

ATLANTIC STATES MARINE FISHERIES COMMISSION

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR BLACK SEA BASS
(Centropristis striata)

2018 FISHING YEAR



Prepared by the Plan Review Team

Approved by the Joint ASMFC/MAFMC Summer Flounder, Scup & Black Sea Bass Boards
October 2019

Review of the Interstate Fishery Management Plan for Black Sea Bass

I. Status of the Fishery Management Plan

Atlantic States Marine Fisheries Commission (ASMFC or Commission) management of black sea bass was initiated as one component of a multi-species fishery management plan (FMP) addressing summer flounder, scup, and black sea bass. In 1990, summer flounder was singled out for immediate action under a joint ASMFC and Mid-Atlantic Fishery Management Council (MAFMC or Council) plan. Further action on the scup and black sea bass plan was delayed until 1992 to expedite the summer flounder FMP and subsequent amendments. The joint Black Sea Bass FMP was completed and approved in 1996. The MAFMC approved regulations for black sea bass as Amendment 9 to the Summer Flounder FMP in May 1996.

The management unit of the Black Sea Bass FMP includes all black sea bass in U.S. waters in the western Atlantic Ocean from Cape Hatteras, North Carolina north to the Canadian border. Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Virginia, and North Carolina have declared an interest in black sea bass; Maine and New Hampshire declared interest in 2014, then declined interest in the fishery in 2017 and 2018, respectively. The Commission's Summer Flounder, Scup, and Black Sea Bass Management Board (or Board) and the MAFMC guide development of the FMP. Technical issues are addressed through the Summer Flounder, Scup, and Black Sea Bass Technical and Monitoring Committees. The Black Sea Bass Plan Review Team conducts annual reviews and monitors compliance, and the Summer Flounder, Scup and Black Sea Bass Advisory Panel provides industry input and advice.

The objectives of the FMP are to reduce fishing mortality to ensure overfishing does not occur, reduce fishing mortality on immature black sea bass to increase spawning stock biomass, improve yield from the fishery, promote compatible regulations among states and between federal and state jurisdictions, promote uniform and effective enforcement, and minimize regulations necessary to achieve the stated objectives. The initial black sea bass FMP (1996) aimed to reduce fishing mortality using a coastwide commercial quota allocated into quarterly periods beginning in 1998, and a recreational harvest limit constrained through the use of minimum size, possession limit, and seasonal closures.

Amendment 12 to the Summer Flounder, Scup, and Black Sea Bass FMP was approved by the Commission and MAFMC in October 1998. The Amendment revised overfishing definitions, identified and described essential fish habitat, and defined the framework adjustment process.

Addendum IV, approved in 2001, provides that upon the recommendation of the relevant monitoring committee and joint consideration with the Council, the Board will decide state regulations rather than forward a recommendation to NMFS. Addendum IV also made the states responsible for implementing the Board's decisions on regulations.

Starting in 1998, the fishery was subject to lengthy closures and had some significant quota overages in the commercial sector. Fishery closures occurring as a result of exceeded quotas resulted in increased discards of legal sized black sea bass in mixed fisheries for the remainder of the closed period. A significant financial hardship for the fishing industry resulted from a decrease in market demand caused by a fluctuating supply. To address these issues, the Board enacted a series of Emergency Rules in 2001 that established initial possession limits, triggers, and adjusted possession limits. These measures helped reduce the length of fishery closures, but the rapidly changing regulations confused fishermen and added significant administrative burden to the states. To simplify the process for all parties, the Board approved Addendum VI to provide a mechanism for initial possession limits, triggers, and adjusted possession limits to be set during the annual specification setting process without the need for further Emergency Rules.

Amendment 13, approved by ASMFC and MAFMC in 2002, implemented a federal, annual coastwide commercial quota that is managed in state waters by ASMFC using a state-by-state allocation system. The Amendment was implemented in 2003 and 2004. State-specific commercial shares are listed in Table 1. Amendment 13 also removed the necessity for fishermen who have both a Northeast Region (NER, now referred to as the Greater Atlantic Region) Black Sea Bass permit and a Southeast Region (SER) Snapper Grouper (S/G) permit to relinquish their permits for a six-month period prior to fishing south of Cape Hatteras during a northern closure.

Addendum XII, approved in 2004, continued the use of an annual coastwide commercial quota managed by the ASMFC through a state-by-state allocation system.

Addendum XIII and the MAFMC's complementary Framework 5, approved in 2004, modified the FMP so that Total Allowable Landings (TALs) for the summer flounder, scup, and/or black sea bass can be specified for up to three years.

Addendum XIX, approved in 2007, continued the state-by-state black sea bass commercial management measures, without a sunset clause. This addendum, and the MAFMC's complementary Framework 7, also broadened the descriptions of stock status determination criteria contained within the Summer Flounder, Scup, and Black Sea Bass FMP to allow for greater flexibility in those definitions, while maintaining objective and measurable status determination criteria for identifying when stocks or stock complexes covered by the FMP are overfished. It establishes acceptable categories of peer-review for stock status determination criteria. When these specific peer-review metrics are met and new or updated information is available, the new or revised stock status determination criteria may be incorporated by the Commission directly into the annual management measures for each species, rather than requiring a modification to the FMP.

