New England Fishery Management Council
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Daniel Salerno, *Acting Chair* | Cate O'Keefe, PhD, *Executive Director*

MEMORANDUM

DATE: August 11, 2025

TO: Scientific and Statistical Committee (SSC)

FROM: Cate O'Keefe, Executive Director

SUBJECT: **Terms of Reference – Atlantic sea scallop biological reference points and specification setting**

TERMS OF REFERENCE

A. Consider the results of the 2025 research track assessment for Atlantic sea scallops and information provided by the Council's Scallop Plan Development Team (PDT) on developing specifications considering biological reference points.

B. Provide recommendations related to fishing mortality reference points and targets for developing specifications for fishing year (FY) 2026 and default FY 2027. The SSC will review catch specification methods when recommending overfishing limits (OFL) and acceptable biological catch (ABC) at the October 2025 SSC meeting.

BACKGROUND

The Atlantic Sea Scallop Research Track Assessment was peer reviewed in April 2025. The peer review panel determined that this assessment represented the "best scientific information available" but indicated that several Terms of Reference (TORs) were only partially met. Specifically, the panel noted that TOR # 5 lacked documentation for full understanding of the details of how reference points (Table 1) were determined. The assessment working group had noted that initial simulations for the Mid-Atlantic, which used the full stock recruitment relationship, resulted in non-credible reference points. The review report stated, "The calculated Mid-Atlantic yield curve was very flat, suggesting F_{MSY} is not well defined for this region."

The report further noted:

> *"The Review Panel is concerned about the reliability of the combined region* [Mid-Atlantic and Georges Bank] *reference point. There is strong evidence in the material presented to the Panel that there needed to be different spatial regions in the Catch-at-Size Analysis (CASA) model to fully represent the range of dynamics present throughout the stock range. The different modelling regions appear to be experiencing substantially different environmental conditions, different rates and temporal patterns of natural*

mortality, growth, and recent patterns of exploitation. Thus, it seems to the Review Panel that reference points are region-specific, and that combining them, although done so in a mathematically correct way, introduces additional and unquantified risk. For example, a single reference point based on the entire region risks not identifying overfishing that could be occurring in Georges Bank. The Review Panel questions whether a single reference point for the entire region is appropriate."

Table 1. Select biological reference points for Atlantic Sea Scallop derived from the Scallop Area Management Simulator (SAMS) model developed for the 2025 Atlantic Sea Scallop Research Track Assessment (excerpted from Miller et al., 2025 – Summary Report of the Atlantic Scallop Research Track Stock Assessment Peer Review)

Region	MSY (mt of meats)	F_{MSY}	B_{MSY} (mt of meats)	$B_{threshold}$ (mt of meats)	B_{2023} (mt of meats)	F_{2023}
Mid-Atlantic	7,941	1.56	15,909		20,556	0.06
Georges Bank	22,706	0.36	83,414		49,400	0.47
Combined	28,402	0.49	93,282	41,707	69,956	0.33

The assessment indicated that overfishing was occurring on the Georges Bank scallop resource despite overfishing not occurring across the full range of the scallop stock (Table 1). Updated fishing mortality reference points through terminal data year 2023 suggest that continued combination of Mid-Atlantic (F_{MSY} = 1.56) and Georges Bank (F_{MSY} = 0.36) F_{MSY} reference points (Combined=0.49) could exacerbate resource decline, especially on Georges Bank where fishing effort has been concentrated in recent years.

The Council seeks input from the SSC for developing specification measures that limit excessive fishing effort in FY2026. There is strong evidence that the combined reference point introduces additional risk of overfishing, and there are currently no management measures available to apply regional reference points. The Scallop PDT will develop OFL and ABC recommendations for consideration by the SSC in October. The Council is requesting SSC input to guide that process at this earlier stage to ensure that the management measures account for the high uncertainty associated with the combined fishing mortality reference point.

INFORMATION

a. 2025 Atlantic Sea scallop research track assessment
    i. Presentation by NEFSC
    ii. Assessment report
    iii. Peer review report
b. Scallop Plan Development Team
    i. Presentation by Council staff
    ii. Scallop PDT memo to SSC re: Atlantic sea scallop reference points, August 8, 2025
c. Correspondence (if any)

Background Documents

1. SSC memo re: Atlantic sea scallop OFLs and ABCs, October 29, 2024
2. Scallop Fishery Information
    a. Affected Environment for Scallop Framework Adjustment 39 (Section 5.0, p. 54-109)
    b. Fishery Performance Report – Scallop landings grades and LPUE, GARFO
3. Relevant peer-reviewed scallop papers provided for the October 11, 2023, SSC meeting