

Atlantic States Marine Fisheries Commission

Summer Flounder, Scup, and Black Sea Bass Management Board

March 24, 2022
10:30 a.m. – 12:30 p.m.
Webinar

Link to register for webinar:

<https://attendee.gotowebinar.com/register/8045885664746620685> (Webinar ID: 228-241-235)

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Draft Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary.

1. Welcome/Call to Order (*J. Davis*) 10:30 a.m.
2. Board Consent 10:30 a.m.
 - Approval of Agenda
 - Approval of Proceedings from January 2022
3. Public Comment 10:35 a.m.
4. Consider 2022 Recreational Summer Flounder & Black Sea Bass Regional Proposals for Final Approval **Final Action** 10:45 a.m.
 - Review Regional Proposals (*D. Colson Leaning*)
 - Technical Committee Recommendations (*A. Galvan*)
 - Consider Final Approval of Regional Proposals
5. Other Business/Adjourn 12:30 p.m.

MEETING OVERVIEW

Summer Flounder, Scup, and Black Sea Bass Management Board Webinar
March 24, 2022
10:30 a.m. – 12:30 p.m.
Webinar

Chair: Justin Davis (CT) Assumed Chairmanship: 12/21	Technical Committee Chair: Alexa Galvan (VA)	Law Enforcement Committee Representative: Snellbaker (MD)
Vice Chair: Vacant	Advisory Panel Chair: Vacant	Previous Board Meeting: February 8, 2022
Voting Members: NH, MA, RI, CT, NY, NJ, DE, MD, PRFC, VA, NC, NMFS, USFWS (13 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from January 2022

3. Public Comment – At the beginning of the meeting public comment will be taken on items not on the agenda. Individuals that wish to speak at this time must sign-in at the beginning of the meeting. For agenda items that have already gone out for public hearing and/or have had a public comment period that has closed, the Board Chair may determine that additional public comment will not provide additional information. In this circumstance the Chair will not allow additional public comment on an issue. For agenda items that the public has not had a chance to provide input, the Board Chair may allow limited opportunity for comment. The Board Chair has the discretion to limit the number of speakers and/or the length of each comment.

4. Consider 2022 Recreational Summer Flounder & Black Sea Bass Regional Proposals for Final Approval (10:45-12:30 p.m.) Final Action

Background

- The Summer Flounder, Scup, and Black Sea Bass Management Board (Board) and the Mid-Atlantic Fishery Management Council (Council) jointly approved a 20.7% reduction in coastwide black sea bass harvest and a 16.5% liberalization in coastwide summer flounder harvest. The Board and Council opted to proceed with the regional conservation equivalency processes as outlined in Addendum XXXII for both species, as opposed to implementing uniform coastwide measures.
- In January, the Board approved the Technical Committee (TC) recommended methodology to assist regions with developing recreational measure proposals.
- Following this meeting, regions began collecting stakeholder input on preferred measures to develop options for incorporation in regional proposals. Regions submitted their proposals on February 25th (**Briefing Materials**).
- The TC met on March 2nd to review the technical merits of the proposals and provide recommendations on the proposals for the Board's consideration (**Briefing Materials**).

Presentations

- Recreational Summer Flounder & Black Sea Bass Regional Proposals by D. Colson Leaning
- TC Recommendations on Regional Proposals by A. Galvan

Board Actions for Consideration

- Approve 2022 Recreational Summer Flounder & Black Sea Bass Regional Proposals

5. Other Business/Adjourn

Summer Flounder, Scup, & Black Sea Bass 2022 TC Tasks

Activity Level: High

Committee Overlap Score: High (Multi-species committees for this Board)

Committee Task List

- July 2022: Review and develop recommendations on 2023 specifications (coastwide quota and RHLs) for summer flounder, scup, and black sea bass.
- November 2022: Develop recommendations on 2023 recreational measures.

TC Members: Alexa Galvan (VA, Chair), Julia Beaty (MAFMC), Peter Clarke (NJ), Dustin Colson Leaning (ASMFC), Karson Coutre (MAFMC), Kiersten Curti (NOAA), Kiley Dancy (MAFMC), Lorena de la Garza (NC), Steve Doctor (MD), Emily Keiley (NOAA), Jeff Kipp (ASMFC), Rachel Sysak (NY), Corinne Truesdale (RI), Sam Truesdell (MA), Mark Terceiro (NOAA), Greg Wojcik (CT), Richard Wong (DE), Tony Wood (NOAA).

**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
SUMMER FLOUNDER, SCUP, AND BLACK SEA BASS MANAGEMENT BOARD**

**Webinar
January 25, 2022**

These minutes are draft and subject to approval by the Summer Flounder Scup, and Black Sea Bass Management Board.
The Board will review the minutes during its next meeting.

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1. **Approval of Agenda** by Consent (Page 1).
2. **Approval of Proceedings of August 4, 2021** by Consent (Page 1).
3. **Move to rescind the December 2021 black sea bass recreational management motion and move to adopt conservation equivalency for 2022 black sea bass recreational management, with a reduction in harvest specified to achieve the coastwide 2022 RHL. A 28 percent reduction will be required unless additional analyses conducted by the Technical Committee examining the MRIP data, including an outlier analysis and incorporation of the updated 2021 data as presented today, result in a modified percentage. Non-preferred coastwide measures are: 14-inch minimum size, 5 fish possession limit, and open season of May 15-September 21. Precautionary default measures are: 16-inch minimum size, 3 fish possession limit, and open season of June 24-December 31. If the percent reduction is changed the precautionary default and coastwide measures will be adjusted to be consistent with the required adjustment** (Page 12). Motion by Shanna Madsen; second by Nichola Meserve. Motion carried (Page 16).
4. **Move to adjourn** by consent (Page 19).

ATTENDANCE

Board Members

Cheri Patterson, NH (AA)	Tom Fote, NJ (GA)
Ritchie White, NH (GA)	John Clark, DE (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Roy Miller, DE (GA)
Nichola Meserve, MA, proxy for D. McKiernan (AA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
Raymond Kane, MA (GA)	Mike Luisi, MD, Administrative proxy
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	Russell Dize, MD (GA)
Jason McNamee, RI (AA)	David Sikorski, MD, proxy for Del. Stein (LA)
David Borden, RI (GA)	Pat Geer, VA, Administrative proxy
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Bryan Plulmlee, VA (GA)
Justin Davis, CT (AA)	Shanna Madsen, VA, proxy for Sen. Mason (LA)
Bill Hyatt, CT (GA)	Chris Batsavage, NC, proxy for K. Rawls (AA)
John Maniscalco, NY, proxy for J. Gilmore (AA)	Jerry Mannen, NC (GA)
Emerson Hasbrouck, NY (GA)	Marty Gary, PRFC
John McMurray, NY, proxy for Sen. Kaminsky (LA)	Mike Pentony, NMFS
Joe Cimino, NJ (AA)	Mike Millard, USFWS

(AA = Administrative Appointee; GA = Governor Appointee; LA = Legislative Appointee)

Ex-Officio Members

Jason Snellbaker, Law Enforcement Representative	Alexa Galvan, Technical Committee Chair
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Staff

Bob Beal	James Boyle	Savannah Lewis
Toni Kerns	Lisa Havel	Kirby Rootes-Murdy
Laura Leach	Chris Jacobs	Sarah Murphy
Lisa Carty	Jeff Kipp	Mike Rinaldi
Maya Drzewicki	Heather Konell	Caitlin Starks
Tina Berger	Dustin Colson Leaning	Anna-Mai Svajdlenka
Kristen Anstead	Adam Lee	Deke Tompkins

Guests

Karen Abrams, NOAA	Alan Bianchi, NC DENR	Carson Coutre, MAFMC
John Almeida, NOAA	Kurt Blanchard, RI DEM	Greg Cudnik
Max Appelman, NOAA	Francis Blount	Jessica Daher, NJ DEP
Jeff Amorello	Jeff Brust, NJ DEP	Laura Deighan, NOAA
Max Appelman, NOAA	Tony Butch	Jason Didden, MAFMC
Pat Augustine, Coram, NY	Peter Clarke, NJ DEP	Greg DiDomenico
Jason Avila, Avila Global	Todd Collins	Anthony DiLernia
Julia Beaty, MAFMC	Heather Corbett, NJ DEP	Steve Doctor, MD DNR
Rick Bellavance	Nichole Lengyel Costa, RI DEM	Michelle Duval, MAFMC

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Guests (continued)

G. Warren Elliott, PA (LA)
Skip Feller
Marianne Ferguson, NOAA
Cynthia Ferrio, NOAA
Jim Gilmore, NY (AA)
Edward Gladue
Brendon Harrison, NJ DEP
Jay Hermsen, NOAA
Helen Takade-Heumacher, EDF
Jesse Hornstein, NYS DEC
Jeff Kaelin, Lund's Fisheries
Emily Keiley, NMFS
Moira Kelley, NOAA
Adam Kenyon, VMRC
Rob LaFrance, Quinnipiac Univ
Chip Lynch, NOAA
Dan McKiernan, MA (AA)
Conor McManus, RI DEM
Steve Meyers
Chris Moore, MAFMC
Brandon Muffley, MAFMC
Allison Murphy, NOAA
Brian Neilan, NJ DFW

Steven Ellis, NOAA
Anthony Friedrich, SGA
Tom Fuda
John Gans, TRCP
Adam Nowalsky, Pt Republic, NJ
Bill Pappas, Virginia Beach, VA
Michael Pirri
Michael Plaia
Nicholas Popoff
Will Poston, SGA
Jill Ramsey, VMRC
Kathy Rawls, NC (AA)
James Riley
Paul Risi, City Univ. of NY
Tyler Rowe
Mary Sabo, NOAA
Tara Scott, NOAA
Bill Shillingford
Philip Simon
Somers Smott, VMRC
Rachel Sysak, NYS DEC
Mark Terceiro, NOAA
Scott Thomas

Lynn Fegley, MD DNR
Lorena de la Garza, NC DENR
Matt Gates, CT DEEP
Lewis Gillingham, VMRC
Wes Townsend, Dogsboro, DE
Corinne Truesdale, RI DEM
Richard Vaughan
Douglas Vaughan
S. Curatolo-Wagemann, Cornell
Mike Waine, ASA
Craig Weedon, MD DNR
John Whiteside
Kate Wilke, TNC
Logan Williams
Charles Witek
Steven Witthuhn
Greg Wojcik, CT DEEP
Spud Woodward, GA (GA)
Chris Wright, NOAA
Harvey Yenkinson
Gerry Zagorski
Erik Zlokovitz, MD DNR
Renee Zobel, NH FGD

The Summer Flounder, Scup, and Black Sea Bass Management Board of the Atlantic States Marine Fisheries Commission, convened via webinar; Tuesday, January 25, 2022, and was called to order at 2:45 p.m. by Chair Justin Davis.

CALL TO ORDER

CHAIR JUSTIN DAVIS: Good afternoon, everybody. I'm going to call to order this meeting of the Summer Flounder, Scup, and Black Sea Bass Management Board. My name is Justin Davis; I'm the Administrative Commissioner from Connecticut, and I'm currently serving as Board Chair.

APPROVAL OF AGENDA

CHAIR DAVIS: First up on our agenda this afternoon is Approval of the Agenda. Do we have any suggested additions to the agenda? Toni, I'll ask if you could track the hands.

MS. TONI KERNS: No hands, I was just giving it one second, no hands are raised.

CHAIR DAVIS: Great, we'll consider the agenda approved by consent.

APPROVAL OF PROCEEDINGS

CHAIR DAVIS: And moving on, the Proceedings from this Board's August, 2021 meeting were provided in the meeting materials. Are there any additions or corrections to the proceedings from August, 2021?

MS. KERNS: No hands are raised.

CHAIR DAVIS: Great, we'll consider the proceedings from August, 2021 approved by consent.

PUBLIC COMMENT

CHAIR DAVIS: Next up on the agenda is Public Comment. Is there any member of the public in virtual attendance who would like to make a comment on an item that is not on the agenda this afternoon? If you're on the phone and can't raise your hand on the webinar, just go ahead and speak

out, and we'll get your name down for public comment.

MS. KERNS: I don't see any hands raised.

REVIEW TECHNICAL COMMITTEE RECOMMENDATIONS ON METHODOLOGY FOR ADJUSTING 2022 SUMMER FLOUNDER AND BLACK SEA BASS RECREATIONAL MEASURES

CHAIR DAVIS: Okay, moving right along here, great. Okay next up we're going to have a presentation pertaining to 2022 Recreational Specifications. As a review of recent history, at the joint meeting of this Board and the Mid-Atlantic Council last month, the two bodies received information suggesting that a harvest liberalization was possible for summer flounder in 2022, and that conversely a comparison of the 2022 RHL and projected 2021 harvest suggested a harvest reduction was necessary for black sea bass.

After deliberating, the two bodies passed like motions, choosing to pursue conservation equivalency for those two species, rather than implement a consistent set of coastwide measures, and to adopt measures that would achieve a 16.5 percent liberalization for summer flounder, and a 28 percent harvest reduction for black sea bass. By virtue of taking that action, the Board and Council initiated the Addendum XXXII process. Addendum XXXII was passed in 2018, and lays out a process by which states and regions will ultimately arrive at measures to achieve reductions or liberalizations. The step we're at in the process now is that the Technical Committee has been working on developing a methodology that states and regions can use to set measures.

Today we're going to hear a presentation on that methodology, and we'll be asking the Board to approve that. We're also going to receive some information about Technical Committee analyses that suggest we could possibly reconsider the percent reduction necessary for black sea bass. With that, I'll go ahead and hand it over to Dustin.

MR. DUSTIN COLSON LEANING: Thank you, Mr. Chair for the overview. I'll maybe make my recap of

the background information a little bit shorter, but maybe some of you out there are visual learners, so perhaps having it up on the screen on a slide will be helpful. Here is an overview of the presentation.

Like I said, I'll be giving a background of the pertinent information. I'll cover a quick timeline according to the Addendum XXXII process that the Chair mentioned. Then I'll cover the TC recommendations on the methodology for adjusting 2022 recreational measures for summer flounder, and then following that I'll give an update on TC progress on developing the standardized reduction tables for black sea bass.

Then Jeff Brust will be helping me by presenting on the Thompson Tau outlier analysis that the TC has been conducting on MRIP harvest data for black sea bass. Then there are a number of issues here for Board consideration, namely approving the methodologies for developing proposals, and then discussing the outlier analysis, and the various consequences of which approach is taken, and how it relates to the Council as well.

As Justin said, back in December at the joint meeting, the Board and Council adopted CE, or conservation equivalency for 2022 summer flounder and black sea bass recreational management. For summer flounder, 2018 through 2021, 2021 data was projected. Those four years of data were used to compare to the 2022 recreational harvest limit, which demonstrated that there was an ability to liberalize by 33 percent, to meet but not exceed the RHL.

The Board did take a more conservative approach jointly with the Council. They agreed that there were data uncertainties, and there were some concerns about the stock status, and the fact that it wasn't yet at the target. They went with a more conservative approach at 60.5 percent liberalization.

Then for black sea bass, also using 2018 through 2021 harvest data compared to the 2022 RHL. This indicated that a 28 percent reduction in regional measures was needed to meet but not exceed the

RHL. Separately, I'll mention it here, I don't have many slides prepared on scup. The focus today will be black sea bass and summer flounder.

But the Board and the Council did jointly approve a one-inch increase in the scup recreational minimum size for 2022, and this is expected to achieve a 33 percent reduction in harvest. Here is a timeline. Like I said, I just covered what happened in December, and then following that meeting in January, the TC met twice to recommend guidelines for the states to use in developing their regional proposals. Then throughout this time and into February, states will be going through their own public comment process, involving stakeholders, and collaborating within the regions to develop the regional proposals for measures.

Then here we are today, the January Commission meeting, where the Board will hopefully approve a methodology for the states to use in developing the regional proposals. Then a tentative deadline of February 21, has been set for regions to submit their proposals. Then late February, the TC would meet again to review those proposals, look at the technical merit of the proposals, and ensure that the liberalizations or the reductions are expected to be achieved within each region.

Then in early March, staff would help set up a summer flounder, scup, and black sea bass board only meeting. This would likely be via webinar, where the Board would review the proposals, the TC recommendations, and they would hopefully establish a final set of measures for 2022. Then following on this, Commission staff sends a letter to the Regional Administrator, certifying that the Board approved measures in combination, will achieve but not exceed the RHL.

As Justin alluded to, we're very much following the Addendum XXXII process. This pertains to both summer flounder and black sea bass. I'll start with summer flounder. The Addendum outlines that there are six regions, Massachusetts, Rhode Island, Connecticut through New York, New Jersey, Delaware through Virginia, and North Carolina, and that Rec measures within all states within a region

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should consist of the same size limits, bag limits and seasons.

This is unique to summer flounder. Then also, measures should be adjusted unidirectionally, so if there is a liberalization it should be equivalent across regions in one direction, and if there is a reduction vice versa. In addition to states within a region being consistent with their measures, the Addendum also suggests that states should aim for minimal discrepancy in measures between bordering states.

This kind of gets at the enforcement issue, and hoping to reduce confusion on state lines. In addition to those criteria that have been outlined within the Addendum itself, the TC did meet to make additional recommendations when putting forward a memo that was supplied for supplemental materials.

The TC said that states and regions should consider adjustments to bag, minimum or maximum size, as is now allowed, season as well as gear modifications. The TC specified that liberalization should be calculated in pounds, and that recreational data should be pooled across 2018 through 2021. But 2021 data should be included only if available, or if it makes sense for the particular analysis, considering that we're still waiting on Wave 6 data.

Measures may be split by mode, but it is very important here that the pooling method still be applied, especially if you split recreational harvest estimates down to the state, wave and mode level. You might be dealing with PSEs that are quite high, so the pooling approach hopefully will mitigate some of that. The TC also specified that noncompliant harvest data should still be assumed to occur under the new regulations. For example, if someone has landed something way above the bag limit, and it showed up in an intercept, that level of noncompliance that has already been identified in previous years, should be assumed to be carrying forward in the future year, 2022.

The TC also recommends calculating liberalization sequentially, by measure change, to result in the cumulative expected liberalization. If that is not part of the proposal's analysis, and liberalizations are actually calculated independently, the following interaction equation should be used. Whereby the total liberalization equals X plus Y, so a change in measure X, and change in measure Y, plus the product of those percent changes.

Said differently, a lower minimum size increases harvest by 20 percent, and a higher bag increases harvest by 15 percent. We would expect the final increase in harvest to be 38 percent. Please note that the memo that was provided for supplemental materials had a typo in this numerical example for the interaction equation.

The memo has since been updated to reflect that the combination of a 20 and a 15 percent liberalization would result in a cumulative 38 percent increase in harvest, and the TC has been provided with this updated correction. Now, moving on to Addendum XXXII as it applies to black sea bass. There are three regions for black sea bass, Massachusetts through New York being the northern region.

Then we have New Jersey, and then the southern region, Delaware through North Carolina. Addendum XXXII specifies that the TC is tasked with providing a recommendation on how the coastwide harvest is distributed among the regions, based on factors including resource distribution and expected availability, angler effort, prior year fishery performance, among other considerations.

The Board then considers the recommendation and determines how the reduction is distributed. Also outlined in the Addendum, states are to develop measures in a manner that ensures each state takes an equitable reduction. The Board should reduce interregional differences between measures when possible, taking into account regional differences in availability.

