Black Sea Bass Fishery Information Document

June 2023

This document provides a brief overview of the biology, stock condition, management system, and fishery performance for black sea bass (*Centropristis striata*) with an emphasis on 2022. Data sources include unpublished National Marine Fisheries Service (NMFS) commercial fish dealer reports, vessel trip reports (VTRs), permit data, Northeast Fisheries Observer Program data, Marine Recreational Information Program (MRIP) data,[1] and stock assessment information. All 2022 data should be considered preliminary. For more information on black sea bass management, including previous Fishery Information Documents, visit http://www.mafmc.org/sf-s-bsb.

Key Facts

- Black sea bass are not overfished and overfishing is not occurring, according to the most recent stock assessment. Spawning stock biomass in 2019 was estimated to be about 2.1 times the target level and fishing mortality was 15% below the threshold level.
- In 2022, about 5.30 million pounds of black sea bass were landed by commercial fishermen, the highest commercial landings in the time series going back to 1981.
- Commercial fish dealers paid an average of $2.61 per pound of black sea bass in 2022, an 11% decrease from the 2021 average after accounting for inflation.
- Recreational fishermen harvested an estimated 8.14 million pounds of black sea bass in 2022, a 32% decrease from 2021.
- Anglers fishing from private/rental vessels accounted for 91% of recreational black sea bass harvest (in numbers of fish) in 2022.

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.

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

[1] 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. Most recreational estimates in this document reflect revised MRIP estimates except where otherwise noted.

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 nuccal 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

The most recent stock status information for black sea bass is available from a management track stock assessment which was peer reviewed and accepted in June 2021 (NEFSC 2022a). This assessment incorporated fishery data and fishery-independent survey data through 2019. Data from 2020 were not incorporated due to significant gaps in some data sets due to the COVID-19 pandemic and the time required to consider how to best address those gaps.

A research track assessment is currently in development and is scheduled for peer review in October 2023. Stock status will be updated through a subsequent management track assessment in June 2024.

The 2021 management track assessment indicated that the black sea bass stock was not overfished and overfishing was not occurring in 2019. Spawning stock biomass in 2019 was estimated at about 2.1 times the target level. Fishing mortality in 2019 was estimated to be 15% below the threshold level that defines overfishing (Table 1, Figure 1 - Figure 3, NEFSC 2022a).

The 2011 year class (i.e., fish spawned in 2011) was estimated to be the largest in the time series and the 2015 year class was the second largest. The 2017 year class was well below the 1989-2018 average, but the 2018 year class was above average at (Figure 2). The 2018 year class is the most recent year class for which estimates are currently available (NEFSC 2022a).

The NEFSC provides "data updates" in the interim years between management track assessments. Data updates include information on fishery catches and fishery-independent survey indices through the prior year. A data update in 2022 (NEFSC 2022b) showed that relative abundance from the NEFSC spring bottom trawl survey has steadily increased since 2015. Age composition data suggested above average recruitment from the 2015, 2016, and 2019 cohorts. An updated data update will be provided in the summer of 2023.

Table 1: Black sea bass biological reference points from the 2021 management track stock assessment (NEFSC 2022a).

	Spawning stock biomass	**Fishing mortality rate (F)**
Target	31.84 mil lb (14,441 mt)	N/A
Threshold	15.92 mil lb (7,221 mt)	0.46
Terminal year estimate (2019)	65.53 mil lb (29,769 mt) [a] 2.1 times target level	0.39[a] 15% below threshold level
Status	**Not overfished**	**Overfishing not occurring**

