

**Framework Adjustment 72**  
**to the**  
**Northeast Multispecies Fishery Management Plan**

**Appendix I**  
**Scientific and Statistical Committee**  
**Recommendations for Groundfish Stocks**  
**for FY2026– FY2030**



## New England Fishery Management Council

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

Daniel Salerno, *Chair* | Cate O'Keefe, PhD, *Executive Director*

### MEMORANDUM

**DATE:** October 28, 2025 (typo corrected 11/14/25)  
**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 Atlantic wolffish and ocean pout for FY 2026 to FY 2030

The Scientific and Statistical Committee (SSC) met in person and via webinar on October 8, 2025, to address Terms of Reference (TOR) for Atlantic wolffish and ocean pout.

**SSC members in attendance:** Dr. Edward Camp (Vice-Chair), Dr. Anna Birkenbach, Dr. Lisa Kerr, Dr. Gareth Lawson, Dr. Kai Lorenzen, Dr. Jason McNamee, Dr. Richard Merrick, and Dr. Hiro Uchida. A quorum of the SSC was not in attendance during the discussion. However, enough other SSC members reviewed this report to constitute a quorum.

#### ***TERMS OF REFERENCE***

- A. Consider the results of the Northeast Fisheries Science Center's (NEFSC) 2025 data updates for ocean pout and Atlantic wolffish and information provided by the Council's Groundfish Plan Development Team (PDT).
- B. Recommend an overfishing limit (OFL) and acceptable biological catch (ABC) for ocean pout and Atlantic wolffish for FY 2026 – 2030 that will prevent overfishing, be consistent with the Council's groundfish ABC control rule and rebuilding plan for ocean pout and Atlantic wolffish, and consider the Council's Risk Policy Statement and Concept.

#### ***ATLANTIC WOLFFISH***

The SSC received a presentation from Council staff on the recent 2025 data update by the NEFSC for Atlantic wolffish and the Groundfish PDT's development of possible OFLs and ABCs for FY 2026-2030. Due to the impact of recent reductions in force on the NEFSC's stock assessment capacity, the Center provided a data update in lieu of an assessment. The 2025 data update brings up to date the commercial fishery catch data and the research survey indices of abundance through 2024 (spring survey goes to 2025).

Based on the information from the last management track assessment (2022), the Atlantic wolffish stock is overfished but overfishing is not occurring. The data update does not allow for updating of reference points, but little has changed in the information provided since 2022. Since 2010, wolffish has been managed as a non-allocated, discard-only stock. The updated research vessel surveys show no sign that the low levels of catch that have occurred during the past 20 years have improved recruitment. Wolffish is in a rebuilding plan with an undefined end date.

### Terms of Reference Findings

The SSC recommends an OFL of 124 mt for FY 2026-2030 and an ABC of 93 mt for FY 2026-2030 for the Atlantic wolffish stock. The recommended OFLs and ABCs aim to prevent overfishing, are consistent with the Council's ABC control rules, and consider the Council's Risk Policy Statement.

### Rationale Including Significant Sources of Uncertainty

The SSC previously applied Option 1 of the ABC control rule for wolffish. Given that there was only a data update done for this SSC review, and that the catch and survey information for wolffish was generally stable (albeit at apparent low abundance levels), it was challenging to offer an alternative to the previous recommended levels.

The primary sources of uncertainty in the wolffish assessment are the use of the ocean pout research vessel survey catch calibration coefficient to standardize *R/V Albatross* and *R/V Bigelow* survey catches (i.e., wolffish calibration coefficients are unknown) and the apparent lack of impact from the restrictive management indicating likely unaccounted for environmental effects on the population dynamics for this species. It is also unclear whether the lack of a recruitment index signal since 2005 is due to an actual decrease in recruitment or a change in survey catchability resulting from the increase in liner mesh size associated with the switch to the *R/V Bigelow* as the survey vessel. At the next available management track assessment, the *R/V Albatross* and *R/V Bigelow* surveys could be split and treated as two separate surveys rather than trying to calibrate and combine them to remove this uncertainty. Additionally, the surveys may have reached the limit of wolffish detectability due to the decline in stock abundance, or the ineffectiveness of the stratified random sampling design to sample current wolffish habitats—especially if wolffish exhibit range-collapsing behavior that could translate to density-dependent catchability or detectability with respect to survey gear. Given the life history characteristics of wolffish, there may also be non-linear effects in the trawl survey information.

Due to only having a data update available by which to set specifications, stock projections were not conducted. Wolffish catches have been limited almost exclusively to discards since 2010 when the no possession rule was implemented with an assumed 8% discard mortality rate. The SSC believes that the recommended ABC is unlikely to result in overfishing for this stock given this restrictive management program, and no information was offered to the SSC that this management program would change in the coming years.

### Additional Comments and Research Recommendations

The SSC noted that if there are substantial changes in the fishery, for instance large increases or decreases in discards, or large changes in the survey information, the stock should be evaluated and brought back before the SSC and PDT. In 2017, an SSC sub-group called the Substantial Change Working Group (SCWG) evaluated how to determine what magnitude of change could be considered substantial and warrant action; the [report](#) from this group could be reviewed to see if it could be applied to the case of wolffish.

The SSC reiterated several previous research recommendations including further studies on wolffish growth parameters, tagging research to provide information on stock structure, movements, and habitat preferences, an evaluation of discard mortality rate, and studies on post-capture nest site fidelity. The SSC had previously identified additional research recommendations including assessing the utility of wolffish bycatch in the lobster fishery as an index of wolffish abundance. This recommendation appears to have been investigated, and it was

determined that the information was sparse and therefore not useful for this application. There had been a previous recommendation to evaluate the effect of replacing zero values in the research surveys with ½ the minimum value seen in the survey catches, and assessing the utility of the Bottom Longline Survey as a potential index of abundance, as major wolffish habitats may be on untrawlable bottom, and these remain relevant recommendations to carry forward.

It is also possible that despite the low removals of wolffish, the stock may be driven primarily by environmental factors. While annual ABCs have ranged between 70 and 93 mt during 2010-2024, catches of wolffish have only been between 1 and 6 mt in these years. Studies on the effects and impacts of environmental factors on wolffish survival and reproduction would be extremely informative.

Moving wolffish from the SCALE model to a new modeling platform that can accommodate explorations of things like non-linear effects in survey information, environmental effects on recruitment, random effects, and can convert between length and age internally in the model would be good recommendations for a research track for wolffish.

Finally, if there is a decision that there are not resources available to move wolffish into a research track process due to limited resources, wolffish may be a good candidate to move into managing as an Ecosystem Component Species (ECS). Because its biomass is at low levels but does not appear to be responding to restrictive management, a classification as an ECS would provide for monitoring for ecosystem management objectives but would not necessarily require a stock assessment or specific management measures like catch limits. This species is not targeted by fisheries, and is likely not currently subject to overfishing, so reclassifying wolffish as an ECS would allow for a more efficient and ecosystem-based approach to management by prioritizing resources on other groundfish species that require direct management while still monitoring the health of the broader ecosystem, including wolffish.

Summary of Recommendations

1. **The SSC recommends an OFL of 124 mt and an ABC of 93 mt for Atlantic wolffish, held constant for FY 2026-2030.**
2. **The SSC recommends a management track assessment as soon as possible (preferably in the next two years), incorporating some of the research recommendations mentioned in the text above.**
3. **The SSC set specifications for 5 years as requested in the TORs, but the SSC did not support going that long without additional evaluation of the stock.**
4. **The SSC recommends exploration of new modeling techniques for wolffish in a research track (i.e., state space approaches, methods that can convert between length and age internally, and methods that can incorporate environmental effects on dynamics).**
5. **If there is a decision that wolffish does not warrant a research track, wolffish could be considered as a candidate for managing as an Ecosystem Component Species.**

Fishing Year	OFL (mt)	ABC (mt)
2026 - 2030	124	93

## ***OCEAN POUT***

The SSC received a presentation from Council staff on the recent 2025 data update by the NEFSC for ocean pout and the Groundfish PDT's development of possible OFLs and ABCs for FY 2026-2030. Like wolffish, a data update was provided in lieu of an assessment. The data update was from a prior management track stock assessment in 2022 that used an exploitation ratio index-based method. Based on that assessment, as of 2021, ocean pout was overfished and overfishing was not occurring. Ocean pout is in a rebuilding plan with an end date of 2029. The Groundfish PDT provided potential catch based on the spring 2024 and 2025 survey indices and status quo catch for consideration.

### *Terms of Reference Findings*

The SSC recommends an OFL of 125 mt for FY 2026-2030 and an ABC of 87 mt be held constant for FY 2026-2030 for ocean pout. The recommended OFLs and ABCs aim to prevent overfishing, are consistent with the Council's ABC control rules, and consider the Council's Risk Policy Statement.

