



Black Sea Bass Fishery Information Document June 2024

This document provides an overview of the biology, stock condition, management system, and fishery performance for black sea bass (*Centropristis striata*), with an emphasis on 2023. Data sources include unpublished National Marine Fisheries Service (NMFS) Catch Accounting and Monitoring System (CAMS) data,¹ permit data, Northeast Fisheries Observer Program data, Marine Recreational Information Program (MRIP) data,² and stock assessment information. All 2023 data should be considered preliminary. Due to adjustments and corrections to the data over time, some values may differ from those used in previous years and from the values used for final catch accounting.

More information on black sea bass management, including previous Fishery Information Documents, is available at <http://www.mafmc.org/sf-s-bsb>.

Key Facts

- Black sea bass are not overfished and overfishing is not occurring, according to the draft 2024 management track stock assessment. Spawning stock biomass in 2023 was estimated to be about 2.19 times the target level and fishing mortality was 23% below the threshold level.
- In 2023, about 4.67 million pounds of black sea bass were landed in the commercial fishery, a 13% decrease compared to 2022.
- Commercial fish dealers paid an average of \$2.66 per pound of black sea bass in 2023.
- Recreational anglers harvested an estimated 7.49 million pounds of black sea bass in 2023, an 8% decrease from 2022.
- Anglers fishing from private/rental boats accounted for 90% of recreational black sea bass harvest in numbers of fish in 2023.

Basic Biology

Black sea bass are distributed from the Gulf of Maine through the Gulf of Mexico. Genetic studies have identified three stocks within that region. This document focuses on the stock from the Gulf of Maine through Cape Hatteras, North Carolina.

¹ CAMS includes commercial dealer data, including federal and state permitted dealers, as well as federal VTR data and expanded estimates of commercial dead discards. More information on CAMS is available at <https://www.greateratlantic.fisheries.noaa.gov/ro/fso/reports/cams/index.html>.

² In July 2018, MRIP released revisions to their time series of recreational catch and landings estimates based on adjustments for a revised angler intercept methodology and a new effort estimation methodology (i.e., a transition from a telephone-based effort survey to a mail-based effort survey). The revised estimates of catch and landings are higher than the previous estimates for shore and private boat modes. The recreational estimates in this document reflect revised MRIP estimates except where otherwise noted.

Adult and juvenile black sea bass are mostly found on the continental shelf. Young of the year (i.e., fish less than one year old) can be found in estuaries. Adults show strong site fidelity during the summer and prefer to be near structures such as rocky reefs, coral patches, cobble and rock fields, mussel beds, and shipwrecks. Black sea bass migrate to offshore wintering areas starting in the fall. During the winter, young of the year are distributed across the shelf and adults and juveniles are found near the shelf edge. During the fall, adults and juveniles off New York and north move offshore and travel along the shelf edge to as far south as Virginia. Most return to northern inshore areas by May. Black sea bass off New Jersey to Maryland travel southeast to the shelf edge during the late fall. Black sea bass off Virginia and Maryland travel a shorter distance due east to the shelf edge, which is closer to shore than in areas to the north (Drohan et al. 2007, NEFSC 2017).

Black sea bass are protogynous hermaphrodites, meaning they are born female and some later transition to males, usually around 2-5 years of age. About 25% of 15 cm (about 6 inches) black sea bass are males, with increasing proportions of males at larger sizes until about 50 cm, when about 70-80% of black sea bass are male. Male black sea bass are either of the dominant or subordinate type. Dominant males are larger than subordinate males and develop a bright blue nuchal hump during the spawning season. Results from a simulation model highlight the importance of subordinate males in spawning success. This increases the resiliency of the population to exploitation compared to other species with a more typical protogynous life history. About half of black sea bass are sexually mature by 2 years of age and 21 cm (about 8 inches) in length. Black sea bass reach a maximum size of about 60 cm (about 24 inches) and a maximum age of about 12 years (Blaylock and Shepherd 2016, NEFSC 2017).

Black sea bass in the Mid-Atlantic spawn in nearshore continental shelf areas at depths of 20-50 meters. Spawning usually takes place between April and October. During the summer, adult black sea bass share habitats with tautog, hakes, conger eel, sea robins and other migratory fish species. Essential fish habitat for black sea bass includes pelagic waters, structured habitat, rough bottom, shellfish, sand, and shell, from the Gulf of Maine through Cape Hatteras, North Carolina. Juveniles and adults mostly feed on crustaceans, small fish, and squid. The Northeast Fisheries Science Center (NEFSC) food habits database lists spiny dogfish, Atlantic angel shark, skates, spotted hake, summer flounder, windowpane flounder, and monkfish as predators of black sea bass (Drohan et al. 2007).

Status of the Stock

A management track stock assessment for black sea bass was peer reviewed in June 2024. According to the draft 2024 management track assessment report (NEFSC 2024), the black sea bass stock was not overfished and overfishing was not occurring in 2023 (Table 1). Spawning stock biomass in 2023 was estimated at about 2.19 times the target level (Figure 1). Fishing mortality in 2023 was estimated to be 23% below the threshold level that defines overfishing (Figure 2).

Recruitment (i.e., the number of age 1 fish) has fluctuated over time. The estimated number of age 1 fish in 2023 is higher than the prior several years (Figure 3).

Table 1: Black sea bass biological reference points from the draft 2024 management track stock assessment report (NEFSC 2024).

	Spawning stock biomass	Fishing mortality rate (F)
Target	24.75 mil lb (11,225 mt)	N/A
Threshold	12.38 mil lb (5,613 mt)	1.071
Terminal year estimate (2023)	54.17 mil lb (24,572 mt) 2.19 times target level	0.82 23% below threshold level
Status	Not overfished	Overfishing not occurring

