## MEMORANDUM

Date: November 30, 2016
To: Council
From: Julia Beaty
Subject: Scup Recreational Measures for 2017

The following materials are enclosed for Council and Board consideration of scup recreational management measures for 2017.

1) Scup staff memo dated November 3, 2016
2) Monitoring Committee recommendations for scup from November 9-10 meeting
3) Summary of November 17, 2016 Advisory Panel webinar (scup comments only)

# MEMORANDUM 

Date: $\quad$ November 2, 2016<br>To: Chris Moore, Executive Director<br>From: Julia Beaty and Kiley Dancy, Staff<br>Subject: Scup Recreational Management Measures for 2017

## Introduction

In August 2015, the Council and the Atlantic States Marine Fisheries Commission's (Commission's) Summer Flounder, Scup, and Black Sea Bass Board (Board) recommended commercial quotas and recreational harvest limits (RHLs) for scup for the 2016-2018 fishing years, based on the advice of the Scientific and Statistical Committee (SSC) and Monitoring Committee. These measures have been implemented and include a 2017 scup RHL of 5.50 million pounds. The SSC, Monitoring Committee, Council, and Board reviewed these measures in the summer of 2016 and recommended no changes.

The Monitoring Committee must recommend recreational management measures for 2017 that will constrain landings to the 2017 RHL. This document summarizes recreational catch and landings data to support the Monitoring Committee's deliberations.

Recreational landings in 2016 are projected exceed the 2016 RHL. A comparison of 2016 projected landings to the 2017 RHL indicate that a reduction of about $29 \%$ is necessary to prevent an overage of the 2017 RHL. Council staff recommend that this reduction be implemented in both state and federal waters. To achieve this reduction in federal waters, staff recommend that the recreational bag limit in federal be reduced from 50 to 20 fish.

## 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. Landings fluctuated from a high of 11.61 million pounds in 1986 to a low of 0.87 million pounds in 1998 (Table 1).

In 2015, recreational landings were about 4.05 million fish and 4.62 million pounds, approximately $32 \%$ below the 2015 RHL of 6.80 million pounds. Approximately 8.39 million scup were caught, with a release rate of $52 \%$ (Table 1).

Recreational catch and landings data through the Marine Recreational Information Program (MRIP) for

2016 are currently incomplete and preliminary. To date, only the first four waves (January - August) of catch and landings data are available for 2016. The Council and Commission agreed that management recommendations must be made late in the current year to give the states enough 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 9.34 million scup were caught and 3.32 million scup were landed through wave 4 in 2016. Landings through wave 4 totaled 4.01 million pounds, with a mean weight of landed scup of approximately 1.21 pounds. Landings during waves 1-4 in 2016 were about $53 \%$ higher than wave 1-4 landings in 2015 (about 2.63 million pounds; Table 2). Wave 1-4 landings increased between 2015 and 2016 in Massachusetts ( $39 \%$ increase), Rhode Island ( $13 \%$ increase), Connecticut ( $137 \%$ increase), New York ( $63 \%$ increase), New Jersey ( $1,290 \%$ increase, though landings were still low relative to other states), and Virginia ( $405,557 \%$ increase, though landings were still low relative to other states; Table 3).

This increase in landings between 2015 and 2016 could be the result of increased scup abundance. It may also be the result of changes in angler behavior. A 2015 benchmark stock assessment indicated that scup recruitment (i.e. the number of age 0 scup) was slightly above average in 2014 (though it was below average in 2012 and 2013). ${ }^{1}$ A 2016 data update showed evidence of a strong 2015 year class. ${ }^{2}$ Scup reach the minimum size for retention in the federal waters recreational fishery ( 9 inches TL) when they are two or three years old; ${ }^{3}$ therefore, the 2015 year class would not have contributed to the high 2015 recreational landings. It could, however, contribute to high landings in 2017. The length distributions of landed scup in 2014 and 2015 are shown in Figure 1.

Preliminary wave 1-4 data for 2016 were 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. There were no changes to the state or federal recreational measures for scup between 2015 and 2016; therefore, any changes in the proportion of catch by wave between 2015 and 2016 would be the result of factors other than regulations. Projections for the states of Maryland, Delaware, Virginia, and North Carolina were adjusted because projections using the proportion of landings by wave in 2015 produced unreasonable estimates. Specifically, Maryland, Delaware, and North Carolina had no estimated recreational landings during waves 1-4 in 2016, which produced an estimate of no scup landings in 2016. These projections were thus replaced with the average wave 5 and 6 landings during 2013-2015 (Table 4).

