

2013 REVIEW OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
FISHERY MANAGEMENT PLAN FOR the 2012 Black Sea Bass Fishery
Black Sea Bass (*Centropristis striata*)



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I. Status of the Fishery Management Plan

ASMFC 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) 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. The Commission's Summer Flounder, Scup, and Black Sea Bass Management Board and the MAFMC Demersal Species Committee guide development of the FMP. Technical issues are addressed through the Summer Flounder, Scup, and Black Sea Bass Technical Committee and the Black Sea Bass Monitoring Committee. The Black Sea Bass Plan Review Team conducts annual reviews and monitors compliance and the Scup and Black Sea Bass Advisory Panel provide industry input and advice.

The objectives of the FMP are to reduce fishing mortality to assure 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 to minimize regulations necessary to achieve the stated objectives. The FMP currently defines overfishing as fishing in excess of $F_{MSY}=F_{40\%}$, or $F=0.42$. It defines overfished as the spawning stock biomass being below $SSB_{MSY}=SSB_{40\%}=12,537$ mt. The FMP intends to reduce fishing mortality by a coastwide commercial quota allocated by state, 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 in October 1998 and established revised overfishing definitions, identification and description of essential fish habitat, and defined the framework adjustment process.

Addendum IV, approved on January 29, 2001, provides that upon the recommendation of the relevant monitoring committee and joint consideration with the Council, the Board will decide the state regulations rather than forward a recommendation to NMFS. Addendum IV also made the states responsible for implementing the Board's decision on regulations.

Starting in 1998, the fishery was subject to lengthy closures and had some significant quota overages. 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 Management 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 in May 2002, implemented a federal, coastwide annual quota that is managed by ASMFC using a state-by-state allocation system. The Amendment was implemented in 2003 and 2004. State-specific shares are listed in Table 1.

Amendment 13 also removed the necessity for fishermen who have both a NER BSB permit and a SER 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, continues the use of a state-by-state allocation system, managed by the ASMFC on an annual coastwide commercial quota.

Addendum XIII modifies the FMP so that, within a given year, TALs for the summer flounder, scup, and/or black sea bass can be specified for up to three years.

Addendum XIX continues the state-by-state black sea bass commercial management measures, without a sunset clause. This addendum also broadens 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.

Addendum XX sets policies to reconcile quotas overages to address minor inadvertent quota overages. It was approved in November 2009. It streamlines the quota transfers process and establishes clear policies and administrative protocols to guide the allocation of transfers from states with underages to states with overages. It also allows for quota transfers to reconcile quota overages after year's end.

II. Status of the Stock

The assessment model for black sea bass changed in 2008 from a simple index-based model to a complex statistical catch at length model incorporating a broad range of fishery and survey data. The fishery catch is modeled as a single fleet with indices of stock abundance from NEFSC winter, spring, and autumn surveys. A model averaging approach was adopted using the average

of results from ten candidate models. There appears to be some consistent retrospective bias in F and SSB estimates but less so in recruitment.

Recruitment at age 1 averaged 26.4 million fish during 1968-1999 and in 2000, peaked at 56.0 million fish. The 2000 and 2002 year classes are estimated to be the largest of the time series, at 56.0 and 39.3 million age 1 fish. With greatly improved recruitment and declining fishing mortality rates since 2000, SSB has steadily increased since to about 11,158 mt in 2011. The inter-model variation bounds the biological reference point and suggests that black sea bass has reached or exceeded SSB_{MSY} .

The new reference points are $F_{MSY} = F_{40\%} = 0.44$ and $SSB_{MSY} = SSB_{40\%} = 10,886 \text{ mt} = 24 \text{ million lbs}$. The stock biomass threshold of $\frac{1}{2} SSB_{MSY} = \frac{1}{2} SSB_{40\%} = 5,443 \text{ mt} = 12 \text{ million lbs}$. The current F is 0.21 and SSB is 24.6 million lbs, therefore overfishing is not occurring and the stock is rebuilt.

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 pots, otter trawl and handline. After peaking at 218 million pounds in 1952, commercial landings markedly decreased in the '60s and have since ranged from 1.3 to 4.4 million pounds. From 1988 to 1997 landings averaged 2.86 million pounds. In 1998 a quota system was incorporated into management and state-by-state share were introduced in 2003, since 1998 landings have ranged from 2.86 to 3.53 million pounds with a decrease in landings in 2009, 2010, and 2011, followed by an increase to 5.3 million pounds in 2012 (Table 2 and 3). Commercial discards are generally less than 441,000 pounds per year.