### *Rationale Including Significant Sources of Uncertainty*

The SSC was provided by the PDT with two catch advice alternatives for consideration: (1) status quo (OFL and ABC of 125 mt and 87 mt respectively) and (2) exploitation ratio from the assessment update (OFL and ABC of 131 mt and 91 mt respectively). The SSC opted to advise following the status quo, which would extend the current OFL and ABC (125 mt and 87 mt respectively) for five years to 2030. This was done for continuity and considered justified on the grounds that (i) no major changes in abundance were evident since the last assessment and catch recommendations issued in 2022, and (ii) uncertainty and concerns that suggested a cautious approach was warranted. The uncertainty was related to incomplete recent survey coverage (2023 index was missing) as well as concerns about the appropriateness of the assessment method and resultant reference points (described below). Therefore, the SSC considered that an increase in OFL and ABC, however small, was unlikely to be justified and opted for continuity and recommended revisiting the assessment and the catch level recommendations soon.

The following concerns were noted with respect to assessment methodology for ocean pout. First, the stock has shown no signs of being rebuilt. Ocean pout is in a rebuilding plan with a rebuilding target of 2029, but despite 20 years with realized fishing mortality rates below the FMSY proxy, ocean pout biomass has continued to decline and remains near historic lows in the time series.

Second, there is substantial uncertainty in the reference points. Although various quantitative assessment methods were applied to ocean pout in the 1990s and 2000s, none produced acceptable results. The Overfishing Definition Panel (Applegate et al. 1998) therefore resolved to visually inspect the landings and survey trends and choose values for MSY and BMSY that appeared to be sustainable. The approach was re-examined and reference points updated during the 3rd Groundfish Assessment Review Meeting (NEFSC 2008): "The median NEFSC 3yr average spring biomass index (4.94 kg/tow) and the median exploitation ratio (0.76) during 1977-1985 are used as  $B_{MSY}$  and  $F_{MSY}$  proxies, respectively. The 1977-1985 period corresponds to the time when the replacement ratio was above 1 and biomass increased. Based on these proxies, MSY is estimated to be 3,754 mt ( $4.94 * 0.76 * 1000$ )". The SSC noted that this approach was essentially ad hoc, and that the estimated reference points refer to a period of very high abundance and apparent productivity. The SSC further noted that the  $F_{MSY}$  proxy, an annual

exploitation rate of 76% of total biomass, is very high in the context of ocean pout life history (maximum age 18 years, growth parameters  $L_{\infty} = 122\text{cm}$ ,  $k = 0.1 \text{ year}^{-1}$ , FishBase, Froese & Pauly 2025). There is concern, therefore, that catch advice based on this proxy may be too high and that fishing may have played a greater role in the historical decline of the stock than previously thought. The SSC therefore recommended a re-evaluation of the assessment approach and biological reference points for this stock. It should be noted that a similar re-evaluation has been recommended repeatedly in previous SSC discussions on this stock.

Third and finally, the SSC described concern that not all sources of catch are sufficiently and consistently accounted for. The current assessment/data update methodology does not consider discards from the lobster fishery, and historically this information was not consistently available. Recent total catch data do include the lobster fishery bycatch, which resulted in 2024 ocean pout catch (561 mt) being greater than the current OFL (125 mt). The SSC and PDT discussed that this is not necessarily indicative of overfishing occurring, since the OFL reference points were derived from an approach that did not consider lobster fishery bycatch. Rather, this incongruity adds to the concern regarding the uncertainty of the reference points and suggests caution is warranted.

The SSC considers that, in the absence of a re-evaluation, continuity in catch advice is intended to avoid abrupt shifts in fisheries management to the extent possible. In the case of ocean pout, there is no strong scientific justification for changing OFL and ABC at this point. The SSC's recommended ABC is unlikely to result in overfishing with respect to the current reference points and limits for this stock but noted the concerns about methods for setting the  $F_{MSY}$  proxy used to establish these limits and the fact that recent catches are near or above the OFL.

#### Additional Comments and Research Recommendations

The SSC highlighted that the  $F_{MSY}$  reference point may not be appropriate for the stock. The SSC reiterated its recommendations made in 2020 and 2022 to evaluate the assessment method and basis for biological reference points. The SSC noted that ocean pout is similar in status to other stocks that exhibit a potential change in productivity, either associated with climate or, in this case, possibly compensatory mechanisms. The SSC recommends that clarifying the appropriate assessment and management approaches for this and other similar stocks is critical.

Ocean pout may be another good candidate to move into managing as an Ecosystem Component Species (ECS). Its biomass remains at a low level, and the stock does not appear to be responding to restrictive management, and as an ECS it could be monitored for ecosystem management objectives but would not necessarily require a stock assessment or specific management measures like catch limits. Classification as an ECS would allow for a more efficient and ecosystem-based approach to management by prioritizing resources on other groundfish species that require direct management while still monitoring the health of the broader ecosystem.

#### Summary of Recommendations

- 1. The SSC recommends an OFL of 125 mt and an ABC of 87 mt for ocean pout, held constant for FY 2026-2030.**
- 2. The SSC recommends re-evaluation of the assessment,  $F_{MSY}$  reference point, and catch advice in the near future (ideally prior to 2030).**

**3. The SSC recommends considering ocean pout as a candidate for managing as an Ecosystem Component Species.**

<b>Fishing Year</b>	<b>OFL (mt)</b>	<b>ABC (mt)</b>
2026 - 2030	125 mt	87 mt

***DOCUMENTS***

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

1. NEFSC Data Update Reports
  - a. *2025 Data Update: Unit Stock of Ocean Pout, Zoarces americanus*, September 24, 2025
  - b. *2025 Data Update: Unit Stock of Atlantic Wolffish, Anarhichas lupus*, August 27, 2025
2. Groundfish Plan Development Team
  - a. Presentation by Council staff
  - b. Groundfish PDT memo to SSC re FY 2026 – 2030 OFLs and ABCs for ocean pout and Atlantic wolffish, October 1, 2025
  - c. Risk Policy Matrix cover sheet for groundfish stocks
  - d. Risk Policy Matrix for ocean pout
  - e. Risk Policy Matrix for Atlantic wolffish
3. *Framework Adjustment 69*, Affected Environment Human Communities (Section 5.7), March 11, 2025
4. Previous SSC recommendations regarding ocean pout and Atlantic wolffish
  - a. Meeting materials, October 12, 2022
  - b. SSC report, November 23, 2022

*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

***REFERENCES***

Applegate A, Cadrin SX, Hoenig J, Moore C, Murawski S, Pikitch E. 1998. Evaluation of existing overfishing definitions and recommendations for new overfishing definitions to comply with the Sustainable Fisheries Act. New England Fishery Management Council Report.

Froese, R. and D. Pauly. Editors. 2025. FishBase. World Wide Web electronic publication. [www.fishbase.org](http://www.fishbase.org), version (04/2025).

NEFSC 2008. Assessment of 19 Northeast Groundfish Stocks through 2007: Report of the 3rd Groundfish Assessment Review Meeting (GARM III), Northeast Fisheries Science Center, Woods Hole, Massachusetts, August 4-8, 2008. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 08-15; 884 p + xvii.



## New England Fishery Management Council

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Daniel Salerno, *Chair* | Cate O'Keefe, PhD, *Executive Director*

### MEMORANDUM

**DATE:** November 12, 2025  
**TO:** Cate O'Keefe, Ph.D., Executive Director  
**FROM:** Scientific and Statistical Committee  
**SUBJECT:** Response to Terms of Reference - Overfishing Limit and Acceptable Biological Catch for U.S./Canadian transboundary Northeast multispecies stocks for FY 2026

The Scientific and Statistical Committee (SSC) met in person and via webinar on October 22, 2025, to address Terms of Reference (TOR) for Northeast multispecies stocks that are managed jointly with Canada.

**SSC members in attendance:** Dr. Edward Camp (Vice-Chair), Dr. Anna Birkenbach, Dr. Adam Delargy, Dr. Adrian Jordaan, Dr. Lisa Kerr, Dr. Gareth Lawson, Dr. Jason McNamee, Dr. Richard Merrick, Dr. Mateja Nenadovic, Dr. Kevin St. Martin, Dr. Michelle Staudinger, Dr. Hiro Uchida, and Dr. John Wiedenman. Other SSC members contributed to the review of this report.

#### ***TERMS OF REFERENCE***

- A. Review the recommendations from the Transboundary Management Guidance Committee (TMGC) based on results from the most recent U.S. and Canada stock assessments and information provided by Council staff.
- B. Confirm TMGC guidance for U.S. equivalent OFLs and ABCs for fishing year (FY) 2026 for the following stocks:
  - a. Georges Bank cod
  - b. Georges Bank haddock
  - c. Georges Bank yellowtail flounder

#### ***INTRODUCTION***

The SSC received a presentation from the Council's Executive Director on recent updates to the processes for assessing and managing the U.S./Canada transboundary stocks.