Projections for Virginia's total 2016 landings were calculated using 2013-2015 average proportion of landings by wave, rather than using only the 2015 proportions. When only 2015 proportions were used for Virginia, it produced an extremely unlikely estimate of about 7.5 million pounds of recreational landings in the state of Virginia alone in 2016. This was due to the extremely large increase in Virginia's wave 1-4 landings between 2015 and 2016 (Table 3) and due to the fact that $99.6 \%$ of Virginia's scup

[^0]landings in 2015 occurred in wave 5. Using average 2013-2015 proportions by wave produced a much more reasonable 2016 estimate of 56,577 pounds (Table 4).

Although New Jersey also saw a large increase in wave 1-4 landings between 2014 and 2015, those projections were not adjusted because the increase was not beyond the scale of what has occurred in the past. Specifically, landings in New Jersey exceeded the 2016 projected amount (i.e. 394,998 pounds) in 1994 and 2010. The proportion of New Jersey's scup landings during waves 5-6 remained generally stable for the past 5 years, with wave 5-6 landings contributing to $90-100 \%$ of annual landings during 2011 and 2013-2015 and about $25 \%$ of annual landings in 2012.

Using the methodology described above, 2016 recreational scup landings from Maine through North Carolina were projected to be about 7.70 million pounds, which is about $26 \%$ higher than the 2016 RHL. If wave 5-6 landings occur as projected, then 2016 will be the first year that the recreational fishery has exceeded the RHL since 2010 (Table 5).

Using this same methodology, landings in numbers of fish are expected to be 6.72 million scup in 2016. The Commission sets a target of the states of Massachusetts, Rhode Island, Connecticut, and New York landing the number of scup which are equivalent to $97 \%$ of the RHL. This target is projected to be exceeded by about $13 \%$ (Table 6).

During 2007-2016 (through wave 4) about $2 \%$ of scup landings (in numbers) were harvested from federal waters (> 3 miles at sea), while the remaining $98 \%$ came from state waters (Table 7). Most scup landings originated in state waters from Massachusetts through New York. Scup landings in Delaware, Maryland, and North Carolina mostly originated in federal waters (Table 8); however, landings in those states were very low (Table 2). There is some uncertainty associated with data on fishing areas because this information is self-reported by anglers.

During waves 1-4 in 2016, anglers took an estimated 635,831 trips in which scup was the primary target species. This is $38 \%$ greater than the number of directed scup trips during all of 2015 (Table 5).

## 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 (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 2016, the Council and Board adopted federal management measures that include a 50 fish possession limit, a 9-inch total length (TL) size limit, and an open season from January 1 through December 31. These are identical to the 2015 federal regulations (Table 9). The Commission continued the regional approach to scup management in state waters. All state regulations remained status quo between 2015 and 2016 (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 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 ( $\mathrm{B}<1 / 2 \mathrm{~B}$ 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 $\operatorname{target}\left(1 / 2 \mathrm{~B}_{\mathrm{MSY}}<\mathrm{B}<\mathrm{B}_{\mathrm{MSY}}\right)$, 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 ( $\mathrm{ABC}=$ recreational $\mathrm{ACL}+$ 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) $*\left(B_{m s y}-B\right) / 1 / 2 B_{m s y}$.
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 20132015 catch to the 2013-2015 average ACL. Recreational performance for 2016 will be evaluated in 2017, 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 2017 will not exceed the RHL. Recreational possession limits, minimum fish size limits, and recreational seasons can all be modified to achieve this goal.

Landings in 2016 are used as a proxy for landings in 2017 when considering such measures. Based on the projected 2016 landings estimate of 7.70 million pounds, landings must be reduced in 2017 to achieve the 2017 RHL of 5.50 million pounds. 2016 landings must be reduced by 2.2 million pounds, or about $29 \%$, to achieve, but not exceed the 2017 RHL.

## Fishing Trips and Year Class Effects

Table 5 shows the number of trips in which anglers targeted scup over the past 20 years. Predicting the number of trips that might be taken in 2017 is complicated. 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 affect the demand for angler fishing trips. 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.