Addendum XX, approved in 2009, set policies to reconcile commercial quota overages to address minor inadvertent quota overages. It streamlined the quota transfers process and established clear policies and administrative protocols to guide the allocation of transfers from

states with underages to states with overages. It also allowed for commercial quota transfers to reconcile quota overages after the year's end.

Beginning in 2011 due to concerns about equitable access to the resource, a series of addenda replaced the use of uniform coastwide measures to manage the recreational fishery. Addendum XXI established state shares of the recreational harvest limit (RHL) for 2011. Addenda XXII, XXIII, XXV, and XXVII implemented an ad hoc regional management approach for 2012-2017, whereby the northern region states of Massachusetts through New Jersey individually crafted state measures aimed at liberalizing or reducing harvest by the same percent to achieve the RHL, while the southern region states of Delaware through North Carolina largely set regulations consistent with the measures set for federal waters.

For 2018, Addendum XXX established a regional allocation of the coastwide RHL to address state concerns regarding equity and accountability in recreational black sea bass management. Based on a combination of exploitable biomass information from the latest stock assessment and historical harvest, the RHL was allocated to three regions: 1) Massachusetts through New York, 2) New Jersey as a state-specific region, and 3) Delaware through North Carolina. The 2018 state recreational measures were then revised in May 2018 following an appeal of the Addendum to the ISFMP Policy Board by Massachusetts, Rhode Island, Connecticut and New York.

In December 2018, the Board approved Addendum XXXI (and the Council approved corresponding Framework 14), which modifies the FMP to allow conservation equivalency for the recreational black sea bass fishery beginning in 2020, and recommends NOAA Fisheries implement transit provisions for Block Island Sound for recreational and commercial fisheries for all three species in the same area as the existing striped bass transit zone. The Council's framework action also modifies the Council's FMP to allow a maximum size limit to be used in the recreational fisheries for summer flounder and black sea bass.

Addendum XXXII, approved in December 2018, establishes a new process for developing recreational management measures for black sea bass and summer flounder whereby measures will be set annually through a specifications process, rather than addenda. The Board will approve measures in early spring each year, based on technical committee analysis of stock status, resource availability, and harvest estimates. To further aid in setting specifications, the Addendum establishes standards and guiding principles intended to structure the development of recreational measures on a regional basis. Public input on specifications will be gathered by states through their individual public comment processes.

II. Status of the Stock

The 2016 recent benchmark stock assessment for black sea bass was peer reviewed in December 2016 (SAW-62). The assessment found black sea bass was not overfished nor experiencing overfishing in 2015, the terminal year of the assessment. The assessment used an age-structured assessment model (ASAP) that partitioned the resource into two spatial sub-

units separated at approximately Hudson Canyon. This approach was accepted as the best scientific information available for determining stock status for black sea bass; however, it should be noted that the two sub-units were not considered separate stocks by the stock assessment working group, peer review panel, or the MAFMC Scientific and Statistical Committee.

The 2016 benchmark assessment established biological reference points for target spawning stock biomass (SSB) of $SSB_{MSYproxy} = SSB_{40\%} = 21.3$ million lbs, and for target fishing mortality (F) of $F_{MSYproxy} = F_{40\%} = 0.36$. To account for the fact that black sea bass are protogynous hermaphrodites, changing sex from female to male, the assessment defined SSB as the combined male and female mature biomass.

An operational assessment that incorporated new recreational estimates from MRIP through 2018 was peer reviewed in August 2019¹. Based on the prepublication version of the August 2019 Operational Assessment Report, the black sea bass stock north of Cape Hatteras, North Carolina was not overfished and overfishing was not occurring in 2018 relative to the revised reference points. SSB in 2018 was 73.65 million pounds (adjusted for retrospective bias), 2.4 times the updated biomass reference point (i.e., $SSB_{MSYproxy} = SSB_{40\%} = 31.07$ million lbs). The average fishing mortality on fully selected ages 6-7 fish in 2018 was 0.42 (adjusted for retrospective bias), 91% of the updated fishing mortality threshold reference point (i.e., $F_{MSYproxy} = F_{40\%} = 0.46$). Recruitment (R) of the 2017 year class as age 1 in 2018 was estimated at 16.0 million, well below the time series average. The 2011 year class was estimated to be the largest in the time series at 144.7 million fish and the 2015 year class was the second largest at 79.4 million fish. The 2018 estimates of SSB, F, and R were adjusted for internal model retrospective error.

