



Summer Flounder and Scup State Recreational Proposals for 2018 fishing season

Summer Flounder, Scup, and Black Sea Bass
Management Board
February 8, 2018

Outline



- Background
- Technical Committee Review of Summer Flounder Proposals
 - Questions
- Technical Committee Review of Scup Proposals
 - Questions
- Board discussion and potential action
 - Separate motions for Summer flounder and scup

Background



- December 2017: Board voted to extend regional management under Addendum XXVIII for Summer Flounder
- Board specified that State/Regions could liberalize harvest through measures in 2018, up to 17% above 2017 preliminary harvest through wave 4 (July/August)
 - De facto 2018 Coastwide harvest target of **3.78** million pounds
 - 2018 Recreational Harvest Limit: 4.42 million pounds



Call Summary

- TC met via conference call on January 16th
- Summer Flounder and Scup Proposals were reviewed
- All states with the exception of NC submitted proposals to adjust 2018 measures
- Overall the TC recommended approval of the methodologies used to develop the Summer Flounder Proposals

Additional TC Comments



- Continual issue: lack of uniformity in analysis on annual measures adjustment based on the MRIP data for reductions or liberalizations.
 - If the intent is to continue annual adjustment to measures for the foreseeable future, prioritizing the development of a new set of standard operating procedures (SOPs) for this annual task is needed
- TC remains concerned about the status of the summer flounder resource
 - While liberalizations are on the table for 2018, reductions may be needed for 2019 and beyond depending on 2018 benchmark stock assessment results

Methodologies used



- Varied state to state, and by measure change
- Bag limit analysis
 - Additive approach
 - Poisson or Negative binomial distribution regression
- Size limit analysis
 - Natural logarithm regression
 - Generalized Linear Model (GLM) based analysis
- Season analysis
 - Multi-year average percent daily harvest rate
- Interaction equation $\text{Harvest} = (X+Y)-(X*Y)$ used by some but not all proposals



Summer Flounder Proposals

Massachusetts Proposal



- 2017 Measures
 - Size: 17” minimum size
 - Bag: 4 fish
 - Season: May 22-September 23
- 2017 Harvest: 26,669 fish
- Percent Change from 2016: 54% decrease
- 2018 Proposed Measures (only changes):
 - Bag: 5 fish
 - May 23-October 9 (16 additional days)

Rhode Island Proposal



- 2017 Measures
 - Size: 19” minimum size
 - Bag: 4 fish
 - Season: May 1- December 31
- 2017 Harvest: 58,749 fish
- Percent Change from 2016: 31% decrease
- 2018 Proposed Measures (only changes):
 - Bag: 6 fish

Connecticut – New York Proposal



- 2017 Measures
 - Size: 19” minimum size
 - Bag: 3 fish
 - Season: May 17- September 21
- 2017 Harvest: approximately 352,840 fish
- Percent Change from 2016: 68% decrease
- Proposed options follow

CT – NY Proposal Cont'd



2017 Measures

19" min size, 3 fish bag, and season of May 17-September 21 (128 days)

2018 Proposed Measures (changes **bolded**):

- 1) 19" min size, 3 fish bag, and season of May 1-September 30 (**153 days**) (13.3% increase)
- 2) 19" min size, **4** fish bag, and season of May 1-September 25 (**148 day**) (17% increase)
- 3) 19" min size, **4** fish bag, and season of May 4-September 30 **151 day** (16.5% increase)
- 4) **18.5"** min size, 3 fish bag, and season of *May 25-September 30 106 day** (17.0% increase)

New Jersey Proposal



- 2017 Measures
 - Size: 18” minimum size, Bag 3 fish
 - Season: May 25- September 5 (104 days)
- 2017 Harvest: 433,011 fish
- Percent Change from 2016: 42% decrease
- Initial proposed options used an averaged 2018 harvest target that was higher than 17% above 2017 levels
 - The analysis was revised on the call to match correct 2018 harvest target

New Jersey Proposal Cont'd



- 2017 Measures

- Size: 18” minimum size, Bag 3 fish, and season of May 25- September 5 (104 days)

2018 Proposed Measures (changes **bolded**):

- 1) 18” min size, 3 fish bag, and season of May 25- September 22 **121 day** (16.78% increase)
- 2) 18” min size, 3 fish bag limit, and season of May 22-September 20 **122 day** (16.59% increase)
- 3) 18” min size, 3 fish bag limit, and season of May 15-September 16 **125 day** (16.83% increase)

Delaware – Virginia Proposal



- 2017 Measures
 - Size: 17” minimum size
 - Bag 4 fish
 - Season: all year (365 days)
- 2017 Harvest: 148,190 fish
- Percent Change from 2016: 231% increase
- 2018 Proposed Measures (only changes):
 - 16.5” Size limit
 - Depending on data set used to fit regression analysis, increase in harvest could be from 12-26%

Summer Flounder harvest in numbers of fish



State	2017 Regional Harvest	17% liberalization in Harvest	2018 Harvest based on Proposals
MASSACHUSETTS	25,669	30,033	30,033
RHODE ISLAND	58,749	68,736	61,099
CONNECTICUT			
NEW YORK	301,573	352,840	352,840
NEW JERSEY	433,014	506,626	506,626
DELAWARE			
MARYLAND			
VIRGINIA	148,190	173,382	173,251
NORTH CAROLINA	24,429	28,582	24,429
Coastwide Total	991,624	1,160,200	1,148,278

Combined 2018 Harvest based on Proposals is **15.8%** increase from 2017 and 81% of the 2018 RHL

2018 RHL in numbers of fish= 1,415,080



Questions?