Additionally, year-class effects should be considered relative to fish availability and recreational catches. For example, the recent benchmark stock assessment for scup states that recruitment (i.e., number of age 0 fish) in 2014 was slightly above average, but was below average in 2012 and 2013. Scup reach the minimum size for retention in the recreational fishery ( 9 inches TL) when they are about two or three years old. ${ }^{4}$ When higher than average year classes become available to the recreational fishery, they may result in increased catches. Lower than average year classes could result in decreased catches. There are many factors that influence both availability and catch. Multiple indices of recruitment, including the Northeast Fisheries Science Center's (NEFSC's) trawl survey and state trawl surveys in Rhode Island and New York, showed evidence of a strong year class in 2015, which could lead to increased availability of scup to recreational anglers in 2017.

## Staff Recommendation

Projected landings in 2016 must be reduced by $29 \%$ to achieve, but not exceed, the 2017 RHL. Council staff recommend that this reduction be achieved through a decrease in the federal waters recreational possession limit from 50 to 20 scup. This recommendation is based on the number of scup per trip using 2011 MRFSS data for waves 1-4. Due to changes in estimation between MRFSS and MRIP, staff were not able to use more recent catch per trip data to develop this recommendation.

Given the Board's typical approval of regional management for scup and given that $98 \%$ of scup landings originate in state waters (Table 7), staff recommend that the states implement measures to reduce landings in 2017.Staff recommend that the same $29 \%$ reduction apply in state and federal waters, and in all states, rather than applying differing levels of the reduction in different states.

[^1]Table 1: Recreational scup catch and landings by year, Maine through North Carolina, 1981-2016. ${ }^{\text {a }}$

| Year | Catch <br> (millions of fish) | Landings <br> (millions of fish) | Landings <br> (millions of pounds) | \% <br> Released | Avg. weight of <br> landed fish (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 | 24.89 | 11.60 | $20 \%$ | 0.47 |


| 1986 | 30.87 | 24.82 | 11.60 | $20 \%$ | 0.4 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1988 | 12.38 | 9.92 | 6.20 | $20 \%$ | 0.62 |
| 1989 | 7.54 | 6.06 | 4.27 | $20 \%$ | 0.70 |


| 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 |


| 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 | $63 \%$ |  |


| 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 | 5.44 | $50 \%$ | 1.09 |
| 2014 | 8.99 | 4.13 | 4.74 | $54 \%$ | 1.15 |
| 2015 | 8.39 | 4.05 | 4.62 | $52 \%$ | 1.14 |
| $2016^{\mathrm{b}}$ | 9.34 | 6.72 | 7.70 | $28 \%$ | 1.14 |

[^2]Table 2: Recreational scup catch and landings, waves 1-4 (Jan.-Aug.), Maine through North Carolina. ${ }^{\text {a }}$

| Year | Catch (millions of fish) | $\begin{gathered} \text { Landings } \\ \text { (millions of fish) } \end{gathered}$ | Landings (millions of pounds) | Avg. weight of landed fish (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 | 3.72 | 1.07 |
| 2014 | 5.37 | 2.79 | 3.43 | 1.23 |
| 2015 | 4.38 | 2.33 | 2.63 | 1.13 |
| 2016 | $9.34{ }^{\text {b }}$ | $3.32{ }^{\text {b }}$ | $4.01{ }^{\text {b }}$ | 1.21 |

[^3]Table 3: Recreational scup landings (in pounds) by state, waves 1-4, 2007-2016. ${ }^{\text {a }}$

