

Mid-AtLANTIC COUNCIL

# MEMORANDUM 

Date: $\quad$ November 3, 2017
To: Chris Moore, Executive Director
From: Kiley Dancy, Staff
Subject: Summer Flounder Recreational Management Measures for 2018

In August 2017, the Council and the Atlantic States Marine Fisheries Commission's (Commission's) Summer Flounder, Scup, and Black Sea Bass Board (Board) reviewed the previously implemented commercial quota and recreational harvest limit for summer flounder for the 2018 fishing year. The Council and Board recommended no changes to the implemented catch and landings limits, based on the advice of the Scientific and Statistical Committee (SSC) and Monitoring Committee (MC). These 2018 specifications were approved in August 2016 based on the recommendations from the SSC following the 2016 stock assessment update for summer flounder.

The final rule implementing the 2018 commercial quota and recreational harvest limit (RHL) published on December 22, 2016 ( 81 FR 93842), and includes a 2018 RHL for summer flounder of 4.42 million lb (an increase of approximately $17 \%$ relative to the 2017 RHL of 3.77 million lb).

The MC must recommend recreational management measures for 2018 that will constrain landings to the RHL. The following is a review of recreational catch and landings data for the summer flounder fishery, as well as a staff recommendation.

## Recreational Catch and Landings

Recreational catch of summer flounder has fluctuated since 1981, from a peak of 32.06 million fish in 1983 to a time series low of 2.68 million fish in 1989. Landings have fluctuated from a peak of 27.97 million lb in 1983 to a low of 3.16 million lb in 1989. Landings were estimated to be 6.18 million lb in 2016 (Table 2), approximately $14 \%$ above the 2016 RHL of 5.42 million lb.

Marine Recreational Information Program (MRIP) data for 2017 are incomplete and preliminary. To date, only the first four waves (January through August) of catch and landings data for the current year are available. The MC reviews the MRIP data once wave 4 data are available because the Council and Commission agreed that recommendations need to be made late in the current year (i.e., 2017) to give the states enough time to enact changes in their regulations for the upcoming year (i.e., 2018).

Preliminary data indicate that 7.31 million summer flounder have been caught and 0.91 million summer flounder have been landed through wave 4 in 2017. By weight, landings through wave 4 were 2.83 million lb , with the mean weight at approximately 3.12 lb per fish (Table 3 ).

Preliminary wave 1-4 data for 2017 can be used to project catch and landings for the entire year by assuming the same proportion of catch and landings by wave in the previous year. These projections are typically assumed to be overestimates for states with more restrictive seasonal measures in the current year, and underestimates for those with less restrictive seasonal measures. Although size and bag limits were modified between 2016 and 2017, most open seasons remained status quo between 2016 and 2017, the proportions by wave in these years are not expected to differ substantially as a result of changes in regulations.

Total projected catch for 2017 is 8.60 million fish, and projected landings are 3.23 million lb or 1.05 million fish (Table 2). Landings by state in recent years, in thousands of fish, are shown in Table 6 and Table 7 (for waves 1-4 and all waves, respectively). Projected 2017 landings by state (in numbers of fish) are shown in Table 6 and Table 8.

Expanded landed length frequency for 2014-2016 is shown in Figure 1. About $80 \%$ of summer flounder landings have originated in state waters in recent years (Table 4).

## Past Harvest Limits and Management Measures

RHLs for summer flounder were first implemented in 1993. Since that time they have varied from a high of 11.98 million lb in 2005 to a low of 3.77 million lb in 2017 (Table 7).

From 1993-2001, coastwide measures were in place for all states and federal waters, with possession limits ranging from 3-10 fish and size limits ranging from 14.0-15.5 inches. Starting in 2002, conservation equivalency was implemented, and has been used as the preferred management system each year since. Under conservation equivalency, individual states or multi-state regions set measures that collectively are designed to constrain landings to the coastwide harvest limit. Federal regulations are waived and all anglers are subject to the summer flounder regulations of the state in which they land. State level conservation equivalency was adopted each year from 2002 through 2013, with each state implementing different sets of management measures. Each year from 2014 through 2017, the Commission's Board has approved the use of regional conservation equivalency, where the combination of regional measures is expected to constrain the coastwide harvest to the RHL.

Last December, the Council and Board adopted regional conservation equivalency for the summer flounder recreational fishery in 2017. Region-specific possession limits ranged from 2-8 fish with size limits ranging from 15.0-18.0 inches, with various seasons (Table 8).

Under conservation equivalency, the Council and Board must adopt two associated sets of measures: the non-preferred coastwide measures, and the precautionary default measures. The non-preferred coastwide measures are a set of measures that would be expected to constrain harvest to the RHL if implemented on a coastwide basis. The combination of state or regional measures under conservation equivalency is theoretically designed to be "equivalent" to this set of non-preferred coastwide measures. These coastwide measures are included in the federal regulations, but waived in favor of state- or region-specific measures. The non-preferred coastwide measures adopted in 2017 include a 4-fish possession limit, a 19-inch total length (TL) minimum size, and an open season from June 1-September 15.

The precautionary default measures would be implemented in any state or region that failed to develop adequate measures to constrain or reduce landings as required by the conservation equivalency guidelines. The precautionary default measures in 2017 include a 2 -fish possession limit with a 20 -inch TL minimum fish size and an open season from July 1-August 31.