In previous years, the TMGC typically negotiated the U.S./Canada allocations of transboundary stocks annually based on the historic proportions of fishery utilization and resource distribution

in the Eastern Georges Bank Management Area. In 2025, the TMGC process was changed to include only NOAA Fisheries officials representing U.S. interests, meeting with Canadian fishing industry representatives and officials from Canada's Department of Fisheries and Oceans. The resulting guidance requires confirmation from the NEFMC SSC to integrate into the Northeast Multispecies Fishery Management Plan.

The TMGC provided recommendations for Eastern Georges Bank cod and haddock catch advice based on the Integration of Science Advice for Transboundary Species (ISATS) process that considered domestic U.S. Georges Bank cod and haddock stock assessments and the Canadian Eastern Georges Bank cod and haddock stock assessments. Additionally, the TMGC provided recommendations for Georges Bank yellowtail flounder catch advice based on the U.S. 2025 management track stock assessment. The ISATS compiles, but does not seek to reconcile, domestic science advice products from each country. In 2025, the Georges Bank yellowtail flounder Management Track stock assessment peer review was conducted after the ISATS process and results were considered directly by the TMGC.

### ***TERMS OF REFERENCE FINDINGS***

The SSC recommends the following OFLs and ABCs for the transboundary stocks for FY 2026. For Georges Bank cod, the SSC recommends an OFL of 473 mt and an ABC of 473 mt, resulting in an allocation of 151 mt to the U.S. For Georges Bank haddock, the SSC recommends an OFL of 8,177 mt and an ABC of 8,177 mt, and an allocation of 4,425 mt to the U.S. For Georges Bank yellowtail flounder, the SSC recommends an OFL of 57 mt and an ABC of 57 mt, with an allocation of 31 mt to the U.S. These recommendations are consistent with the TMGC recommendations that consider but are not constrained by groundfish ABC control rules and the Council's Risk Policy. The recommended OFL and ABC aim to prevent overfishing.

### ***RATIONALE INCLUDING SIGNIFICANT SOURCES OF UNCERTAINTY***

#### ***Overall (cross-stock) comments***

The SSC discussed the recent changes in the TMGC processes, noting some challenges of understanding the current process and the SSC's role in providing advice. The SSC discussed that the 2025 process included multiple structurally similar assessments of the same stocks at different spatial scales being conducted independently by the two countries. The SSC was concerned that this effort was resource-intensive and produced models that were not directly comparable, leaving the benefits of this process unclear. The SSC also was concerned that there could have been unintended negative consequences of eliminating the Transboundary Resources Assessment Committee (TRAC) process of reconciling the U.S. and Canadian scientific information and the involvement of U.S. fishing representatives in this process. Finally, the SSC was concerned that the current process could result in apportionment and allocation advice that is biologically unrealistic and has negative socioeconomic consequences (e.g., allocating 100% of cod to the Eastern Georges Bank area when cod are known to occur in Western GB).

#### ***Georges Bank Cod***

Separate assessments were conducted by the U.S. and Canada, with the U.S. assessment focused on the whole bank and Canadian assessment on the Eastern Georges Bank (EGB). Both domestic

stock assessment models underwent peer review and represent the best available science. The U.S. assessment used data through 2023, and the Canadian assessment used data through 2024. These assessments have different spatial scales which complicates reconciling results, particularly as the smaller eastern Georges Bank unit was estimated by the Canadian assessment to have a greater spawning stock biomass (SSB) estimate than the U.S. modeled SSB estimate for the whole Georges Bank unit (10,900 mt vs 2,486 mt).

The TMGC agreed to use the 2025 Canadian EGB cod assessment as the basis for advice. During the U.S. pre-TMGC meeting, it was noted that the fleet structure used in the Canadian assessment was more representative of fishing behavior and practices for the purposes of management advice. The TMGC noted that the Canadian assessment incorporated the latest data and applied a fishing mortality strategy defined as a very low risk of preventable decline, consistent with TMGC's historical approach of reducing fishing pressure when stock productivity is poor.

The TMGC recommended a shared total allowable catch (TAC) of 473 mt for GB cod in the Eastern Georges Bank Management Area. Based on this guidance, the proposed GB cod FY 2026 OFL is 473 mt with an ABC set equal to the OFL. Applying the U.S./Canada resource sharing agreement results in a U.S. ABC of 151 mt (32%) and a Canadian TAC of 322 mt (68%).

The Northeast Fisheries Science Center (NEFSC) developed a biomass apportionment method to determine the portion of GB cod biomass distributed in the eastern Georges Bank management area. Application of the apportionment method indicated that 100% of GB cod biomass was distributed in the Eastern Georges Bank Management Area in 2026.

### Georges Bank Haddock

Separate U.S. and Canadian assessments were conducted and peer reviewed in 2024 (U.S.) and 2025 (Canada) for GB haddock. Though the assessment scientists were not available to present their results, the appropriate reports were made available to the SSC, and the 2024 U.S. and Canadian stock assessments were reviewed by the SSC in October 2024, as they provided advice on the FY2025 Georges Bank haddock OFL/ABC.

The TMGC considered projections and catch advice from the two haddock assessments and selected the U.S. assessment as the preferred model, the Woods Hole Assessment Model (WHAM). The resulting FY 2026  $F_{MSY}$  projected catch/OFL was 8,177 mt with an ABC set equal to the OFL. The SSC noted that the TMGC's recommended ABC does not align with the Council's ABC control rules (i.e., the  $ABC = 75\% F_{MSY}$ ), but given the current stock status and that the ABC does not exceed the OFL, the recommended ABC is unlikely to result in overfishing for this stock.

The Canadian assessment considers EGB haddock as an individual stock, while the U.S. assessment includes the entire GB. To address the spatial differences, the NEFSC developed a biomass apportionment method to determine the portion of GB haddock biomass distributed within the EGB Management Area 3. In 2025, the method was updated to include additional survey strata. The apportionment method indicated that 75% of GB haddock biomass was in the EGB and 25% in the Western Georges Bank (WGB) Management Areas in 2026.

The spatial apportionment of biomass yielded an EGB ABC of 4,750 mt and WGB ABC of 3,427 mt.

The TMGC's most recent U.S./Canada resource sharing agreement produced allocation shares for EGB haddock of 21% (998 mt) to the U.S. and 79% (3,752 mt) to Canada.

In summary, the 2026 Georges Bank haddock ABC for the U.S. is 4,425 mt (i.e. 3,427 mt plus 998 mt) and the TAC for Canada is 3,752 mt.

### Georges Bank Yellowtail Flounder

Georges Bank yellowtail flounder was assessed in 2025 only by the U.S. The assessment was completed by the NEFSC as a management track assessment, which updated the data and made slight methodological adjustments from the 2024 research track assessment that transitioned the assessment of this stock to using WHAM. The 2025 management track assessment was peer-reviewed in September 2025 and found to provide the best scientific information available. The SSC was provided the NEFSC 2025 Management Track Assessment Report and the (draft) 2025 September Management Track Peer Review Panel Report, as well as information from the TMGC.

The 2025 management track assessment found the Georges Bank yellowtail flounder to be overfished (2024 SSB at only 10% of the biomass target) and not undergoing overfishing (2024 fully selected mortality was 19% of the overfishing threshold). This represents a change from the previous assessment, in which overfishing status was unknown—though official status determination is determined by NOAA and has not yet occurred. Catches are exceptionally low, with total catch for the assessment of 12mt, including 1 mt U.S. landing and 0 mt Canadian landings, and with most post-2020 index values overlapping zero. The assessment assumed current and projected recruitment is and would remain lower than historic levels based on a change-point analysis of bottom temperature.

The 2025 Georges Bank yellowtail assessment was completed after the ISATS process, and so this stock was not subject to consideration by the Technical Science Coordination meeting or other ISATS processes, but was considered by the TGMC as well as the plan development team (PDT) and Council staff. The TMGC recommended a shared TAC of 57mt for the stock, noting that the stock is considered overfished by the U.S. and would be considered in the critical zone under the Canadian Precautionary approach. This catch level represents a substantial (72%) reduction over previous years but remains well above recent total catches. The U.S./Canada sharing agreement was determined to be 54% U.S. and 46% Canada, which resulted in a U.S. ABC of 31 mt for 2026.

There are a number of uncertainties. The greatest is that the very low catches in the fishery and survey indices make it difficult to track cohorts and may pose challenges for future assessments. Additionally, the peer review panel and the SSC each noted two potential uncertainties: (1) that state-space WHAM framework might make it difficult to decipher inferences of environmental vs. fishery effects on the stock, and (2) that environmental forecasting might be developed and these forecast environmental conditions might be integrated into future projected recruitment. Finally, the SSC noted that the changes in model-estimated biomass—though very small in

absolute terms—demonstrated substantial relative changes (first negative then positive) in 2019-2021.