| State | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ | $\mathbf{2 0 0 9}$ | $\mathbf{2 0 1 0}$ | $\mathbf{2 0 1 1}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ME | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MA | $1,342,123$ | 686,592 | 797,059 | 869,914 | 719,734 | $1,751,880$ | $1,878,260$ | $1,530,016$ | $1,035,886$ | $1,436,206$ |
| RI | 136,099 | 441,663 | 75,473 | 245,273 | 262,075 | 200,950 | 546,791 | 751,875 | 506,801 | 574,348 |
| CT | 384,381 | 298,314 | 326,330 | 880,253 | 790,339 | 530,376 | 427,283 | 263,195 | 226,044 | 535,889 |
| NY | 637,899 | 798,533 | $1,299,362$ | $2,103,610$ | 320,151 | 533,165 | 865,325 | 889,018 | 856,359 | $1,398,169$ |
| NJ | 24,238 | 8,844 | 21,902 | 370,263 | 530 | 84,932 | 767 | 0 | 3,007 | 40,263 |
| DE | 479 | 441 | 232 | 0 | 35 | 16 | 0 | 28 | 0 | 0 |
| MD | 200 | 69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA | 344 | 1,037 | 14 | 4,995 | 776 | 0 | 2,471 | 0 | 7 | 28,396 |
| NC | 0 | 0 | 0 | 1,386 | 260 | 970 | 339 | 388 | 84 | 0 |
| Total | $\mathbf{2 , 5 2 5 , 7 6 3}$ | $\mathbf{2 , 2 3 5 , 4 9 3}$ | $\mathbf{2 , 5 2 0 , 3 7 2}$ | $\mathbf{4 , 4 7 5 , 6 9 4}$ | $\mathbf{2 , 0 9 3 , 9 0 0}$ | $\mathbf{3 , 1 0 2 , 2 8 9}$ | $\mathbf{3 , 7 2 1 , 2 3 6}$ | $\mathbf{3 , 4 3 4 , 5 2 0}$ | $\mathbf{2 , 6 2 8 , 1 8 8}$ | $\mathbf{4 , 0 1 3 , 2 7 1}$ |



Figure 1: Expanded length frequencies of landed scup in 2014 and 2015 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 19, 2016. Fork length to total length conversion based on Hamer 1979 ( $\mathrm{TL}=1.14 * \mathrm{FL}-0.44$ ). ${ }^{5}$

[^4]Table 4: 2016 projected landings by state (in pounds) and values used to calculate projections.

| State | 2015 <br> Wave 5-6 <br> Landings <br> (pounds) | 2015 <br> Wave 5-6 <br> Landings <br> (\% of annual) | 2013-2015 <br> Wave 5-6 Avg. <br> Landings <br> (pounds) | 2013-2015 <br> Wave 5-6 <br> Landings <br> (\% of annual) | 2016 <br> Wave 1-4 <br> Landings <br> (pounds) | 2016 <br> Projected <br> Annual <br> Landings <br> (pounds) | \% of <br> Projected <br> 2016 Total <br> Landings |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ME | 0 | -- | 0 | -- | 0 | 0 | $0.0 \%$ |
| NH | 0 | -- | 0 | -- | 0 | 0 | $0.0 \%$ |
| MA | $1,035,886$ | $19.5 \%$ | 242,275 | $14.8 \%$ | $1,436,206$ | $1,783,722^{\mathrm{a}}$ | $23.2 \%$ |
| RI | 506,801 | $14.3 \%$ | 234,925 | $26.6 \%$ | 574,348 | $670,558^{\mathrm{a}}$ | $8.7 \%$ |
| CT | 226,044 | $54.6 \%$ | 432,358 | $57.4 \%$ | 535,889 | $1,179,421^{\mathrm{a}}$ | $15.3 \%$ |
| NY | 856,359 | $61.3 \%$ | 703,962 | $40.5 \%$ | $1,398,169$ | $3,611,037^{\mathrm{a}}$ | $46.9 \%$ |
| NJ | 3,007 | $89.8 \%$ | 57,886 | $96.3 \%$ | 40,263 | $394,998^{\mathrm{a}}$ | $5.1 \%$ |
| DE | 0 | $100.0 \%$ | 196 | $50.0 \%$ | 0 | $196^{\mathrm{b}}$ | $0.0 \%$ |
| MD | 0 | $100.0 \%$ | 68 | $100.0 \%$ | 0 | $68^{\mathrm{b}}$ | $0.0 \%$ |
| VA | 7 | $99.6 \%$ | 613 | $33.2 \%$ | 28,396 | $56,577^{\mathrm{c}}$ | $0.7 \%$ |
| NC | 84 | $4.5 \%$ | 141 | $25.7 \%$ | 0 | 0 | $0.0 \%$ |
| Total | $\mathbf{2 , 6 2 8 , 1 8 8}$ |  | $\mathbf{1 , 6 7 2 , 4 2 4}$ |  | $\mathbf{4 , 0 1 3 , 2 7 1}$ | $\mathbf{7 , 6 9 6 , 7 1 9}$ |  |

${ }^{\text {a }}$ Calculated using 2016 wave 1-4 landings and the proportion of annual landings during waves 5-6 in 2015.
${ }^{\mathrm{b}}$ Average wave 5-6 landings, 2013-2015
${ }^{\text {c }}$ Calculated using 2016 wave 1-4 landings and the average proportion of annual landings during waves 5-6 in 2013-2015.