Scup Proposals

Background



- December 2017: Board voted to extend ad hoc regional management for Scup
 - Board tasked TC with analysis on size limit decrease for MA-NY
- Board specified that State/Regions could liberalize harvest through measures in 2018, to achieve RHL of 7.37 million pounds
 - 2017 Preliminary harvest through wave 5 (September/October) was 4.65 million pounds
 - 59% liberalization based on 2017 harvest

Call Summary



- TC met via conference call on January 16th
- TC discussed MA-NY proposal and NJ proposal
- MA-NY proposal was initially unclear of proposed management measures change
 - Analysis had be done on both size limit changes and bag limit increases on the ‘bonus season’
- Proposal revised to **only request size limit change**
- Overall the TC found the analysis and methodology technically sound recommended both Proposals be approved

MA-NY Proposal



- Analysis was done on both size limit and bag limit change
- 2017 measures: MA-NY, 10 inch min size*
 - RI and CT had a 9 inch min size at select shore sites
- Decrease of 1 inch in size limit would increase harvest by approx. 27% for the region
- ‘Bonus season’ change in bag limit was also explored (45 to 50 fish)
 - Poisson and additive approach showed increase in harvest from BOTH size and bag limit change in a range of 47%-39%

MA-NY Proposal Cont'd



- TC acknowledged some risk in the assumption that harvest of 9 inch fish would be the same at 10 inch, 11 inch, and 12 fish
 - Higher availability of smaller fish
- MRIP length frequency data indicates anglers in the region are likely already self-selecting for fish larger than 10 inches
- TC noted that shore based harvest change would likely be minimal, as harvest is significantly less than other fishing modes

New Jersey Proposal



- NJ was not interested in size limit change
 - Already at 9 inch min size
- Proposed change in season length from 243 days to 365 days
- NJ season in recent years: January 1-February 28 and July 1-December 31
 - High variability in harvest between years and waves; challenge of estimating harvest in closed periods
 - Gap filling was done by averaging harvest across multiple waves
 - Proposed change estimated to increase harvest by 34%



TC feedback

- Agreed with gap filling approach used
- Questions asked about characterizing NJ's recreational scup fishery
 - NJ: increasing season to include March through June may not significantly increase harvest as species is not sought after like summer flounder and black sea bass

Combined harvest increases



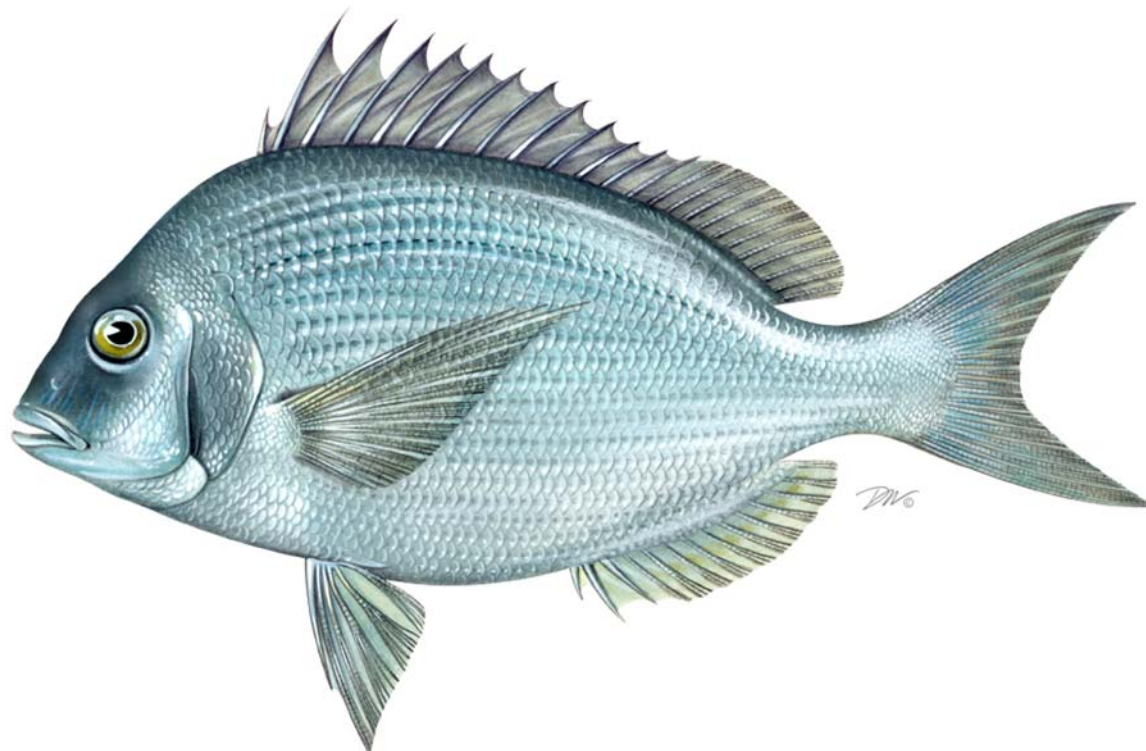
- Harvest through wave 5 (September-October)
 - Massachusetts-New York
 - 2017 Harvest: 4,052,679 pounds
 - 2017 Harvest + 27% (increase): 5,146,902 pounds
 - That includes size limit changes from 10 to 9 inches
 - New Jersey
 - 2017 Harvest: 592,583 pounds
 - 2017 Harvest + 34% increase: 794,061 pounds
 - Harvest associated with season change
 - Combined harvest increases for 2017: **6.73** million pounds
 - 2018 Recreational Harvest Limit (RHL): **7.37** million pounds
- ~91% of the 2018 RHL