III. Status of the Fishery

The commercial fishery is allocated 49% of the total allowable landings (TAL) for black sea bass. The principle gears used in the fishery are fish pots (or traps), otter trawls, and handlines. After peaking at 21.8 million lbs in 1952, commercial landings markedly decreased in the 1960s and have since ranged from 1.14 to 3.9 million lbs since 1981. In 1998, a commercial quota system was incorporated into management and state-by-state shares were introduced in 2003. From 2006-2016 commercial landings ranged between 1.14 million lbs in 2009 to 2.53 million lbs in 2016 (Tables 2 and 3). In 2017 and 2018, higher quotas resulted in commercial landings of approximately 3.9 million lbs, and 3.33 million lbs², respectively. The 2018 landings were under the coastwide quota of 3.52 million lbs by approximately 5.4% (Tables 2 and 3). According to the 2019 operational assessment (prepublication report), commercial dead discards in 2018

¹ The prepublication report for the August 2019 Operational Assessment can be found here: https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/5d6fdae24fd5d20001d0e08b/1567611629485/3_OpAssessments_Aug2019-Prepublication-9-4-2019-f.pdf

² Commercial landings for 2018 are preliminary and are derived from state compliance reports.

were 1.59 million lbs and total removals (landings plus dead discards) exceeded the 2018 commercial annual catch limit (ACL) of 4.35 million lbs by approximately 13% ¹.

The recreational fishery is allocated 51% of the TAL for black sea bass, loosely based on the proportion of recreational to commercial landings from 1983-1992. In 2018, recreational harvest estimates from the Marine Recreational Information Program (MRIP) were recalibrated based on the new Fishing Effort Survey (FES). In general the recalibration has resulted in higher harvest estimates throughout the time series, with more divergence in recent years (Figure 1). After a drastic peak in 1986 at 11.19 million lbs, recreational harvest averaged 5.02 million lbs annually from 1987 to 1997². Recreational harvest limits were put in place in 1998 and harvest generally increased from 1.92 million lbs in 1998 to 9.06 million lbs in 2015 (Table 4). In 2016 and 2017 harvest jumped up to 12.05 and 11.48 million lbs, respectively. In 2018, recreational harvest was estimated at 7.92 million lbs, a 31% decrease from 2017. Recreational live discards as a proportion of total catch have generally increased over the time series, averaging 46% in the 1980s, and 84% over the last decade. According to MRIP, total live recreational discards from Maine to Virginia were 20.90 million fish in 2018. Assuming 15% hook and release mortality, estimated recreational discard losses were projected to be 3.13 million fish, equal to 44% of the total recreational removals (harvest plus dead discards) in 2018. According to the 2019 operational assessment (prepublication report), recreational dead discards totaled 2.30 million pounds in 2018.

The Board and Council opened a Wave 1 recreational fishery for black sea bass from February 1-28, 2018; up to 100,000 lbs of black sea bass were allocated to the fishery, to be accounted for by the participating states according to their historic recreational harvest in February. Only Virginia and North Carolina participated in 2018; estimated harvest was between 4,826 and 5,206 lbs for Virginia and 0 lbs for North Carolina.

IV. Status of Assessment Advice

An operational stock assessment was submitted for peer review in August 2019 and will be considered for management use in October 2019. According to the assessment, the black sea bass stock north of Cape Hatteras, North Carolina was not overfished and overfishing was not occurring in 2018 compared to the revised reference points. The next management track³ stock assessment is tentatively scheduled for 2021.

¹ Prior to the start of the 2020 fishing year, NOAA Fisheries' Greater Atlantic Regional Fisheries Office (GARFO) will compile and review final 2018 catch estimates and determine if any overages occurred. NOAA will publish a notice with final 2020 specifications prior to the start of the fishing year that would account for any overages, if applicable. Since November 2018, pound-for-pound payback accountability measures (AMs) to account for non-landings (i.e., discard) overages to the ACL are no longer required when the stock is above the target biomass, as black sea bass is currently.

² Recreational data included in this report are derived from recalibrated MRIP data based on the new Fishing Effort Survey (FES). These new MRIP estimates were incorporated into the 2019 Operational Assessment.

³ A description of the revised stock assessment process for the New England and Mid-Atlantic Region can be found at: <https://s3.amazonaws.com/nefmc.org/Stock-assessment-process-june.pdf>

V. Status of Research and Monitoring

Commercial landings information is collected by the Vessel Trip Reporting system and dealer reports. States are also required to collect and report landings data. Sea sampling data from the NEFSC observer sampling program are used to estimate discards for the trawl and gill net fisheries, and VTR data is used to estimate discards from pots and hand lines if observer data are insufficient. The NEFSC weigh-out program provides commercial age and length information. Recreational landings and discards were estimated through the Marine Recreational Fisheries Statistics Survey (MRFSS) until it was replaced by MRIP, which has provided recreational landings and discards from 2008 to present. In 2018, MRIP released recalibrated harvest estimates derived from a new mail-based fishing effort survey (FES), rather than the Coastal Household Telephone Survey. Recreational discards in weight are estimated by the NEFSC. New York conducts fishery-dependent surveys of the recreational and commercial fishery, and dockside commercial sampling is conducted in North Carolina.