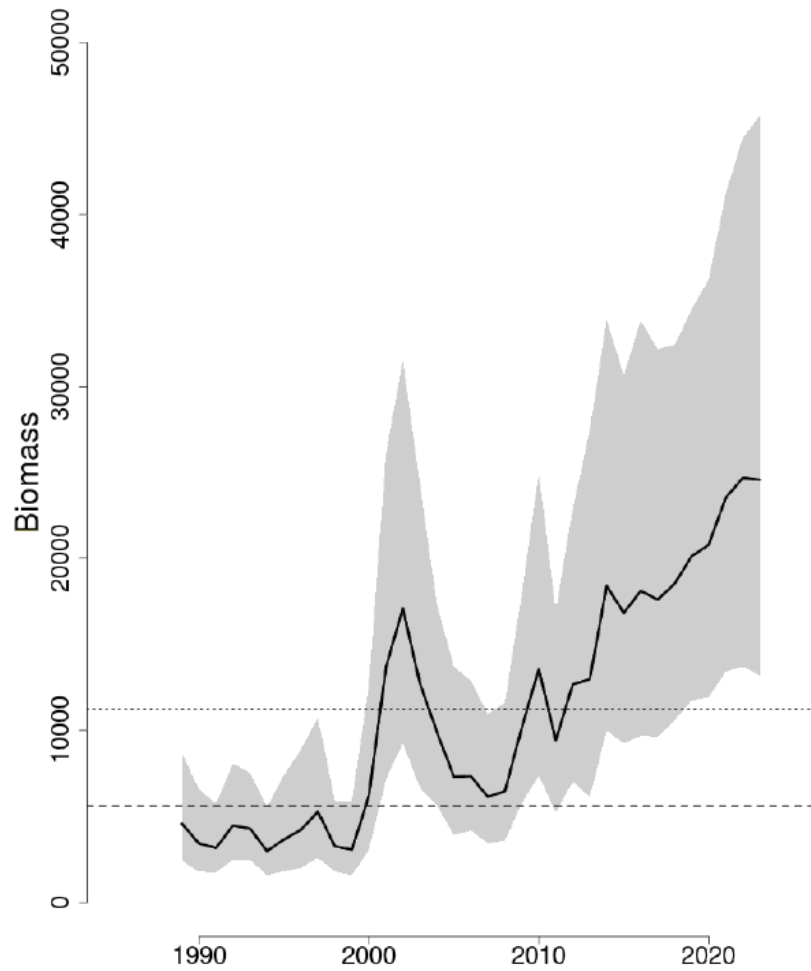


Figure 1: Black sea bass spawning stock biomass, 1989-2023 based on the draft 2024 management track stock assessment (NEFSC 2024). The gray shading represents 95% confidence intervals. The horizontal dotted line is the updated biomass target and the horizontal dashed line is the updated biomass threshold. When biomass is above the threshold, the stock is not overfished.

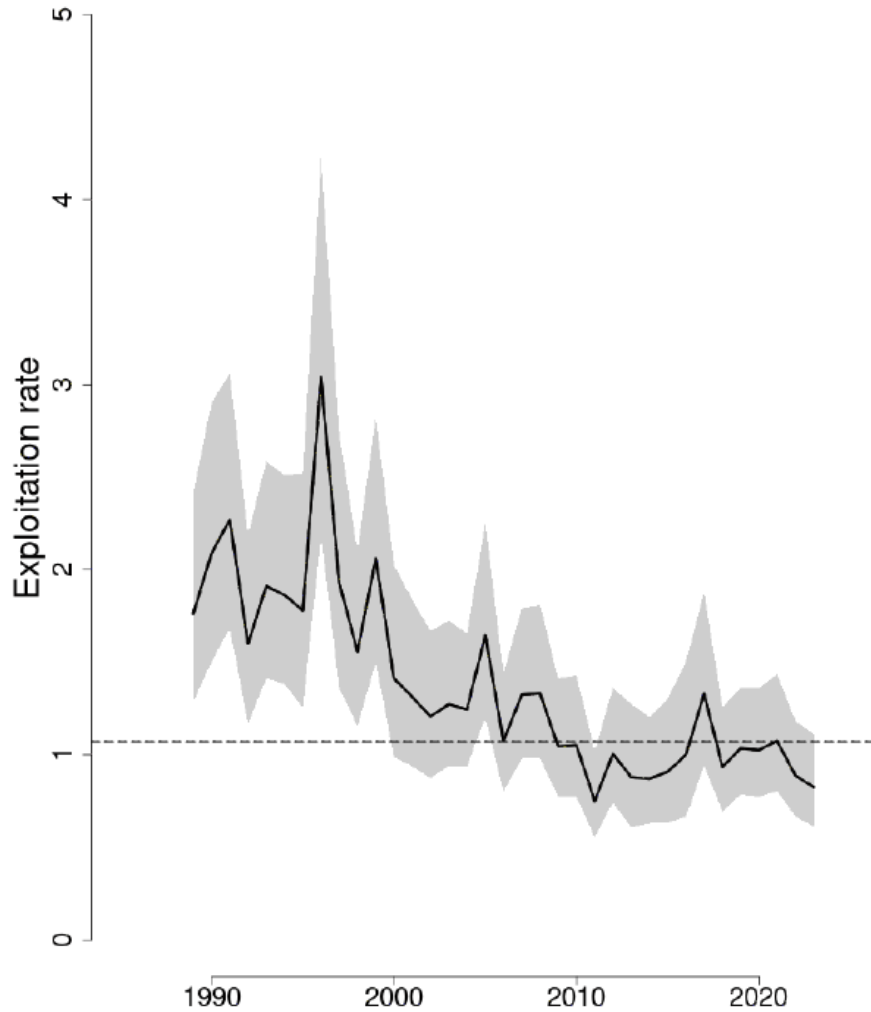


Figure 2: Trends in fully selected fishing mortality for black sea bass, 1989-2023 based on the draft 2024 management track stock assessment (NEFSC 2024). The gray shading represents 95% confidence intervals. The horizontal dotted line is the updated fishing mortality reference point. When fishing mortality is below the reference point, overfishing is not occurring.