## Accountability Measures

In 2013, the Council modified the recreational accountability measures (AMs) for Mid-Atlantic species via the Omnibus Recreational Accountability Measures Amendment. This amendment removed the inseason closure authority for the summer flounder recreational fishery that was previously held by the NMFS Regional Administrator. Additionally, in the event of a recreational Annual Catch Limit (ACL) overage, recreational accountability measures no longer necessarily include a direct pound-for-pound payback of the overage amount in a subsequent fishing year. Instead, accountability measures are tied to stock status, and though poundage 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 target $\left(1 / 2 \mathrm{~B}_{\mathrm{MSY}}<\mathrm{B}<\mathrm{B}_{\text {MSY }}\right)$, 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) would be made in the following year, or as soon as possible once catch data are available. These adjustments would take into account the performance of the measures and the 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 ( $B>B_{\text {MSY }}$ ): Adjustments to the recreational management measures (bag, size, and seasonal limits) would be made in the following year, or as soon as possible once catch data are available. These adjustments would take into account the performance of the measures and the conditions that precipitated the overage.

Accountability measures have not been triggered for the recreational summer flounder fishery based on a comparison of average 2014-2016 catch to the 2014-2016 average ACL. Although there was a slight (4\%) overage of the recreational ACL in 2014, and a more moderate (12\%) overage in 2016, recreational catch was substantially below the recreational ACL in 2015 ( $35 \%$ ), resulting in a 3-year average of catch that is below the 3-year average ACL (Table 1). Recreational performance relative to the 2017 ACL will be
evaluated in 2018, once final 2017 catch estimates are available, and will be taken into account in next year's recreational specifications process if necessary.

## Methodology

The MC must consider and recommend whether coastwide measures or conservation equivalency (state-by-state or voluntary regional) are appropriate for 2018 (Table 9). Specifically, the Committee must recommend measures that will ensure the recreational harvest limit is not exceeded in 2018. Based on the projected landings estimate of 3.23 million lb for 2017 , landings would not have to be reduced to achieve the 2018 harvest limit of 4.42 million lb.

In February 2017, the Board approved Addendum XXVIII, which allowed for continued use of regional conservation equivalency, with the regions in the same configuration as used in 2016. Addendum XXVIII allows the Board to extend regional conservation equivalency provision under this addendum into 2018. If conservation equivalency (state-by-state or regional) is adopted at the December 2017 Council and Board joint meeting, the Commission's staff will update the 2017 landings projections based on MRIP wave 5 data, which may result in a change to the needed management response. States and/or regions would then develop proposals for recreational measures that would be reviewed by the Board in February 2018.

The MC must make recommendations for non-preferred coastwide measures and precautionary default measures that would be applied under conservation equivalency in the event that this strategy is selected by the Council and Board. The methodology detailed in Framework 2 (Addendum III) to the Summer Flounder, Scup and Black Sea Bass FMP and Framework 6 to the FMP (Addendum XVII) can be used to develop state-specific or regional regulations to meet the state-specific or region-specific targets (Table 9).

Because of the long-term implementation of state-specific regulations, the use of a coastwide reduction table (for minimum size and possession limits) to analyze coastwide regulations is no longer feasible. Staff note that the level of precision of annual harvest estimates from MRIP data depend on the survey sample sizes, the frequency of sampled angler trips that caught the species, and the variability of numbers caught among those trips. Harvest estimates are always progressively less precise at lower levels of stratification; annual estimates are more precise than bimonthly estimates, coastal estimates are more precise than regional estimates, and regional estimates are more precise than state estimates. For the development of 2017 measures, states used a variety of data sources to analyze the effects of adjustments at the state and regional levels, including state-specific data sources. It is increasingly difficult to quantitatively analyze the expected effects of a coastwide set of measures.

The Council has recently received a revised report from John Ward, who was contracted by the Council to develop a recreational harvest model using MRIP data. The TC/MC had previously worked with John Ward on refining this model. The Council requested further development of this project, as described in the November 2017 report. The Monitoring Committees should consider the revised report and determine whether this model could be used for current or future recreational measures recommendations.

## Fishing Trips and Year Class Effects

Table 10 provides an overview of coastwide recreational fishery performance and estimates of the number of trips where summer flounder was reported as the primary target. A comparison of summer flounder directed trips to total trips suggests that summer flounder trips continue to be a substantial component of
total angler trips, ranging from about 13-20 percent of total trips from 1997-2017 (Table 10). Predicting the number of summer flounder trips that might be taken in 2018 is complicated because many factors affect the demand for angler fishing trips. Changes in angler behavior are also complex and difficult to predict, and may violate the assumptions associated with specific sets of regulations and their anticipated results.

Year-class effects, in terms of fish availability, can influence the expected impacts of management measures and should be considered. The stock assessment update for $2016^{1}$ indicates that several consecutive years of below average recruitment have been observed for summer flounder (2010-2015), contributing to a decline in biomass over the past several years. Although total stock biomass is projected to increase slightly in 2018, the summer flounder year classes expected to be most influential on recreational landings in 2018 (generally 2013-2016) are estimated to be below average.