Questions?



2017 Scup FMP Review



Summer Flounder, Scup, Black Sea Bass Board

February 8, 2018

Outline



- Changes to Management
- Landings trends
- Stock Status/ Stock Assessment
- **Compliance & *De minimis* requests**
- Board Action

Compliance & De Minimis request



- The Board postponed action on FMP due to issues with Massachusetts state compliance
 - MA did not enforce the minimum mesh size requirements or the threshold for triggering those requirements from April 23 to June 9 because of overlap with the state's small mesh squid fishery
- January 2018
 - Massachusetts provided memo outlining efforts to come into compliance before the start of small-mesh squid fishery in Spring 2018
- *De minimis* request from Delaware



Questions?



Draft Addendum XXX for Board Review: Black Sea Bass Recreational Management in 2018 and Beyond

Caitlin Starks

Atlantic States Marine Fisheries Commission

February 8, 2018

Presentation Outline



1. Document Development Timetable
2. Changes to the Document
3. Public Comment Overview
4. Addendum Background
5. Management Options & Public Comments
6. Advisory Panel Report
7. Next Steps
8. Questions

Document Development



Board Initiated Draft Addendum XXX	May 2017
Board Approval of Draft Addendum XXX for Public Comment	December 2017
Public Comment	Dec-Jan 2018
Board Considers Final Addendum	February 2018

Changes to the Document



- Tables in Appendix I have been updated**
 - 2006 Harvest estimates corrected
 - Regional allocations changed by <1%
 - Example measures for Northern region updated with data through wave 5 (Tables B1 and B2)
 - Changes highlighted in yellow

Changes to the Document



Table A1

State	Harvest	Regional Harvest	% Allocation	2018 RHL	2018 Regional Allocation in lbs (2006-2015 timeframe)	Projected 2017 Harvest (lbs)	% Change from 2017 Harvest to 2018 Allocation	Minimum Size Limit	Possession Limit (# fish)	Season (# of days)
MA	3,439,611	14,964,052	91.19% (90.01%)*	3.66 million lbs	3,339,267 (3,332,685)*	3,910,840	-14.62%	15"	5	219
RI	1,009,319									
CT	1,059,646									
NY	4,342,265									
NJ	5,113,211									
DE	454,274	1,445,602	8.81% (8.99%)*		322,611 (329,193)*	257,943	25.07%	12.5"	15	225
MD	491,303									
VA	403,912									
NC	96,113									
Grand Total	16,409,654		100.00%							

Public Comment Overview



- Public hearings held in 8 jurisdictions
 - 111 attendees, 87 commenters
- Written Comments (54 total)
 - 1 form letter (12 signed)
 - 8 organization letters
 - 34 from individual stakeholders

Document Overview



- Overview
 - Background
 - Statement of the Problem
 - Status of the Stock
- Proposed Management Program
 - Management Options
 - Timeframe for Addendum Provisions

Background



- FMP: Target quota for recreational black sea bass (RHL)
- 1996-2010: Coastwide measures
- 2011: Addendum XXI
 - State-by-state and regional management
- 2014: Addendum XXV
 - Continued ad-hoc regional management

Statement of the Problem



- Coastwide catch limits from 2010-2016 were set using a constant catch approach
- Differences in measures reductions under ad-hoc regional management
- Concerns about inequities in harvest reductions and lack of uniformity in measures and accountability

