New England Fishery Management Council
50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492
Daniel Salerno, *Acting Chair* | Cate O'Keefe, PhD, *Executive Director*

MEMORANDUM

DATE: August 31, 2025

TO: Cate O'Keefe, Ph.D., Executive Director

FROM: Scientific and Statistical Committee

SUBJECT: Response to Terms of Reference - Overfishing Limits and Acceptable Biological Catches for Northern and Southern Monkfish for FY 2026 to FY 2030

The Scientific and Statistical Committee (SSC) met in person and via webinar on August 19, 2025, to address Terms of Reference (TOR) for northern and southern monkfish.

SSC members in attendance: Dr. Conor McManus (Chair), Dr. Edward Camp (Vice-Chair), Dr. Anna Birkenbach, Dr. Adam Delargy, Dr. Lisa Kerr, Dr. Gareth Lawson, Dr. Kai Lorenzen, Dr. Jason McNamee, Dr. Mateja Nenadovic, Dr. Fred Serchuk, Dr. Kevin St. Martin, Dr. Michelle Staudinger, Dr. Sam Truesdell, Dr. Hiro Uchida, and Dr. John Wiedenmann.

TERMS OF REFERENCE

A. Consider the results of the Northeast Fisheries Science Center's (NEFSC) 2025 Data Update for Northern and Southern monkfish and information provided by the Council's Monkfish Plan Development Team (PDT).

B. Recommend OFLs and ABCs for monkfish in both the Northern and Southern management areas for FY 2026 – 2030 (defaults for FY 2029 and 2030) that will prevent overfishing, meet the objectives of the fishery management plan, and consider the Council's Risk Policy Statement and Concept.

DOCUMENTS

To address the TORs, the SSC considered the following information:

1. NEFSC Monkfish Data Update Report, July 29, 2025
    a. Monkfish North Data Update
    b. Monkfish South Data Update
2. Monkfish Plan Development Team
    a. Presentation by Council staff

b. Monkfish PDT memo to SSC re FY 2026 – 2028 (and default for FY 2029-2030) OFLs and ABCs for monkfish, August 12, 2025
c. Risk Policy Matrix for monkfish

3. Monkfish SAFE Report, including the most recent description of the social and economic status of the fishery (Framework Adjustment 13, Affected Environment Human Communities), monitoring and assessment reports, etc.
4. FY 2024 monkfish catch accounting, GARFO
5. Previous SSC recommendations regarding monkfish
    a. Meeting materials, January 20, 2023
    b. SSC memo, January 23, 2023

Background Documents

1. The Council's Risk Policy Statement and Concept, implemented January, 2025
2. NOAA/NEFSC 2025 State of the Ecosystem Reports for the Northeast U.S. Shelf

NORTHERN AND SOUTHERN MONKFISH

The SSC received a presentation from Council staff on: 1) the 2025 data updates for Northern and Southern monkfish from the Northeast Fisheries Science Center (NEFSC), and 2) the Monkfish Plan Development Team (PDT) recommendations of possible OFLs and ABCs for FY 2026-2030.

Data updates are a new product for this SSC from the NEFSC, and in the case of Northern and Southern monkfish, include: 1) ***catch information*****:** fishery landings and discards (1964-2024), 2) ***biomass indices***: seasonal (spring and fall) bottom trawl survey index of biomass (1963-2025, and 3) ***stratified mean indices at length*** (1963-2025) from the bottom trawl survey.

The SSC noted that Northern monkfish catch has been relatively stable with a similar level of landings and discards in recent years. Likewise, indices of Northern monkfish biomass through 2025 (biomass, kg/tow) have been relatively stable with a slight increase in fall and a more pronounced increase in spring. Length distribution over time suggests a decrease in smaller fish (0-15 cm) in 2023-2024 (fall index), potentially indicative of decreased recruitment. Southern monkfish commercial landings have declined in recent years with variable commercial discards. Bottom trawl survey indices for Southern monkfish have remained stable in recent years at low levels. Fall length distributions seem to indicate variable recruitment for Southern monkfish.

There is no explicit guidance at this time for the SSC for making catch advice recommendations based on data updates. The SSC noted that the 2025 data update did not include the Ismooth multipliers, which had been provided by the NEFSC since the failure of the monkfish analytical assessment in 2016 that precluded use of the ABC control rule. The SSC discussed the recent history of how Ismooth had been used to inform ABC setting, briefly summarized here.