## 2018 Staff Recommendation

For 2018 recreational management, staff recommend the continuation of regional conservation equivalency under Addendum XXVIII. Current 2017 projections for summer flounder landings, using data through wave 4 ( 3.23 million lb), indicate that no reductions are necessary to constrain landings to the 2018 RHL ( 4.42 million lb).

Given the current projections, there may be room for some states or regions to make minor adjustments to measures. However, the very low landings thus far in 2017 appear to be consistent with declining trends in nearly all fishery independent indices of abundance used in the assessment. Staff recommend using precaution in pursuing substantial changes to measures given summer flounder stock status, uncertainty in the recreational data, and the large variation in observed harvest resulting from very similar management measures in recent years. Summer flounder biomass is estimated at $58 \%$ of the target biomass. Declining trends in most indices did not appear to improve with the 2017 data update, and several declined further, a potential indication that projected increases in biomass in 2018 may not be realized. A benchmark stock assessment is currently in development and scheduled for a late 2018 peer review.

The MC and the Commission's Technical Committee (TC) have been developing several approaches to improve the recreational specifications stetting process, including approaches to incorporate the uncertainty surrounding the point estimates of landings generated by MRIP. The aim of this approach is to provide more stability in the recreational measures by avoiding substantial adjustments when the harvest limit for the upcoming year is within some measure of uncertainty around a point estimate of landings in the current year. The specifics of this approach (e.g., which uncertainty bounds will be used) have not yet been defined, however, the TC/MC is generally in support of approaches that strike a balance between maintaining stability where possible and modifying measures (within the constraints of the FMP) when adjustments are clearly called for. This approach includes fewer modifications in both directions, i.e., lower or no reductions in cases when the projected harvest is slightly above the RHL, and lower or no liberalizations when the projected harvest is slightly below the RHL. The MC will discuss the potential for creating a more structured control rule for this approach. Last year, consistent with the general concept of this approach, the Board approved a set of adjustments that did not take the full calculated percent reduction from the point estimate as was done in past years, in an attempt to account for uncertainty in the

[^0]recreational data and the wide variation in harvest estimates under an almost identical set of management measures over 2014-2016.

For the reasons described above, staff recommend maintaining largely status quo measures under regional conservation equivalency in 2018. The Committees should re-evaluate once wave 5 becomes available (over the past five years, wave 5 has accounted for approximately $10 \%$ of annual summer flounder harvest on average).

If conservation equivalency is selected by the Council and Board, a set of non-preferred coastwide measures must be identified, along with a set of precautionary default measures. The non-preferred coastwide measures must consist of a minimum fish size, possession limit, and season for 2018 that if implemented on a coastwide basis, would be expected to constrain harvest to the harvest limit in 2018. Under conservation equivalency, these measures are written into the federal regulations, but waived in favor of the state- or region-specific measures. For 2017, the non-preferred coastwide measures that were in place for several years prior were adjusted to account for the time series low harvest limit in 2017 of 3.77 million pounds. 2017 non-preferred coastwide measures include a 19-inch minimum fish size, 4 fish bag limit, and open season from June 1-September 15.

Because the RHL increases between 2017 and 2018 by about $17 \%$, staff recommend a slight adjustment to the size limit for the non-preferred coastwide measures for 2018. Staff recommend that the 2018 nonpreferred coastwide measures consist of an 18-inch minimum fish size, a 4 fish bag limit, and an open season from May 15 -September 15. According to a preliminary analysis, these measures, if implemented on a coastwide basis, would be expected to constrain landings to the 4.42 million lb RHL in 2018, assuming similar availability and angler behavior compared to 2017.

The precautionary default measures are a set of measures that are intended to be more restrictive than measures any state would need to implement to achieve a necessary reduction, to deter states from deviating from the conservation equivalency guidelines. The Commission would require adoption of the precautionary default measures by any state that either does not submit a summer flounder management proposal to the Commission's Summer Flounder Technical Committee, or submits measures that are inconsistent with the conservation equivalency guidelines. In 2017, the precautionary default measures consist of a 20 -inch minimum size, a 2 -fish possession limit, and an open season of July 1-August 31. Because these measures are intended to be a deterrent to implementing measures inconsistent with the conservation equivalency guidelines, and because this default is likely to be more restrictive than any measure an individual state would implement in 2018, staff recommend no changes to the current precautionary default measures.

In summary, staff recommend that the summer flounder recreational fishery be managed under regional conservation equivalency in 2018, and that states and the Board maintain largely status quo management measures given uncertainty in the recreational data. Staff recommend non-preferred coastwide measures that include an 18-inch TL size limit, a 4-fish possession limit, and an open season from May 15September 15, 2018, as well as precautionary default measures that include a 20-inch TL minimum size, $\underline{2 \text { fish possession limit, and open season from July 1-August 31, } 2018 .}$

Table 1: Accountability Measures evaluation for summer flounder recreational fishery, comparing 2014-2016 average recreational catch vs. 2014-2016 average recreational ACL. Source for total recreational catch: 2017 summer flounder data update. ${ }^{2}$

|  | Rec. ACL (mil lb) | Rec. Catch (mil lb) | \% Over/Under |
| :---: | :---: | :---: | :---: |
| $\mathbf{2 0 1 4}$ | 9.07 | 9.45 | $+4 \%$ |
| $\mathbf{2 0 1 5}$ | 9.44 | 6.11 | $-35 \%$ |
| $\mathbf{2 0 1 6}$ | 6.83 | 7.66 | $+12 \%$ |
| AVG | 8.45 | 7.74 | $-8 \%$ |