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, 1997 to 2016.

| Year | Number of <br> Directed $^{\text {Fishing Trips }^{\mathbf{a}}}$ | Directed Scup <br> Trips As \% <br> Of All Trips $^{\text {a,b }}$ | RHL <br> (millions of $_{\text {pounds) }^{\text {c }}}$ | Landings <br> (millions of $_{\text {pounds) }^{\mathbf{d}}}$ | \% RHL <br> Overage (+)/ <br> Underage (-) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1997 | 194,640 | $0.65 \%$ | 1.95 | 1.20 | $-38 \%$ |
| 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 | $2.09 \%$ | 7.55 | 5.44 | $-28 \%$ |
| 2014 | 418,687 | $1.61 \%$ | 7.03 | 4.74 | $-33 \%$ |
| 2015 | 461,840 | $2.09 \%$ | 6.80 | 4.62 | $-32 \%$ |
| 2016 | $635,831^{\mathrm{e}}$ | $3.76 \%$ | 6.09 | $7.70^{\mathrm{f}}$ | $+26 \%^{\mathrm{f}}$ |

${ }^{\text {a }}$ 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 19, 2016.
${ }^{\mathrm{b}}$ Source of total trips for all species combined: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 19, 2016.
${ }^{\text {c }}$ RHLs for 2002 through 2014 are adjusted for research set-aside.
${ }^{\text {d }}$ Source: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 19, 2016.
${ }^{\mathrm{e}}$ Preliminary estimate for waves 1-4 (January - August)
${ }^{\text {f }}$ Projected
N/A = Data not available.

Table 6: Projected recreational scup landings (in number of fish) relative to Commission target for 2016, by state.

| State | 2016 Target | 2016 Projected Landings ${ }^{\text {a }}$ | Percent Overage |
| :---: | :---: | :---: | :---: |
| MA | 5,181,842 ${ }^{\text {b }}$ | 1,521,096 | 13\% |
| RI |  | 625,403 |  |
| CT |  | 817,081 |  |
| NY |  | 2,878,442 |  |
| NJ | None | 842,737 | N/A |
| DE | None | 176 | N/A |
| MD | None | 103 | N/A |
| VA | None | 37,342 | N/A |
| NC | None | 0 | N/A |
| Total |  | 3,319,954 |  |

${ }^{a}$ Source: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 19, 2016. Projected as described on page 3.
${ }^{\mathrm{b}}$ The target for the states of MA-NY is $97 \%$ of the RHL in numbers of fish. The 2016 target shown is approximate, calculated using the 2016 RHL ( 6.09 million pounds) and the 2015 mean weight of landed fish (1.14 pounds).
N/A=Not applicable.

Table 7: Percentage of recreational scup landings (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 per angler trip. ${ }^{\text {a }}$

| Year | State Waters (<=3 miles) | EEZ ( > 3 miles) |
| :---: | :---: | :---: |
| 2007 | $99 \%$ | $1 \%$ |
| 2008 | $99 \%$ | $1 \%$ |
| 2009 | $99 \%$ | $1 \%$ |
| 2010 | $98 \%$ | $2 \%$ |
| 2011 | $96 \%$ | $4 \%$ |
| 2012 | $100 \%$ | $0 \%$ |
| 2013 | $94 \%$ | $6 \%$ |
| 2014 | $97 \%$ | $3 \%$ |
| 2015 | $99 \%$ | $1 \%$ |
| 2016 | $97 \%$ | $3 \%$ |
| Avg. 2007-2016 | $98 \%$ | $2 \%$ |
| Avg. 2014-2016 | $98 \%$ | $2 \%$ |

${ }^{a}$ Source: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 19, 2016.

