



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901  
Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org  
Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** November 1, 2017  
**To:** Chris Moore, Executive Director  
**From:** Julia Beaty and Kiley Dancy, Staff  
**Subject:** Scup Recreational Management Measures for 2018

### **Introduction**

In August 2017, the Mid-Atlantic Fishery Management Council (Council) and the Atlantic States Marine Fisheries Commission's (Commission's) Summer Flounder, Scup, and Black Sea Bass Board (Board) recommended a revised 2018 scup commercial quota and recreational harvest limit (RHL), as well as a new commercial quota and RHL for 2019. These recommendations were based on the most recent scup stock assessment update and the advice of the Scientific and Statistical Committee (SSC) and Monitoring Committee. These measures have not yet been implemented and are expected to include a 2018-2019 RHL of 7.37 million pounds.

The Monitoring Committee must recommend recreational management measures for 2018 that will constrain landings to the 2018 RHL. This document summarizes recreational catch and landings data to support the Monitoring Committee's deliberations.

Recreational landings in 2017 are projected to be 4.49 million pounds, about 39% below the 2018 RHL. Federal scup recreational management measures have been consistent since 2015 and include a 50 fish bag limit, a year-round open season, and a minimum fish size of nine inches. These measures are already quite liberal; therefore, Council staff recommend that federal waters recreational measures remain *status quo* in 2018.

### **Recreational Catch and Landings**

Since 1981, recreational scup catch fluctuated from a peak of 30.87 million fish in 1986 to a low of 2.67 million fish in 1998. Recreational landings fluctuated from a high of 11.61 million pounds and 24.82 million fish in 1986 to a low of 0.87 million pounds and 1.21 million fish in 1998 (Table 1).

In 2016, recreational landings were about 3.84 million fish and 4.26 million pounds, approximately 30% below the 2016 RHL of 5.50 million pounds. Approximately 12.10 million scup were caught, with a release rate of 68% (Table 1). Length frequencies of landed scup during 2014-2016 are shown in Figure 1.

Recreational catch and landings data from the Marine Recreational Information Program (MRIP) are currently available as preliminary estimates for the first four waves (January - August) of 2017. The Council and Commission make management recommendations late in the current year to give the states time to enact changes to their regulations for the upcoming year; therefore, the Monitoring Committee reviews MRIP data and develops their recommendations once preliminary wave 4 data are available.

Preliminary data indicate that 7.39 million scup were caught and 2.78 million scup were landed through wave 4 in 2017. Landings through wave 4 totaled 2.65 million pounds, with a mean weight of approximately 0.95 pounds per landed scup. Landings (in weight) during waves 1-4 in 2017 were about 21% lower than 2016 wave 1-4 landings (Table 2). Wave 1-4 landings decreased between 2016 and 2017 in all states except Delaware and North Carolina. The biggest decrease (63%) occurred in New Jersey. Massachusetts, Rhode Island, and New York had similar levels of decrease at 41%, 46%, and 46% respectively. Wave 1-4 landings in Connecticut decreased by 7% between 2016 and 2017. Maryland and Virginia had no wave 1-4 landings in 2017, though they did have landings in waves 1-4 of 2016 (Table 3). Although wave 1-4 landings decreased between 2016 and 2017, projected total 2017 landings are 5% higher than 2016 annual landings and about 2% higher than 2015 landings.

For the states of Massachusetts through New Jersey, as well as North Carolina, preliminary 2017 wave 1-4 data were used to project catch and landings for the entire year by assuming the same proportions of catch and landings by wave as in 2015-2016. Recreational scup regulations were consistent during 2015-2017 in all states; therefore, any changes in the proportion of catch by wave during those years would be the result of factors other than regulations. Delaware had no wave 1-4 landings during 2015-2016. Maryland had no wave 1-4 landings during 2015-2017, and Virginia had no wave 1-4 landings in 2017. Therefore, projections for Delaware, Maryland, and Virginia were replaced with average annual landings during 2015-2016. New Hampshire has had no estimated scup recreational landings for several years, however, there were wave 1-4 landings in 2017. New Hampshire's wave 1-4 landings in 2017 were assumed to be equal to total 2017 landings. Based on past years, it was assumed that there would be no wave 5-6 landings in New Hampshire in 2017. This methodology resulted in total projected 2017 recreational landings of 4.49 million pounds (Table 4), about 18% below the 2017 RHL of 5.50 million pounds and about 39% below the expected 2018-2019 RHL of 7.37 million pounds (Table 5).