The recreational fishery is allocated 51% of the TAL for black sea bass. After peaking in 1985 at 12.35 million pounds, recreational harvest averaged 3.75 million pounds annually from 1988 to 1997. Recreational harvest limits were put in place in 1998 and harvest ranged from 1.1 to 4.4 million pounds from 1998 to 2012 (Table 4). Recreational discard are somewhat higher than commercial ranging from 220,500 to 1,764,000 pounds per year.

IV. 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 sea sampling program are used to estimate discards. The NEFSC weigh-out program provides commercial age and length information. Recreational landings and discards were estimated through the Marine Recreational Fisheries Statistics Survey until 2008, with the Marine Recreational Information Program (MRIP) replacing it for all data collected from 2008 to present.

Fishery-independent surveys are conducted in Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Maryland, Virginia, and North Carolina. The Virginia Game Fish Tagging Program has targeted black sea bass since 1997. Data from the tagging program will be used to develop an analytical, age-based model. Recruitment and stock abundance data are provided by the NEFSC spring, autumn, and winter trawl surveys.

V. Status of Assessment Advice

The new reference points and stock status determinations should be used with caution due to the uncertainty in the natural mortality estimate, the model input parameters, residuals patterns in model fit, and significant uncertainty associated with managing a protogynous species (i.e. individuals change sex from female to male)

The next assessment update will be in fall of 2014.

VI. Status of Management Measures and Developing Issues

Currently there are no developing black sea bass FMPs.

VII. Black Sea Bass Compliance Criteria

2012 Commercial Fishery Requirements

Minimum size of possession: 11"

Minimum mesh: larger nets are required to 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; smaller nets must have 4.5" mesh or larger throughout

Mesh Threshold: 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 would be required to be at least 3" x 6".

Commercial quota: 1.71 million pounds

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.

2013 Recreational Fishery Requirements

See Table 6.

Recreational harvest limit: 1.85 million pounds

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.

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. Also please note that the management measures may change annually.

VII. Compliance

States and jurisdictions required to comply with the provisions of the Black Sea Bass FMP are: 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.

All states appear in compliance with the FMP provisions for fishing year 2012.

Black Sea Bass FMP Compliance Schedule

Commercial

9" Size Limit	1/1/97
10" Size Limit	1/1/98
11" Size Limit	1/1/02
Minimum mesh and threshold provisions	1/1/02
Pot and trap escape vents and degradable fasteners	1/1/97
Roller diameter restriction	1/1/97
States must report to NMFS all landings from state waters	1/1/98

Recreational

Size Limit	1/1/97
Harvest Limit	1/1/98
Ability to implement possession limits and seasonal closures	1/1/98

General

Annual compliance report	Annually, 7/1
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VIII. Recommendations

Table 1. State by state allocation for annual 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 (2002-2012) in thousands of pounds.

Source: National Marine Fisheries Service Commercial Landings Data (7/18/2013)

State	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
MA	962,312	415,077	382,389	510,162	596,480	442,136	316,722	148,470	260,181	287,666	248,463
RI	341,508	368,301	435,733	293,976	273,161	356,542	226,925	128,053	241,892	185,709	187,806
CT	29,863	22,376	24,867	17,522	10,445	10,123	15,554	17,854	21,422	20,485	
NY	287,231	227,381	240,517	244,074	315,700	270,392	201,887	123,806	201,717	183,423	153,173
NJ	620,153	667,989	697,085	543,733	494,352	480,112	424,667	204,213	305,294	293,609	310,427
DE	12,414	97,535	83,728	72,931	87,381	63,431	60,700	5,843	2,989	3,524	81,976
MD	279,889	312,903	283,605	336,662	350,385	170,909	159,453	125,643	203,088	182,711	140,861
VA	771,401	507,149	498,204	475,356	327,281	189,396	215,390	164,389	263,565	274,699	4,111,708
NC*	591,857	850,562	881,261	690,043	777,659	472,931	484,507	614,734	400,879	272,189	61,187
Coastwide	3,896,628	3,469,273	3,527,725	3,184,459	3,232,844	2,455,972	2,105,805	1,533,005	1,901,027	1,704,015	5,295,601

* Landings are from both north and south of Hatteras

Table 3. 2012 Commercial Allocation and Landings in pounds

State	2012 ASMFC Quota (including transfer)	2012 Landed (as of July 2013)	2013 ASMFC Quota
ME	8,536		8,900
NH	8,536		8,900
MA	221,936	248,463	231,400
RI	187,931	187,806	195,800
CT	17,072	17,677	17,800
NY	119,504	153,173	124,600
NJ	341,440	310,427	356,000
DE	85,360	81,976	89,000
MD	187,792	140,861	195,800
VA	460,541	411,708	356,000
NC	68,552	61,187	195,800
Coastwide	1,707,200	1,613,278	1,780,000

Table 4. Black Sea Bass Recreational Landings by State (2002-2012) in thousands of pounds.