Table 8: Proportion of 2013-2015 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 per angler trip. ${ }^{\text {a }}$

| State | State Waters <br> $(<=3$ miles) | EEZ (>3 <br> miles) |
| :---: | :---: | :---: |
| MAINE | -- | -- |
| NEW HAMPSHIRE | -- | -- |
| MASSACHUSETTS | $96 \%$ | $4 \%$ |
| RHODE ISLAND | $96 \%$ | $4 \%$ |
| CONNECTICUT | $96 \%$ | $4 \%$ |
| NEW YORK | $96 \%$ | $4 \%$ |
| NEW JERSEY | $96 \%$ | $4 \%$ |
| DELAWARE | $5 \%$ | $95 \%$ |
| MARYLAND | $0 \%$ | $100 \%$ |
| VIRGINIA | $100 \%$ | $0 \%$ |
| NORTH CAROLINA | $20 \%$ | $80 \%$ |

[^5]Table 9: Summary of federal management measures for the scup recreational fishery, 1997-2017. ABCs, TACs, ACLs, RHLs, and landings are in millions of pounds. Landings are totals for the states of Maine through North Carolina.

| Measure | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ABC | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| TAC ${ }^{\text {a }}$ | 7.28 | 5.92 | 5.92 | 8.37 | 12.92 | 18.65 | 18.65 | 18.65 | 19.79 | 13.97 |
| Recreational ACL | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| RHL | 1.55 | 1.24 | 1.24 | 1.76 | 2.71 | 4.01 | 3.99 | 3.96 | 3.99 | 2.74 |
| Recreational landings ${ }^{\text {b }}$ | 0.87 | 1.89 | 5.44 | 4.26 | 3.62 | 8.48 | 7.28 | 2.69 | 3.72 | 4.56 |
| Possession Limit | - | - | - | 50 | 20 | 50 | 50 | 50 | 50 | 50 |
| Size Limit (inches, TL) | 7 | 7 | - | 9 | 10 | 10 | 10 | 10 | 10 | 10 |
| Open Season | 1/1-12/31 | 1/1-12/31 | 1/1-12/31 | $\begin{aligned} & 8 / 15- \\ & 10 / 31 \end{aligned}$ | 7/1-10/2 | $\begin{gathered} 1 / 1-2 / 28 \\ \text { and } 7 / 1- \\ 11 / 30 \end{gathered}$ | $\begin{gathered} 1 / 1-2 / 28 \\ \text { and } 9 / 7- \\ 11 / 30 \end{gathered}$ | $\begin{gathered} 1 / 1-2 / 28 \\ \text { and } 9 / 18- \\ 11 / 30 \end{gathered}$ | $\begin{gathered} 1 / 1-2 / 28 \\ \text { and } 9 / 18- \\ 11 / 30 \end{gathered}$ | $\begin{gathered} 1 / 1-2 / 28 \\ \text { and } 9 / 18 \text { - } \\ 11 / 30 \end{gathered}$ |
| Measure | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| ABC | -- | 11.70 | 17.09 | 51.70 | 40.88 | 38.71 | 35.99 | 33.77 | 31.11 | 28.40 |
| TAC ${ }^{\text {a }}$ | 9.90 | 15.54 | 17.09 | 31.92 | 40.88 | 38.71 | 35.99 | 33.77 | 31.11 | 28.40 |
| Recreational ACL | -- | -- | -- | -- | 31.89 | 30.19 | 28.07 | 26.35 | 6.84 | 6.25 |
| RHL | 1.83 | 2.59 | 3.01 | 5.74 | 8.45 | 7.55 | 7.03 | 6.80 | 6.09 | 5.50 |
| Recreational landings ${ }^{\text {b }}$ | 3.79 | 3.23 | 5.97 | 3.67 | 4.17 | 5.44 | 4.74 | 4.62 | $7.70{ }^{\text {c }}$ | -- |
| Possession Limit | 15 | 15 | 10 | 10 | 20 | 30 | 30 | 50 | 50 | -- |
| Size Limit (inches, TL) | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10 | 9 | 9 | 9 | -- |
| Open Season | $\begin{gathered} 1 / 1-2 / 28 \\ \text { and } 9 / 18- \\ 11 / 30 \end{gathered}$ | $\begin{gathered} 1 / 1-2 / 28 \\ \text { and } 10 / 1- \\ 10 / 31 \end{gathered}$ | $\begin{gathered} 1 / 1-2 / 28 \\ \text { and } 10 / 1- \\ 10 / 31 \end{gathered}$ | 6/6-9/26 | 1/1-12/31 | 1/1-12/31 | 1/1-12/31 | 1/1-12/31 | 1/1-12/31 | -- |

${ }^{\text {a }}$ 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.
${ }^{\mathrm{b}}$ Source: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 19, 2016.
${ }^{\text {c }}$ Projected

Table 10: Scup recreational management measures by state, 2015 and 2016.