Using this same methodology, it was projected that 5.06 million scup would be landed by recreational fishermen in 2017. The Commission sets a target for the states of Massachusetts, Rhode Island, Connecticut, and New York to land the number of scup which is equivalent to 97% of the RHL. This target is not projected to be exceeded in 2017 (Table 6).

During waves 1-4 in 2017, anglers in Maine through North Carolina took an estimated 390,795 trips for which scup was the primary target species. This represents almost 2% of all directed trips in the region (Table 5).

During 2007-2016 about 3% of scup landings (in numbers of fish) were harvested from federal waters (> 3 miles at sea) and 97% came from state waters (Table 7). Scup landings in Massachusetts through New Jersey and Virginia were predominantly from state waters. Landings in Delaware, Maryland, and North Carolina mostly originated in federal waters (Table 8) There is some uncertainty associated with data on fishing areas as they are self-reported by anglers.

### **Past Harvest Limits and Management Measures**

Scup RHLs were first implemented in 1996. Since then the RHL varied from a low of 1.24 million pounds in 1999 and 2000 to a high of 8.45 million pounds in 2012. The 2017 RHL is 5.50 million pounds, and the proposed RHL for 2018 is 7.37 million pounds (Table 9).

Until 2002, the recreational scup fishery was managed with coastwide measures as dictated by the FMP. These measures included a common minimum fish size, possession limit, and an open season that were implemented in both state and federal waters. In 2003, the Commission developed an addendum which created RHLs for state waters and allocated 97% of the coastwide RHL to the states of Massachusetts through New York. State waters measures have grown increasingly complex, with variable possession limits and minimum sizes by fishing mode (i.e., for-hire vs. private angler) and by season (Table 10).

For 2017, the Council and Board adopted federal management measures that include a 50 fish possession limit, a 9-inch total length (TL) size limit, and a year-round open season. These are identical to the 2015 and 2016 federal regulations (Table 9). The Commission continued the regional approach to scup management in state waters. All state regulations remained *status quo* during 2015-2017 (Table 10).

### **Accountability Measures**

In 2013, the Council modified the recreational accountability measures (AMs) for Mid-Atlantic species through the Omnibus Recreational AM Amendment. This amendment removed the in-season closure authority for the scup 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. Though paybacks may be required in some circumstances, any potential payback amounts are 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) will be made in the following year, or as soon as possible once catch data are available. These adjustments will take into account the performance of the measure and conditions that precipitated the overage.
  - b. If the Acceptable Biological Catch ( $ABC = \text{recreational ACL} + \text{commercial ACL}$ ) 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:  $(\text{overage amount}) * (B_{msy} - B) / \frac{1}{2} B_{msy}$ .

3. If biomass is above the target ( $B > B_{MSY}$ ): Adjustments to the recreational management measures (bag, size, and seasonal limits) will be made in the following year, or as soon as possible once catch data are available. These adjustments will take into account the performance of the measure and conditions that precipitated the overage.

AMs have not been triggered for the recreational scup fishery based on a comparison of average 2014-2016 catch to the 2014-2016 average ACL. Recreational performance for 2017 will be evaluated in 2018, once final catch estimates are available, and will be taken into account in next year's recreational specifications process if necessary.

### **Monitoring Committee Responsibility**

The Monitoring Committee must consider and recommend management measures to ensure that landings in 2018 will not exceed the 2018 RHL. Recreational possession limits, minimum fish size limits, and recreational seasons can all be modified to achieve this goal.

Landings in 2017 are used as a proxy for landings in 2018 when considering such measures. Based on the projected 2017 landings estimate of 4.49 million pounds, it is assumed that *status quo* measures will result in a 39% underage compared to the 2018 RHL.

### **Fishing Trips and Year Class Effects**

Changes in fishing site characteristics (e.g., travel costs, catch rates, available species), fishery management policies (e.g., possession limits, size restrictions, closed seasons), and angler demographics affect recreational fishing effort. This makes evaluation of changes in angler behavior difficult and complex. 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 should also be considered relative to fish availability and recreational catches. For example, the recent stock assessment update for scup states that recruitment (i.e., number of age 0 fish) was above average in 2014 and 2015, but was below average in 2016.<sup>1</sup> Scup reach the minimum size for retention in the recreational fishery (9 inches TL) when they are two or three years old.<sup>2</sup> In 2017, the fishery likely experienced high availability due to the strong 2014 and 2015 year classes; however, this high availability did not lead to a notable increase in landings. Projected 2017 landings are about 5% higher than 2016 landings and about 2% higher than 2015 landings. The below-average recruitment in 2016 is not expected to impact landings until 2018 when those fish reach the minimum size for retention in the recreational fishery.