[^1]Table 2: Summer flounder recreational catch and landings by year, Maine through North Carolina, 19812017, all waves. The number of fish released is presented as a proportion of the total catch (\% Released). ${ }^{\text {a }}$

| Year | $\begin{gathered} \text { Catch } \\ \text { (mil fish) } \end{gathered}$ | Landings (mil fish) | Landings (mil lb) | $\begin{gathered} \% \\ \text { Released } \end{gathered}$ | Mean weight of landed fish (lb) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1981 | 13.579 | 9.567 | 10.081 | 30\% | 1.05 |
| 1982 | 23.562 | 15.473 | 18.233 | 34\% | 1.18 |
| 1983 | 32.062 | 20.996 | 27.969 | 35\% | 1.33 |
| 1984 | 29.785 | 17.475 | 18.765 | 41\% | 1.07 |
| 1985 | 13.526 | 11.066 | 12.490 | 18\% | 1.13 |
| 1986 | 25.292 | 11.621 | 17.861 | 54\% | 1.54 |
| 1987 | 21.023 | 7.865 | 12.167 | 63\% | 1.55 |
| 1988 | 17.171 | 9.960 | 14.624 | 42\% | 1.47 |
| 1989 | 2.677 | 1.717 | 3.158 | 36\% | 1.84 |
| 1990 | 9.101 | 3.794 | 5.134 | 58\% | 1.35 |
| 1991 | 16.075 | 6.068 | 7.960 | 62\% | 1.31 |
| 1992 | 11.910 | 5.002 | 7.148 | 58\% | 1.43 |
| 1993 | 22.904 | 6.494 | 8.831 | 72\% | 1.36 |
| 1994 | 17.725 | 6.703 | 9.328 | 62\% | 1.39 |
| 1995 | 16.308 | 3.326 | 5.421 | 80\% | 1.63 |
| 1996 | 18.994 | 6.997 | 9.820 | 63\% | 1.40 |
| 1997 | 20.027 | 7.167 | 11.866 | 64\% | 1.66 |
| 1998 | 22.086 | 6.979 | 12.477 | 68\% | 1.79 |
| 1999 | 21.378 | 4.107 | 8.366 | 81\% | 2.04 |
| 2000 | 25.384 | 7.801 | 16.468 | 69\% | 2.11 |
| 2001 | 28.187 | 5.294 | 11.637 | 81\% | 2.20 |
| 2002 | 16.674 | 3.262 | 8.008 | 80\% | 2.45 |
| 2003 | 20.532 | 4.559 | 11.638 | 78\% | 2.55 |
| 2004 | 20.336 | 4.316 | 11.022 | 79\% | 2.55 |
| 2005 | 25.806 | 4.027 | 10.915 | 84\% | 2.71 |
| 2006 | 21.400 | 3.950 | 10.505 | 82\% | 2.66 |
| 2007 | 20.732 | 3.108 | 9.337 | 85\% | 3.00 |
| 2008 | 22.897 | 2.350 | 8.151 | 90\% | 3.47 |
| 2009 | 24.085 | 1.806 | 6.030 | 93\% | 3.34 |
| 2010 | 23.722 | 1.501 | 5.108 | 94\% | 3.40 |
| 2011 | 21.559 | 1.840 | 5.956 | 91\% | 3.24 |
| 2012 | 16.528 | 2.272 | 6.490 | 86\% | 2.86 |
| 2013 | 16.105 | 2.521 | 7.355 | 84\% | 2.92 |
| 2014 | 18.969 | 2.458 | 7.389 | 87\% | 3.01 |
| 2015 | 12.153 | 1.621 | 4.721 | 87\% | 2.91 |
| 2016 | 14.170 | 2.028 | 6.182 | 86\% | 3.05 |
| 2017 (proj.) ${ }^{\text {b }}$ | 8.593 | 1.045 | 3.227 | 88\% | 3.09 |

${ }^{a}$ Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 23, 2017. 1981-2003 data are from MRFSS, 2004-2017 data are from MRIP.
${ }^{\text {b }}$ Projected using proportion by wave from 2016 MRIP data and 2017 MRIP wave 1-4 data.

Table 3: Summer flounder recreational catch and landings for waves 1-4 (January-August), Maine through North Carolina, 1981-2017. ${ }^{\text {a }}$