Fishery-independent surveys are conducted in Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, and Virginia. The Virginia Game Fish Tagging Program has targeted black sea bass since 1997. Recruitment and stock abundance data are also provided by the NEFSC spring, autumn, and winter trawl surveys.

VI. Status of Management Measures and Developing Issues

In August 2018, the Board formed a Commercial Black Sea Bass Work Group to identify management issues related to changes in stock distribution and abundance. In their report to the Board in February 2019, the Working Group highlighted the issue that state commercial quota allocations have remained unchanged for 15 years, though scientific evidence supports shifts in distribution and abundance of black sea bass. A Plan Development Team (PDT) was then formed to perform analyses and develop potential management options related to reallocation of state commercial quotas. The Board reviewed the PDT report in May 2019, and continued discussing the issue in August 2019, though no management action was initiated.

To address broad management issues for the recreational fishery, the Board and Council formed a joint work group in March 2019. To date this group has focused on identifying strategies to increase management stability and flexibility, while reducing the administrative burden of the annual evaluation and setting of recreational measures. Work on this issue is ongoing, though a management action has not been initiated.

VII. Black Sea Bass Compliance Criteria

2018 Commercial Fishery Requirements

Minimum size of possession: 11"

Minimum mesh: Nets must possess a minimum of 75 meshes of 4.5" diamond mesh in the codend, or the entire net must have a minimum mesh size of 4.5" throughout; for codends with fewer than 75 meshes, the entire net must have 4.5" diamond mesh or larger throughout

Threshold to trigger minimum mesh requirements: 500 lbs for January-March and 100 lbs for April-December

Maximum roller rig trawl roller diameter: 18"

Pot and trap escape vents: 2 ½" for circular, 2" for square, and 1-3/8 x 5-3/4" for rectangular. Must be 2 vents in the parlor portion of the trap.

Pot and trap degradable fastener provisions: a) untreated hemp, jute, or cotton string 3/16" (4.8 mm) or smaller; b) magnesium alloy timed float releases or fasteners; c) ungalvanized, uncoated iron wire of 0.094" (2.4mm) or smaller. The opening covered by a panel affixed with degradable fasteners is required to be at least 3" x 6".

Commercial quota: 3.52 million lbs

Pot and trap definition: A black sea bass pot or trap is defined as any pot or trap used by a fisherman to catch and retain black sea bass.

2018 Recreational Fishery Requirements

Recreational harvest limit: 3.66 million lbs

See Table 5 for 2018 state recreational measures.

Other Measures

Reporting: States are required to submit an annual compliance report to the Chair of the Black Sea Bass Plan Review Team by June 1st. The report must detail the state's management program for the current year and establish proof of compliance with all mandatory management measures. It should include landings information from the previous year, and the results of any monitoring or research programs.

Black Sea Bass FMP Compliance Schedule*

| <u>Commercial</u> | |
|--|---------------|
| 11" Size Limit | 1/1/02 |
| 4.5" diamond minimum mesh throughout codend and threshold provisions | 1/1/02 |
| Pot and trap escape vents and degradable fasteners | 1/1/97 |
| Maximum 18" roller diameter restriction | 1/1/97 |
| States must report to NMFS all landings from state waters | 1/1/98 |
| <u>Recreational</u> | |
| Size Limit | 1/1/97 |
| Harvest Limit | 1/1/98 |
| Ability to implement possession limits and seasonal closures | 1/1/98 |
| <u>General</u> | |
| Annual compliance report | Annually, 6/1 |

*This summary of compliance criteria is intended to serve as a quick reference guide. It in no way alters or supersedes compliance criteria as contained in the Black Sea Bass FMP and any Amendments thereto. Management measures may change annually.

VIII. Status of Implementation of FMP Requirements

For 2018, states and jurisdictions required to comply with the provisions of the Black Sea Bass FMP are: New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Potomac River Fisheries Commission, Virginia, and North Carolina. All states implemented regulations in compliance with the requirements approved by the Board.

Most states appear in compliance with the FMP provisions for fishing year 2018; however, the following issues were noted:

- In 2018, Rhode Island did not implement the provision regarding the threshold to trigger minimum mesh requirements: (500 lbs for January - March; 100 lbs from April- December). Rhode Island has explained that the provision was inadvertently left out of the regulations, but the possession limit would not allow for this trigger to be hit in the summer. Rhode Island will add it to their next public hearing to have it reinstated in the regulations prior to January 2020 where the possession limit could allow the trigger to be hit.
- Maryland did not implement the size requirement for ghost panels to be at least 3"x 6", and their regulations are unclear with regard to the requirement for two escape vents in the trap parlor.

These states have indicated they will resolve the above issues as soon as possible. Therefore, the PRT determined that all states have made a good faith effort to implement regulations in compliance with the requirements approved by the Board.