### **Staff Recommendation**

Projected 2017 recreational landings are 39% lower than the 2018 RHL. Existing federal waters recreational management measures for scup are already quite liberal at a 50 fish bag limit, a nine inch minimum size, and a year-round open season. Advisors have largely expressed satisfaction with these

---

<sup>1</sup> Scup stock assessment update for 2017. Northeast Fisheries Science Center. Available at: <http://www.mafmc.org/ssc-meetings/2017/july-19-20>

<sup>2</sup> Northeast Fisheries Science Center. 2015. 60th Northeast Regional Stock Assessment Workshop (60th SAW) Assessment Report. U.S. Department of Commerce, Northeast Fisheries Science Center Reference Document 15-08. Available at: <http://www.nefsc.noaa.gov/saw/>

measures over the past few years. For these reasons, staff recommend *status quo* recreational scup management measures in 2018.

Table 1: Recreational scup catch and landings by year, Maine through North Carolina, 1981-2017.<sup>a</sup>

<b>Year</b>	<b>Catch</b> (millions of fish)	<b>Landings</b> (millions of fish)	<b>Landings</b> (millions of pounds)	<b>% Released</b>	<b>Avg. weight of landed fish</b> (pounds)
1981	10.38	9.08	5.81	12%	0.64
1982	7.18	6.45	5.20	10%	0.81
1983	10.16	8.84	6.25	13%	0.71
1984	7.77	6.06	2.42	22%	0.40
1985	13.86	10.81	6.09	22%	0.56
1986	30.87	24.82	11.60	20%	0.47
1987	12.38	9.92	6.20	20%	0.62
1988	7.54	6.06	4.27	20%	0.70
1989	11.39	9.18	5.56	19%	0.61
1990	10.17	8.04	4.14	21%	0.51
1991	16.85	13.28	8.09	21%	0.61
1992	10.08	7.76	4.41	23%	0.57
1993	7.08	5.66	3.20	20%	0.56
1994	5.65	4.27	2.63	24%	0.62
1995	3.77	2.42	1.34	36%	0.56
1996	4.68	2.97	2.16	36%	0.73
1997	3.07	1.92	1.20	38%	0.62
1998	2.67	1.21	0.87	55%	0.72
1999	4.64	3.25	1.89	30%	0.58
2000	11.28	7.24	5.44	36%	0.75
2001	9.93	5.10	4.26	49%	0.84
2002	7.58	3.65	3.62	52%	0.99
2003	14.66	9.45	8.48	36%	0.90
2004	13.43	7.15	7.28	47%	1.02
2005	7.04	2.59	2.69	63%	1.04
2006	9.61	3.43	3.72	64%	1.08
2007	10.05	4.75	4.56	53%	0.96
2008	10.71	3.49	3.79	67%	1.09
2009	8.70	3.13	3.23	64%	1.03
2010	11.15	5.15	5.97	54%	1.16
2011	6.47	3.06	3.67	53%	1.20
2012	8.83	3.67	4.17	58%	1.14
2013	10.02	4.98	5.37	50%	1.08
2014	8.99	4.13	4.43	54%	1.07
2015	8.39	4.05	4.41	52%	1.09
2016	12.10	3.84	4.26	68%	1.11
2017 <sup>b</sup>	13.24	5.06	4.49	62%	0.89

<sup>a</sup> Source: personal communication with the NMFS Fisheries Statistics Division, October 30, 2017.

<sup>b</sup> 2017 catch and landings are projected using the methodology described on page 2.

