



# The Commonwealth of Massachusetts

## Division of Marine Fisheries

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### Massachusetts 2020 Black Sea Bass For-hire Fishery Conservation Equivalency Proposal

July 17, 2020

#### Overview

The Massachusetts Division of Marine Fisheries (DMF) submits this conservation equivalency proposal to extend the end of the state’s for-hire recreational black sea bass season in 2020 to account for seven days closed to for-hire fishing at the beginning of the season due to the COVID-19 pandemic. Three alternatives are presented (Table 1).

Option A was DMF’s initial proposal and would extend the season 53 days. The approach of Option A best represents expected values for a conservationally equivalent exchange for days lost in the beginning of the season, except that the MRIP data have high PSEs caused by a paucity of intercept data in Wave 5 due to so few days being historically opened in September. Option B was added to the proposal to allay Technical Committee concerns about the high PSEs and instead uses lower PSE data from the adjacent Wave 4 as a proxy for Wave 5 harvest estimates. However, DMF believes that given annual pattern of landings and decreasing catch rates and angler participation after Labor Day, it is excessively conservative to apply Wave 4 daily landings values to wave 5. DMF proposes Option C, a compromise approach that falls in between the first two and extends the fishery only through October 9, the final open fishing day for summer flounder.

*Table 1. Massachusetts status quo and proposed rules for recreational black sea bass fishing aboard for-hire vessels in 2020 via conservation equivalency.*

	Season	Daily Bag Limit	Minimum Size
Status Quo	May 18 – September 8	5 fish	15”
Option A	May 25 – October 31	5 fish	15”
Option B	May 25 – September 21	5 fish	15”
Option C (preferred)	May 25 – October 9	5 fish	15”

#### Introduction

Consistent with executive orders of the Governor of Massachusetts in response to the COVID-19 pandemic and further guidance from the Administration, DMF issued Permit Conditions for all 2020 For-hire Permit holders making it unlawful to conduct any for-hire fishing activity in the Commonwealth effective April 27, 2020<sup>1</sup>. These permit conditions were rescinded effective May 25, 2020, when for-hire fishing operators were authorized to resume operations provided they comply with specific restrictions and safety standards under the phased-in re-opening guidance<sup>2</sup>.

<sup>1</sup> <https://www.mass.gov/doc/042720-statement-of-permit-conditions-to-restrict-for-hire-fishing-during-covid-19-stay-at-home/download>

<sup>2</sup> <https://www.mass.gov/doc/051820-statement-of-permit-conditions-on-2020-for-hire-permit-and-workplace-safety-and/download>

These permit conditions were issued pursuant to the authority set forth at G.L. c. 130, §§17C and 80 and 322 CMR 7.01(7) and 7.10(7). Violation of these permit conditions would result in an adjudicatory hearing to suspend or revoke the for-hire permit, as well as any other fines and penalties provided in G.L. c.130. The Massachusetts Environmental Police (MEP) enforce permit conditions the same as regulations. During the for-hire fishing closure, MEP conducted normal enforcement operations, reporting high compliance with the permit conditions and only one documented violation by an individual who was not a holder of a 2020 for-hire permit.

DMF submits this conservation equivalency proposal to amend the 2020 Massachusetts black sea bass for-hire fishing season in response to this closure of the for-hire fishery. Private recreational fishing, while likely impacted by social distancing measures, was not prohibited during the same period. If an alternative conservationally equivalent for-hire season is authorized by the ASMFC's Summer Flounder, Scup, and Black Sea Bass Management Board, DMF would implement the revision to the 2020 for-hire season by permit condition. The for-hire season would revert in 2021 to that in the regulations (May 18–September 8), unless subsequently amended through a Board-approved revision.

This action would cause a temporary regulatory mode-split in the MA recreational black sea bass where non currently exists. DMF is on the record expressing concerns with recreational mode-splits between for-hire and private anglers; however, the unprecedented nature of this situation in which only one mode was closed by factors external to fisheries management outweighs these concerns and provides our rationale for responding with a mode-specific recoupment. A recreational black sea bass mode split currently exists elsewhere along the coast and they have been authorized for other species as well.