Source: National Marine Fisheries Service MRFSS Online Query (2001-2003); MRIP (2004-present)

State	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
MA	365,060	146,990	81,519	337,112	161,388	190,363	330,562	445,122	702,138	194,752	519,910
RI	132,322	74,877	79,926	39,700	67,194	81,912	83,047	48,071	160,427	50,203	102,548
CT	29,096	7,948	24,517	161	5,392	2,985	36,766	465	15,682	8,378	110,858
NY	587,579	375,657	143,899	312,398	401,464	433,867	364,793	711,568	543,243	274,473	321,516
NJ	1,877,455	1,726,003	1,065,920	898,505	921,265	1,237,777	572,508	821,703	687,451	148,487	107,650
DE	636,261	278,172	59,152	71,275	121,048	110,316	30,029	52,441	21,028	42,961	40,141
MD	484,659	265,996	155,722	85,715	118,940	68,852	48,071	35,703	36,018	47,445	33,080
VA	211,659	390,424	63,836	120,554	157,117	90,966	79,868	180,927	29,718	18,964	4,076
NC*	118,219	182,594	274,340	229,893	151,075	196,134	90,977	145,208	138,961	95,004	75,638
Coastwide	4,442,310	3,448,661	1,948,831	2,095,313	2,104,883	2,413,172	1,636,621	2,441,162	2,704,231	1,122,368	2,162,986

*NC harvest is reported for the full coast, therefore it will also include landing south of Hatteras which is outside of the management unit.

Table 5. 2012 recreational management measures for black sea bass by state.

State	Minimum Size (inches)	Possession Limit	Open Season
Massachusetts	14	10 fish	May 22-June 24
		20 fish	June 25-October 31
Rhode Island	13	15 fish	June 15-December 31
Connecticut	13	15 fish	June 15-December 31
New York	13	15 fish	June 15-December 31
New Jersey	12.5	25 fish	May 19 to October 14 and November 1 to December 31
Delaware	12.5	25 fish	May 19 to October 14 and November 1 to December 31
Maryland	12.5	25 fish	May 19 to October 14 and November 1 to December 31
PRFC	12.5	25 fish	May 19 to October 14 and November 1 to December 31
Virginia	12.5	25 fish	May 19 to October 14 and November 1 to December 31
North Carolina (North of Cape Hatterass 35° 15'N Latitude)	12.5	25 fish	May 19 to October 14 and November 1 to December 31

Table 6. 2013 recreational management measures for black sea bass by state.

State	Minimum Size (inches)	Possession Limit	Open Season
Massachusetts (Private and For-hire)	14	4 fish	May 11- October 31
Massachusetts (For-hire with Letter of Authorization from MA DMF)	14	10 fish	May 11- June 14
		20 fish	July 1- August 11
			September 1- October 10
Rhode Island	13	3 fish	June 15- August 31
		7 fish	September 1- December 31
Connecticut (Private and Shore)	13	3 fish	June 15- August 31
		8 fish	September 1- October 29
			For-hire*
New York	13	8 fish	July 10- December 31
New Jersey	12.5	20 fish	May 19- August 8; September 27- October 14; November 1- December 31
Delaware	12.5	15 fish	January 1- February 28
		20 fish	May 19 - October 14 and November 1 - December 31
Maryland	12.5	15 fish	January 1 - February 28
		20 fish	May 19 - October 14 and November 1 - December 31
PRFC	12.5	15 fish	January 1 - February 28
		20 fish	May 19 - October 14 and November 1 - December 31
Virginia	12.5	15 fish	January 1 - February 28
		20 fish	May 19 - October 14 and November 1 - December 31
North Carolina (North of Cape Hatterass 35° 15'N Latitude)	12.5	15 fish	January 1 - February 28
		20 fish	May 19 - October 14 and November 1 - December 31

*Party/Charter Vessels enrolled In Monitoring Program