Table 2: Recreational scup catch and landings, waves 1-4 (Jan.-Aug.), Maine through North Carolina, 1981-2017.<sup>a</sup>

<b>Year</b>	<b>Catch</b> (millions of fish)	<b>Landings</b> (millions of fish)	<b>Landings</b> (millions of pounds)	<b>Avg. weight of landed fish</b> (pounds)
1981	5.71	4.60	2.52	0.55
1982	5.30	4.91	4.17	0.85
1983	5.60	4.75	3.33	0.70
1984	6.73	5.23	1.78	0.34
1985	5.48	4.43	3.09	0.70
1986	16.85	13.94	5.91	0.42
1987	9.19	7.40	4.78	0.65
1988	4.27	3.35	2.25	0.67
1989	6.33	5.21	3.41	0.65
1990	6.31	5.00	2.34	0.47
1991	10.22	8.09	4.77	0.59
1992	5.50	4.29	2.51	0.58
1993	3.98	3.23	1.66	0.51
1994	2.62	2.08	1.19	0.57
1995	1.33	0.87	0.50	0.58
1996	2.61	1.56	1.16	0.75
1997	1.70	1.07	0.77	0.72
1998	1.71	0.77	0.59	0.77
1999	2.52	1.75	0.96	0.55
2000	5.73	3.99	2.99	0.75
2001	6.28	3.12	2.42	0.78
2002	4.02	1.79	1.56	0.87
2003	9.00	5.96	5.67	0.95
2004	8.35	4.74	4.64	0.98
2005	2.77	1.31	1.46	1.11
2006	5.12	2.17	2.22	1.03
2007	5.15	2.90	2.53	0.87
2008	6.52	2.12	2.24	1.06
2009	6.72	2.47	2.52	1.02
2010	7.86	3.79	4.48	1.18
2011	3.94	1.78	2.09	1.18
2012	6.63	2.79	3.10	1.11
2013	6.65	3.48	3.70	1.06
2014	5.37	2.79	3.13	1.12
2015	4.38	2.33	2.53	1.09
2016	8.57	2.82	3.34	1.19
2017 <sup>b</sup>	7.39	2.78	2.65	0.95

<sup>a</sup> Source: personal communication with NMFS Fisheries Statistics Division, October 30, 2017.

<sup>b</sup> Preliminary estimates

Table 3: Recreational scup landings (in pounds) by state, waves 1-4, 2008-2017.<sup>a</sup>

State	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 <sup>b</sup>
ME	0	0	0	0	0	0	0	0	0	0
NH	0	0	0	0	0	0	0	0	0	1,458
MA	838,775	865,457	1,005,902	837,425	1,799,446	2,093,144	1,791,306	1,286,537	1,051,148	618,675
RI	622,176	145,560	362,746	719,880	556,037	875,625	1,024,129	591,696	606,528	330,072
CT	573,964	376,553	1,350,123	1,194,679	922,374	1,070,402	587,336	477,987	843,268	784,014
NY	1,678,679	1,699,941	2,632,881	867,672	776,013	1,229,802	975,887	2,020,735	1,533,400	833,097
NJ	72,698	141,861	610,659	42,222	113,332	99,580	48,353	29,500	210,727	77,424
DE	638	487	0	35	91	0	28	589	1	16
MD	79	36	11	7		0	0	204	127	0
VA	1,039	127	5,498	2,634	2,317	2,471	0	1,846	14,157	0
NC	0	0	1,546	476	1,939	507	640	88	0	373
<b>Total</b>	<b>3,788,048</b>	<b>3,230,022</b>	<b>5,969,366</b>	<b>3,665,030</b>	<b>4,171,549</b>	<b>5,371,531</b>	<b>4,427,679</b>	<b>4,409,182</b>	<b>4,259,356</b>	<b>2,645,129</b>

<sup>a</sup> Source: personal communication with NMFS Fisheries Statistics Division, October 30, 2017.

<sup>b</sup> Preliminary estimates

Table 4: 2017 projected landings by state (in pounds) and values used to calculate projections.

State	2015-2016 Wave 1-4 Landings as % of Annual Landings	2017 Wave 1-4 Landings (pounds)	Average 2015-2016 landings (pounds)	2017 Projected Annual Landings (pounds)	% of Projected 2017 Total Landings
ME	N/A <sup>a</sup>	0	0	0	0.00%
NH	N/A <sup>a</sup>	1,458	0	1,458 <sup>b</sup>	0.03%
MA	88.81%	618,675	1,168,843	696,611 <sup>c</sup>	15.52%
RI	90.76%	330,072	599,112	363,682 <sup>c</sup>	8.10%
CT	52.05%	784,014	660,628	1,506,184 <sup>c</sup>	33.55%
NY	55.07%	833,097	1,777,068	1,512,666 <sup>c</sup>	33.70%
NJ	19.39%	77,424	120,114	399,376 <sup>c</sup>	8.90%
DE	0.00%	16	295	295 <sup>d</sup>	0.01%
MD	0.00%	0	166	166 <sup>d</sup>	0.00%
VA	88.51%	0	8,002	8,002 <sup>d</sup>	0.18%
NC	95.45%	373	88	391 <sup>c</sup>	0.01%
<b>Total</b>		<b>2,645,129</b>		<b>4,488,829</b>	

<sup>a</sup> There were no estimated recreational landings in Maine or New Hampshire in 2015 or 2016.