| Year | $\begin{gathered} \text { Catch } \\ \text { (mil fish) } \end{gathered}$ | Landings (mil fish) | Landings (mil lb) | Mean Weight of landed fish (lb) |
| :---: | :---: | :---: | :---: | :---: |
| 1981 | 11.774 | 8.071 | 8.899 | 1.10 |
| 1982 | 20.108 | 12.599 | 15.289 | 1.21 |
| 1983 | 26.979 | 17.128 | 22.523 | 1.31 |
| 1984 | 26.355 | 14.614 | 15.245 | 1.04 |
| 1985 | 10.626 | 8.535 | 9.691 | 1.14 |
| 1986 | 21.321 | 8.885 | 13.274 | 1.49 |
| 1987 | 18.749 | 6.656 | 10.393 | 1.56 |
| 1988 | 13.906 | 7.918 | 11.728 | 1.48 |
| 1989 | 2.120 | 1.465 | 2.715 | 1.85 |
| 1990 | 7.277 | 3.025 | 4.125 | 1.36 |
| 1991 | 13.977 | 5.186 | 6.796 | 1.31 |
| 1992 | 9.830 | 3.992 | 5.688 | 1.42 |
| 1993 | 17.636 | 4.750 | 6.553 | 1.38 |
| 1994 | 15.052 | 5.499 | 7.603 | 1.38 |
| 1995 | 14.315 | 2.765 | 4.629 | 1.67 |
| 1996 | 17.206 | 6.175 | 8.685 | 1.41 |
| 1997 | 14.466 | 4.657 | 7.636 | 1.64 |
| 1998 | 19.015 | 5.944 | 10.568 | 1.78 |
| 1999 | 19.113 | 3.629 | 7.441 | 2.05 |
| 2000 | 22.131 | 6.867 | 14.148 | 2.06 |
| 2001 | 25.661 | 4.810 | 10.651 | 2.21 |
| 2002 | 14.442 | 2.842 | 7.008 | 2.47 |
| 2003 | 18.177 | 4.123 | 10.615 | 2.57 |
| 2004 | 17.998 | 3.931 | 10.088 | 2.57 |
| 2005 | 22.874 | 3.630 | 9.800 | 2.70 |
| 2006 | 20.515 | 3.685 | 9.813 | 2.66 |
| 2007 | 18.659 | 2.898 | 8.803 | 3.04 |
| 2008 | 21.792 | 2.277 | 7.951 | 3.49 |
| 2009 | 23.482 | 1.758 | 5.905 | 3.36 |
| 2010 | 22.725 | 1.428 | 4.902 | 3.43 |
| 2011 | 19.347 | 1.708 | 5.511 | 3.23 |
| 2012 | 14.390 | 1.968 | 5.680 | 2.89 |
| 2013 | 14.641 | 2.296 | 6.732 | 2.93 |
| 2014 | 16.235 | 2.128 | 6.454 | 3.03 |
| 2015 | 10.412 | 1.382 | 4.044 | 2.93 |
| 2016 | 12.213 | 1.830 | 5.599 | 3.06 |
| 2017 | 7.310 | 0.908 | 2.833 | 3.12 |

${ }^{\text {a }}$ Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 23, 2017. 1981-2003 data are from MRFSS, 2004-2016 data are from MRIP.


Figure 1: Expanded length frequencies of landed summer flounder from 2014-2016 MRIP data, as a percentage of total landed fish. Each length bin contains fish from X. 0 to X. 99 inches. Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 11, 2017.

Table 4: Estimated percentage of summer flounder recreational landings in state vs. federal waters, Maine through North Carolina, 2007-2016. ${ }^{\text {a }}$

| Year | State <= 3 mi | EEZ >3 mi |
| :---: | :---: | :---: |
| 2007 | $88.91 \%$ | $11.09 \%$ |
| 2008 | $96.49 \%$ | $3.51 \%$ |
| 2009 | $90.93 \%$ | $9.07 \%$ |
| 2010 | $92.40 \%$ | $7.60 \%$ |
| 2011 | $95.31 \%$ | $4.69 \%$ |
| 2012 | $87.76 \%$ | $12.24 \%$ |
| 2013 | $76.97 \%$ | $23.03 \%$ |
| 2014 | $77.08 \%$ | $22.92 \%$ |
| 2015 | $80.95 \%$ | $19.05 \%$ |
| 2016 | $80.91 \%$ | $19.09 \%$ |
| Avg. 2007-2016 | $\mathbf{8 6 . 5 \%}$ | $\mathbf{1 3 . 5 \%}$ |
| Avg. 2014-2016 | $\mathbf{7 9 . 7 \%}$ | $\mathbf{2 0 . 3 \%}$ |

[^2]Table 5: Summer flounder recreational landings (in thousands of fish) by state for waves 1-4 (JanuaryAugust), 2008-2017. ${ }^{\text {a }}$

| State | $\mathbf{2 0 0 8}$ | $\mathbf{2 0 0 9}$ | $\mathbf{2 0 1 0}$ | $\mathbf{2 0 1 1}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 7}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{M E}$ | - | - | - | - | - | - | - | - | - | - |
| $\mathbf{N H}$ | $<1$ | - | - | - | $<1$ | - | - | - | - | - |
| MA | 232 | 50 | 45 | 33 | 74 | 29 | 113 | 66 | 53 | 25 |
| RI | 203 | 71 | 118 | 152 | 103 | $126^{\mathrm{b}}$ | 184 | 160 | 84 | 57 |
| CT | 146 | 45 | 35 | 47 | 62 | $268^{\mathrm{b}}$ | $115^{\mathrm{b}}$ | $81^{\mathrm{b}}$ | 216 | 82 |
| NY | 609 | 298 | 331 | 349 | 482 | 501 | $418^{\mathrm{b}}$ | $366^{\mathrm{b}}$ | 695 | 189 |
| NJ | 752 | 817 | 551 | 719 | 905 | $1,095^{\mathrm{b}}$ | 1,046 | 462 | 602 | 396 |
| DE | 33 | 78 | 50 | 56 | 44 | 49 | 86 | 44 | 84 | 27 |
| MD | 34 | 64 | 14 | 10 | 19 | 36 | 27 | 43 | 17 | 25 |
| VA | 243 | 275 | 235 | 301 | 249 | 171 | $113^{\mathrm{b}}$ | 131 | 69 | 87 |
| NC | 25 | 59 | 50 | 40 | 31 | 30 | 25 | 29 | 10 | 19 |

