Mid-Atlantic Fishery Management Council
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Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: November 30, 2016

To: Council

From: Kiley Dancy, Staff

Subject: Black Sea Bass Recreational Measures for 2017

The Council and the Atlantic States Marine Fisheries Commission's Summer Flounder, Scup, and Black Sea Bass Board (Board) will discuss recreational measures for black sea bass in 2017. As discussed in the materials listed below, a benchmark stock assessment is currently being finalized for black sea bass. The Council's Scientific and Statistical Committee (SSC) will review the results of the assessment in January 2017, and consider adjustments to the currently implemented 2017 catch limits. For this reason, staff and the Monitoring Committee recommend delaying adoption of 2017 recreational measures until early 2017, after this SSC review.

The current federal measures (15-fish possession limit, 12.5-inch minimum size, and federal season of May 15-September 21 and October 22-December 31) would remain in place until modified. Under this scenario, if the Board chose to continue the ad hoc regional approach in state waters, modifications to state measures would also be considered following the adoption of new catch limits. Council and Commission staff are currently working with GARFO to develop a revised timeline for this process that will allow timely modification of recreational measures in early 2017, while allowing for additional input from advisors and the Monitoring and Technical Committees.

If the Council and Board agree with the recommendation to delay consideration of 2017 recreational measures, no specific action is needed at the December meeting. The following materials are enclosed for Council and Board consideration of this subject:

1) Advisory Panel meeting summary for black sea bass (November 17 webinar)
2) Advisor email comments relevant to black sea bass
3) Letter to the ASMFC Summer Flounder, Scup, and Black Sea Bass Management Board from Nichola Meserve (MA Administrative Board Member Proxy)
4) Monitoring Committee recommendations for black sea bass (November 9-10 meeting)
5) Black sea bass staff memo dated November 2, 2016

Summer Flounder, Scup, and Black Sea Bass Advisory Panel Webinar

November 18, 2016

Council Advisory Panel members present: Carl Benson, Skip Feller, James Fletcher, Jeff Gutman, Gregory Hueth, Jan McDowell, Ross Pearsall, Michael Plaia*, Bob Pride, Paul Risi, Steve Witthuhn, Harvey Yenkinson,

Commission Advisory Panel members present: Jack Conway, Marc Hoffman, Ken Neill, Michael Plaia*, Art Smith, Buddy Seigel, James Tietje

*Serves on both Council and Commission Advisory Panels.

Others present: Julia Beaty (Council staff), Joe Cimino (VMRC), Kiley Dancy (Council staff), Tony DiLernia (Council member), Emily Gilbert (GARFO), Katie May Laumann (Monitoring Committee member, VMRC), Brandon Muffley (Council staff), Kirby Rootes-Murdy (ASMFC staff), Wes Townsend (Council member)

Summary

The Council and Commission's Summer Flounder, Scup, and Black Sea Bass Advisory Panels met via webinar to discuss recreational management measures for the three species in 2017. Comments on black sea bass are summarized below.

Black Sea Bass Comments

Data Concerns

As with the other two species, one advisor expressed concerns about the accuracy of the MRIP data and low sample sizes for black sea bass.

Management Measures

The results of a new benchmark stock assessment will not be available until early 2017. Council staff and the Monitoring Committee recommend postponing consideration of 2017 recreational management measures until after the assessment results are available. One advisor said some states cannot quickly change their management measures, which could result in a change in measures part way through the recreational fishing season. He recommended that the Council, Commission, and states do everything they can to implement the changes as quickly as possible.

One advisor recommended implementation of transiting provisions to allow anglers to transit through federal waters when in possession of fish legally caught in state waters.

One advisor said that, as with summer flounder, discards of black sea bass should be prohibited and barbless hooks should at least be recommended, if not required.

One advisor said the New Jersey black sea bass fishery should not be managed with the other states in the Northern Region (MA, NY, CT, RI) because black sea bass tend to be smaller in New Jersey. He thought it would be preferable to have a bag limit with no minimum size as this would reduce discard mortality.

Mr. Michael C. Plaia

119 Currituck Road

Newtown, CT 06470

November 24, 2016

Mid-Atlantic Fisheries Management Council

Summer flounder, scup, and black sea bass management board

Gentlemen;

I am an advisor to both the Council and Commission for summer flounder, scup and black sea bass. I am writing to draw your attention to a rule which is causing problems for recreational fishermen from Connecticut, New York, Rhode Island and Massachusetts. Many fishermen were cited for possession of black sea bass, during the time the season was closed in federal waters but open in state waters. These fishermen were fishing in state waters around Block Island, where fishing for black sea bass was perfectly legal, but then they had to transit Federal Waters to return to their home port. It was while they were transiting Federal waters that they were stopped and cited for illegal possession of the fish.

I was the one who raised this issue at the Advisory Panel meeting. We need a rule similar to the current rule for striped bass, which will allow fishermen to transit Federal waters in possession of legally caught fish from state waters. The current rule only covers striped bass. The Council should consider a new rulemaking which covers all species of fish and shellfish. Many fishermen from all four states regularly fish the fertile waters around Block Island and this issue is sure to arise again, since all fishermen returning to the mainland must cross Federal waters to return to their home port.

Yours Truly,

Michael C. Plaia

Commonwealth of Massachusetts

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Deputy Commissioner

MEMORANDUM

TO: ASMFC Summer Flounder, Scup, and Black Sea Bass Management Board

FROM: Nichola Meserve, MA Administrative Board Member (Proxy)

DATE: November 30, 2016

RE: Working Group for 2017 Recreational Black Sea Bass Management

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Overview

Next month, this Management Board will consider extending the ad hoc regional management approach for the recreational black sea bass fishery into 2017 by Board action, as permitted under Addendum XXVII. The decision facing the Board carries significant consequences. Four consecutive years of targeted harvest cuts under the approach have had a profound impact on the recreational black sea bass fisheries in the Northern Region of Massachusetts through New Jersey.

Without the necessity of a draft addendum by which the implications of such an action could be considered, I'm requesting the formation of a working group to review the management approach's performance. Ideally, this working group would report back to the Board prior to a definitive action to continue the management approach.

My request is based on a review of the fishery's performance and changes to state regulations under the ad hoc regional management approach (below). It indicates that the end result has been disproportionate impacts on the states, counter to the management approach's stated goal, while still causing overages of the recreational harvest limit (RHL).

The development of an entirely new recreational management approach for next year (through an addendum) seems unlikely given the late date and the timeline for revising the 2017 RHL, as does a return to coastwide management. While we may be tied to the management approach for 2017, my interpretation of what it means "*to extend the provisions in section 3.2*" of Addendum XXVII provides the Board with enough leeway to address the growing disparity among states in the Northern Region. If it were to agree, the requested working group would also propose specifics on how the approach could be implemented in 2017 for the Board's consideration.

Fishery Performance Review

The ad hoc regional management approach has been utilized since 2012. State-specific allocations and regulations were established for 2011 only, prior to which a single set of coastwide measures were annually selected. The goal of ad hoc regional management, as described in Addenda XXII, XXIII, XXV, and XXVII, is *"to mitigate potential disproportionate impacts on states that can result from coastwide measures."* The problem statements in these addenda also highlight overages of the annual RHLs as a concern.

Given the reasons for establishing the ad hoc regional management approach, I evaluated two questions (below). The evaluation uses data from the following sources:

(a) RHLs, in pounds, from ASMFC press releases;

(b) recreational harvest estimates, in pounds, from the Marine Recreational Information Program, as queried on 11/10/16 (see Appendix); 2016 harvest data are preliminary and through August only;

(c) annual harvest targets, as percentages, from ASMFC addenda or Board minutes; these were typically developed by the Technical Committee based on preliminary MRIP harvest estimates in numbers of fish and preliminary estimates of the RHL in numbers of fish; and

(d) state regulations from ASMFC FMP reviews.

Analysis of fishery performance in 2016 is not included in some cases because of the open nature of the recreational fishery during all or most of September–December in nearly all states (Massachusetts being the exception); consequently, results were considered to be premature.