[a] Adjusted for retrospective bias

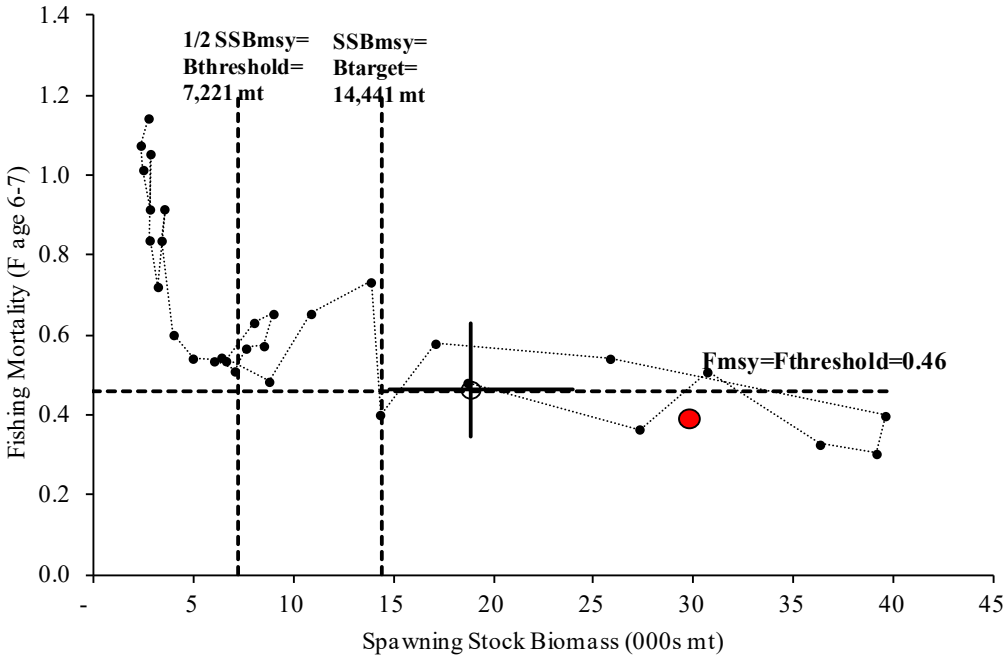

Figure 1: Estimates of black sea bass spawning stock biomass (SSB) and fully-recruited fishing mortality (F, peak at ages 6-7) relative to biological reference points. Open circle with 90% confidence intervals shows the assessment point estimates. The filled circle shows the retrospectively adjusted estimates which are used in management (NEFSC 2022a).

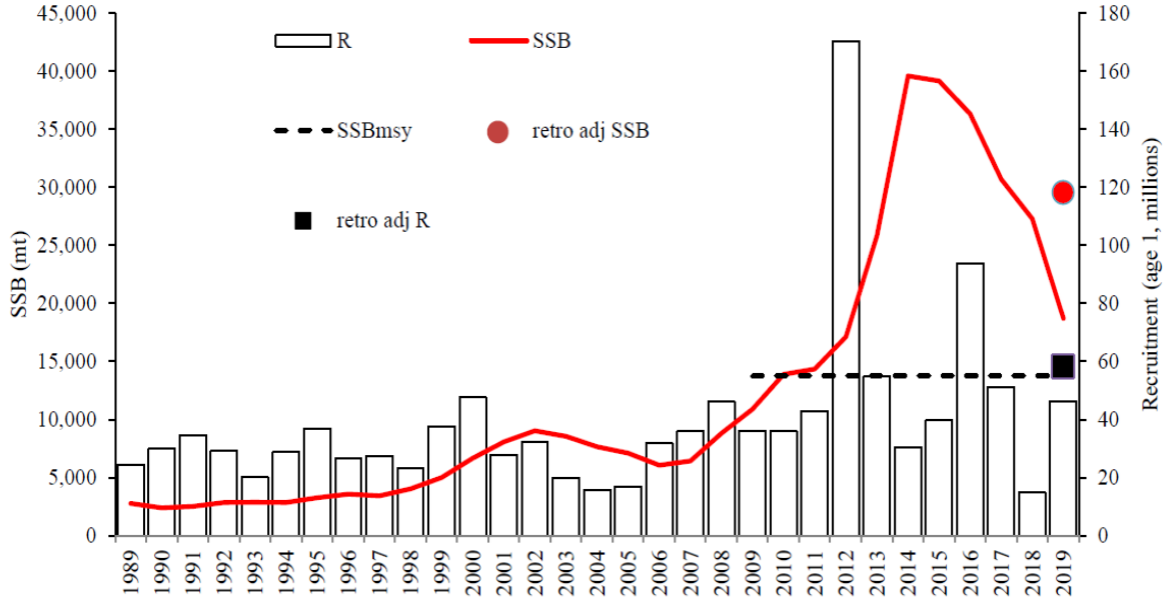

Figure 2: Black sea bass spawning stock biomass (SSB; solid line) and recruitment at age 1 (R; vertical bars), 1989-2019 (NEFSC 2022a). The horizontal dashed line is the updated SSB_{MSY} proxy = $SSB_{40\%}$ =14,441 mt. SSB and recruitment estimates for 2019 were adjusted for a retrospective pattern in the stock assessment (red circle and black square, respectively). Adjusted values are used in management.