In addition, the PRT made the following recommendations to improve compliance reports:

- *State compliance reports should include a copy of the regulations in effect for the relevant fishing year to facilitate the review process. Not all states provided their regulations.*
- *State compliance reports should explicitly list all required regulations and whether they are in compliance with the FMP.*
- *Pots/traps should be separated from other types of gear in the commercial harvest by gear tables included in compliance reports.*
- *Virginia should note in their compliance report that trawling is prohibited in state waters to make it clear their regulations are in compliance with the FMP.*

IX. References

NEFSC (Northeast Fisheries Science Center). 2017. 62nd Northeast Regional Stock Assessment Workshop (62nd SAW) Assessment Report. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 17-03; 822 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026, or online at <http://nefsc.noaa.gov/publications/>.

Table 1. State by state allocation of annual commercial quota.

| State | % Allocation |
|----------------|---------------------|
| Maine | 0.50% |
| New Hampshire | 0.50% |
| Massachusetts | 13% |
| Rhode Island | 11% |
| Connecticut | 1% |
| New York | 7% |
| New Jersey | 20% |
| Delaware | 5% |
| Maryland | 11% |
| Virginia | 20% |
| North Carolina | 11% |

Table 2. Black Sea Bass Commercial Landings by State (2008-2018) in pounds. Source: State Compliance Reports & ACCSP (June 2019). Commercial Landings Summaries (Dealer Reports)-Non-Confidential; generated by C. Starks; using ACCSP Data Warehouse, Arlington, VA.

| Year | ME | NH | MA | RI | CT | NY | NJ | DE | MD | VA | NC* | TOTAL |
|------|----|----|---------|---------|--------|---------|---------|---------|---------|---------|---------|------------------|
| 2008 | | | 316,719 | 227,065 | 15,556 | 201,934 | 424,722 | 60,700 | 160,471 | 216,448 | 208,726 | 1,832,342 |
| 2009 | | | 148,470 | 128,084 | 16,138 | 124,026 | 204,213 | 50,285 | 125,643 | 164,564 | 176,748 | 1,138,171 |
| 2010 | 3 | | 260,178 | 241,886 | 21,497 | 201,708 | 305,331 | 79,791 | 203,088 | 263,563 | 107,996 | 1,685,042 |
| 2011 | | 49 | 287,662 | 211,597 | 20,496 | 183,420 | 293,609 | 85,564 | 182,223 | 274,699 | 98,505 | 1,637,823 |
| 2012 | | | 292,010 | 204,360 | 18,158 | 153,338 | 310,842 | 82,351 | 144,174 | 392,332 | 61,187 | 1,658,752 |
| 2013 | | | 328,393 | 265,691 | 23,066 | 180,694 | 421,310 | 108,545 | 234,074 | 495,938 | 88,242 | 2,145,954 |
| 2014 | | | 307,046 | 267,703 | 26,957 | 223,677 | 493,775 | 102,279 | 251,724 | 387,518 | 212,488 | 2,273,167 |
| 2015 | | | 347,820 | 238,647 | 24,591 | 151,409 | 468,248 | 111,508 | 236,183 | 422,333 | 241,538 | 2,242,277 |
| 2016 | | | 354,031 | 294,343 | 29,236 | 184,529 | 525,647 | 96,794 | 271,512 | 553,491 | 225,405 | 2,534,987 |
| 2017 | | | 541,932 | 458,153 | 43,798 | 301,774 | 898,665 | 117,452 | 409,594 | 745,087 | 388,858 | 3,905,313 |
| 2018 | | | 481,068 | 371,948 | 39,408 | 270,680 | 698,665 | 169,078 | 373,898 | 606,240 | 317,565 | 3,328,550 |

* Landings from NC are from north of Cape Hatteras from 2008 forward

**2018 landings are preliminary from state compliance reports

Table 3. 2017 Commercial Landings and 2018 Black Sea Bass State by State Quotas (pounds). Source: Personal communication with NOAA Fisheries, September 9, 2019.

| State | % Allocation | 2017 Landings | 2018 ASMFC Initial Quota |
|-----------------------------|---------------------|-------------------------|---------------------------------|
| Maine | 0.005 | 0 | 17,600 |
| New Hampshire | 0.005 | 0 | 17,600 |
| Massachusetts | 0.13 | 541,932 | 457,600 |
| Rhode Island | 0.11 | 458,153 | 387,200 |
| Connecticut | 0.01 | 43,798 | 35,200 |
| New York | 0.07 | 301,774 | 246,400 |
| New Jersey | 0.2 | 898,665 | 704,000 |
| Delaware | 0.05 | 117,452 | 176,000 |
| Maryland | 0.11 | 409,594 | 387,200 |
| Virginia | 0.2 | 745,087 | 704,000 |
| North Carolina | 0.11 | 388,858 | 387,200 |
| Coastwide Total | 100% | 3,905,313 | 3,520,000 |
| 2017 Coastwide Quota | | 4,120,400 | |
| Overage | | None (Under by 215,087) | |

* Landings from North Carolina are from North of Cape Hatteras

Table 4. Black Sea Bass Recreational Harvest Estimates by State (2008-2018) in pounds.