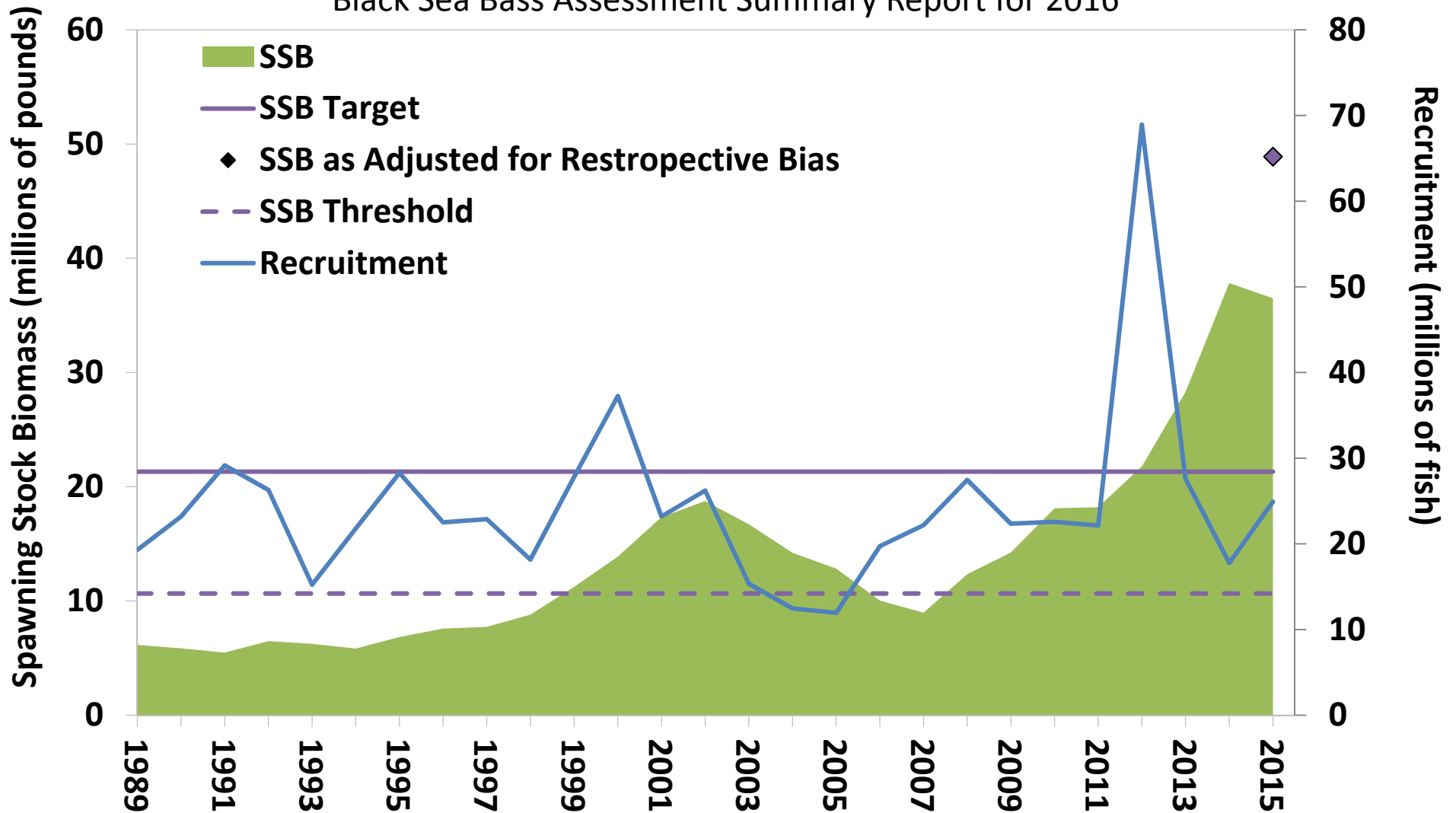
Status of the Stock



Black Sea Bass Spawning Stock Biomass and Recruitment

Source: 62nd Northeast Regional Stock Assessment Workshop

Black Sea Bass Assessment Summary Report for 2016



Management Options



- **Option 3.1.1 Default Management Program (Coastwide Measures)**
- **Option 3.1.2 Regional Allocation of the RHL**
 - 3.1.2.1 Basis for Allocation
 - 3.1.2.2 Regional Alignment
 - 3.1.2.3 Timeframe for specifying allocation
 - 3.1.2.4 Management measures within a region
 - 3.1.3 Specification and evaluation of measures
 - 3.2 Timeframe for Addendum provisions

3.1.1 Default Management Approach



- Default approach under FMP
- Coastwide management measures
 - **14” minimum size, 5 fish possession limit, season from May 15 – September 15**
 - NOTE: Would apply to rest of fishing year after February 2018. States participating in February fishery would have to further reduce measures to account for February harvest.