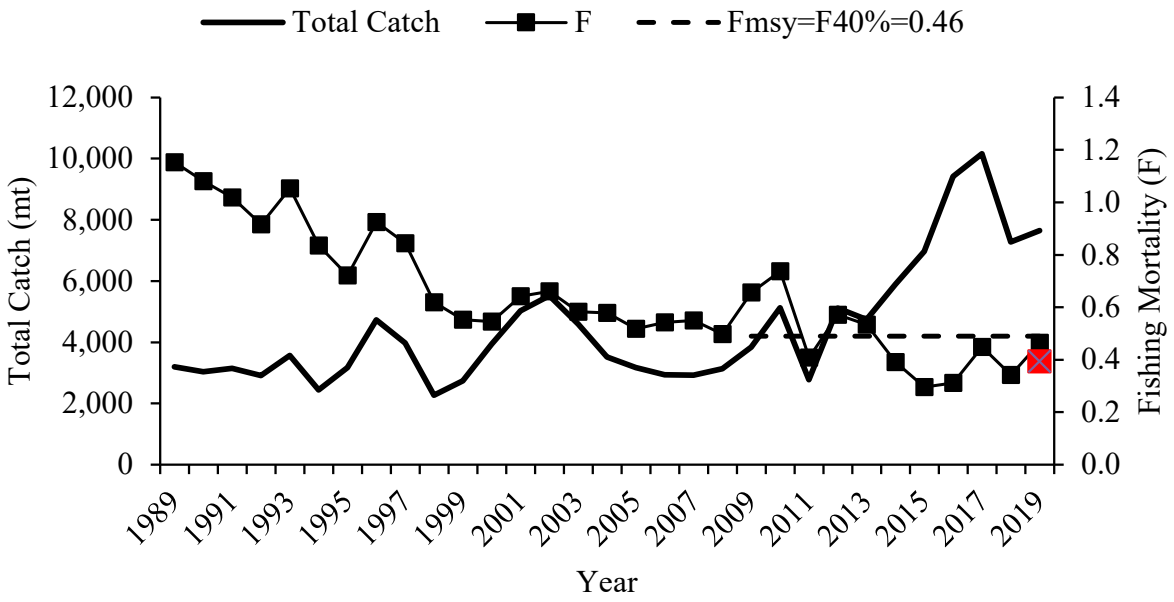

Figure 3: Total fishery catch (metric tons; mt; solid line) and fishing mortality (F, peak at age 6-7; squares) for black sea bass (NEFSC 2022a). The horizontal dashed line is the updated F_{MSY} proxy = $F_{40\%}$ = 0.46. The red square is the retrospectively adjusted fishing mortality value for 2019. The adjusted value is used in management.

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 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% 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.[2]

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 (Table 3, Table 12).

Fishery Catch Summary

Table 2 shows the black sea bass ABCs from 2010 through 2023, 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 12). 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 or setting recreational management measures, as described in more detail below.

[2] For more information on the commercial/recreational allocation revisions, see https://www.mafmc.org/actions/sfsbsb-allocation-amendment.

Figure 4 shows commercial and recreational black sea bass landings and dead discards from 1993 through 2022 (note that discards are only shown through 2021). Total dead catch (landings and dead discards) have been generally increasing over the past decade, with peaks in 2016, 2017, and 2021 largely driven by recreational landings.

Table 2: Total dead catch (i.e., commercial and recreational landings and dead discards) compared to the OFL and ABC, 2014-2023. 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. Dead discard estimates for 2022 are not currently available.

Year	Total dead catch[a]	OFL[b]	OFL overage/underage	ABC[b]	ABC overage/underage
2013	5.99	NA	NA	5.50	+9%
2014	7.92	NA	NA	5.50	+44%
2015	7.92	NA	NA	5.50	+44%
2016	10.66	NA	NA	6.67	+60%
2017	11.70	12.05	-3%	10.47	+12%
2018	9.97	10.29	-3%	8.94	+12%
2019	9.77	10.29	-5%	8.94	+9%
2020	17.88	19.39	-8%	15.07	+19%
2021	21.82	17.68	+23%	17.45	+25%
2022	--	19.56	--	18.86	--
2023	--	17.01	--	16.66	--

[a] See Table 3 and Table 12 for the commercial and recreational data contributing to the total catch estimates.

[b]An 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.

