



Mid-Atlantic Fishery Management Council
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MEMORANDUM

Date: June 27, 2018 (Corrected on July 19, 2018)
To: Dr. Chris Moore, Executive Director
From: Matthew Seeley, Staff
Subject: 2019 Bluefish Specifications

Summary

This memo provides recommendations for setting bluefish specifications for one year (2019). For 2019, staff recommends an Acceptable Biological Catch (ABC) of 21.81 million pounds (9,895 mt).

Introduction

The Magnuson Stevens Act (MSA) as currently amended requires each Council's Scientific and Statistical Committee (SSC) to provide, among other things, ongoing scientific advice for fishery management decisions, including recommendations for acceptable biological catches (ABCs). The SSC recommends ABCs to the Mid-Atlantic Fishery Management Council (the Council) that address scientific uncertainty such that overfishing is unlikely to occur per the Council's risk policy. The Council's ABC recommendations to NMFS for the upcoming fishing year(s) cannot exceed the ABC recommendation of the SSC. As such, the SSC's ABC recommendations form the upper limit for catches of Council-managed species.

Once the SSC meets and decides on an ABC, the Bluefish Monitoring Committee will meet to discuss if changes to other management measures should be recommended based on the ABCs from the SSC as well as other management considerations. These measures include Annual Catch Limits (ACLs), Annual Catch Targets (ACTs), and Accountability Measures (AMs). Based on the SSC's and Monitoring Committee's recommendations, the Council will make recommendations to the NMFS Northeast Regional Administrator. Based on NMFS' evaluation of the Council's recommendations, NMFS will publish a Proposed Rule for specifications and then a Final Rule, which may change from the Proposed Rule based on public comment.

Current management measures and staff recommendations for 2019 are presented in Table 1.

Table 1. Current fishing year specifications (2018) and 2019 staff recommended specifications for bluefish.

Management Measure	2018 (Current Measures set in 2015, see FR) ¹		Basis	2019 (Staff recommended)	
	Million lbs	mt		Million lbs	mt
ABC	21.81	9,895	Derived by SSC; Council P* policy	21.81	9,895
ACL	21.81	9,895	Defined in FMP as equal to ABC	21.81	9,895
Management Uncertainty	0	0	Derived by Monitoring Committee	0	0
Commercial ACT	3.71	1,682	(ACL – Management Uncertainty) x 17%	3.71	1,682
Recreational ACT	18.11	8,213	(ACL – Management Uncertainty) x 83%	18.11	8,213
Commercial Discards	0	0	Value used in assessment	0	0
Recreational Discards	2.99	1,356	2015 discards	2.99	1,356
Commercial TAL (pre-transfer)	3.71	1,682	Commercial ACT – commercial discards	3.71	1,682
Recreational TAL (pre-transfer)	15.12	6,857	Recreational ACT – recreational discards	15.12	6,857
TAL Combined	18.83	8,539	Commercial TAL + recreational TAL	18.83	8,539
Expected Rec Landings	11.58	5,253	2015 recreational landings	11.58	5,253
Commercial quota	7.24	3,286	Commercial TAL + transfer	7.24	3,286
Recreational harvest limit	11.58	5,253	Recreational TAL - transfer	11.58	5,253

¹ Greater Atlantic Regional Fisheries Office adjusted values (<https://www.greateratlantic.fisheries.noaa.gov/sustainable/species/bluefish/index.html>) and FR notice: <https://www.gpo.gov/fdsys/pkg/FR-2016-08-04/pdf/2016-18424.pdf>.