Management Options



- **Option 3.1.1 Default Management Program (Coastwide Measures)**
- **Option 3.1.2 Regional Allocation of the RHL**
 - 3.1.2.1 Basis for Allocation
 - 3.1.2.2 Regional Alignment
 - 3.1.2.3 Timeframe for specifying allocation
 - 3.1.2.4 Management measures within a region
 - 3.1.3 Specification and evaluation of measures
 - 3.2 Timeframe for Addendum provisions

Public Comment: Management Program



3.1 Management Program		
	Option A	Option B
	3.1.1 Default (Coastwide Measures)	3.1.2 Regional Allocation of the RHL
Individual		7
Organization		4
Form Letter		
Hearings		
MA	1	21
RI		13
CT		3
NY		9
NJ		11
DE		5
MD		17
VA		3
TOTAL	1	93

3.1.2 Decision Points (1/6)



- **3.1.2.1 Options for Allocation of the RHL**
 - **A: Regional allocation based on historical harvest**
 - Uses recreational harvest estimates from MRIP in numbers of fish to determine proportion of RHL allocated to each region
 - **B: Regional allocation based on exploitable biomass and historical harvest**
 - 3 regions: MA-NY, NJ and DE-NC
 - Uses recreational catch per angler (CPA) scaled to exploitable biomass using the region-specific catchability coefficient (q) to determine regional allocations to North and South
 - Then uses historical harvest to determine NJ allocation

Public Comment: Basis for Allocation



3.1.2.1 Basis for Allocation of the RHL

	Option A	Option B
	Based on harvest	Based on exploitable biomass and harvest
Individual	3	6
Organization	2	3
Form Letter		
Hearings		
MA	1	22
RI		
CT	1	2
NY	9	
NJ	3	8
DE		5
MD		17
VA		3
TOTAL	19	66

3.1.2 Decision Points (2/6)



- **3.1.2.2 Regional Alignment (pg. 13)**
 - **A: 2 Regions:** MA-NJ (Northern Region) and DE-NC north of Cape Hatteras (Southern region)
 - **B: 3 Regions:** MA-NY (Northern Region); NJ (New Jersey Region); and DE-NC north of Cape Hatteras (Southern region).
 - **C: 4 Regions:** MA-RI (Northern Region); CT-NY (Long Island Region); NJ (New Jersey Region); and DE-NC north of Cape Hatteras (Southern region).

Public Comment: Regional Alignment



3.1.2.2 Regional Alignment

	Option A	Option B	Option C
	2 Regions	3 Regions	4 Regions
Individual	2	4	1
Organization	2	2	
Form Letter			
Hearings			
MA	1	22	2
RI	14	14	
CT		2	
NY	9		
NJ	2	7	4
DE		5	
MD		17	
VA		3	
TOTAL	30	76	7

3.1.2 Decision Points (3/6)



- **3.1.2.3 Timeframe for specifying regional allocation (pg. 14)**

The option will specify the timeframe for calculating regional average CPA and harvest.

–**A: 2006-2015 (10 years)**

–**B: 2011-2015 (5 years)**

Public Comment: Timeframe for Allocation



3.1.2.3 Timeframe for specifying Allocation		
	Option A	Option B
	2006-2015	2011-2015
Individual	1	6
Organization	1	3
Form Letter		
Hearings		
MA		25
RI		14
CT		2
NY		9
NJ	11	
DE	3	
MD	14	
VA	3	
TOTAL	33	59

3.1.2 Decision Points (4/6)



- **3.1.2.4 Management measures within a region**
 - **A: Uniform regulations within a region**
 - **NOTE:** Only viable if no states participate in the February 2018 recreational fishery.
 - **B: Regulatory standard with Conservation Equivalency allowed**
 - Not to differ more than 1” in size limit, 3 fish in possession limit, and 30 days in season length from the regulatory standard)

Public Comment: Timeframe for Allocation



3.1.2.4 Management Measures within a Region		
	Option A	Option B
	Uniform regulations within a region	Regulatory standard with CE
Individual	1	5
Organization	0	3
Form Letter		
Hearings		
MA	1	24
RI		10
CT		3
NY	2	2
NJ		10
DE	5	
MD	1	14
VA		1
TOTAL	10	72

3.1.2 Decision Points (5/6)



- **3.1.3 Specification and evaluation of measures**
 - **A: Status Quo:** Recreational measures will be set annually based on the most current year's projected harvest and fishery performance to constrain harvest in the subsequent year to the regional allocation of the RHL.
 - **B: Adjusting management measures to ACL:** Recreational measures will initially be set to constrain *harvest* to the regional allocation of the 2018 RHL. Then, fishery performance will evaluate *catch* against the ACL, comparing overages to a 3 year moving average of the ACL.

$$\text{ACL} - \text{Estimated Discards} = \text{RHL}$$

3.1.2 Decision Points (5/6)



- **3.1.3 Specification and evaluation of measures**
 - **B: Adjusting management measures to ACL**
 - Requirement for improved data collection and compliance from by 2020 in the following five areas:
 1. Biological sampling (length and weight)
 2. Reduction in refusal rates of dock side MRIP intercepts/interviews
 3. Discard composition information (i.e. reason discarded, length)
 4. Reduction in discarding relative to 2010-2015
 5. Improved compliance with management measures

Public Comment: Specification and Evaluation



3.1.3 Specification and Evaluation of Measures

	Option A	Option B
	Status Quo	Adjusting Management Measures to ACL
Individual		6
Organization		4
Form Letter		
Hearings		
MA		24
RI		
CT		
NY		1
NJ		11
DE		5
MD		15
VA		1
TOTAL	0	67

3.1.2 Decision Points (6/6)



- **3.2 Timeframe for Addendum provisions**
 - **A: Up to 2 years (2018-2019)**
 - **B) Up to 3 years (2018-2020)**

The selected options would constitute the management program for 2018 and beyond. The Board could vote to extend the management program as specified in the addendum for one or two years, expiring at the end of 2019 or 2020.