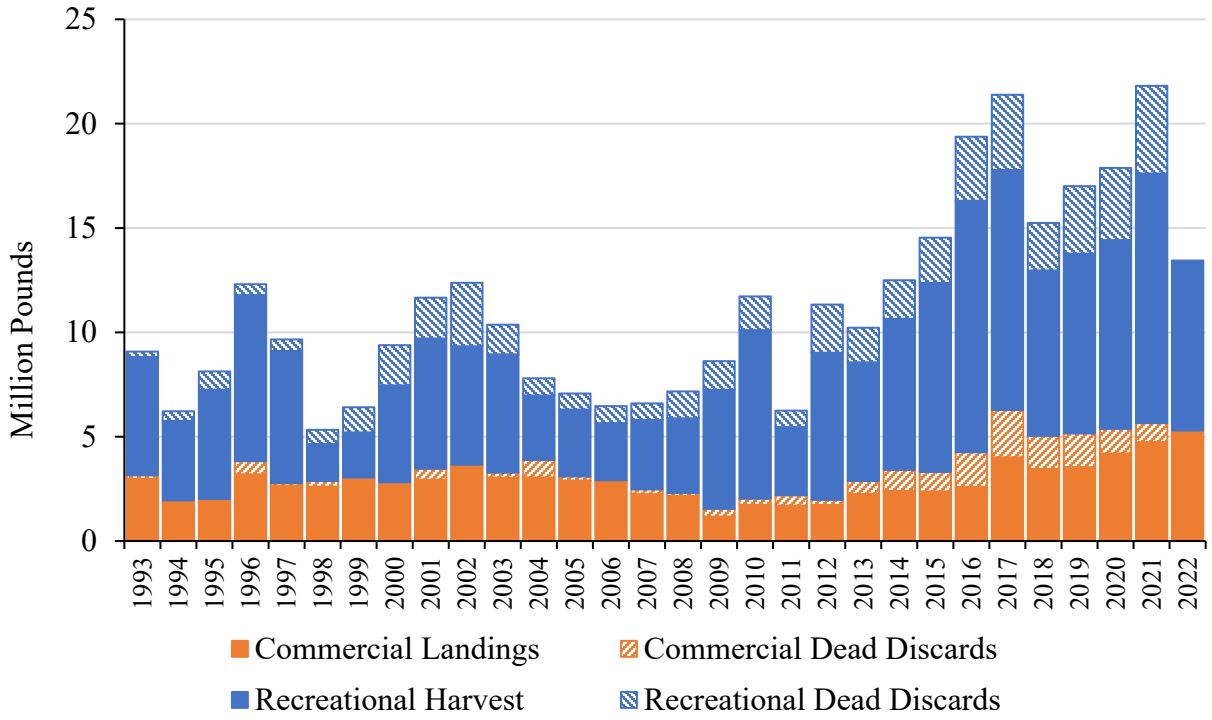

Figure 4: Commercial and recreational black sea bass landings and dead discards in millions of pounds, Maine – Cape Hatteras, North Carolina, 1993-2022, based on federal dealer data for commercial landings, MRIP data for recreational landings, NEFSC data for discards through 2019 (NEFSC 2022a), and GARFO discard estimates for 2020-2021. ***Discard estimates for 2022 are not shown in this figure as they are not currently available.***

Commercial Fishery

In 2022, about 5.30 million pounds of black sea bass were landed in the commercial fishery, the highest commercial landings in the time series of available data from 1981 through 2022. The 2022 commercial quota of 6.47 million pounds was higher than any previous quota (Table 3). Commercial black sea bass landings were lowest in 2009, when 1.18 million pounds were landed and the lowest quota in the time series was implemented (1.09 million pounds).

Commercial quota overages have been rare; however, ACL overages occurred each year during 2013-2019 based on higher than expected discards. The method for calculating projected dead discards was revised starting with the 2021 specifications in an attempt to address this issue (Table 3).

Black sea bass are a valuable commercial species. Total ex-vessel value was $13.84 million in 2022. Landings and average price per pound (adjusted to 2021 dollars) were generally stable from 2010 through 2016. Landings increased in 2017 with an increase in the quota. On an annual coastwide level, the average price per pound tended to decrease with increases in landings since 2016 (Figure 5). 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.

A total of 159 federally-permitted dealers from Maine through North Carolina purchased black sea bass in 2022. More dealers bought black sea bass in New York than in any other state (Table 4).

According to federal VTR data, statistical area 615, off southern New Jersey, was responsible for the largest percentage (22%) of commercial black sea bass catch (landings and live and dead discards, as reported by captains) in 2022. Statistical area 616, which includes important fishing areas near Hudson Canyon, accounted for the second highest proportion of catch (21%), followed by statistical area 537, south of Massachusetts and Rhode Island (9%); statistical area 613, south of Long Island (8%); statistical area 621, off southern New Jersey, Delaware, and Maryland (6%); and statistical area 612, off northern New Jersey and Western Long Island (6%; Table 5, Figure 6). Statistical area 613 had the highest number of trips which reported black sea bass catch on federal VTRs in 2022 (1,702 trips), followed by statistical area 537 (1,333 trips; Table 5).

According to dealer data, in 2022, most commercial black sea bass landings from state and federally-permitted vessels occurred in New Jersey (23%), followed by Massachusetts (17%), Rhode Island (15%), Virginia (12%), and New York (12%). All other states in the management unit each accounted for less than 10% of landings in 2022. The percentage of landings by state is generally driven by the state commercial quota allocations. States set measures to achieve their state-specific commercial quotas. These allocations were first implemented in 2003. The Council and Commission recently revised these allocations such that they now are based partially on the original state allocations and partially on recent biomass distribution information. The revised allocations were first implemented in 2022.[3]

At least 100,000 pounds of black sea bass were landed in 11 ports in 6 states from Maine through North Carolina in 2022. These 11 ports collectively accounted for over 60% of all commercial black sea bass landings in 2022 (Table 6).

Since 1997, a moratorium permit has been required to fish commercially for black sea bass in federal waters. In 2022, 663 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. There is no federal waters black sea bass possession limit; however, many states have set possession limits for state waters.