In terms of the regional distribution of the reduction. The TC recommends restrictions to

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recreational regulations for black sea bass be applied equally across those regions. Then within regions, as already outlined in the Addendum, reductions should be considered equally. It was pretty much determined that each state should do their fair share and equal part, at least that is the TC's recommendation. The TC also recommends standardizing the reduction analysis to support coordination between the states within regions.

This hopefully will just expedite the process, and make it a little bit easier. In response to the TC's own recommendation, they have begun collaborating. A subset of the TC is in the process of developing tables to standardize the methodology for calculating reduction. The final tables will apply the following criteria. Many of these criteria have already kind of been applied to summer flounder, but the reductions should be calculated in pounds. The analysis uses recreational data from 2018 through 2020, 2021 at this point is potentially being used to inform the length frequency distribution. Then like with the case for summer flounder, the black sea bass reduction tables would assume noncompliance would remain in changes to new regulations. Then all the reductions in these black sea bass reduction tables are calculated sequentially. In effect this would preclude the need for the interaction equation that I presented on earlier.

Each state will have its own standardized reduction table within an Excel document. This table would be shared and distributed amongst TC members, and the table calculates a daily harvest rate, the percent of harvest that occurs within each half-inch bin by wave, and the percent of harvest that occurs under each bag limit by wave.

In this way, TC members will be able to adjust bag, size, and season by wave, to determine the total projected reduction. This methodology has been used before, for summer flounder, and it's a lot of work up front to develop these tables. But on the back end, in terms of adjusting measures, seeing how they interact with each other within regions, it really simplifies the process for being able to put

forward the proposals, and see cumulatively what the reductions will look like.

As I mentioned earlier, the TC did look into black sea bass data a little bit more through their reduction table analysis, and just generally looking at MRIP harvest data. Jeff Brust will be giving a presentation on that work, and I would like to say a big thanks to him as well, for working with Peter Clark on this. It's definitely been a lot of work in a short amount of time. I think we owe all of our thanks, and take it away, Jeff. I'm happy to click through the slides. Just let me know when I should switch to the new one.

MR. JEFFREY BRUST: Good afternoon, everyone. Just for those who don't know me, my name is Jeff Brust with New Jersey Marine Fisheries Administration. Yes, so I'm not currently a member of the Technical Committee, but staff asked me to come help with this analysis, so that the TC members could focus on the work that they had in front of them.

A little bit of background. You've heard this a couple of times already today. Back in December the Board and Council had a joint motion to reduce recreational black sea bass harvest by 28 percent, to achieve the 2022 recreational harvest limit. As Dustin just pointed out, the TC was working to develop standardized methods to evaluate the recreational management options.

While they were doing that, two things happened. One, we received updated 2021 harvest projections from MRIP. As the TC was looking at the data they noticed, no surprise, that there were some harvest estimates that seemed a little bit out of the ordinary, or out of context with some of the other estimates from the same state, year, wave and mode. Both of these things that cropped up during their analysis could have an effect on the magnitude of the required harvest reduction that we need to take. The first one is easy. We had new harvest projections.

During the December meeting the staff memo only had data through Waves 1 through 4 in 2021, so we

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made projections about what Wave 5 and Wave 6 would look like. Since the December meeting we have received Wave 5 preliminary estimates, and with that we can include those. We get rid of the Wave 5 projection and replace it with the actual data, and now we only have to re-estimate Wave 6 using Waves 1 through 5. You can see in the plot at the bottom, the blue bars are what was presented at the December meeting, and the orange bars are with the updated MRIP harvest estimates. I do want to point out, you can see in the table on the right. You'll remember that the staff memo suggested that there was a 28 percent reduction needed. But staff calculated that reduction two different ways. One said it was a 27 percent reduction, one said it was a 28 percent reduction.

For this I'm showing you the 27, because the way that that was calculated is consistent with the way that we're looking at the data for the analysis we're looking at. Bottom line is the reduction, the new harvest estimates for 2021 have come down a little bit. It's looking like we won't need the full 28 percent reduction, 24.4 might be a bit low because of the methodology that was used. But you can see that it has come down from the previous estimate. The next thing that we noticed, and we've all seen plots like this before, you know it's MRIP data, it's variable.

There is uncertainty instituted in the results through sample size, angler behavior, stock biomass, things like that. But these are just some examples of the anomalous data that we saw. The two top figures or what look like anomalously low harvest estimates. We were looking at the data by state, year, wave and mode.

The top two, one is Massachusetts and one is New Jersey. You can see that those two lowest values are very different from the other years. Then the bottom two figures are what look like anomalously high estimates of harvest for those cells. Just looking at the data you can't tell, are these real, are they true outliers, or are they just expected variability.

Some of the things that we were considering when looking at them, for black sea bass it's unusual that we have four years in a row where the regulations remained relatively unchanged. That works in our favor. But because we have regulations that were similar, we would expect the harvest to be very similar as well.

Some things, as I mentioned before, some things that might affect the estimates would be stock abundance or availability, angler behavior. We did have a pandemic, so that might affect how folks are fishing, which might affect the harvest estimates. In my mind what's most likely here, particularly since the outliers are happening at the cell level. You know stock abundance might change, but it probably wouldn't just change for two months in Virginia in the charterboat fishery.

It's more likely to be seen across multiple waves, multiple modes. The same with angler behavior. I would expect to see changes to harvest because of changed angler behavior across wider times and spaces. In my mind the most likely culprit here is small sample size, leading to anomalous values in the harvest assessment. Again, just looking at the data. We can't confirm that it's an outlier, so what we wanted to do was use a standardized method, something quantitative, something statistical, to help us identify those outliers.

Folks who have been on the Board for a few years will remember that back in 2018 we did a similar analysis for New York and New Jersey party and charterboat estimates. There were a couple of anomalous values that the Technical Committee used a method called the modified Thompsons Tau analysis to identify those, and they smoothed them using a method called winsorization. Just very briefly on the Thompsons Tau analysis. It is a statistical method; it's based on the student's t-distribution. One benefit is it identifies both high and low outlier values, and it has some flexibility that you can set what probability of detection you want to look for, for an outlier.

Maybe you want to chop off the top and bottom 5 percent of 10 percent, or maybe just 1 percent on

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each end. You do have some flexibility in what you define as an outlier. The Thompson's Tau is helpful, because it helps us identify outliers, but that's all it does. It just identifies the outliers. Then there is the question of what do you do with these outliers?

Depending on the analysis you might just decide to keep them. Hey, it's good to know we have outliers. But in this instance, we wanted to try and smooth them, to help get better estimates of what our harvest would be. In some cases, you might remove the outlier entirely. We couldn't do that here. We know there was harvest. We can't just disregard entirely an estimate of harvest for a certain cell.

The Technical Committee has been looking into ways to, once we've identified these outliers, replace them with something that seems more realistic, in terms of what we've seen in the other years, given those same regulations. Again though, there are lots of different options on how to do this. What we're looking for is an objective method, a repeatable method, and something that can be applied to all of the different cells equitably, so an objective method to determine how to replace those values.

We've looked at, I don't know, I've probably looked at three dozen different ways of how to replace those values. I will say that we're narrowing in on it. But we do not have a final answer on what we think that the best method should be. This is still very much a work in progress. A couple of things that need to happen is we need more eyes on the analysis, to make sure I've done everything correctly.

We need to come up with the standards for how we're going to replace them, and even what probability level we want to use to identify those values. Real quick, jumping into more specifics of how we did this analysis. We used MRIP data from 2018 through 2021. Again, Wave 6 of 2021 was projected information.

We did the analysis at the state, year, wave and mode level. This is consistent with how it was done

in 2017, and also the one benefit of doing it this way is once we identify those outliers and we replace them with what we think is a more reasonable estimate. Those new values can be used in the state analyses to develop management options.

It's not just hey, we've identified outliers, we're changing the harvest numbers, and then we're going to use the original raw data to do our analyses. No, we're taking these new results and plugging them into the analyses, so that they're carrying forward into what our regulations should be.

If you think back to the normal distribution curve that I showed that had the orange tails. We've looked at outliers at the 80, 90, and 95 percent probability, so if we're at the 80 percent probability we truncated the 10 percent on either end of that distribution. At the 90th percentile we truncated 5 percent off each side, and at the 95th it was 2.5 percent on each side. We've looked at three different probabilities for identifying outliers. For replacement, I think I've got 6 or 8 different methods that we were looking at.

Probability distributions that include or exclude the outlier value. If we're looking to replace it, do we, for example, use a median value that includes that outlier, or do we just use a median value that does not include that outlier, just the three values that we think are realistic? Then we also looked at a method that uses the next closest value.

If you have a high value, we don't believe that one, we use the next highest value. We did that with scaling or without scaling, so that next highest value as it is, or maybe that next highest value plus 50 percent, because we don't want to cheat it down too far, but we know it's not as high as what the estimate is actually saying it is.

Again, we've looked at probably 24 different ways of doing this. Real quick some preliminary results. These tables show how many outliers were observed. The top table is by year, the middle table is how many outliers by wave, and the bottom is

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how many by mode. You can see thankfully, most of the values that we see are good, they are not outliers.

What you see is actually, there are in most cases more outliers that were on the low end, than on the high end. For here it looks like 2021 had the most outliers. By wave, Wave 3 had the most. Several had more than a dozen though, and by mode it's pretty even across all of them. They are all in the, well, party, charter and private all had 15 or so outliers.

Again, mostly on the low end. More on the low end than on the high end. Go back to that first slide that I showed, where we visually ID'd what we thought might be outliers. These are the same four graphs with some of the replacement values that we're considering. The blue lines are the original values, the orange line is the highest replacement value from the analysis that we've done so far.

The gray bar is the lowest replacement value for each of these plots. You can see that when you have a high outlier, the highest estimate doesn't change it too much. The low end does change it a lot. For the low outliers, the lowest value doesn't change it very much from the original. The high value changes it much closer to what the other three years are looking like.

This top graph, it's showing the range of estimates. The blue bar is the original harvest estimate. The other colored bars are a handful of the different options that we're looking at. What I wanted to point out here actually, is that for 2018 you can see that most of the replacement values are higher, so more than likely our 2018 estimate of harvest is going to increase from what MRIP is telling us it is.

For 2020, most of the values are lower than what the MRIP estimate is telling us, and then overall, the average harvest across all four years tends to come down from about 8.8 million pounds, 8 million pounds, am I looking at that right? Yes, the original value was close to 8.9, almost 9 million pounds. The replacement values range anywhere from 8.8 million down to about 8.59. Somewhere in that

range is probably where the average harvest is going to end up. Then the bottom graph there just shows the range of reductions that we might need, depending on the final harvest estimate. Once we've replaced all the outliers, we are probably looking at a harvest reduction required somewhere between about 17.5, 18 percent maybe and up to 24.6.

The 24.6 is the reduction that we would need if we didn't replace any. Remember the 2021 harvest estimates have been updated, and that table alone showed that we only need about a 24.5, 25 percent reduction. All the other points to the right of that one value are looking at different ways of replacing the outliers. It ranges from about 23.5 down to about 17 or 18 percent, something like that. I believe that's it, I'm happy to take any questions.

MR. COLSON LEANING: Yes, thanks, Jeff for the presentation. Before we get into questions, I kind of just wanted to outline a few items that are ready for Board consideration. I know we've given a lot of information here, but I hoped this might help frame the discussion. First, I presented on the criteria that the TC has recommended for use in the development of regional proposals for black sea bass and summer flounder recreational measures.

The Board could approve those criteria today, either through a consensus or through a motion, if consensus is not reached. Then second, Jeff has presented on the TC's ongoing analysis of black sea bass MRIP estimates. In light of this analysis, the Board could vote to rescind the December 2021 black sea bass recreational management motion.

This would allow the TC to further discuss the Thompson Tau outlier analysis, and make a recommendation for how the outlier values are replaced, which in turn would result in a recommendation for a new reduction percentage target for black sea bass. If the Board did go this route, I have just outlined in red here some additional steps that would kind of enter into that timeline.

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The Board, again, has the option to rescind the December motion. The Board has the option to task the TC with reviewing this analysis, and recommending a new percentage reduction for black sea bass. If that is the route the Board takes, then the Council would have to consider rescinding the December motion at their February 8 Council meeting, because this is a joint FMP.

Then if all of that continues as outlined, the Board would then consider the TC analysis, and approve a new reduction percentage target for black sea bass. This could be resolved via e-mail vote, a webinar meeting, or the Board could just defer to whatever the TC recommends. Yes, with that I'll turn it over to you, Mr. Chair, for directing any questions about what's been presented. Then hopefully we can get into a comprehensive discussion.

CHAIR DAVIS: Great, thanks very much, Dustin, and thank you, Dustin and Jeff for those presentations, and thanks to Commission staff and all the members of the Technical Committee who have been working really hard over the last month since the last meeting on all of this analysis. I certainly appreciate all the hard work there. At this time, I'll open it up to the Board for any questions about either of the presentations that were just made, or about the information Dustin presented on potential path forward from this point. Toni, do we have any hands?

MS. KERNS: I will give you a queue. I have Shanna Madsen, Jason McNamee, and Nichola Meserve.

CHAIR DAVIS: Okay, go ahead, Shanna.

MS. SHANNA MADSEN: Thank you, Jeff, for this presentation. I think it was really comprehensive and it answered a lot of questions that I had as I was watching the TC deliberations. I did have a quick question regarding the last, if we can go back to the last slide you showed before this one.

MR. COLSON LEANING: You mean the timeline slide?

MS. MADSEN: No, one before that. Sorry, Dustin, the one with the graphs, Number 22.

MR. COLSON LEANING: Okay yes, here we go.

MS. MADSEN: Perfect, thank you. Jeff, the question I had was, so it sounds like the TC needs some time to deliberate on setting the probability level of detection, as well as the replacement analysis. My question was regarding these points along this reduction required chart. Are those a range based on the probability level of detection? Are they based on what replacement method you might end up using? I'm just wondering what the different variables are here that are going into generating these levels of reduction.

MR. BRUST: That is a good question, Shanna, thank you. There is really no rhyme or reason to this figure, other than I sorted them high to low. You can see, I think what's maybe important, and I should have pointed it out before, is that this looks at all three probability levels, so the 0.8, the 0.9, and 0.95.

You can see that a lot of the different values are falling out right around the 21, 21.5 percent range. There is a lot of overlap, there is a lot of consistency in the results, depending on even though we're looking at different methodologies. But no, this doesn't necessarily show all the ones on the left are to 0.95, and all the ones on the right are the 0.8. I can't say that equivocally, I just sorted it high to low.

MS. MADSEN: Great, thanks, Jeff. That helps me kind of figure out where the consistency might be there. I appreciate it.

CHAIR DAVIS: Okay, next up I have Jason McNamee.

DR. JASON McNAMEE: Thanks, Jeff, really great work. It brings me back, and it's great to hear your voice. It's funny, Shanna asked the question that I was going to ask, but I still am confused, so hoping you can help me out. Staying on this slide. My question is, do each of these dots represent kind of

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a different. I understand what's changing, with regard to the chosen probabilities. But are there different methods incorporated in there as well, so does each dot represent a unique method, along with a choice of probability? Is that what these are?

MR. BRUST: Yes, Jay, good question. As I said before, this covers all three probabilities of identification for the outliers. Then yes, so each dot would then be a different replacement method applied to each of those three identification probabilities. Just to give you an idea, some of the options that we looked at, we're replacing it with the 95th percentile of all four values for that cell, or just the 95th percentile of the three "acceptable" values from that cell.

Another one would be replacing them with the median, or replacing it with the median scaled up or down, depending if it's a high or low value. Yes, each dot is a combination of an identification probability and a replacement method. The only one that is not is the one all the way to the left. Like I said, it incorporates only the revised harvest estimate from 2021.

DR. McNAMEE: Go you, got you, thank you so much, Jeff, that was perfect. I appreciate it.

CHAIR DAVIS: Okay, next up, Nichola Meserve.

MS. NICHOLA MESERVE: Thank you, Mr. Chair and Dustin and Jeff for your presentations and the Technical Committee digging into this evaluation with a short turnaround. Could we just go to the timeline slide, for a quick question, I think? I wanted to get confirmation that we expect that the TC will be recommending that new percent reduction by the time of the Council meeting on February 8, is that correct? Is that the expectation?

MR. COLSON LEANING: Yes, good question, Nichola. I've been polling the TC to see when they would be able to meet. It's looking like early next week would be the TC's preferred date. Assuming that we could get this settled in one meeting, I would expect that we would have a new TC

recommendation prior to the Council meeting on February 8.

MS. MESERVE: Okay, thank you.

MS. KERNS: Nichola, I just wanted to, I think this timeline is a little off in the sense that we need to have a recommendation prior to the Council meeting. I think if the Board does rescind the motion, then we would need to have a discussion about how to get that new recommended value.

MS. MESERVE: Formally adopted.

MS. KERNS: Yes, exactly.

MS. MESERVE: I had a second question, Mr. Chair, if you don't mind, regarding the standard methodology for state proposals. I noticed that the Technical Committee didn't make a specific recommendation about PSEs associated with the data that's going to be used, although, Dustin, you did bring it up in your presentation. Absent of the TC setting some standard, I was going to ask at least that the state proposals be required to present PSEs associated with the data, particularly when it's broken down at a mode level, for example. Is that part of the format, Dustin?

MR. COLSON LEANING: Yes, I'm just double-checking the memo itself, because in my mind I had thought that was included. But you know what, it may not have gotten into the final version. But I think that's definitely worth including. Yes. There is some discussion about pooling data and high PSE values, but we certainly can amend the memo that was sent out through supplemental materials, and in the requirements for regions submitting the proposals, we can say that it is a requirement to include the PSE values.

MS. MESERVE: Yes, thank you. I think that would be informative for the Board when they eventually review the proposals.

CHAIR DAVIS: Okay, next up in the queue I have Emerson Hasbrouck.

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MR. EMERSON C. HASBROUCK: Thank you, Dustin and Jeff, for your presentations. I have two questions for Jeff. Jeff, in your presentation you said that there are probably 6 to 8 different methods that determine what the best replacement value is going to be for these outliers. I'm wondering, how is it going to be determined what the best replacement value is? That's my first question.

MR. BRUST: That's a good question, Emerson, thank you. I can't tell you what the TC discussions are going to revolve around, but you know certain things like maybe PSEs or sample size. There might be some that we've, even though it's identified as an outlier, maybe we don't want to replace it. For example, we have three years with a 0 and then a positive year. Maybe we don't want to replace that one.

They're going to have to fine-tune this analysis, and consider the different caveats of the different assumptions that I made during this analysis. Perhaps a median is too much of a change, and we want to replace it with some other percentile from the observed distribution. If I had an answer, if I knew the best way to do it, I think this analysis would be done. But it certainly needs the whole committee's eyes and brains working on this one.

MR. HASBROUCK: Okay, thank you, so that's going to be fleshed out in the next TC meeting, and I guess by consensus of the TC. My second question was, there are probably similar outliers for fluke and scup, and I'm wondering if those species were also looked at for outliers like this.

