPTS collects data used to estimate the total number of boat trips on which anglers fished with rod and reel or handline for large pelagic species. For-hire boats are covered by a weekly survey, and private boats are covered by a biweekly survey. The For Hire Survey LPTS Add-on is a series of additional questions asked during the For Hire Survey of vessels with an eligible Charter/Headboat category HMS permit. HMS Charter/Headboat permitted vessels are prohibited from selling any catch of HMS unless they obtain a “commercial sale” endorsement as part of the permit.<sup>3</sup>

While the LPS was designed as a specialized survey that would focus specifically on the recreational fishery directed at large pelagic species, it also collects information on the quantity of non-LPS species kept (e.g., Atlantic bluefish, king mackerel, black sea bass, spiny dogfish, ocean triggerfish, golden and blueline tilefish) on trips targeting large pelagic species.

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<sup>2</sup> For additional information see [2023 LPIS Procedures Manual](#)

<sup>3</sup> <https://www.fisheries.noaa.gov/bulletin/atlantic-highly-migratory-species-charter-headboat-permit-commercial-sale-endorsement>

Recreational stakeholders have indicated that almost every private vessel fishing deep enough to catch tilefish has an HMS permit (Tilefish Advisory Panel 2022). It was estimated that in 2022, approximately 65% of the tilefish recreational permit holders also held an HMS permit.

Recreational anglers are highly unlikely to catch golden tilefish while targeting tuna or swordfish. However, for example, these boats may fish for golden tilefish at any time during a tuna trip (i.e., when the tuna limit has been reached, on the way out or on the way in from a tuna fishing trip, or at any time when tuna fishing is slow). While fishing for tuna recreational anglers may troll using rod and reel (including downriggers). Rod and reel is the typical gear used in the recreational golden tilefish fishery. However, while both fisheries use “rod and reel,” it is unlikely that the same equipment would be used to catch tuna and golden tilefish. Because golden tilefish are found in relatively deep waters, electric reels may be used to facilitate landing (MAFMC 2022).

### 1.3.1 Charter boats harvest and discards

The LPS defines Charter boats as boats with a Charter/Headboat category HMS permit or vessels fishing for LPS without an HMS permit but operate as a Charter Boat. Due to HMS permit regulations, vessels with a Charter/Headboat category HMS permit are not required to take paying passengers on a trip (Anthony Kaufman pers. comm. 2023). In fact, for the 2006-2022 period, 25% percent of the charter trips with golden tilefish catch did not have paying passengers (Anthony Kaufman pers. comm. 2023).<sup>4</sup>

Due to historical changes in data collection programs and survey estimation methods, only custom estimates from 2005-2022 can be provided. In addition, in 2010 the definition of an eligible LPS trip was changed from "Any trip targeting or catching LPS" to "Any trip Targeting LPS." Data filtered out intercepts from 2005-2009 that did not report an LPS target. Lastly, the LPIS does not sample party/head boats (Anthony Kaufman pers. comm. 2023).

According to LPS data, 15,282 golden tilefish were kept by charter mode vessels during the 2005-2022 period (Table 22). In addition, 35,879 and 11,325 blueline and unclassified tilefish were kept for the same period, with minor quantities of sand tilefish kept (Table 22). The number of unclassified tilefish kept is likely to be a combination of both golden tilefish and blueline tilefish as landings of sand tilefish and blackline tilefish are rare in the mid-Atlantic. Most of the reported golden tilefish charter mode landings are coming from New Jersey (Table 23).

Tilefish catch rate estimates (fish per trip targeting LPS) and the proportion of LPIS intercepts with an HMS permit that caught tilefish by mode are shown in Tables 24-31.

For the 2005-2022 period, there were no golden tilefish discards reported on charter boat trips targeting LPS (Table 32).

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<sup>4</sup> LPS data and caveats described in section 1.3 provided by Anthony Kaufman pers. Comm. 2023.

### 1.3.1.1 Golden tilefish adjusted charter boat harvest

As previously indicated, the unclassified tilefish kept are likely to be a combination of both golden tilefish and blueline tilefish as landings of sand tilefish and blackline tilefish are rare in the mid-Atlantic. Two methods were used to reallocate a portion of the unclassified tilefish to golden tilefish.

- Method 1: the yearly contribution of golden tilefish kept (derived from Table 22) to the total number of all kept tilefish by species identified to species was used to calculate the proportion of unclassified tilefish assumed to be golden tilefish. For instances (i.e., years) with no reports of golden tilefish kept but unclassified tilefish kept were estimated, then the average (2005-2022) contribution of golden tilefish kept to the total number of all tilefish kept was used to calculate the proportion of unclassified tilefish assumed to be golden tilefish.
- Method 2: the state-by-state yearly contribution of golden tilefish kept (derived from Table 23) to the total number of all kept tilefish by species was used to calculate the proportion of unclassified tilefish assumed to be golden tilefish. For instances (i.e., year/state) with no reports of golden tilefish kept but unclassified tilefish kept were estimated, then the state average (2005-2022) contribution of golden tilefish kept to the total number of all tilefish kept was used to calculate the proportion of unclassified tilefish assumed to be golden tilefish.

The resulting adjusted number of golden tilefish kept for the charter mode are presented in Table 33. The amount of golden tilefish kept increased from 15,282 fish (original kept value; Tables 22 and 23) to 17,752 and 17,387 under methods 1 and 2, respectively (Table 33).

### 1.3.2 Private harvest and discards

The data caveats described in section 1.3.1 also apply here. According to LPS data, 20,177 golden tilefish were kept by private mode vessels during the 2005-2022 period (Table 34). In addition, 19,036 and 10,842 blueline and unclassified tilefish were kept for the same period, with minor quantities of sand tilefish kept (Table 34). The number of unclassified tilefish kept is likely to be a combination of both golden tilefish and blueline tilefish as landings of sand tilefish and blackline tilefish are rare in the mid-Atlantic. Most of the reported golden tilefish private mode landings are coming from New Jersey (Table 35).

Tilefish catch rate estimates (fish per trip targeting LPS) and the proportion of LPIS intercepts with an HMS permit that caught tilefish by mode are shown in Tables 24-31.

For the 2005-2022 period, 47 golden tilefish discards on private trips targeting LPS were reported (Table 32).

### 1.3.2.1 Golden tilefish adjusted private harvest

As previously indicated, the unclassified tilefish kept is likely to be a combination of both golden tilefish and blueline tilefish. The same two methods described under section 1.3.1.1 were used to reallocate a portion of the private unclassified tilefish harvest to golden tilefish.

The resulting adjusted number of golden tilefish kept are presented in Table 36. The amount of golden tilefish kept increased from 20,177 fish (original kept value; Tables 34 and 35) to 23,753 and 23,435 under methods 1 and 2, respectively (Table 36).

## 1.4 Turner Recreational Time Series

Turner (1986) developed a time series of recreational catches for the 1973-1982 period. The size of the recreational catches in almost all years had to be estimated using a variety of assumptions and data provided by other researchers. Party-charter catch rates for the 1970-1971 were about 1 mt per trip. This catch rate was assumed for 1974 and 100 trips for the year were also assumed. The 1973 catch was assumed to be 75 mt and 1975-1977 catches were steadily decreased to 5 mt for 1978. The same amount was used for the 1979 estimate, and annual catches of 3 mt were assumed for 1980-1982 (Table 37 and Figure 4).

## 1.5 Recreational Catch Time Series

In prior assessments, golden tilefish recreational catches were not included as a component of the total catch, as stock assessment working groups were not able to develop a reliable time series for recreational catch. In SAW58th (NEFSC 2014) the working group also concluded that recreational removals were likely a minor component of the catch. In an effort to better assess the effort of the recreational catches and improve the management system, permitting and reporting requirements have been implemented for the for-hire (2009) and private (2020) fishing sectors. The 2024 research track assessment working group believes that recently implemented reporting requirements, improvements in the specialize LPS, and other historical recreational data can now be used to develop a golden tilefish time series for recreational landings which should be considered for inclusion in stock assessment work to better characterize removals in the fishery.

The working group considered the information presented in sections 1.1 through 1.4 in addition to other information presented below to develop a time series of recreational catch. The foundation for developing the time series (1971-2022) are discussed in the text below and summarized in Tables 38 and 39.

For years 1973 through 1982, the catch is based on the estimates developed by Turner (1986). While there was not much recreational activity for golden tilefish reported during the 1964-1968 period, several specimens were caught in 1969 by a party boat that sailed from Atlantic City (New Jersey) and fished at the end of the continental shelf. Within less than a year, scores of boats were fishing out of ports from New York and New Jersey, eventually leading to the

peak catches reported in 1974 (MAFMC 2000). The minimum 3 mt estimate for the 1973-1982 period estimated by Turner (1986) was used to characterize landings for the first year of the time series (1971), as the fishery was rediscovered in the late 1960s and interest in tilefish was growing. The mid-point between the 1971 (3 mt) and 1973 (75 mt) catches was used to characterize the ramp up in fishing activity and catch in 1972 (39 mt).

For the 1983-1993 period, catch is assumed to be a 3 mt minimum value for the 1973-1982 period when recreational interest in the fishery presumably decreased but was thought not to have decreased to zero. For the 1994-2006 period, landings were also assumed to be 3 mt as there were some processing and reporting issues with VTR data in the early part of this period (section 1.2.1).

For the 2007-2022 period, recreational catch in number of fish was estimated by adding the number of fish caught as reported in the party/charter VTR data (section 1.2.1) and the adjusted private LPS number of fish kept under method 2 for assessing unclassified tilefish fish (section 1.3.2.1 ). The working group recommended method 2 to adjust the private LPS number of golden tilefish kept, as the ratio of golden tilefish to blueline tilefish kept differs by state (i.e., more bluelines as you go further south). Private VTR catch estimates were not used as this data requirement has been in place for less than 3 years and reported VTR private tilefish catch appears to be too low given the effort observed on the water (section 1.2.2) and the results of the LPS survey. The resulting number of recreational catch for each year was multiplied by the yearly commercial mean weights at age. The center of activity of the tilefish fishery occupies a relatively narrow range and it is believed that both the recreational and commercial fishery target similar year classes as they pass through the fisheries. Collection of length data from the recreational fishery would help address this source of uncertainty in estimating recreational catch. The working group recommends length sampling on party/charter trips as a research recommendation for potential improvements in the recreational time series estimates for golden tilefish.

Based upon the recreational catch time series in Table 38, the contribution of recreational golden tilefish landings to total removals for the 2005-2022 period ranged from 0.3% in 2006 to 3.7% in 2015 (Table 40). In 2022, contribution of recreational golden tilefish landings to total removals was 3.2% (Table 40).