1. *Has the ad hoc regional management approach been successful in constraining coastwide harvest to the RHL?*

A comparison of the coastwide harvest to the RHL since 2012 indicates that the ad hoc regional management approach has been unsuccessful in restricting harvest to the RHL in every year of its use (Figure 1). Given the largely static RHL, this has necessitated cutting harvest in every year following its use. Interestingly, the use of state shares in 2011 resulted in harvest below the RHL and allowed for a liberalization in 2012.

This failure of the approach results from states' achieved harvests exceeding their targets, primarily in the Northern Region (because it is responsible for 90–95% of coastwide harvest). Accordingly, I evaluated how well Northern Region state regulations have performed with regards to achieving their expected harvests. Since 2012, states in the Northern Region have implemented state-specific regulations to achieve the same target as a percent increase or decrease from their prior year harvest. As a region, the regulations have consistently resulted in greater harvest than expected, and have had variable results at the state harvest level (Tables 1 & 2).

Under the ad hoc regional approach, when a state's estimated harvest is greater than expected, it negatively impacts all the states in the Northern Region. The states can only implement regulations that have been developed with a Technical Committee-approved methodology and are projected to achieve their target. If the management approach is continued, the Technical Committee should be tasked with evaluating the success of its approved methodology and, if deemed necessary, considering revisions to the methodology to improve the fit between expected state harvest and estimates of achieved state harvest. For example, should past effectiveness of regulations, non-compliance, and stock projections be factored into expected harvest? Note that Addendum XXVII (and its precursors) requires the reduction tables that are to be provided by the TC for developing regulations to *"be adjusted for each region to account for past effectiveness of the regulations."* (Did this occur in any or all prior years?)

2. *Has the ad hoc regional management approach impacted states in a consistent manner?*

I evaluated this question by reviewing how estimates of Northern Region state-specific harvests and targets have changed under the management approach (Figures 2 & 3); and how state regulations (season length, bag, and size limit) have evolved since coastwide management ended (Table 3).

In summary, because of the way the management approach works, some states have been able to incrementally build their harvests and targets more—and restrict their fisheries less—than other states. The management approach will continue to provide the most benefit to those states that implement the least effective regulations, furthering a de facto shift in allocation, if unchanged.

Extending the Provisions of Addendum XXVII

Addendum XXVII provides the Board the opportunity *"to extend the provisions in section 3.2 ad hoc regional black sea bass management for one year, expiring at the end of 2017."* The provisions of Section 3.2 include the following:

- The states of MA–NJ will comprise the Northern Region.
- The states of DE–NC (north of Cape Hatteras) will comprise the Southern Region.
- All states will agree to the regulations implemented within their region.
- The Northern Region states will implement state-specific regulations to achieve a regional percent change in harvest based on the region's prior year landings.
- The Southern Region states will implement uniform regulations consistent with Federal waters regulations set by NOAA Fisheries.
- The regulations of the two regions combined will result in a projected harvest no greater than the RHL.
- A back-up set of measures will be implemented by NOAA Fisheries if the states fail to implement regulations projected to result in harvest no greater than the RHL.
- Reduction tables, provided by the Technical Committee, will be used to determine which suite of possession limits, size limits and closed seasons will constrain harvest to the RHL. Tables will be adjusted for each region to account for past effectiveness of the regulations.
- State regulations will be reviewed by the Technical Committee and approved by the Board prior to implementation.

The requested working group should consider the following if/when proposing specifics on how the ad hoc regional management approach is implemented in 2017:

1) Under Addendum XXVII, the 2016 regulations for Federal waters and Southern Region state waters were allowed to remain unchanged from 2015 (due to the contribution to coastwide harvest), while the 2016 regulations for Northern Region state waters were restricted to reduce harvest by 23%. Does continuing Addendum XXVII into 2017 require that the Federal and Southern Region regulations again be status quo, regardless of whether a coastwide cut or liberalization is in effect? What would be fair given the different treatment of the regions the past five years?
2) Under Addendum XXVII, the Northern Region states all implemented regulations to take the same 23% percent reduction in 2016 (based on the preliminary 2015 MRIP data at least). Does continuing Addendum XXVII into 2017 require that the Northern Region states all implement the same percent increase or decrease? None of the language in Addendum XXVII explicitly suggests this. Keep in mind that the 2016 target reductions per state in the Northern Region were not uniform when based on final 2015 MRIP data, resulting in some states taking larger projected cuts and other states taking smaller projected cuts. Also recall that the percent liberalizations implemented in 2012 varied by state (for an overall 37% regional liberalization in the north). If all states within a region cannot "agree to the regulations," what is the process for resolution?
3) Under Addendum XXVII, the reduction tables provided by the Technical Committee for developing 2016 regulations were to be adjusted for each region to account for past effectiveness of the regulations. Regardless of whether this happened in 2016, will it be done for 2017? Considering that the effectiveness of 2016 regulations will vary by state, would the reduction tables be adjusted by state? Should the Technical Committee make adjustments to the reduction tables based on any other factors (e.g., non-compliance, stock projections)?

Figure 1. Comparison of black sea bass RHL to coastwide landings (MA-NC), 2011–2016. 2016 landings are through August only and are considered preliminary.

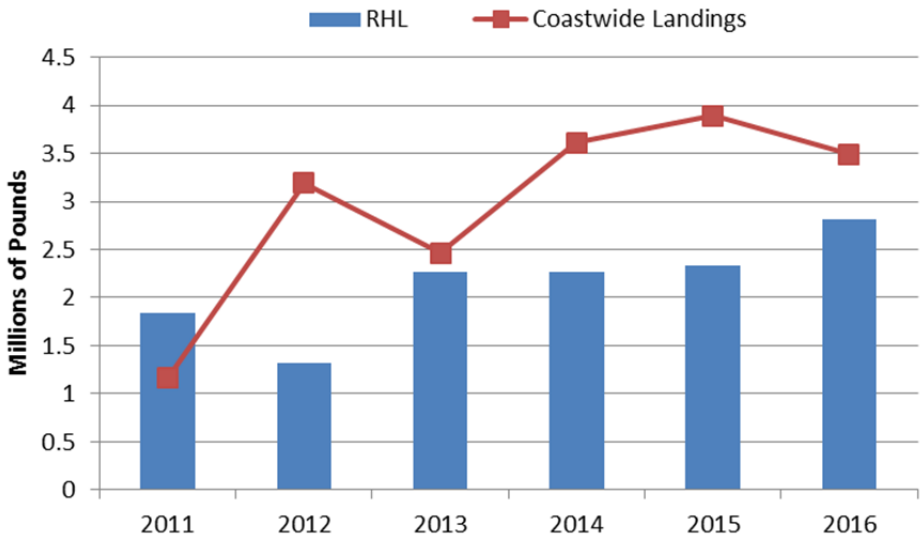


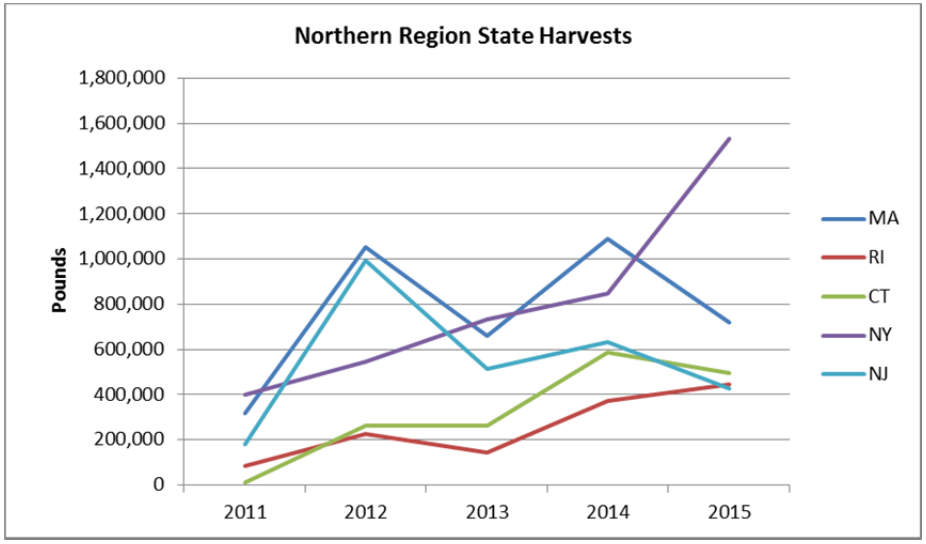
Table 1. Northern Region harvest targets vs. harvests achieved (as percentages based on pounds), 2011–2016. The 2016 achieved harvest percent will increase when September–December 2016 harvest estimates are available. The 2016 harvest target was based on preliminary 2015 data which were subsequently subject to significant revisions.