MR. BRUST: I'll take a shot at that, and then I'll pass it over to staff, see if they want to add to this. This is something that I spoke to Toni about. For the sake of time, we focused on black sea bass, because well, we needed to start somewhere, and also because fluke is a liberalization this year. For one thing, it seems like when we do this outlier analysis, the overall trend is that the harvest estimates come down. Since fluke is already currently under the RHL, and we're looking at a liberalization.

It seemed like it was less necessary to reduce that harvest. As far as scup, I'm not too familiar with that. Toni was mentioning that perhaps someone will look at it, but it was not something that I was asked to do. That is my initial response, I don't know, kick it over to Dustin or Toni, to see if they have any additional thoughts.

MR. COLSON LEANING: Yes, Jeff, I think that was a good response. Perhaps even further to support your statements about summer flounder, the Board had the ability to go with a 33 percent liberalization, but ended up taking a more conservative approach, and went with a 16.5 percent liberalization.

It's unlikely that an outlier analysis would result in something that would ultimately change the Board's decision, considering that that more conservative approach has already been taken. Then for scup, it was kind of a timing thing at this point, why we were only able to do it for black sea bass. It can definitely be done for scup, and if it's at the Board's discretion or if they would like to task the TC with developing a similar outlier analysis for scup. That can probably be done prior to the Council's February 8th meeting.

CHAIR DAVIS: Okay, are you good, Emerson?

MR. HASBROUCK: Yes, I am, thank you.

CHAIR DAVIS: Okay, next up I have John Maniscalco.

MR. JOHN MANISCALCO: First, I would like to thank Jeff Brust and Pete Clark and any other state or Commission staff that worked on this. I think it's great. During my tenure we started looking at Thompson Tau, but we never kind of looked at all the estimates holistically, and addressed both highs and lows. This is a really great step forward. I was wondering how easy it would be to replicate for all the species, and it looks like you mostly answered that question. I would certainly support this being done for scup, if the TC isn't already overtasked.

CHAIR DAVIS: Next up I have Chris Batsavage.

MR. CHRIS BATSAVAGE: Thank you, Jeff, for the presentation. I thought I heard you say that you accounted for the anomalously high estimates and the low estimates, and it seemed like the higher estimates had more of an influence, regarding what the adjusted harvest amount would be. The graphics up on the screen right now, the top left, shows a range of possibilities.

Is that kind of showing where there would be a higher influence by just the high estimates versus the low? Because I was thinking about when this was done several years ago. We had just adjusted the high ones and didn't look at the low ones. I'm just trying to make sure I'm understanding the range of options here, considering the fact that the anomalously high estimates seem to have more of an influence than those low estimates.

MR. BRUST: Thanks, Chris, good question. Yes, in the couple weeks that I've been looking at this. It does appear that even though there were more low outliers identified, the impact from the high estimates outweighed those. Dustin, if you can go up, I think just one slide. I don't know if folks can zoom in and see this.

But just as an example. The top right, the New Jersey private rental Wave 5. In 2019 the original estimate is 25,000. It is getting bumped up anywhere to about 30,000 to 150,000. It's bumping up like 125,000 pounds, which is a lot. But if you look at the lower right, you know that high estimate in 2021 is going from 500,000 down to as low as about 50,000, so that one high outlier is moving a lot more than several low outliers would collectively. That is not always the case. You can see that in 2018 the overall movement was a higher estimate of harvest. The blue line all the way to the left is the original, and pretty much all of the replacement values are higher than that. In some cases, you do get higher estimates of harvest, but in general it looks like the overall pattern is that for a given cell, that the magnitude is decreased.

CHAIR DAVIS: Follow up, Chris, or are you good?

MR. BATSAVAGE: I'm good, thanks.

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CHAIR DAVIS: At this time, I don't have any more hands for questions. Sorry, go ahead, Toni.

MS. KERNS: Roy Miller just raised his hand.

CHAIR DAVIS: Okay, Roy Miller, go ahead.

MR. ROY W. MILLER: The obvious question from this is, when do we apply this methodology to deal with outliers and anomalous results? Do we only do it when we have to take a harvest reduction? Do we do it when we are allowed to take a harvest liberalization? What is the triggering level that precipitates this type of analysis? I'm just wondering, going forward, for future results, if there can be some guidance that comes out of this process.

MS. KERNS: Mr. Chairman, if I could try to help out with that answer.

CHAIR DAVIS: Please do, Toni.

MS. KERNS: Roy, what I would say is that the work that we're trying to do through the Harvest Control Rule Addendum that utilizes some of the model approaches for setting recreational measures would greatly help out with this. We find ourselves using additional sources of information and data for setting recreational measures, where this wouldn't even need to be a consideration any more.

As you know for black sea bass for the last four years we've had status quo measures, and kept them in place. There really hasn't been much thought to the MRIP data and analyses such as this. We've done the same for summer flounder and scup. Really the last time we changed summer flounder measures; we did use this type of analysis approach back in 2017. It is my hope that through this Harvest Control Rule Addendum that we're working on, we won't need to take this into consideration any more, and we'll have a new approach.

MR. MILLER: Thank you, that would eliminate this dilemma of when to apply it.

CHAIR DAVIS: Do we have anymore hands at this point for questions?

MS. KERNS: I do not have any additional hands.

CHAIR DAVIS: Okay, so in the interest of time, we've got about a half hour left in our agenda allotted time today. I think I'm going to ask the Board to move to potentially taking action on the one piece of business before us today, that I think is definitely going to require a motion. That is, as Dustin discussed, the potential need to rescind the motion that was adopted at the December joint Board and Council meeting.

Adopt a new motion that would allow, essentially the Board to operationalize this analysis that's been done, and that is continuing to be worked on by the Technical Committee, that could potentially adjust the overall percent reduction that is required for sea bass. At this point, I'll turn to the Board and ask if there is any Board member who might be willing to make a motion concerning that action item, and that could help sort of focus the discussion going forward.

MS. KERNS: You have Shanna Madsen with her hand up.

CHAIR DAVIS: Okay, Shanna, go ahead.

MS. MADSEN: I am willing to make a motion to that point. I believe staff might have a motion, but if not, I'm willing to just go ahead with it. Yes, there you are. **We've got move to rescind the December 2021 black sea bass recreational management motion and move to adopt conservation equivalency for 2022 black sea bass recreational management, with a reduction in harvest specified to achieve the coastwide RHL in 2022.**

A 28 percent reduction will be required unless additional analyses conducted by the Technical Committee examining the MRIP data, including the outlier analysis and incorporation of the updated 2021 data as presented today, result in a modified percentage. Non-preferred coastwide measures are as follows.

The 14-inch minimum size, 5 fish possession limit, and open season of May 15-September 21. Precautionary default measures are: 16-inch minimum size, 3 fish possession limit, and open season of June 24-December 31. If the percent reduction is changed the precautionary default and coastwide measures will be adjusted to be consistent with the required adjustment.

CHAIR DAVIS: Thank you, so we have a motion on the board from Shanna Madsen, do I have a second?

MS. KERNS: We have Nichola Meserve.

CHAIR DAVIS: Okay, motion seconded by Nichola Meserve. Any discussion on the motion?

MS. KERNS: We have Joe Cimino with his hand up, and I don't know if you wanted to go to the maker of the motion first or not, if she has any comments.

CHAIR DAVIS: Thank you, Toni. Shanna, I'll turn to you to ask first if you want to provide any rationale for the motion.

MS. MADSEN: Sure, thank you, Mr. Chair and thank you, Toni. Yes, I would be happy to provide rationale. I think I've been following the TC work really closely. I appreciate all the work that Jeff's been doing for the TC, to get this analysis ready for this meeting today. I think the analysis that's been done, combined with those updated 2021 harvest projections and the apparent anomalies that we saw in some of those harvest estimates.

These have really led me to want to make this motion today, and to support seeing what the TC can do with these methods that they're proposing. I think that I take good comfort in the fact that this has been done previously, and it's consistent with what the Board has approved for the 2018 year, dealing with the New York and New Jersey party charter. I look forward to seeing what the TC comes back with in February.

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CHAIR DAVIS: Nichola Meserve, I'll turn to you to ask, as the seconder of the motion, if you would like to provide some additional rationale.

MS. MESERVE: I think Shanna covered it very well. I would just add that I would be interested to see a similar exercise for scup and fluke, potentially. You know I think we're looking at a potential closure of federal waters for scup, based on the reduction that we chose at the last meeting. It's a potential that this appropriate digging into the MRIP data could potentially reduce that burden as well.

CHAIR DAVIS: At this time, I'll turn to Joe Cimino, if you still have your hand up.

MR. JOE CIMINO: Yes, I think something that Jeff showed was that even just using the same prediction methods, that the new MRIP estimates would change that percentage a little bit. That alone is enough reason for me. This is tough, like Jeff and Jay and John, I was part of the TC that used to try and do these predictions, and it's tough just using point estimates from other years, and it's something that impacts people's lives. I really support this as a tool moving forward, to help us with future projections and staying within the RHL.

CHAIR DAVIS: Next up, I have Chris Batsavage.

MR. BATSAVAGE: Yes, I support the motion for the reasons given. Also, depending on where the Harvest Control Rule ends up, maybe this type of exercise won't be needed as much. But it's a good tool to have. I think ideally, if low sample size seemed to be one of the issues resulting in these outliers, that if we could get more MRIP intercepts at the state, Wave, and mode level to kind of reduce the need for these types of analyses to deal with outliers, would be the best situation. But actually, I think what's being proposed here is appropriate for black sea bass.

CHAIR DAVIS: Next, I have Jason McNamee.

DR. McNAMEE: Just adding my voice to the mix here in support for the motion, and also to support what Nichola offered. You know I think there are

potential flags in scup as well, you know outlier looking data points, that sort of thing. I think this would be valuable for scup as well. I don't feel as compelled to do it for summer flounder, for the reasons Dustin offered before. It's not that we shouldn't be following a systematic approach, it's more about kind of efficiency, and sort of operating in the fisheries that needed it, and kind of circling back. To Joe Cimino's point, I agree, kind of investigating. This is one approach. I think there are others that could be investigated as well. Once we get kind of out of the heat of the moment, you know this is a good approach.

It's tractable, folks can understand it. Once we get away from that kind of investigating, these approaches in a more comprehensive manner, without a view of the species or anything like that, I think would be another thing worth investing in. Thanks for the time, Mr. Chair.

CHAIR DAVIS: Toni, do we have any more hands in the queue?

MS. KERNS: Mike Luisi.

CHAIR DAVIS: Okay, Mike Luisi, go ahead.

MR. MICHAEL LUISI: I'll speak in support of this motion. I think it's a good way forward. I would recommend in the future, if we can keep this in mind when we meet jointly with the Council in December, that we may want to think about a similar type of motion that doesn't bind us to a certain percent reduction, so that this type of analysis can be conducted without having to go back and go through the motions, or jump through the hoops, to rescind and provide a new motion for consideration. Just something to keep in mind.

I do have a question about scup; if there is an interest in doing that analysis for scup in the process that has been laid out. The Council is going to need to take these motions, or this motion and any other motion made, under consideration in two weeks. Will there need to be a similar motion for scup, so that the Council would have an opportunity

to address the previous motions from December at the February meeting?

CHAIR DAVIS: Good question, and I think I'm going to defer to Toni here, and her opinion on whether or not we might need to take up a similar motion here for scup, to allow some sort of follow-on action that deviates from the motion we adopted in December.

MS. KERNS: Mike, with scup it's a little different, because we don't have the conservation equivalency process, like we do with summer flounder and black sea bass. I feel like we're in a situation that we've not been in before, where the required reduction was higher than what the Board and Council put in place for measures. We already did not bound ourselves to the reduction that came out of the analysis of last year's harvest, or the average of the last couple year's harvest to the 2022 RHL.

On the Commission side, I think we have the flexibility to make these changes and look at the analysis of the Thompson Tau, and perhaps provide a letter to NOAA if it comes out with something different, or for the Board to discuss, hey, if you do the analysis the required reduction, let's say it's like 40 percent.

The measures that you guys have in place right now is 38 percent. Then does the Board want to take action to find those other 2 percent, or is there information that we can provide to NOAA for their consideration of the federal water measures, that would get us on the same page? I don't know if NOAA would need both bodies to change the motions or not, since the motions were not something that was favorable from NOAA Fisheries at the joint meeting. I guess I would have that question to Mike Pentony is if both bodies would have to change that motion or not.

MR. MICHAEL PENTONY: Me, Mr. Chairman?

CHAIR DAVIS: Sure, go ahead, Mike, thanks.

MR. PENTONY: I think that's an open question right now. The motion adopted, as Toni was just describing, the motion that just was adopted in December calls for a 10-inch total minimum length per scup, to achieve a 33 percent reduction in harvest. I think if there was an outlier analysis done that showed something less than 33 percent production was necessary, then yes, I think you would, just like the Board and potentially the Council are doing here for black sea bass.

You would need new motions by both bodies to address what level of production is desired or required, and what measure. Is it not a 10-inch minimum size, is it something else? But if it falls somewhere between 33 and we would argue, is already required, based on the data. Then there is no change to the motion necessary, because you're still in the same place, if that makes sense.

MR. LUISI: Yes, Mr. Chairman, if I could just follow up with that.

CHAIR DAVIS: Yes, go ahead, Mike.

MR. LUISI: It makes sense. I just, in thinking about the next couple weeks in our preparation for finalizing these recommendations. I want to be sure today that we don't miss a step, because of timing and because of the Council's work with the Board on this. I just don't want to miss a step along the way, and then be stuck.

That is kind of where my mind is. I certainly support this, and it sounds like from what Mike just said, that we might need to take up a motion on scup, so we're not so specific about the percent reduction. If an analysis is different from that, then we have the ability to modify that. I'm still a little confused as to what we might do. But I don't want to deflect from the motion before us, so Mr. Chairman, I'm happy to take this motion up and then try to get some more clarity on the scup issue, if that's more clear at this time.

CHAIR DAVIS: Yes, thanks, Mike, and I think that is what I am going to advise at this point is for the Board to deal with the motion we have in front of

us here, without getting too sidetracked at this point on the scup issue. But we could take that back up after we dispense with this motion. Toni, do we have any other hands up?

MS. KERNS: No additional Board members, but you do have one member of the public.

CHAIR DAVIS: Okay, I'll recognize that member of the public at this time.

MS. KERNS: It's Bill Pappas.

CHAIR DAVIS: Okay, Bill, go ahead.

MR. WILLIAM PAPPAS: Hi guys, thank you everybody for putting in your hard work and relooking at this sea bass. I also support this motion to rescind, the December thing. As a charter captain in Virginia Beach, I would like to tell you what you guys have directly, how you directly affected our livelihoods, and it's been only a few short sentences.

You know I work with the NOAA, and I do the Charter Input Seminar, the two-hour webinar at night. I've been doing that for a little while now, and we are also wondering, and the consensus is, just say for example we got it wrong, and there is a healthy fishery, and there are twice as many fish out there, and you haven't considered chips technology.

The amount of people fishing because of COVID, and the extra amount of fish that can be found, if there might be more fish pushing your numbers that you have at setting the cap a little higher than they should be, and making you feel like there is a reduction in a healthy fishery. Do you guys want the best numbers? You're not going to use your small sample sizes; you're going to talk to the VTRs and the Charter captains. You're going to use their numbers.

They are out there five to seven days a week. They have their numbers available, and instead we put a reduction in December, which scared our VMRC into shutting down the only thing we have to fish

for, for four months in Virginia, sea bass in February. They won't even offer or try it out, because they've already had their meeting, and they determined by your 28 percent that they're not going for a February at all.

My mate just had a baby. My family is on the line. I made \$9,000.00 in February, which is more than enough to space out three or four months. You've got it wrong here. You know, there is recreational reform on the way. Everybody's admitted there is not enough time on this. At the last second with no time, we reduced, we're scared, we shut down and there is no turning around now. We don't have a VMRC that is willing to stand for us, and that's all we've got left.

We appreciate you guys rescinding this motion. We actually are looking forward to a change, if there is recreational reform that's being spoken about, and we need to get the best numbers to make our decisions, because you guys are loving the numbers. But you've got to have the right ones to make the decisions that really effect the livelihoods of people at the other end of the stick. Thank you for your time.

CHAIR DAVIS: Thank you very much for that perspective. Appreciate the comment. Toni, unless we have more hands at this point, I think what I would like to do is provide a 60 second caucus, one minute for the Board, and then we'll come back and take a vote on this motion.

MS. KERNS: Justin, just as a reminder to the Board before they caucus, that because this is making a change to a final action, this requires a two-thirds majority vote to pass.

CHAIR DAVIS: Right, thanks for that reminder, Toni. Okay, at this point we'll have a one-minute caucus, and then we'll come back and vote. Okay, does any Board member need more time to caucus? If you do, please raise your hands.

MS. KERNS: I have one hand up.

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The Board will review the minutes during its next meeting.

CHAIR DAVIS: Okay, why don't we provide an additional minute? Okay, unless any Board member feels like they need additional time, I'm going to go ahead and call the question here. Toni, do we need to read the motion into the record again?

MS. KERNS: The motion did not change, so no need to read it into the record again.

CHAIR DAVIS: Okay, good news there. At this point I'll ask everyone in favor of the motion to please raise your hand.

MS. KERNS: I'm just going to give the hands a moment to settle. I have Maryland, Massachusetts, Virginia, North Carolina, Rhode Island, New York, Delaware, New Hampshire, New Jersey, Connecticut, and Potomac River Fisheries Commission. I will put the hands down for everyone.

MR. COLSON LEANING: I counted 11 in favor.

CHAIR DAVIS: Okay. Anyone opposed to the motion, same sign.

MS. KERNS: I have no hands raised.

CHAIR DAVIS: Any null votes, please raise your hands.

MS. KERNS: I have no hands raised.

CHAIR DAVIS: Any abstentions?

MS. KERNS: I have NOAA Fisheries.

CHAIR DAVIS: Okay, by my count the motion passes 11 to 0 with one noted abstention from NOAA National Marine Fisheries Service. Okay, moving on. It occurs to me that before we potentially consider any motion around scup, and rescinding the motion from December relative to that species.

There have been several comments on the record today from Board members, supporting the idea of the Technical Committee working on a Thompson's

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Tau analysis for scup. I think it is safe to say at this point, and here I'm asking Dustin and Toni and perhaps, Jeff. Is it safe to assume at this point that the Technical Committee will be undertaking that analysis?

MS. KERNS: Yes, it is safe to say they will be taking that and starting it up.

CHAIR DAVIS: Okay, great. Given that, at this point I think we have to consider whether we might want to consider a motion to rescind the December 2021 motion around scup. Toni, at this point, I guess I would turn it to the Board, and ask if anyone has any comments on that potential action, or potentially a motion.

MS. KERNS: I have John Maniscalco with his hand up.

CHAIR DAVIS: Okay, John Maniscalco, go ahead.

MR. MANISCALCO: I guess I'm still a little confused why we actually have to. I still want to see analysis for scup. I think the federal expectation was a 56 percent reduction, so far, the Board and Council agreed to a 1-inch increase in minimum size, which is approximately a 33 percent reduction. If the states move forward with a 1-inch increase in minimum size, and we have the scup analysis done.

Doesn't that just support? Assuming that the change in the required reduction identified decreases, doesn't that just further support the 1-inch minimum size increase, and gives NOAA the ability to not take additional action in federal waters? I don't actually know why we have to do another motion, and why we need to rescind the previous action, if we still intend to go forward with a 1-inch minimum size increase. I'll just leave that as my question.

