

ATLANTIC STATES MARINE FISHERIES COMMISSION

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR BLACK SEA BASS
(Centropristis striata)

2009 FISHING YEAR



Prepared by the Plan Review Team

Approved by the Joint ASMFC/MAFMC Summer Flounder, Scup & Black Sea Bass Boards
November 2010

Review of the Interstate Fishery Management Plan for Black Sea Bass

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. It also addendum 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 12,978 mt in 2009. 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 $F_{MSY} = F_{40\%} = 0.42$ and $SSB_{MSY} = SSB_{40\%} = 12,537 \text{ mt} = 27.6$ million lbs. The stock biomass threshold of $\frac{1}{2} SSB_{MSY} = \frac{1}{2} SSB_{40\%} = 6,269 \text{ mt} = 13.8$ million lbs. The current F is 0.26 and SSB is 12,978 mt, 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 from 2008 of a total of 1.4 million pounds (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 2009 (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 weighout program provides commercial age and length information. Recreational landings and discards are estimated through the Marine Recreational Fisheries Statistics Survey.

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 and 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 early summer of 2011.

VI. Status of Management Measures and Developing Issues

Currently there are no developing black sea bass FMPs.

VII. Black Sea Bass Compliance Criteria

2009 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: 1.76 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.

2010 Recreational Fishery Requirements

Minimum Size: 12.5 inches

Possession Limit: 25 fish

Open Season: May 22 to October 11 and November 1-December 31.

Recreational harvest limit: 1.83 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.

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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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 (1994-2004) in thousands of pounds.

Source: National Marine Fisheries Service Commercial Landings Data

State	1999	2000	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
ME		9	8	10	85				9	465								
NH													336					
MA	572,674	625,902	20,800	41,525	39,646	91,005	280,662	572,674	625,902	570,300	962,312	415,077	382,389	510,162	596,480	442,136	316,722	148,470
RI	175,740	101,493	86,616	89,006	156,778	177,592	134,753	175,740	101,493	375,944	341,508	368,301	435,733	293,976	273,161	356,542	226,925	128,053
CT	14,756	14,637	4,000	8,501	16,826	11,972	8,860	14,756	14,637	19,639	29,863	22,376	24,867	17,522	10,445	10,123	15,554	16,312
NY	207,134	138,538	121,461	192,638	259,260	262,241	134,980	207,134	138,538	248,934	287,231	227,381	240,517	244,074	315,700	270,392	201,887	123,806
NJ	500,882	587,292	956,917	797,092	1,221,869	705,244	578,517	500,882	587,292	646,824	620,153	667,989	697,085	543,733	494,352	480,112	424,667	204,213
DE		93,587				152,229			93,587	25,449	12,414	97,535	83,728	72,931	87,381	63,431	51,214	
MA	439,277	304,927	220,492	302,565	546,487	513,177	314,775	439,277	304,927	150,250	279,889	312,903	283,605	336,662	350,385			
VA	740,015	647,984	389,967	362,817	789,802	506,467	816,470	740,015	647,984	661,208	771,401	507,149	498,204	475,356	327,281	189,396	215,390	164,389
NC*	612,657	566,949	700,896	490,618	777,348	765,887	741,937	612,657	566,949	643,982	591,857	850,562	881,261	690,043	777,659	472,931	484,507	614,734
Coastwide	3,263,135	3,081,318	2,501,157	2,284,772	3,808,101	3,185,814	3,010,954	3,263,135	3,081,318	3,342,995	3,896,628	3,469,273	3,527,725	3,184,459	3,232,844	2,285,063	1,936,866	1,399,977

* Landings are from both north and south of Hatteras

Table 3. 2009 Commercial Allocation and Landings in pounds

State	2009 ASMFC Quota (including transfers)	2009 Landed (as of 12/09)	2010 ASMFC Quota
ME	5,466	0	8,793
NH	5,466	0	8,793
MA	130,403	126,594	228,619
RI	120,251	123,127	193,447
CT	10,932	13,708	17,586
NY	76,523	81,453	123,103
NJ	218,638	201,322	351,722
DE	54,660	43,338	87,931
MD	120,251	110,581	193,447
VA	218,638	165,690	351,722
NC	120,251	194,146	193,447
Coastwide	1,081,478	1,059,959	1,758,610

Table 4. Black Sea Bass Recreational Landings by State (1994-2004) in thousands of pounds.

Source: National Marine Fisheries Service MRFSS Online Query

State	2001	2002	2003	2004	2005	2006	2007	2008	2009
MA	69,690	365,060	146,990	81,519	337,112	161,388	190,363	330,562	445,122
RI	177,728	132,322	74,877	79,926	39,700	67,194	81,912	83,047	48,071
CT	19,650	29,096	7,948	24,517	161	5,392	2,985	36,766	419
NY	312,941	587,579	375,657	143,899	312,398	401,464	433,867	364,793	711,568
NJ	2,151,967	1,877,455	1,726,003	1,065,920	898,505	921,265	1,237,777	572,508	821,703
DE	198,815	636,261	278,172	59,152	71,275	121,048	110,316	30,029	52,441
MA	134,855	484,659	265,996	155,722	85,715	118,940	68,852	48,071	35,703
VA	338,225	211,659	390,424	63,836	120,554	157,117	90,966	79,868	180,927
NC*	188,773	118,219	182,594	274,340	229,893	151,075	196,134	90,977	145,208
Coastwide	3,592,644	4,442,310	3,448,661	1,948,831	2,095,313	2,104,883	2,413,172	1,636,621	2,441,162

*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. 2009 recreational management measures for black sea bass by state.

State	Minimum Size (inches)	Possession Limit	Open Season
Massachusetts	12.5	20 fish	All Year
Rhode Island	12.5	25 fish	All Year
Connecticut	12.5	25 fish	All Year
New York	12.5	25 fish	All Year
New Jersey	12.5	25 fish	All Year
Delaware	12.5	25 fish	All Year
Maryland	12.5	25 fish	All Year
PRFC	12.5	25 fish	All Year
Virginia	12.5	25 fish	All Year
North Carolina (North of Cape)	12.5	25 fish	All Year

Table 6. 2010 recreational management measures for black sea bass by state.

State	Minimum	Possession	Open Season
Massachusetts	12.5	20 fish	May 22 to October 11 and
Rhode Island	12.5	25 fish	May 22 to October 11 and
Connecticut	12.5	25 fish	May 22 to October 11 and
New York	12.5	25 fish	May 22 to October 11 and
New Jersey	12.5	25 fish	May 22 to October 11 and
Delaware	12.5	25 fish	May 22 to October 11 and
Maryland	12.5	25 fish	May 22 to October 11 and
PRFC	12.5	25 fish	May 22 to October 11 and
Virginia	12.5	25 fish	May 22 to October 11 and November 1 to December 31
North Carolina (North of Cape Hatterass)	12.5	25 fish	May 22 to October 11 and November 1 to December 31