	2011	2012	2013	2014	2015	2016
Target	-40%	37%	-32%	-7%	-33%	-23%
Achieved	-68%	208%	-25%	52%	3%	-8%

Table 2. Northern Region state-specific harvest targets vs. harvests achieved (as percentages based on pounds), 2011–2016. Red font denotes greater harvest than expected. The targets for 2012 varied by state but were not available for this analysis; the overall target of 37% was used for all states. The 2016 harvest target was based on preliminary 2015 data which were subsequently subject to significant revisions (so the actual target varied by state).

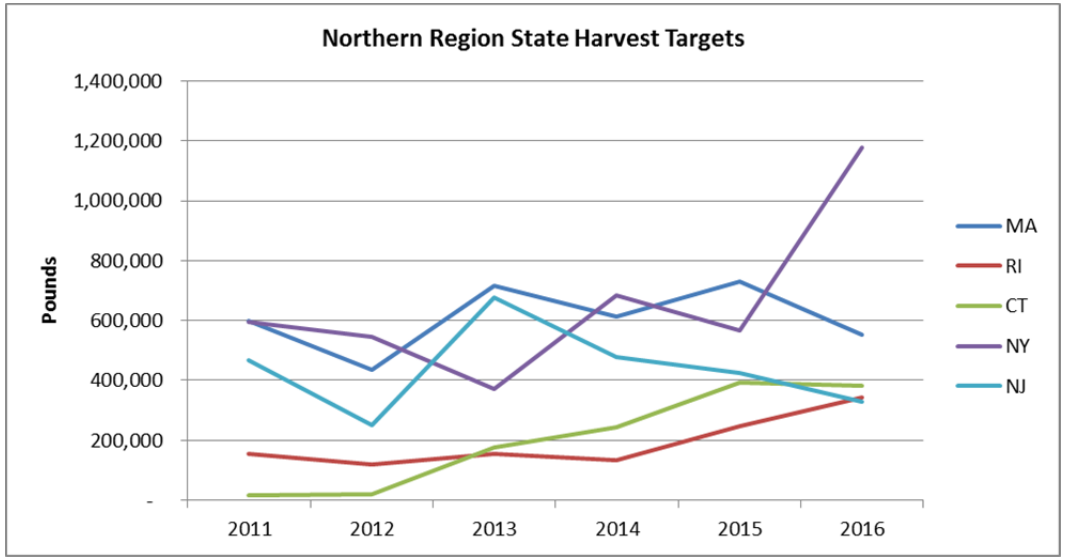
	2011		2012		2013		2014		2015		2016	
	Target	**Achieved**	**Target**	**Achieved**	**Target**	**Achieved**	**Target**	**Achieved**	**Target**	**Achieved**	**Target**	**Achieved**
MA	-43%	-70%	37%	230%	-32%	-37%	-7%	65%	-33%	-34%	-23%	TBD
RI	-37%	-65%	37%	163%	-32%	-36%	-7%	156%	-33%	20%	-23%	TBD
CT	-37%	-43%	37%	1798%	-32%	0%	-7%	123%	-33%	-15%	-23%	TBD
NY	-39%	-59%	37%	37%	-32%	35%	-7%	15%	-33%	81%	-23%	TBD
NJ	-40%	-77%	37%	447%	-32%	-48%	-7%	23%	-33%	-32%	-23%	TBD

Figure 2. Northern Region state harvests, 2011–2015, in pounds, and percent change from 2011 (state share management) and 2012 (first year of ad hoc regional management) to 2015. (2016 data excluded due to highly incomplete harvest estimates.)



State	2011 to 2015 Change in Harvest	2012 to 2015 Change in Harvest
MA	126%	-32%
RI	417%	96%
CT	3503%	90%
NY	284%	181%
NJ	136%	-57%

Figure 3. Northern Region state harvest targets, 2011–2016, in pounds, and percent change from 2011 (state share management) and 2012 (first year of ad hoc regional management) to 2016. Poundage targets estimated by applying target rates in Table 2 to prior year harvest in pounds.



State	2011 to 2016 Change in Target	2012 to 2016 Change in Target
MA	-8%	27%
RI	121%	191%
CT	2410%	1925%
NY	98%	116%
NJ	-30%	32%

Table 3. State regulatory changes from 2010 to 2016.

2010 Regulations (last year of coastwide management)					
		Size (“)	**Bag (#)**	**Season**	
Coastwide (MA-NC*)		12.5	20**	5/22–10/11 & 11/1–12/31	204 days
2016 Regulations					
State		**Size**	**Bag**	**Season**	
MA		15	5	5/21–8/31	103 days
RI		15	3	6/24–8/31	191 days
			7	9/1–12/31	
CT	Private/Shore	15	5	5/1–12/31	245 days
	For-hire Vessel		8		
NY		15	3	6/27–8/31	188 days
			8	9/1–10/31	
			10	11/1–12/31	
NJ		12.5	10	5/23–6/19	161 days
		12.5	2	7/1–8/31	
		13	15	10/22–12/31	
DE–NC*		12.5	15	5/15–9/21 & 10/22–12/31	201 days

2010 to 2016 Regulatory Changes			
		Season Length	**Size and Bag Limit Changes (Bag limit reductions from 25 fish; size limit increases from 12.5”)**
MA		-101 days	102 days: fishery closed 102 days: bag reduced by 20 fish & size limit increased by 2.5” 1 day: fishery newly opened at 5 fish & 15”
RI		-13 days	33 days: fishery closed 69 days: bag reduced by 22 fish & size limit increased by 2.5” 102 days: bag reduced by 18 fish & size limit increased by 2.5” 20 days: fishery newly opened at 7 fish & 15”
CT	Private/Shore	+41 days	204 days: bag reduced by 20 fish & size limit increased by 2.5” 41 days: fishery newly opened at 5 fish & 15”
	For-hire Vessel		204 days: bag reduced by 17 fish & size limit increased by 2.5” 41 days: fishery newly opened at 8 fish & 15”
NY		-16 days	36 days: fishery closed 66 days: bag reduced by 22 fish & size limit increased by 2.5” 41 days: bag reduced by 17 fish & size limit increased by 2.5” 61 days: bag reduced by 15 fish & size limit increased by 2.5” 20 days: fishery newly opened at 8 fish & 15”
NJ		-43 days	53 days: fishery closed 62 days: bag reduced by 23 fish (no change in size limit) 28 days: bag reduced by 15 fish (no change in size limit) 61 days: bag reduced by 10 fish & size limit increased by 0.5” 10 days: fisher newly opened at 15 fish & 13”
DE–NC*		-3 days	20 days: fishery closed 184 days: bag reduced by 10 fish (no change in size limit) 17 days: fishery newly opened at 15 fish & 12.5”

* NC for north of Cape Hatteras only

** The coastwide maximum was 25 fish; MA opted to be more conservative, with a 20-fish limit.

Appendix

Table A1. Marine Recreational Information Program harvest estimates, in pounds, used to develop relevant figures and tables within this document. Queried 11/10/16. NC data are for the entire state. 2016 data are through Wave 4 only and are considered preliminary.