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### 3 Tables

Table 1. Recreational harvest (Type A + B1) and release (Type B2) in number of fish for all modes combined, 1981-2022. Source: MRIP (PSE values in parentheses).

Year	Harvest no. A + B1		Released no. B2	
1981				
1982	2,225	(102)		
1983				
1984				
1985				
1986				
1987				
1988				
1989				
1990				
1991				
1992				
1993				
1994	555	(101.6)		
1995				
1996	1,765	(80.5)		
1997				
1998				
1999				
2000				
2001	98	(101.4)		
2002	122,443	(85.7)	8,163	(85.7)
2003	967	(75.2)		
2004	55	(102.2)		
2005				
2006	471	(103.7)		
2007	1,837	(71.4)		
2008				
2009	168	(89.8)		
2010	218,137	(96.3)		
2011				
2012				
2013	1,145	(0)		
2014				
2015				
2016	29,691	(70.4)		
2017	59,413	(59.4)		
2018	8,818	(72.9)	4	(106.8)
2019	10,364	(64.2)		
2020	11,270	(79.1)	41	(100.3)
2021	10,191	(54.2)		
2022	98,024	(67.3)		

Table 2. Recreational harvest (Type A + B1) in pounds for all modes combined, 1981-2022. Source: MRIP (PSE values in parentheses).

Year	Weight (kilograms) A + B1	
1981		
1982	242	(102)
1983		
1984		
1985		
1986		
1987		
1988		
1989		
1990		
1991		
1992		
1993		
1994	-	-
1995		
1996	-	-
1997		
1998		
1999		
2000		
2001	-	-
2002	834,798	(85.7)
2003	7,645	(72)
2004	271	(102.2)
2005		
2006	1,851	(103.7)
2007	7,779	(71.5)
2008		
2009	2,024	(89.8)
2010	694,086	(95.3)
2011		
2012		
2013	-	-
2014		
2015		
2016	130,470	(73.7)
2017	342,021	(59.1)
2018	15,285	(63.7)
2019	58,451	(64.1)
2020	37,645	(72.3)
2021	18,918	(58.2)
2022	457,799	(63.4)

Table 3. Recreational harvest (Type A + B1) and discards (Type B2) in number of fish by mode, 1981-2022. Source: MRIP (PSE values in parentheses).

Year	Harvest no. A and B1				Released no. B2			
	All For-Hire Modes Combined		Private/rental Mode		All For-Hire Modes Combined		Private/rental Mode	
1981			2,225	(102)				
1982								
1983								
1984								
1985								
1986								
1987								
1988								
1989								
1990								
1991								
1992								
1993								
1994	555	(101.6)						
1995								
1996	1,765	(80.5)						
1997								
1998								
1999								
2000								
2001	98	(101.4)						
2002			122,443	(85.7)			8,163	(85.7)
2003	967	(75.2)						
2004	55	(102.2)						
2005								
2006	471	(103.7)						
2007	1,837	(71.4)						
2008								
2009	168	(89.8)						
2010	4,754	(81.9)	213,382	(98.4)				
2011								
2012								
2013	1,145	(0)						
2014								
2015								
2016			29,691	(70.4)				
2017			59,413	(59.4)				
2018	7,925	(80.3)	893	(102.9)	4	(106.8)		
2019			10,364	(64.2)				
2020	1,933	(60.3)	9,336	(94.7)	41	(100.3)		
2021	270	(102.1)	9,921	(55.6)				
2022	1,306	(39)	96,718	(68.2)				

Table 4. Recreational harvest (Type A + B1) in number of fish for all modes combined by state, 1981-2022. Source: MRIP (PSE values in parentheses).

Year	NY		NJ		DE		MD		VA	
1981							2,225	(102)		
1982										
1983										
1984										
1985										
1986										
1987										
1988										
1989										
1990										
1991										
1992										
1993										
1994	555	(101.6)								
1995										
1996	1,011	(116.9)			754	(104.5)				
1997										
1998										
1999										
2000										
2001					98	(101.4)				
2002	122,443	(85.7)								
2003					967	(75.2)				
2004					55	(102.2)				
2005										
2006			471	(103.7)						
2007					13	(100.6)			1,824	(71.9)
2008										
2009							168	(89.8)		
2010	213,382	(98.4)	4,736	(82.2)			18	(94.4)		
2011										
2012										
2013			1,145	(0)						
2014										
2015										
2016			29,351	(71.2)					341	(101.9)
2017	32,684	(86)					25,851	(82.5)	878	(88.4)
2018			7,893	(80.6)					925	(99.4)
2019			6,706	(88.3)			2,362	(115.8)	1,296	(103.2)
2020			1,000	(105.2)	852	(57.9)	9,418	(93.9)		
2021	3,052	(109.6)	2,899	(99.3)			3,969	(83.5)	270	(102.1)
2022			8,828	(105.3)	10,756	(100.8)	78,370	(82.2)	70	(102)

Table 5. Recreational harvest (Type A + B1) in number of fish for all for-hire modes combined by state, 1981-2022. Source: MRIP (PSE values in parentheses).

Year	NY		NJ		DE		MD		VA	
1981										
1982										
1983										
1984										
1985										
1986										
1987										
1988										
1989										
1990										
1991										
1992										
1993										
1994	555	(101.6)								
1995										
1996	1,011	(116.9)			754	(104.5)				
1997										
1998										
1999										
2000										
2001					98	(101.4)				
2002										
2003					967	(75.2)				
2004					55	(102.2)				
2005										
2006			471	(103.7)						
2007					13	(100.6)			1,824	(71.9)
2008										
2009							168	(89.8)		
2010			4,736	(82.2)			18	(94.4)		
2011										
2012										
2013			1,145	(0)						
2014										
2015										
2016										
2017										
2018			7,893	(80.6)					32	(106.8)
2019										
2020			1,000	(105.2)	852	(57.9)	81	(136.3)		
2021									270	(102.1)
2022							1,236	(40.8)	70	(102)

Table 6. Recreational harvest (Type A + B1) in number of fish for private/rental mode by state, 1981-2022. Source: MRIP (PSE values in parentheses).

Year	NY		NJ		DE		MD		VA	
1981							2,225	(102)		
1982										
1983										
1984										
1985										
1986										
1987										
1988										
1989										
1990										
1991										
1992										
1993										
1994										
1995										
1996										
1997										
1998										
1999										
2000										
2001										
2002	122,443	(85.7)								
2003										
2004										
2005										
2006										
2007										
2008										
2009										
2010	213,382	(98.4)								
2011										
2012										
2013										
2014										
2015										
2016			29,351	(71.2)					341	(101.9)
2017	32,684	(86)					25,851	(82.5)	878	(88.4)
2018									893	(102.9)
2019			6,706	(88.3)			2,362	(115.8)	1,296	(103.2)
2020							9,336	(94.7)		
2021	3,052	(109.6)	2,899	(99.3)			3,969	(83.5)		
2022			8,828	(105.3)	10,756	(100.8)	77,134	(83.5)		

Table 7. Recreational harvest (Type A + B1) in number of fish for all modes combined by wave, 1981-2022. Source: MRIP (PSE values in parentheses).

Year	Wave 3 (May/June)		Wave 4 (Jul/Aug)		Wave 5 (Sept/Oct)		Wave 6 (Nov/Dec)	
1981			2,225	(102)				
1982								
1983								
1984								
1985								
1986								
1987								
1988								
1989								
1990								
1991								
1992								
1993								
1994			555	(101.6)				
1995								
1996			754	(104.5)	1,011	(116.9)		
1997								
1998								
1999								
2000								
2001					98	(101.4)		
2002			122,443	(85.7)				
2003			644	(103)	323	(92.3)		
2004					55	(102.2)		
2005								
2006	471	(103.7)						
2007	1,824	(71.9)			13	(100.6)		
2008								
2009			168	(89.8)				
2010			218,137	(96.3)				
2011								
2012								
2013			-	-				
2014								
2015								
2016	17,222	(107.6)	341	(101.9)			12,129	(79.6)
2017			58,535	(60.3)			878	(88.4)
2018			6,942	(88.1)	1,876	(106.4)		
2019	2,362	(115.8)	1,296	(103.2)	6,706	(88.3)		
2020	1,822	(71.9)	8,366	(104.7)	1,081	(97.8)		
2021	3,969	(83.5)	2,899	(99.3)	3,323	(101)		
2022	22,557	(63.8)	75,467	(85.3)				



Table 8. Recreational harvest (Type A + B1) in number of fish for all for-hire modes combined by wave, 1981-2022. Source: MRIP (PSE values in parentheses).

Year	Wave 3 (May/Jun)		Wave 4 (Jul/Aug)		Wave 5 (Sept/Oct)	
1981						
1982						
1983						
1984						
1985						
1986						
1987						
1988						
1989						
1990						
1991						
1992						
1993						
1994			555	(101.6)		
1995						
1996			754	(104.5)	1,011	(116.9)
1997						
1998						
1999						
2000						
2001					98	(101.4)
2002						
2003			644	(103)	323	(92.3)
2004					55	(102.2)
2005						
2006	471	(103.7)				
2007	1,824	(71.9)			13	(100.6)
2008						
2009			168	(89.8)		
2010			4,754	(81.9)		
2011						
2012						
2013			-	-		
2014						
2015						
2016						
2017						
2018			6,049	(99.9)	1,876	(106.4)
2019						
2020	662	(68.7)	190	(100.3)	1,081	(97.8)
2021					270	(102.1)
2022	1,236	(40.8)	70	(102)		

Table 9. Recreational harvest (Type A + B1) in number of fish for private/rental mode combined by wave, 1981-2022. Source: MRIP (PSE values in parentheses).

Year	Wave 3 (May/Jun)		Wave 4 (Jul/Aug)		Wave 5 (Sept/Oct)		Wave 6 (Nov/Dec)	
1981								
1982			2,225	(102)				
1983								
1984								
1985								
1986								
1987								
1988								
1989								
1990								
1991								
1992								
1993								
1994								
1995								
1996								
1997								
1998								
1999								
2000								
2001								
2002			122,443	(85.7)				
2003								
2004								
2005								
2006								
2007								
2008								
2009								
2010			213,382	(98.4)				
2011								
2012								
2013								
2014								
2015								
2016	17,222	(107.6)	341	(101.9)			12,129	(79.6)
2017			58,535	(60.3)			878	(88.4)
2018			893	(102.9)				
2019	2,362	(115.8)	1,296	(103.2)	6,706	(88.3)		
2020	1,160	(105.9)	8,177	(107.1)				
2021	3,969	(83.5)	2,899	(99.3)	3,052	(109.6)		
2022	21,321	(67.5)	75,397	(85.4)				

Table 10. Recreational harvest (Type A + B1) in number of fish for all modes combined by state and wave, 1981-2022. Source: MRIP (PSE values in parentheses).