The analysis of conservation equivalency included in this proposal applies standard, previously approved methods and data for evaluating conservation equivalency. It relies on prior year harvest data to project harvest under proposed regulatory changes in the current year. For this reason, coupled with it being an evaluation for a complete closure of the for-hire fishery during May 18-24, 2020, the analysis is not impacted by the lack of MRIP APAIS conduct caused by COVID-19 during that time (which was resumed in Massachusetts on May 20) or the pending availability of Wave 3 MRIP catch and effort estimates. As a mode-specific proposal, consideration is not given to any changes in private angler recreational harvest that may have occurred this spring; it is our position that this would not be expected of a conservation equivalency proposal submitted in advance of the fishery's season. Complete MRIP surveying and sampling is expected to occur throughout the for-hire black sea season in Massachusetts providing an estimate of for-hire harvest in 2020 to compare to 2019 for an evaluation of the impacts of this conservation equivalency proposal.

### **Proposal Timeline**

The ASMFC's Summer Flounder, Scup, and Black Sea Bass Management Board discussed the potential for states to make regulatory adjustments in response to COVID-19 impacts at its May 6 meeting. The first version of this proposal was submitted to the ASMFC on May 26 with a request for Board consideration at its June 16 meeting. This aggressive timeline was pursued in hopes of providing the for-hire industry the most benefit in terms of lead-time from an approved proposal. A second version, adding the Option B approach following review by the Technical Committee, was submitted to ASMFC on June 8. The second version and the TC's review were included in the Board's briefing materials for June 16; however, action was deferred to await guidance from the Commission's Executive Committee on conservation equivalency proposals of this nature. The Board did agree at that time to consider the Massachusetts proposal (and any others) no later than the August 2020 meeting. The ISFMP Policy Board did not adopt the Executive Committee's eventual guidance, but had it, the MA propose would have met the narrow criteria intended to limit the precedence setting nature of allowing states to

modify in-season regulations to address lost fishing opportunity. The Policy Board did conclude that states could still submit proposed changes to their recreational measures following the guidelines outlined in the Commission's Conservation Equivalency Policy and Technical Guidance Document. This third version of the proposal, submitted July 17, does not alter the analysis but provides additional information to meet that document's standards for state conservation equivalency proposals, and adds the compromise approach of Option C. Given this history and that the submission of this third version meets the two-week cut-off for consideration prior to the next Board meeting, DMF is requesting that the Board chair use his discretion to allow its review and consideration for approval at the August 6 meeting of the Summer Flounder, Scup, and Black Sea Bass Management Board.

### **Analysis**

On December 10, 2019, the Summer Flounder, Scup, and Black Sea Bass Management Board approved status quo recreational black sea bass management measures in state and federal waters for 2020. This meant a May 18–September 8 open season, 5 fish limit, and 15" minimum size limit for Massachusetts. As a consequence of the Governor's for-hire fishery closure, the Massachusetts for-hire fishery missed seven open fishing days of the 2020 recreational black sea bass season (i.e., May 18–May 24).

MRIP data for the past two years were used to estimate lost for-hire harvest due to the fishery closure and determine the conservationally equivalent number of days that could be added to the end of the season for for-hire activity (Tables 2–3). The average daily harvests per wave were calculated for both the most recent year (2019) and a two-year average (2018–2019). The premise of the analysis was to add an equivalent of seven Wave 3 days (the number of days lost) to the end of the season during Wave 5. Notably, Wave 3 had the highest daily catch rates, meaning that the equivalent number of Wave 5 days was larger than seven in all cases. Note that 2018 and 2019 are the only recent years in which the fishery was open during Wave 5 to provide harvest data. Less than a quarter of Wave 5 was open in either year which helps explain the high PSE values. During Wave 5 in 2018, 47 intercepts encountered black sea bass and 19 intercepts encountered black sea bass during 2019.

### **Option A**

This option compares daily harvest rates in Wave 3 to rates in Wave 5 to determine the number of equivalent Wave 5 days to add at the end of the season (Tables 2–3). Using the 2-year average approach, closing seven days in Wave 3 provides for opening 65 days at Wave 5 harvest. This is more than the number of days that could possibly be opened in Wave 5 (53 days remaining). Massachusetts has no Wave 6 data with which to produce a daily harvest rate, but it can be assumed to be—at most—equal to Wave 5 given declining seasonal availability of black sea bass and fishing effort. Extending equally into Wave 6 would result in a conservationally equivalent season of May 25–November 12. Using 2019 data alone, closing seven days in Wave 3 provides for opening 39 days at Wave 5 harvest. This would result in a conservationally equivalent season of May 25–October 17.