Public Comment: Timeframe for Allocation



3.2 Timeframe for Addendum Provisions

	Option A	Option B
	Up to 2 Years	Up to 3 Years
Individual	1	1
Organization	2	0
Form Letter		
Hearings		
MA	1	18
RI	*	*
CT	1	1
NY	1	3
NJ	10	1
DE		5
MD		15
VA		3
TOTAL	16	47

*14 participants recommended Addendum XXX stay in place for 1 year only, expiring at end of 2018

Additional Comments



- Season length important factor
- Separate measures for the for-hire sector
- More explicit about state/regional accountability
- Lack of confidence in MRIP data, mortality estimates, and management system
- Management should be less restrictive because the stock biomass is so large
- Opposed to mid-season closures
- Uncertainties in data make it difficult to comment



Draft Addendum XXX for Board Review: Advisory Panel Report

Caitlin Starks

Atlantic States Marine Fisheries Commission

February 8, 2018

Advisory Panel Review



- AP conference call on January 25th
- 8 preferred Regional Allocation of the RHL
 - 8 preferred harvest based allocation (A)
 - 4 preferred 2 regions (A), 1 preferred 3 regions (B) and 2 preferred 4 regions (C)
 - 8 preferred 5 year timeframe (B)
 - 7 preferred regulatory standard (B)
 - 8 preferred adjusting measures to the ACL (B)
 - 5 preferred Addendum provisions for 2 years (A)

Next Steps



- Consider Draft Addendum XXX for Final Approval
 - Select Addendum Provisions
 - Management Program (Coastwide vs Regional Allocation)
 - *Basis for Allocation*
 - *Regional Alignment*
 - *Timeframe for specifying allocation*
 - *Management measures within a region*
 - *Specification and evaluation of measures*
 - *Select Addendum Timeframe*
 - *A: Up to 2 Years or B: Up to 3 Years*