Management System

The Council and the ASMFC work cooperatively to develop fishery regulations for bluefish off the east coast of the United States. The Council and Commission work with the National Marine Fisheries Service (NMFS), which serves as the federal implementation and enforcement entity. This cooperative management endeavor was developed because a significant portion of the catch is taken from both state waters (0-3 miles offshore) and federal waters (3-200 miles offshore, also known as the Exclusive Economic Zone or EEZ). The management unit for bluefish (*Pomatomus saltatrix*) is the U.S. waters in the western Atlantic Ocean. For bluefish, the ACT is split 83/17% into recreational and commercial ACTs, respectively, and the discarded component of that catch is deducted to arrive at recreational and commercial TALs. Additionally, landings above the expected recreational harvest can be “transferred” from the recreational to the commercial fishery as long as the final commercial quota does not exceed 10.5 million pounds.

Catch and Landings Update

A time series of recreational/commercial landings and recreational discards from 1985-2017 are presented in Figure 1.

Recreational landings in 2017 were 9.52 million lbs (4,318 mt), about 99% of the recreational harvest limit (9.65 million lbs or 4,377 mt). State landings are presented in Table 2.

Reported 2017 dealer landings in the commercial fishery were approximately 3.64 million lbs (1,651 mt), about 57% under the commercial quota of 8.54 million lbs (3,874 mt).

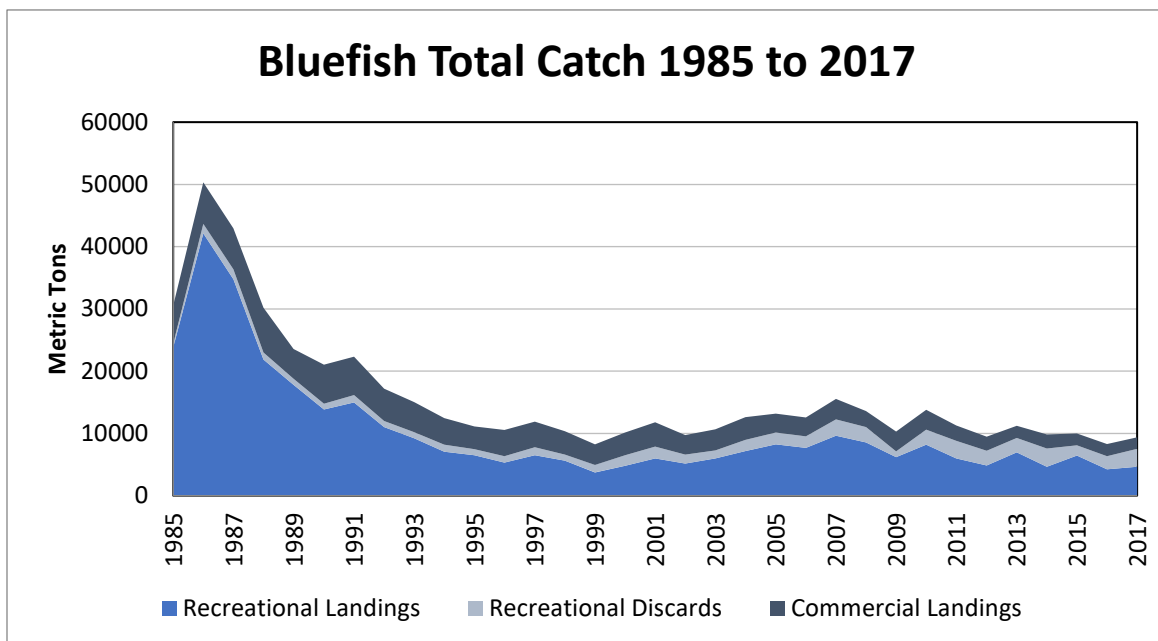


Figure 1. Bluefish recreational/commercial landings and recreational discards from 1985-2017.

Table 2. 2017 recreational/commercial landings, commercial quota, and percentage harvested of the commercial quota.