${ }^{\text {a }}$ Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 23, 2017.
${ }^{\mathrm{b}}$ In August 2016 MRIP revised some estimates to address small sample size issues. Revised estimates are only available at the annual level. Thus, some landings are excluded from the following wave/mode/state results due to insufficient sample sizes, including: 2013 CT, NJ, and RI charter, 2014 CT, NY, and VA charter, 2015 CT and NY charter.

Table 6: Summer flounder recreational landings (in thousands of fish) by state for all waves (January-
December), 2008-2017. ${ }^{\text {a }}$

| State | $\mathbf{2 0 0 8}$ | $\mathbf{2 0 0 9}$ | $\mathbf{2 0 1 0}$ | $\mathbf{2 0 1 1}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 7}$ <br> $\mathbf{( p r o j}^{\mathbf{b}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{M E}$ | - | - | - | - | - | - | - | - | - | - |
| NH | $<1$ | - | - | - | $<1$ | - | - | - | - | - |
| MA | 232 | 50 | 45 | 58 | 76 | 31 | 113 | 79 | 55 | 26 |
| RI | 204 | 72 | 118 | 161 | 103 | 128 | 185 | 164 | 87 | 59 |
| CT | 146 | 45 | 35 | 47 | 63 | 270 | 120 | 93 | 218 | 83 |
| NY | 609 | 299 | 334 | 376 | 509 | 518 | 508 | 492 | 712 | 193 |
| NJ | 762 | 825 | 552 | 737 | 1,130 | 1,232 | 1,175 | 497 | 755 | 496 |
| DE | 35 | 87 | 54 | 67 | 45 | 58 | 93 | 51 | 90 | 29 |
| MD | 58 | 65 | 25 | 15 | 23 | 53 | 80 | 44 | 22 | 32 |
| VA | 260 | 289 | 260 | 318 | 260 | 186 | 139 | 159 | 72 | 92 |
| NC | 44 | 75 | 77 | 60 | 63 | 45 | 46 | 41 | 18 | 36 |
| Total | 2,350 | 1,806 | 1,501 | 1,840 | 2,272 | 2,521 | 2,458 | 1,621 | 2,028 | 908 |

[^3]Table 7: Summary of federal management measures for the summer flounder recreational fishery, 1993-2018.

| Measure | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ABC (m lb) | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Recreational ACL (land+disc; m lb) | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Harvest Limit (m lb) | 8.38 | 10.67 | 7.76 | 7.41 | 7.41 | 7.41 | 7.41 | 7.41 | 7.16 | 9.72 | 9.28 | 11.21 | 11.98 |
| Landings (m lb) | 8.83 | 9.33 | 5.42 | 9.82 | 11.87 | 12.48 | 8.37 | 16.47 | 11.64 | 8.01 | 11.64 | 11.02 | 10.92 |
| Possession Limit | 6 | 8 | 6/8 | 10 | 8 | 8 | 8 | 8 | 3 | a | a | a | a |
| Size Limit (TL in) | 14 | 14 | 14 | 14 | 14.5 | 15 | 15 | 15.5 | 15.5 | a | a | a | a |
| Open Season | $\begin{gathered} 5 / 15- \\ 9 / 30 \end{gathered}$ | $\begin{aligned} & 4 / 15- \\ & 10 / 15 \end{aligned}$ | $\begin{gathered} 1 / 1- \\ 12 / 31 \end{gathered}$ | $\begin{gathered} 1 / 1- \\ 12 / 31 \end{gathered}$ | $\begin{gathered} 1 / 1- \\ 12 / 31 \end{gathered}$ | $\begin{gathered} 1 / 1- \\ 12 / 31 \end{gathered}$ | $\begin{gathered} 5 / 29- \\ 9 / 11 \end{gathered}$ | $\begin{gathered} 5 / 10- \\ 10 / 2 \end{gathered}$ | $\begin{aligned} & 4 / 15- \\ & 10 / 15 \end{aligned}$ | a | a | a | a |
| Measure | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| ABC ( mlb ) | - | - | - | 21.50 | 25.50 | 33.95 | 25.58 | 22.34 | 21.94 | 22.57 | 16.26 | 11.30 | 13.23 |
| Recreational ACL (land+disc; m lb) | - | - | - | - | - | - | 11.58 | 10.23 | 9.07 | 9.44 | 6.83 | 4.72 | 5.53 |
| Harvest Limit (m <br> lb) - landings only | 9.29 | 6.68 | 6.22 | 7.16 | 8.59 | 11.58 | 8.49 | 7.63 | 7.01 | 7.38 | 5.42 | 3.77 | 4.42 |
| Landings (m lb) | 10.51 | 9.34 | 8.15 | 6.03 | 5.11 | 5.96 | 6.49 | 7.36 | 7.39 | 4.72 | 6.18 | $3.23{ }^{\text {c }}$ | - |
| Possession Limit | a | a | a | a | a | a | a | a | b | b | b | b | - |
| Size Limit (TL in) | a | a | a | a | a | a | a | a | b | b | b | b | - |
| Open Season | a | a | a | a | a | a | a | a | b | b | b | b | - |