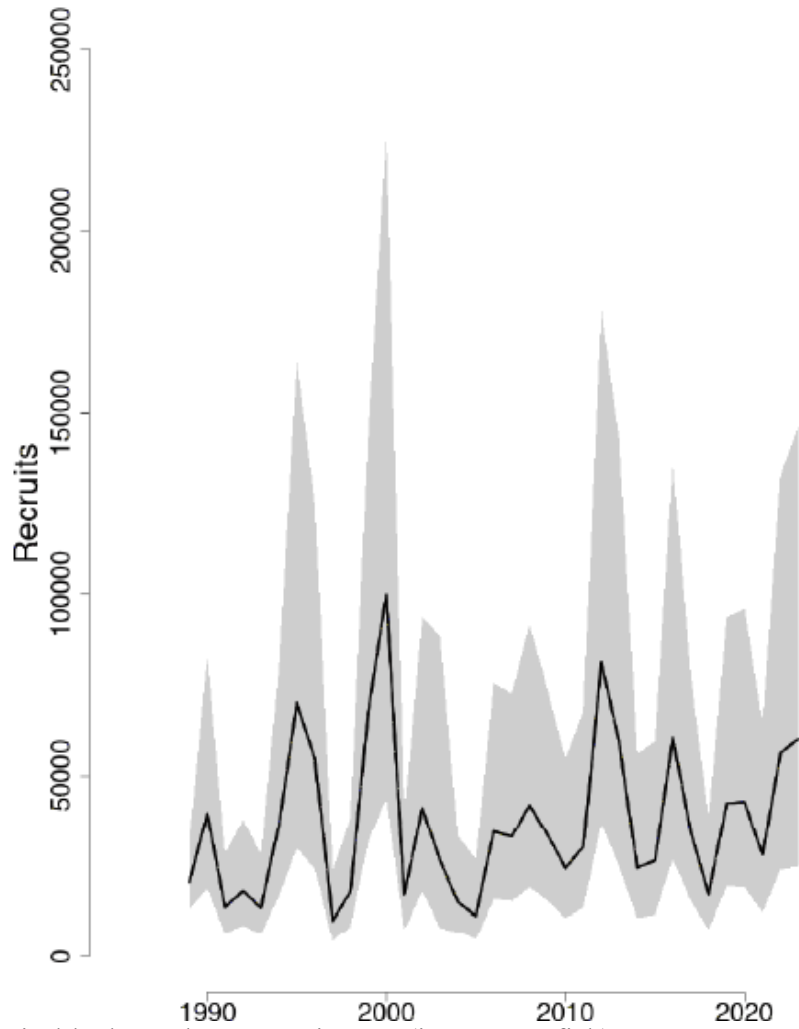


Figure 3: Trends in black sea bass recruitment (i.e., age 1 fish), 1989-2023. Estimates from the draft 2024 management track stock assessment (NEFSC 2024) are shown as the solid line with 95% confidence intervals in gray shading.

Management System and Fishery Performance

Management

The Mid-Atlantic Fishery Management Council (Council) and the Atlantic States Marine Fisheries Commission (Commission) work cooperatively to develop commercial and recreational fishery regulations for black sea bass from Maine through Cape Hatteras, North Carolina. The Council and Commission work with NMFS, which serves as the federal implementation and enforcement entity. This cooperative management system was developed because a significant portion of the catch is taken from both state waters (0-3 miles offshore) and federal waters (3-200 miles offshore). The joint management program began in 1996 with the approval of Amendment 9 to what became the Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan (FMP). The original FMP and subsequent amendments and framework adjustments are available at: www.mafmc.org/fisheries/fmp/sf-s-bsb.

Commercial and recreational black sea bass fisheries are managed using catch and landings limits, minimum fish sizes, open and closed seasons, gear regulations, permit requirements, and other regulations.

The Council's Scientific and Statistical Committee (SSC) recommends annual Acceptable Biological Catch (ABC) levels for black sea bass (Table 2). The Council must either approve the ABC recommended by the SSC or a lower ABC. Through 2022, 49% of the total allowable landings (calculated by subtracting total expected dead discards from the ABC) were allocated to the commercial fishery as a commercial quota and 51% was allocated to the recreational fishery as an RHL. Starting with 2023, the ABC is now allocated 45% to the commercial fishery as a commercial annual catch limit (ACL) and 55% to the recreational fishery as a recreational ACL.³

The Council and Commission also approve commercial and recreational annual catch targets (ACTs), which are set equal to or less than the respective ACLs to account for management uncertainty. To date, the black sea bass ACTs have always been set equal to the ACLs. The ABC, ACLs, and ACTs are catch limits which account for both landings and discards, while the commercial quota and recreational harvest limit (RHL) are landing limits. The commercial quota and RHL are calculated by subtracting expected discards from the respective ACTs (Figure 4).

³ For more information on the commercial/recreational allocation revisions, see <https://www.mafmc.org/actions/sfsbsb-allocation-amendment>.

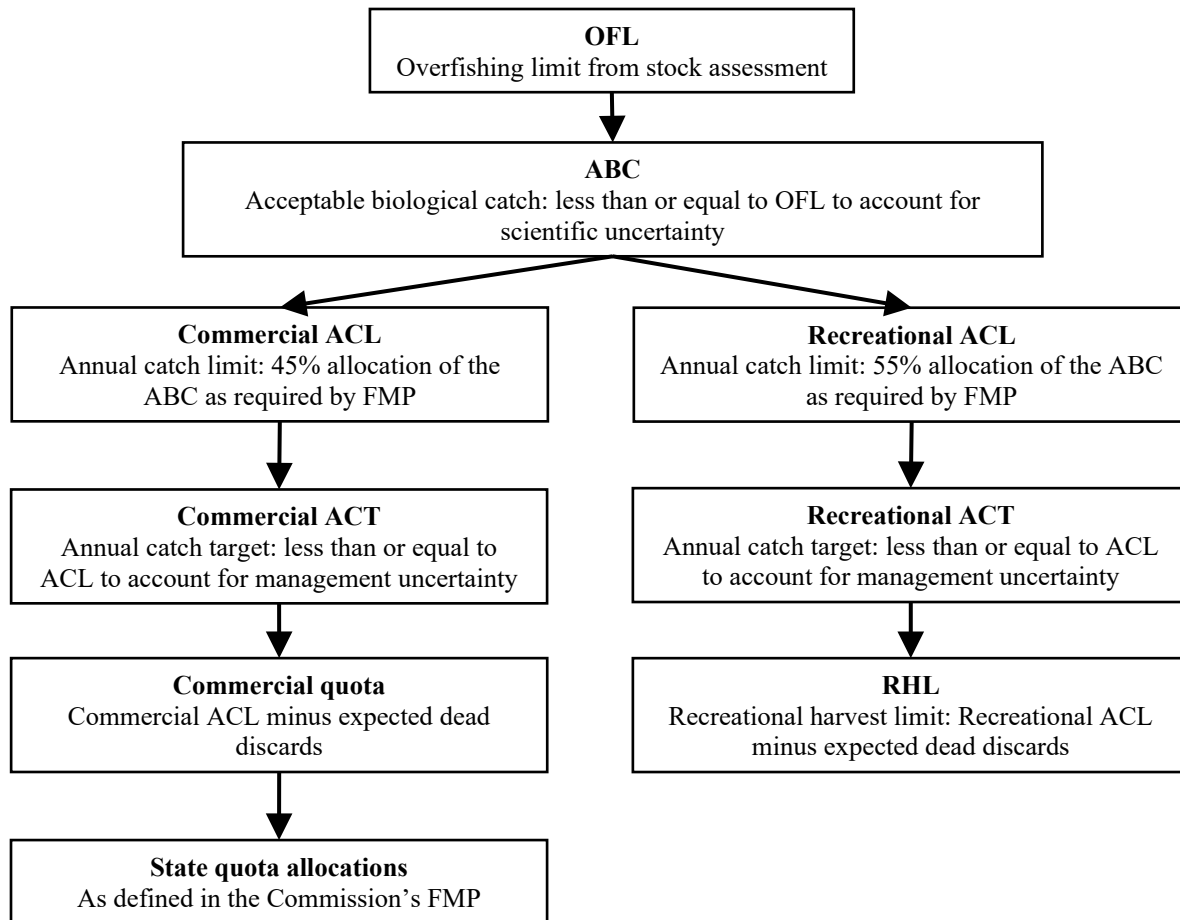


Figure 4: Black sea bass catch and landings limits, reflecting the revised commercial/ recreational allocations which became effective in 2023.