State	Recreational Landings (lbs)	Commercial Landings (lbs)	Commercial Quota (lbs)	Percentage of Commercial Quota (%) ²
ME	69	0	57,105	0
NH	0	0	35,408	0
MA	619,746	364,810	573,755	64
RI	337,710	647,112	731,901	88
CT	597,122	33,088	108,170	31
NY	1,321,368	690,675	887,118	78
NJ	3,365,738	304,710	1,215,633	25
DE	770,820	5,679	160,440	4
MD	109,424	25,147	256,420	10
VA	45,055	36,251	1,014,435	4
NC	690,018	1,319,384	2,638,704	50
SC	84,593	0	3,007	0
GA	1,184	0	812	0
FL (East Coast)	1,576,897	209,864	859,322	24
Total	9,519,744	3,636,720	8,542,230	43

Biological Reference Points and Stock Status

The bluefish benchmark stock assessment was peer reviewed in June 2015 and approved for use by management at SAW/SARC 60. This benchmark assessment uses the model from the 2005 benchmark assessment (SAW 41; NEFSC 2005), which is a forward-projecting statistical catch-at-age model called ASAP (Age Structured Assessment Program), with updates to the way the catch-at-age matrices were constructed and change to model configuration. The catch-at-age matrices were completely reconstructed to incorporate new age data, including archived historical samples that had not been processed at the time SAW/SARC 41 was conducted, and to correct aging errors in the earlier years of the time series (NEFSC 2015). Documentation on this assessment and previous stock assessments, such as reports on stock status, including annual assessment and reference point update reports, Stock Assessment Workshop (SAW) reports, and Stock Assessment Review Committee (SARC) panelist reports, are available online at the NEFSC website: <http://www.nefsc.noaa.gov/saw/>.

The biological reference points estimated in the previous benchmark assessment (SAW/SARC 41) were MSY reference points for F and total biomass (F_{MSY}, B_{MSY}). However, MSY reference

² The percentage of initial commercial quota is based on the pre-transfer quotas.

points require a reliable stock-recruitment relationship. The stock-recruitment relationship for bluefish is poorly defined, due to the lack of information on recruitment at small stock sizes, with steepness estimated to be close to one for most model runs (NEFSC 2015). Therefore, in SAW/SARC 60, SPR-based (spawn per recruit) reference points were used as a proxy for MSY reference points.

Results from the most recent benchmark stock assessment indicate that the bluefish stock is not overfished, and overfishing was not occurring in 2014 relative to the biological reference points (BRPs) from the 2015 SAW/SARC 60. Modeling results indicated that the estimated that SSB was 190.77 million lbs (86,534 mt) in 2014 (78% of the accepted reference point SSB_{MSY} proxy = 245.21 million lbs or 111,228 mt). Spawning stock biomass declined since the beginning of the time series, from a high of 340.90 million lbs (154,633 mt) in 1985 to a low of 116.34 million lbs (52,774 mt) in 1997, before increasing again. The stock spawning biomass average for the time series is 175.15 million lbs (79,449 mt; Figure 2). Fully-selected fishing mortality in 2014 was estimated to be 0.157, below the F threshold (F_{MSY} proxy = $F_{40\%SPR}$ = 0.170, which was later adjusted by the SSC to F_{MSY} proxy = $F_{35\%SPR}$ = 0.190). Fully selected F peaked in 1987 at 0.477 and then declined gradually since then, with a time series average of 0.284 (Figure 3).