Year	MA	RI	CT	NY	NJ	DE	MD	VA	NC*	Total
2010	1,052,441	246,229	24,138	975,624	780,115	29,430	41,507	24,702	186,803	3,360,989
2011	318,383	85,903	13,758	399,031	181,699	46,232	51,730	26,747	143,234	1,266,717
2012	1,052,049	226,132	261,164	545,222	993,613	49,966	42,174	2,599	127,621	3,300,540
2013	660,797	144,722	262,392	734,729	515,176	44,365	39,170	33,660	68,225	2,503,236
2014	1,087,847	370,531	586,113	847,181	631,457	30,962	87,086	24,433	132,351	3,797,961
2015	718,101	444,337	495,675	1,531,493	428,319	26,893	78,052	63,694	100,146	3,886,710
2016	888,775	294,872	801,284	1,020,663	319,267	22,329	20,630	59,466	64,631	3,491,917

Summer Flounder, Scup, and Black Sea Bass Monitoring Committee
2017 Recreational Measures Recommendations

Monitoring Committee Attendees: Greg Wojcik (CT DEEP), John Maniscalco (NY DEC; via webinar), Peter Clarke (NJ F&W), Rich Wong (DNREC), Steve Doctor (MD DNR), Katie May Laumann (VMRC), T.D. VanMiddlesworth (NC DMF), Kiley Dancy (MAFMC Staff), Julia Beaty (MAFMC Staff), Kirby Rootes-Murdy (ASMFC Staff), Emily Gilbert (NMFS GARFO; via webinar), Mark Terceiro (NEFSC; via webinar), Jason McNamee (RI DEM; via webinar 11/9 only)

Other Attendees (all via webinar): Alex Aspinwall (VMRC, 11/9 only), Joe Cimino (VMRC, 11/10 only), Bonnie Brady (Long Island Commercial Fishermen's Association), Rob O'Reilly (VMRC, 11/9 only), Carl Benson (11/9 only)

The Monitoring Committee met on Wednesday, November 9 and Thursday, November 10, 2016 in Baltimore, MD to recommend 2017 recreational management measures for summer flounder, scup, and black sea bass.

General Comments

The Monitoring Committee agreed that recent end-of-year adjustments to the MRIP data to account for low sample sizes are a source of uncertainty. This was done for the first time in August 2016 (for 2013-2015 data), and it is not known if or how such adjustments will impact the final 2016 estimates.

The Monitoring Committee agreed that if the recreational fishery for any of these three species is open during wave 1 (January 1 – February 28), there should be recreational data sampling in place to produce comparable MRIP estimates. It is important to document removals occurring from the fisheries, and wave 1 recreational catch (for states other than North Carolina) is currently not incorporated into final catch estimates or the stock assessments.

Black Sea Bass

The Monitoring Committee agrees with the staff recommendation to postpone in-depth analysis of

revisions to the recreational management measures until early 2017, once the assessment results become available and the Scientific and Statistical Committee revisits 2017 catch and landings limits. Accountability measures for black sea bass would also be addressed at that time.

The Committee notes that this delay will complicate timely implementation of recreational measures, and likely means that adjustments to the front end of the season in 2017 will not be feasible. Necessary seasonal adjustments would thus need to be made to the middle or end of the 2017 seasons.

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Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: November 2, 2016

To: Chris Moore, Executive Director

From: Kiley Dancy and Julia Beaty, Staff

Subject: Black Sea Bass Recreational Management Measures for 2017

In August 2016, the Council and the Atlantic States Marine Fisheries Commission's (Commission's) Summer Flounder, Scup, and Black Sea Bass Board (Board) recommended no changes to the previously implemented commercial quotas and recreational harvest limits for black sea bass in 2017, based on the July 2016 advice of the Scientific and Statistical Committee (SSC) and Monitoring Committee. The final rule implementing the 2017 landings limits published on December 28, 2015 (80 FR 80690), and includes a 2017 recreational harvest limit (RHL) of 2.82 million pounds.

However, a benchmark stock assessment is currently in development for black sea bass, and is scheduled to undergo peer review from November 29-December 2, 2016 at the 62nd Stock Assessment Review Committee (SARC 62). The SSC plans to review the results of the assessment peer review and recommend a revised 2017 ABC in January 2017.

The Monitoring Committee is responsible for recommending recreational management measures for 2017 that will constrain landings to the recreational harvest limit. Recreational measures for 2017 must also address the average 2013-2015 recreational overage of the recreational Annual Catch Limit (ACL), consistent with the Council's recreational accountability measures (AMs) as revised in 2013.

Given the timing of the assessment, Council staff recommend that current federal and state measures remain in place until early 2017, when the Monitoring and Technical Committees would then make specific recommendations for 2017 recreational measures based on the results of the stock assessment peer review and resulting SSC recommendations. Staff recommend that the Committee begin planning for how to quickly and efficiently respond to potential harvest limit revisions in early 2017.

This document includes a review of recreational catch and landings data for the black sea bass fishery. Additional information will be provided in early 2017 for the Monitoring Committee's consideration of revised 2017 recreational measures

Recreational Catch and Landings

Recreational catch of black sea bass has fluctuated since 1981, from a peak of 28.9 million fish in 1986 to a low of 3.4 million fish in 1984. Landings have fluctuated from a peak of 12.39 million lb in 1986 to a

low of 1.15 million lb in 1998. Landings were estimated to be 3.79 million lb in 2015 (Table 2), approximately 63% above the 2015 RHL of 2.33 million lb.

Marine Recreational Information Program (MRIP) data for 2016 are incomplete and preliminary. To date, only the first four waves (January through August) of catch and landings data for the current year are available. The Monitoring Committee reviews the MRIP data once wave 4 data are available because the Council and Commission have agreed that recommendations need to be made late in the current year (i.e., 2016) to give the states enough time to enact changes in their regulations for the upcoming year (i.e., 2017). Preliminary data indicate that 8.43 million black sea bass have been caught and 1.68 million black sea bass have been landed through wave 4 in 2016 (north of Cape Hatteras, NC). By weight, landings through wave 4 were 3.43 million lb, with the mean weight at approximately 2.04 lb per landed fish (Table 3). These preliminary estimates indicate that the 2016 RHL of 2.82 million lb has already been exceeded by approximately 22%.

Preliminary wave 1-4 data for 2016 can be used to project catch and landings for the entire year, by assuming the same proportion of catch and landings by wave in the previous year. Because prior year proportions are used in this method, if seasonal adjustments are not taken into account, landings will tend to be overestimated for states with more restrictive seasons in the current year, and for those with less restrictive seasons, landings are likely to be underestimated. Between 2015 and 2016, no states adjusted open seasons for waves 5 and 6; however, several states opened more days in waves 3 and 4, which is expected to impact the percentage of annual landings by wave for those states.

Projection adjustments were made for the states of Rhode Island, Connecticut, New York, and New Jersey, all of which increased the number of open days in waves 3 and/or 4 between 2015 and 2016. For these states, the percentage of annual landings expected to originate from waves 1 through 4 was adjusted slightly upward, in line with the increased percentage of total open days from waves 3 and 4. In last year's projections for Massachusetts, zero harvest was assumed for waves 5 and 6 in 2015 given a recreational closure for those waves. However, a small amount of harvest still occurred in wave 5 in 2015. To account for this management uncertainty resulting from non-compliance, the assumption of zero harvest from Massachusetts in waves 5 and 6 was not maintained for 2016 projections. Projected landings by state are given in Table 4 (pounds) and Table 6 (number), and trends by state over time are shown in Figure 1 and Figure 2.

The coastwide (north of Cape Hatteras, NC) projected catch for 2016 is 12.65 million fish, and projected landings are 5.06 million lb or 2.48 million fish (Table 2).

Past Harvest Limits and Management Measures

Recreational harvest limits for black sea bass have ranged from a high of 4.13 million lb in 2005 to a low of 1.14 million lb in 2009. The 2017 RHL is identical to the 2016 RHL, at 2.82 million lb (Table 7).