| 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; <br> November 1-December 31 |
|  |  | 45 fish | September 1-October 31 |
| Connecticut (private angler) | 10 | 30 fish | 1- December |
| Connecticut (45 designated shore sites) | 9 | 30 fish | 1- December 31 |
| 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 |

Table 11: Number of scup landed per trip and frequency of occurrence based on 2011 Marine Recreational Fisheries Statistics Survey data for waves 1-4 and estimated landings per trip under 15 and 20 fish bag limits, assuming compliance.

| \# per trip | Frequency | \# landed | New \# per trip with 15 fish limit | \# landed with 15 fish limit | \# landed with 20 fish limit | New \# per trip with 20 fish limit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 78 | 78 | 1 | 78 | 1 | 78 |
| 2 | 44 | 88 | 2 | 88 | 2 | 88 |
| 3 | 15 | 45 | 3 | 45 | 3 | 45 |
| 4 | 20 | 80 | 4 | 80 | 4 | 80 |
| 5 | 5 | 25 | 5 | 25 | 5 | 25 |
| 6 | 10 | 60 | 6 | 60 | 6 | 60 |
| 7 | 5 | 35 | 7 | 35 | 7 | 35 |
| 8 | 4 | 32 | 8 | 32 | 8 | 32 |
| 9 | 6 | 54 | 9 | 54 | 9 | 54 |
| 10 | 6 | 60 | 10 | 60 | 10 | 60 |
| 12 | 2 | 24 | 12 | 24 | 12 | 24 |
| 14 | 3 | 42 | 14 | 42 | 14 | 42 |
| 16 | 3 | 48 | 15 | 45 | 16 | 48 |
| 17 | 1 | 17 | 15 | 15 | 17 | 17 |
| 19 | 3 | 57 | 15 | 45 | 19 | 57 |
| 21 | 2 | 42 | 15 | 30 | 20 | 40 |
| 35 | 1 | 35 | 15 | 15 | 20 | 20 |
| 26 | 4 | 104 | 15 | 60 | 20 | 80 |
| 27 | 4 | 108 | 15 | 60 | 20 | 80 |
| 28 | 1 | 28 | 15 | 15 | 20 | 20 |
| 30 | 1 | 30 | 15 | 15 | 20 | 20 |
| 31 | 1 | 31 | 15 | 15 | 20 | 20 |
| 32 | 1 | 32 | 15 | 15 | 20 | 20 |
| 34 | 2 | 68 | 15 | 30 | 20 | 40 |
| 35 | 1 | 35 | 15 | 15 | 20 | 20 |
| 37 | 1 | 37 | 15 | 15 | 20 | 20 |
| 38 | 1 | 38 | 15 | 15 | 20 | 20 |
| 40 | 7 | 280 | 15 | 105 | 20 | 140 |
| 41 | 1 | 41 | 15 | 15 | 20 | 20 |
| 43 | 1 | 43 | 15 | 15 | 20 | 20 |
| 45 | 1 | 45 | 15 | 15 | 20 | 20 |
| 48 | 1 | 48 | 15 | 15 | 20 | 20 |
| 50 | 1 | 50 | 15 | 15 | 20 | 20 |
| Total | 237 | 1,840 |  | 1,208 |  | 1,385 |
| Reduction |  |  |  | 34\% |  | 25\% |

## 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.

## Scup

Due to high estimated 2016 wave 4 landings in New York compared to previous years, the Monitoring Committee agreed that the 2016 projections for New York should be modified based on the 2013-2015 proportion of landings by wave. This resulted in a revised coast-wide projected estimate of 6.44 million pounds of landings in 2016, requiring a $15 \%$ reduction to achieve the 2017 RHL of 5.50 million pounds.

Wave 5 has been an important component of annual scup landings in previous years. Preliminary wave 5 estimates have not yet been published. Given this uncertainty, it will be important to recalculate the reduction once wave 5 preliminary estimates are available. These estimates will not be available until after the December Council and Board meeting.

The Committee supports the ongoing regional approach for setting recreational scup measures in state waters. This approach provides flexibility for the states to accommodate the needs of the modes and areas for their individual states.

The vast majority of recreational scup landings come from state waters from New York through Massachusetts (about 98\% in 2015); therefore, adjustments to the federal measures will have little impact (on the order of $2 \%$ ) on coast-wide harvest.