About 66% of commercial black sea bass landings reported on federal VTRs in 2022 were caught with bottom otter trawl gear, 29% with pots/traps, and 5% with hand lines. Other gear types each accounted for less than 1% of total commercial landings reported on VTRs in 2022. It is important to note that federal VTR data do not account for landings of black sea bass by vessels that are only permitted to fish in state waters. Some gear types (e.g., handlines) are more prevalent in state waters than in federal waters.

Any federally-permitted vessel which uses otter trawl gear and catches 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

[3] More information on the revised black sea bass commercial state allocations is available at https://www.mafmc.org/actions/bsb-commercial-allocation.

the codend for at least 75 continuous meshes forward of the end of the net. 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.

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 2017-2022 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, striped, and unclassified), skates (little, winter, and unclassified), and summer flounder (Table 7).

Table 3: Black sea bass commercial landings and dead catch compared to the commercial quota and commercial ACL, 2014-2023. Discard estimates for 2022 are not currently available. 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	2.40	2.17	+11%	1.01	3.41	2.6	+31%
2015	2.38	2.21	+8%	0.93	3.31	2.6	+27%
2016	2.59	2.71	-4%	1.67	4.26	3.15	+35%
2017	4.01	4.12	-3%	2.26	6.27	5.09	+23%
2018	3.46	3.52	-2%	1.59	5.05	4.35	+16%
2019	3.55	3.52	1%	2.26	5.81	4.35	34%
2020	4.20	5.58	-25%	1.17	5.37	6.98	-23%
2021	4.75	6.09	-22%	0.9	5.65	9.52	-41%
2022	5.30	6.47	-18%	--	--	10.10	--
2023	--	4.80	--	--	--	7.50	--

[a] NMFS commercial dealer data.

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

[c] Estimates through 2019 are based on NEFSC data as provided in 2021 management track assessment (NEFSC 2022a). Estimates for 2020 and 2021 were provided by GARFO and may be updated. Estimates for 2022 are not currently available.

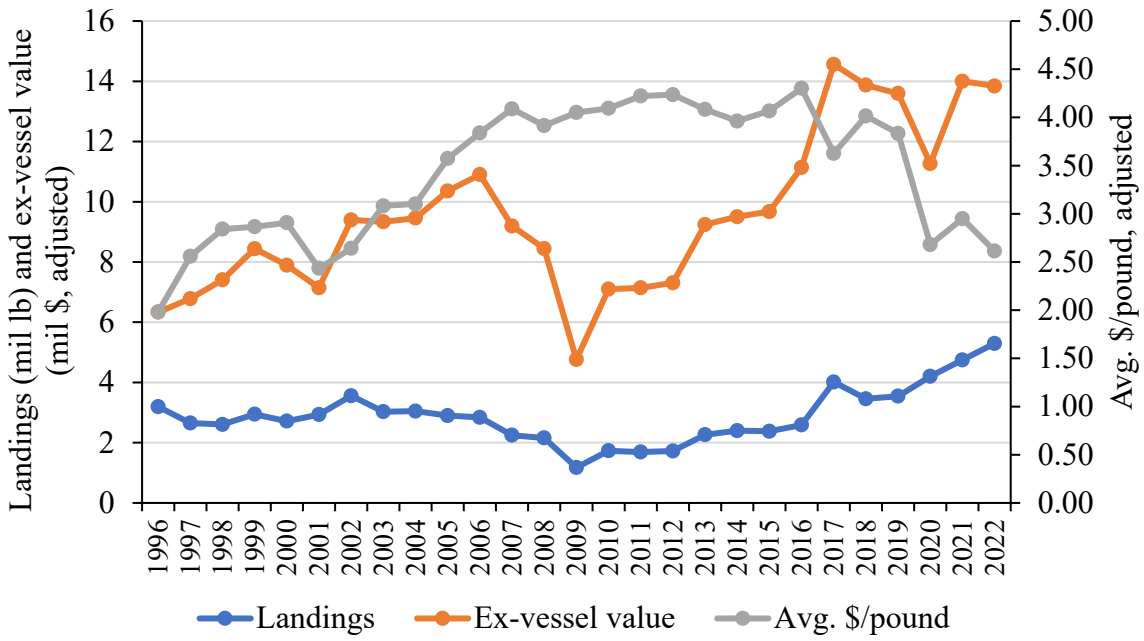

Figure 5: Landings, ex-vessel value, and average price for black sea bass, ME-NC, 1996-2022. Ex-vessel value and price are inflation-adjusted to 2022 dollars using the Gross Domestic Product Price Deflator.

Table 4: Number of dealers, by state, reporting purchases of black sea bass in 2022.

State	ME	NH	MA	RI	CT	NY	NJ	DE	MD	VA	NC
Number of dealers	0	0	36	31	14	50	27	4	7	10	17

Table 5: Statistical areas that accounted for at least 5% of the total commercial black sea bass catch (landings and dead discards) in 2022 based on federal VTRs, with associated number of trips. Federal VTR data do not include landings by vessels only permitted to fish in state waters.