CHAIR DAVIS: Toni, do you have any perspective on that?

MS. KERNS: I think so. If I'm understanding what Mike Pentony just said to the Board, is the only reason why you would need a motion to rescind is if

we got an analysis that showed us, we needed less than 33 percent reduction. I mean I can't speak for what the analysis is going to show, but I would think. I'm not sure we would get that low. Mike Pentony has his hand up, so I'll let him correct me if I'm wrong.

CHAIR DAVIS: Okay, Mike Pentony, go ahead.

MR. PENTONY: No, I think that's right. If the motion, as was just described, the motion is for a 1-inch increase in the minimum size. At what point would the Council and the Board decide that that 1-inch increase in the minimum size is no longer warranted? Probably not a 32 percent reduction needed or 31 percent.

You know, it's where does that line fall that maybe instead of a 1-inch increase in minimum size you go for half inch or something, or no increase in minimum size. I think the likelihood of this analysis going from a 56 percent reduction necessary, down to something so low that you would rethink that 1-inch minimum size increase, the likelihood of that is probably pretty small.

I think what is more likely is that the 56 becomes something, you know less than that, which a letter to us informing the Agency of the results of that analysis to what the new reduction might be, would inform as Toni just said, would inform the action that we decide we need to take in federal waters, but would be unlikely to affect the action that the states were taking under the Board's plan. I hope that helps.

CHAIR DAVIS: Thank you, Mike, that is helpful, and from my perspective, just I'm not seeing a need for a motion here to rescind the scup motion from December. I think what's evident is that there is value in doing a Thompson's Tau analysis for scup, because it might provide us new perspective on what level of conservation we're achieving, with the measure we approved in December, the 1-inch minimum length increase.

It's very unlikely that the Thompson Tau analysis is going to sort of provide such drastic new

information that we would decide that that 1-inch minimum length increase is essentially more of a reduction than is necessary. I'll still open it up here to the Board, if anyone is interested in making a motion, please raise your hand. But at least from my perspective, I'm convinced based on the input we just got that that motion is not necessary.

MS. KERNS: I have no hands.

CHAIR DAVIS: Okay, so moving on from that. I think one outstanding piece of business here is that we need to approve the Technical Committee's suggested methodology for determining state and regional measures for summer flounder and black sea bass. I think we could potentially do that by consent. I'm not sure a motion is needed.

That methodology was described in a memo provided in the meeting materials, and also at the beginning of Dustin's presentation. At this point I'll just open it up to the Board. If there are any questions about the methodology, if there are any lingering concerns or uncertainties around that, please raise your hand.

MS. KERNS: I have no hands raised.

CHAIR DAVIS: Okay, I think at this point then I would ask if we can have Board consent to approve the methodologies suggested by the Technical Committee, if there is anyone who objects to that, please raise your hand at this time.

MS. KERNS: I have no hands raised.

CHAIR DAVIS: Okay, so we'll consider the TC's methodology approved by consent. I think moving on, one last item, Toni, might be to outline sort of next steps here for the Board to consider, based on the actions taken today, sort of what might need to happen in the coming weeks before the next Council meeting, in the second week of February, and what remaining decision points we might have here about what path to take.

MS. KERNS: Thanks, Justin. By rescinding the motion and the fact that the TC has not completed

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their analysis for black sea bass, and what they would recommend as a final required percent reduction. We need to determine how the Board wants to approve that final percent reduction.

We do need to do that before the Council meeting next Thursday, and so there is what I see, I guess three possible paths. One, the Board can defer that sort of decision, or say that, you know whatever the Technical Committee recommends is what the Board would use, and for the states to use for their proposals for their 2022 measures, so just leaving it to the TC recommendations. The second path forward is we can provide a report via e-mail to the Board, and then the Board could vote on that final percent reduction via an e-mail vote, or we can attempt to set up a conference call between now and the Council meeting, to finalize that measure.

I recognize that the New England Fishery Management Council is next week, so that could be a little bit tricky. We would have to be pretty flexible on schedules for that. It sounds like the TC is going to meet at the beginning of next week, so maybe the Board could meet at the end of next week, if we needed to have a call to do that. But those are three paths forward.

CHAIR DAVIS: Just to clarify. You mentioned next Thursday. That would be the 3rd of February, is that a deadline by which we need to have made a decision on the target percent reduction?

MS. KERNS: I didn't mean next Thursday. The Council meeting is on Thursday.

MR. COLSON LEANING: Toni, it's Tuesday, February 8.

MS. KERNS: The Council meeting is Tuesday, February 8, sorry about that. I got my meetings mixed up.

CHAIR DAVIS: It seems to me the decision point here is whether the Board wants to leave it in the hands of the Technical Committee to make a recommendation on the most appropriate target percent reduction, and then leave that as the

default, and states and regions will engineer their proposals towards that percent reduction, or if the Board wants to take some positive action between now and the Council meeting to approve the percent reduction suggested by the Technical Committee. At this point I'll open it up to the Board, and ask if any Board members have perspectives on this question of sort of which path to take here.

MS. KERNS: I'm waiting for hands. I have Nichola Meserve.

CHAIR DAVIS: Okay, Nichola Meserve, go ahead.

MS. MESERVE: I was going to suggest that we take the e-mail vote option. We saw a pretty thorough presentation today of the approach that the Technical Committee is taking, but there was still a number of unresolved questions. Going through the e-mail approach for a vote would require that to be written out for the record.

I think that would be wise moving forward to do that, rather than just, as much as the confidence I have in the Technical Committee, no I would like to kind of see the final outcome, you know in writing, and have an opportunity to disapprove it that way for the record.

CHAIR DAVIS: Thanks for that perspective, Nichola. Do we have any other hands?

MS. KERNS: No additional hands at this time. Uh, here we go, Shanna Madsen.

CHAIR DAVIS: Okay, Shanna, go ahead.

MS. MADSEN: I just wanted to say that I agree with Nichola, I think that's a good way forward. I think what Jeff showed us today showed us that even depending on the combinations that were selected for the various, you know the replacement values and the level of detection. We mostly fell out around the same level of percentage. But I do think that an e-mail vote would be nice, so that we can see what the methodology is that's selected, and

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just have all of that on the record. Just definitely in agreeance with Nichola.

CHAIR DAVIS: Okay, thanks, Shanna.

MS. KERNS: I don't have any additional hands, Justin.

CHAIR DAVIS: Okay, we have a suggestion from Nichola Meserve, sort of seconded by Shanna Madsen, to go the e-mail vote route. I'll just say, to me that does seem like a pretty reasonable approach. You know it won't be sort of just putting it all in the Technical Committee's hands.

It will require some level of positive action by the Board, but we'll avoid the potential difficulties of trying to have to schedule something like a Board call, to get everybody together. It seems like a pretty reasonable path forward for me. I think I'll ask at this time if anybody on the Board has any objection to taking that path forward.

MS. KERNS: I see no hands raised in objection.

CHAIR DAVIS: All right, so seeing no hands raised, we'll move forward with that pathway, an e-mail vote to approve the final percent reduction, and consider that approved by consent. Okay, I think under this Agenda Item Number 4, I think we've wrapped up all the business we have to take care of. Am I correct there, Toni?

MS. KERNS: You are correct.

ADJOURNMENT

CHAIR DAVIS: All right, then I'll ask if there is any Other Business to come before this Board today.

MS. KERNS: No additional hands.

CHAIR DAVIS: Given that, this Board stands adjourned, thank you everybody.

(Whereupon the meeting adjourned at 4:15 p.m. on
Tuesday, January 25, 2022)



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MEMORANDUM

TO: Summer Flounder, Scup, and Black Sea Bass Management Board

FROM: Summer Flounder, Scup, and Black Sea Bass Technical Committee

DATE: March 7, 2022

SUBJECT: TC Review of 2022 Recreational Summer Flounder & Black Sea Bass Regional Proposals

Technical Committee Members: Alexa Galvan (Chair, VA), Julia Beaty (MAFMC), Peter Clarke (NJ), Kiersten Curti (NEFSC), Kiley Dancy (MAFMC), Steve Doctor (MD), Lorena De La Garza (NC), Emily Keiley (GARFO), Rachel Sysak (NY), Mark Terceiro (NEFSC), Corinne Truesdale (RI), Sam Truesdell (MA), Greg Wojcik (CT), Richard Wong (DE),

Staff: Tracey Bauer (ASMFC), Dustin Colson Leaning (ASMFC)

Other Attendees: Chris Batsavage (NC DMF), Shanna Madsen (VMRC), Nichola Meserve (MA DMF), Mike Waine (ASA)

The Summer Flounder, Scup, Black Sea Bass Technical Committee (TC) met via webinar on Wednesday, March 2, 2022 to review the 2022 regional measures proposals for the summer flounder and black sea bass recreational fisheries. The Summer Flounder, Scup, and Black Sea Bass Management Board (Board) approved a 16.5% increase in expected harvest for summer flounder and a 20.7% decrease in harvest for black sea bass compared to 2018-2021 harvest levels. The specifications process outlined in Addendum XXXII requires that states within each summer flounder region (MA, RI, CT-NY, NJ, DE-VA, NC) implement consistent measures. For black sea bass, the Addendum XXXII process requires each region to implement regulations that will collectively achieve but not exceed the regional allocation of the recreational harvest limit. Through the specifications process outlined in the addendum, the Summer Flounder, Scup, and Black Sea Bass Management Board (Board) determined that all three regions (MA-NY, NJ, DE-NC) must take equal 20.7% reductions in expected harvest.

Summer Flounder Regional Proposals

Each region's proposal was presented by a representative of that region, followed by a discussion of the methods and results by the full TC. Overall, the TC had no major concerns with the methodologies used to develop the proposals, but TC members did provide some minor feedback for proposal improvement and consideration. Below is a summary of TC feedback and recommendations on each proposal. Refer to each region's proposal for a complete and detailed description of the methods and proposed options.

Massachusetts

Massachusetts staff presented several methodologies for projecting the increase in harvest associated with raising the bag limit, and the TC agreed that regressing the percent change in harvest on the log of the bag limit was the preferred method. This modeling approach aligned the best with assumptions of linear models, and other regional proposals utilized the same method. The TC also recommended that the Massachusetts proposal consider harvest data across all modes, not just the headboat harvest, to

increase sample size when projecting changes in harvest associated with increases in the minimum size limit.

Rhode Island

The majority of the TC did not recommend Rhode Island's proposed option 1a for Board consideration because the 1 inch liberalization in the minimum size limit is projected to increase harvest by 19%, which exceeds the Board approved 16.5% increase. The TC representative from Rhode Island indicated that this option was very popular with Rhode Island anglers, but considering the concerns raised by TC members, they would drop it from the final proposal submitted to the Board.

Connecticut-New York

No TC comments/questions on this proposal. Methods and options received TC support.

New Jersey

Two TC members shared concerns about New Jersey's proposed option 5, specifically, the 1-inch narrow slot limit represented an enforcement concern and could lead to increased unintentional noncompliance. While the Law Enforcement Committee's (LEC) 2015 report on [Guidelines for Resource Managers on the Enforceability of Fishery Management Measures](#) gave a favorable rating on the enforceability of slot limits, the [LEC subsequently met in 2020](#) and shared some situations when slot limits may have unintended consequences. For example, the LEC expressed concern that unintentional violations could increase in states where slot limits have not been used previously. The report also stated that the likelihood of violations increases with narrower slot limits because it becomes more difficult to catch a legal-sized fish, and there is greater potential for illegal harvest both under and over the slot limit, as opposed to just sublegal limit harvest. Several TC members suggested providing an option that explores a larger slot limit to potentially mitigate these concerns.

Delaware-Maryland-Virginia

No TC comments/questions on this proposal. Methods and options received TC support.

North Carolina

No proposal was submitted for North Carolina because North Carolina does not intend to liberalize its recreational measures for summer flounder. Summer flounder and southern flounder are managed under the same recreational regulations in North Carolina and measures are currently very restrictive to reduce fishing mortality on the overfished southern flounder stock.

Black Sea Bass Regional Proposals

TC members presented on their regional/state proposals followed by discussion and feedback by the whole TC on the methods and options presented. A standardized methodology was developed by the TC to aid in the development and review of proposals. The southern region opted for consistency in measures across the region, and in contrast, the northern region submitted unique proposals from each state. Below is a summary of TC feedback and recommendations on each proposal. Refer to each region/state's proposal for a complete description of the methods and proposed options.

Northern Region (MA-NY)

Massachusetts had differing seasons by mode in 2020 when mode-specific closures were enforced in response to the Covid-19 pandemic. Massachusetts staff presented on two options for calculating the average daily harvest rate by wave across all modes. The methodologies differed in how the open season days by mode were weighted. The TC recommended weighting the average days open for each

mode by the total number of trips that landed black sea bass. Rhode Island's proposal included an option that had differing season and bag limits by mode. One TC member raised a concern about how the for-hire mode would be managed if PSEs increased significantly in the future. The TC representative from Connecticut offered advice by explaining that their solution has been to require the entire party and charter fleet to submit monthly logbooks. The logbook data is provided as supplemental data to MRIP recreational estimates and used as a cross-reference to ensure accuracy.

Central Region (NJ)

While the methods used within the New Jersey proposal were sound, several TC members were concerned that some of the original proposed options did not fully meet the required reduction percentage of 20.7%. The New Jersey representative indicated that further adjustments would be made to these options to ensure all options met the reduction requirement prior to final submission of the proposal.

Southern Region (DE-NC)

No TC comments/questions on this proposal. Methods and options received TC support.



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Director

Massachusetts Summer Flounder Recreational Measures Proposal for 2022

March 9, 2022

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Introduction

Massachusetts comprises its own regulatory region for summer flounder. Each region has been allotted a 16.5% liberalization by weight for summer flounder harvest. The following document summarizes the approach to developing regulations that are suited to this liberalization. The Massachusetts summer flounder status quo regulations as well as the proposed modifications discussed in this document are:

Scenario	Season Open	Season Close	Size limit	Bag limit	Expected percent change
SQ	May 23	Oct 9	17.0	5	0.0
1	May 23	Oct 25	17.0	6	16.5
1a	May 21	Oct 24	17.0	6	16.5
2	May 23	Sep 30	16.5	5	16.1
2a	May 21	Sep 29	16.5	5	16.1
3	May 23	Sep 12	16.0	5	16.4
3a	May 21	Sep 11	16.0	5	16.5
4	May 23	Sep 20	16.0	4	16.4
4a	May 21	Sep 19	16.0	4	16.4
5	May 23	Oct 9	16.5	4	16.1
5a	May 21	Oct 8	16.5	4	16.1

Methods

Data

The data used in these analyses are summer flounder MRIP data. These include:

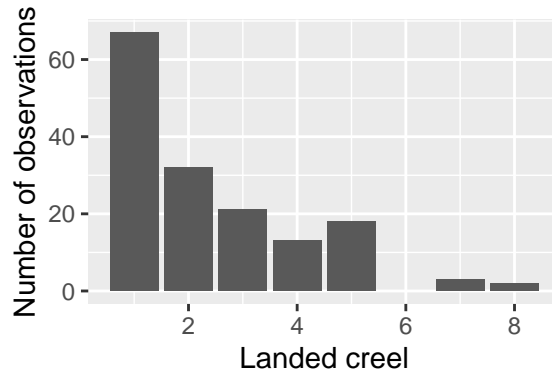
- MRIP catch microdata from 2018-2021 waves 1-6 (2021 Wave 6 data are preliminary) for Massachusetts;
- MRIP trip microdata from 2018-2021 waves 1-6 (2021 Wave 6 data are preliminary) for Massachusetts;
- MRIP headboat harvest size microdata for Massachusetts/Rhode Island;
- MRIP headboat release size microdata for Massachusetts/Rhode Island (from special data request); and
- By-wave harvest *estimate* data for Massachusetts, including PSEs (i.e., separate from the microdata)

Creel analyses

The premise of the bag analyses is that the percent liberalization that would be expected to occur under an *expansion* of the creel is related to the expected percent *reductions* under restricted creel limits. In other words, if a 10% reduction in landings is expected from a one fish creel restriction, a similar expansion in landings can be expected from a one fish liberalization. The MRIP data can be used to provide creel reduction estimates; these estimates are used as the foundation of the liberalization analyses.

The Massachusetts harvest and trip data were combined so that each harvest record could be associated with the number of anglers that were attributed to the catch. Since some records had multiple associated contributors, instead of attempting to assign particular fish to anglers only the data that had 1 contributor per observed creel were used. Due to MRIP's estimation methods, the number of fish that were landed were sometimes not integers so all landings estimates were rounded to whole numbers.

The distribution of creel landings in Massachusetts during 2018-2021 is shown in the plot below



Two functions were produced in R to facilitate bag reduction estimates to be used in liberalizations (the results of these functions are used in all the methods below) that provide answers to the following questions:

- Given a set of observed bag frequencies, a status quo creel limit and a new creel limit, what is the expected total reduction in catch of reducing the bag limit by one or more? Note that this function is based on numbers rather than weight, but here there is no assumption of angler behavior for preferential removal of larger fish so a numbers-based reduction is assumed to be the same as a weight-based reduction.
- Given the same data set and status quo creel, the second function loops over all possible creel limits from the status quo to a bag of 1 and calculates the corresponding estimated harvest reduction.

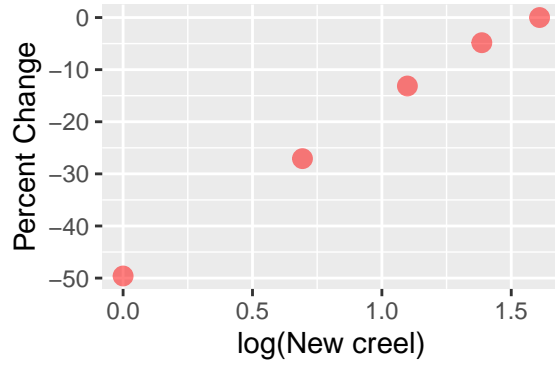
Using these two functions a table was prepared relating each potential creel limit – where the creel limits were all reductions – to the associated assumed reduction in catch (liberalizations were not calculated in this step).

Status quo creel	New creel	Percent Change
5	5	0.00
5	4	-4.83
5	3	-13.14
5	2	-27.08
5	1	-49.60

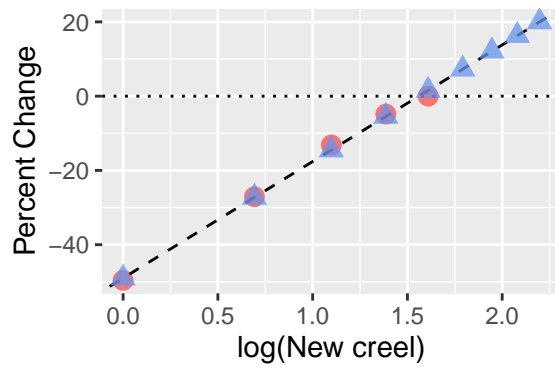
The approach to creel liberalization uses estimates for all possible creel reductions from the status quo down to a creel limit of 1 as data to support the analysis. The percent reductions are related to the reduced creels via a linear model which is then used to make liberalization predictions. While the creel limits could be used directly, the *log* creel limits were deemed more appropriate by the Technical Committee. The data including the logged creel reduction percentages are:

Status quo creel	New creel	log(New creel)	Percent Change
5	5	1.61	0.00
5	4	1.39	-4.83
5	3	1.10	-13.14
5	2	0.69	-27.08
5	1	0.00	-49.60

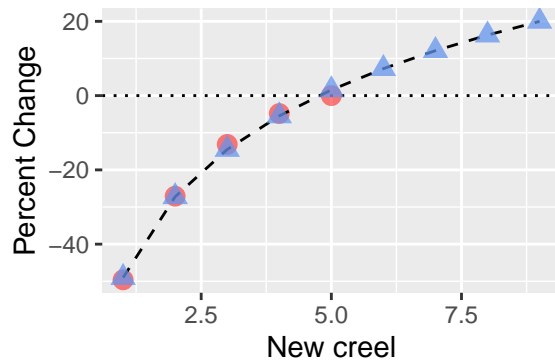
which can be plotted on a coordinate system:



This relationship can be approximated by a linear model (below) where the response is the percent change and the predictor is the log of the new creel limit. The red points are the original data while the blue triangles – which include extrapolation into liberalization percentages – are the expected percent change at each possible creel limit.