## ***ADDITIONAL COMMENTS AND RESEARCH RECOMMENDATIONS***

### ***Overarching (multi-species) comments***

The SSC provides several research recommendations in addition to those already provided by recent review panels. Note that these are like the recommendations provided in 2024 and the SSC continues to provide these recommendations to NMFS/NEFSC.

The SSC suggests that the following be considered as overarching research recommendations:

- Consider joint cooperative science initiatives, like TRAC, that might produce more cohesive advice more efficiently.
- Evaluate options to address spatial scale mismatches between assessment approaches.
- Conduct institutional or policy analyses that evaluate the cases under which alterations of the TMGC process could improve incorporation of stakeholder knowledge and feedback.
- With respect to apportionment protocols, NMFS should consider the approaches recommended by the SSC at its July 2024 meeting now that the original approach to apportionment has been applied and found to need improvement. Recommendations included:
  - Consider survey seasonality and reevaluating equal survey weightings when averaging.
  - Evaluate the frequency at which no tows occur in a stratum and the impact of the assumption that a stratum with no tows has a mean of zero biomass.
  - Evaluate other time series modeling techniques, acknowledging that use of the loess smoother maintains consistency with the calculation of the US-Canada resource sharing allocation. Specifically, the SSC suggests exploring a time series model that provides predictions bound between 0 and 100 and that minimizes prediction error.

With respect to the allocation of quota for GB cod and haddock stocks, the increased observer coverage in the U.S. groundfish fishery resulting from the Northeast Multispecies Amendment 23 provides detailed information on the resource distribution on Georges Bank. These data can be used to evaluate the degree of alignment between the transboundary allocation of quota and the spatial pattern of past catches.

### ***Georges Bank Cod***

The spawning stock biomass estimates of the Eastern Georges Bank cod model are considerably greater than the SSB estimated by both the U.S. Georges Bank cod model despite a smaller stock area footprint. Several factors are likely contributing to scaling differences between the model estimates, including the impact of different footprints on the models, differences in natural

mortality (M) assumptions, and structural differences between the two models related to how uncertainty around data gaps is handled, all of which contribute to differences in model outputs. The SSC is concerned about the scaling of SSB between models and recommends further work within WHAM to reconcile differences between models and resolve preferred model specifications.

### Georges Bank Haddock

With respect to the GB haddock WHAM assessment, the large fluctuations in this stock's abundance could lead to significant density dependent effects on growth and weight at age. This could impact performance of the stock assessment and projections if these population parameters are not regularly updated. The SSC recommends that the density dependent effects on growth should be examined in future assessments of the stock.

### Georges Bank Yellowtail Flounder

The SSC recommended that managing Georges Bank yellowtail flounder as a bycatch-only stock be considered. However, the SSC acknowledged that coordination with Canada would be needed..

### ***SUMMARY OF RECOMMENDATIONS***

- 1. The SSC recommends an OFL of 473 mt, an overall ABC of 473 mt, and a U.S. ABC of 151 mt for Georges Bank cod for FY 2026.**
- 2. The SSC recommends an OFL of 8,177 mt, an overall ABC of 8,177 mt, and a U.S. ABC of 4,425 mt for Georges Bank haddock for FY 2026.**
- 3. The SSC recommends an OFL of 57 mt, an overall ABC of 57 mt, and a U.S. ABC of 31 mt for Georges Bank yellowtail flounder for FY 2026.**
- 4. The SSC recommends that the density dependent effects on growth should be examined in future assessments of the Georges Bank haddock stock.**
- 5. The SSC recommends NMFS consider the other approaches to apportionment recommended by the SSC at its July 2024 meeting now that the original approach to apportionment has been applied and found to need improvement.**
- 6. The SSC recommends NMFS use additional observer data to evaluate the degree of alignment between the transboundary allocation of quota and the spatial pattern of past catches.**

Stock	Fishing Year	OFL (mt)	ABC (mt)	US ABC (mt)
GB cod	2026	473	473	151
GB haddock	2026	8,177	8,177	4,425
GB yellowtail flounder	2026	57	57	31

### ***DOCUMENTS***

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

1. Presentation by Council Executive Director
2. NEFMC Executive Director to SSC Memo – FY2026 U.S. OFL and ABC for U.S./Canada Transboundary Stocks, October 16, 2025
3. DRAFT Transboundary Management Guidance Committee 2026 Guidance Document
4. Report - [Compilation of Scientific Advice for Eastern Georges Bank Cod and Haddock for Fishing Year 2026](#)
5. Presentation – Compilation of Scientific Advice for Eastern Georges Bank – U.S. Pre-TMGC Meeting, September 26, 2025
6. [September 2025 Management Track Assessment for Georges Bank Yellowtail Flounder](#)
  - a. [2025 Management Track Assessment Peer Review Report, October 4, 2023](#)
  - b. Stock Assessment Support Information [portal](#)\*

### ***REFERENCES***

Applegate A, Cadrin SX, Hoenig J, Moore C, Murawski S, Pikitch E. 1998. Evaluation of existing overfishing definitions and recommendations for new overfishing definitions to comply with the Sustainable Fisheries Act. New England Fishery Management Council Report.

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NEFSC. 2008. Assessment of 19 Northeast Groundfish Stocks through 2007: Report of the 3rd Groundfish Assessment Review Meeting (GARM III), Northeast Fisheries Science Center, Woods Hole, Massachusetts, August 4-8, 2008. U.S. Dept Commer, Northeast Fish Sci Cent Ref Doc. 08-15; 884 p + xvii.

#2b



## New England Fishery Management Council

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Daniel Salerno, *Chair* | Cate O'Keefe, PhD, *Executive Director*

### MEMORANDUM

**DATE:** November 12, 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 Several Groundfish Stocks for FY 2026 to FY 2030

The Scientific and Statistical Committee (SSC) met in person and via webinar on October 21-22, 2025, to address Terms of Reference (TOR) for several Northeast multispecies stocks.

**SSC members in attendance:** Dr. Edward Camp (Vice-Chair), Dr. Anna Birkenbach, Dr. Adam Delargy, Dr. Adrian Jordaan, Dr. Lisa Kerr, Dr. Gareth Lawson, Dr. Jason McNamee, Dr. Richard Merrick, Dr. Mateja Nenadovic, Dr. Kevin St. Martin, Dr. Michelle Staudinger, Dr. Hiro Uchida, and Dr. John Wiedenman. Other SSC members contributed to the review of this report.

#### *TERMS OF REFERENCE*

- A. Consider the results of the most recent stock assessments for groundfish stocks and information provided by the Council's Groundfish Development Team (PDT).
- B. Recommend overfishing limits (OFL) and acceptable biological catches (ABC) for the following groundfish stocks for FY 2026-2030 that will prevent overfishing, be consistent with the Council's groundfish ABC control rule and rebuilding plans and consider the Council's Risk Policy Statement and Concept.
  - a. Acadian redfish
  - b. Winter flounder: Georges Bank, Gulf of Maine, Southern New England/Mid-Atlantic
  - c. White hake
  - d. Yellowtail flounder: Cape Cod/Gulf of Maine and Southern New England/Mid-Atlantic

#### *CROSS-STOCK COMMENTS*

Across stocks, the SSC feels that an important area of research is how to best deal with increased uncertainty in setting OFLs and ABC over longer periods. The SSC was asked to provide five years of catch specification advice in response to recent and expected continued changes in NOAA capacity. The SSC discussed the challenges of providing longer-term and inherently less-certain catch advice that can credibly be expected to prevent overfishing without being

systematically conservative with respect to the catch recommended. A substantial component of the increased uncertainty of longer-term catch advice are the projections upon which they rely. Best practices for projections—especially across different life history/fishery types—remain an active area of research. This research area could have been explored by the Projections Research Track Working Group, but the work from that group was halted soon after its formation due to layoffs and reduced capacity at NOAA. The SSC feels that this work is of great importance and should be resumed as soon as possible.

### ***ACADIAN REDFISH***

The SSC received a presentation from Council staff on the 2025 management track assessment by the Northeast Fisheries Science Center (NEFSC) for Acadian redfish (Level 3) and the Groundfish PDT's development of possible OFLs and ABCs for FY 2026-2030. The SSC accepts the Woods Hole Assessment Model (WHAM) approved by the Peer Review Panel including the change in the assessment start year, change in recruitment model, use of age-specific fishery and survey selectivity, and change in fishery and survey age composition likelihoods. Additionally, the SSC concurs that a rho adjustment is not needed for this assessment when setting catch advice.

#### *Terms of Reference Findings*

The SSC recommends an OFL of 7,519 mt and an ABC of 5,665 mt for FY 2026, an OFL of 7,203 mt and an ABC of 5,427 mt for FY 2027, an OFL of 6,999 mt and an ABC of 5,273 mt for FY 2028, an OFL of 6,723 mt and an ABC of 5,065 mt for FY 2029, and an OFL of 6,513 mt and an ABC of 4,907 mt for FY 2030 for the Acadian redfish stock. The recommended OFLs and ABCs aim to prevent overfishing, are consistent with the Council's ABC control rules, and consider the Council's Risk Policy Statement.