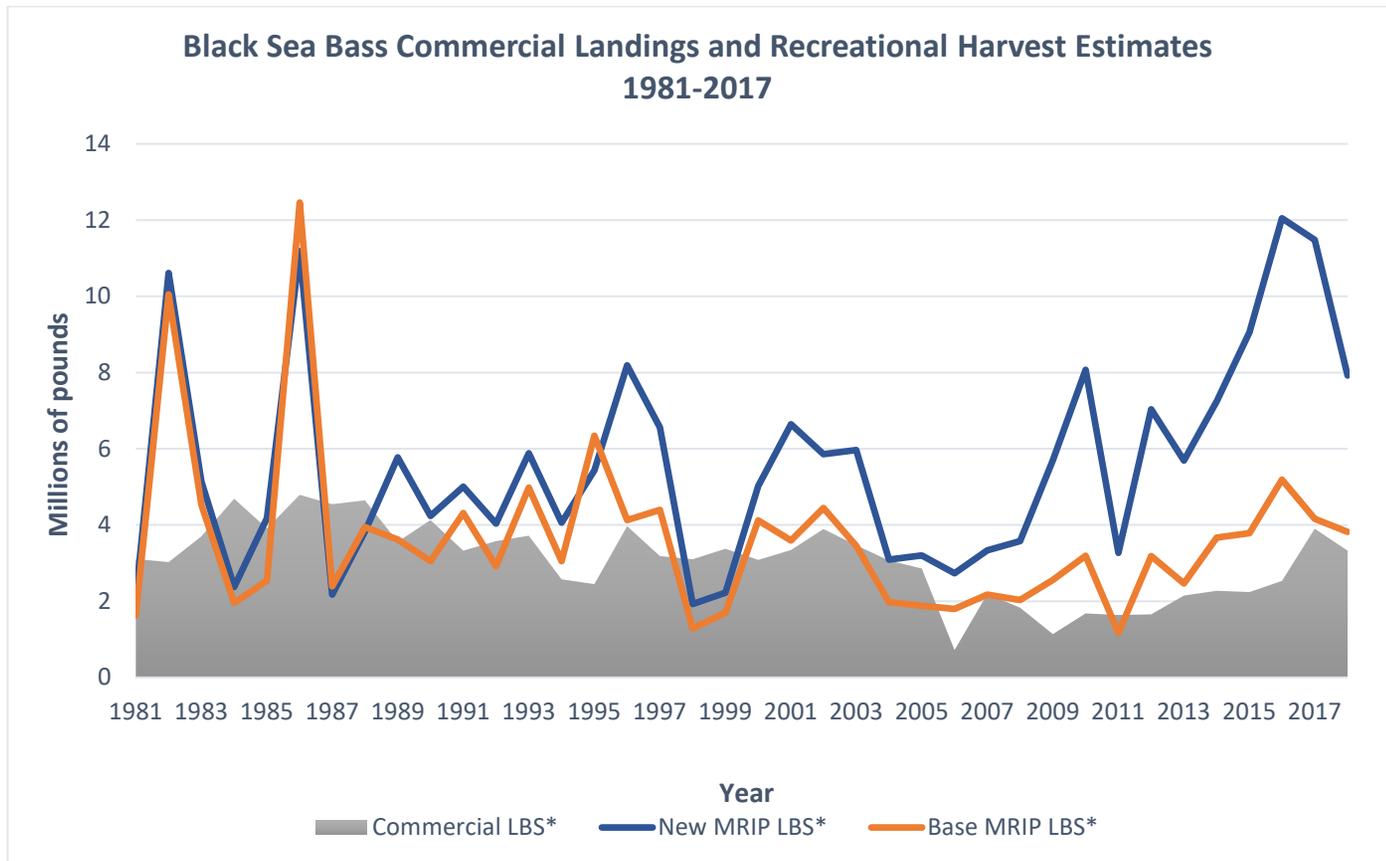
Source: MRIP, 2019 (recalibrated data based on FES Survey). NC estimated for North of Cape Hatteras were provided by NC DENR.