The same information, only with creel limits on the arithmetic scale rather than the log scale, is shown below.



The expected percent change for each possible bag limit in table form given the model is:

New Creel	Percent Change
1	-49.0
2	-27.2
3	-14.5
4	-5.5
5	1.5
6	7.3
7	12.1
8	16.3
9	20.0

Note that the maximum percent change associated with expanding the bag by 4 fish is much smaller than the percent change associated with reducing the bag by 4 fish. This is due to the nonlinear nature of the model.

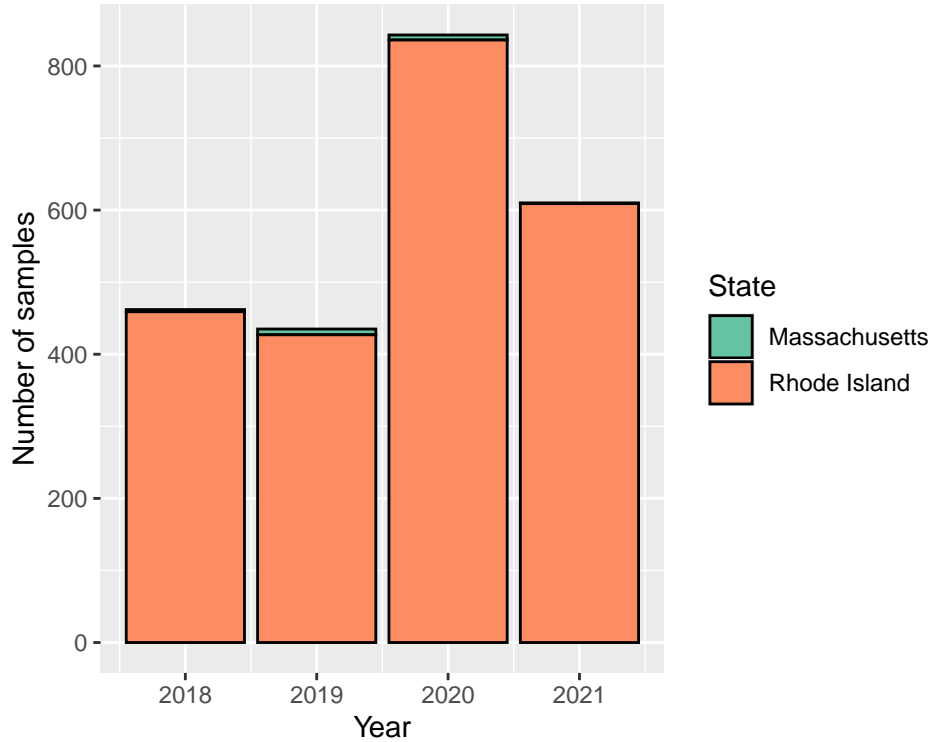
Assumptions and uncertainty

The creel liberalization calculations discussed here include the following assumptions:

- Availability. The harvest estimates are predicated on fish population dynamics producing conditions that are similar to the conditions during 2018-2021. If availability is higher or lower the actual harvest will change accordingly.
- Behavior. The average angler decision-making process will be similar during 2022 as it was during 2018-2021. This includes targeting – if availability of other species is different during 2022, whether because of changes in a population or due to regulations, this could result in measures that are not consistent with the expectations produced here.
- Bag liberalization. This method assumes that the percent change under harvest reduction scenarios are equivalent to the percent change under corresponding liberalization scenarios. This means that the rate of change governing the incremental bag landings estimates is constant. This ignores any impact of anglers changing their behavior because of the bag limit when they would have caught additional fish, but it may be a sufficient approximation.

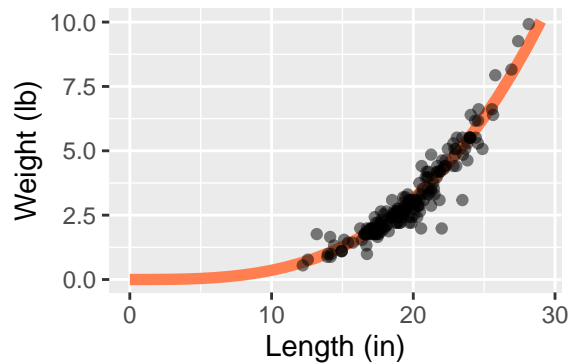
Size analysis

Currently, headboat releases provide the only source of usable release size composition angler data. Unfortunately there are few recent data on Massachusetts headboat summer flounder releases; anecdotally the fleet has not targeted them in recent years. During 2018-2021 there were only 21 headboat release records from Massachusetts trips. Rhode Island had considerably more headboat release records during this time period. Although headboats from these two states are likely to fish primarily in areas distinct from one another, the only reasonable solution was to perform the analysis using both MA and RI data combined. That the Rhode Island data are representative of Massachusetts harvest and release records is an assumption of the analysis. The figure below shows the disparity in headboat sampling between Massachusetts and Rhode Island.



The size-based analysis needs to be performed in weight. Thus it is useful to develop a length-weight relationship in order to estimate the weight in pounds at the mid-point of each size bin. A model was fit using MRIP harvest size microdata on the log scale (i.e., $\log(W_i) = \beta_0 + \beta_1 \log(L_i) + \epsilon_i$). To avoid overfitting the model at the most common size classes, weights were applied by length bin such that the model weighting of each data point was $1/n$ where n is the number of records in the arithmetic scale one inch length bin.

The model estimated a slope of 3.13 and an intercept of 0. The data points and fitted model are shown in the plot below.



Headboat catch only

The size-based liberalization analyses depend on MRIP headboat release data for information on the size structure of fish smaller than the current size limit. As mentioned above, the Rhode Island headboat release data are necessary to generate sufficient release information. However, combining Massachusetts and Rhode Island data must be done in terms of total headboat catch rather than just releases because the regulations differ by state. The general procedure is:

1. Determine the overall combined MA and RI AB1 and B2 catch in numbers;
2. Calculate the observed headboat harvest by size bin;
3. Calculate the observed headboat releases by size bin;
4. Expand out the size compositions via the AB1 and B2 catch;
5. Calculate the average weight associated with each size bin;
6. Calculate the percent change in available weight from one size measure to another.

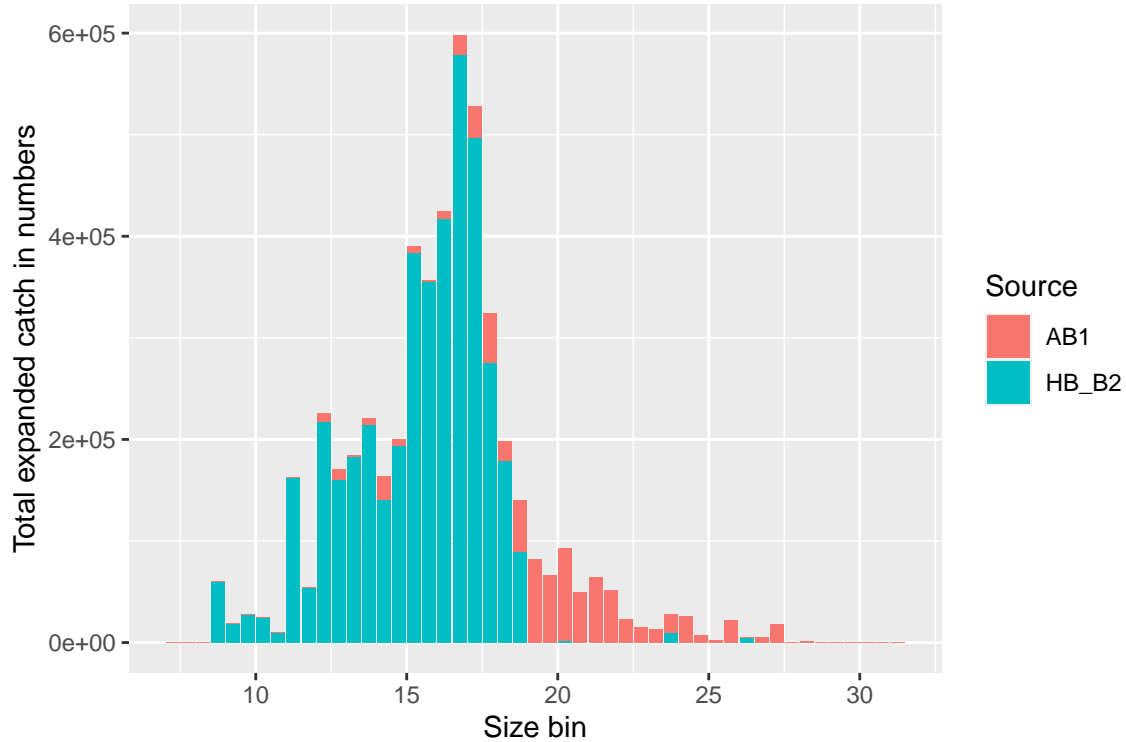
The total MA and RI combined harvest and release data are necessary for expanding out the harvest and releases to put them on a common scale in order to determine the overall catch composition.

Year	ST	Total Harvest (N)	Total Releases (N)	Total Harvest (lb)
2018	25, 44	235,883	929,109	746,299
2019	25, 44	268,978	1,543,773	982,320
2020	25, 44	190,094	1,125,280	655,187
2021	25, 44	100,483	660,325	266,007

Two helper functions in R were developed to (1) extract the left and right components of a size bin, and (2) calculate the median of each half-inch size bin.

The headboat harvest and headboat release data were organized into half inch size bins by year. The number of fish in each bin was the sum of the statistical weighting associated with each record. Then the proportion of fish by bin for each year was calculated (i.e., so the proportions in each year summed to 1.0). These proportions were then multiplied by either the total harvest in numbers or the total releases in numbers depending on the data set.

The harvest and release data sets were then combined to form a single data set that represented the overall total catch. The total catch, summed over all years by size bin, is plotted below and parsed out by the source of the data. The harvest and release data are notably mixed in the 17-19 in range partly because the size limit is 17 in in MA and 19 in in RI.



The final step is to calculate the impact of proposed liberalizations. Status quo harvest (aggregated over the four year period – and using the combined MA and RI data) is defined as the available catch ≥ 17 in. The liberalized harvest expectation is defined as the available catch \geq the proposed harvest limit. The percent liberalization is $(\sum(W_{lib}) - \sum(W_{SQ})) / \sum(W_{SQ}) \times 100$ where $\sum(W_{lib})$ is the total weight associated with the liberalization and $\sum(W_{SQ})$ is the total weight associated with the projected harvest.

Expected liberalization percentages for size limit decreases from 15 to 17 in are given below. Percent liberalization in weight is the metric of interest.

Minimum size	Percent Liberalization N	Percent Liberalization W
17.0	0.00	0.00
16.5	33.95	21.94
16.0	58.05	36.10
15.5	78.31	46.89
15.0	100.46	57.56

Assumptions and uncertainty

The size liberalization calculations discussed here include the following assumptions:

- The availability and behavior assumptions noted above in the Creel Analysis section also apply here.
- Massachusetts and Rhode Island headboat harvest and release data are sufficiently representative of Massachusetts harvest and release data for all modes. This is an important assumption. It was necessary to use headboat data because MRIP APAIS release data do not have any size information. It was necessary to use Rhode Island headboat data because Massachusetts headboat data had so few records. If the size composition of the populations encountered by the Rhode Island headboat fleet differ substantially from the size composition of the population encountered by the Massachusetts angling population the expectations from this analysis may not be met during 2022.

Season adjustments to fine-tune total expected change in MA

The analyses above provide discrete regulatory options (e.g., increase the bag limit by one fish, decrease the size limit by 0.5 in) that result in percentage change that does not necessarily align with the 16.5% allotment. To fine-tune these potential discrete options and bring them in line with the 16.5% liberalization allotted to Massachusetts, further adjustments to the season can be made. The steps are:

1. Calculate the baseline harvest rate per wave;
2. Calculate the new harvest rate as the baseline rate multiplied by the percent change implied by the liberalization or reduction;
3. Calculate total base harvest as the number of base days multiplied by the base harvest rate;
4. Calculate the total expected new harvest as a result of the regulatory change as the new harvest rate multiplied by an adjusted number of days (to fine-tune the measure);
5. Calculate the new percent liberalization using the total base harvest and new expected total harvest.

An R function was developed to arrive at a new expected liberalization percentage based on baseline harvest rates, the liberalization expected from discrete regulatory changes and a proposed season adjustment.

In order to use this function, the average harvest rate by wave for Massachusetts summer flounder must be calculated; the average catch by wave, including the PSE associated with the average, are given below.

Wave	Mean harvest (lb)	PSE mean harvest
3	16,074.2	30.8
4	95,254.0	19.4
5	29,354.8	31.2

Assumptions and uncertainty

The calculations discussed here include the following assumptions:

- The availability and behavior assumptions noted above in the Creel Analysis section and Size Analysis section also apply here.
- Wave harvest rate. When the liberalizations are applied to the harvest rate and then summed over the potential open days during a wave the assumption is that the harvest is the same during each day of the wave. If the harvest rate during a wave is nonstationary (i.e., trending in one direction or the other) the expectations estimated by these analyses may not be met.

The PSEs associated with the mean harvest are given in the table above. All are sufficiently low so as to provide meaningful harvest rate information. For context, the baseline data by wave and associated PSEs are given below. Notably, the summer flounder PSEs by wave are consistently above 50 in Massachusetts; aggregating over years solves this issue (though assumes that the average harvest over the entire period is sufficiently predictive of future rates).

Year	Wave	Harvest (lb)	PSE
2018	3	27,627	57.5
2018	4	59,139	33.7
2018	5	55,774	49.3
2019	3	13,562	61.7
2019	4	116,076	32.2
2019	5	15,566	70.1
2020	3	9,114	41.2
2020	4	145,212	39.6
2020	5	21,262	56.7
2021	3	13,994	52.9
2021	4	60,589	32.5
2021	5	24,817	72.3

Proposed regulations

Six fish bag limit

The expected liberalization from moving to a 6 fish bag limit (see calculations above) using the model suggested by the Technical Committee review is 7.3%.

Creel	Expected Percent Change
1	-49.0
2	-27.2
3	-14.5
4	-5.5
5	1.5
6	7.3
7	12.1
8	16.3
9	20.0

This is lower than the allotted liberalization of 16.5%. Adjusting the season according to the methods above gives the following results for expected total liberalization given a May 23rd (status quo) opening and the closing date.

Season open	Season close	Percent liberalization
05-23	10-23	15.3
05-23	10-24	15.9
05-23	10-25	16.5
05-23	10-26	17.1
05-23	10-27	17.6

Massachusetts may opt to adjust the summer flounder opening day to coincide with the black sea bass opening day. Given a six fish bag and a May 21 opening, the season would follow as below:

Season open	Season close	Percent liberalization
05-21	10-22	15.4
05-21	10-23	16.0
05-21	10-24	16.5
05-21	10-25	17.1
05-21	10-26	17.7

Under the six fish bag limit scenario, Massachusetts requests a season that runs from May 23 to Oct 25 or May 21 to Oct 24 and retains a 17 in size limit.

16.5 inch size limit

The expected liberalization moving to a 16.5 inch minimum size is 21.94% (see Size Analysis section above). This is larger than the allotted 16.5% liberalization for Massachusetts. Adjusting the season according to the methods above gives the following results for expected total liberalization given the closing date.

Season open	Season close	Percent liberalization
05-23	09-27	14.1
05-23	09-28	14.8
05-23	09-29	15.4
05-23	09-30	16.1
05-23	10-1	16.7
05-23	10-2	17.4

Massachusetts may opt to adjust the summer flounder opening day to coincide with the black sea bass opening day. Given a 16.5 inch minimum size and a May 21 opening, the season would follow as below:

Season open	Season close	Percent liberalization
05-21	09-27	14.8
05-21	09-28	15.5
05-21	09-29	16.1
05-21	09-30	16.8
05-21	10-1	17.4
05-21	10-2	18.1

Under the 16.5 in size limit scenario, Massachusetts requests a season that runs from May 23 to Sep 30 or May 21 to Sep 29 and retains a five fish bag limit.

16 inch size limit

The expected liberalization moving to a 16 inch minimum size is 36.1 (see Size Analysis section above). This is larger than the allotted 16.5% liberalization for Massachusetts. Adjusting the season according to the methods above gives the following results for expected total liberalization given the closing date.

Season open	Season close	Percent liberalization
05-23	09-9	14.3
05-23	09-10	15.0
05-23	09-11	15.7
05-23	09-12	16.4
05-23	09-13	17.2
05-23	09-14	17.9

Massachusetts may opt to adjust the summer flounder opening day to coincide with the black sea bass opening day. Given a six fish bag and a May 21 opening, the season would follow as below:

Season open	Season close	Percent liberalization
05-21	09-9	15.1
05-21	09-10	15.8
05-21	09-11	16.5
05-21	09-12	17.2
05-21	09-13	18.0
05-21	09-14	18.7

Under the 16 in size limit scenario, Massachusetts requests a season that runs from May 23 to Sep 12 or May 21 to Sep 11 and retains a five fish bag limit.

16 inches and four fish

Two scenarios include measures designed both to liberalize and constrain harvest through a size decrease paired with a bag decrease. This analysis calculates a total percent reduction using the Technical Committee's equation that includes an interaction term. The total percent change is $p = p_1 + p_2 + p_1p_2$ where p (29.53%) is the estimated percent change, and p_1 (the percent change moving to a bag of 4, -4.83%) and p_2 (the percent change moving to a 16 inch limit, 36.1%) are the percent changes associated with the individual measures. Reducing the size limit to 16 inches and the bag limit to 4 fish results in the following season:

Season open	Season close	Percent liberalization
05-23	09-17	14.3
05-23	09-18	15.0
05-23	09-19	15.7
05-23	09-20	16.4
05-23	09-21	17.1
05-23	09-22	17.7

An alternate May 21 start date results in:

Season open	Season close	Percent liberalization
05-21	09-17	15.0
05-21	09-18	15.7
05-21	09-19	16.4
05-21	09-20	17.1
05-21	09-21	17.8
05-21	09-22	18.5

Under the 16 in size limit and four fish scenario, Massachusetts requests a season that runs from May 23 to Sep 20 or May 21 to Sep 19.