State	Year	Wave 3 (May/Jun)		Wave 4 (Jul/Aug)		Wave 5 (Sept/Oct)		Wave 6 (Nov/Dec)	
NY	1994			555	(101.6)				
	1996					1,011	(116.9)		
	2002			122,443	(85.7)				
	2010			213,382	(98.4)				
	2017			32,684	(86)				
	2018			6,017	(100.4)				
	2021					3,052	(109.6)		
NJ	2006	471	(103.7)						
	2010			4,736	(82.2)				
	2013			-	-				
	2016	17,222	(107.6)					12,129	(79.6)
	2018			6,017	(100.4)	1,876	(106.4)		
	2019					6,706	(88.3)		
	2020					1,000	(105.2)		
	2021			2,899	(99.3)				
	2022	8,828	(105.3)						
DE	1996			754	(104.5)				
	2001					98	(101.4)		
	2003			644	(103)	323	(92.3)		
	2004					55	(102.2)		
	2007					13	(100.6)		
	2020	662	(68.7)	190	(100.3)				
	2022	10,756	(100.8)						
MD	1982			2,225	(102)				
	2009			168	(89.8)				
	2010			18	(94.4)				
	2017			25,851	(82.5)				
	2019	2,362	(115.8)						
	2020	1,160	(105.9)	8,177	(107.1)	81	(136.3)		
	2021	3,969	(83.5)						
	2022	2,973	(60)	75,397	(85.4)				
VA	2007	1,824	(71.9)						
	2016			341	(101.9)				

	2017							878	(88.4)
	2018			925	(99.4)				
	2019			1,296	(103.2)				
	2021					270	(102.1)		
	2022			70	(102)				

Table 11. Recreational harvest (Type A + B1) in number of fish for all for-hire modes combined by state and wave, 1981-2022. Source: MRIP (PSE values in parentheses).

State	Year	Wave 3 (May/June)		Wave 4 (Jul/Aug)		Wave 5 (Sept/Oct)	
NY	1994			555	(101.6)		
	1996					1,011	(116.9)
NJ	2006	471	(103.7)				
	2010			4,736	(82.2)		
	2013			-	-		
	2018			6,017	(100.4)	1,876	(106.4)
	2020					1,000	(105.2)
DE	1996			754	(104.5)		
	2001					98	(101.4)
	2003			644	(103)	323	(92.3)
	2004					55	(102.2)
	2007					13	(100.6)
	2020	662	(68.7)	190	(100.3)		
MD	2009			168	(89.8)		
	2010			18	(94.4)		
	2020					81	(136.3)
	2022	1,236	(40.8)				
VA	2007	1,824	(71.9)				
	2018			32	(106.8)		
	2021					270	(102.1)
	2022			70	(102)		

Table 12. Recreational harvest (Type A + B1) in number of fish for all private/rental mode by state and wave, 1981-2022. PSE values in parentheses. Source: MRIP (PSE values in parentheses).

State	Year	Wave 3 (May/Jun)		Wave 4 (Jul/Aug)		Wave 5 (Sept/Oct)		Wave 6 (Nov/Dec)	
NY	2002			122,443	(85.7)				
	2010			213,382	(98.4)				
	2017			32,684	(86)				
	2021					3,052	(109.6)		
NJ	2016	17,222	(107.6)					12,129	(79.6)
	2019					6,706	(88.3)		
	2021			2,899	(99.3)				
	2022	8,828	(105.3)						
DE	2022	10,756	(100.8)						
MD	1982			2,225	(102)				
	2017			25,851	(82.5)				
	2019	2,362	(115.8)						
	2020	1,160	(105.9)	8,177	(107.1)				
	2021	3,969	(83.5)						
	2022	1,737	(98.5)	75,397	(85.4)				
VA	2016			341	(101.9)				
	2017							878	(88.4)
	2018			893	(102.9)				
	2019			1,296	(103.2)				

Table 13. State/wave data used to generate overall harvest (Type A + B1) in number of fish for all modes combined, 1981-2022. Source: Tables 10-12 above.

Year	Landed no. A and B1			
	All For-Hire Modes Combined		Private/rental Mode	
1981				
1982			2,225	MD-W4
1983				
1984				
1985				
1986				
1987				
1988				
1989				
1990				
1991				
1992				
1993				
1994	555	NY-W4		
1995				
1996	1,765	NY-W5; DE-W4		
1997				
1998				
1999				
2000				
2001	98	DE-W5		
2002			122,443	NY-W4
2003	967	DE-W4, W5		
2004	55	DE-W5		
2005				
2006	471	NJ-W3		
2007	1,837	DE-W5; VA-W3		
2008				
2009	168	MD-W4		
2010	4,754	NJ-W4; MD-W4	213,382	NY-W4
2011				
2012				
2013	1,145			
2014				
2015				
2016			29,691	NJ-W3, W6; VA-W4
2017			59,413	NY-W4; MD-W4; VA-W6
2018	7,925	NJ-W4, W5; VA-W4	893	VA-W4
2019			10,364	NJ-W5; MD-W3; VA-W4
2020	1,933	NJ-W5; DE-W3, W4; MD-W5	9,336	MD-W3, W4
2021	270	VA-W5	9,921	NY-W5; NJ-W4; MD-W3
2022	1,306	MD-W3; VA-W4	96,718	NJ-W3; DE-W3; MD-W3, W4

Table 14. Number of samples by length (cm) and year for the 317 lengths collected by MRIP from 1981-2022.

Length (cm)	1982	2002	2003	2004	2006	2007	2009	2010	2016	2017	2018	2019	2020	2021	2022
20	1														
33									2						
35												1	1		
37									2	2					
38														1	
39											6		2		
41								5			6				
42											6				
43								6							
44											7			1	
45									3	1	6				
46											5	2	10	3	
48											8				
49												2	9	2	
53									2	1		1	9	1	
54		1	1												
56														1	6
57													3		
58												2	1	1	6
59		2	4									2	9	2	
60				1											
61		1	1											2	6
62		2	4						2	4					
63		1	1				2		1	2		3	10		
65		1	1		2	2									
66		1	2	1											
67			1						2	2					
68									1	2					
70			1					5							
71												2	2		
74									1	2					
75				1								1	8	2	
76										3					
77		1	1		1	3									
78												3	1		
81												1	2	2	6
82			1					5							
83							1		5	4					
84													2		
86			2												
88									1	2					7
89		1	2												
91		1	1												
92		1	1												
93												4	2		
94												1	1		
95		1	2												
106										2	1				
109							1								

Table 15. Recreational catch by mode, 1994-2022 (North Carolina not included). Source: VTR.

Year	Recreational mode			Total
	Party	Charter	Private	
1994				
1995	*	*		717
1996	81			81
1997	380	20		400
1998	120	21		141
1999	91			91
2000	145	2		147
2001	219	3		222
2002	853	9		862
2003	431	563		994
2004	603	287		890
2005	370	178		548
2006	301	177		478
2007	875	260		1,135
2008	904	196		1,100
2009	1,301	150		1,451
2010	1,712	154		1,866
2011	2,472	466		2,938
2012	5,793	631		6,424
2013	6,210	350		6,560
2014	5,600	1,358		6,958
2015	7,656	889		8,545
2016	5,420	499		5,919
2017	6,679	335	25	7,039
2018	3,822	3,288	35	7,145
2019	4,543	881	2	5,426
2020	2,876	590	64	3,530
2021	5,763	1,206	203	7,172
2022	4,371	1,410	298	6,079

\* Breakdown by mode not available.



Table 16. Party and charter recreational catch by top 5 vessels, 1995-2022. Source: VTR.

Year	Top 5	Bottom 152
1995	20%	80%
1996	100%	0%
1997	95%	5%
1998	85%	15%
1999	97%	3%
2000	73%	27%
2001	66%	34%
2002	52%	48%
2003	9%	91%
2004	3%	97%
2005	15%	85%
2006	57%	43%
2007	59%	41%
2008	80%	20%
2009	85%	15%
2010	77%	23%
2011	88%	12%
2012	90%	10%
2013	79%	21%
2014	79%	21%
2015	88%	12%
2016	94%	6%
2017	90%	10%
2018	80%	20%
2019	80%	20%
2020	75%	25%
2021	67%	33%
2022	62%	38%

Table 17. Party and charter recreational catch by state, 1994-2022. Source: VTR.

Year	MA	NY	NJ	DE	MD	VA	Other	NC	Total
1994									
1995		176					541		717
1996		81							81
1997		400							400
1998		141						52	193
1999		88			2		1	34	125
2000		108	39					139	286
2001		122	100					1,164	1,386
2002		439	423						862
2003		71	905				18		994
2004		12	624			254			890
2005		82	364	14		16	72	25	573
2006		265	66	2	133	12		30	508
2007		447	457	88	5	138		313	1,448
2008		488	545	22	32	10	3	60	1,160
2009		720	675	18	7	31			1,451
2010		582	1,194	19	23	48			1,866
2011	496	720	1,643	60	5	14		9	2,947
2012		1,116	5,144	42	23	98	1	12	6,436
2013		1,900	4,568	39	12	41			6,560
2014		957	5,705	180	40	73	3		6,958
2015		693	7,404	100	56	264	28		8,545
2016		673	5,067	69	43	67			5,919
2017		424	6,358	118	76	38			7,014
2018		1,202	5,579	46	87	195	1		7,110
2019		995	3,956	146	56	266	5		5,424
2020		447	2,536	233	33	185	32		3,466
2021	33	2,494	3,801	75	287	143	136		6,969
2022		1,392	3,537	231	511	53	57	2	5,783

Table 18. Party and charter percent of recreational catch by state, 1994-2022. Source: VTR.

Year	MA	NY	NJ	DE	MD	VA	Other	NC
1994								
1995	0%	25%	0%	0%	0%	0%	75%	0%
1996	0%	100%	0%	0%	0%	0%	0%	0%
1997	0%	100%	0%	0%	0%	0%	0%	0%
1998	0%	73%	0%	0%	0%	0%	0%	27%
1999	0%	70%	0%	0%	2%	0%	1%	27%
2000	0%	38%	14%	0%	0%	0%	0%	49%
2001	0%	9%	7%	0%	0%	0%	0%	84%
2002	0%	51%	49%	0%	0%	0%	0%	0%
2003	0%	7%	91%	0%	0%	0%	2%	0%
2004	0%	1%	70%	0%	0%	29%	0%	0%
2005	0%	14%	64%	2%	0%	3%	13%	4%
2006	0%	52%	13%	0%	26%	2%	0%	6%
2007	0%	31%	32%	6%	0%	10%	0%	22%
2008	0%	42%	47%	2%	3%	1%	0%	5%
2009	0%	50%	47%	1%	0%	2%	0%	0%
2010	0%	31%	64%	1%	1%	3%	0%	0%
2011	17%	24%	56%	2%	0%	0%	0%	0%
2012	0%	17%	80%	1%	0%	2%	0%	0%
2013	0%	29%	70%	1%	0%	1%	0%	0%
2014	0%	14%	82%	3%	1%	1%	0%	0%
2015	0%	8%	87%	1%	1%	3%	0%	0%
2016	0%	11%	86%	1%	1%	1%	0%	0%
2017	0%	6%	91%	2%	1%	1%	0%	0%
2018	0%	17%	78%	1%	1%	3%	0%	0%
2019	0%	18%	73%	3%	1%	5%	0%	0%
2020	0%	13%	73%	7%	1%	5%	1%	0%
2021	0%	36%	55%	1%	4%	2%	2%	0%
2022	0%	24%	61%	4%	9%	1%	1%	0%

Table 19. Party and charter recreational catch by statistical area and year, 1994-2022 (North Carolina not included). Source: VTR.