${ }^{\text {a }}$ State-specific conservation equivalency measures.
${ }^{\mathrm{b}}$ Region-specific conservation equivalency measures.
${ }^{\text {c }}$ Projected

Table 8: Summer flounder recreational management measures and landings (in thousands of fish; 2017 projected) by state and region, 2016 and 2017.

| Region | State | 2016 |  |  |  | 2017 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Min. Size (in) | Poss. <br> Limit | Open Season | Landings ('000 fish) | State | Min. Size (inches) | Poss. <br> Limit | Open Season | Proj. Landings ('000 fish) |
| 1 | MA | 16 | 5 fish | May 22-Sept. 23 | 55 | MA | 17 | 4 fish | May 22-Sept. 23 | 26 |
| 2 | RI | 18 | 8 fish | May 1-Dec. 31 | 87 | RI | 19 | 4 fish | May 1-Dec. 31 | 59 |
| 3 |  | 18 |  |  |  |  | 19 |  |  |  |
|  | CT | 16 (41 designated shore sites) | 5 fish | May 17-Sept. 21 | 218 | CT | 17 (41 designated shore sites) | 3 fish | May 17- Sept. 21 | 83 |
|  | NY | 18 | 5 fish | May 17- Sept. 21 | 712 | NY | 19 | 3 fish | May 17- Sept. 21 | 193 |
|  | NJ | 18 | 5 fish | May 21-Sept. 25 | 755 | NJ | 18 | 3 fish | May 25-Sept. 5 | 496 |
|  |  | $\begin{gathered} 16(1 \text { shore } \\ \text { site }) \end{gathered}$ | 2 fish |  |  |  | $\begin{gathered} 16 \text { (1 shore } \\ \text { site) } \end{gathered}$ | 2 fish |  |  |
|  |  | $\begin{gathered} 17 \text { (NJ } \\ \text { Delaware } \\ \text { Bay) } \end{gathered}$ | 4 fish |  |  |  | 17 (NJ Delaware Bay) | 3 fish |  |  |
| 4 | DE | 16 | 4 fish | Jan. 1- Dec. 31 | 90 | DE | 17 | 4 fish | Jan. 1- Dec. 31 | 29 |
|  | MD | 16 | 4 fish | Jan. 1- Dec. 31 | 22 | MD | 16 | 4 fish | Jan. 1- Mar. 31 | 32 |
|  |  |  |  |  |  |  | 17 |  | April 1- Dec. 31 |  |
|  | PRFC | 16 | 4 fish | Jan. 1- Dec. 31 | -- | PRFC | 16 | 4 fish | Jan. 1- Dec. 31 | -- |
|  | VA | 16 | 4 fish | Jan. 1- Dec. 31 | 72 | VA | 17 | 4 fish | Jan. 1- Dec. 31 | 92 |
| 5 | NC | 15 | 6 fish | Jan. 1- Dec. 31 | 18 | NC | 15 | 4 fish | Jan. 1- Dec. 31 | 36 |

# Table 9: Procedures for establishing summer flounder recreational management measures. 

August<br>Council/Commission's Board recommend recreational harvest limit. October<br>MRIP data available for current year through wave 4.<br>November<br>Monitoring Committee meeting to develop recommendations to Council:<br>Overall \% reduction required.<br>Use of coastwide measures or state conservation equivalency.<br>*Precautionary default measures.<br>**Coastwide measures.<br>December<br>Council/Board meeting to make recommendation to NMFS<br>State Conservation Equivalency OR Coastwide measures

## State Conservation Equivalency Measures

## Late December

Commission staff summarizes and distributes state-specific and multi-state conservation equivalency guidelines to states.

Early January
Council staff submits recreational measure package to NMFS. Package includes:

- Overall \% reduction required.
- Recommendation to implement conservation equivalency and precautionary default measures (Preferred Alternative). -Coastwide measures (Non-preferred Alternative).

States submit conservation equivalency proposals to ASMFC.

## January 15

ASMFC distributes state-specific or multi-state conservation equivalency proposals to Technical Committee.

Late January
ASMFC Technical Committee meeting:
-Evaluation of proposals.
-ASMFC staff summarizes Technical Committee recommendations and distributes to Board.

Coastwide Measures
Early January
Council staff submits recreational measure package
to NMFS. Package includes:
-Overall \% reduction required.
-Coastwide measures.
February 15
NMFS publishes proposed rule for recreational measures announcing the overall \% reduction required and Coastwide measures.

April
NMFS publishes final rule announcing overall \% reduction required and Coastwide measures.
*Precautionary default measures - measures to achieve at least the \% required reduction in each state, e.g., one fish possession limit and 15.5 inch bag limit would have achieved at least a $41 \%$ reduction in landings for each state in 1999.
**Coastwide measures - measure to achieve \% reduction coastwide.

## February

Board meeting to approve/disapprove proposals and submits to NMFS within two weeks, but no later than end of February.