Fishery Catch Summary

Table 2 shows the black sea bass ABCs from 2014 through 2024, as well as the overfishing limit (OFL), from which the ABC is derived when possible. The ABC is set less than or equal to the OFL to account for scientific uncertainty. As shown in Table 2, ABC overages occurred in many years; however, OFL overages have been rare. Depending on the year, the ABC overages were driven by higher than anticipated discards in one or both of the commercial and recreational sectors and/or recreational harvest exceeding the RHL (Table 3, Table 9). The Council and Commission have taken steps in recent years to better account for discards when setting catch and landings limits. Changes have also been made to the process for setting recreational measures, as described in more detail below.

Figure 5 shows commercial and recreational black sea bass landings and dead discards from 1996 through 2023. Total dead catch (landings and dead discards) have generally been increasing over the past decade, with peaks in 2016, 2017, and 2021 largely driven by recreational landings. Total catch in 2023 decreased by about 9% compared to 2022.

Table 2: Total dead catch (i.e., commercial and recreational landings and dead discards) compared to the OFL and ABC, 2014-2024. All values are in millions of pounds. The recreational contribution to total dead catch is based on data in the “old” MRIP units through 2019 and the revised MRIP data starting in 2020. Catch limits did not account for the revised MRIP data until 2020.

Year	Total dead catch ^a	OFL ^b	OFL overage/underage	ABC ^b	ABC overage/underage
2014	7.92	NA	NA	5.5	+44%
2015	7.81	NA	NA	5.5	+42%
2016	10.24	NA	NA	6.67	+53%
2017	11.57	12.05	-4%	10.47	+10%
2018	9.85	10.29	-4%	8.94	+10%
2019	9.54	10.29	-7%	8.94	+7%
2020	17.33	19.39	-11%	15.07	+15%
2021	21.36	17.68	+21%	17.45	+22%
2022	18.62	19.56	-5%	18.86	-1%
2023	16.94	17.01	0%	16.66	+2%
2024	--	17.01	--	16.66	--

^a See Table 3 and Table 9 for the commercial and recreational data contributing to the total catch estimates.

^bAn OFL was not used and the ABC was set based on a constant catch approach during 2010-2015 due to the lack of a peer reviewed and accepted stock assessment. The 2016 ABC was set based on a data limited methodology. Starting with 2017, the ABC has been set based on a peer reviewed and approved stock assessment.

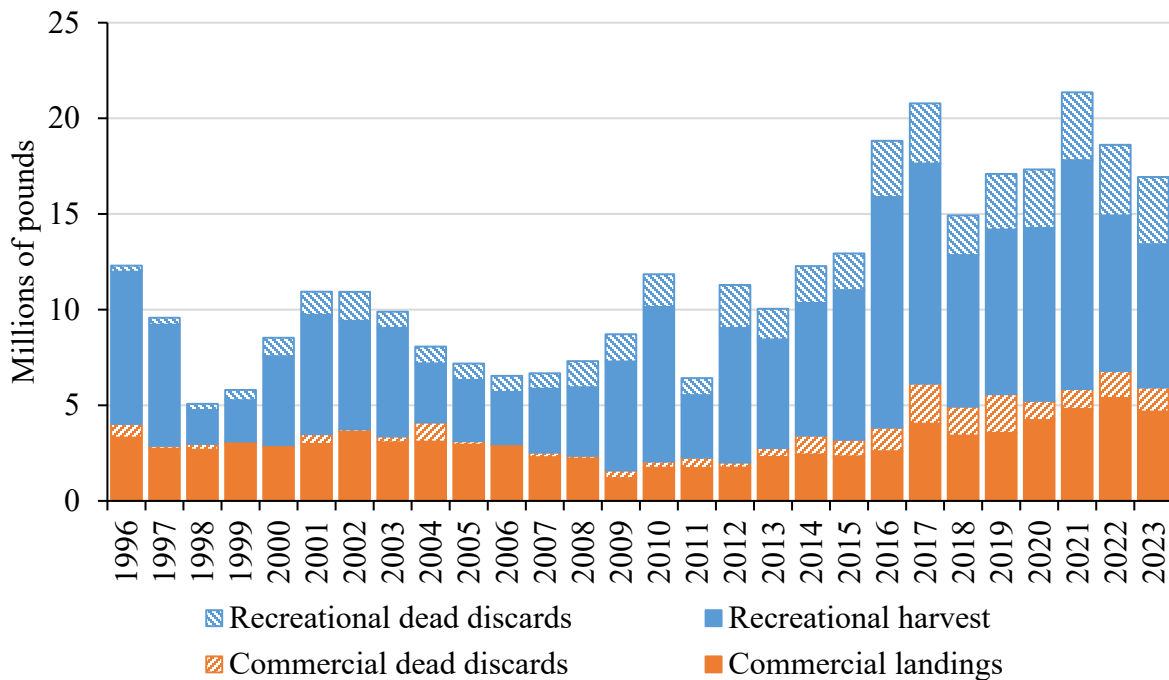


Figure 5: Commercial and recreational black sea bass landings and dead discards in millions of pounds, Maine – Cape Hatteras, North Carolina, 1996-2023. Commercial landings are from CAMS. Commercial dead discards are from the draft 2024 management track assessment report (NEFSC 2024) for 1996-2019 and from CAMS for 2020-2024. Recreational harvest is from MRIP. Recreational dead discards are from the draft 2024 management track assessment report.

Commercial Fishery

In 2023, about 4.67 million pounds of black sea bass were landed in the commercial fishery, a 13% decrease compared to 2022. This decline was likely largely driven by a 26% decrease in the coastwide commercial quota (Table 3).