Until 2010, the black sea bass recreational fishery was managed with coastwide measures as dictated by the FMP, which included an identical minimum fish size, possession limit, and an open season that were implemented in both state and federal waters. Since 2011, the Commission has developed addenda which have enabled "ad hoc regional management." This process essentially results in two regions: the northern states of Massachusetts through New Jersey, which set state-specific measures, and the southern states of Delaware through North Carolina (north of Cape Hatteras), which typically set measures consistent with federal measures given that most landings from southern states are taken in the EEZ (Table 4). Where state and federal measures differ, federal party/charter permit holders and private anglers fishing in federal

waters are bound by whichever regulations are more restrictive. Many federal for-hire permit holders drop their federal permits during periods when state waters are open but federal waters are closed, allowing them to fish in state waters during this time. Most reapply for the permit once this period of inconsistency is complete. In practice under ad hoc regional management, landings in the northern states are constrained by state measures rather than federal. As such, any adjustments to the federal recreational measures should be considered primarily adjustments to the measures for the southern region.

In 2016, federal and southern states measures included a 12.5-inch TL minimum size, a 15-fish possession limit, and an open season of May 15-September 21 and October 22-December 31 (Table 7; Table 8). The Commission's Addendum XXVII, approved February 2016, allowed for ad hoc regional management in 2016 with the option to extend this management strategy into 2017. Northern states implemented state-specific measures in 2016 with minimum fish sizes ranging from 13 to 14 inches TL, possession limits from 1 to 10 fish, and various seasons (Table 8).

Accountability Measures

In 2013, the Council modified the recreational accountability measures (AMs) for Mid-Atlantic species through an Omnibus Recreational Accountability Measures Amendment. This amendment removed the in-season closure authority for the black sea bass recreational fishery that was previously held by the NMFS Regional Administrator. Additionally, in the event of an Annual Catch Limit (ACL) overage, recreational AMs will no longer necessarily include a direct pound-for-pound payback of the overage amount in a subsequent fishing year. Instead, AMs are now tied to stock status, and though paybacks may be required in some circumstances, any potential payback amounts would be scaled relative to biomass, as described below.

The modified recreational AMs are as follows: the 3-year recreational sector ACL is evaluated against a 3-year moving average of total catch. Both landings and dead discards are evaluated in determining if the 3-year average recreational sector ACL has been exceeded. If the recreational ACL is exceeded, the appropriate AM will be determined based on the following criteria:

1. If the stock is overfished ($B < \frac{1}{2} B_{MSY}$), under a rebuilding plan, or the stock status is unknown: The exact amount, in pounds, by which the most recent year's recreational ACL has been exceeded, will be deducted in the following fishing year, or as soon as possible once catch data are available.
2. If biomass is above the threshold, but below the target ($\frac{1}{2} B_{MSY} < B < B_{MSY}$), and the stock is not under a rebuilding plan:
    a. If only the recreational ACL has been exceeded, then adjustments to the recreational management measures (bag, size, and seasonal limits) would be made in the following year, or as soon as possible once catch data are available. These adjustments would take into account the performance of the measure and conditions that precipitated the overage.
    b. If the Acceptable Biological Catch (ABC = recreational ACL + commercial ACL) is exceeded in addition to the recreational ACL, then a single year deduction will be made as a payback, scaled based on stock biomass. The calculation for the payback amount in this case is: (overage amount) * $(B_{msy}-B)/\frac{1}{2} B_{msy}$.
3. If biomass is above the target ($B > B_{MSY}$): Adjustments to the recreational management measures (bag, size, and seasonal limits) would be made in the following year, or as soon as possible once catch data are available. These adjustments would take into account the performance of the measure and conditions that precipitated the overage.

Recreational AMs have been triggered for black sea bass based on a comparison of the 3-year average ACL to the 3-year average of catch, as described above. The 2013-2015 average recreational catch (4.11 million lb) exceeded the 2013-2015 average recreational ACL (2.90 million lb; Table 1).

Table 1: Recreational AM evaluation for black sea bass, comparing 3-year average total catch to the 3-year average ACL.

	2013	2014	2015	3-year average
Rec ACL (mil lb)	2.90	2.90	2.90	2.90
Total rec. catch (mil lb)	3.08	4.53	4.71	4.11
Landings	*2.46*	*3.67*	*3.79*	*3.31*
Discards	*0.62*	*0.86*	*0.92*	*0.80*
Overage percent	6.2%	56.2%	62.4	41.6%
Overage amount (mil lb)	0.18	1.63	1.81	1.21

Because the most recent estimate of black sea bass biomass is above the target biomass, the AM triggered includes required adjustments to the recreational management measures (bag, size, and season). The Monitoring Committee will need to take into account the performance of past measures and conditions that precipitated the overage. The Monitoring Committee should consider continuing to update the data and methodology used to calculate effective recreational measures and reductions as a way to take into consideration the performance of past measures and improve understanding of how adjustments have effected recent recreational performance.

Fishing Trips and Year Class Effects

Predicting the number of trips that might be taken in 2017 is complicated (Table 9). Changes in fishing site characteristics (travel costs, catch rates, available species, water quality, etc.), fishery management policies (possession limits, size restrictions, closed seasons), and angler demographics can affect the demand for angler fishing trips. Changes in angler behavior may result in a violation of the assumptions associated with specific sets of regulations and their anticipated results.

Year-class effects in terms of fish availability can influence the expected impacts of management measures and should be considered. The Monitoring Committee has previously noted potential year class effects from the large 2011 year class of black sea bass, and should review additional year class information from the benchmark assessment once available.

2017 Staff Recommendation

The previously adopted 2017 harvest limit is 2.82 million lb. If this limit were to remain unchanged, based on preliminary data through wave 4 of 2016, landings would have to be reduced in 2017 by 44% compared to 2016 projections, to constrain harvest to the 2017 recreational harvest limit of 2.82 million lb. However, as described above, a benchmark stock assessment is in development for black sea bass, with peer review scheduled for November 29-December 2, 2016. The SSC will review the assessment and peer review results in January 2016, followed by Council and Board review and potential catch limit revisions in February 2017. In the event that the stock assessment is deemed unacceptable for management use, the SSC would revert to an updated run of the Data Limited Toolkit approach[1] incorporating the most recent survey indices. Thus, the Council and Board are likely to consider harvest limit revisions in either scenario.

[1] First adopted in the fall of 2015 for 2016 measures; see http://www.mafmc.org/ssc-meetings/2015/sept-16-17.

Given expected harvest limit revisions, staff recommends postponing in-depth analysis of revisions to the recreational management measures until early 2017. Because this will require a short time frame for recommending, approving, and implementing recreational measures prior to the core fishing season, the Monitoring Committee should begin to plan for approaches to 2017 recreational management, including how to quickly and efficiently respond to expected harvest limit revisions.

Information on recreational fishery trends, through wave 4 of 2016, is provided in the tables and figures below to facilitate initial discussions of options for 2017. This information will be updated and supplemented for any future discussions of the Monitoring Committee, Board, and Council regarding 2017 measures.

Table 2: Black sea bass recreational catch and landings by year, 1982 to 2015, and projected catch and landings for 2016, Maine to Cape Hatteras, NC. The number of fish released is presented as a proportion of the total catch (% Released).