16.5 inches and four fish

Reducing the bag limit to four fish and the size limit to 16.5 inches (bag change p_1 above is -4.83% and size change p_2 is 21.94%, resulting in estimated percentage p of 16.05%) gives the following season:

Season open	Season close	Percent liberalization
05-23	10-7	14.8
05-23	10-8	15.4
05-23	10-9	16.1
05-23	10-10	16.7
05-23	10-11	17.3

An opening day on May 21st under the same bag and size measure results in the following season:

Season open	Season close	Percent liberalization
05-21	10-6	14.9
05-21	10-7	15.5
05-21	10-8	16.1
05-21	10-9	16.7
05-21	10-10	17.4

Under the 16.5 in size limit and four fish scenario, Massachusetts requests a season that runs from May 23 to Oct 9 or May 21 to Oct 8.

Implementation timeline

Massachusetts Division of Marine Fisheries will file emergency regulations in mid to late April. A review process will follow (approximately four weeks) and implementation is expected in early May, before any of the proposed season opening dates.



Rhode Island
Department of Environmental Management

DIVISION OF MARINE FISHERIES

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TO: Dustin Colson Leaning

FROM: Corinne Truesdale, RIDEM- Marine Fisheries

DATE: March 8, 2022

SUBJECT: Rhode Island recreational summer flounder management proposal, 2022

Please find Rhode Island's proposal for three potential management changes for the 2022 recreational fishing season. These options are proposed as means of achieving up to a 16.5% liberalization in recreational harvest compared with the 2018-2021 average. The code used to produce these estimates are supplied as a separate appendix; supporting data files will also be submitted.

Table 1. Summary of Proposed Measures for Rhode Island recreational summer flounder

	Size Limit	Bag Limit	Open Season
Status quo	19"*	6 fish/person	May 3 - Dec 31
Proposed Option 1	18.5"*	6 fish/person	May 3 – Dec 31
Proposed Option 2	19"*	7 fish/person	May 3 - Dec 31
Proposed Option 3	18"*	4 fish/person	May 3 – Dec 31

*two fish at 17" are allowed at seven special shore sites

The Rhode Island Division of Marine Fisheries’ public comment period for recreational finfish management ended on February 21st, 2022. Based on public comments received and on analyses conducted by RIDMF staff, **three potential changes to summer flounder recreational management are being submitted** for approval by the ASMFC Board and New England Fishery Management Council. Pending this approval, selection of final management measures will occur via the Rhode Island marine fisheries regulatory cycle process.

Currently, the Rhode Island recreational fishery is open from May 3rd through the end of the year, with a minimum size of 19 inches and a possession limit of six fish. There are seven locations, “special shore sites” where anglers may possess two fish at a minimum size of 17 inches.

Timeline for Implementation

Implementation of selected measures will occur before the start of the 2022 fishing season (status quo start = May 3).

MRIP Harvest and Discard Data

Rhode Island recreational fishers harvested an average of 138,195 summer flounder (522,408 lbs.) per year from 2018 to 2021. Average discards were 852,048 fish per year. Although the season is open through the end of December, no harvest was reported during Wave 6 during the 2018-2021 period.

Table 2. Rhode Island summer flounder harvest by year, 2018-2021. Please note that harvest estimates for 2021 are preliminary.

Year	Harvest, lbs (PSE)	Harvest, # fish (PSE)
2018	603,752 (23.3)	168,580 (25.1)
2019	837,107 (30.7)	213,592 (32.1)
2020	479,590 (30.8)	120,413 (33.5)
2021	169,182 (21.2)	50,195 (21.6)
Sum	2,089,631 (15.8)	552,780 (16.4)

Table 3. Rhode Island summer flounder discard estimates, 2018-2021. Estimate for 2021 is preliminary and does not include Wave 6.

Year	Discards, # fish (PSE)
2018	790,918 (23.5)
2019	1,319,352 (27.3)
2020	809,883 (20.1)
2021	488,039 (18.2)
Sum	3,408,192 (13.1)

Liberalization Estimation Methods and Results

Management Option 1: Reduction of minimum size from 19 to 18 inches

•**Data used:** APAIS head boat type 9 length data (for length frequencies of discards); MRIP data query for harvest and discards; raw MRIP length data to estimate length-weight relationship for conversion from discard numbers to weight

•**Sample size summary**

Data source	Quantity	Unit	Years of data used
APAIS type 9 data	2381	fish	2018-2021
MRIP length data	2300	fish	2018-2021

• **Method summary**

The percent liberalization achieved by reducing the minimum size was estimated using MRIP type 9 intercept data along with MRIP harvest and discard estimates from years 2018-2021. Wave 6 discard estimates for 2021 were projected based on the proportion of discards attributed to Wave 6 in pooled 2018-2020 data.

Type 9 length frequencies by half-inch bin were converted to proportion of discards in each half-inch bin. The proportion-by-number in each length bin was then applied to the total number of discarded fish (Type B2) to derive the total number of discarded fish by size bin.

A length-weight regression was fitted to raw MRIP size data from 2018-2021 (equation: $Wt = \exp(-8.846) * Lgth^{3.063}$, where Wt =weight of fish in kg and $Lgth$ = length of fish in inches). This relationship was used to convert the numbers of discarded fish in each size bin to total weight. To calculate the percent liberalization by weight, the weight of fish in the newly accessible size bin(s) was compared with the total harvest. For example, for a proposed minimum size of 18 inches (a reduction by 1 inch), the weight of discarded fish in the 18-18.5” and 18.5-19” size bins was summed and divided by the total harvest to get the percent increase in harvest under the new minimum size. Results of this minimum size analysis are provided in Table 4.

Table 4: Liberalization estimates for two reductions of the minimum size by 1 inch and ½ inch.

Minimum Size	Percent liberalization by weight	Percent liberalization by number
18"	19.0%	31.6%
18.5"	5.6%	8.8%

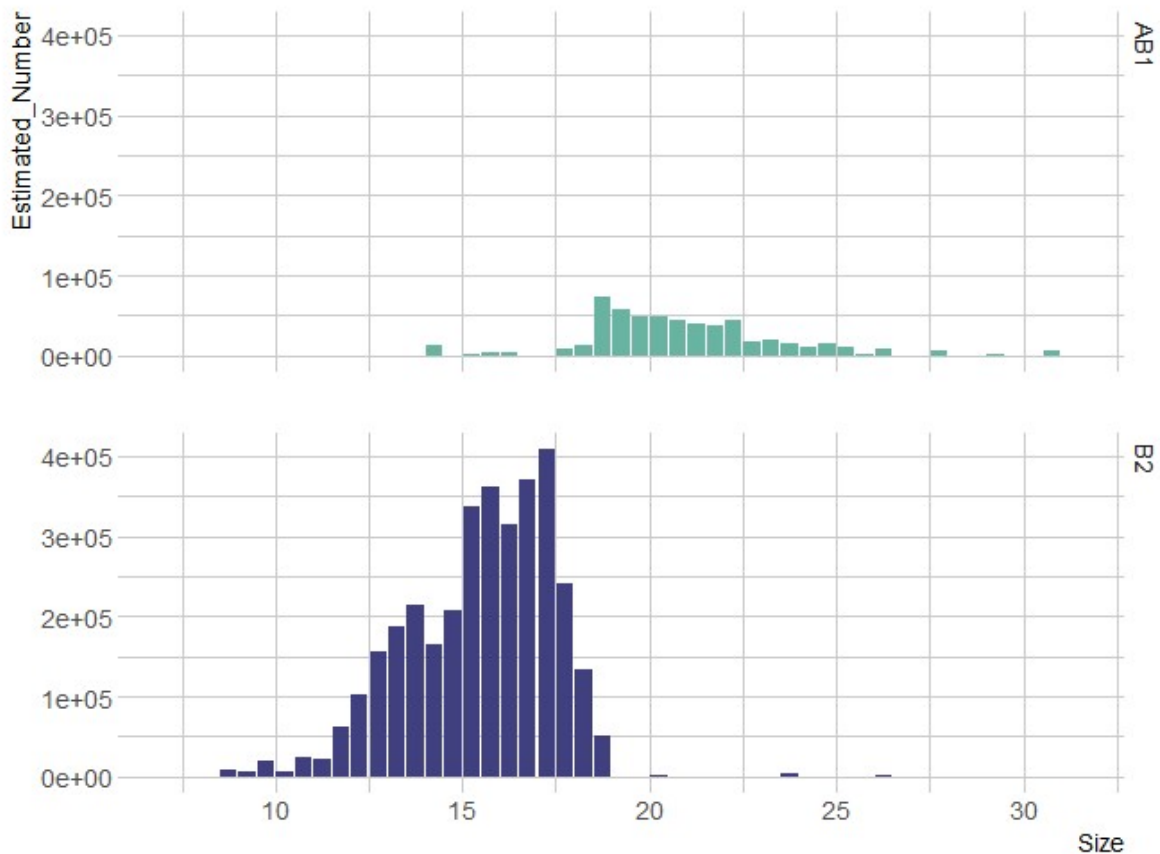


Figure 1. Histogram of harvested (AB1) and discarded (B2) summer flounder by half-inch size bin. Liberalization was estimated by calculating change in harvest if discards in newly accessible size bin (18-19”) would be converted to harvest.

Management Option 2: Increase bag limit from 6 to 7 fish

- **Data used:** Raw MRIP trip data for summer flounder, subsetted to trips where number of contributors equaled 1
- **Sample size summary**

Data source	Quantity	Unit	Years of data used
MRIP trip level data	16527	trips	2018-2021

• **Method summary**

Two approaches were taken to calculate the harvest liberalization resulting from a change in the bag limit. Both relied on calculations of the reduction in harvest that would result from reduction of the bag limit, which was carried out as described below using raw MRIP data (without sample

weights applied). The estimates are based on numbers of fish as trip-level weight data are not available.

Step 1: The baseline case was calculated by taking the total number of trips at each observed bag, multiplying each by the observed bag, and summing this value over all observed bag sizes to get the total baseline harvest.

Step 2: To calculate the modified harvest under a reduced bag limit, trips with observed bags greater than the new bag limit and less than the status quo bag limit were truncated so that the observed bag equaled the new bag limit. Trips above the status quo bag limit were considered noncompliant harvest and remained unmodified. Total harvest was calculated in the same manner as Step 1 and was compared to the baseline harvest to calculate the reduction. See Table 5 for reductions estimated for a range of changes in bag limit.

Table 5. Estimated reductions in harvest, in numbers of fish, for indicated changes in the bag limit for summer flounder.

New Bag Limit	Number of fish	Reduction percent
6	2215	0.0
5	2189	1.2
4	2145	3.2
3	2035	8.1
2	1802	18.7
1	1308	41.0

Approach 1

To evaluate the potential increase in harvest that would result from an increase in the bag limit for summer flounder, the assumption was made that any increase in harvest from increasing the bag limit by n fish would be the opposite of that estimated for a reduction of the bag limit by n fish. In this case, the bag limit reduction calculation indicates that harvest would be reduced by 1.17% if the bag limit were reduced from 6 to 5 fish. We thus assume that the change in harvest resulting from an increase in the bag limit from 6 to 7 fish would be an **increase of 1.17%**.

Approach 2

A log-linear regression was fit to the relationship between the bag limit and the percent reduction/liberalization of harvest (Figure 2). The coefficients from this relationship were used to predict the harvest increase that would result from an increase in the bag limit. This method estimated a **7.7% increase** in harvest.

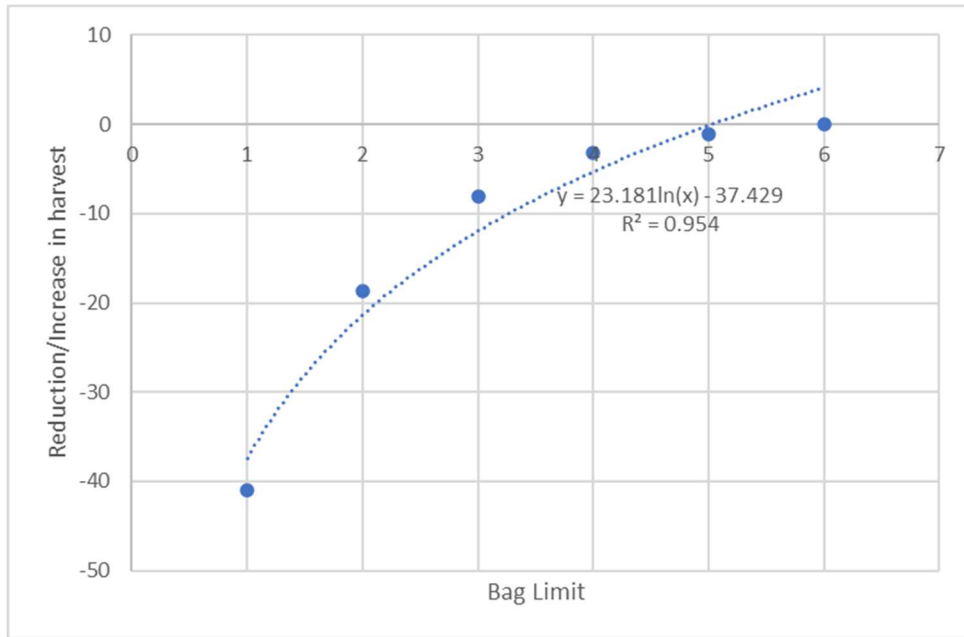


Figure 2. Log-linear regression of reduction/increase in summer flounder harvest on changes in bag limit

Management Option 3: Reduce minimum size by 1 inch, decrease bag limit to 4 fish

- This method uses the minimum size calculations from Option 1 and the bag reduction tables from Option 2. The interaction equation approved for use by the Technical Committee is used to calculate the combined liberalization.

This option pulls the reduction calculated from a change in the bag limit from 6 to 4 fish (Table 5) and the increase in harvest from a decrease in the minimum size to 18” (Table 4).

The estimated liberalization resulting from both measures is:

$$0.190 - 0.032 + (0.190 * -0.032) = \mathbf{15.2\%}$$

Rhode Island Management Options Summary

Status quo regulations		
Minimum Size	Season	Possession Limit
19"*	Jan 1 - May 2	Closed
	May 3 - Dec 31	6 fish/day

* At several special shore sites, 2 fish per angler may be harvested at 17"

Option 1: Decrease minimum size by 0.5 inch		
Minimum Size	Season	Possession Limit
18.5"*	Jan 1 - May 2	Closed
	May 3 - Dec 31	6 fish/day

* At several special shore sites, 2 fish per angler may be harvested at 17"

Option 1 liberalization estimates:	
By weight	5.6%
By number	8.8%

Option 2: Increase bag limit		
Minimum Size	Season	Possession Limit
19"*	Jan 1 - May 2	Closed
	May 3 - Dec 31	7 fish/day

* At several special shore sites, 2 fish per angler may be harvested at 17"

Option 2 liberalization estimates:	
Approach 1: Reduction equivalency	1.2%
Approach 2: Log-linear regression	7.7%

Option 3: Decrease minimum size by 1 inch, reduce bag		
Minimum Size	Season	Possession Limit
18"*	Jan 1 - May 2	Closed
	May 3 - Dec 31	4 fish/day

* At several special shore sites, 2 fish per angler may be harvested at 17"

Option 1 liberalization estimates:	
Using interaction equation:	15.2%



Department of
Environmental
Conservation

CT/NY Regional Summer Flounder Proposal

Overview

The New York Department of Environmental Conservation’s Division of Marine Resources and the Connecticut Department of Energy and Environmental Protection’s Fisheries Division are submitting the following regional proposals for approval for the summer flounder recreational fishery:

Summary of Proposed Measures:

Connecticut and New York Proposed recreational fishery measures for 2022

Options	Region	Minimum Size	Possession Limit	Open Season	Percent Liberalization
Status Quo	CT/NY	19"	4 Fish	May 4 - September 30	0.0%
1	CT/NY	18"	3 Fish	May 4 - September 29	16.2%
2	CT/NY	18.5"	5 Fish	May 4 - September 30	15.0%
3	CT/NY	18.5"	4 Fish	May 1 - October 9	16.5%

Connecticut and New York are proposing three potential options for the 2022 summer flounder recreational fishery. All of the measures are within the required 16.5% liberalization allowed by the ASMFC Summer Flounder, Scup and Black Sea Bass Management Board. Option 1 is designed to reduce the minimum size by 1” to reduce discard mortality. Since reducing the minimum size alone is a 20.5% liberalization, both the possession limit and season were restricted to fall within the allowed liberalization. Options 2 and 3 both reduce the minimum size by .5” and additionally liberalize the number of open days in the season or the possession limit. Changes to status quo measures are indicated in blue cells in the table above.

Liberalization Data Summary:

Data from the approved sources and standards set forth by the TC were utilized to develop these regional proposals. Below is a summary of the data utilized and the pooled PSE values. Size limit, possession limit and season analysis are described below.

Size Limit Analysis

MRIP Type 9 data was utilized to develop proportions of discards by half inch length bins. These proportions were expanded using the MRIP B2 (released alive) data for the years 2018 – 2021 within the CT/NY region. Conversion from numbers of fish to pounds of fish was achieved by utilizing the following length/weight equation provided by the Mid-Atlantic Fishery Management Council Staff:

$$Wkg = a * Lcm^b \quad a = 3.56E-06 \quad b = 3.278$$

Liberalization	1" decrease	.5" decrease
Pounds	2,065,165	864,015
Percent	20.54%	8.59%

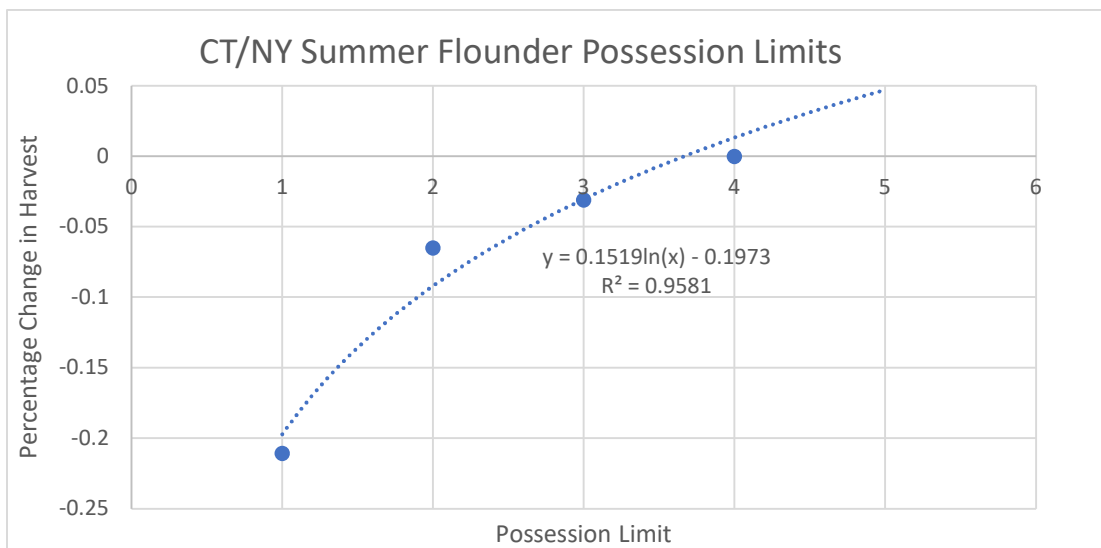
Possession Limit Analysis

Pooled New York and Connecticut 2018 – 2021 MRIP trip and catch data was utilized to calculate both liberalizations and reductions associated with changes to the possession limit. To estimate the numbers of fish kept at larger possession limits, we fit a logarithmic trendline to our data for the current possession limit and the estimates for a reduced possession limit. This trendline equation was used to generate percentages for the liberalizations. All options assume that any non-compliant harvest (harvest > possession limit) will continue in 2022. Table 2 provides the expected percent change in harvest for each of the options presented.