Year	526	537	539	611	612	613	614	615	616	621	622	626	632	Other
1994														
1995		144				541			32					
1996	66	15												
1997	380								20					
1998	120				20				1					
1999	3	82										2		4
2000	83					18			46					
2001		122							100					
2002	160	40			14			1	472					175
2003		64			55				868		4			3
2004						14			619	3			251	3
2005	75	60			10				357		17	3	13	13
2006		50					1	2	273	20	87	30	12	3
2007	300	67							433	22	92	80	58	83
2008	380	3	1		1	2			574	101	21	16		1
2009	625				5	3			588	173	26	29	2	
2010	416	150		6					968	169	97	37	6	17
2011	607	369	240					106	676	339	587	14		
2012	356		261		160	39		80	538	466	4,282	120		122
2013	440	40	200		500	100	30		964	18	3,964	47	7	250
2014	609	262			50		8	88	324	317	5,185	114	1	
2015	65	210	140		40	1			219	139	7,367	364		
2016	553	116							83	176	4,899	70	19	3
2017	192	139	63						791	108	5,662	58		1
2018	375		64	96	578		212	792	696	91	3,527	178		501
2019			995		2		297	757	178	87	2,370	250	33	455
2020	342				120		135		193	30	2,355	222	8	61
2021	1,183		510	160	92	2	186	119	906	46	3,233	306	9	217
2022	109	620		270	106		124	292	586	200	3,213	40		221

Table 20. Percent party and charter recreational catch by statistical area and year, 1994-2022 (North Carolina not included). Source: VTR.

Year	526	537	539	611	612	613	614	615	616	621	622	626	632	Other
1994														
1995	0%	20%	0%	0%	0%	75%	0%	0%	4%	0%	0%	0%	0%	0%
1996	81%	19%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
1997	95%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
1998	85%	0%	0%	0%	14%	0%	0%	0%	1%	0%	0%	0%	0%	0%
1999	3%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	4%
2000	56%	0%	0%	0%	0%	12%	0%	0%	31%	0%	0%	0%	0%	0%
2001	0%	55%	0%	0%	0%	0%	0%	0%	45%	0%	0%	0%	0%	0%
2002	19%	5%	0%	0%	2%	0%	0%	0%	55%	0%	0%	0%	0%	20%
2003	0%	6%	0%	0%	6%	0%	0%	0%	87%	0%	0%	0%	0%	0%
2004	0%	0%	0%	0%	0%	2%	0%	0%	70%	0%	0%	0%	28%	0%
2005	14%	11%	0%	0%	2%	0%	0%	0%	65%	0%	3%	1%	2%	2%
2006	0%	10%	0%	0%	0%	0%	0%	0%	57%	4%	18%	6%	3%	1%
2007	26%	6%	0%	0%	0%	0%	0%	0%	38%	2%	8%	7%	5%	7%
2008	35%	0%	0%	0%	0%	0%	0%	0%	52%	9%	2%	1%	0%	0%
2009	43%	0%	0%	0%	0%	0%	0%	0%	41%	12%	2%	2%	0%	0%
2010	22%	8%	0%	0%	0%	0%	0%	0%	52%	9%	5%	2%	0%	1%
2011	21%	13%	8%	0%	0%	0%	0%	4%	23%	12%	20%	0%	0%	0%
2012	6%	0%	4%	0%	2%	1%	0%	1%	8%	7%	67%	2%	0%	2%
2013	7%	1%	3%	0%	8%	2%	0%	0%	15%	0%	60%	1%	0%	4%
2014	9%	4%	0%	0%	1%	0%	0%	1%	5%	5%	75%	2%	0%	0%
2015	1%	2%	2%	0%	0%	0%	0%	0%	3%	2%	86%	4%	0%	0%
2016	9%	2%	0%	0%	0%	0%	0%	0%	1%	3%	83%	1%	0%	0%
2017	3%	2%	1%	0%	0%	0%	0%	0%	11%	2%	81%	1%	0%	0%
2018	5%	0%	1%	1%	8%	0%	3%	11%	10%	1%	50%	3%	0%	7%
2019	0%	0%	18%	0%	0%	0%	5%	14%	3%	2%	44%	5%	1%	8%
2020	10%	0%	0%	0%	3%	0%	4%	0%	6%	1%	68%	6%	0%	2%
2021	17%	0%	7%	2%	1%	0%	3%	2%	13%	1%	46%	4%	0%	3%
2022	2%	11%	0%	5%	2%	0%	2%	5%	10%	3%	56%	1%	0%	4%

Table 21. Party and charter percent of recreational catch by quarter, 1994-2022 (North Carolina not included). Source: VTR.

Year	Quarter			
	1	2	3	4
1994				
1995	0%	20%	4%	75%
1996	0%	81%	0%	19%
1997	0%	95%	5%	0%
1998	0%	85%	14%	1%
1999	0%	98%	2%	0%
2000	0%	69%	7%	24%
2001	0%	50%	2%	48%
2002	2%	74%	9%	15%
2003	0%	29%	4%	67%
2004	1%	28%	48%	23%
2005	0%	51%	32%	17%
2006	0%	27%	43%	29%
2007	10%	39%	32%	19%
2008	0%	53%	26%	21%
2009	1%	39%	52%	8%
2010	0%	42%	48%	10%
2011	0%	40%	56%	5%
2012	12%	38%	27%	23%
2013	18%	34%	34%	14%
2014	3%	48%	36%	12%
2015	0%	47%	39%	14%
2016	1%	48%	47%	4%
2017	0%	34%	58%	8%
2018	0%	54%	44%	2%
2019	0%	33%	62%	5%
2020	2%	12%	82%	3%
2021	0%	45%	51%	4%
2022	0%	48%	49%	2%

Table 22. Tilefish kept estimates (number of fish) for charter mode, LPS data, 2005-2022.

Year	Golden Tilefish		Blueline Tilefish		Sand Tilefish		Unclassified		All Tilefish (Total)	
	Sum Kept	PSE	Sum Kept	PSE	Sum Kept	PSE	Sum Kept	PSE	Sum Kept	PSE
2005										
2006							27	76.44	27	76.44
2007	298	67.63					211	54.12	509	45.50
2008	7	99.48					449	85.08	455	83.81
2009	504	51.66					241	86.67	745	44.81
2010	4	100.00					398	82.81	402	81.94
2011	1,743	42.97	77	87.56			983	64.09	2,803	35.00
2012	168	48.28	156	68.34	21	98.16	179	74.66	523	36.34
2013	32	58.93	543	60.47			20	73.47	595	55.33
2014	1,554	49.94	785	34.43			135	71.21	2,474	33.44
2015	417	67.95	2,045	31.55	65	87.98	107	57.22	2,635	26.93
2016	722	58.03	3,108	29.07			641	66.02	4,471	24.20
2017	557	33.23	1,540	39.09			1,640	43.09	3,737	25.33
2018	372	51.09	1,856	30.07			782	48.13	3,010	23.24
2019	800	35.86	2,839	26.35			2,207	31.98	5,845	18.26
2020	1,656	36.83	4,431	19.51			2,639	47.83	8,726	18.87
2021	4,351	31.00	10,147	16.29			148	68.75	14,646	14.59
2022	2,097	30.77	8,352	18.81			518	40.86	10,968	15.60
Total	15,282	13.56	35,879	8.18	86	70.95	11,325	17.00	62,573	6.51

Table 23. Tilefish kept estimates (number of fish) for charter mode by state (a-d) and proportions of golden tilefish and blueline tilefish to total of all tilefish kept (e-f), LPS data, 2005-2022.

a. Golden tilefish – number of fish kept

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005									
2006									
2007					96	202			298
2008			7						7
2009			36		468				504
2010								4	4
2011			70		319		1,354		1,743
2012			54		62		49	4	168
2013			16		16				32
2014			152		1,388			15	1,554
2015			66		349			2	417
2016			86		596	40			722
2017			406		144			7	557
2018			113			212		47	372
2019	74		359		31	74	211	51	800
2020			534		707	240	91	85	1,656
2021			1,127		541	2,649	32	1	4,351
2022			661		446	970		19	2,097
Total	74		3,686		5,163	4,387	1,737	235	15,282

b. Blueline tilefish – number of fish kept

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005									
2006									
2007									
2008									
2009									
2010									
2011					62			15	77
2012			146		10				156
2013			220		323				543
2014			575					210	785
2015			1,922		68			55	2,045
2016			2,891		64	32		121	3,108
2017			911		14			615	1,540
2018			749		323	274		510	1,856
2019			1,652		24	481		681	2,839
2020			2,687		226	180		1,338	4,431
2021			6,782		13	1,317		2,035	10,147
2022			7,094			685		574	8,352
Total			25,628		1,128	2,969		6,154	35,879



c. Unclassified tilefish – number of fish kept

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005									
2006			8				19		27
2007			0	14	151			46	211
2008			17		28		395	8	449
2009							241		241
2010			38				351	9	398
2011			3		609	353		17	983
2012			7					172	179
2013			3		16				20
2014			135						135
2015			70					38	107
2016			0		511			130	641
2017			102			332		1,206	1,640
2018			467			131		185	782
2019			1,841		19		119	227	2,207
2020			808				1206	625	2,639
2021						92		56	148
2022			122		175			221	518
Total			3,622	14	1,510	907	2,332	2,940	11,325

d. All tilefish (Total) – number of fish kept

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005									
2006			8				19		27
2007				14	247	202		46	509
2008			24		28		395	8	455
2009			36		468		241		745
2010			38				351	14	402
2011			73		990	353	1,354	32	2,803
2012			206		92		49	175	523
2013			239		355				595
2014			861		1,388			225	2,474
2015			2,058		483			95	2,635
2016			2,977		1,172	72		251	4,471
2017			1,419		158	332		1,828	3,737
2018			1,329		323	617		741	3,010
2019	74		3,852		74	555	330	960	5,845
2020			4,028		933	420	1297	2,048	8,726
2021			7,910		554	4,058	32	2,092	14,646
2022			7,877		622	1,655		814	10,968
Total	74		32,936	14	7,888	8,264	4,069	9,329	62,573

e. Golden tilefish – ratio of golden tilefish kept compared to total of all tilefish kept (values in Table a divided by values in Table d)