<sup>b</sup> Equal to 2017 wave 1-4 landings.

<sup>c</sup> Projected using 2017 wave 1-4 landings and the proportion of annual landings by wave in 2015-2016.

<sup>d</sup> Equal to average annual landings, 2015-2016.



Table 5: Number of scup recreational fishing trips, harvest limit, recreational landings, and fishery performance (i.e. RHL overage or underage) from Maine through North Carolina, 1998 to 2017.

Year	Number of Directed Fishing Trips <sup>a</sup>	Directed Scup Trips As % Of All Trips <sup>a,b</sup>	RHL (millions of pounds) <sup>c</sup>	Landings (millions of pounds) <sup>d</sup>	% RHL Overage (+)/ Underage (-)
1998	204,703	0.80%	1.55	0.87	-44%
1999	220,909	0.88%	1.24	1.89	+52%
2000	452,099	1.30%	1.24	5.44	+339%
2001	459,813	1.25%	1.77	4.26	+141%
2002	471,340	1.53%	2.71	3.62	+34%
2003	934,956	2.66%	4.01	8.48	+111%
2004	710,221	2.08%	4.01	7.28	+82%
2005	550,964	1.51%	3.96	2.69	-32%
2006	554,594	1.51%	4.15	3.72	-10%
2007	516,752	1.37%	2.74	4.56	+66%
2008	536,307	1.46%	1.83	3.79	+107%
2009	538,084	1.83%	2.59	3.23	+25%
2010	699,516	2.37%	3.01	5.97	+98%
2011	477,275	1.78%	5.74	3.67	-36%
2012	603,126	2.33%	8.45	4.17	-51%
2013	532,439	1.43%	7.55	5.37	-29%
2014	418,687	1.08%	7.03	4.43	-37%
2015	461,840	1.36%	6.80	4.41	-35%
2016	799,474	2.17%	6.09	4.26	-30%
2017	390,795 <sup>e</sup>	1.76% <sup>e</sup>	5.50	4.49 <sup>f</sup>	-18% <sup>f</sup>

<sup>a</sup> Estimated number of recreational fishing trips (expanded) where the primary target species was scup, Maine through North Carolina. Source: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 31, 2017.

<sup>b</sup> Source of total trips for all species combined: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 31, 2017.

<sup>c</sup> RHLs for 2002 through 2014 are adjusted for research set-aside.

<sup>d</sup> Source: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 30, 2017.

<sup>e</sup> Preliminary estimate for waves 1-4 (January – August)

<sup>f</sup> Projected

Table 6: Projected recreational scup landings (in number of fish) relative to Commission target for 2017, by state.

State	2017 Target	2017 Projected Landings <sup>a</sup>
NH	None	1,201
MA	4,483,193 <sup>b</sup>	643,217
RI		443,972
CT		1,446,755
NY		1,741,399
MA-NY total		4,275,342
NJ		None
DE	None	247
MD	None	235
VA	None	10,263
NC	None	263
Total		5,058,204

<sup>a</sup> Source: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 30, 2017. Projection methodology is described on page 2.

<sup>b</sup> The target for the states of MA-NY is 97% of the RHL in numbers of fish. The 2017 target shown is approximate, calculated using the 2017 RHL (5.50 million pounds) and the 2016 mean weight of landed fish (1.19 pounds).

Table 7: Percentage of recreational scup landings (in numbers of fish) by year and area, Maine through North Carolina, 2007-2016. Area information is self-reported based on the area where the majority of fishing activity occurred on each trip.<sup>a</sup>

Year	State Waters (<= 3 miles)	EEZ (> 3 miles)
2007	98%	2%
2008	96%	4%
2009	98%	2%
2010	96%	4%
2011	96%	4%
2012	100%	0%
2013	95%	5%
2014	96%	4%
2015	98%	2%
2016	94%	6%
<b>Avg. 2007-2016</b>	97%	3%
<b>Avg. 2014- 2016</b>	96%	4%

<sup>a</sup> Source: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 12, 2017.