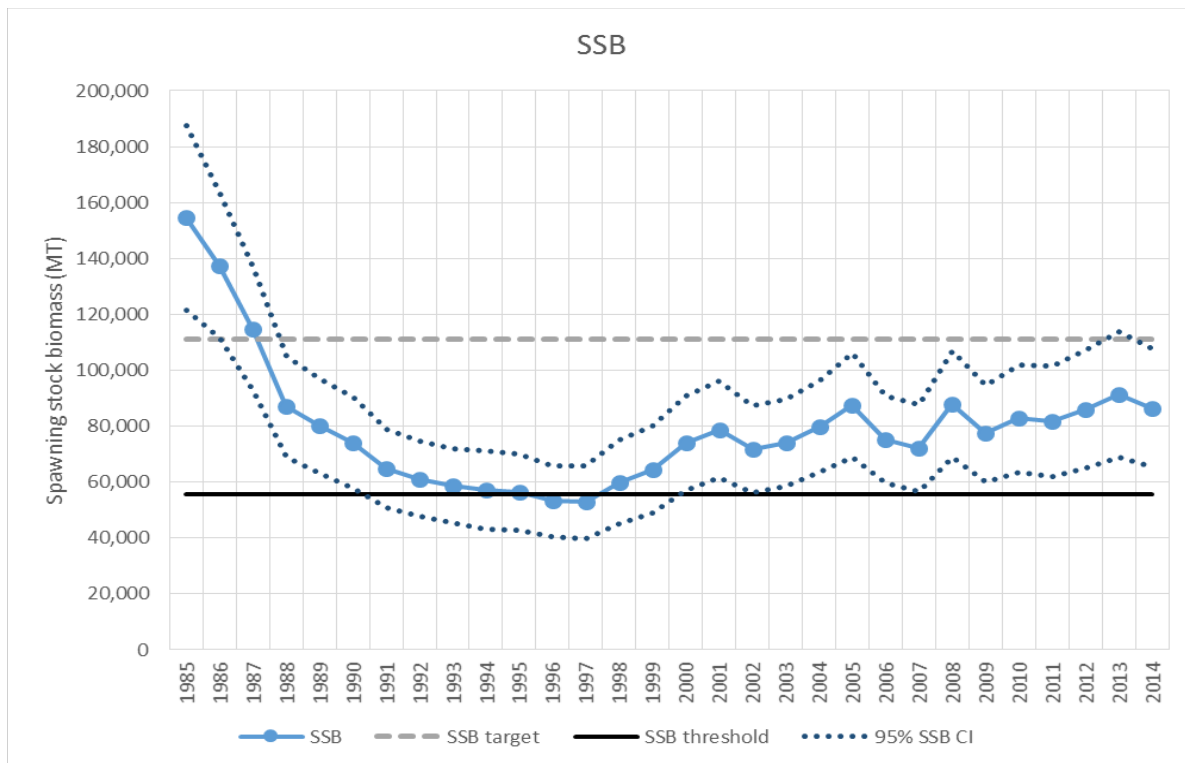


Figure 2. Total spawning stock biomass of bluefish plotted with thresholds and 95% confidence intervals. Source: NEFSC 2015.