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005									
2006			0%				0%		0%
2007				0%	39%	100%		0%	59%
2008			29%		0%		0%	0%	2%
2009			100%		100%		0%		68%
2010			0%				0%	29%	1%
2011			96%		32%	0%	100%	0%	62%
2012			26%		67%		100%	2%	32%
2013			7%		5%				5%
2014			18%		100%			7%	63%
2015			3%		72%			2%	16%
2016			3%		51%	56%		0%	16%
2017			29%		91%	0%		0%	15%
2018			9%		0%	34%		6%	12%
2019	100%		9%		42%	13%	64%	5%	14%
2020			13%		76%	57%	7%	4%	19%
2021			14%		98%	65%	100%	0%	30%
2022			8%		72%	59%		2%	19%
Total	100%		11%	0%	65%	53%	43%	3%	24%

f. Blueline tilefish – ratio of blueline tilefish kept compared to total of all tilefish kept (values in Table b divided by value in Table d)

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005									
2006			0%				0%		0%
2007				0%	0%	0%		0%	0%
2008			0%		0%		0%	0%	0%
2009			0%		0%		0%		0%
2010			0%				0%	0%	0%
2011			0%		6%	0%	0%	47%	3%
2012			71%		11%		0%	0%	30%
2013			92%		91%				91%
2014			67%		0%			93%	32%
2015			93%		14%			58%	78%
2016			97%		5%	44%		48%	70%
2017			64%		9%	0%		34%	41%
2018			56%		100%	44%		69%	62%
2019	0%		43%		32%	87%	0%	71%	49%
2020			67%		24%	43%	0%	65%	51%
2021			86%		2%	32%	0%	97%	69%
2022			90%		0%	41%		71%	76%
Total	0%		78%	0%	14%	36%	0%	66%	57%

Table 24. Golden tilefish catch rate estimates (fish per trip targeting LPS) by mode, LPS data, 2005-2022.

Year	Charter		Private	
	Total Catch Rate	PSE	Total Catch Rate	PSE
2005				
2006				
2007	0.015162	68.87	0.004362	71.05
2008	0.000795	99.96		
2009	0.033924	50.52		
2010	0.004335	69.85	0.005738	80.99
2011	0.126973	37.66	0.042998	41.34
2012	0.01626	49.15	0.034862	44.87
2013	0.003919	46.86	0.018058	47.44
2014	0.115782	41.62	0.019484	39.63
2015	0.033643	46.96	0.01626	53.84
2016	0.044258	42.64	0.00786	51.76
2017	0.078505	32.31	0.051986	37.66
2018	0.06675	43.13	0.043149	27.64
2019	0.093423	25.51	0.056785	39.15
2020	0.137131	31.66	0.060285	26.69
2021	0.261389	22.69	0.063097	26.67
2022	0.198786	23.43	0.078638	26.30

Table 25. Blueline tilefish catch rate estimates (fish per trip targeting LPS) by mode, LPS data, 2005-2022.

Year	Charter		Private	
	Total Catch Rate	PSE	Total Catch Rate	PSE
2005				
2006				
2007				
2008				
2009				
2010				
2011	0.00755	71.16	0.003276	79.10
2012	0.019387	75.50	0.004547	84.96
2013	0.062051	40.89	0.023426	50.36
2014	0.215713	30.52	0.015587	57.80
2015	0.513921	18.13	0.065447	32.23
2016	0.448565	22.71	0.028821	57.58
2017	0.266044	31.84	0.100049	35.81
2018	0.525265	18.85	0.066726	31.43
2019	0.56177	18.47	0.088518	27.29
2020	0.680731	15.81	0.110907	27.22
2021	1.643764	11.91	0.132025	24.64
2022	1.239757	14.90	0.076878	25.08

Table 26. Unclassified tilefish catch rate estimates (fish per trip targeting LPS) by mode, LPS data, 2005-2022.

Year	Charter		Private	
	Total Catch Rate	PSE	Total Catch Rate	PSE
2005			0.00202	99.82
2006	0.011029	74.94	0.001551	99.88
2007	0.020435	62.39	0.012292	49.86
2008	0.027822	60.46	0.017999	55.31
2009	0.019275	82.57	0.018489	42.95
2010	0.062139	72.00	0.02459	55.64
2011	0.063143	60.40	0.028665	42.04
2012	0.036898	72.73	0.00341	89.65
2013	0.001306	70.46	0.012689	61.22
2014	0.031702	70.48	0.019971	86.36
2015	0.041763	49.59	0.022358	46.63
2016	0.136364	34.80	0.021834	61.21
2017	0.190031	33.26	0.031878	43.32
2018	0.140362	38.06	0.030694	47.44
2019	0.315304	25.02	0.014614	45.51
2020	0.315049	34.96	0.02485	45.27
2021	0.020164	56.64		
2022	0.152504	36.34	0.009977	55.88

Table 27. All tilefish catch rate estimates (fish per trip targeting LPS) by mode, LPS data, 2005-2022.

Year	Charter		Private	
	Total Catch Rate	PSE	Total Catch Rate	PSE
2005			0.00202	99.82
2006	0.011029	74.94	0.001551	99.88
2007	0.035597	46.24	0.016653	41.10
2008	0.028617	58.85	0.017999	55.31
2009	0.0532	43.98	0.018489	42.95
2010	0.066474	67.42	0.030328	47.47
2011	0.197666	31.07	0.074939	29.11
2012	0.073796	46.18	0.042819	38.87
2013	0.067276	38.75	0.054173	31.22
2014	0.363198	24.12	0.055041	38.19
2015	0.595128	16.56	0.104065	24.59
2016	0.629187	18.55	0.058515	37.70
2017	0.534579	21.08	0.183914	24.05
2018	0.732377	15.89	0.140569	20.41
2019	0.970498	13.88	0.159916	20.69
2020	1.132911	13.88	0.196042	19.08
2021	1.925317	11.06	0.195122	20.37
2022	1.591047	12.79	0.165493	18.07

Table 28. The annual proportion of LPIS intercepts with an HMS permit that caught golden tilefish by mode.

Year	Boat Type	HMS Permitted Intercepts	Proportion of HMS Intercepts With Catch	Variance of Proportion	PSE of Proportion	No. of Intercepts with Tilefish Catch
2005	CHARTER	1,366	0.000000	0.000000		
2006	CHARTER	1,074	0.000000	0.000000		
2007	CHARTER	1,494	0.002677	0.000002	49.86%	4
2008	CHARTER	1,243	0.000805	0.000001	99.96%	1
2009	CHARTER	1,260	0.006349	0.000006	37.14%	8
2010	CHARTER	1,328	0.001506	0.000001	69.83%	2
2011	CHARTER	1,416	0.009181	0.000007	29.17%	13
2012	CHARTER	1,576	0.003807	0.000002	40.19%	6
2013	CHARTER	1,520	0.003289	0.000002	44.46%	5
2014	CHARTER	1,415	0.009187	0.000006	27.22%	13
2015	CHARTER	1,684	0.007720	0.000004	26.60%	13
2016	CHARTER	1,598	0.006258	0.000004	31.34%	10
2017	CHARTER	1,508	0.012599	0.000008	22.57%	19
2018	CHARTER	1,535	0.009121	0.000006	27.95%	14
2019	CHARTER	1,567	0.017869	0.000011	18.39%	28
2020	CHARTER	1,406	0.016358	0.000014	22.62%	23
2021	CHARTER	1,292	0.032508	0.000023	14.73%	42
2022	CHARTER	1,299	0.021555	0.000015	17.69%	28
2005	PRIVATE	1,841	0.000000	0.000000		
2006	PRIVATE	1,786	0.000000	0.000000		
2007	PRIVATE	2,317	0.000863	0.000000	70.78%	2
2008	PRIVATE	2,248	0.000000	0.000000		
2009	PRIVATE	2,409	0.000000	0.000000		
2010	PRIVATE	2,307	0.000867	0.000000	70.39%	2
2011	PRIVATE	2,354	0.004248	0.000002	33.27%	10
2012	PRIVATE	2,481	0.003628	0.000001	31.87%	9
2013	PRIVATE	1,967	0.004067	0.000002	34.83%	8
2014	PRIVATE	1,958	0.003575	0.000002	37.19%	7
2015	PRIVATE	2,360	0.004661	0.000003	37.23%	11
2016	PRIVATE	2,156	0.002319	0.000001	43.88%	5
2017	PRIVATE	1,937	0.006711	0.000003	26.96%	13
2018	PRIVATE	2,114	0.008042	0.000004	23.97%	17
2019	PRIVATE	2,279	0.009653	0.000008	28.53%	22
2020	PRIVATE	2,062	0.012609	0.000005	18.19%	26
2021	PRIVATE	1,792	0.014509	0.000010	21.31%	26
2022	PRIVATE	1,599	0.015635	0.000009	19.47%	25

Table 29. The annual proportion of LPIS intercepts with an HMS permit that caught blueline tilefish by mode.