Statistical Area	Percent of 2022 Commercial Black Sea Bass Catch	Number of Trips
615	22%	286
616	21%	463
537	9%	1,333
613	8%	1,702
621	6%	293
612	6%	512

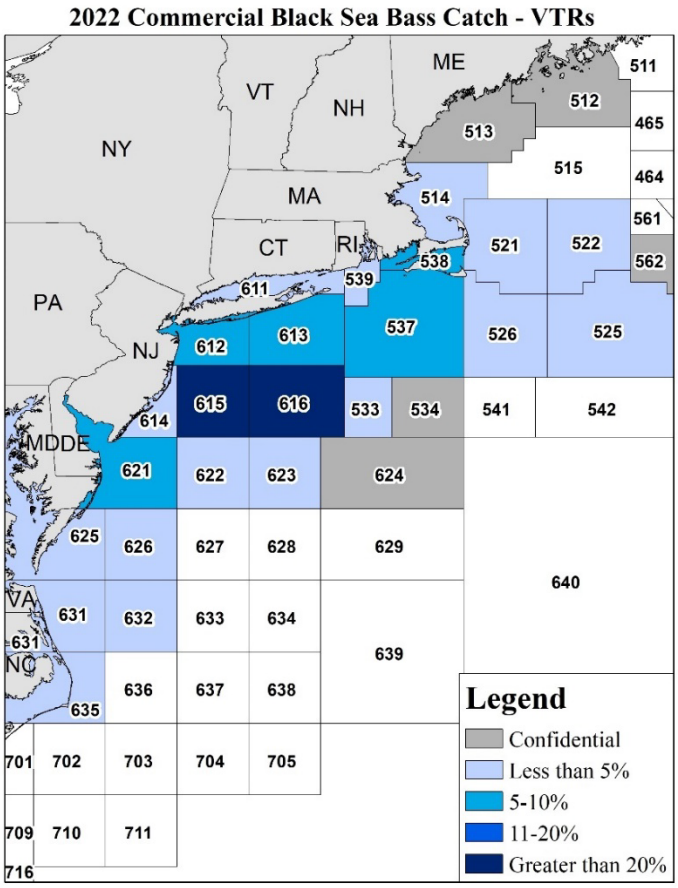

Figure 6: Proportion of black sea bass catch (landings and dead discards) by statistical area in 2022 based on federal VTR data. Confidential areas are associated with fewer than three vessels and/or dealers. The amount of catch not reported on federal VTRs (e.g., catch from vessels permitted to fish only in state waters) is unknown.

Table 6: Ports reporting at least 100,000 pounds of black sea bass landings in 2022, associated number of vessels, and percentage of total commercial landings. C = confidential.

Port name	Pounds of black sea bass landed	% of total commercial black sea bass landed	Number of vessels landing black sea bass
POINT JUDITH, RI	652,377	12%	137
POINT PLEASANT, NJ	640,632	12%	41
OCEAN CITY, MD	386,391	7%	16
MONTAUK, NY	365,483	7%	95
NEW BEDFORD, MA	339,715	6%	63
CAPE MAY, NJ	275,524	5%	26
HAMPTON, VA	202,429	4%	20
SEA ISLE CITY, NJ	175,609	3%	10
NORFOLK, VA	122,687	2%	5
NEWPORT NEWS, VA	114,720	2%	14
VIRGINIA BEACH, VA	C	C	C

Table 7: Percent of non-target species caught in observed trawls where black sea bass made up at least 75% of the observed landings, 2017-2022. Only those non-target species comprising at least 2% of the aggregate non-target catch are listed.

Species	% of total catch on black sea bass observed directed trips, 2017-2022[a]
DOGFISH, SPINY	12%
SCUP	9%
SEA ROBIN, NORTHERN	6%
SEA ROBIN, STRIPED	3%
SEA ROBIN, NK	3%
SKATE, LITTLE/WINTER, NK	2%
FLOUNDER, SUMMER (FLUKE)	2%
SKATE, LITTLE	2%

[a] Percentages are aggregate totals over 2017-2022 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

State and federal waters recreational management measures for black sea bass remained virtually unchanged from 2018-2021. In 2022, state measures were modified with the goal of achieving a 20.7% reduction in harvest compared to the 2018-2021 average (Table 8). A new approach for setting recreational management measures, referred to as the Percent Change Approach, was used to set black sea bass measures in 2023.[4] This approach required a 10% reduction in expected harvest in 2023. State waters recreational measures for 2023 are shown in Table 9. The Council and Commission agreed to use the federal conservation equivalency process to waive federal waters recreational measures for black sea bass for the first time in 2022 (Table 10). This approach was continued for 2023.