#### *Rationale Including Significant Sources of Uncertainty*

The SSC's decision to recommend ABCs following Option A of the groundfish control rule and without a rho-adjustment was based largely on comparatively low uncertainty, stock status, and previous work.

The SSC considered the Acadian redfish projections to have relatively low uncertainty because the species' long lifespan, slower growth, and size-based selectivity resulted in projections through 2030 being based mostly on year class sizes which are already being observed in the data. The projections are not sensitive to recruitment in the short term (i.e., 5 years). Incoming redfish recruitment does not enter the fishery until older age classes, so the projection time period does not become overly reliant on recruited fish that have not yet been seen in the data (so-called "paper fish"). The model-projected decreases in SSB therefore largely derive from empirically-informed signals of lower productivity.

The current status of redfish is good; the stock is not overfished and overfishing is not occurring. Therefore, the SSC believed that recommending ABCs based on Option A of the control rule would not increase any risk of overfishing.

The SSC appreciated the presentation of the rho-adjusted information even though this was not used for setting catch advice, as it offered some perspective on the effect of that uncertainty. However, the SSC agreed with the Peer Review Panel that the rho adjustment was not needed, because the retrospective pattern was not severe (a judgement made about the magnitude of the retrospective bias), with the estimates of rho being within the bounds recommended as acceptable by other fisheries authorities (e.g., ICES 2020), though it does violate the current guidelines used by NOAA for some other stocks. Additionally, the adjustment does not alter stock status, and not using the rho adjustment could mitigate some of the negative socioeconomic consequences of the declining catch advice. The SSC concluded that the unadjusted, Option A catch projections represent a reasonable upper-bound by which to set catch advice.

The SSC discussed the lack of fit of the assessment model to the survey data. This diagnostic improved in the current assessment, but there is still a lack of fit in the terminal year of the assessment. This issue was identified by the SSC previously and continues to be an uncertainty in the assessment. The dearth of age data is still a concern for the SSC and was also noted by the Peer Review Panel. Improvements on this topic were made, and the SSC supports continuing to bolster this data element in the assessment. The SSC was also comfortable with the recruitment assumption but recommends exploring survey fitting and the incorporation of more age data as these become available in future assessments.

A final uncertainty noted by the SSC and discussed with some public in attendance was the variations in catch over the time series. Some of this was driven by a need for bait in some fixed gear fisheries, but there are also federal programs (e.g., USDA) that incentivize increased harvest in some years. The SSC felt this trend should be closely monitored given that catch advice may be impacted if the current dynamics of the fishery change more consistently in the future.

#### *Additional Comments and Research Recommendations*

As noted above, utilization of this stock is generally low, though that could change based on external factors. Therefore, it seems as if the projected ABCs are protective against the risk of overfishing and decrease through the specification setting period. If harvests go up in the coming years, the ABCs are in place and can curtail harvest going up rapidly.

The SSC discussed that the projections are not overly reliant on recruitment but also discussed that there does not appear to be an accumulation of fish in the plus group either; therefore, this was another factor in the SSC using the projections for setting catch advice for this species without any modifications.

Additional recommendations included continuing working with WHAM and testing the other features available in that software, namely applying random effects on the numbers-at-age, experimenting with some of the other available methods in the software to improve survey fits, testing possible environmental effects on things like recruitment, exploring alternate selectivity blocks, and accounting for sexually dimorphic growth and weight-at-age which is a biological characteristic of this species.

Some final recommendations from the SSC are to better understand migration dynamics between the Gulf of Maine and the Scotian Shelf as this may be important to understand for this stock, so this is an area of research that could be explored in the future. Also, bolstering the age data is an area where some investment can be made for this stock. This can be accomplished by: 1) completing aging of structures that exist in the archives or 2) incorporating length-frequency modeling into the redfish WHAM model. The age data is important in the case of redfish to make sure the age dynamics are well understood as this is a long-lived species. The SSC agrees with the Peer Review Panel that investigating state survey data may be a good exploration for future versions of the redfish model. Finally, there was discussion that it is not possible to do a rho adjustment directly in WHAM. While state-space models tend to mitigate retrospective patterns, in cases where the WHAM model will be configured to behave like a standard age-structured model, it may be necessary to have this feature, therefore this should be added to the capabilities of WHAM.

Summary of Recommendations

1. **The SSC recommends an OFL of 7,519 mt and an ABC of 5,665 mt for FY 2026, an OFL of 7,203 mt and an ABC of 5,427 mt for FY 2027, an OFL of 6,999 mt and an ABC of 5,273 mt for FY 2028, an OFL of 6,723 mt and an ABC of 5,065 mt for FY 2029, and an OFL of 6,513 mt and an ABC of 4,907 mt for FY 2030.**
2. **The SSC recommends using some of the available features in WHAM to account for some of the diagnostic issues in the current assessment structure.**
3. **The SSC recommends continuing to bolster the age information for this stock by aging existing structures and/or modeling length age data in WHAM.**
4. **The SSC recommends investigating migration patterns between the GOM and Scotian Shelf.**

<b>Fishing Year</b>	<b>OFL (mt)</b>	<b>ABC (mt)</b>
2026	7,519	5,665
2027	7,203	5,427
2028	6,999	5,273
2029	6,723	5,065
2030	6,513	4,907

**GEORGES BANK WINTER FLOUNDER**

The SSC received a presentation from Council staff on the 2025 management track assessment by the NEFSC for Georges Bank (GB) winter flounder (Level 3) and the Groundfish PDT’s development of possible OFLs and ABCs for FY 2026-2030.

The 2025 management track assessment for Georges Bank winter flounder was an update of the state space WHAM with data through 2024. The assessment update corrected estimates of catch from 1982-2003 which were used in the previous assessment. This correction reduced the estimated catch over this period, which rescaled estimates of biomass and recruitment over this period. The updated assessment shows an increase in spawning biomass in recent years and indicates that the stock is not overfished (spawning stock biomass (SSB) in 2024 is estimated to be 5,477 mt, which is 6% above the  $SSB_{MSY}$  target of 5,182 mt), nor is overfishing occurring (fishing mortality (F) in 2024 is estimated to 0.177, which is 41% of the  $F_{MSY}$  limit of 0.431). The reference points for this stock were based on the spawning potential ratio (SPR) proxy estimates assuming a target SPR of 40%. No retrospective adjustments were made to the assessment results.

### Terms of Reference Findings

The SSC recommends an OFL of 2,279 mt and an ABC of 1,785 mt for FY 2026, an OFL of 2,148 mt and an ABC of 1,681 mt for FY 2027, an OFL of 2,079 mt and an ABC of 1,627 mt for FY 2028, an OFL of 2,061 mt and an ABC of 1,613 mt for FY 2029, and an OFL of 2,060 mt and an ABC of 1,612 mt for FY 2030 for the Georges Bank winter flounder stock. The recommended OFLs and ABCs aim to prevent overfishing, are consistent with the Council's ABC control rules, and consider the Council's Risk Policy Statement.

### Rationale Including Significant Sources of Uncertainty

The SSC was presented with five-year projections (2026-2030) of SSB and catch at a target F of 0.32, which is 75% of  $F_{MSY}$  under option A of the Council's groundfish control rule. Two options were discussed for setting the OFL and ABC. In the first option, the target catch was based on 75%  $F_{MSY}$  in all five years of the projection (2026-2030). In the second option, the target catch was based 75%  $F_{MSY}$  for the first three years (2026-2028), and the ABC was fixed at the 2028 estimate in years 2029 and 2030. The rationale for the second option was the increasing uncertainty in the projections in later years.

The SSC discussed at length the uncertainty of using projections over long time periods, and depending on the life history of the species, the projected stock size and target catches become increasingly composed of paper fish. "Paper fish" refers to the fish cohorts in the projections that are based on the estimated recruitments from the terminal assessment year onward during the projection. As noted above, this is less of an issue for long-lived species like redfish, but more so for winter flounder. For GB winter flounder, most of the target catches from 2028 onward were composed of paper fish, with the fraction increasing year over year.

The SSC decided to recommend the estimated ABC and OFL fishing at 75%  $F_{MSY}$  under Option A of the groundfish control rule. The SSC decision not to recommend holding the ABC constant in the final two years, despite these projected catches being considered uncertain based on their reliance on paper fish, was based on several reasons. First, the stock was assessed to be above  $SSB_{MSY}$ , and the SSC believes the Option A ABCs will limit sufficient risk of overfishing and not pose a risk to the stock. Second, the Option A ABCs are above current catch levels, and well above recent catches, thus the SSC believed that following Option A of the control rule is unlikely to cause socioeconomic hardship to the fishery. Finally, there were only small

differences in the ABCs for FY 2029 and 2030 between Option A and using constant values. In total, the SSC did not believe there was sufficient justification to deviate from Option A of the groundfish control rule for Georges Bank Winter Flounder.