Table 1 CT/NY Possession Limit Changes to Harvest

Possession Limit	% Change in Harvest
6	7.49%
5	4.72%
4	0.00%
3	-3.08%
2	-6.49%
1	-21.08%

Figure 1. Logarithmic fit to determine any potential increase in the creel limit.



Season Days Analysis

Connecticut and New York pooled 2018 – 2021 MRIP Harvest (Type A + B1) data in pounds was utilized to generate harvest per day for each wave. Using the pooled harvest per day we determined percent liberalizations and reductions by adding or removing days. The MRIP PSE associated with the full pooled wave data was determined and is included in the table below.

Tables 2. CT/NY Season Days from Pooled MRIP Harvest Data

Pooled Wave Data	Sum of Days	Sum of Pooled Harvest lbs	Pooled Harvest per Day	PSE
MAY/JUNE	61	5,425,910	88,949	9.98%
JULY/AUGUST	62	3,089,551	49,831	20.62%
SEPTEMBER/OCTOBER	30	1,537,747	51,258	24.05%
Total		10,053,208		

Table 3. Results of the Seasonal Analysis used in the Proposed Options.

Proposed Seasons	Difference in Days	Additional Pooled Harvest lbs	% Change
May 1 - October 9	12	728,172	7.24%
May 4 - Sept 29	-1	-51,258	-0.51%

Interaction Analysis

Since percentages were used to do the analysis the interaction calculation was required to determine total liberalization percentages. A table of liberalization percentages was generated using the following equation:

$$Total\ Liberalization = X\% + Y\% + (X\% * Y\%)$$

Table 4. CT/NY Total Liberalization Percentages

	Interaction	
	.5" decrease	1" decrease
3 fish	5.25%	16.83%
4 fish	8.59%	20.54%
5 fish	14.96%	27.61%
12 Days added	16.46%	
1 day lost and 3 fish		16.23%

Timeline for Implementation

Both the states of Connecticut and New York will be receiving feedback from the public on the 2022 summer flounder regional options using the following methods and dates:

- New York is holding a public meeting on March 8th, 2022 to get feedback from the NY Marine Resource Advisory Council and the public on the above options.
- Connecticut is soliciting feedback from the options from the CT Marine Advisory Group (MAG) currently via email.
- Connecticut is holding a public hearing on March 1st 2022.



NEW JERSEY DIVISION OF
Fish and Wildlife
P.O. Box 400
Trenton, NJ 08625-0400
David Golden, Director

Memorandum

TO: Dustin Leaning, FMP Coordinator
Atlantic States Marine Fisheries Commission

FROM: Peter Clarke, Fisheries Biologist
New Jersey Bureau of Marine Fisheries

DATE: February 24, 2022

SUBJECT: New Jersey 2022 Summer Flounder Recreational Fishery Management Proposal

Included are the New Jersey proposed management examples for the 2022 recreational summer flounder fishery. Under the Board/Council approved conservation equivalency plan, adjustments to season length, size limits, and possession limits are proposed as viable management options by the State of New Jersey to limit the recreational harvest of summer flounder to a 16.5 percent liberalization compared to the average harvest from 2018-2021. Tables describing the adjustments are attached while an excel spreadsheet has been provided to the ASMFC Summer Flounder, Scup, Black Sea Bass Technical Committee for review of the analysis methods used to calculate adjustments.

Background:

At the December 2021 joint ASMFC/MAFMC meeting, the Board and Council approved a 16.5 percent liberalization for the 2022 recreational summer flounder fishery. The Board determined that states can make adjustments to season length, size limits, and possession limits. For the last 4 years including 2018, 2019, 2020, and 2021, New Jersey's recreational summer flounder regulations allowed a 3 fish possession limit, an 18-inch minimum size limit, and a 121-day open season. New Jersey is submitting methodology that adjusts these three variables used to constrain harvest to a specified Recreational Harvest Limit (RHL) for the 2022 fishing year.

Methodology:

During the last 4 years from 2018-2021, the average harvest by New Jersey anglers was 3,876,690 pounds utilizing measures including an 18-inch size limit, 3 fish possession limit, and a season consisting of 121 total open days. New Jersey's harvest limit for 2022 is 4,516,344

pounds representing a 16.5 percent liberalization compared to the previous four-year average. As such, all calculations are based on the four-year average of harvest. MRIP estimates from 2018-2021 were utilized for three variables including size, season, and possession limit.

Size:

To calculate changes to size, a length frequency distribution analysis including Type A and Type 9 data were used. These data types are observed measured lengths and were then expanded to represent all caught fish. All length data is recorded in numbers at size therefore data was converted to pounds at size to remain standardized with the rest of the analysis. Length data was determined using half inch length bins and used to evaluate reducing or liberalizing the minimum size from 18 inches to 17.5 inches, 17 inches, and a slot size of 17-17.99 inches (Table 1).

Season:

Seasonal changes were calculated using wave specific harvest in pounds of fish which provided data to conduct daily adjustments to the season through average daily harvest rates. By using the average 4-year harvest by wave divided by the average number of days open in each wave, the effect of increasing or decreasing the season length on the overall annual harvest was determined (Table 2).

Possession:

Possession limits were calculated by merging MRIP catch and trip data using the “ID Code” field to join the trip data containing the number of anglers associated with each trip with the catch data containing the number of fish harvested on each trip. Only records with one contributing angler were used minimizing the uncertainty surrounding the individual anglers catch. All years were pooled together to create a bag table describing number of fish harvested on each trip cumulatively during the year. Since liberalizing possession limits is an option for the 2022 fishing year, the rate of increase was calculated by plotting the observed harvest and applying a curvilinear equation determining the liberalized possession limit (Table 3).

Proposed Measures

The proposed examples for New Jersey’s 2022 recreational summer flounder fishery are found in table 4 below. In addition, New Jersey will keep special regulations the same as in previous years for Delaware Bay with a 17-inch minimum size limit with a 3 fish possession limit while our shore site on Island Beach State Park will remain at a 16-inch minimum size limit and 2 fish possession. Both special locations will follow the same New Jersey coastwide season. These measures presented are examples only and should not be considered final proposed options. They represent examples for reference to review methodology and may differ from the final options adopted by the State before final implementation.

Table 1. New Jersey Size Tables. Data include 2018-2021 cumulative length data from MRIP A, B1, B2, and Type 9.

NJ MRIP A+B1+B2 Size Tables					
MRIP A_B1_B2	weight (lbs)	MRIP A_B1_B2	weight (lbs)	MRIP A_B1_B2	weight (lbs)
17 and over	17,108,248	17.5 and over	15,121,426	17-17.99	3,812,571
18 and over	13,295,677	18 and over	13,295,677	18 and over	13,295,677
conv rate	1.287	conv rate	1.137	conv rate	0.287

Table 2. A. Four year Average Harvest. B. Average days open per wave. C. Average daily harvest rate. D. Four year average daily harvest rate and average annual harvest.

Table 2.A

Year	Wave 3	Wave 4	Wave 5	Grand Total
2018	804,535	2,120,588	229,418	3,154,541
2019	589,951	2,188,436	450,670	3,229,057
2020	830,128	4,324,743	336,810	5,491,681
2021	775,123	2,337,674	498,539	3,611,336
Average Harvest	749,934	2,742,860	378,859	3,871,654

Table 2.B

Days Open	Wave 3	Wave 4	Wave 5	Total
Days Open 2018	37	62	22	121
Days Open 2019	38	62	21	121
Days Open 2020	40	62	19	121
Days Open 2021	40	62	19	121
Average Open Days	39	62	20	121

Table 2.C

Daily Rate	Wave 3	Wave 4	Wave 5
2018 Daily Rate	21,744	34,203	10,428
2019 Daily Rate	15,525	35,297	21,460
2020 Daily Rate	20,753	69,754	17,727
2021 Daily Rate	19,378	37,704	26,239
Average Daily Catch Rate	19,350	44,240	18,964

Table 2.D

Days Open	Wave 3	Wave 4	Wave 5	4 year Average Harvest
Average Days Open	39	62	20	
4 year Average Harvest	749,817	2,742,860	384,012	3,876,690

Table 3. New Jersey Possession Limits.

Action	Bag	Multiplier	% Change
Liberalization	4	1.077033622	7.703362185
Status Quo	3	1	0
Reduction 2	2	0.93440367	-6.5
Reduction 1	1	0.751834862	-24.8

Table 4. New Jersey Proposed 2022 Recreational Summer Flounder Examples.

Example	Size	Possession	Days Open Wave 3	Days Open Wave 4	Days Open Wave 5	Total Open Days	Harvest	Percent Change
Status Quo	18	3	39	62	20	121	3,876,787	0.0
1	18	3	49	62	43	154	4,506,450	16.2
2	18	4	42	62	33	137	4,503,469	16.2
3	17.5	3	41	62	23	126	4,517,860	16.5
4	17	3	30	62	9	101	4,495,960	15.9
5	2 fish 17 to 17.99 and 1 fish 18 or greater	2 / 1	50	62	38	150	4,518,616	16.5



COMMONWEALTH of VIRGINIA

Marine Resources Commission
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Andrew R. Wheeler
Secretary of Natural and Historic
Resources

Justin D. Worrell
Acting Commissioner

February 25, 2022

TO: ASMFC Summer Flounder, Scup, and Black Sea Bass Technical Committee

FROM: Alexa Galván, Virginia Marine Resources Commission

SUBJECT: Delaware, Maryland, and Virginia proposal for 2022 summer flounder recreational management

Delaware-Maryland-Virginia Summer Flounder Management for 2022

Under the provisions of Addendum XXVIII, Delaware, Maryland, and Virginia will implement one of the following recreational fishing measures in the southern region:

Option	Size Limit	Bag Limit	Season	Expected Harvest Change
Status Quo	16.5" minimum	4 per person	January 1 – December 31	0%
Option 1	16" minimum	4 per person	January 1 – December 31	+9%

An Agency of the Natural and Historic Resources Secretariat

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Recreational Measures and Harvest for Delaware, Maryland, and Virginia from 2018-2021

Year	Size Limit	Bag Limit	Season	State	Harvest (lb)	PSE
2018	16.5"	4	Jan 1 – Dec 31	DE	205,380	16.8
				MD	121,760	35.7
				VA	345,064	26
2019	16.5"	4	Jan 1 – Dec 31	DE	224,528	19.1
				MD	206,373	32.6
				VA	368,955	24.1
2020	16.5"	4	Jan 1 – Dec 31	DE	534,247	25.2
				MD	187,228	24.9
				VA	381,165	21.9
2021	16.5"	4	Jan 1 – Dec 31	DE	272,703	17.2
				MD	154,683	22.1
				VA	623,256	20.7

Methods

Minimum Size

- Harvest liberalization was calculated using pooled MRIP data (harvest and Type 9 discard) from Delaware, Maryland, and Virginia from 2018-2021. These four years were identified by the Technical Committee and approved by the Board as being the most recent years with consistent management measures (see table above).
- Discard length frequency was calculated from Type 9 headboat observations by summing the number of fish discarded in half inch length bins, dividing each length bin by the total observed discards for a percent of discards in each length bin, then multiplying each percent by the total number of discards over the four year period. When expanded, the number of discards between 16.0 and 16.5 inches over the last four years was 190,006.
- The average fish weight in each half inch length bin was calculated from MRIP harvest microdata. The average weight of a harvested fish between 16.0 and 16.5 inches was 1.67 pounds.
- The percent liberalization was calculated by the following equation:

$$\begin{aligned}
 & \% \text{ Liberalization} \\
 &= \frac{\text{All landed fish}(lb) + (\text{Discarded fish between 16.0-16.5"} * \text{Average weight})}{\text{All landed fish}(lb)} \\
 &= \frac{190,006 \times 1.67}{3,625,342} = 8.74\%
 \end{aligned}$$



The Commonwealth of Massachusetts

Division of Marine Fisheries

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Director

Massachusetts Black Sea Bass 2022 Recreational Fishery Proposal

Massachusetts staff used the black sea bass coastwide reduction tables, developed by the Summer Flounder Scup and Black Sea Bass Technical Committee, to develop a suite of proposals to submit for approval. The only change that was made to the Excel table was to change the number of Wave 3 and Wave 5 days during 2020 (i.e., cells B19 and D19) to account for the season shift for the for-hire fleet during 2020. During 2020 the private/shore sector was open for 44 Wave 3 days and 8 Wave 5 days while the for-hire sector was open for 37 Wave 3 days and 21 Wave 5 days. The number of Wave 3 or 5 equivalent days in 2020 integrated over modes was calculated using a weighted mean approach where weights were assigned to the for-hire and private/shore number of days. The weights were the total number of trips in the private/shore and for-hire modes that landed black sea bass. The number of private/shore trips that were estimated to have harvested black sea bass, compiled using an MRIP Directed Trips query (A+B1 harvest), was 93,361 and 14,360 for Waves 3 and 5, respectively, and the number of for-hire Wave 5 trips was 2,136 and 1,124. This resulted in a weighted mean estimate of 43.84 Wave 3 days and 10.25 Wave 5 days during 2020.

The analyses used black sea bass data that adapted estimates that were considered by the Technical Committee's Thompson Tau method to be outliers. The outlier identification was performed at the scale of year-state-mode-wave. For context, the original (including the PSE) and revised annual estimates in lb are provided in Table 1 and the wave scale estimates are given in Table 2.

Table 1. MRIP estimates as of 2/25/2022 in lb and associated PSEs as well as annual totals under the Thompson Tau revisions.

Year	MRIP Estimate	PSE	Revised Estimate
2018	1,818,682	23.3	1,819,668
2019	1,361,110	21.5	1,191,492
2020	1,537,990	23.7	1,532,170
2021	2,610,537	24.0	2,125,914

Table 2. MRIP estimates as of 2/25/2022 by wave in lb and associated PSEs as well as wave totals under the Thompson Tau revisions. The pooled average revised estimates were used in the Technical Committee reduction tables.

Year	Wave	MRIP Estimate	PSE	Revised Estimate
2018	3	1,517,419	27.6	1,517,418
	4	213,140	29.1	214,127
	5	88,123	42.6	88,123
2019	3	829,797	32.9	714,641
	4	361,223	21.0	306,654
	5	170,091	43.0	170,195
2020	3	1,046,065	33.5	1063,255
	4	373,458	23.2	350,446
	5	118,467	36.1	118,467

2021	3	2,327,981	26.4	1,877,787
	4	198,509	51.0	198,510
	5	84,047	74.9	49,616
Pooled Avg	3	1,430,316	15.1	1,293,275
	4	286,583	14.4	267,434
	5	115,182	24.3	106,600

Massachusetts has a suite of options for approval by the Board. Each of the options was produced using the coastwide reduction tables in Excel that were developed by the Technical Committee.

Table 3. Regulatory options under consideration by Massachusetts for its 2022 black sea bass season. Percent reductions from table developed by the Technical Committee are given in parentheses.

Bag Limit	<u>Wave 3</u>		<u>5 fish</u>				<u>4 fish</u>				
	<u>Wave 4</u>	<u>5 fish</u>	<u>5 fish</u>	<u>3 fish</u>	<u>3 fish</u>	<u>2 fish</u>	<u>4 fish</u>	<u>4 fish</u>	<u>2 fish</u>	<u>1 fish</u>	<u>3 fish</u>
	<u>Wave 5</u>		<u>3 fish</u>	<u>3 fish</u>	<u>1 fish</u>	<u>2 fish</u>		<u>2 fish</u>	<u>2 fish</u>	<u>1 fish</u>	
Season Start Date	May 18 (Wed)	July 22 (20.8)	July 22 (20.8)	July 27 (20.7)	July 27 (20.7)	Aug 1 (20.8)	Aug 19 (20.8)	Aug 19 (20.8)	Sept 2 (20.8)	Sept 13 (20.9)	Sept 12 (21.1)
	May 21 (Sat)	Aug 13 (20.8)	Aug 13 (20.8)	Aug 23 (20.7)	Aug 23 (20.7)	Sept 1 (20.8)	Sept 4 (20.7)	Sept 5 (20.9)	Sept 13 (20.9)	Sept 29 (20.9)	Sept 21 (20.7)
	May 25 (Wed)	Sept 4 (21.0)	Sept 5 (20.9)	Sept 10 (20.9)	Sept 18 (20.7)	Sept 17 (20.8)	Sept 15 (20.7)	Sept 20 (20.8)	Sept 28 (20.9)	Oct 21 (20.7)	Oct 2 (20.7)

Implementation timeline

Massachusetts Division of Marine Fisheries will file emergency regulations in mid to late April. A review process will follow (approximately four weeks) and implementation is expected in early May, before any of the proposed season opening dates.



Rhode Island
Department of Environmental Management

DIVISION OF MARINE FISHERIES

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TO: Dustin Colson Leaning

FROM: Corinne Truesdale, RIDEM- Marine Fisheries

DATE: March 8, 2022

SUBJECT: Rhode Island recreational black sea bass management proposals, 2022

Please find Rhode Island's proposed management changes for the 2022 recreational black sea bass fishing season as part of the northern region's proposal. These options are proposed as means of achieving at least a 20.7% reduction in recreational harvest compared with the 2018-2021 average. Reduction estimates, provided in the management options summary, were calculated using approved coastwide reduction tables.

The Rhode Island Division of Marine Fisheries is submitting three 2022 black sea bass proposals for the consideration of the TC, Board, and Council as part of the northern region’s management proposal for 2022. The Rhode Island Division of Marine Fisheries’ public comment period for recreational finfish management ended on February 21st, 2022. Based on public comments received, the following potential changes to black sea bass recreational management are being proposed for 2022. These are being submitted for approval by the Technical Committee, ASMFC Board, and New England Fishery Management Council. Pending this approval, selection of final management measures will occur via the Rhode Island marine fisheries regulatory cycle process.

Currently, the Rhode Island recreational fishery is open from June 24th through the end of the year, with a minimum size of 15 inches and a possession limit of 3 fish during waves 3 and 4 and 7 fish during waves 5 and 5.

Table 1. Rhode Island recreational fishery management proposals

Option	Minimum Size	Season	Possession Limit
Status Quo	15"	Jan 1 – Jun 23	Closed
		Jun 24 - Aug 31	3 fish/day
		Sept 1 - Dec 31	7 fish/day
Option 1	16"	Jan 1 - May 21	Closed
		May 22 - Aug 31	2 fish/day
		Sept 1 - Dec 31	3 fish/day
Option 2- Private	16"	Jan 1 - May 21	Closed
		May 22 - Aug 31	2 fish/day
		Sept 1 - Dec 31	3 fish/day
Option 2- For Hire	16"	Jan 1 - June 25	Closed
		June 26 - Aug 31	2 fish/day
		Sept 1 - Dec 31	6 fish/day
Option 3	16"	Jan 1 - June 11	Closed
		June 12 - Aug 31	2 fish/day
		Sept 1 - Dec 31	4 fish/day

Harvest Estimates

Table 2. Harvest estimates (lbs) and PSEs for black sea bass, all modes combined.