Under Option A, DMF is proposing a season extension until October 31 only. This is mid-way between the 2-year and 1-year approaches' results. The Technical Committee has in recent years supported an averaging approach for seasonal revisions through conservation equivalency (which would provide for additional open days). However, opening in Wave 6 is not anticipated to provide much benefit to the industry and could provide for spurious MRIP harvest estimates with few intercepts. This choice also recognized the high PSE values for the Wave 5 harvest estimates used for analysis. Extending the season further into Wave 5 should help improve the precision of the estimates.

While the Wave 3:5 exchange rates are substantial, differential harvest between the waves is not unexpected. The commencement of the recreational black sea bass season in Massachusetts in mid-May

is much anticipated, with large aggregations of fish available in shallow waters nearshore and favorable weather producing high effort and high catch rates. Delayed season openings in several other northeast states until mid-June further drives for-hire business in May and early June in Massachusetts.

Harvest rates in Wave 5 are also not anticipated to be constant throughout the proposed season extension, but rather drop off steeply with declining local availability of fish and fishing effort at the onset of fall. While there are no data that explicitly describe the expected harvest rates through the end of Wave 5 (the fishery has not been open during this time due to regulations), weekly harvest rates across modes are typically near annual lows at the beginning of Wave 5 (Figure 1). Also of note is that for-hire activity contributes less than 15% to the state's total recreational black sea bass harvest on average for 2017–2019.

#### Option B

An alternative approach is also proposed as a strategy to satisfy Technical Committee concerns to avoid using the Wave 5 data with high PSEs. The assumption under this conservative approach is that Wave 4 daily catch rates during 2018 and 2019 could serve as representative proxies for the Wave 5 rates during 2020. The Wave 4 data had lower PSEs than Wave 5 (55.2 in 2018 and 34.1 in 2019; Table 2). The Option B analysis estimated that 13 additional days could be added to the end of the season using the average 2018-2019 daily harvest rates and 8 days could be added using the 2019 rates alone (Table 3). Under this proposal, 13 additional days would be added to the end of the season, representing the average daily harvest rate from 2018 and 2019; in the past, averaging years has been supported by the TC. The Option A proposed extension of 53 days was between the 2018/2019 average daily harvest rate and the 2019 rate alone (Tables 2 and 3). Option A did not propose to use the 2018/2019 average because there was little benefit to the fishery of remaining open into November and because the end of a wave was a convenient marker for closing the fishery; these factors did not apply to the Option B proposal.

#### Option C

DMF requests the Board approve a preferred Option C that is not based on a specific analysis but falls between Options A and B in the length of the season extension. DMF appreciates the concerns of the Technical Committee about the use of high PSE catch data, but it is reasonable to assume that given the seasonal pattern of declining landings after Labor Day caused by offshore migrations of black sea bass, decreasing catch rates, decreasing angler participation, and decaying weather conditions, Wave 5 landings will invariably be lower than Wave 4. DMF's Option C is a compromise option that falls in between the two disparate Options: A (53 days) and B (13 days). This option would extend the fishery for just 30 days through October 9, the last open fishing day for summer flounder, thereby resulting in for-hire anglers being able to enjoy the retention of two species that are commonly targeted and retained together.

#### **Summary**

Options A and B represent two disparate outcomes with Option B being sensitive to the comfort level of the Technical Committee. DMF has presented these and highlighted their challenges and has recommended a compromise option for Board consideration for extending Massachusetts' for-hire fishing season during Wave 5 for 30 days to accommodate for-hire vessel operators and anglers who were closed out of the fishery due to the COVID-19 pandemic in May when sea bass fishing is at its peak in the Commonwealth.