Additional Comments and Research Recommendations

Natural mortality (M) for this stock is assumed fixed across ages and years and is an important source of uncertainty in the assessment model and in the estimation of reference points. The SSC recommends exploration and potentially updating M for this stock.

The SSC recommends further research into environmental influences on productivity for Georges Bank winter flounder.

There are two other winter flounder stocks (Gulf of Maine and Southern New England / Mid-Atlantic), and all three were part of a Research Track Assessment that was recently halted. The Research Track process can provide a more holistic view of the population dynamics across stocks, which might identify common drivers for this species in the region. The SSC feels that the Research Track Assessment for these stocks should be resumed as soon as possible.

Summary of Recommendations

- 1. The SSC recommends an OFL of 2,279 mt and an ABC of 1,785 mt for FY 2026, an OFL of 2,148 mt and an ABC of 1,681 mt for FY 2027, an OFL of 2,079 mt and an ABC of 1,627 mt for FY 2028, an OFL of 2,061 mt and an ABC of 1,613 mt for FY 2029, and an OFL of 2,060 mt and an ABC of 1,612 mt for FY 2030.**
- 2. The SSC recommends resuming the work of the Projections Research Track Working Group and the Winter Flounder Research Track Assessment as soon as possible.**
- 3. The SSC recommends revisiting natural mortality assumptions and research to better understand environmental drivers of stock productivity.**

<b>Fishing Year</b>	<b>OFL (mt)</b>	<b>ABC (mt)</b>
2026	2,279	1,785
2027	2,148	1,681
2028	2,079	1,627
2029	2,061	1,613
2030	2,060	1,612

## ***GULF OF MAINE WINTER FLOUNDER***

The SSC received a presentation from Council staff on the 2025 management track assessment by the NEFSC for Gulf of Maine winter flounder (Level 1) and the Groundfish PDT's development of possible OFLs and ABCs for FY 2026-2030.

An Empirical 30+ Area-Swept model was used to determine current stock status. It was determined that overfishing is not occurring, although overfished status remains unknown. Surveys show some signs of increase in area-swept biomass estimates. Proposed catch advice was based on 75% of E40%<sup>1</sup> (75% E<sub>MSY</sub> proxy), specifically using the average of the 2023 and 2024 fall survey data using updated catchability coefficients. The PDT recommended a constant approach using 75% of E40%, employed to derive proposed catch advice (OFLs and ABCs) for SSC consideration, in part because there is no information on recruitment available for projections. Recent commercial and recreational landings and discards have been stable at lower levels, and the GOM winter flounder stock has been underutilized for some time, maintaining similar patterns in the most recent five years. Notable recreational and commercial catches occur in state waters, but these fisheries lack accountability measures and are included in expected catches. Socioeconomic findings show that inter-sector annual catch entitlement (ACE) leases prices have been \$0 in recent years, in part because utilization is low and the stock is not constraining other fisheries.

### *Terms of Reference Findings*

The SSC recommends an OFL of 1,064 mt and an ABC of 798 mt, held constant for FY 2026-2030 for the Gulf of Maine winter flounder stock. The recommended OFLs and ABCs aim to prevent overfishing, are consistent with the Council's ABC control rules, and consider the Council's Risk Policy Statement.

### *Rationale Including Significant Sources of Uncertainty*

The SSC catch recommendation was based on Option A of the groundfish ABC control rule, where the ABC is the catch associated with 75% of F<sub>MSY</sub>. In the case of Gulf of Maine winter flounder, E40% is the overfishing exploitation threshold proxy for 75% of F<sub>MSY</sub>. The empirical framework used for Gulf of Maine winter flounder used the average of the 2023 and 2024 fall survey data to project OFLs and ABCs for 2026-2030 under a constant approach. The SSC discussed that this constant approach was well-justified for this stock. What is known about the life history of winter flounder suggests that there will be a large proportion of fish in 3-5 years that have yet to be recruited (and thus are not observed). This means the projected catch, especially in out years, is subject to the "paper fish" issue referred to above for Georges Bank winter flounder. This uncertainty, the empirical approach limitations, and the consistency with past recommendations and PDT findings all warranted the constant catch advice for fishing years 2026-2030.

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<sup>1</sup> E40% is the overfishing exploitation threshold proxy.

Additional Comments and Research Recommendations

Regarding stock status, the SSC remains uncomfortable with assigning an overfishing status using an empirical method, although this has been carried over for some years. The lack of stock status could be solved by pursuing ongoing work to move into a WHAM framework.

The SSC recommended several improvements to data collection and integration. There is a need for better catchability estimates for state surveys, requiring some coordination between the States. Research into the phenology of winter flounder and survey timing might help understand patterns in survey indices. A fixed survey timing with a migrating species impacted by climate change could impact the catchability within the survey over space and time. There has been a lot of tagging of winter flounder sporadically through time that could be leveraged to better elucidate the stock structure of this species.

The SSC discussed that resumption of the Research Track Assessment for this and other winter flounder stock should be beneficial. New tools are available to integrate stocks into a single synthetic stock assessment which could be especially helpful for stocks. The SSC recommended exploring this option, which would likely require transitioning from empirical to analytic assessment approaches like WHAM. The SSC expects that transition to WHAM and exploration of multi-stock assessments would remain on the task list if the research track were resumed.

Finally, the SSC recommended work to understand and improve overall marketability of the winter flounder stock. Marketability is perceived as being low, and improving marketability could increase utilization by the fishery.

Summary of Recommendations

- 1. The SSC recommends an OFL of 1,064 mt and an ABC of 798 mt, held constant for FY 2026-2030.**
- 2. The SSC recommends resuming the work of the Winter Flounder Research Track Assessment as soon as possible and/or work to transition assessing all winter flounder stocks with WHAM.**
- 3. The SSC recommends coordination across data collection efforts to elucidate questions about stock structure and survey catchability.**

<b>Fishing Year</b>	<b>OFL (mt)</b>	<b>ABC (mt)</b>
2026-2030	1,064	798

## ***SOUTHERN NEW ENGLAND/MID-ATLANTIC WINTER FLOUNDER***

The SSC received a presentation from Council staff on the 2025 management track assessment by the NEFSC for Southern New England/Mid-Atlantic (SNE/MA) winter flounder (Level 1) and the Groundfish PDT's development of possible OFLs and ABCs for FY 2026-2030.

### ***Terms of Reference Findings***

The SSC recommends an OFL of 961 mt and an ABC of 507 mt for FY 2026, an OFL of 1,009 mt and an ABC of 532 mt for FY 2027, an OFL of 1,055 mt and an ABC of 556 mt for FY 2028, an OFL of 1,101 mt and an ABC of 556 mt for FY 2029, and an OFL of 1,101 mt and an ABC of 556 mt for FY 2030 for the Southern New England/Mid-Atlantic winter flounder stock. However, the SSC recommends that the PDT recalculate the OFL for FY 2030 to achieve the constant ABC at 50%  $F_{MSY}$ , and the SSC would accept the updated OFL value. The recommended OFLs and ABCs aim to prevent overfishing, are consistent with the Council's ABC control rules, and consider the Council's Risk Policy Statement.

*Note: This stock is one of the few in which the SSC recommended that OFL in the out-years be recalculated (see below). To be able to complete these calculations, the SSC acknowledges that the PDT requires the expertise of its members from the NEFSC staff, staff who are currently under the federal furlough.*

### ***Rationale Including Significant Sources of Uncertainty***

The PDT provided a range of options for the SSC to consider, including ABCs based on: 1) 75%  $F_{MSY}$ , 2) 75%  $F_{MSY}$  with year 3 advice held constant for years 4 and 5, 3) 50%  $F_{MSY}$ , and 4) 50%  $F_{MSY}$  with year 3 advice held constant for years 4 and 5. The range of options presented reflects advice given by the SSC in the previous advice setting process. The SSC recommended Option 4, 50%  $F_{MSY}$  held constant with year 3 ABCs (but not OFLs) held constant for years 4 and 5. The SSC justified this recommendation based on substantial uncertainty in out-year projections, uncertainty associated with reference points, and poor indicators of stock health.

The SSC considered the projected catch to be especially uncertain and potentially overly optimistic. Projected catch, especially for out years 2029 and 2030, would be based largely on the "paper fish" mentioned for previous stocks—i.e., year classes that have not yet been observed. Further, estimated recruitment has remained low and steady over the past decade with only a slight increase at the end of the time series. The projected catch appears to assume continued improvements in recruitment that have not yet been observed.