Year	Wave 3	Wave 4	Wave 5	Wave 6
2018	9,093 (36.4)	780,219 (24.2)	839,235 (19.5)	327 (35)
2019	15,760 (63.5)	761,043 (20.6)	337,491 (22.3)	110,764 (79.8)
2020	39,286 (74.5)	588,020 (18.7)	647,217 (25.6)	206,258 (106.4)
2021	27,606 (43.5)	515,200 (17.2)	479,346 (22.8)	NA
Pooled by Wave	91,745 (36.3)	2,644,482 (10.7)	2,303,289 (11.6)	317,349 (99.4)

One of the proposed management options presented in this document has mode-specific regulations, so harvest estimates were calculated for the party/charter fleet and for private/shore/rental mode separately:

Table 3. Harvest estimates (lbs) and PSEs for black sea bass party and charter modes combined.

Year	Wave 3	Wave 4	Wave 5	Wave 6
2018	4,994 (20.8)	41,304 (12.8)	9,058 (23.4)	327 (35.0)
2019	415 (58.0)	17,466 (29.4)	6,309 (20.8)	460 (37.3)
2020	4,470 (50.3)	52,207 (11.5)	43,351 (25.7)	3,322 (44.8)
2021	1,011 (46.8)	44,452 (16.2)	20,965 (20.7)	NA
Pooled by wave	10,890 (23.3)	155,429 (7.7)	79,683 (15.3)	4,109 (35.6)

Table 4. Harvest estimates (lbs) and PSEs for black sea bass private, rental and shore modes combined.

Year	Wave 3	Wave 4	Wave 5	Wave 6
2018	4,099 (76.7)	738,915 (25.6)	80,177 (19.6)	NA
2019	15,345 (65.2)	743,577 (21.1)	331,182 (22.7)	110,304 (80.2)
2020	34,817 (83.9)	535,825 (20.5)	603,867 (27.4)	202,936 (108.1)
2021	26,595 (45.1)	470,747 (18.7)	458,381 (23.9)	NA
Pooled by wave	80,856 (41.2)	2,489,051 (11.4)	2,223,607 (12.0)	313,240 (75.5)

Party and charter modes accounted for about 5% of the black sea bass harvest by weight from 2018 to 2021.

Table 5. Harvest estimates (A+B1) in lbs by wave and year, with associated PSE values and revised estimates from Thompson Tau outlier identification and data smoothing.

Year	Wave	MRIP Estimate	PSE	Revised Estimate
2018	3	9093	36.4	12371
	4	780219	24.2	780219
	5	839235	19.5	761930
	6	327	35	291
2019	3	15760	63.5	16098
	4	761043	20.6	767094
	5	337491	22.3	297171
2020	6	110764	79.8	110764
	3	39287	74.5	36964
	4	588019	18.7	588019
	5	647218	25.6	627565
2021	6	206258	106.4	206258
	3	27606	43.5	27004
	4	515199	17.2	372342
	5	479346	22	479346
	6	110998	NA	110998
	Sum	5467863		5194435

Management proposal summaries

The Rhode Island Division of Marine Fisheries is considering three options for changes to its black sea bass regulations to achieve at least a 20.7% reduction in harvest using the approved coastwide reduction estimate tables. These options are summarized below:

Option 1. This option increases the minimum size by one inch, reduces the bag limit across all waves, and changes the season start date to begin on May 21st instead of June 24th. The earlier spring season was requested by recreational anglers who want to be able to harvest sea bass in the spring months. This option is calculated to achieve a **reduction of 20.8%**.

Option 1		
Minimum Size	Season	Possession Limit
16"	Jan 1 - May 21	Closed
	May 22 - Aug 31	2 fish/day
	Sept 1 - Dec 31	3 fish/day

Option 2. This option is a split mode proposal with different regulations for party/charter anglers and private/shore/rental anglers. The split was requested by industry members to allow the for-hire fleet to have access to the fall fishery with higher bag limits while still allow the private modes to have a spring fishing season. The private/shore/rental regulations for this proposal mirror those from Option 1. This option is calculated to achieve a **reduction of 22.9% in the private/shore/rental mode** and a **reduction of 20.8% in the for-hire fleet.**

Option 2		
Private/Shore/Rental mode		
Minimum Size	Season	Possession Limit
16"	Jan 1 - May 21	Closed
	May 22 - Aug 31	2 fish/day
	Sept 1 - Dec 31	3 fish/day
Party/Charter mode		
Minimum Size	Season	Possession Limit
16"	Jan 1 - June 25	Closed
	June 26 - Aug 31	2 fish/day
	Sept 1 - Dec 31	6 fish/day

Option 3. This option increases the minimum size by one inch, reduces the bag limit across all waves, and changes the season start date from June 24th to June 12th. Option 3 differs from Option 1 in terms of the tradeoff between the fall bag limit and the spring start date, providing an intermediate option between status quo and Option 1. This option is calculated to achieve a **reduction of 20.7%.**

Option 3		
Minimum Size	Season	Possession Limit
16"	Jan 1 - June 11	Closed
	June 12 - Aug 31	2 fish/day
	Sept 1 - Dec 31	4 fish/day

To: ASMFC Summer flounder, Scup and Black Sea Bass Technical Committee
 From: Greg Wojcik, CT DEEP Marine Fisheries Division
 Date: March 1, 2022

2022 Connecticut Recreational Black Sea Bass Fishery Options

The Connecticut Department of Energy and Environmental Protection is submitting its proposal for 2022 recreational black sea bass measures. This is a portion of the northern regions' (MA-NY) management proposal.

Connecticut staff methodology used the coastwide spreadsheet created by the Summer Flounder, Scup and Black Sea bass Technical Committee to determine the three options below (Table 1) for consideration for the 2022 recreational season. Since Connecticut had split regulations by both wave and mode in during the years 2018 - 2021, we ensured the combined harvest of all modes and waves was above the 20.7% required reduction. All three options have a proposed increase in minimum size from 15 inches to 16 inches. Since an increase in minimum size by 1 inch alone is not sufficient to meet the required 20.7% reduction, both season length and possession limit reductions were also evaluated. Option 1 shortens the season on the backend while Option 2 shortens the season on the front end. Option 3 lowers the creel limit from 5 to 3 fish.

The PSEs from the MRIP harvest estimates by wave and mode were determined and are provided in Table 2. Since the data were pooled over the four-year period, the estimate of PSEs in Table 2 does not take into consideration the smoothing process that was done by the Technical Committee.

Table 1. Connecticut's Options to meet a 20.7% reduction in Harvest

Option	State	Possession Limit	Open Season	Minimum Size	Percent Reduction
Status Quo	Connecticut (Private & Shore)	5 fish	May 19-December 31	15	0.0%
	CT (Party and Charter Vessels)	5 fish	May 19-August 31		
		7 fish	September 1-December 31		
1	Connecticut (Private & Shore)	5 fish	May 19-December 1	16	20.8%
	CT (Party and Charter Vessels)	5 fish	May 19-August 31		
		7 fish	September 1-December 31		
2	Connecticut (Private & Shore)	5 fish	June 10-December 31	16	20.8%
	CT (Party and Charter Vessels)	5 fish	June 10-August 31		
		7 fish	September 1-December 31		
3	Connecticut (Private & Shore)	3 fish	May 15-December 31	16	20.8%
	CT (Party and Charter Vessels)	5 fish	May 15-August 31		
		7 fish	September 1-December 31		

Table 2 Pooled 2018 – 2022 MRIP harvest (lbs) and PSE's

Wave	Party Charter	Private and Shore
3	69,689 (25.4%)	1,098,392 (35.0%)
4	139,528 (48.1%)	1,581,122 (11.0%)
5	90,637 (14.6%)	1,671,375 (39.3%)
6	12,103 (78.6%)	392,994 (63.1%)

Implementation Timeline

- The Connecticut Marine Fisheries Program held a Public Informational Meeting on March 1, 2022, as well as a Marine Advisory Group (MAG) meeting on February 23, 2022, to collect feedback on the options.
- Connecticut will have the new 2022 black sea bass regulations in place through the declaratory process prior to the opening of the season.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Marine Resources

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To: ASMFC Summer Flounder, Scup, and Black Sea Bass Technical Committee
 From: Rachel Sysak, NYSDEC Division of Marine Resources
 Date: March 9, 2022

New York Black Sea Bass Proposals

Overview

The New York State Department of Environmental Conservation’s Division of Marine Resources is part of the northern management region and is submitting the following as part of the regional proposals for approval for the black sea bass recreational fishery:

Summary of Proposed Measures:

New York is proposing three potential options for the 2022 black sea bass recreational fishery. All of the measures are above the required 20.7% reduction required by the ASMFC Summer Flounder, Scup and Black Sea Bass Management Board. Option 1 is designed to increase the minimum size by one inch and decrease the possession limit during the second half of the open season. Options 2 and 3 both reduce the number of open season days while also implementing the one inch size increase. Changes to status quo measures are indicated in green cells in the table below.

Table 1. New York Proposed black sea bass recreational fishery measures for 2022

Option	State	Possession Limit	Open Season	Minimum Size	Percent Reduction
Status Quo	NY	3 Fish	Jun 23 - Aug 31	15"	0.0%
		7 Fish	Sep 1 - Dec 31		
1	NY	3 Fish	Jun 23 - Aug 31	16"	-20.7%
		6 Fish	Sep 1 - Dec 31		
2	NY	3 Fish	Jun 24 - Aug 31	16"	-20.7%
		7 Fish	Sep 1 - Dec 25		
3	NY	3 Fish	Jun 28 - Aug 31	16"	-20.9%
		7 Fish	Sep 1 - Dec 31		

Reduction Data Summary:

Data from the standardized coast-wide reduction spreadsheet provided by the TC was utilized to develop this proposal. Below is a summary of the pooled PSE values associated with the pooled harvest data that contributed to this dataset. It does not include PSE values associated with the outlier smoothing method utilized by the TC.

Table 2. NY Pooled MRIP Harvest Data

Pooled Wave Data	Sum of Pooled Harvest lbs	Average PSE
Wave 3	500,107	37.55%
Wave 4	4,015,067	19.43%
Wave 5	2,897,432	24.03%
Wave 6	2,136,433	33.43%
Total	9,549,097	

Timeline for Implementation

New York will be holding a public meeting on the 2022 black sea bass options on March 8th, 2022 to get feedback from the NY Marine Resource Advisory Council and the public on the above options.



NEW JERSEY DIVISION OF
Fish and Wildlife
P.O. Box 400
Trenton, NJ 08625-0400
David Golden, Director

Memorandum

TO: Dustin Leaning, FMP Coordinator
Atlantic States Marine Fisheries Commission

FROM: Peter Clarke, Fisheries Biologist
New Jersey Bureau of Marine Fisheries

DATE: Revised - March 8, 2022

SUBJECT: New Jersey Black Sea Bass Recreational Fishery Management Proposal for 2022

Attached are New Jersey's options to manage its 2022 recreational black sea bass fishery. Options may contain adjustments to season length, possession limits, and size limits. All options presented satisfy the requirements of regional management under the Atlantic States Marine Fisheries Commission (ASMFC) Addendum XXXII. A spreadsheet is included with calculations used to develop changes in all three variables of season length, size, and possession limits. These calculations have been provided to the ASMFC summer flounder, scup, black sea bass technical committee for review.

Background:

In December 2021, the Atlantic States Marine Fisheries Commission Summer Flounder, Scup, and Black Sea Bass Management Board approved a 28% reduction in coastwide black sea bass harvest compared to the 2018-2021 average. The Commission's Summer Flounder, Scup, and Black Sea Bass Technical Committee met several times in January 2022 to consider methodologies for identifying and smoothing outlier recreational harvest estimates at the state, wave, mode, and year level for 2018-2021 as well as establishing methodology for states to use when developing regional proposals for recreational black sea bass measures. As a result of this analysis, the TC recommended a modified coastwide harvest reduction target between 20.7% and 26.8% as viable options for managing the 2022 black sea bass recreational fishery. At the ASMFC meeting in February 2022, the ASMFC Summer Flounder, Scup and Black Sea Bass Management Board rescinded the previously approved 28% reduction and approved a coastwide reduction target of 20.7% compared to the previous four-year average harvest.

Methodology:

2018-2021 MRIP Estimates. During the four-year period from 2018-2021, the state of NJ implemented recreational measures that remained constant and unchanged over the time series. Upon examination of MRIP estimates during this period, it was determined that a more appropriate estimate of harvest should include a Thompson Tau Analysis for outliers coupled with a smoothing technique using the median value observed for the outlier series. Through this method, outliers both high and low were replaced with median values. This analysis was performed at the state, wave, mode level. As such, the NJ RHL for 2022 was calculated to be 1,086,863 pounds compared to the four-year averaged smoothed estimate of 1,370,571 pounds, a 20.7% reduction.

Size. To calculate changes in size, a MRIP length frequency distribution was used to describe size frequency by wave over half inch increments from the current 12.5 inches to 18 inches. The below Table (Table 1) describes those changes in terms of percent harvest per wave at each size bin.

Table 1. NJ Length Reduction Table Per Wave.

Percent Harvest Relative to Current Size Per Wave						
Length (inches)	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6
12.5	Closed	Closed	1	1	1	1.201
13	Closed	Closed	0.855	0.940	0.864	1
13.5	Closed	Closed	0.726	0.831	0.784	0.982
14	Closed	Closed	0.555	0.698	0.648	0.912
14.5	Closed	Closed	0.449	0.551	0.530	0.789
15	Closed	Closed	0.369	0.505	0.455	0.759
15.5	Closed	Closed	0.294	0.405	0.391	0.626
16	Closed	Closed	0.242	0.282	0.330	0.371
16.5	Closed	Closed	0.199	0.240	0.295	0.294
17	Closed	Closed	0.178	0.143	0.231	0.270
17.5	Closed	Closed	0.153	0.129	0.196	0.260
18	Closed	Closed	0.143	0.108	0.172	0.236

Season. Changes to season length were determined using 2018-2021 average smoothed MRIP estimates by calculating harvest per day by wave. The average harvest by wave was divided by the average number of days open in each wave to determine the average daily harvest rate. That rate was then multiplied by a new number of open days per wave to determine the estimated new harvest. Table 2 below describes examples.

Table 2. NJ Per Wave Average Harvest, Open Days, and Daily Harvest Rate.

Baseline Data From Thompson Tau Log-Transformed MRIP Estimates 2018-2021						
	W1	W2	W3	W4	W5	W6
4 -Year Average Harvest	0	0	792,001	274,782	248,854	54,934
Average Days Open	0	0	39	62	24	61
Average Daily Harvest Rate	0	0	20,308	4,432	10,369	901
PSE of Average Harvest	0	0	14.1	11.2	21.8	29.2

Possession Limits. In order to create example measures with decreased possession limits, NJ used the aggregated 2018-2021 MRIP harvest estimates accounting for each trip by wave and calculated the percentage of trips that landed a given number of fish. A series of bag reduction tables were developed for each specific wave where the possession limits differed across waves. This resulted in four possession reduction tables, one for wave 3 where the possession limit was 10 fish during all years, another for wave 4 where the possession limit was 2 for all years, one for wave 5 where the possession limit was 10 for all years, and the final for wave 6 where the possession limit was 15 for all years (Table 3). By multiplying the projected harvest by the associated percent change at the new possession limit, a reduction in the projected harvest was calculated.

Table 3. NJ Possession Limit Reduction Table Per Wave.

Percent Harvest with current 10 fish limit		Percent Harvest with current 2 fish limit		Percent Harvest with current 10 fish limit		Percent Harvest with current 15 fish limit	
Bag	W 3	Bag	W4	Bag	W 5	Bag	W 6
15		15		15		15	1
14		14		14		14	0.994
13		13		13		13	0.983
12		12		12		12	0.968
11		11		11		11	0.952
10	1	10		10	1	10	0.932
9	0.963	9		9	0.967	9	0.902
8	0.923	8		8	0.927	8	0.864
7	0.876	7		7	0.881	7	0.821
6	0.817	6		6	0.825	6	0.769
5	0.745	5		5	0.751	5	0.700
4	0.548	4		4	0.663	4	
3	0.457	3		3	0.248	3	
2	0.419	2	1	2	0.218	2	
1	0.251	1	0.699	1	0.141	1	
0		0		0		0	

Proposed Measures

The proposed examples for New Jersey’s 2022 recreational black sea bass fishery are found in table 4 below. These measures presented are examples only and should not be considered final proposed options. They represent examples for reference to review methodology and may differ from the final options adopted by the State before final implementation.

Table 4. NJ Proposed 2022 Black Sea Bass Management Examples.

			Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	
Status Quo	Average measures	Bag	0	0	10	2	10	15	Projected Total 1,370,571
		Size	0	0	12.5	12.5	12.5	13	
		Days	0	0	39	62	24	61	

**2022
Example**

1	Future Measures	Bag	0	0	10	1	10	10	Projected Total 1,087,401
		Size	0	0	12.5	12.5	12.5	13	
		Days	0	0	32	62	21	33	

2	Future Measures	Bag	0	0	8	1	8	8	Projected Total 1,082,815
		Size	0	0	12.5	12.5	12.5	13	
		Days	0	0	35	62	21	48	

3	Future Measures	Bag	0	0	8	2	8	8	Projected Total 1,087,153
		Size	0	0	12.5	12.5	12.5	13	
		Days	0	0	31	62	21	38	

4	Future Measures	Bag	0	0	10	2	10	15	Projected Total 1,082,464
		Size	0	0	13	13	13	13	
		Days	0	0	34	62	20	61	



Larry Hogan, Governor
Boyd Rutherford, Lt. Governor
Jeannie Haddaway-Riccio, Secretary
Allan Fisher, Acting Deputy Secretary

March 10, 2022

Black Sea Bass Management Measures for 2022 Season for the Region including Delaware, Maryland, Virginia and North Carolina

To: AMSFC Summer flounder, black sea bass and scup management board

From: DE MD VA NC technical committee members

The four-state region is submitting several options for a season, size and creel for 2022. Management measures were crafted using the standardized table supplied by ASMFC. The data in the table was amended to correct the harvest rate in one year, wave and state*. MRIP wave level estimates from 2018 through 2021 from the four states were used to produce/evaluate the required management measures for the region. **

In 2021 the region had a 15 fish creel with a 12.5-inch minimum size and an open season from May 15 through December 31.

For 2022 the options are as follows:

All these options achieve the required a 20.7% reduction

	Current Measures	Option 1	Option 2	Option 3	Option 4***
Size	12.5"	13"	13"	13"	13"
Bag	15	15	15	13	15
Season	May 15 to December 31	May 15 to December 11	May 20 to December 14	May 15 to December 15	May 15 to May 30 and July 9 to December 31
Reduction	0	21%	20.9%	21.1%	20.8%

*In Virginia's average season length by wave, wave 3 of 2021 should have been 32 days instead of 47 because they were closed wave 3 for 15 days to compensate for the February fishery. Virginia did not hold a February black sea bass season in 2022.

**The PSE's of the wave estimates used for the calculations ranged from 10.9 to 98.3.

***Option four was added after technical committee review using the same methodology.