Table 8: Proportion of 2014-2016 recreational landings (in pounds) from state and federal waters by state. Area information is self-reported based on the area where the majority of fishing activity occurred for each trip.<sup>a</sup>

State	State Waters (<= 3 miles)	EEZ (> 3 miles)
MAINE	--	--
NEW HAMPSHIRE	--	--
MASSACHUSETTS	98%	2%
RHODE ISLAND	95%	5%
CONNECTICUT	98%	2%
NEW YORK	94%	6%
NEW JERSEY	85%	15%
DELAWARE	5%	95%
MARYLAND	0%	100%
VIRGINIA	100%	0%
NORTH CAROLINA	34%	66%

<sup>a</sup> Source: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 12, 2017.

Table 9: Summary of federal management measures for the scup recreational fishery, 1999-2018. ABCs, TACs, ACLs, RHLs, and landings are in millions of pounds. Landings are totals for the states of Maine through North Carolina.

Measure	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
ABC	--	--	--	--	--	--	--	--	--	--
TAC <sup>a</sup>	5.92	5.92	8.37	12.92	18.65	18.65	18.65	19.79	13.97	9.90
Recreational ACL	--	--	--	--	--	--	--	--	--	--
RHL	1.24	1.24	1.76	2.71	4.01	3.99	3.96	3.99	2.74	1.83
Recreational landings <sup>b</sup>	1.89	5.44	4.26	3.62	8.48	7.28	2.69	3.72	4.56	3.79
Possession Limit	-	-	50	20	50					15
Size Limit (inches, TL)	7	-	9	10						10.5
Open Season	1/1 -12/31		8/15 - 10/31	7/1 - 10/2	1/1-2/28 and 7/1- 11/30	1/1-2/28 and 9/7- 11/30	1/1-2/28 and 9/18- 11/30	1/1-2/28 and 9/18-11/30		
Measure	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ABC	11.70	17.09	51.70	40.88	38.71	35.99	33.77	31.11	28.40	39.14
TAC <sup>a</sup>	15.54	17.09	31.92	40.88	38.71	35.99	33.77	31.11	28.40	39.14
Recreational ACL	--	--	--	31.89	30.19	28.07	26.35	6.84	6.25	8.61
Recreational ACT	--	--	--	31.89	30.19	28.07	26.35	6.84	6.25	8.01
RHL	2.59	3.01	5.74	8.45	7.55	7.03	6.80	6.09	5.50	7.37 <sup>d</sup>
Recreational landings <sup>b</sup>	3.23	5.97	3.67	4.17	5.44	4.74	4.62	4.26	4.49 <sup>c</sup>	--
Possession Limit	15	10		20	30		50			--
Size Limit (inches, TL)	10.5				10	9				--
Open Season	1/1-2/28 and 10/1- 10/31		6/6 - 9/26	1/1-12/31						--

<sup>a</sup> Prior to the implementation of the 2011 Omnibus ACLs and AMs Amendment, the Council specified a Total Allowable Catch (TAC) instead of an ABC for scup. Both terms refer to the total catch limit in a given year, but the amounts occasionally differed during the transition years of 2009-2011. In 2009 this was due to NMFS specifying a revised catch limit after new scientific information became available. In 2011, the difference was due to the Council specifying a more conservative limit than recommended by the SSC.

<sup>b</sup> Source: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 30, 2017.

<sup>c</sup> Projected

<sup>d</sup> Pending implementation.

Table 10: Scup recreational management measures by state, 2015-2017.

State	Minimum Size (inches)	Possession Limit	Fishing Season
Massachusetts (private and shore)	10	30 fish	May 1- December 31
Massachusetts (party/charter)	10	45 fish	May 1 - June 30
		30 fish	July 1 - December 31
Rhode Island (private and shore)	10	30 fish	May 1- December 31
RI Shore Program (7 designated sites)	9	30 fish	May 1- December 31
Rhode Island (party/charter)	10	30 fish	May 1-August 31; November 1-December 31
		45 fish	September 1-October 31
Connecticut (private angler)	10	30 fish	May 1- December 31
Connecticut (45 designated shore sites)	9		
Connecticut (party/charter)	10	30 fish	May 1-August 31 and November 1-December 31
		45 fish	September 1-October 31
New York (private and shore)	10	30 fish	May 1- December 31
New York (party/charter)	10	30 fish	May 1- August 31 and November 1-December 31
		45 fish	September 1- October 31
New Jersey	9	50 fish	Jan 1-Feb 28 and July 1 – December 31
Delaware	8	50 fish	All Year
Maryland	8	50 fish	All Year
Virginia	8	50 fish	All Year
North Carolina, North of Cape Hatteras	8	50 fish	All Year