Commercial quota overages have been rare; however, commercial ACL overages occurred each year during 2012-2019 based on higher than expected commercial dead discards. The method for calculating projected dead discards was revised starting with the 2021 specifications in an attempt to address this issue. In addition, the commercial ACL increased by about 60% from 2019 to 2020 (Table 3). Likely due to a combination of these factors, the commercial ACL has not been exceeded since 2019.

Black sea bass are a valuable commercial species. In 2023, total ex-vessel value was \$11.83 million and the average price per pound was \$2.66. Commercial landings have generally been increasing since 2017 due to increases in the quota. As landings have increased, the average annual coastwide price per pound has generally decreased from a high of \$4.46 in 2016 (adjusted to 2023 dollars) to a recent low of \$2.66 in 2023 (Figure 6). Prices are impacted by many factors in addition to landings. The relationship between landings and price varies at the regional, state, and sometimes port level based on market demand, state-specific regulations (e.g., seasonal openings), or individual trawl trips with high landings, all of which can be inter-related.

Over 200 commercial fish dealers from Maine through North Carolina purchased black sea bass in 2023. More dealers purchased black sea bass in New York than in any other state (Table 4).

According to CAMS data, statistical area 616 was responsible for the largest percentage (18%) of commercial black sea bass commercial landings in 2023, followed by statistical areas 538 (14%), 539 (12%), and 611 (11%). All other statistical areas accounted for less than 10% of 2023 commercial black sea bass catch in 2023 (Figure 7). When excluding trips with less than 50 pounds of black sea bass landings, likely representing mostly incidental landings, statistical area 611 had the highest number of trips with commercial black sea bass landings in 2023 (2,478 trips), followed by statistical areas 538 (2,343 trips) and 539 (1,765 trips; Table 5).

Most commercial black sea bass landings in 2022 occurred in New Jersey (22%), followed by Massachusetts (18%), Virginia (15%), Rhode Island (14%), and New York (12%). All other states from Maine through North Carolina each accounted for less than 10% of commercial landings in 2023. The percentage of landings by state is driven by the state commercial quota allocations. States set measures to achieve their state-specific commercial quotas. These allocations were first implemented in 2003 and were recently revised such that they are now based partially on the original state allocations and partially on recent biomass distribution information. The revised allocations were first effective in 2022.⁴

At least 100,000 pounds of black sea bass were landed in 13 ports in 6 states from Maine through North Carolina in 2023. These 13 ports collectively accounted for over 60% of all commercial black sea bass landings in 2023 (Table 6).

⁴ The revised commercial state allocations were implemented through Addendum XXXIII to the Commissions FMP, available at <https://asmfc.org/species/black-sea-bass>.

Since 1997, a moratorium permit has been required to fish commercially for black sea bass in federal waters. In 2023, 646 of these permits were issued.

A minimum commercial black sea bass size limit of 11 inches total length has been in place in federal waters since 2002. Any federally-permitted vessel using otter trawl gear and catching more than 500 pounds of black sea bass from January through March, or more than 100 pounds from April through December, must use nets with a minimum mesh size of 4.5-inch diamond mesh applied throughout the codend for at least 75 continuous meshes forward of the end of the net. There is no federal waters black sea bass possession limit for trawl gear with mesh greater than 4.5-inches; however, many states have set possession limits for state waters. Pots and traps used to commercially harvest black sea bass must have two escape vents with degradable hinges in the parlor. The escape vents must measure 1.375 inches by 5.75 inches if rectangular, 2 inches by 2 inches if square, or have a diameter of 2.5 inches if circular.

According to CAMS data, about 41% of commercial black sea bass landings in 2023 were caught with bottom otter trawl gear, 40% with pots/traps, and 17% with hand lines. All other gear types combined accounted for about 2% of 2023 commercial landings.

The most commonly caught non-target species in the commercial black sea bass fishery were identified based on raw data from Northeast Fisheries Observer Program observed trips from 2019-2023 where black sea bass made up at least 75% of the landings by weight. Using this definition of a directed trip, the most common non-target species in the black sea bass fishery include spiny dogfish, scup, sea robins (northern and striped), and little skate (Table 7).

Table 3: Black sea bass commercial landings and dead catch compared to the commercial quota and commercial ACL, 2014-2023. All values are in millions of pounds.

Year	Com. landings ^a	Com. quota ^b	Quota overage/ underage	Com. dead discards ^c	Com. dead catch	ACL	ACL overage/ underage
2014	2.43	2.17	+12%	0.99	3.41	2.60	+31%
2015	2.33	2.21	+5%	0.87	3.20	2.60	+23%
2016	2.59	2.71	-4%	1.24	3.84	3.15	+22%
2017	4.04	4.12	-2%	2.10	6.14	5.09	+21%
2018	3.41	3.52	-3%	1.52	4.93	4.35	+13%
2019	3.56	3.52	+1%	2.02	5.58	4.35	+28%
2020	4.22	5.58	-24%	1.00	5.23	6.98	-25%
2021	4.81	6.09	-21%	1.04	5.85	9.52	-39%
2022	5.38	6.47	-17%	1.40	6.78	10.10	-33%
2023	4.67	4.80	-3%	1.26	5.93	7.50	-21%
2024	--	6.00	--	--	--	7.50	--

^a CAMS data.

^b The 2014 commercial quota reflects a 3% deduction for Research Set Aside.

^c Discards from 2014-2019 are from the draft 2024 black sea bass management track assessment (NEFSC 2024). Values for 2020-2023 are from CAMS.