| State | ME | NH | MA | RI | CT | NY | NJ | DE | MD | VA | NC* | Coastwide |
|-------------|----|--------|-----------|-----------|-----------|-----------|-----------|---------|---------|-----------|---------|-------------------|
| 2008 | | | 531,026 | 126,496 | 73,201 | 794,957 | 1,848,100 | 48,854 | 34,668 | 101,983 | 14,948 | 3,574,232 |
| 2009 | | | 1,144,810 | 128,218 | 8,146 | 1,959,703 | 2,025,902 | 154,452 | 40,832 | 228,281 | 8,283 | 5,698,627 |
| 2010 | | | 2,945,488 | 643,348 | 46,242 | 1,956,546 | 2,191,362 | 137,222 | 48,012 | 81,377 | 24,471 | 8,074,067 |
| 2011 | | | 1,251,169 | 236,607 | 41,727 | 855,115 | 423,606 | 131,177 | 171,402 | 48,340 | 111,538 | 3,270,681 |
| 2012 | | 19,130 | 2,839,821 | 645,039 | 429,493 | 936,640 | 1,778,079 | 173,628 | 198,815 | 11,278 | 8,231 | 7,040,154 |
| 2013 | | 64,478 | 1,228,732 | 313,316 | 413,558 | 2,106,973 | 1,389,868 | 56,384 | 35,802 | 58,919 | 21,617 | 5,689,647 |
| 2014 | | | 2,148,079 | 659,562 | 1,063,682 | 2,224,755 | 892,307 | 62,504 | 79,659 | 109,054 | 1,269 | 7,240,871 |
| 2015 | | | 1,629,169 | 807,840 | 1,011,926 | 4,722,098 | 596,811 | 59,710 | 118,061 | 104,944 | 6,224 | 9,056,782 |
| 2016 | | | 1,765,705 | 1,124,414 | 1,364,242 | 6,547,541 | 693,808 | 127,182 | 274,441 | 148,818 | 1,591 | 12,047,742 |
| 2017 | | | 1,444,180 | 749,965 | 1,102,722 | 5,515,386 | 2,088,631 | 150,530 | 239,715 | 156,810 | 33,421 | 11,481,361 |
| 2018 | | | 1,818,682 | 1,628,875 | 873,055 | 1,726,555 | 1,440,761 | 109,365 | 189,711 | 123,937** | 9,494** | 7,920,435 |

*Harvest is from north of Hatteras from 2008 to 2018.

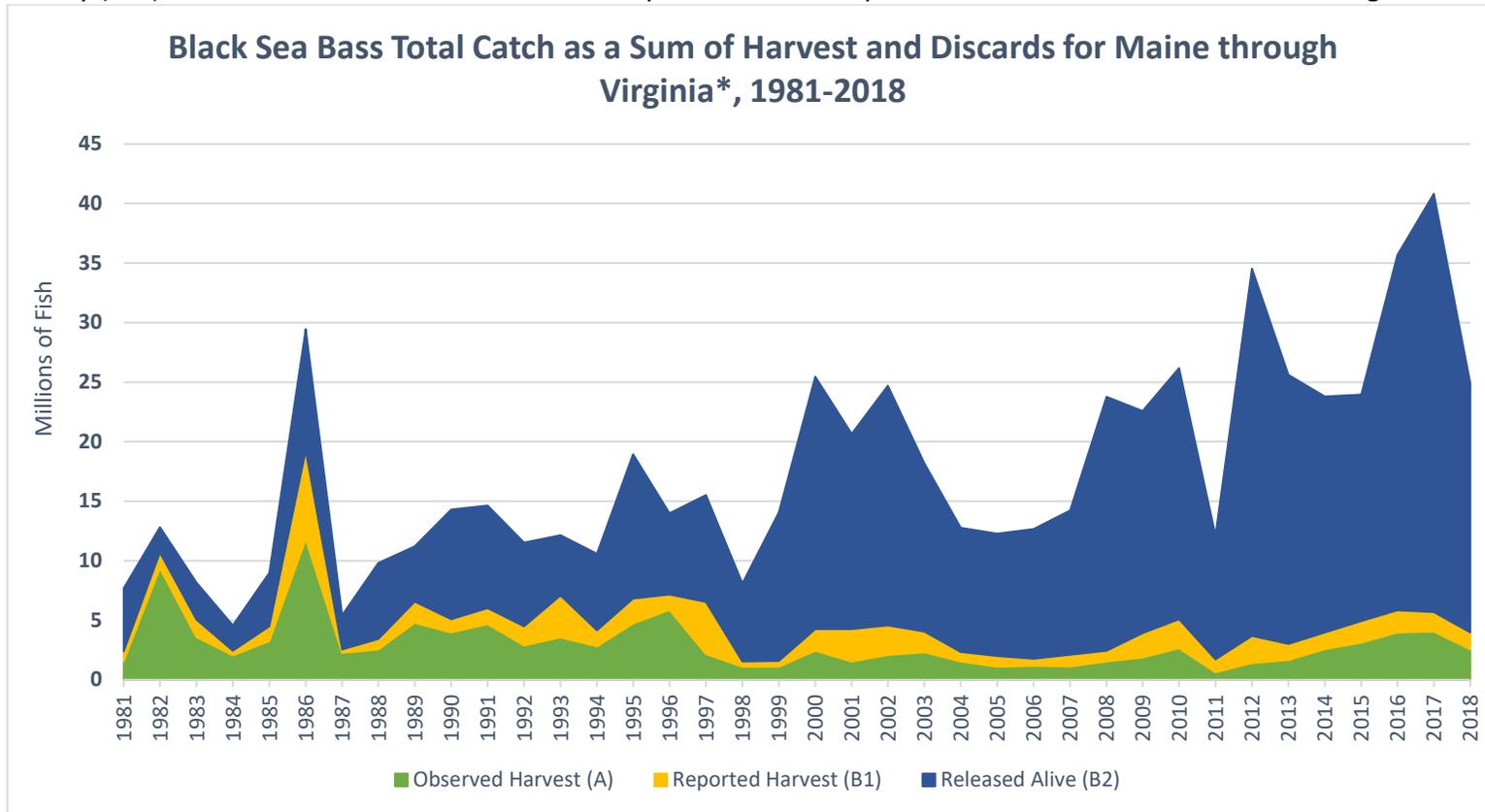
**Virginia and North Carolina participated in the February 2018 black sea bass recreational fishery. Virginia estimated 4,826 lbs of harvest in February 2018, and North Carolina estimated zero harvest. These estimates are not included in the state total for 2018.