In the 2022 stock assessment, there was a revision to the recruitment stanza (i.e., truncated period of 2002-2021) that informed the calculation of reference points. This revision made the assessment more responsive to changes in productivity. However, because of the use of an  $F_{MSY}$  proxy ( $F_{40\%}$ ) in this case, this change in productivity assumption revised the  $SSB_{threshold}$ , while the corresponding  $F_{MSY}$  was unaffected. The adjustment of an  $SSB_{threshold}$  to reflect decreased productivity without coincident adjustment to the  $F_{MSY}$  management targets can have the inadvertent result of higher exploitation rates on stocks under stress. This led to SSC questions as to whether  $F_{40\%}$  remains a good proxy for  $F_{MSY}$  in this situation. These questions align with past Assessment Oversight Panel (AOP) and Peer Review Panel discussions regarding the need to

reevaluate whether F40% remains a good proxy under a lower productivity assumption or if  $F_{MSY}$  should be directly estimated.

The change in reference points in 2022 led to the stock being considered rebuilt despite no changes in indicators of stock health. The assessment reflects an overall declining trend in SSB over the time series, with the current estimate being the second lowest in the time series, and observed survey indices are at or near time series lows. These changes in the 2022 stock assessment challenged the SSC's ability to recommend the stock's ABC, and the SSC noted that using the ABC control rule Option A (75%  $F_{MSY}$ ) for the stock would have doubled the ABC.

Concern over the substantial uncertainty in projections, continued poor stock condition, and uncertainty regarding the  $F_{MSY}$  proxy led to the SSC recommending continued use of 50%  $F_{MSY}$  to inform ABCs for this stock with year 3 held constant for years 4 and 5. The SSC believes that the OFL and ABC recommendations will prevent overfishing and meet the Council's management objectives for this stock.

The SSC also recommends allowing the OFLs to continue to increase for FY 2029 and 2030 even as ABCs are held constant, to reflect increases in the projections and to be consistent with recommendations made in previous years. This is a departure from the 50%  $F_{MSY}$  sensitivity run provided by the PDT where both the ABCs and OFLs were held constant at the FY 2028 level for FY 2029 and 2030. The value for the SSC's preferred OFL for FY 2030 was thus not available at the time of the meeting. In its absence, the SSC recommends the OFL for FY 2030 be held constant at the FY 2029 level with the intent that, if possible, it will be recalculated based on projections assuming catches at the recommended FY 2029 ABC.

#### *Additional Comments and Research Recommendations*

The SSC recommends continued exploration of best practices for integrating prevailing biological conditions to inform projections and reference points to provide realistic management targets. The SSC recommends exploration of fitting a stock recruitment model to test whether F40% remains an appropriate proxy for  $F_{MSY}$ . There is evidence that the productivity of this stock has and will continue to be impacted by warming ocean conditions. The SSC recommends continued investigation of environmental drivers affecting the productivity of this stock. Work was ongoing to transition to a WHAM model for this stock and to explore the utility of environmental covariates within the model in the context of the research track, which is now paused. Therefore, the transition in model platform and the treatment of environmental influences on stock dynamics will need to be explored through an alternative pathway, such as the next management track. Furthermore, the SSC suggested the possibility of considering all three winter flounder stocks together in a WHAM multi-stock assessment. Several surveys are used to inform this stock assessment which can present challenges in model fitting. Future work could explore application of a spatial-temporal modeling framework (e.g., a vector autoregressive spatial-temporal (VAST) model) that can integrate the surveys to estimate a comprehensive index of abundance.

Summary of Recommendations

1. The SSC recommends an OFL of 961 mt and an ABC of 507 mt for FY 2026, an OFL of 1,009 mt and an ABC of 532 mt for FY 2027, an OFL of 1,055 mt and an ABC of 556 mt for FY 2028, an OFL of 1,101 mt and an ABC of 556 mt for FY 2029, and an OFL of 1,101 mt and an ABC of 556 mt for FY 2030. However, the FY 2030 OFL should be recalculated if possible.
2. The SSC recommends resuming the work of the Winter Flounder Research Track Assessment as soon as possible and/or work to transition assessing all winter flounder stocks with WHAM.
3. The SSC recommends research to better understand environmental drivers of stock productivity.
4. The SSC recommends modeling that can incorporate data from multiple surveys to estimate a comprehensive index of abundance.

Fishing Year	OFL (mt)	ABC (mt)
2026	961	507
2027	1,009	532
2028	1,055	556
2029	1,101	556
2030	1,101*	556

\* Recalculate OFL if possible.

**WHITE HAKE**

The SSC received a presentation from Council staff on the 2025 management track assessment by the NEFSC for white hake (Level 3) and the Groundfish PDT’s development of possible OFLs and ABCs for FY 2026-2030. Based on the presentations from the PDT, which included information from the 2025 Management Track Peer Review Panel, and discussion within the SSC, it is recommended that the catch advice for FY 2026-2030 be based on model projections approved during the SAW56 benchmark assessment and using the control rule option B (70% F<sub>MSY</sub>) to set ABCs as this species is still in a rebuilding plan.

Terms of Reference Findings

The SSC recommends an OFL of 1,943 mt and an ABC of 1,393 mt for FY 2026, an OFL of 1,760 mt and an ABC of 1,261 mt for FY 2027, an OFL of 1,640 mt and an ABC of 1,174 mt for

FY 2028, an OFL of 1,618 mt and an ABC of 1,157 mt for FY 2029, and an OFL of 1,698 mt and an ABC of 1,215 mt for FY 2030 for the white hake stock. The recommended OFLs and ABCs aim to prevent overfishing, are consistent with the Council's ABC control rules, and consider the Council's Risk Policy Statement.

#### *Rationale Including Significant Sources of Uncertainty*

The white hake stock is neither overfished nor experiencing overfishing. It had been making progress on rebuilding, though this rebuilding seems to have stalled in recent years. Utilization of white hake by the multispecies groundfish fishery is high, and it can be a constraining stock. The assessed stock status and condition do not well match industry perceptions of white hake populations per written correspondence and public comment received by the SSC. The SSC weighed these issues during their deliberations. The SSC's recommended ABCs follow the groundfish rebuilding control rule (70%  $F_{MSY}$ ). The SSC considered there to be moderate uncertainty in the projections, but the SSC did not find sufficient biological nor socioeconomic justification to deviate from control rule by holding any out-years constant.

White hake life history and fishing practices predisposes them to less severe "paper fish" issues (projected catch composed of projected and yet unobserved recruits) than winter flounder stocks, though still by 2028, 25% of projected white hake SSB is from projected recruits. The SSC did not find this amount of uncertainty sufficient justification for holding out-years constant. Further, it was not obvious that holding out-years constant would have increased biological risk or alleviated socioeconomic hardship (the SSC-recommended ABC's at 70%  $F_{MSY}$  would allow marginally more catch 2028-2030 than holding 2029 and 2030 ABCs constant at 2028 levels). The SSC also recognized that the stock status (rebuilding) and trends (declining with especially low recruitment in recent years) presented challenges to recommending ABCs greater than those specified by the control rule.

As discussed by the SSC and as presented by the PDT, the major sources of uncertainty for this stock are the catch-at-age information not being well characterized throughout the assessment time period, the use of pooled and survey age-length keys to age commercial catch, possible seasonal movement of white hake out of defined stock area, and inconsistency between recruitment methods used in the long-term and short-term projections.

The SSC appreciated the inclusion of the autocorrelated recruitment (AR1) sensitivity projection run with a different recruitment assumption as it provided good context regarding the rebuilding of the stock. Recruitment is one of the major uncertainties with this assessment. Even though the SSC felt that using the autocorrelated recruitment was a plausible basis for projections, the SSC continued to support the SAW56 methods for the projections used for specification setting, consistent with the recommendations of the 2025 assessment peer review panel. There is not a biologically meaningful difference between standard projection (SAW56 method) and AR1 projection (sensitivity run) in the first three years, so the SSC agreed with the peer review panel in using the standard projection until more investigation of best practices for projections can be conducted. This is an issue that should continue to be considered for future white hake assessments where both sets of consultant analyses should be considered for biological reference point development as well as for projections. These analyses could be simulation-tested to see which might perform better for a stock like white hake in the long term.

Additional Comments and Research Recommendations

The SSC continues to be concerned about the lack of recent white hake recruitment. There was considerable discussion during the meeting concerning the lack of apparent recruitment despite low harvest, and whether this was signaling a longer-term change for stock productivity. The SSC decided to recommend ABCs that follow the projections in this case because the stock dynamics as they are understood by the model continue to decrease through 2029. If the SSC had followed the process of holding the out years at a static ABC, the risk of overfishing would have increased during the specification period. Therefore, the SSC decided that following the projections mitigated this risk since the specification time period was long (5 years) and holding the ABC constant as the biomass declined was more risk prone than letting the ABC follow the projection directly.