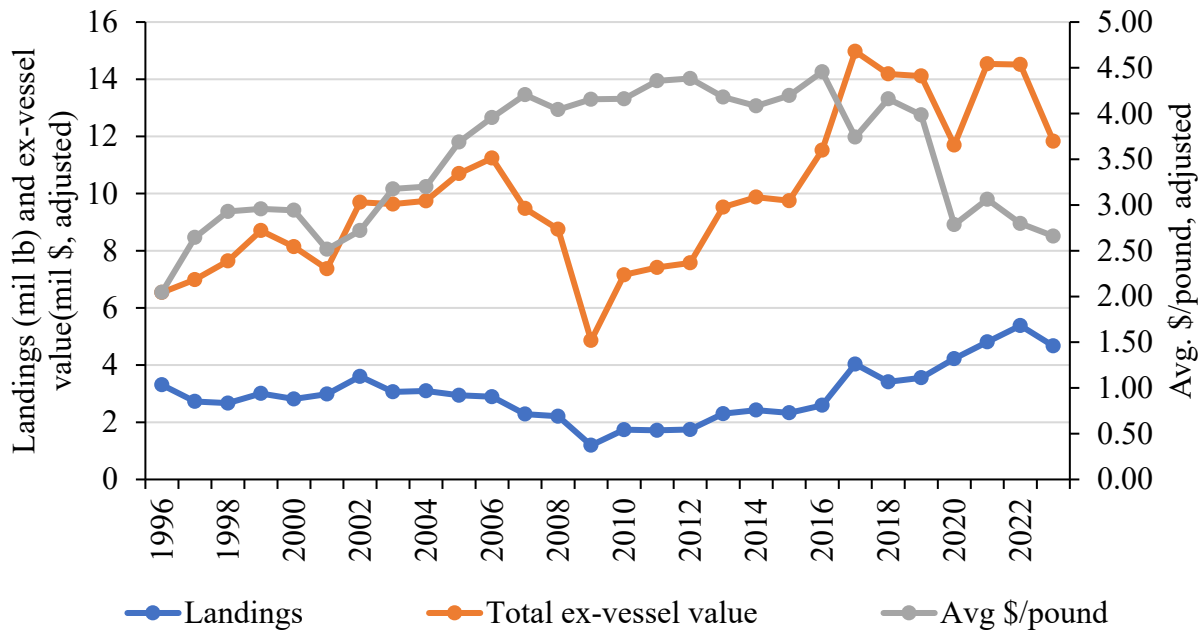


Figure 6: Landings, ex-vessel value, and average price per pound for black sea bass, Maine – North Carolina, 1996-2023 based on CAMS data. Ex-vessel value and price are inflation-adjusted to 2023 dollars using the Gross Domestic Product Price Deflator.

Table 4: Number of commercial dealers, by state, reporting purchases of black sea bass in 2023.

State	ME	NH	MA	RI	CT	NY	NJ	DE	MD	VA	NC
Number of dealers	C	0	38	34	15	59	21	3	5	11	17

Table 5: Statistical areas that accounted for at least 5% of the total commercial black sea bass landings in 2023 with associated number of trips, based on CAMS data, which includes both state and federal dealer data as well as federal VTR data. For number of trips only, the values shown are for trips with at least 50 pounds of black sea bass landings to exclude trips with low amounts of what are likely mostly incidental landings.

Statistical Area	Percent of 2023 Commercial Black Sea Bass Landings	Number of Trips
616	18%	330
538	14%	2,343
539	12%	1,765
611	11%	2,478
621	8%	225
537	7%	630
615	6%	144
613	5%	704
612	5%	234

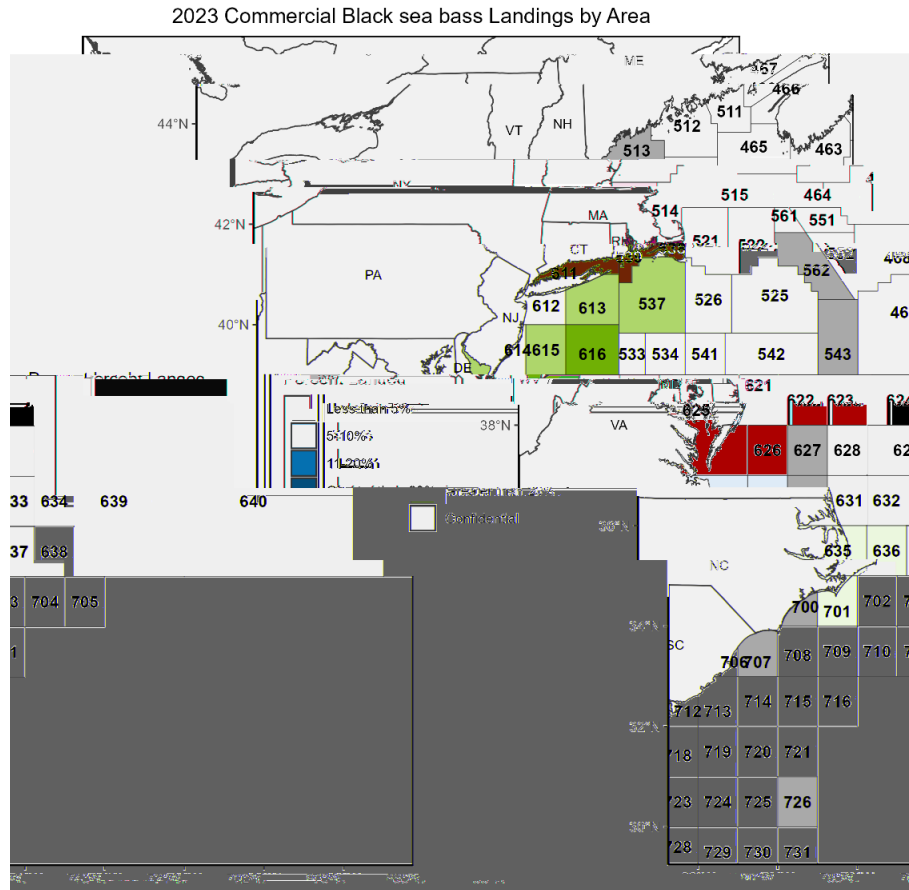


Figure 7: Proportion of black sea bass commercial landings by statistical area in 2023 based on CAMS data, which includes both state and federal dealer data as well as federal VTR data.

Table 6: Ports reporting at least 100,000 pounds of black sea bass landings in 2023, associated number of vessels, and percentage of total commercial landings. Two additional ports in Virginia and one port in Delaware also had more than 100,000 pounds of commercial black sea bass landings; however, the values are confidential as they are associated with fewer than three vessels and/or dealers.

Port name	Pounds of black sea bass landed	% of total commercial black sea bass landed	Number of vessels landing black sea bass
Point Pleasant, NJ	518,120	11%	36
Point Judith, RI	473,173	10%	328
Ocean City, MD	307,050	7%	11
Montauk, NY	303,686	6%	199
New Bedford, MA	289,240	6%	229
Hampton, VA	190,671	4%	21
Sea Isle City, NJ	189,681	4%	6
Cape May, NJ	159,330	3%	30
Barnegat Light, NJ	144,217	3%	9
Newport News, VA	130,828	3%	13

Table 7: Percent of non-target species caught in observed trawls where black sea bass made up at least 75% of the observed landings, 2019-2023. Only those non-target species comprising at least 2% of the aggregate catch are listed.