According to the most recent MRIP data, between 1981 and 2021, recreational catch (landings and live and dead discards) of black sea bass from Maine through Cape Hatteras, NC was lowest in 1984 at 4.73 million fish and was highest in 2021 at 42.67 million fish. Recreational harvest in weight was highest in 2016 at 12.05 million pounds;[5] however, harvest in numbers of fish was highest in 1986 at 19.28 million fish. Recreational harvest in weight was lowest in 1981 at 1.53 million pounds, while harvest in numbers of fish was lowest in 1998 at 1.56 million fish. Recent time series of recreational harvest and discards are shown in Figure 4 and Table 11.

Recreational harvest in 2022 was estimated at 8.14 million pounds, about 21% above the 2022 RHL of 6.74 million pounds. RHL overages have been common for black sea bass in recent years (Table 12).

[4] More information on the Percent Change Approach is available at https://www.mafmc.org/newsfeed/2022/mafmc-amp-asmfc-take-first-step-toward-recreational-management-reform-for-bluefish-sumer-flounder-scup-and-black-sea-bass

[5] The coastwide 2016 and 2017 MRIP estimates for black sea bass are viewed as outliers by the Monitoring and Technical Committees and the Scientific and Statistical Committee due to the influence of very high estimates in individual states and waves (i.e., New York 2016 wave 6 for all modes and New Jersey 2017 wave 3 for the private/rental mode). Steps have been taken to address uncertainty in these specific estimates in management.

In 2022, 54% 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 46% in federal waters (Table 13). Most of the recreational harvest in numbers of fish in 2022 was landed in New Jersey (32%), followed by New York (28%; Table 14).

For-hire vessels carrying passengers in federal waters must obtain a federal party/charter permit. In 2022, 962 vessels held a federal party/charter black sea bass permit.

About 91% of the recreational black sea bass harvest in numbers of fish in 2022 came from anglers fishing on private or rental boats, about 9% from anglers aboard party or charter boats, and 2% from anglers fishing from shore (Table 15).

The top non-target species in the recreational fishery were identified by a species guild approach that identifies species with the strongest associations on recreational trips from 2017-2021 (2021 MRIP data used here were preliminary and excluded wave 6). Scup, sea robins, summer flounder, bluefish, and tautog where highly correlated with black sea bass recreational catch (J. Brust, personal communication March 2022).

Table 8: State waters black sea bass recreational measures in 2022.

State	Min. Size	Bag Limit	Open Season
Maine	13”	10 fish	May 19-Sept 21; Oct 18-Dec 31
New Hampshire	13”	10 fish	Jan-Dec 31
Massachusetts	16”	4 fish	May 21-Sept 4
Rhode Island private & shore	16”	2 fish	May 22-Aug 31
		3 fish	Sept 1-Dec31
Rhode Island for-hire		2 fish	June 18-Aug 31
		6 fish	Sept 1-Dec 31
Connecticut private & shore	16”	5 fish	May 19-Dec 1
CT authorized for-hire monitoring program vessels		5 fish	May 19-Aug 31
		7 fish	Sept 1-Dec 31
New York	16”	3 fish	June 23-Aug 31
		6 fish	Sept 1-Dec 31
New Jersey	13”	10 fish	May 17-Jun 19
		2 fish	July 1-Aug 31
		10 fish	Oct 7-Oct 26
		15 fish	Nov 1-Dec 31
Delaware	13”	15 fish	May 15-Dec 11
Maryland			
Virginia			
North Carolina North of Cape Hatteras (35° 15’N)			

Table 9: State waters black sea bass recreational measures in 2023.

STATE	Size Limit	Possession Limit	Open Season
Maine	13”	10 fish	May 19-September 21; October 18-December 31
New Hampshire	16.5”	4 fish	January-December 31
Massachusetts	16.5”	4 fish	May 20-September 7
Rhode Island private & shore	16.5”	2 fish	May 22-August 26
		3 fish	August 27-December 31
Rhode Island for-hire	16”	2 fish	June 18-August 31
		6 fish	September 1-December 31
Connecticut private & shore	16”	5 fish	May 19-June 23; July 8-December 1
CT authorized for-hire monitoring program vessels		5 fish	May 19-August 31
		7 fish	September 1-December 31
New York	16.5”	3 fish	June 23-August 31
		6 fish	September 1-December 31
New Jersey	12.5”	10 fish	May 17-June 19
		1 fish	July 1-August 31
		10 fish	October 1-October 31
		15 fish	November 1-December 31
Delaware	13”	15	May 15-September 30; October 10-December 31
Maryland	13”	15	May 15-September 30; October 10-December 31
Virginia	13”	15	May 15-July 6; August 9-December 31
North Carolina North of Cape Hatteras (35° 15’N)	13”	15	May 15-September 30; October 10-December 31

Table 10: Federal black sea bass recreational measures, Maine - Cape Hatteras, NC, 2007 - 2023.