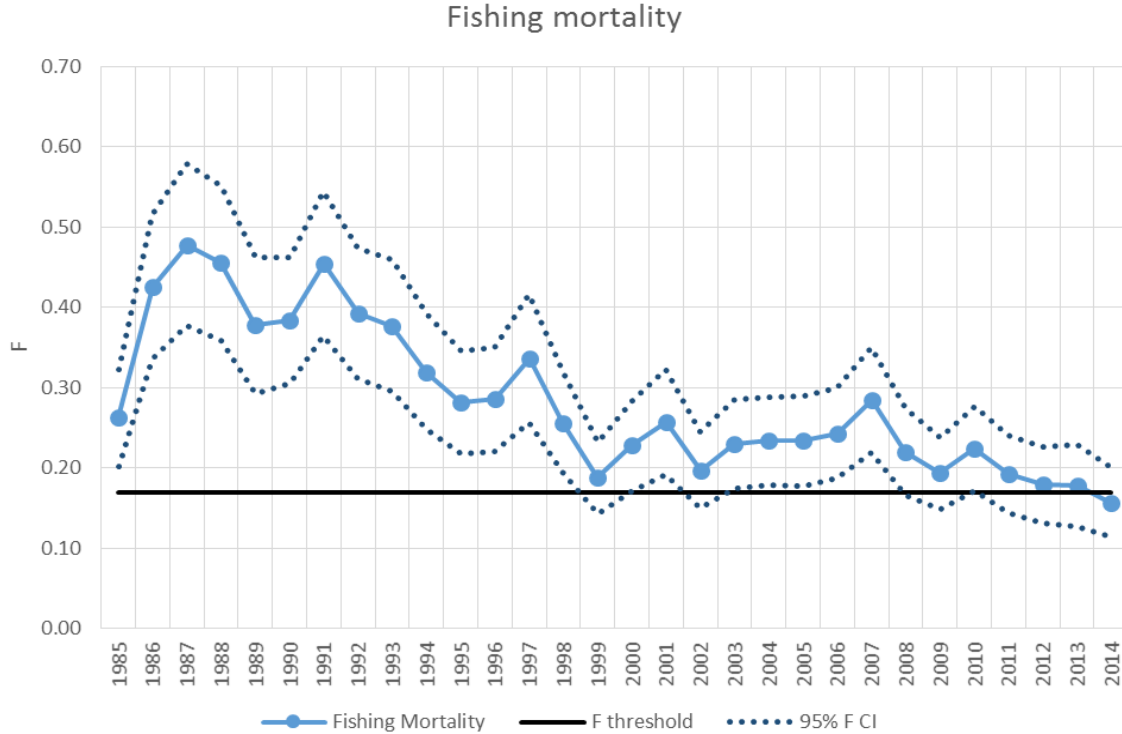


Figure 3. Fully selected fishing mortality of bluefish plotted with thresholds and 95% confidence intervals. Source: NEFSC 2015.

OFL/ABC Values Derived by the SSC

The most recent benchmark stock assessment was peer reviewed in June 2015. The SARC 60 benchmark assessment was a significant improvement over previous assessments. Many uncertainties were addressed regarding input data and there was a characterization of uncertainty in the OFL. The OFL was adjusted upward by 50% from the model output by the assessment team to account for un-modeled uncertainty. Despite these improvements, the SSC deemed the assessment uncertainty level that requires an SSC derived coefficient of variation (CV) for the OFL as the most appropriate for the new benchmark assessment.

The SSC noted that the F_{MSY} proxy of $F_{40\%}$ might be inappropriate for bluefish, a highly productive species. At the July 2015 SSC meeting, the SSC concluded that a proxy of $F_{35\%}$ is more precise for bluefish, as indicated by various published meta-analyses for the order perciformes.

Using $F_{35\%}$, the SSC recommended an OFL of:

- 2016: 25.76 million lbs (11,686 mt)
- 2017: 26.44 million lbs (11,995 mt)
- 2018: 27.97 million lbs (12,688 mt)

A CV of 60% was applied to the OFL, instead of the previously used CV of 100%, to reflect the much improved treatment of uncertainty in the current bluefish assessment. This is consistent with the rationale used by the SSC to determine CV for the summer flounder assessment OFL. The OFL levels for 2016-2018 were determined by assuming bluefish exhibit a typical life history and using $F_{35\%} = 0.19$. The SSB_{msy} is therefore 223.42 million pounds (101,343 mt) and $SSB_{2014} = 190.78$ million pounds (86,534 mt), so the $SSB/SSB_{msy} = 0.85$, with an SSB threshold of 111.71 million pounds (50,672 mt). The SSC applied the Council policy of $P^* = 0.307$ in 2016. This results in an ABC of:

2016: 19.46 million lbs (8,825 mt) ($P^* = 0.307$)

2017: 20.64 million lbs (9,363 mt) ($P^* = 0.328$)

2018: 21.81 million lbs (9,895 mt) ($P^* = 0.327$)

Catch and Landings Limit Recommendations

Staff recommend specifications be set for 1 year since updated recreational data will be available for 2020 bluefish measures. For 2019, staff recommends an Acceptable Biological Catch (ABC) of 21.81 million lbs (9,895 mt). According to the Bluefish Fishery Management Plan (FMP) flow chart (Figure 4), the annual catch limit (ACL) is equal to the ABC. Staff recommends that the recreational and commercial annual catch targets (ACTs) equal the ACL and ABC. Staff also recommends a recreational ACT of 18.11 million lbs (8,213 mt), and a commercial ACT of 3.71 million lbs (1,682 mt). After adjusting the ACTs for discards (2.99 million lbs or 1,356 mt recreational; zero commercial), the recreational and commercial total allowable landings would sum to 18.83 million lbs (8,539 mt; Table 1). The overall recommended commercial quota and recreational harvest limit are 7.24 million lbs (3,286 mt) and 11.58 million lbs (5,253 mt), respectively.