Year	Catch[a] ('000 fish)	Landings[a] ('000 fish)	Landings[a] ('000 lb)	% Released	Mean weight of landed fish (lb)
1982	11,386	10,045	9,894	12%	0.98
1983	7,561	4,537	4,079	40%	0.90
1984	3,428	1,780	1,447	48%	0.81
1985	6,047	3,388	2,097	44%	0.62
1986	28,946	21,742	12,392	25%	0.57
1987	5,052	2,883	1,924	43%	0.67
1988	8,186	3,088	2,869	62%	0.93
1989	6,427	4,239	3,289	34%	0.78
1990	9,135	3,881	2,761	58%	0.71
1991	10,829	5,269	4,186	51%	0.79
1992	7,722	3,592	2,706	53%	0.75
1993	9,023	6,007	4,842	33%	0.81
1994	7,166	3,430	2,948	52%	0.86
1995	14,059	6,747	6,207	52%	0.92
1996	8,143	3,624	3,993	55%	1.10
1997	10,646	4,739	4,268	55%	0.90
1998	5,146	1,148	1,152	78%	1.00
1999	7,400	1,378	1,664	81%	1.21
2000	16,927	3,629	3,988	79%	1.10
2001	13,869	2,841	3,421	80%	1.20
2002	14,703	3,351	4,349	77%	1.30
2003	12,128	3,251	3,289	73%	1.01
2004	7,238	1,531	1,973	79%	1.29
2005	7,041	1,263	1,883	82%	1.49
2006	7,602	1,286	1,800	83%	1.40
2007	8,727	1,528	2,175	82%	1.42
2008	10,653	1,294	2,031	88%	1.57
2009	9,224	1,806	2,558	80%	1.42
2010	9,964	2,207	3,190	78%	1.45
2011	4,737	817	1,171	83%	1.43
2012	12,536	1,874	3,185	85%	1.70
2013	9,807	1,282	2,464	87%	1.92
2014	10,870	2,118	3,667	81%	1.73
2015	9,429	2,215	3,790	77%	1.71
2016 (proj.)[b]	12,653	2,477	5,064	80%	2.04

[a] 1982-2003 data are from MRFSS, 2004-2016 data are from MRIP. Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 27, 2016.

[b] Projected using proportion by wave from 2015 MRIP data and 2016 MRIP wave 1-4 data, with adjustments for RI, CT, NY, and NJ to account for seasonal openings in waves 3 and 4 between 2015 and 2016 (Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 27, 2016).

Table 3: Black sea bass recreational catch and landings for waves 1-4, Maine through Cape Hatteras, North Carolina, 2005-2016.[a]

Year	Catch ('000 fish)	Landings ('000 fish)	Landings ('000 lb)	Mean Weight (lb)
2005	3,628	824	1,308	1.59
2006	3,491	710	1,075	1.51
2007	4,440	1,090	1,547	1.42
2008	6,261	618	996	1.61
2009	6,765	1,470	2,030	1.38
2010	4,693	1,284	1,897	1.48
2011	2,524	478	689	1.44
2012	7,534	1,252	2,280	1.82
2013	5,954	928	1,792	1.93
2014	6,341	1,287	2,456	1.91
2015	6,137	1,505	2,590	1.72
2016	8,434	1,682	3,428	2.04

[a] Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 27, 2016.

Table 4: Landings of black sea bass (in lb) by state and area (state vs. federal waters), 2014 and 2015, Maine through North Carolina, and projected landings for 2016 by state. Area information is self-reported based on the area where most fishing activity occurred per angler trip.

State	2014 Landings (lb)	2015 Landings (lb)	Avg. % of Coastwide Landings (lb) 2014-2015	2016 projected landings (lb)	Proj. % of coastwide landings in 2016	% from State Waters (<= 3 mi), 2014-2015	% from EEZ (> 3 mi), 2014-2015
NH	0	0	0.0%	0	0.0%	--	--
MA	1,087,856	718,108	24.2%	894,392	17.7%	93%	7%
RI	370,534	444,341	10.9%	634,973	12.5%	77%	23%
CT	586,118	495,679	14.5%	1,603,071	31.7%	95%	5%
NY	847,188	1,531,507	31.9%	1,365,107	27.0%	76%	24%
NJ	631,461	428,323	14.2%	371,612	7.3%	13%	87%
DE	30,963	26,893	0.8%	39,850	0.8%	4%	96%
MD	87,087	78,053	2.2%	89,591	1.8%	10%	90%
VA	24,433	63,695	1.2%	63,463	1.3%	26%	74%
NC	1,180[a]	3,887[a]	0.1%	1,803[a]	0.0%[a]	16%[b]	84%[b]
Total	**3,666,820**	**3,790,487**	**100.0%**	**5,063,861**	**100.0%**	**69%**	**31%**

[a] Through Cape Hatteras, NC.

[b] All of North Carolina, both north and south of Cape Hatteras.

Table 5: Black sea bass recreational landings (in thousands of fish) by state for waves 1-4, Maine through Cape Hatteras, NC, 2007-2016.

State	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ME	-	-	-	-	-	-	-	-	-	-
NH	-	-	-	-	-	3	12	-	-	-
MA	69	154	367	641	159	454	190	349	338	380
RI	11	12	23	133	12	55	51	110	99	133
CT	1	60	0	15	3	87	96	187	143	381
NY	265	111	429	227	105	271	256	277	635	504
NJ	614	203	483	210	129	314	243	308	228	228
DE	77	18	34	16	14	33	34	18	12	17
MD	32	22	24	18	38	31	25	32	13	16
VA	14	29	109	17	13	3	12	4	36	21
NC	7	9	2	7	6	2	8	<1	1	<1

Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 28, 2016.

Table 6: Black sea bass recreational landings (in thousands of fish) by state for all waves, Maine through Cape Hatteras, NC, 2007-2016.[a]

State	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 (proj.)[b]
ME	-	-	-	-	-	-	-	-	-	-
NH	-	-	-	-	-	3	12	-	-	-
MA	149	246	431	702	195	520	292	457	343	385
RI	44	52	36	160	50	103	75	214	234	296
CT	24	60	0	16	8	111	110	397	331	756
NY	410	260	566	543	274	322	353	469	877	636
NJ	725	580	583	687	148	735	345	468	310	280
DE	93	23	37	21	43	40	37	24	23	31
MD	39	26	33	36	47	33	30	68	58	69
VA	36	38	115	30	19	4	21	19	39	23
NC	9	9	3	11	31	4	8	<1	2	1

[a] Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 28, 2016.

[b] Projected using proportion by wave from 2015 MRIP data and 2016 MRIP wave 1-4 data, with adjustments for RI, CT, NY, and NJ to account for seasonal openings in waves 3 and 4 between 2015 and 2016 (Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 28, 2016).

Table 7: Summary of management measures for the black sea bass recreational fishery, 1997-2016.

Measure	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	
ABC (m lb)	-	-	-	-	-	-	-	-	-	-	
Recreational ACL (m lb)	-	-	-	-	-	-	-	-	-	-	
Harvest Limit (m lb)[a]	-	3.15	3.15	3.15	3.15	3.43	3.43	4.01	4.13	3.99	
Landings (m lb)[b]	4.3	1.2	1.7	4.0	3.4	4.4	3.3	2.0	1.9	1.8	
Possession Limit	-	-[c]	-[c]	-[c]	25	25	25	25	25	25	
Size Limit (TL in)	9	10	10	10	11	11.5	12	12	12	12	
Open Season	1/1-12/31	1/1-7/30 and 8/16-12/31	1/1-12/31	1/1-12/31	1/1-2/28 and 5/10-12/31	1/1-12/31	1/1-9/1 and 9/16-11/30	1/1-9/7 and 9/22-11/30	1/1-9/7 and 9/22-11/30	1/1-12/31	
Measure	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017[d]**
ABC (m lb)				4.50	4.50	4.50	5.50	5.50	5.50	6.67	6.67
Recreational ACL (m lb)	-	-	-	-	-	-	2.90	2.90	2.90	3.52	3.52
Harvest Limit (m lb)[a]	2.47	2.11	1.14	1.83	1.84	1.32	2.26	2.26	2.33	2.82	2.82
Landings (m lb)[b]	2.17	2.03	2.56	3.19	1.17	3.19	2.46	3.67	3.79	-	-
Possession Limit	25	25	25	25	25	20 or 25	20	15	15	15	-
Size Limit (TL in)	12	12	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	-
Open Season	1/1-12/31	1/1-12/31	1/1-12/31	1/1-10/5	5/22-10/1 and 11/1-12/31	1/1-2/29, 5/19-10/14 and 11/1-12/31	5/19-10/14 and 11/1-12/31	5/19-9/21 and 10/18-12/31	5/15-9/21 and 10/22-12/31	5/15-9/21 and 10/22-12/31	-

[a] For 2006-2014, recreational harvest limits are adjusted for Research Set Aside (RSA). Quotas and harvest limits for 2015-2016 do not reflect an adjustment for RSA due to the suspension of the program in 2014.