After the last management track for monkfish (2022), which included the Ismooth multipliers, the SSC recommended catch advice for Northern and Southern monkfish management areas for FY 2023-2025 (November 21, 2022 memo) based on application of this empirical approach. During the FY 2020-2022 catch-setting process, the Ismooth multipliers were applied to recent

ABCs, which is inconsistent with best practices for use of the Ismooth approach. The more appropriate application of the Ismooth approach is to apply the multipliers to recent catch, under the assumption that survey indices are directly related to removals (i.e., catch). For FY 2023-2025, the SSC recommended Ismooth multipliers be applied to the most recent 3-year average catch to calculate the Annual Catch Targets (ACT) for the Northern and Southern management areas, and the ACT was then increased by the management uncertainty buffer (3% for monkfish) to calculate ABCs (November 21, 2022 memo). This approach resulted in a substantial reduction in catch advice for monkfish stocks at the time (i.e., a 34% and 69% reduction in the Northern and Southern management areas, respectively). The NEFMC subsequently remanded the advice back to the SSC and asked them to consider a transition to the appropriate application of the Ismooth approach for monkfish stocks, setting ABCs for the FY 2023-2025 using the average of two approaches: 1) multipliers applied to recent 3-year catch (appropriate Ismooth method) and 2) multipliers applied to the recent ABCs (approach used for FY 2020-2022). This approach reduced catch advice by ~25% in the North and over 50% in the South from recent ABCs and was considered a transition to use of the appropriate Ismooth method. The SSC recommended the use of this transition approach as the basis for catch advice for monkfish in both the Northern and Southern management areas for FY 2023-2025 (January 23, 2023 memo).

TERMS OF REFERENCE FINDINGS

The SSC recommends OFL continue to be unknown for the Northern and Southern management areas for FY 2026-2030 as reference points are undetermined for monkfish. The SSC recommends status quo ABC of 6,224 mt for the Northern management area be held constant for FY 2026-2030 and the status quo ABC of 5,861 mt for the Southern management area be held constant for FY 2026-2028 with the advice for FY 2029-2030 held constant at 3,766 mt. The recommended OFLs and ABCs aim to prevent overfishing and consider the Council's Risk Policy Statement and Concept.

Rationale Including Significant Sources of Uncertainty

The Monkfish PDT acknowledged that there is no guidance on how to make decisions on catch advice based on data updates. They discussed recommendations of 1) status quo catch for FY 2026-2030 and 2), a reduction in ABCs from FY 2029-2030 as a precautionary approach given uncertainty before ultimately recommending catch for Northern and Southern monkfish be held constant at status quo levels for FY 2026-2030.

The SSC agreed with the PDT interpretation that there do not appear to be any substantial changes for these stocks but also noted that although Southern monkfish biomass indices appear stable, the last three years are lowest in the time series and far below historic levels. This suggests that the southern stock may be in a stable but depleted state.

The SSC discussed concerns about how the status quo catch advice was derived, and the period that the SSC is asked to consider extending advice (2026-2030). Specifically, the SSC is concerned about the increasingly dated nature of the status quo ABCs as they are based on application of the Ismooth approach from the last management track (i.e., indices and catch data ending in 2022) as well as the ABCs from a previously rejected analytical stock assessment (from 2016). The SSC was concerned with the uncertainty associated with extending this catch advice out to 2030, particularly for Southern monkfish given its depleted state.

The SSC noted that despite recent decreases in Southern monkfish catch, the survey indices have not responded, signaling that more precautionary advice for FY 2026-2030 may be warranted. Ultimately, the SSC supported the use of status quo ABCs for the Northern monkfish stock for FY 2026 to 2030 (6,224 mt). However, based on the stable but depleted state of Southern monkfish, the SSC advises holding status quo ABC (5,861 mt) constant for FY 2026-2028 with ABCs for FY 2029-2030 held constant at levels derived from using the Ismooth method applied to recent catch in the latest (2022) management track assessment (3,766 mt). The recommended OFLs and ABCs aim to prevent overfishing and consider the Council's Risk Policy Statement and Concept.