Year	Boat Type	HMS Permitted Intercepts	Proportion of HMS Intercepts With Catch	Variance of Proportion	PSE of Proportion	No. of Intercepts with Tilefish Catch
2005	CHARTER	1,366	0.000000	0.000000		
2006	CHARTER	1,074	0.000000	0.000000		
2007	CHARTER	1,494	0.000000	0.000000		
2008	CHARTER	1,243	0.000000	0.000000		
2009	CHARTER	1,260	0.000000	0.000000		
2010	CHARTER	1,328	0.000000	0.000000		
2011	CHARTER	1,416	0.001412	0.000001	70.88%	2
2012	CHARTER	1,576	0.001904	0.000001	57.33%	3
2013	CHARTER	1,520	0.005263	0.000003	34.25%	8
2014	CHARTER	1,415	0.014134	0.000013	25.46%	20
2015	CHARTER	1,684	0.026128	0.000014	14.21%	44
2016	CHARTER	1,598	0.021902	0.000016	18.33%	35
2017	CHARTER	1,508	0.017241	0.000014	21.90%	26
2018	CHARTER	1,535	0.024756	0.000018	16.92%	38
2019	CHARTER	1,567	0.029355	0.000020	15.42%	46
2020	CHARTER	1,406	0.036984	0.000026	13.75%	52
2021	CHARTER	1,292	0.082043	0.000072	10.35%	106
2022	CHARTER	1,299	0.056197	0.000060	13.84%	73
2005	PRIVATE	1,841	0.000000	0.000000		
2006	PRIVATE	1,786	0.000000	0.000000		
2007	PRIVATE	2,317	0.000000	0.000000		
2008	PRIVATE	2,248	0.000000	0.000000		
2009	PRIVATE	2,409	0.000000	0.000000		
2010	PRIVATE	2,307	0.000000	0.000000		
2011	PRIVATE	2,354	0.000850	0.000000	70.77%	2
2012	PRIVATE	2,481	0.000806	0.000000	70.72%	2
2013	PRIVATE	1,967	0.003050	0.000002	40.27%	6
2014	PRIVATE	1,958	0.001532	0.000001	57.54%	3
2015	PRIVATE	2,360	0.005932	0.000003	27.87%	14
2016	PRIVATE	2,156	0.002319	0.000001	44.12%	5
2017	PRIVATE	1,937	0.005679	0.000003	29.44%	11
2018	PRIVATE	2,114	0.006623	0.000003	26.49%	14
2019	PRIVATE	2,279	0.009653	0.000004	21.49%	22
2020	PRIVATE	2,062	0.009214	0.000005	23.29%	19
2021	PRIVATE	1,792	0.016741	0.000012	20.67%	30
2022	PRIVATE	1,599	0.010006	0.000005	23.29%	16

Table 30. The annual proportion of LPIS intercepts with an HMS permit that caught unclassified tilefish by mode.

Year	Boat Type	HMS Permitted Intercepts	Proportion of HMS Intercepts With Catch	Variance of Proportion	PSE of Proportion	No. of Intercepts with Tilefish Catch
2005	CHARTER	1,366	0.000000	0.000000		
2006	CHARTER	1,074	0.001862	0.000002	71.09%	2
2007	CHARTER	1,494	0.002677	0.000002	49.64%	4
2008	CHARTER	1,243	0.004827	0.000004	40.57%	6
2009	CHARTER	1,260	0.001587	0.000001	70.74%	2
2010	CHARTER	1,328	0.004518	0.000003	40.96%	6
2011	CHARTER	1,416	0.003531	0.000002	44.65%	5
2012	CHARTER	1,576	0.001904	0.000001	57.76%	3
2013	CHARTER	1,520	0.001316	0.000001	70.48%	2
2014	CHARTER	1,415	0.001413	0.000001	70.38%	2
2015	CHARTER	1,684	0.003563	0.000002	40.73%	6
2016	CHARTER	1,598	0.007509	0.000004	28.16%	12
2017	CHARTER	1,508	0.009284	0.000007	27.63%	14
2018	CHARTER	1,535	0.007166	0.000005	32.19%	11
2019	CHARTER	1,567	0.017869	0.000016	22.71%	28
2020	CHARTER	1,406	0.009957	0.000009	29.89%	14
2021	CHARTER	1,292	0.003096	0.000002	49.62%	4
2022	CHARTER	1,299	0.007698	0.000006	30.96%	10
2005	PRIVATE	1,841	0.000543	0.000000	99.91%	1
2006	PRIVATE	1,786	0.000560	0.000000	99.84%	1
2007	PRIVATE	2,317	0.002158	0.000001	44.22%	5
2008	PRIVATE	2,248	0.002224	0.000001	44.23%	5
2009	PRIVATE	2,409	0.003321	0.000001	34.84%	8
2010	PRIVATE	2,307	0.003468	0.000002	38.92%	8
2011	PRIVATE	2,354	0.003823	0.000002	33.22%	9
2012	PRIVATE	2,481	0.000806	0.000000	70.62%	2
2013	PRIVATE	1,967	0.003050	0.000002	40.29%	6
2014	PRIVATE	1,958	0.001021	0.000001	70.31%	2
2015	PRIVATE	2,360	0.003814	0.000002	36.89%	9
2016	PRIVATE	2,156	0.002319	0.000001	44.08%	5
2017	PRIVATE	1,937	0.003614	0.000002	37.12%	7
2018	PRIVATE	2,114	0.003784	0.000002	38.43%	8
2019	PRIVATE	2,279	0.002633	0.000001	40.18%	6
2020	PRIVATE	2,062	0.004365	0.000003	36.61%	9
2021	PRIVATE	1,792	0.000000	0.000000		
2022	PRIVATE	1,599	0.002502	0.000002	49.42%	4

Table 31. The annual proportion of LPIS intercepts with an HMS permit that caught All tilefish by mode.

Year	Boat Type	HMS Permitted Intercepts	Proportion of HMS Intercepts With Catch	Variance of Proportion	PSE of Proportion	No. of Intercepts with Tilefish Catch
2005	CHARTER	1,366	0.000000	0.000000	.	
2006	CHARTER	1,074	0.001862	0.000002	71.09%	2
2007	CHARTER	1,494	0.005355	0.000003	34.81%	8
2008	CHARTER	1,243	0.005632	0.000004	37.57%	7
2009	CHARTER	1,260	0.007937	0.000007	32.90%	10
2010	CHARTER	1,328	0.006024	0.000004	35.12%	8
2011	CHARTER	1,416	0.013418	0.000010	23.57%	19
2012	CHARTER	1,576	0.005711	0.000004	32.78%	9
2013	CHARTER	1,520	0.008553	0.000005	26.20%	13
2014	CHARTER	1,415	0.021908	0.000019	20.06%	31
2015	CHARTER	1,684	0.033848	0.000021	13.40%	57
2016	CHARTER	1,598	0.030663	0.000021	15.07%	49
2017	CHARTER	1,508	0.031830	0.000023	14.99%	48
2018	CHARTER	1,535	0.035831	0.000025	14.05%	55
2019	CHARTER	1,567	0.054882	0.000039	11.42%	86
2020	CHARTER	1,406	0.054054	0.000038	11.41%	76
2021	CHARTER	1,292	0.095201	0.000081	9.44%	123
2022	CHARTER	1,299	0.072363	0.000070	11.55%	94
2005	PRIVATE	1,841	0.000543	0.000000	99.91%	1
2006	PRIVATE	1,786	0.000560	0.000000	99.84%	1
2007	PRIVATE	2,317	0.003021	0.000001	36.95%	7
2008	PRIVATE	2,248	0.002224	0.000001	44.23%	5
2009	PRIVATE	2,409	0.003321	0.000001	34.84%	8
2010	PRIVATE	2,307	0.004335	0.000002	33.99%	10
2011	PRIVATE	2,354	0.008071	0.000004	23.36%	19
2012	PRIVATE	2,481	0.004434	0.000002	29.03%	11
2013	PRIVATE	1,967	0.008134	0.000004	24.15%	16
2014	PRIVATE	1,958	0.005618	0.000003	29.34%	11
2015	PRIVATE	2,360	0.013136	0.000007	19.77%	31
2016	PRIVATE	2,156	0.006030	0.000003	27.08%	13
2017	PRIVATE	1,937	0.013939	0.000007	18.89%	27
2018	PRIVATE	2,114	0.015610	0.000007	17.28%	33
2019	PRIVATE	2,279	0.019307	0.000012	17.77%	44
2020	PRIVATE	2,062	0.022308	0.000011	14.56%	46
2021	PRIVATE	1,792	0.025670	0.000020	17.24%	46
2022	PRIVATE	1,599	0.024390	0.000014	15.21%	39



Table 32. Tilefish discards (number of fish) by mode, LPS data, 2005-2022 combined.

	Charter mode	Private mode	Total
Golden Tilefish		47	47
Blueline Tilefish	88	94	182
Sand Tilefish			0
Unclassified	8	72	81
Total	96	213	309

Table 33. Charter mode adjusted number of golden tilefish kept accounting for a proportion of unclassified fish apportioned to golden tilefish (under methods 1 and 2 described in section 1.3.1.1).

Method 1.

Year	Sum Kept
2005	
2006	7
2007	422
2008	14
2009	667
2010	9
2011	2,354
2012	227
2013	33
2014	1,639
2015	435
2016	826
2017	801
2018	468
2019	1,102
2020	2,157
2021	4,395
2022	2,196
Total	17,752

Method 2.

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005									
2006			1				11		12
2007				3	155	202		14	374
2008			12		5		227	2	246
2009			36		468		138		642
2010			4				201	7	212
2011			73		515	39	1,354	6	1,986
2012			55		62		49	7	173
2013			17		17				33
2014			175		1,388			15	1,578
2015			68		349			3	420
2016			86		856	40		41	1,023
2017			435		144	36		12	627
2018			152			257		58	468
2019	74		531		39	74	287	64	1,068
2020			641		707	240	176	111	1,874
2021			1,127		541	2,709	32	1	4,411
2022			671		572	970		25	2,238
Total	74		4,085	3	5,819	4,567	2,474	365	17,387

Table 34. Tilefish kept estimates (number of fish) for private mode, LPS data, 2005-2022.

Year	Golden Tilefish		Blueline Tilefish		Sand Tilefish		Unclassified		All Tilefish (Total)	
	Sum Kept	PSE	Sum Kept	PSE	Sum Kept	PSE	Sum Kept	PSE	Sum Kept	PSE
2005							209	71.23	209	71.23
2006							47	94.06	47	94.06
2007	288	70.19					552	52.21	840	41.90
2008							568	54.84	568	54.84
2009							971	51.52	971	51.52
2010	70	59.43					650	51.14	721	46.51
2011	1,346	42.77	78	79.50			697	37.72	2,121	29.98
2012	1,821	54.77	122	93.26			111	102.88	2,054	49.19
2013	315	47.19	349	52.29			390	47.30	1,054	28.37
2014	571	46.98	283	58.37			320	80.58	1,174	34.68
2015	294	51.22	1,312	36.70			1,622	50.84	3,228	29.95
2016	242	71.23	435	61.87			827	69.79	1,505	43.86
2017	2,121	42.22	2,322	38.67			893	40.45	5,336	24.71
2018	1,440	29.68	2,580	60.06			1,079	41.69	5,099	32.73
2019	2,357	32.46	2,335	27.59			247	52.00	4,939	20.42
2020	2,808	28.82	3,342	28.08			1,108	61.88	7,258	19.51
2021	3,095	34.86	3,568	27.04					6,663	21.72
2022	3,409	29.99	2,309	25.26			552	83.18	6,270	20.15
Total	20,177	12.09	19,036	13.03			10,842	15.41	50,055	7.71

Table 35. Tilefish kept estimates (number of fish) for private mode by state (a-d) and proportions of golden tilefish and blueline tilefish to total of all tilefish kept (e-f), LPS data, 2005-2022.