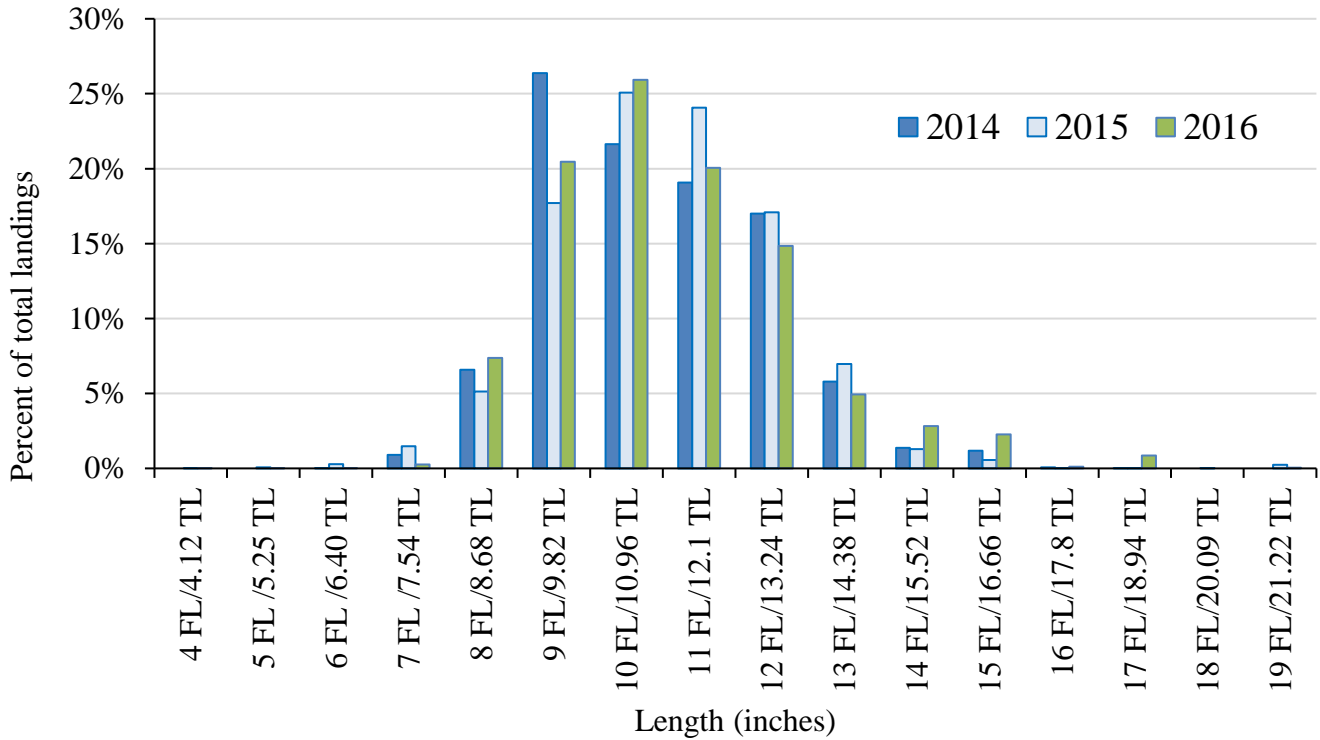


Figure 1: Expanded length frequencies of landed scup, 2014-2016, from Maine through North Carolina, as a percent of total recreational landings of scup. Source: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 12, 2017. Fork length to total length conversion based on Hamer 1979 ( $TL = 1.14*FL - 0.44$ ).<sup>3</sup>

<sup>3</sup> Hamer, P.E. 1979. Studies of the scup, *Stenotomus chrysops*, in the Middle Atlantic Bight. New Jersey Division of Fish, Game and Shellfish, Misc. Rep. No. 18M, 67 p.