The rationale was that there were no substantial changes to the catch and survey indices in the 2025 data update that indicate that the status quo specifications are inappropriate to continue for these stocks in the short-term. However, given the depleted nature of Southern monkfish stock and uncertainty in the approaches used to assess and set catch advice, the SSC recommended more precautionary advice for FY 2029-2030. While use of the annual catch limit (ACL) is high for Northern monkfish, it is low for Southern monkfish, suggesting that the allowable catch is unlikely to be realized. Furthermore, recent reductions in the scallop fishery effort in the Mid-Atlantic and Southern New England suggest minimal increases in discards in coming years for Southern monkfish.

ADDITIONAL COMMENTS AND RESEARCH RECOMMENDATIONS

Data updates are a new product for the SSC and there is not yet a prescribed approach to setting catch advice based on these information products. The SSC recommends the development of decision-making criteria for catch advice setting based on data updates in coming years.

The SSC notes there is the potential to reframe information provided in data updates to be more informative in a decision making context. These include but are not limited to:

- Relative fishing mortality (total removals / index of biomass)
- Mean length from surveys may provide an important indicator for assessing stock condition

The SSC strongly recommends revisiting advice on monkfish stocks in two years, and noted that working towards developing a more holistic approach or policy for recommending catch advice based only on data updates would be helpful. Furthermore, the SSC recommends considering multi-indicator approaches for decision making in the case of data updates. For example, the Mid-Atlantic Council had outlined a rumble strip approach (e.g., MAFMC 2013) which evaluates multiple indicators to determine if they are within an expected range, and if indicators fall outside the expected bounds, this signals that corrective action may be necessary (i.e., modification of the ABC or adjustment of management measures). In the absence of guidance on how to use these data updates, it will continue to be challenging to see how the SSC might adjust ABCs.

The SSC recommends synthesis of research on stock structure of monkfish to evaluate the one stock vs. two stock hypothesis. Recent genetic work suggests that monkfish may be a single stock, with the Southern management area representing the trailing end of the stock as the distribution has contracted north. The SSC continues to recommend pursuing alternative assessment methods (e.g., delay-difference models, stochastic surplus production models, or

length-based assessments). These methods could provide a basis for estimating reference points and stock status for these stocks.

The SSC recommends consideration of additional survey indices in future assessment and data updates (e.g., scallop survey indices, NEAMAP survey indices, fishery dependent indices,), as well as further analysis of the different patterns among surveys (e.g., integration of multiple indices), including length-frequency distributions. Additionally, swept-area biomass estimates for monkfish from the NEFSC bottom trawl would be another useful addition and could support estimation of exploitation rate.

SUMMARY OF RECOMMENDATIONS

1. The SSC recommends OFL be unknown for the Northern and Southern management areas for FY 2026-2030 (as determined in advice provided in the November 21, 2022 memo).
2. The SSC recommends status quo ABC of 6,224 mt for the Northern management area be held constant for FY 2026-2030, and the status quo ABC of 5,861 mt for the Southern management area to be held constant for FY 2026-2028 with the advice for FY 2029-2030 held constant at 3,766 mt.
3. The SSC strongly recommends revisiting the FY 2029-2030 advice with a data update to inform ABC setting in these years.
4. The SSC recommends development of criteria for decision making using information contained in NEFSC data updates.
5. The SSC recommends synthesis of research on stock structure to evaluate the one stock vs two stock hypothesis.
6. The SSC recommends that alternative assessment methods for monkfish should be investigated in the next assessment iteration.
7. The SSC recommends consideration of additional survey indices, analyses of differences in survey indices, and swept-area biomass estimates derived from survey indices be analyzed.

Fishing Year	Management Area	OFL (mt)	ABC (mt)
2026-2028	Northern	Unknown	6,224
2026-2028	Southern	Unknown	5,861
2029-2030	Northern	Unknown	6,224
2029-2030	Southern	Unknown	3,766

REFERENCES

Mid-Atlantic Fishery Management Council (MAFMC). 2013. Rumble Strips for Assessing the Performance of Multi-year Acceptable Biological Catch Limits. Report of the Scientific Uncertainty Subcommittee of the Scientific and Statistical Committee. August 30, 2013.