Table 2. Massachusetts wave-specific daily for-hire harvest rates, # of fish (MRIP query date 5/18/20)

	Wave 3	Wave 4	Wave 5
2018 For-hire Harvest, # fish (PSE)	36,083 (22.2)	13,659 (55.2)	455 (80)
# Open Days (May 19–Sep 12)	43	62	12
Daily Harvest Rate	839	220	38
2019 For-hire Harvest, # fish (PSE)	30,685 (24.1)	34,040 (34.1)	1,001 (106)
# Open Days (May 18–Sep 8)	44	62	8
Daily Harvest Rate	697	549	125
2018–2019 Avg. Daily For-hire Harvest	768	385	82
2019 Avg. Daily For-hire Harvest	697	549	125

Table 3. Calculation of conservationally equivalent for-hire season lengths for Options A and B.

	Exchange Rate	Days added in Wave 5 to account for 7 fewer days in Wave 3	Resulting Season Length
<i>Option A (Waves 3:5 Exchange Rate)</i>			
Two-year Average	9.424	65	May 25 – November 12
Most Recent Year	5.574	39	May 25 – October 17
Proposed	-	53	May 25 – October 31
<i>Option B (Waves 3:4 Exchange Rate)</i>			
Two-year Average	2.00	13	May 25 – Sep 21
Most Recent Year	1.27	8	May 25 – Sep 16
Proposed	-	13	May 25 – Sep 21

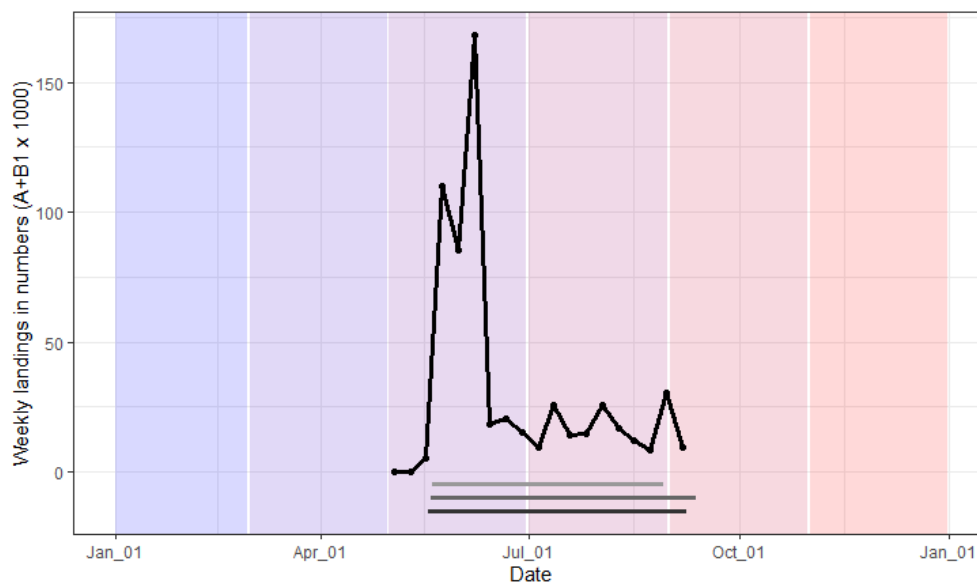


Figure 1. Average black sea bass harvest in numbers (given in thousands) by week over 2017-2019. Horizontal lines at the bottom of the figure indicate the season length in 2017 (top), 2018 and 2019 (bottom). Vertical rectangles indicate waves. Note that the harvest quantities provided are across all modes to increase the sample size.

## **Appendix 1.**

**Methods.** The steps below outline the methodology used in this proposal for calculations leading to a conservationally equivalent season extension. Subscripts in the table below refer to the Option A approach; for Option B the reference to Wave 5 can be replaced with Wave 4.

Steps	Equation		Definitions
(1) Calculate the average daily harvest rate by wave for each year by dividing the total harvest in numbers in each year and wave by the number of days that were open in that year and wave.	$r_{w,y} = \frac{h_{w,y}}{d_{w,y}}$	$r_{w,y}$ $w$ $y$ $h_{w,y}$ $d_{w,y}$	Average daily harvest rate by wave and year. wave. Year. Total harvest in numbers during wave $w$ of year $y$ . Number of open days during wave $w$ of year $y$ .
(2) Calculate the average of the average daily harvest rates by wave across all years in the set.	$\bar{r}_w = \frac{1}{Y} \sum_{y=1}^Y r_{w,y}$	$\bar{r}_w$ $Y$	Average harvest rate by wave over all $y$ years Total number of years
(3) Calculate the exchange rate – the ratio of average daily harvest rate in wave 3 to average daily harvest rate in wave 5.	$x_{w3w5} = \frac{\bar{r}_{w=3}}{\bar{r}_{w=5}}$	$x_{w3w5}$	Exchange rate ratio (waves 3:5)
(4) Determine the number of additional days in wave 5 that account for the days lost during wave 3 (7 days were lost).	$\tilde{d}_{w5} = 7x_{w3w5}$	$\tilde{d}_{w5}$	Number of additional days during wave 5