a. Golden tilefish – number of fish kept

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005									
2006									
2007					177		112		288
2008									
2009									
2010			70						70
2011			238		1,055		53		1,346
2012			295		1,527				1,821
2013			274		34			6	315
2014			220		327			24	571
2015			259			31		5	294
2016			86		157				242
2017			382		1,676			63	2,121
2018			350		498	150	246	197	1,440
2019			1,213		371	695		78	2,357
2020			1,416		373	594	379	45	2,808
2021			782		454	1,459	149	251	3,095
2022			858		480	412	1,434	225	3,409
Total			6,441		7,129	3,340	2,374	894	20,177

b. Blueline tilefish – number of fish kept

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005									
2006									
2007									
2008									
2009									
2010									
2011			59					20	78
2012			115					8	122
2013			201					148	349
2014			174					108	283
2015			1,013					299	1,312
2016			83					352	435
2017			534		758			1,030	2,322
2018			204		50	1,574		751	2,580
2019			699			940		696	2,335
2020			1,948			434		960	3,342
2021			2,383			115	159	912	3,568
2022			1,563			361		385	2,309
Total			8,976		808	3,424	159	5,669	19,036

c. Unclassified tilefish – number of fish kept

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005					209				209
2006							47		47
2007	137					293	45	78	552
2008			120		208			240	568
2009			184				745	41	971
2010			423			172	25	31	650
2011			334		13		349		697
2012			9			102			111
2013			34		152	46	50	108	390
2014			320						320
2015					57	965	578	23	1,622
2016			33			139	544	112	827
2017			398			134	146	215	893
2018			270			679		129	1,079
2019	37		125					85	247
2020			81		23		799	206	1,108
2021									
2022					472			80	552
Total	173		2,330		1,134	2,529	3,327	1,348	10,842

d. All tilefish (Total) – number of fish kept

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005					209				209
2006							47		47
2007	137				177	293	157	78	840
2008			120		208			240	568
2009			184				745	41	971
2010			493			172	25	31	721
2011			631		1,068		403	20	2,121
2012			418		1,527	102		8	2,054
2013			510		186	46	50	262	1,054
2014			714		327			133	1,174
2015			1,272		57	995	578	326	3,228
2016			202		157	139	544	463	1,505
2017			1,314		2,434	134	146	1,308	5,336
2018			824		548	2,403	246	1,078	5,099
2019	37		2,037		371	1,635		859	4,939
2020			3,445		395	1,028	1,178	1,211	7,258
2021			3,165		454	1,573	308	1,163	6,663
2022			2,420		953	773	1,434	690	6,270
Total	173		17,747		9,071	9,294	5,859	7,911	50,055

e. Golden tilefish – ratio of golden tilefish kept compared to total of all tilefish kept (values in Table a divided by values in Table d)

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005					0%				0%
2006							0%		0%
2007	0%				100%	0%	71%	0%	34%
2008			0%		0%			0%	0%
2009			0%				0%	0%	0%
2010			14%			0%	0%	0%	10%
2011			38%		99%		13%	0%	63%
2012			71%		100%	0%		0%	89%
2013			54%		18%	0%	0%	2%	30%
2014			31%		100%			18%	49%
2015			20%		0%	3%	0%	2%	9%
2016			43%		100%	0%	0%	0%	16%
2017			29%		69%	0%	0%	5%	40%
2018			42%		91%	6%	100%	18%	28%
2019	0%		60%		100%	43%		9%	48%
2020			41%		94%	58%	32%	4%	39%
2021			25%		100%	93%	48%	22%	46%
2022			35%		50%	53%	100%	33%	54%
Total	0%		36%		79%	36%	41%	11%	40%

f. Blueline tilefish – ratio of blueline tilefish kept compared to total of all tilefish kept (values in Table b divided by value in Table d)

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005					0%				0%
2006							0%		0%
2007	0%				0%	0%	0%	0%	0%
2008			0%		0%			0%	0%
2009			0%				0%	0%	0%
2010			0%			0%	0%	0%	0%
2011			9%		0%		0%	100%	4%
2012			28%		0%	0%		100%	6%
2013			39%		0%	0%	0%	56%	33%
2014			24%		0%			81%	24%
2015			80%		0%	0%	0%	92%	41%
2016			41%		0%	0%	0%	76%	29%
2017			41%		31%	0%	0%	79%	44%
2018			25%		9%	66%	0%	70%	51%
2019	0%		34%		0%	57%		81%	47%
2020			57%		0%	42%	0%	79%	46%
2021			75%		0%	7%	52%	78%	54%
2022			65%		0%	47%	0%	56%	37%
Total	0%		51%		9%	37%	3%	72%	38%

Table 36. Private mode adjusted number of golden tilefish kept accounting for a proportion of unclassified fish apportioned to golden tilefish (under methods 1 and 2 described in section 1.3.1.1).

Method 1.

Year	Sum Kept
2005	84
2006	19
2007	478
2008	229
2009	391
2010	134
2011	1,788
2012	1,919
2013	431
2014	727
2015	442
2016	376
2017	2,475
2018	1,745
2019	2,474
2020	3,237
2021	3,095
2022	3,709
Total	23,753

Method 2.

Year	CT/RI	MA	MD/DE	NH/ME	NJ(N)	NJ(S)	NY	VA	Total
2005					26				26
2006							27		27
2007	137				177	80	144	13	550
2008			16		26			41	83
2009			24				423	7	454
2010			131			47	14	5	197
2011			363		1,067		100		1,531
2012			301		1,527	28			1,855
2013			293		63	13	28	9	405
2014			318		327			24	669
2015			259		7	60	328	5	659
2016			100		157	38	309	19	622
2017			497		1,676	36	83	73	2,366
2018			464		498	192	246	220	1,621
2019	37		1,287		371	695		86	2,476
2020			1,450		394	594	636	53	3,127
2021			782		454	1,459	149	251	3,095
2022			858		719	412	1,434	251	3,673
Total	173		7,142		7,489	3,653	3,921	1,058	23,435

Table 37. Recreational catch estimates in the Middle Atlantic -Southern New England region, 1973-1982. Source: Turner 1986.

Year	mt
1973	75
1974	100
1975	60
1976	50
1977	25
1978	5
1979	5
1980	3
1981	3
1982	3



Table 38. Recreational catch time series, 1971-2022.

Year	mt	Number of fish*	Basics	Year	mt	Number of fish*	Basics
1971	3		Assumed “minimum” value for the 1973-1982 period (below).	1997	3		Assumed “minimum” 3 mt value. VTR party/charter estimates (Table 15) not used due to potential issues with reporting rates discussed in section 1.2.1.1.
1972	39		Assumed ramp up value. Mid-point between assumed 3 mt (1971) and 75 mt (1973).	1998	3		
1973	75		Catch estimates developed by Turner (1986).	1999	3		
1974	100			2000	3		
1975	60			2001	3		
1976	50			2002	3		
1977	25			2003	3		
1978	5			2004	3		
1979	5			2005	3		
1980	3			2006	3		
1981	3			2007	5	1,685	
1982	3			2008	3	1,183	
1983	3		2009	3	1,905		
1984	3		2010	4	2,063		
1985	3		2011	11	4,469		
1986	3		2012	21	8,279	Number of fish was calculated by summing the number of fish caught in the party/charter VTR (Table 15) plus number of fish kept in the private mode estimated in the LPS (Table 36, Method 2). VTR private estimates not used due to potential issues with reporting rates discussed in section 1.2.2.2. Metric tons were calculated by multiplying the	
			Assumed “minimum” value estimated by Turner (1986) in the early 1980s when the fishery steadily decreased to minimum values in the 1973-1982 period.				

1987	3			2013	18	6,965	number of fish by the assumed commercial mean weights at age (see Table 39 for details).
1988	3			2014	17	7,627	
1989	3			2015	23	9,204	
1990	3			2016	14	6,541	
1991	3			2017	16	9,380	
1992	3			2018	16	8,731	
1993	3			2019	17	7,900	
1994	3		Assumed "minimum" 3 mt value. VTR party/charter estimates (Table 15) not used due to processing errors discussed in section 2.2.1.1.	2020	15	6,593	
1995	3			2021	22	10,064	
1996	3			2022	22	9,454	

\*See Table 39 for additional details on the number of fish calculations.

Table 39. Recreational catch by mode used to derive the number of fish and mt for years 2007-2022 in Table 38 (shaded area).

Year	mt (rounded)	VTR #s		LPS #s by state	No. fish Total	mt	Commercial mean wt (kg)
		Party	Charter	Private			
1996	3 minimum	81					
1997	3 minimum	380	20				
1998	3 minimum	120	21				
1999	3 minimum	91					
2000	3 minimum	145	2				
2001	3 minimum	219	3				0.858
2002	3 minimum	853	9				1.220
2003	3 minimum	431	563				1.589
2004	3 minimum	603	287				2.011
2005	3 minimum	370	178	26	574	1.46	2.546
2006	3 minimum	301	177	27	505	1.64	3.239
2007	5	875	260	550	1,685	5.02	2.980
2008	3	904	196	83	1,183	2.64	2.233
2009	3	1,301	150	454	1,905	3.29	1.725
2010	4	1,712	154	197	2,063	4.02	1.948
2011	11	2,472	466	1531	4,469	10.77	2.410
2012	21	5,793	631	1855	8,279	21.05	2.542
2013	18	6,210	350	405	6,965	17.54	2.518
2014	17	5,600	1,358	669	7,627	16.74	2.195
2015	23	7,656	889	659	9,204	22.84	2.482
2016	14	5,420	499	622	6,541	13.60	2.079
2017	16	6,679	335	2366	9,380	15.81	1.686
2018	16	3,822	3,288	1621	8,731	15.98	1.830
2019	17	4,543	881	2476	7,900	17.25	2.184
2020	15	2,876	590	3127	6,593	14.81	2.247
2021	22	5,763	1,206	3095	10,064	21.54	2.140
2022	22	4,371	1,410	3673	9,454	22.24	2.352

Table 40. Estimated proportion of recreational and commercial landings assuming recreational time series in Table 37, 2005-2022.