[b] Landings for Maine through Cape Hatteras, NC. 1997-2003 data are from MRFSS, 2004-2015 data are from MRIP.

[c] There was no federal possession limit but some states implemented a 20 fish possession limit in these years.

[d] Implemented; subject to change in early 2017 based on results of black sea bass stock assessment in development.

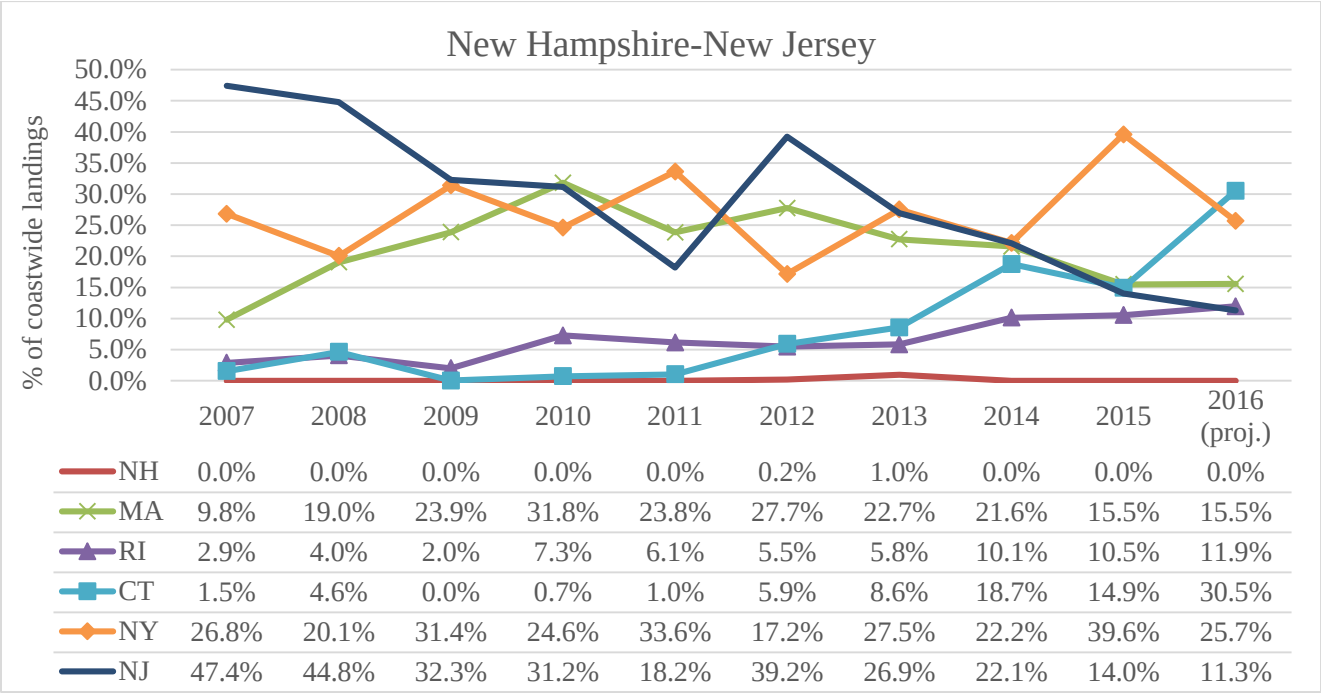
Table 8: Black sea bass recreational management measures by state, 2015 (a) and 2016 (b).

a) 2015 measures by state.

State	Minimum Size (inches)	Possession Limit	Open Season
Maine	13	10 fish	May 19 - September 21 and October 18-December 31
New Hampshire	13	10 fish	January 1 - December 31
Massachusetts	14	8 fish	May 23 - August 27
Rhode Island	14	1 fish	July 2 - August 31
		7 fish	September 1 - December 31
Connecticut	14	3 fish	June 1 - August 31
		5 fish	September 1- December 31
Connecticut authorized party/charter monitoring program vessels	14	8 fish	June 21-December 31
New York	14	8 fish	July 15 - October 31
		10 fish	November 1 - December 31
New Jersey	12.5	2 fish	July 1 - July 31
		15 fish	May 27 - June 30; October 22- December 31
Delaware	12.5	15 fish	May 15 - September 21 and October 22 - December 31
Maryland	12.5	15 fish	May 15 - September 21 and October 22 - December 31
Potomac River Fisheries Commission	12.5	15 fish	May 15 - September 21 and October 22 - December 31
Virginia	12.5	15 fish	May 15 - September 21 and October 22 - December 31
North Carolina (north of Cape Hatteras)	12.5	15 fish	May 15 - September 21 and October 22 - December 31

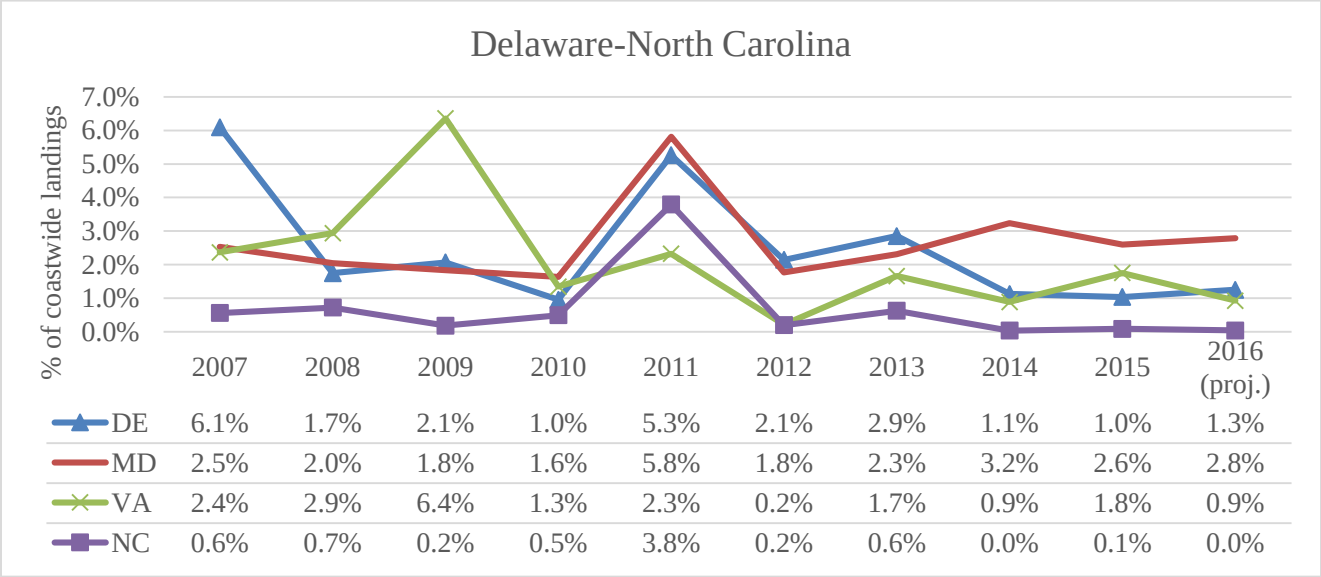
b) 2016 measures by state.

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 21-August 31
Rhode Island	15	3 fish	June 24- August 31
		7 fish	September 1-December 31
Connecticut (Private & Shore)	15	5 fish	May 1-December 31
CT (Authorized party/charter monitoring program vessels)		8 fish	
New York	15	3	June 27 – August 31
		8 fish	September 1-October 31
		10 fish	November 1-December 31
New Jersey	12.5	10 fish	May 23-June 19
		2 fish	July 1-August 31
	13	15 fish	October 22-December 31
Delaware	12.5	15 fish	May 15-September 21; October 22-December 31
Maryland	12.5	15 fish	May 15-September 21; October 22-December 31
Virginia	12.5	15 fish	May 15-September 21; October 22-December 31
North Carolina, North of Cape Hatteras (N of 35° 15'N)	12.5	15 fish	May 15-September 21; October 22-December 31



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 (proj.)
NH	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	1.0%	0.0%	0.0%	0.0%
MA	9.8%	19.0%	23.9%	31.8%	23.8%	27.7%	22.7%	21.6%	15.5%	15.5%
RI	2.9%	4.0%	2.0%	7.3%	6.1%	5.5%	5.8%	10.1%	10.5%	11.9%
CT	1.5%	4.6%	0.0%	0.7%	1.0%	5.9%	8.6%	18.7%	14.9%	30.5%
NY	26.8%	20.1%	31.4%	24.6%	33.6%	17.2%	27.5%	22.2%	39.6%	25.7%
NJ	47.4%	44.8%	32.3%	31.2%	18.2%	39.2%	26.9%	22.1%	14.0%	11.3%

Figure 1: Percentage of coastwide black sea bass landings (in number of fish) by state, 2007-2016 (projected) for New Hampshire-New Jersey.