Year	Min. size	Bag limit	Open season
2007-2008	12”	25	Jan 1 - Dec 31
2009	12.5”	25	Jan 1 - Oct 5
2010-2011	12.5”	25	May 22 - Oct 11; Nov 1 - Dec 31
2012	12.5”	25	May 19 - Oct 14; Nov 1 - Dec 31
2013	12.5”	20	Jan 1 - Feb 28; May 19 - Oct 14; Nov 1 - Dec 31
2014	12.5”	15	May 19 - Sept 18; Oct 18 - Dec 31
2015-2017	12.5”	15	May 15 - Sept 21; Oct 22 - Dec 31
2018-2021	12.5”	15	Feb 1 - 28; May 15 - Dec 31
2022-2023	Federal waters measures waived in favor of state measures		

Table 11: Estimated recreational black sea bass catch (harvest and live and dead discards) and harvest from Maine through Cape Hatteras, North Carolina, 2013-2022.

Year	Catch (millions of fish)	Harvest (millions of fish)	Harvest (millions of pounds)	% of catch retained
2013	25.78	3.02	5.69	12%
2014	23.91	3.97	7.24	17%
2015	24.11	4.94	9.06	20%
2016	35.81	5.84	12.05	16%
2017	41.19	5.70	11.50	14%
2018	24.99	3.99	7.92	16%
2019	32.32	4.38	8.61	14%
2020	34.11	4.23	9.05	12%
2021	42.67	6.44	11.97	15%
2022	41.13	4.57	8.14	11%

Table 12: 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. Dead discard estimates for 2022 are not currently available. All values are in millions of pounds.

Year	Version of MRIP data	Rec. harvest[a]	RHL[b]	RHL over/ under	Rec. dead disc.[c]	Rec. dead catch	ACL	ACL over/ under
2014	Old MRIP (pre-revision)	3.67	2.26	+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%	1.1	4.92	4.59	+7%
2019		3.46	3.66	-5%	0.5	3.96	4.59	-14%
2020[d]	New MRIP (post-revision)	9.05	5.81	+56%	3.46	12.51	8.09	+55%
2021		11.97	6.34	+89%	4.20	16.17	7.93	+104%
2022		8.14	6.74	+21%	--	--	8.76	--
2023		--	6.57	--	--	--	9.16	--

[a] Based on MRIP data through 2017. Values for 2018 and 2019 were provided by GARFO.

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

[c] Estimates for 2014-2017 are from data update provided by the NEFSC in 2018 (most recent data from NEFSC in "old" MRIP units; NEFSC 2018). Estimates for 2018-2019 are from the 2021 management track assessment (NEFSC 2022a). Estimates for 2020 and 2021 were provided by GARFO and may be updated. Estimates for 2022 are not currently available.

[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.]

Table 13: Estimated percentage of black sea bass recreational harvest (in numbers of fish) in state and federal waters, from Maine through Cape Hatteras, North Carolina, 2013-2022.

Year	State waters	Federal waters
2013	67%	33%
2014	68%	32%
2015	69%	31%
2016	59%	41%
2017	40%	60%
2018	61%	39%
2019	62%	38%
2020	56%	44%
2021	52%	48%
2022	54%	46%
2013-2022 avg	**59%**	**41%**

Table 14: State contribution to total recreational harvest of black sea bass (in number of fish), Maine through Cape Hatteras, North Carolina, 2020 – 2022.

State	2020	2021	2022	2020-2022 average
Maine	0%	0%	0%	**0%**
New Hampshire	<1%	<1%	<1%	**0%**
Massachusetts	14%	19%	8%	**14%**
Rhode Island	15%	8%	6%	**9%**
Connecticut	10%	13%	8%	**11%**
New York	30%	14%	28%	**23%**
New Jersey	19%	30%	32%	**28%**
Delaware	3%	6%	4%	**5%**
Maryland	2%	3%	3%	**3%**
Virginia	6%	7%	8%	**7%**
North Carolina	1%	<1%	1%	**1%**

Table 15: Percent of total recreational black sea bass harvest (in numbers of fish) by recreational fishing mode, Maine through North Carolina, 2013-2022. Note that some percentages do not add to 100% due to rounding.

Year	Shore	Party/charter	Private/rental	Total number of fish (millions)
2013	2%	9%	89%	3.10
2014	3%	18%	79%	4.31
2015	<1%	20%	79%	5.26
2016	4%	8%	88%	6.03
2017	1%	9%	90%	6.00
2018	2%	12%	86%	4.07
2019	3%	17%	79%	4.52
2020	2%	11%	87%	4.32
2021	4%	12%	84%	6.48
2022	1%	9%	91%	4.68
2013-2022 avg	**2%**	**13%**	**85%**	**4.88**

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

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