



## New England Fishery Management Council

50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116

John F. Quinn, J.D., Ph.D., *Chairman* | Thomas A. Nies, *Executive Director*

### Memorandum

**Date:** May 3, 2019

**To:** Science and Statistical Committee

**From:** Tom Nies, Executive Director

**Subject:** Revised overfishing levels (OFLs) and acceptable biological catch (ABC) recommendations for Atlantic herring

This year the Council will submit the OFLs and ABCs for 2019-2021 in Framework Adjustment 6 to the Atlantic Herring FMP. The schedule was for the Council to approve the range of alternatives in April 2019 and select the preferred alternative in June. The OFL and ABC for 2019 have already been established by NMFS. This memo describes an error that was discovered during the preparation of Framework 6 alternatives and clarifies the final 2019-2021 OFLs and ABCs.

The SSC met on October 10, 2018 in Boston, Massachusetts, to make its recommendations for OFL and ABC for Atlantic Herring for fishing years 2019-2021. The recommendations were presented to the full Council in December 2018. Just prior to the April 2019 Council meeting an error was discovered in the OFL/ABC projections previously reviewed by the SSC and Council. No additional action is needed by the SSC or Council since the error was a simple cut-and-paste mistake that did not impact the ultimate ABC values or associated risks, the probabilities of overfishing and overfished, presented at previous meetings.

The ABC recommendations developed by the PDT and approved by the SSC in October 2018 were based on the ABC control rule that is the preferred alternative in Amendment 8 (under review). The control rule is biomass-based, with a maximum fishing mortality of 0.8 Fmsy when biomass is greater than 0.5 SSB/SSBmsy. When biomass falls below 0.5 SSB/SSBmsy, fishing mortality declines linearly until 0.1 SSB/SSBmsy; when fishing mortality is set to zero, or a fishery cutoff at 0.1 SSB/SSBmsy. The SSC was prepared to implement the harvest control rule selected through the Amendment 8 MSE process. However, the SSC had reservations about the projections for Atlantic herring and was concerned about the assumptions regarding future recruitment. The SSC recommended the Council set ABC for 2019 and 2020 based on the ABC control rule but recommended keeping the ABC for 2021 the same as for 2020 due to the uncertainty in the projections.

The OFL and ABC values (expressed in metric tons) resulting from these deliberations were:

Year	OFL	ABC
2019	30,668	21,266
2020	38,878	16,131
2021	59,788	16,131

Prior to the April 2019 Council meeting, the PDT reviewed alternatives recommended by the Herring Committee for inclusion in Framework 6 and discovered a minor mistake in the information presented to the SSC and Council. Specifically, the OFL values for one projection (keeping  $F=F_{msy}$  for all years) were accidentally pasted in the table for the OFL values associated with the Amendment 8 proposed control rule projection. Only the OFL values presented in the table were incorrect. All associated calculations of ABC and probabilities of risk presented were accurate. The correct values are presented below and will be used in Framework 6 (Table 1).

**Table 1. OFL and ABC calculations for the Amendment 8 proposed control rule presented to the SSC, with revised OFL values for 2020 and 2021 after corrections made, in metric tons (mt).**

*The final OFL and ABC values for 2019-2021 are in columns B and C.*

	OFL (from SSC) <b>A</b>	OFL (Revised) <b>B</b>	ABC (from SSC - no need to revise) <b>C</b>
2019	30,668	30,668	21,266
2020	38,878	41,830	16,131
2021	59,788	69,064	16,131

Typically herring projections are done once in the fall for the subsequent three fishing years, but in this case more time was available to consider updated catch information because a separate action was taken by NMFS to set 2019 catch levels to prevent overfishing. Updated 2018 landings are about 5,000 mt higher than the estimate used in the original projections. When the catch assumption is updated, the resulting OFL and ABC calculations for 2019-2021 are slightly lower (Table 2). The PDT presented the Council two results for consideration: the original projection results reviewed by the SSC (Alternative 2 original), as well as updated results with more complete 2018 landings information (Alternative 2 updated). The Council reviewed both at the April Council meeting and decided to include both as alternatives for setting OFL and ABC for 2019-2021 in Framework 6.

Framework 6 will also include a No Action Alternative that would maintain the 2019 catch levels for 2020 and 2021 (Alternative 1). The final projection results for all three alternatives are included below (Table 2). The Council discussed that it is not necessary for the SSC to review the updated projection results (Alternative 2 updated) since it is lower than the original projection. The Council will have the ability to consider all options in Framework 6. In the future, pending approval of Amendment 8, the Council would likely not have OFL/ABC alternatives in herring specification actions. The ABC control rule would simply be applied and that would determine the OFL and ABC values that would be presented to the SSC for consideration. Because Amendment 8 is not approved yet, the Council has been advised that this action should consider more than one alternative in addition to No Action.

**Table 2. Final OFL and ABC alternatives under consideration in Framework 6 (specifications for FY2019-2021) in metric tons (mt).**

	<b>Alternative 1 (No Action)</b> (2019 measures rollover)		<b>Alternative 2 original</b> (A8 ABC control rule)		<b>Alternative 2 updated</b> (A8 ABC control rule with updated 2018 landings data)	
	<b>OFL</b>	<b>ABC</b>	<b>OFL</b>	<b>ABC</b>	<b>OFL</b>	<b>ABC</b>
2019	30,668	21,266	30,668	21,266	30,668	21,266
2020	30,668	21,266	41,830	16,131	40,574	14,265
2021	30,668	21,266	69,064	16,131	68,718	14,265