# Atlantic States Marine Fisheries Commission

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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:** June 11, 2020

**SUBJECT:** TC Recommendations on Massachusetts Conservation Equivalency Proposal for Black Sea Bass Recreational For-Hire Fishery

The Technical Committee (TC) received a conservation equivalency proposal from Massachusetts to adjust the 2020 for-hire black sea bass season to account for days closed to for-hire fishing at the beginning of the season due to the COVID-19 pandemic. The proposal was reviewed and discussed by the TC via email. Below is a summary of the Massachusetts proposal as well as TC comments and recommendations.

### Summary of Massachusetts CE Proposal

The premise of the proposal was to add additional days to the end of the season during Wave 5, with the number of days being conservationally equivalent to seven Wave 3 days (the number of days closed). To accomplish this, the daily harvest rates during Wave 3 and Wave 5 were compared using 2018 and 2019 MRIP for-hire mode harvest in numbers from Waves 3-5. The proposal had two options. Option A compared Wave 3 daily harvest rates to Wave 5 rates and resulted in 65 additional Wave 5 days (based on 2018-2019 data) or 39 additional days (based on 2019 only). Under Option A Massachusetts proposed opening 53 additional days in Wave 5. The PSEs associated with the Wave 5 data used in Option A were high (>80); thus an alternative approach was also presented. Option B assumed Wave 4 daily harvest rates were a representative proxy for Wave 5 rates. Wave 4 harvest estimates had lower PSEs (55.2 in 2018 and 34.1 in 2019). Option B resulted in 13 additional Wave 5 days (based on 2018-2019 data) or 8 additional days (based on 2019 only). Under Option B Massachusetts proposed 13 additional days. See the attached proposal for additional details on methodology and calculations.

### TC Discussion and Recommendations

While the TC agreed that the methods used to calculate the proposed season adjustment were mathematically correct, several members were concerned with the data used under Option A. In particular, the MRIP estimates used to calculate the wave 5 for-hire daily harvest rates had very high PSEs (>80). The TC recommended validating the magnitude of the Wave 5 harvest estimates by comparing them with available VTR or logbook data, but MA does not have any for-hire VTR or logbook reporting after 2014.

In addition to data concerns, the TC noted that recreational harvest was projected to exceed the RHL and ABC in 2020. The final 2019 MRIP harvest estimate is 8.61 million lb, 48% higher than the 2020-2021 RHL of 5.82 mil lb. While incomplete MRIP sampling due to COVID-19 has created substantial uncertainty for 2020 recreational harvest estimates, private fishing effort was likely only slightly impacted by COVID-19. Because the private mode accounts for most black sea bass harvest (e.g., 88% during 2016-2019) under the current MRIP methodology, the 2020 RHL is still likely to be exceeded even with COVID-19 impacts.

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Considering these factors, the TC was more comfortable with the method proposed under Option B of using the most recent two-year average of the Wave 4 for-hire daily harvest rates as a proxy for the Wave 5 rates. Wave 4 estimates for black sea bass harvest in MA are generally more reliable due to more available trip-level data and lower PSEs. The TC found it reasonable to assume that the Wave 5 harvest rate would be similar to the Wave 4 rate based on typical declining effort (due to a combination of weather and behavioral changes at onset of fall), and possible decrease in availability as fish redistribute to the south. The TC recommends using the average of the 2018-2019 Wave 4 for-hire harvest estimates as a proxy for Wave 5 to calculate the daily harvest rate and resulting season modification to achieve conservation equivalency. This provides for opening 13 additional days in Wave 5, 2020. The TC agreed this is a more conservative approach that addresses concerns about data uncertainty and reduces the risk of producing higher than expected harvest in Wave 5; however, the group notes that a significant amount of uncertainty is still involved.