Next Steps

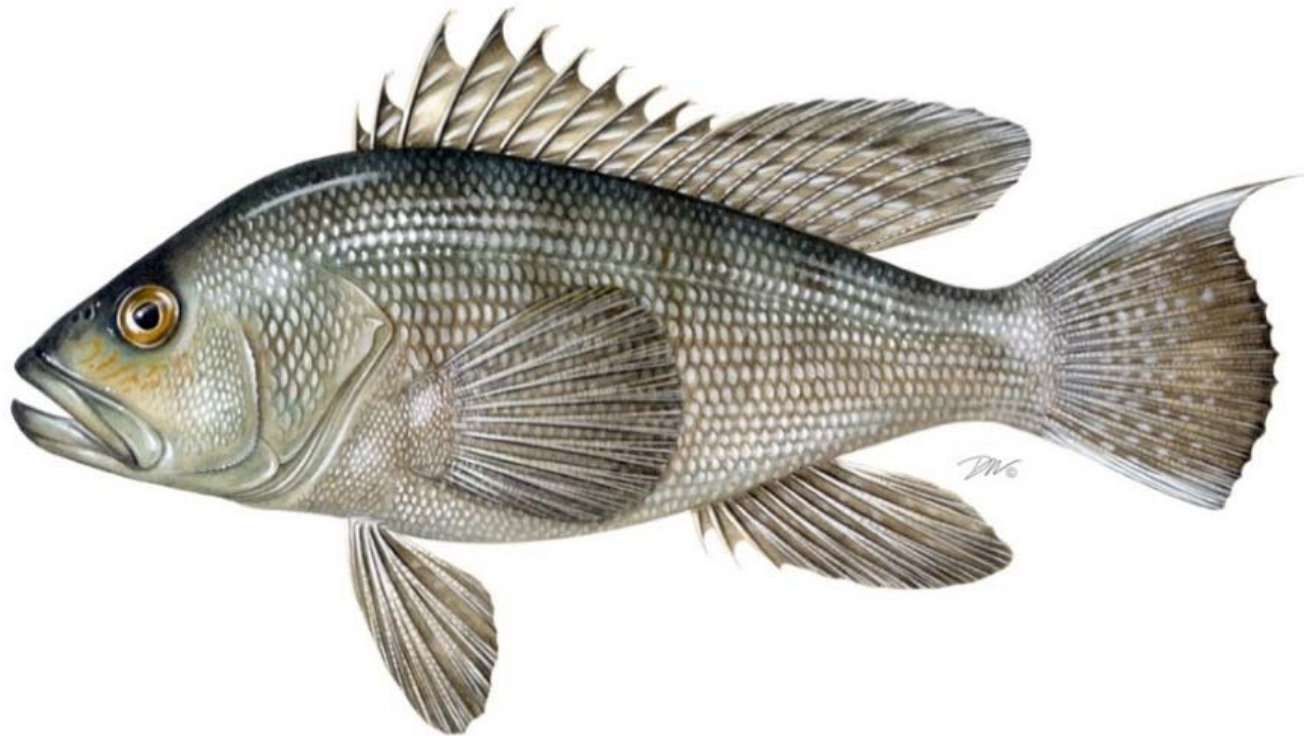


- Consider Draft Addendum XXX for Final Approval
 - Select Addendum Provisions
 - Management Program (Coastwide vs **Regional Allocation** ✓)
 - Basis for Allocation
 - Regional Alignment
 - Timeframe for specifying allocation
 - Management measures within a region
 - Specification and evaluation of measures
 - Select Addendum Timeframe
 - A: Up to 2 Years **or** B: Up to 3 Years

Next Steps



- If Regional Management adopted, regions submit proposals for measures for TC review
 - Board may determine the deadline for proposals
- TC reviews proposals
- Board reviews proposals, TC recommendations and approves regional measures



Questions?

Regional Allocation Tables (1/10)



Table A1. Time Series Option "A" 2006-2015 harvest in numbers of fish

State	Harvest	Regional Harvest	% Allocation	2018 RHL	2018 Regional Allocation in lbs (2006-2015 timeframe)	Projected 2017 Harvest (lbs)	% Change from 2017 Harvest to 2018 Allocation	Minimum Size Limit	Possession Limit (# fish)	Season (# of days)
MA	3,439,611	14,964,052	91.19% (90.01%)*	3.66 million lbs	3,339,267 (3,332,685)*	3,910,840	-14.62%	15"	5	219
RI	1,009,319									
CT	1,059,646									
NY	4,342,265									
NJ	5,113,211									
DE	454,274	1,445,602	8.81% (8.99%)*		322,611 (329,193)*	257,943	25.07%	12.5"	15	225
MD	491,303									
VA	403,912									
NC	96,113									
Grand Total	16,409,654		100.00%							

*Updated values highlighted in yellow

Regional Allocation Tables (1/10)



Table A2. Time Series Option “B” 2011-2015 harvest in numbers of fish

State	Harvest	Regional Harvest	% Allocation	2018 RHL	2018 Regional Allocation in lbs (2006-2015 timeframe)	Projected 2017 Harvest (lbs)	% Change from 2017 Harvest to 2018 Allocation	Minimum Size Limit	Possession Limit (# fish)	Season (# of days)
MA	1,805,993	7,740,526	93.37%	3.66 million lbs	3,418,989	3,910,840	-12.577%	15"	5	227
RI	675572									
CT	956704									
NY	2294805									
NJ	2007452									
DE	166437	549,896	6.63%		242,889	257,943	-5.84%	12.5"	15	195
MD	236302									
VA	101900									
NC	45257									
Grand Total	8,290,422		100.00%							

*Updated values highlighted in yellow

Regional Allocation Tables (1/10)



Table A3. Time Series Option “A” 2006-2015 harvest in numbers of fish

State	Harvest	Regional Harvest	% Allocation	2018 RHL	2018 Regional Allocation in lbs (2006-2015 timeframe)	Projected 2017 Harvest (lbs)	% Change from 2017 Harvest to 2018 Allocation	Minimum Size Limit	Possession Limit (# fish)	Season (# of days)
MA	3,439,611	9,850,841	60.03% (59.81%)*	3.66 million lbs	2,198,225 (2,190,257)*	2,496,841	-11.96%	15"	5	107
RI	1,009,319									
CT	1,059,646									
NY	4,342,265									
NJ	5,113,211	5,113,211	31.16% (31.20%)*		1,141,041 (1,142,428)*	1,413,999	-19.30%	12.5"	w3: 10 w4: 2 w5-6: 15	137
DE	454,274	1,445,602	8.81% (8.99%)*		322,611 (329,193)*	257,943	25.07%	12.5"	15	225
MD	491,303									
VA	403,912									
NC	96,113									
Grand Total	16,409,654		100.00%							

*Updated values highlighted in yellow

Regional Allocation Tables (1/10)



Table A4. Time Series Option “B” 2011-2015 Harvest in numbers of fish

State	Harvest	Regional Harvest	% Allocation	2018 RHL	2018 Regional Allocation in lbs (2006-2015 timeframe)	Projected 2017 Harvest (lbs)	% Change from 2017 Harvest to 2018 Allocation	Minimum Size Limit	Possession Limit (# fish)	Season (# of days)
MA	1,805,993	5,733,074	69.15%	3.66 million lbs	2,532,298	2,496,841	1.42%	15"	5	126
RI	675,572									
CT	956,704									
NY	2,294,805									
NJ	2,007,452	2,007,452	24.21%		886,691	1,413,999	-37.29%	13"	w3: 10 w4: 2 w5-6: 10	131
DE	166,437	549,896	6.63%		242,889	257,943	-5.84%	12.5"	15	195
MD	236,302									
VA	101,900									
NC	45,257									
Grand Total	8,305,900		100.00%							