Species	% of total catch on black sea bass observed directed trips, 2019-2023 ^a
Spiny dogfish	12%
Scup	6%
Northern sea robin	3%
Striped sea robin	3%
Little skate	2%

^a Percentages are aggregate totals over 2019-2023 and do not reflect the percentages of non-target species caught on individual trips. This analysis describes only observed trips and has not been expanded to the fishery as a whole.

Recreational Fishery

Black sea bass are a popular recreational fish. Total recreational catch (i.e., harvest plus live and dead releases) from Maine through Cape Hatteras, North Carolina has exceeded 40 million fish each year for the most recent three years. Due to fishery regulations and other factors, most of these fish are released, with about 4.55 million fish harvested in the recreational fishery in 2023. Total recreational harvest in weight in 2023 was about 7.49 million pounds (Figure 8).

Recreational bag, size, and season limits (also referred to as recreational measures) for black sea bass remained virtually unchanged from 2018-2021. Measures were restricted in 2022, and again in 2023. In 2024, recreational measures were left unchanged with the exception of a few minor season adjustments. State waters recreational measures for 2023-2024 are shown in Table 10. Federal waters recreational measures have been waived since 2022 following the process implemented through Framework 14 to the FMP.

Framework 17 implemented a new process for setting recreational measures called the Percent Change Approach. Unlike the previous process, recreational measures no longer aim to achieve but not exceed the RHL. Instead, measures aim to achieve a different level of harvest, which varies based on estimated harvest in the upcoming year(s) compared to the RHL as well as biomass compared to target level. The target level of harvest is defined as a percentage change from the expectation of harvest in the upcoming year(s) if the current measures were to remain in place.⁵

Following the Percent Change Approach, for 2023, state waters measures were restricted with the goal of achieving 7.14 million pounds of coastwide harvest. The final 2023 MRIP harvest estimate is 7.49 million pounds, about 5% higher than the target of 7.14 million pounds. Harvest in 2023 was about 14% higher than the RHL; however, it is important to note that under the Percent Change Approach, measures did not aim to achieve the RHL, they instead aimed to achieve 7.14 million pounds of harvest.

In 2023, 36% of black sea bass harvested by recreational fishermen from Maine through Cape Hatteras, North Carolina (in numbers of fish) were caught in state waters and 64% in federal waters

⁵ Additional information on the Percent Change Approach is available at <https://www.mafmc.org/actions/hcr-framework-addenda>.

(Table 11). Most of the recreational harvest in numbers of fish in 2023 was landed in New Jersey (36%), followed by New York (18%; Table 12).

For-hire vessels carrying passengers in federal waters must obtain a federal party/charter permit. In 2023, 942 vessels held a federal party/charter black sea bass permit.

About 90% of the recreational black sea bass harvest in numbers of fish in 2023 came from anglers fishing on private or rental boats, about 9% from anglers aboard party or charter boats, and 1% from anglers fishing from shore (Table 13).

Brust et al. (2023) used a species guild approach to identify other species commonly caught with black sea bass in the recreational fishery. The top five species with highest correlations with black sea bass in Maine – New York during 2010-2021 were scup, smooth dogfish, unclassified dogfish, northern puffer, and sea robins. The top five correlated species in New Jersey – North Carolina were gray triggerfish, scup, red hake, pigfish, and cunner.

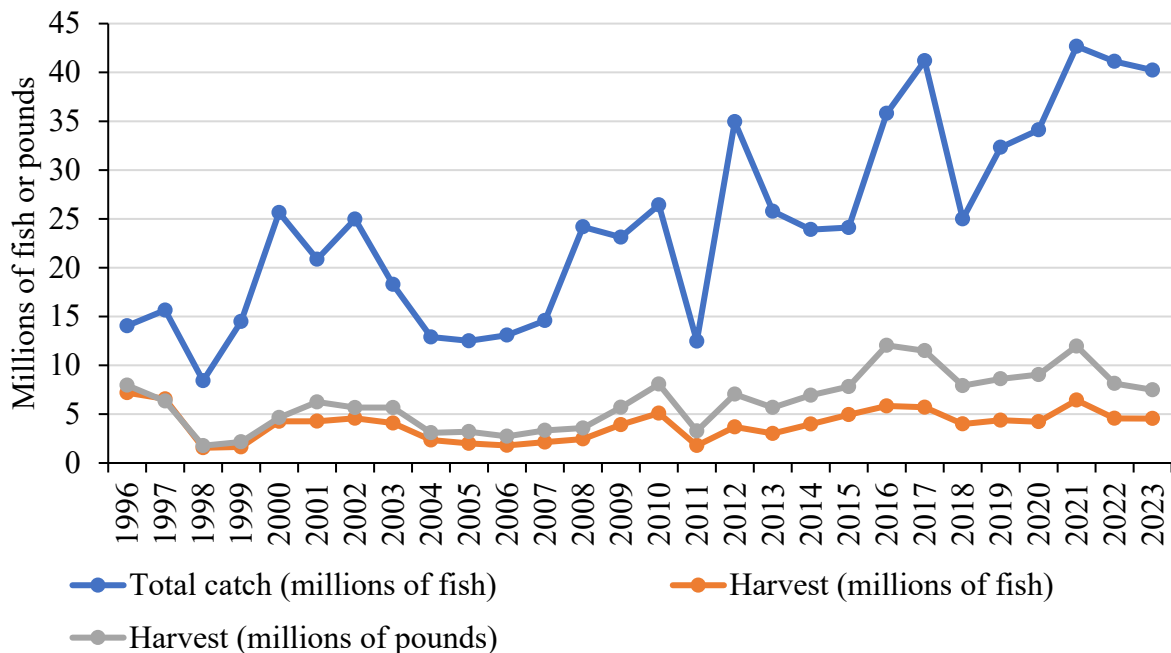


Figure 8: Estimated recreational black sea bass catch (harvest and live and dead discards) and harvest from Maine through Cape Hatteras, North Carolina, 2014-2023.

Table 8: Black sea bass recreational landings, dead discards, and dead catch compared to the RHL, projected recreational dead discards, and recreational ACL, 2014-2023. Values are provided in the “old” MRIP units for 2014-2019 and the “new” MRIP units for 2020-2023 as the ACLs and RHLs did not account for the revised MRIP data until 2020. Therefore, overage/underage evaluations must be based in the old MRIP units through 2019 and the new MRIP units starting in 2020. All values are in millions of pounds.