The Monitoring Committee recommends that the federal waters bag limit decrease from 50 to 40 fish and that states also decrease their bag limits. For example, the Monitoring Committee recommends, as a starting point for discussion, a decrease from 30 to 25 fish for most seasons and modes and from 45 to 40 fish for the party/charter bonus seasons. The magnitude of these adjustments may change after preliminary wave 5 estimates are available.

The Monitoring Committee recommends no changes to the federal recreational season or size limit. Given that most harvest occurs in state waters in New York through Massachusetts, and given that those states have a higher size limit and shorter season than federal waters, an increase in the federal waters size limit or a decrease in the season would not achieve the needed reduction.

State regulations are complex by mode and wave. This makes it difficult to predict changes in harvest under different measures. Future efforts to simplify measures would be beneficial for evaluating regulations, especially in cases when changes are necessary. The Monitoring Committee recommends that the Board consider this when discussing 2017 state measures adjustments.


# Summer Flounder, Scup, and Black Sea Bass Advisory Panel Webinar <br> 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 scup are summarized below.

## Scup Comments

## Data Concerns

One advisor thought the projections for scup landings during wave 5 (September and October) seemed unreasonably high, especially in Connecticut. Another advisor said the 2016 wave 1-4 (January - August) MRIP estimates for landings in Virginia were extremely high and did not match what he has seen and heard in his local area. He thought the actual Virginia landings were similar to the estimated Delaware and Maryland landings (i.e., zero or very low). One advisor said the MRIP data on landings per angler per trip is not reflective of the Connecticut fishery, where many anglers keep more than 20 fish per trip.

One advisor said that because MRIP does not sample private docks, a large proportion of recreational catch is undocumented.

One advisor thought the $15 \%$ recreational discard mortality assumption used in the stock assessment is too high.

## Management Measures

A comparison of projected 2016 recreational landings to the 2017 RHL indicates that scup landings will need to be reduced by $15 \%$ to prevent an overage of the RHL. One advisor called this a manufactured crisis, given that scup biomass is at $210 \%$ of the biomass target. He argued that the Council's risk policy prevents them from effectively managing rebuilt stocks and should be modified. Three other advisors agreed with him.

Two advisors argued that dead discards should be eliminated through a bag limit with no minimum size restriction. One advisor said discards could not be totally eliminated as some anglers on party boats do not want to keep scup and will discard any that they catch.

One advisor said a high bag limit in federal waters helps party and charter businesses attract customers, even though very few anglers actually keep the full 50 scup which they are allowed. He said that the Monitoring Committee's recommendation for a 40 scup bag limit in federal waters would not have major impacts, but bag limits below 40 scup would negatively impact recreational fisheries, especially the for-hire sector. He said a 13 fish bag limit ${ }^{1}$ would destroy the for-hire fleet as it is not high enough for anglers to justify the cost of a party or charter trip, given the small size of scup. Another advisor questioned the need to reduce the federal waters possession limit to 40 fish because the data suggest this will have little to no impact on reducing the coastwide harvest.

One advisor said the high biomass of scup is negatively impacting other species, including lobsters, clams, and crabs.

[^6]
[^0]:    ${ }^{1}$ 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/
    ${ }^{2}$ Northeast Fisheries Science Center. 2016. Scup Data Update for 2016. Available at: http://www.mafmc.org/ssc-meetings/2016/july-20-21
    ${ }^{3}$ 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/

[^1]:    ${ }^{4}$ 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/

[^2]:    ${ }^{\text {a }}$ Source: personal communication with the NMFS Fisheries Statistics Division, October 19, 2016.
    ${ }^{\mathrm{b}} 2016$ catch and landings are projected using proportion by wave from 2015 data and 2016 wave 1-4 data (Source: personal communication with NMFS Fisheries Statistics Division, October 19, 2016).

[^3]:    ${ }^{\text {a }}$ Source: personal communication with NMFS Fisheries Statistics Division, October 19, 2016.
    ${ }^{\mathrm{b}}$ Preliminary estimates

[^4]:    ${ }^{5}$ 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.

[^5]:    ${ }^{\text {a }}$ Source: personal communication with the National Marine Fisheries Service, Fisheries Statistics Division, October 19, 2016.

[^6]:    ${ }^{1}$ The Monitoring Committee's revised 2016 scup landings projections show that a $15 \%$ reduction in landings may be needed to prevent an overage of the 2017 RHL. Based on MRIP data on landings per angler per trip in 2015, this could be achieved with a 13 fish coastwide bag limit.