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 (proj.)
DE	6.1%	1.7%	2.1%	1.0%	5.3%	2.1%	2.9%	1.1%	1.0%	1.3%
MD	2.5%	2.0%	1.8%	1.6%	5.8%	1.8%	2.3%	3.2%	2.6%	2.8%
VA	2.4%	2.9%	6.4%	1.3%	2.3%	0.2%	1.7%	0.9%	1.8%	0.9%
NC	0.6%	0.7%	0.2%	0.5%	3.8%	0.2%	0.6%	0.0%	0.1%	0.0%

Figure 2: Percentage of coastwide black sea bass landings (in number of fish) by state, 2007-2016 (projected) for Delaware-North Carolina.

Table 9: Number of directed black sea bass recreational fishing trips (Maine through North Carolina), recreational harvest limits, recreational landings, and fishery performance from 1995 to 2017.

Year	Number of Directed Fishing Trips[a]	Percentage of Directed Trips relative to Total Trips[b]	Recreational Harvest Limit (million lb)[c]	Recreational Landings of BSB (million lb)[d,e]	Percentage Overage (+%)/ Underage (-%)
1995	313,537	1.2	None	6.34	None
1996	231,090	0.8	None	3.99	None
1997	310,898	1.0	None	4.26	None
1998	137,734	0.5	3.15	1.14	-64%
1999	136,452	0.5	3.15	1.64	-48%
2000	255,789	0.7	3.15	3.98	+26%
2001	293,191	0.8	3.15	3.41	+8%
2002	283,537	0.9	3.43	4.37	+27%
2003	285,861	0.8	3.43	3.30	-4%
2004	149,670	0.4	4.01	1.97	-51%
2005	199,603	0.5	4.13	1.88	-54%
2006	253,040	0.7	3.99	1.80	-55%
2007	368,042	1.0	2.47	2.18	-12%
2008	256,341	0.7	2.11	2.03	-4%
2009	393,389	1.3	1.14	2.56	+125%
2010	417,663	1.4	1.83	3.19	+74%
2011	193,655	0.7	1.83	1.17	-36%
2012	267,932	0.8	1.32	3.19	+142%
2013	261,582	1.0	2.26	2.46	+9%
2014	403,624	1.0	2.26	3.67	+62%
2015	505,571	1.8	2.33	3.79	+63%
2016	NA	NA	2.82	NA	NA
2017	NA	NA	2.82[f]	NA	NA

[a] Estimated number of recreational fishing trips (expanded) where the primary target species was black sea bass, Maine through North Carolina. Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 27, 2016.

[b] Source of total trips (Maine through North Carolina) for all species combined: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 18, 2016.

[c] Harvest limits for 2002 through 2014 are adjusted for research set-aside.

[d] Maine through Cape Hatteras, NC.

[e] 1994-2003 data are from MRFSS, 2004-2015 data are from MRIP. Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 27, 2016.

[f] Implemented; subject to change based on new assessment information in early 2017.

NA = Data not available.

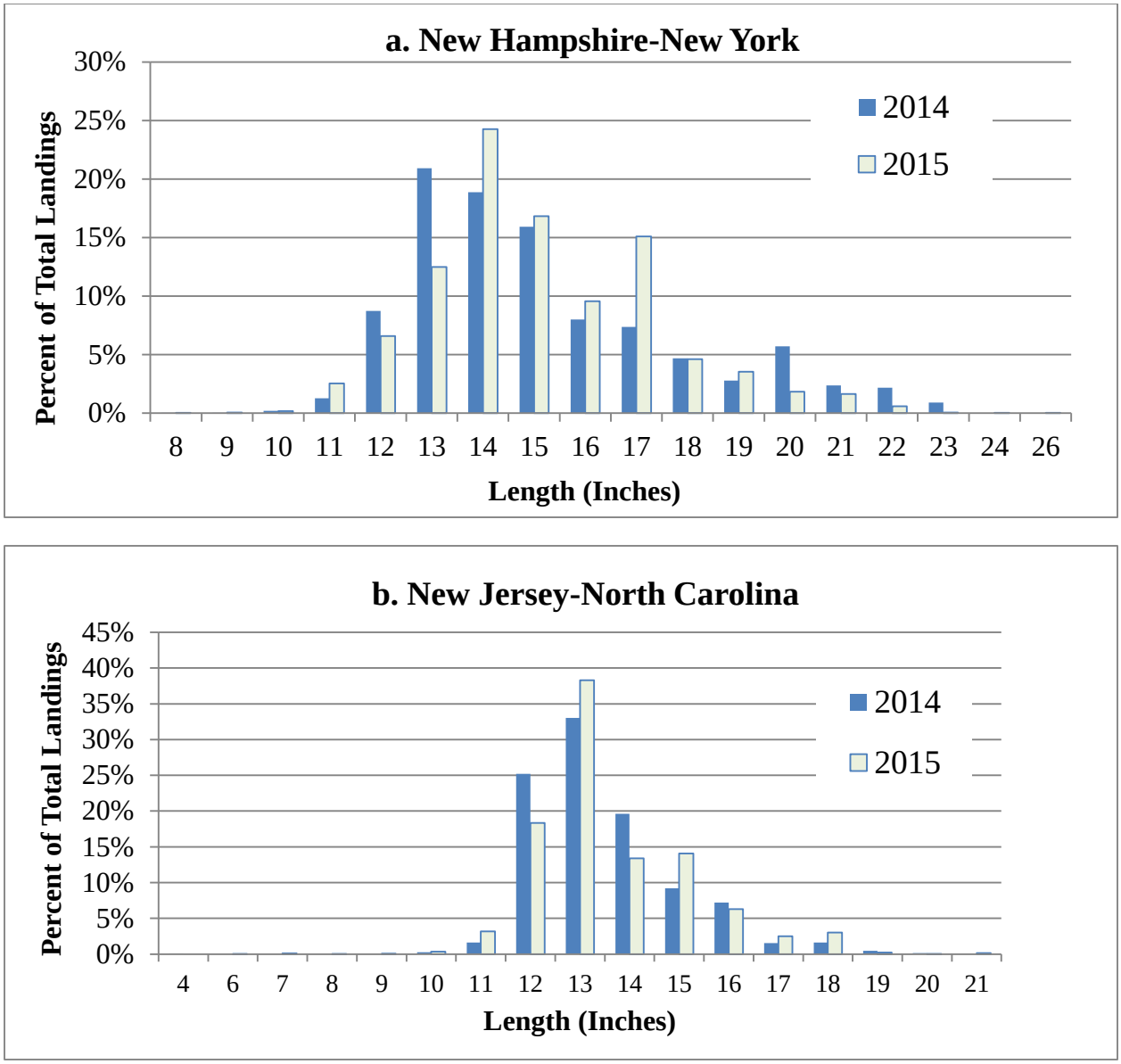


Figure 3: Expanded length frequencies of landed black sea bass from 2014 and 2015 MRIP data, as a percent of total landed fish, for a) New Hampshire through New York (13 or 15-inch size limits) and b) New Jersey through North Carolina (generally 12.5-inch size limit, except for New Jersey fall season). Each length bin contains fish from X.0 to X.99 inches. Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 28, 2016.