Figure 1. Black Sea Bass Commercial Landings and Recreational Harvest Estimates, 1981-2017. Source: Recreational harvest from MRIP, June 2019. Commercial landings from ACCSP Data Warehouse, June 2019. Note: New MRIP recreational harvest estimates were released July 2, 2018, following recalibration of the time series based on the new Fishing Effort Survey (FES). The new MRIP estimates will be incorporated into an operational assessment in 2019 for management use. For comparison, the “Base MRIP” estimates represent the precalibrated harvest estimates based on the Coastal Household Telephone Survey.



*Commercial and recreational harvest estimates include landings for all of NC prior to 2004. After 2004, only landings north of Cape Hatteras are included.

Figure 2. Black Sea Bass Total Catch as a Sum of Harvest and Discards. Source: Recreational harvest from MRIP, July 2019. Note: New MRIP recreational harvest estimates were released July 2, 2018, following recalibration of the time series based on the new Fishing Effort Survey (FES). The new MRIP estimates will be incorporated into an operational assessment in 2019 for management use.



*Discard estimates for NC north of Cape Hatteras are not yet available.

Table 5. 2018 Black Sea Bass Recreational Management Measures by State

| State | Minimum Size (inches) | Possession Limit | Open Season |
|--|------------------------------|-------------------------|--|
| Maine | 13 | 10 fish | May 19-September 21; October 18-December 31 |
| New Hampshire | 13 | 10 fish | January 1-December 31 |
| Massachusetts | 15 | 5 fish | May 19-September 12 |
| Rhode Island | 15 | 3 fish | June 24-August 31 |
| | | 7 fish | September 1-December 31 |
| Connecticut (Private & Shore) | 15 | 5 fish | May 19-December 31 |
| CT Authorized Party/Charter Monitoring Program Vessels | | 5 fish | May 19-August 31 |
| | | 7 fish | September 1-December 31 |
| New York | 15 | 3 fish | June 23-August 31 |
| | | 7 fish | September 1-December 31 |
| New Jersey | 12.5 | 10 fish | May 15-June 22 |
| | | 2 fish | July 1-August 31 |
| | | 10 fish | October 8-October 31 |
| | 13 | 15 fish | November 1-December 31 |
| Delaware | 12.5 | 15 fish | May 15-December 31 |
| Maryland | 12.5 | 15 fish | May 15-December 31 |
| Virginia | 12.5 | 15 fish | February 1-28 |
| | | | May 15-December 31 |
| North Carolina, North of Cape Hatteras (N of 35° 15'N) | 12.5 | 15 fish | February 1-28 |
| | | | May 15-December 31 |
| Minimum Federal Measures | 12.5 | 15 fish | May 15-December 31 |

Table 6. 2019 Black Sea Bass Recreational Management Measures by State

| State | Minimum Size (inches) | Possession Limit | Open Season |
|--|------------------------------|-------------------------|---|
| Maine | 13 | 10 fish | May 19-September 21; October 18- December 31 |
| New Hampshire | 13 | 10 fish | January 1-December 31 |
| Massachusetts | 15 | 5 fish | May 18-September 8 |
| Rhode Island | 15 | 3 fish | June 24- August 31 |
| | | 7 fish | September 1-December 31 |
| Connecticut (Private & Shore) | 15 | 5 fish | May 19-December 31 |
| CT (Authorized party/charter monitoring program vessels) | 15 | 5 fish | May 19-August 31 |
| | | 7 fish | September 1-December 31 |
| New York | 15 | 3 fish | June 23-August 31 |
| | | 7 fish | September 1-December 31 |
| New Jersey | 12.5 | 10 fish | May 15-June 22 |
| | | 2 fish | July 1-August 31 |
| | | 10 fish | October 8-October 31 |
| | 13 | 15 fish | November 1-December 31 |
| Delaware | 12.5 | 15 fish | May 15-December 31 |
| Maryland | 12.5 | 15 fish | May 15-December 31 |
| Virginia | 12.5 | 15 fish | February 1-28 |
| | 12.5 | 15 fish | May 15-May 31; June 22-December 31 |
| North Carolina, North of Cape Hatteras (N of 35° 15'N) | 12.5 | 15 fish | February 1-28 |
| | 12.5 | 15 fish | May 17-December 31 |
| Minimum Federal Measures | 12.5 | 15 fish | May 15-December 31 |