Staff do not recommend any change to the current recreational possession limit (15 fish per person per trip with no minimum size) at this time for 2019.

Atlantic Bluefish Flowchart

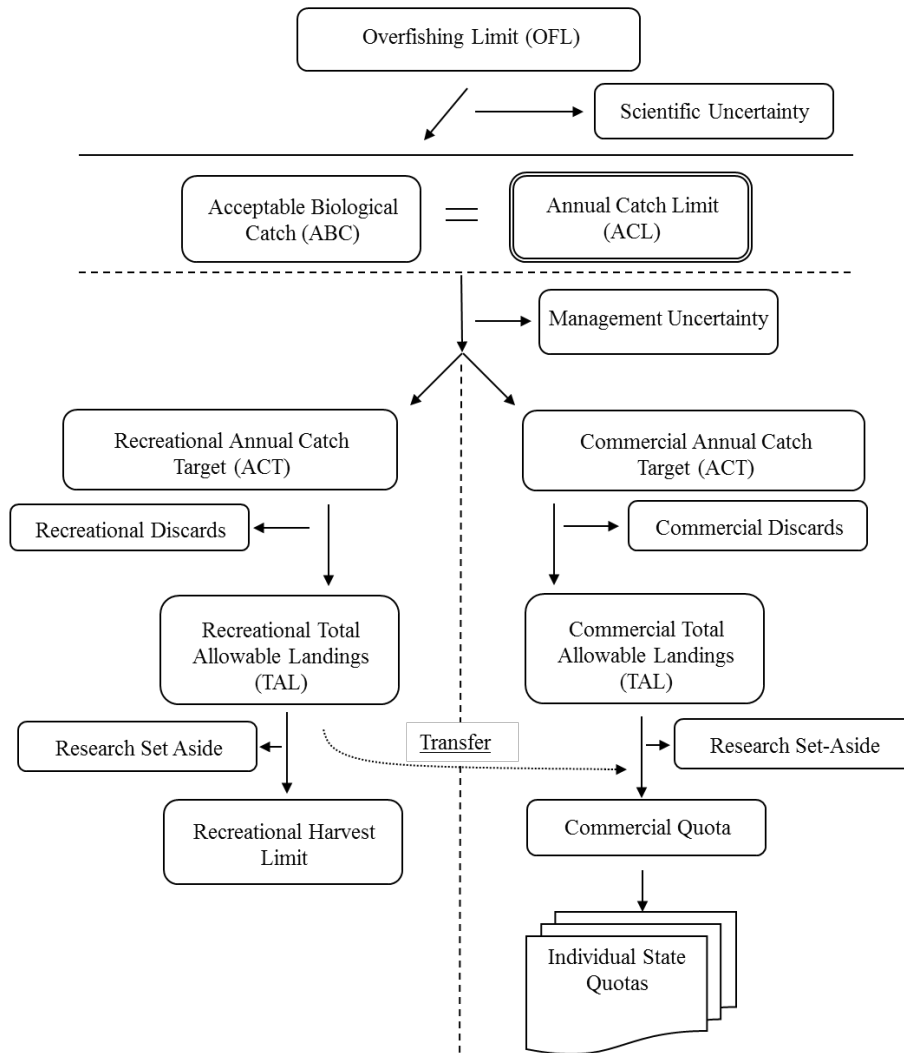


Figure 4. Bluefish specification process as described in Amendment 3 to the Bluefish FMP.