*Updated values highlighted in yellow

Regional Allocation Tables (1/10)



Table A5. Time Series Option “A” 2006-2015 Harvest in numbers of fish

State	Harvest	Regional Harvest	% Allocation	2018 RHL	2018 Regional Allocation in lbs (2006-2015 timeframe)	Projected 2017 Harvest (lbs)	% Change from 2017 Harvest to 2018 Allocation	Minimum Size Limit	Possession Limit (# fish)	Season (# of days)
MA	3,439,611	4,448,930	27.11%	3.66 million lbs	992,735	1,008,198	-1.53%	15"	5	114
RI	1,009,319		(26.74%)*		(979,221)*					
CT	1,059,646		32.92%		1,205,490					
NY	4,342,265		(33.07%)*		(1,211,036)*					
NJ	5,113,211	5,113,211	31.16% (31.20%)*		1,141,041 (1,142,428)*	1,413,999	-19.30%	13"	w3: 10 w4: 2 w5-6: 10	155
DE	454,274	1,445,602	8.81% (8.99%)*		322,611 (329,193)*	257,943	25.07%	12.5"	15	225
MD	491,303									
VA	403,912									
NC	96,113									
Grand Total	16,409,654									

*Updated values highlighted in yellow

Regional Allocation Tables (1/10)



Table A6. Time Series Option “B” 2011-2015 Harvest in numbers of fish

State	Harvest	Regional Harvest	% Allocation	2018 RHL	2018 Regional Allocation in lbs (2006-2015 timeframe)	Projected 2017 Harvest (lbs)	% Change from 2017 Harvest to 2018 Allocation	Minimum Size Limit	Possession Limit (# fish)	Season (# of days)
MA	1,805,993	2,481,565	29.93%	3.66 million lbs	1,096,107	1,008,198	8.72%	15"	5	126
RI	675,572									
CT	956,704	3,251,509	39.22%		1,436,191	1,488,642	-3.52%	15"	5	125
NY	2,294,805									
NJ	2,007,452	2,007,452	24.21%		886,691	1,413,999	-37.29%	12.5"	w3: 10 w4: 2 w5-6: 10	122
DE	166,437	549,896	6.63%		242,889	257,943	-5.84%	12.5"	15	195
MD	236,302									
VA	101,900									
NC	45,257									
Grand Total	8,305,900		100.00%							

*Updated values highlighted in yellow

Regional Allocation Tables (1/10)



Table B1: Regional Allocation based on Exploitable Biomass and Historical Harvest for 2006-2015

Region	Time series average (2006-2015) CPA by Region	Catchability coefficient (q) scaler (For entire time series)	Regional Allocation % under time series 2006-2015		2018 RHL	Regional Allocation under time series 2006-2015 (lbs)		Projected 2017 Harvest (lbs)	% Change from 2017 harvest to 2018 Allocation	Potential Management		
										Min. Size Limit	Bag Limit (# fish)	Season (# of days)
North: MA-NY	1.09 fish per trip	0.0000528	57%		3.66 million pounds	2,087,270		2,496,841	-16.40%	15"	5	102 (144)**
South: NJ	1.87 fish per trip	0.0001197	43%	78.0%* (77.6%)**		1,574,608	1,228,194 (1,221,895)*	1,413,999	-13.14%	12.5"	w3: 10 w4: 2 w5-6: 15	140
South: DE-NC			22.0%* (22.4%)**	346,414 (352,712)*		257,943	34.30%	12.5"	15	238		

*North Carolina north of Cape Hatteras

**Updated values highlighted in yellow

Regional Allocation Tables (1/10)



Table B2: Regional Allocation based on Exploitable Biomass and Historical Harvest for 2011-2015

Region	Time series average (2011-2015) CPA by Region	Catchability coefficient (q) scaler (For entire time series)	Regional Allocation % under time series 2011-2015		2018 RHL	Regional Allocation under time series 2011-2015 (lbs)		Projected 2017 Harvest (lbs)	% Change from 2017 harvest to 2018 Allocation	Potential Management		
										Min. Size Limit	Bag Limit	Season (# of days)
North: MA-NY	1.51 fish per trip	0.0000528	65.7%		3.66 million pounds	2,405,854		2,496,841	-3.64%	15"	5	119 (185)**
South: NJ	1.78 fish per trip	0.0001197	34.3%	78.5%*		1,256,024	985,979	1,413,999	-30.27%	w3-5: 12.5"	w3: 10 w4: 2	127
South: DE-NC			21.5%*	270,045			257,943	4.69%	12.5"	15	206	

*North Carolina north of Cape Hatteras

**Updated values highlighted in yellow