Year	MRIP version	Rec. harvest ^a	RHL	RHL over/ under	Rec. dead disc. ^c	Rec. dead catch	ACL	ACL over/ under
2014	Old MRIP (pre-revision)	3.67	2.26 ^b	+62%	0.84	4.51	2.9	+56%
2015		3.79	2.33	+63%	0.82	4.61	2.9	+59%
2016		5.19	2.82	+84%	1.21	6.40	3.52	+82%
2017		4.16	4.29	-3%	1.27	5.43	5.38	+1%
2018		3.82	3.66	+4%	1.10	4.92	4.59	+7%
2019		3.46	3.66	-5%	0.50	3.96	4.59	-14%
2020 ^d	New MRIP (post-revision)	9.05	5.81	+56%	3.05	12.10	8.09	+50%
2021		11.97	6.34	+89%	3.55	15.52	7.93	+96%
2022		8.14	6.74	+21%	3.69	11.84	8.76	+35%
2023		7.49	6.57	^e	3.52	11.01	9.16	+20%
2024		--	6.27	--	--	--	9.16	--

^a Based on MRIP data for all years except 2018 and 2019. Estimates in the “old” MRIP units were not available for those years, but were necessary for comparing against the RHL. Therefore, NMFS used alternative methods to calculate the 2018 and 2019 estimates shown here.

^b The 2014 RHL reflects a 3% deduction for Research Set Aside.

^c Estimates for 2014-2017 are from a data update provided by the NEFSC in 2018 (most recent data from NEFSC in “old” MRIP units; NEFSC 2018). Estimates in the “old” MRIP units were not available for 2018-2019, but were necessary for comparing against the ACL. Therefore, NMFS used alternative methods to calculate the 2018 and 2019 estimates shown here. Estimates for 2020 – 2023 are from the draft 2024 management track assessment report (NEFSC 2024).

^d Recreational harvest estimates for 2020 were impacted by temporary suspension of shoreside intercept surveys due to COVID-19. NMFS used imputation methods to fill gaps in 2020 catch data with data collected in 2018 and 2019. For black sea bass, the 2020 harvest estimate for Maine-Virginia relied on approximately 17% imputed data. For more information on imputation methods see: <https://www.mafmc.org/s/1-2020-Marine-Recreational-Catch-Estimates-QA-52121.pdf>.

^e2023 was the first year recreational measures were set using the Percent Change Approach, as implemented through Framework 17. Under this new process, measures are no longer set with the primary goal of allowing harvest to meet but not exceed the RHL. Instead, 2023 measures were set with the goal of achieving a 10% reduction in harvest compared to the expectation of 2023 harvest if 2022 measures had remained in place. Specifically, the recreational measures implemented in 2023 aimed to achieve a target of 7.14 million pounds of harvest.

Table 9: State waters black sea bass recreational measures in 2023 and 2024. Measures in all states remained the same across the two years with the exception of Massachusetts and Connecticut which implemented minor adjustments to maintain a Saturday opening, as well as Virginia which modified their season due to their special February opening.

State	Size Limit	Bag Limit	Open Season
Maine	13"	10 fish	May 19-Sept 21; Oct 18-Dec 31
New Hampshire	16.5"	4 fish	Jan-Dec 31
Massachusetts	16.5"	4 fish	2023: May 20-Sept 7 2024: May 18-Sept 3
Rhode Island private & shore	16.5"	2 fish	May 22-Aug 26
		3 fish	Aug 27-Dec 31
Rhode Island for-hire	16"	2 fish	Jun 18-Aug 31
		6 fish	Sept 1-Dec 31
Connecticut private & shore	16"	5 fish	2023: May 19-Jun 23; Jul 8-Dec 1 2024: May 18-June 28; Jul 8-Nov 28
CT authorized for-hire monitoring program vessels		5 fish	2023: May 19-Aug 31 2024: May 18 – Aug 31
		7 fish	2023 and 2024: Sept 1-Dec 31
New York	16.5"	3 fish	Jun 23-Aug 31
		6 fish	Sept 1-Dec 31
New Jersey	12.5"	10 fish	May 17-Jun 19
		1 fish	Jul 1-Aug 31
		10 fish	Oct 1- 31
		15 fish	Nov 1-Dec 31
Delaware	13"	15 fish	May 15-Sept 30; Oct 10-Dec 31
Maryland	13"	15 fish	May 15-Sept 30; Oct 10-Dec 31
Virginia	13"	15 fish	2023: Feb 1-28, May 15-Jul 6; Aug 9-Dec 31 2024: Feb 1-29, May 15-Jul 15, Aug 4-Dec 31
North Carolina North of Cape Hatteras (35° 15'N)	13"	15 fish	May 15-Sept 30; Oct 10-Dec 31

Table 10: Estimated percentage of black sea bass recreational harvest (in numbers of fish) in state and federal waters, from Maine through Cape Hatteras, North Carolina, 2014-2023.

Year	State waters	Federal waters
2014	72%	28%
2015	73%	27%
2016	61%	39%
2017	42%	58%
2018	61%	39%
2019	64%	36%
2020	57%	43%
2021	52%	48%
2022	54%	46%
2023	36%	64%
2014-2023 avg	57%	43%

Table 11: State contribution to total recreational harvest of black sea bass (in number of fish), Maine through Cape Hatteras, North Carolina, 2021 – 2023.

State	2021	2022	2023	2021-2023 average
Maine	0%	0%	<1%	<1%
New Hampshire	<1%	<1%	0%	<1%
Massachusetts	19%	8%	9%	12%
Rhode Island	8%	6%	6%	7%
Connecticut	13%	8%	6%	9%
New York	14%	28%	18%	20%
New Jersey	30%	32%	36%	33%
Delaware	6%	4%	7%	6%
Maryland	3%	3%	5%	4%
Virginia	7%	8%	12%	9%
North Carolina	<1%	1%	2%	1%

Table 12: Percent of total recreational black sea bass harvest (in numbers of fish) by fishing mode, Maine through North Carolina, 2014-2023. Some percentages do not add to 100% due to rounding.

Year	Shore	Party/charter	Private/rental	Total number of fish (millions)
2014	3%	19%	78%	3.97
2015	0%	22%	78%	4.94
2016	4%	9%	88%	5.84
2017	1%	9%	90%	5.70
2018	1%	12%	87%	3.99
2019	3%	18%	79%	4.38
2020 ^a	2%	11%	87%	4.23
2021	4%	11%	84%	6.44
2022	0%	9%	91%	4.57
2023	1%	9%	90%	4.55
2014-2023 avg	2%	13%	85%	4.86

^a Party and charter fishing was restricted in all states for part of 2020 due to the COVID-19 pandemic.

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