## March 1 (on or around)

NMFS publishes proposed rule for recreational measures announcing the overall \% reduction required, state-specific or multi-state conservation equivalency measures and precautionary default measures (as the preferred alternative), and coastwide measures as the non-preferred alternative.

March 15
During comment period, Board submits comment to inform whether conservation equivalency proposals are approved.

## April

NMFS publishes final rule announcing overall \% reduction required and one of the following scenarios: -State-specific or multi-state conservation equivalency measures with precautionary default measures, or -Coastwide measures.

Table 10: Number of summer flounder recreational fishing trips, harvest limit, landings, and fishery performance (i.e., percent overage or underage) from Maine through North Carolina, 1997 to 2017.

| Year | Number of <br> Summer <br> Flounder <br> Directed Trips <br> (millions) $^{\mathbf{a}}$ | Percentage of <br> Directed Trips <br> Relative to Total <br> Trips $^{\text {a,b }}$ | Recreational <br> Harvest Limit <br> (million lb) $^{\mathbf{c}}$ | Recreational <br> Landings <br> of Summer Flounder <br> (million lb) $^{\mathbf{d}}$ | Percentage <br> Overage (+)/ <br> Underage(-) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1 9 9 7}$ | 5.60 | $18.8 \%$ | 7.41 | 11.87 | $+60 \%$ |
| $\mathbf{1 9 9 8}$ | 5.27 | $20.5 \%$ | 7.41 | 12.48 | $+68 \%$ |
| $\mathbf{1 9 9 9}$ | 4.22 | $16.8 \%$ | 7.41 | 8.37 | $+13 \%$ |
| $\mathbf{2 0 0 0}$ | 5.80 | $16.7 \%$ | 7.41 | 16.47 | $+122 \%$ |
| $\mathbf{2 0 0 1}$ | 6.13 | $16.6 \%$ | 7.16 | 11.64 | $+63 \%$ |
| $\mathbf{2 0 0 2}$ | 4.56 | $14.8 \%$ | 9.72 | 8.01 | $-18 \%$ |
| $\mathbf{2 0 0 3}$ | 5.62 | $16.0 \%$ | 9.28 | 11.64 | $+25 \%$ |
| $\mathbf{2 0 0 4}$ | 4.86 | $14.3 \%$ | 11.21 | 11.02 | $-2 \%$ |
| $\mathbf{2 0 0 5}$ | 5.85 | $16.0 \%$ | 11.98 | 10.92 | $-9 \%$ |
| $\mathbf{2 0 0 6}$ | 4.99 | $13.6 \%$ | 9.29 | 10.51 | $+13 \%$ |
| $\mathbf{2 0 0 7}$ | 5.49 | $14.5 \%$ | 6.68 | 9.34 | $+40 \%$ |
| $\mathbf{2 0 0 8}$ | 4.93 | $13.4 \%$ | 6.21 | 8.15 | $+31 \%$ |
| $\mathbf{2 0 0 9}$ | 4.60 | $15.6 \%$ | 7.16 | 6.03 | $-16 \%$ |
| $\mathbf{2 0 1 0}$ | 4.45 | $15.1 \%$ | 8.59 | 5.11 | $-41 \%$ |
| $\mathbf{2 0 1 1}$ | 4.50 | $16.8 \%$ | 11.58 | 5.96 | $-49 \%$ |
| $\mathbf{2 0 1 2}$ | 4.24 | $16.4 \%$ | 8.59 | 6.49 | $-24 \%$ |
| $\mathbf{2 0 1 3}$ | 3.73 | $14.6 \%$ | 7.63 | 7.36 | $-4 \%$ |
| $\mathbf{2 0 1 4}$ | 4.06 | $15.6 \%$ | 7.01 | 7.39 | $+5 \%$ |
| $\mathbf{2 0 1 5}$ | 3.39 | $15.4 \%$ | 7.38 | 4.72 | $-36 \%$ |
| $\mathbf{2 0 1 6}$ | 3.61 | $14.2 \%$ | 5.42 | 6.18 | $+14 \%$ |
| $\mathbf{2 0 1 7}$ | 1.99 | $14.3 \%$ | 3.77 | $3.23($ projected) | NA |

${ }^{\text {a }}$ Estimated number of recreational fishing trips (expanded) where the primary target species was summer flounder, Maine through North Carolina. Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 23, 2017.
${ }^{\mathrm{b}}$ Source of total trips for all species combined: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 23, 2017.
${ }^{\text {c }}$ RHLs for 2003 through 2014 are adjusted for research set-aside; this program was suspended starting in 2015.
${ }^{\mathrm{d}}$ Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 23, 2017.
NA = Data not available.


[^0]:    ${ }^{1}$ http://www.mafmc.org/s/Summer_flounder_2016_Assess_Update.pdf.

[^1]:    ${ }^{2}$ http://www.mafmc.org/s/5-Summer_flounder_2017_Data_Update-t9ap.pdf

[^2]:    ${ }^{\text {a }}$ Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, May 12, 2017.

[^3]:    ${ }^{\text {a }}$ Source: Pers. Comm. with the National Marine Fisheries Service, Fisheries Statistics Division, October 23, 2017.
    ${ }^{\mathrm{b}}$ Projected using proportion by wave from 2016 MRIP data and 2017 MRIP wave 1-4 data.