Year	Recreational	Commercial
2005	0.4%	99.6%
2006	0.3%	99.7%
2007	0.7%	99.3%
2008	0.4%	99.6%
2009	0.4%	99.6%
2010	0.4%	99.6%
2011	1.2%	98.8%
2012	2.5%	97.5%
2013	2.0%	98.0%
2014	2.0%	98.0%
2015	3.7%	96.3%
2016	2.7%	97.3%
2017	2.2%	97.8%
2018	2.1%	97.9%
2019	2.4%	97.6%
2020	2.3%	97.7%
2021	2.9%	97.1%
2022	3.2%	96.8%

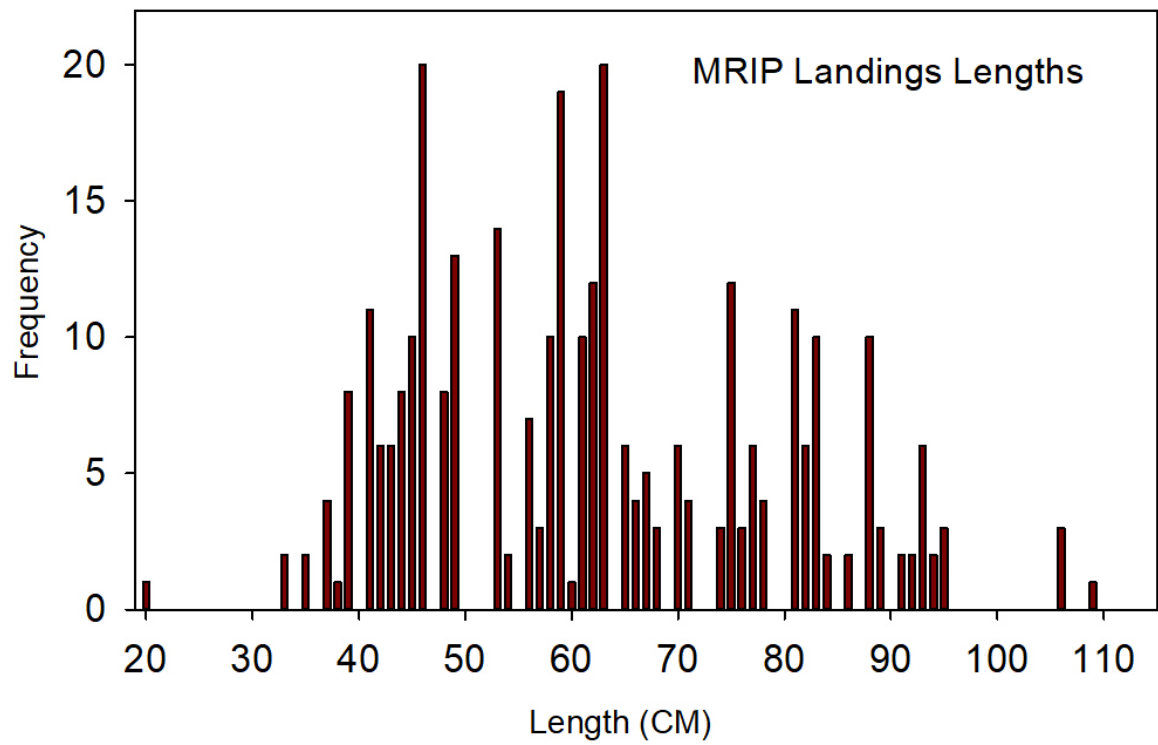


Figure 1. Frequency distribution of 317 lengths collected by MRIP from 1981-2022.

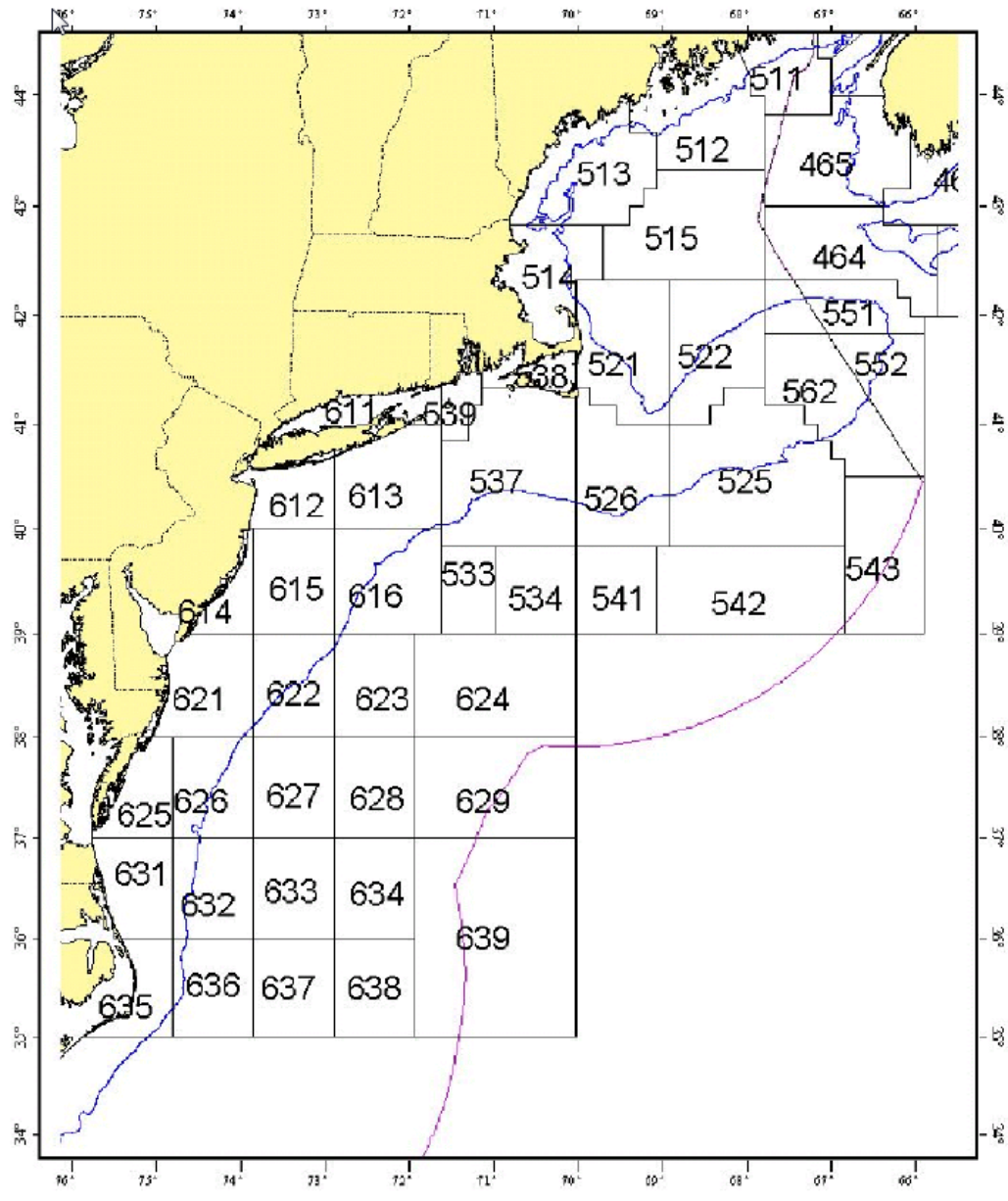


Figure 2. NMFS Statistical Areas.

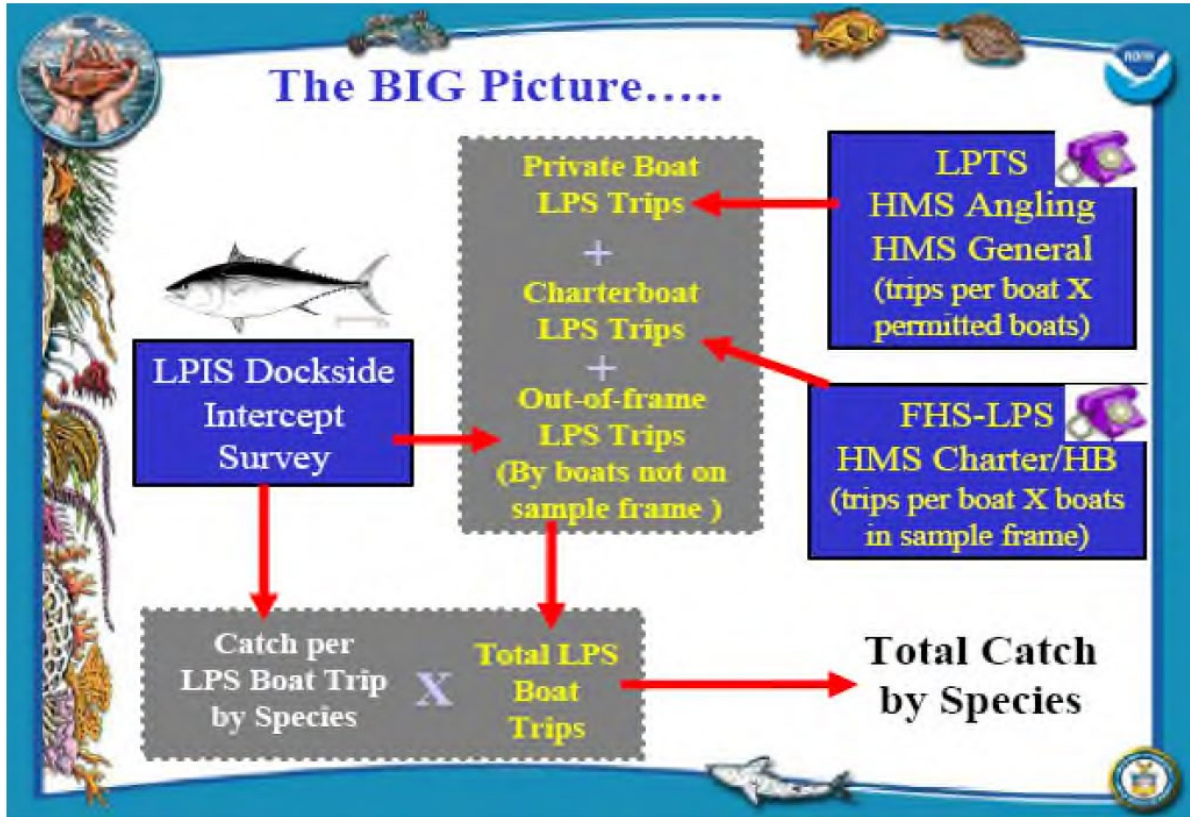


Figure 3. "Big Picture" graphical representation of the Large Pelagics Survey design to estimate total catch by species. Source: [2023 LPIS Procedures Manual](#).

The size of the recreational catches in almost all years had to be estimated. Peak catches were assumed to have occurred in 1974. B. L. Freeman (unpublished data) estimated catch rates for party boats in 1970-1971 at about 1 t per trip. This catch rate was assumed for 1974 and 100 trips for the year was assumed (10 vessels fishing 5 trips each in the spring and fall) (Table 17). The 1973 catch was assumed to be 75 tons and 1975-1977 catches were steadily decreased to the 5 t suggested by Grimes et al. (1980) for 1978. The same amount was used for the 1979 estimate, and annual catches of 3 t were assumed for 1980-1982.

Figure 4. "Excerpt" recreational catch estimates in the Middle Atlantic-Southern New England region, 1973-1982. Source: Turner 1986.