The SSC recommends moving the assessment from the current Age Structured Assessment Program (ASAP) assessment model into WHAM, which would allow for the exploration of various effects like the apparent environmental effects on the population and for more experimentation with the recruitment options that were discussed by the SSC. Additionally, the SSC recommends continuing to work on the recruitment assumptions in long-term and short-term projections. The Peer Review Panel provided a good starting point for this exploration with the strength and weakness analysis that they provided in their report.

Summary of Recommendations

- 1. The SSC recommends an OFL of 1,943 mt and an ABC of 1,393 mt for FY 2026, an OFL of 1,760 mt and an ABC of 1,261 mt for FY 2027, an OFL of 1,640 mt and an ABC of 1,174 mt for FY 2028, an OFL of 1,618 mt and an ABC of 1,157 mt for FY 2029, and an OFL of 1,698 mt and an ABC of 1,215 mt for FY 2030.**
- 2. The SSC recommends moving the assessment from its current ASAP model into WHAM so that some of the uncertainties that were identified by the SSC and Peer Review Panel can be tested using the features of WHAM.**
- 3. The SSC recommends that the question of how recruitment is specified in white hake short-term projections and reference points continue to be evaluated in the next assessment for white hake, using the strength and weakness analysis offered by the peer review panel in their 2025 Management Track Assessment report.**

<b>Fishing Year</b>	<b>OFL (mt)</b>	<b>ABC (mt)</b>
2026	1,943	1,393
2027	1,760	1,261
2028	1,640	1,174
2029	1,618	1,157
2030	1,698	1,215

## ***CAPE COD/GULF OF MAINE YELLOWTAIL FLOUNDER***

The SSC received a presentation from Council staff on the 2025 management track assessment by the NEFSC for Cape Cod/Gulf of Maine (CC/GOM) yellowtail flounder (Level 2) and the Groundfish PDT's development of possible OFLs and ABCs for FY 2026-2030.

The 2025 management track assessment for Cape Cod/Gulf of Maine yellowtail flounder was an update to WHAM developed during the Yellowtail Flounder Research Track Assessment that concluded last year. This is the first management track assessment using the WHAM model for this stock. Relative to the previous 2022 Virtual Population Assessment (VPA) model, the scaling of SSB and recruitment, as well as both reference points, shifted upwards in the 2025 WHAM assessment. This reflects differences in signals from the data as well as changes in model formulation in the new assessment, including time-varying maturity, age-specific natural mortality, age-structured random effects on abundance, and a separation of the NEFSC survey indices by vessel (Albatross vs. Bigelow).

The 2025 assessment indicates that SSB in 2024 was 4,795 mt, which is 44% of the SSB<sub>M<sub>SY</sub></sub> proxy target of 10,907 mt, and the stock is thus overfished. Overfishing is not occurring; F in 2024 was estimated to be 0.144, which is 29% of the overfishing threshold proxy (F<sub>M<sub>SY</sub></sub> proxy = 0.497). Estimated SSB has been overall gradually increasing since 1985 but remains below the new SSB<sub>M<sub>SY</sub></sub> proxy even though fishing pressure has been at historically low levels in recent years. The updated assessment indicates this stock is projected to be above the SSB threshold and not expected to be overfished in 2025 but also not to have reached the rebuilt target. The reference points for this stock were based on the spawning potential ratio (SPR) proxy estimates assuming a target SPR of 40%. No retrospective adjustments were made to the assessment results.

The SSC was presented with OFLs and ABCs based on five-year projections (2026-2030) of SSB and catch at a target F of 0.373, which is 75% of F<sub>M<sub>SY</sub></sub> under Option A of the Council's groundfish ABC control rule. A sensitivity run was also presented with OFLs and ABCs based on 75% F<sub>M<sub>SY</sub></sub> for the first three years (2026-2028) and then holding the OFLs and ABCs constant at the FY 2028 levels for FY 2029 and 2030. The rationale for the sensitivity run was the increasing uncertainty in the projections in later years.

### ***TERMS OF REFERENCE FINDINGS***

The SSC recommends an OFL of 2,224 mt and an ABC of 1,736 mt for FY 2026, an OFL of 2,638 mt and an ABC of 2,062 mt for FY 2027, an OFL of 2,984 mt and an ABC of 2,335 mt for FY 2028, an OFL of 3,225 mt and an ABC of 2,335 mt for FY 2029, and an OFL of 3,225 mt and an ABC of 2,335 mt for FY 2030 for the Cape Cod/Gulf of Maine yellowtail flounder stock. However, the SSC also recommends that the PDT recalculate the OFL for FY 2030 based on catch at the recommended FY 2029 level, and the SSC would accept the updated OFL value. The recommended OFLs and ABCs aim to prevent overfishing, are consistent with the Council's ABC control rules, and consider the Council's Risk Policy Statement.

### Rationale Including Significant Sources of Uncertainty

The SSC had reservations about the assessment, including the large change in scale and aspects of the biological realism, such as large swings in SSB (e.g., the large decreases and increases in 2019-2021) despite overall low fishing mortality. Recruitment in this stock has been weak to moderate, and overall declining since 2017. Recruitment variability and associated uncertainty leads to large confidence intervals around projected SSB.

The SSC was concerned with the projections, particularly in 2029 and 2030. As with the winter flounder stocks discussed above, most of the projected catch from 2028 onward are composed of fish cohorts based on projected recruits (i.e., “paper fish”), with the fraction increasing year over year. Given these uncertainties, the SSC recommended ABCs using the sensitivity run fixing the ABC constant in the latter two years. The stock is below  $SSB_{MSY}$  and the SSC believes these ABCs will limit the risk of overfishing on an overfished stock and promote rebuilding. The recommended ABCs are approximately double current levels and well above recent catch levels under current low utilization, thus holding the latter two years constant is unlikely to cause socioeconomic hardship to the fishery.

The SSC also recommended allowing the OFLs to continue to increase for FY 2029 and 2030 even as ABCs are held constant, to reflect increases in the projections and to be consistent with recommendations made in previous years. This is a departure from the sensitivity run where both the ABCs and OFLs were held constant at the FY 2028 level for FY 2029 and 2030. The value for the SSC’s preferred OFL for FY 2030 was thus not available at the time of the meeting. In its absence, the SSC recommended the OFL for FY 2030 be held constant at the FY 2029 level with the intent that, if possible, it will be recalculated based on projections assuming catches at the recommended FY 2029 ABC.

### Additional Comments and Research Recommendations

The SSC recommends work on the assessment to better attribute process errors. While WHAM can better account for time- and age-varying processes and environmental covariates than other approaches, the Numbers At Age (NAA) random effects are agnostic with respect to process vs. observation error. This can make it challenging to disentangle the relative contributions of multiple processes such as natural mortality, movement, or other natural variations in dynamics that affect populations, and overall may make it difficult to decipher the relative influence of natural and fishery processes on stocks. The SSC has previously discussed how some assessments may inadvertently improve model diagnostics at some cost to biological realism of the outcomes, and that may be the case with this assessment.

There are multiple stock units for yellowtail flounder and there would be value in looking at them synthetically in a single modeling platform. Even if movement between stock areas is small, that could explain some variance and potentially reduce process errors.

Continued examination of environmental drivers of recruitment and population distribution is warranted. The Research Track Assessment found a correlation between recruitment and bottom temperature, although no environmental correlates were included in the final model. A pause in the rapid warming of the Gulf of Maine (GOM) is expected over the next few years, and it will

be instructive to observe how recruitment and population distribution responds. The stock is thought to be shifting in distribution to deeper offshore waters. The rate of that shift should be compared to Atlantic cod to assess the interconnectedness of those two species, particularly given the way in which low cod quotas have limited CC/GOM yellowtail flounder catch, as noted during public comment.

Summary of Recommendations

1. **The SSC recommends an OFL of 2,224 mt and an ABC of 1,736 mt for FY 2026, an OFL of 2,638 mt and an ABC of 2,062 mt for FY 2027, an OFL of 2,984 mt and an ABC of 2,335 mt for FY 2028, an OFL of 3,225 mt and an ABC of 2,335 mt for FY 2029, and an OFL of 3,225 mt and an ABC of 2,335 mt for FY 2030. However, the FY 2030 OFL should be recalculated if possible.**
2. **The SSC recommends additional work on the assessment to reduce process errors and ensure the biological realism of outcomes.**
3. **The SSC recommends continued examination of population distribution and environmental drivers of recruitment.**

<b>Fishing Year</b>	<b>OFL (mt)</b>	<b>ABC (mt)</b>
2026	2,224	1,736
2027	2,638	2,062
2028	2,984	2,335
2029	3,225	2,335
2030	3,225*	2,335

\*Recalculate OFL if possible.

***SOUTHERN NEW ENGLAND/MID-ATLANTIC YELLOWTAIL FLOUNDER***

The SSC received a presentation from Council staff on the 2025 management track assessment by the NEFSC for Southern New England/Mid-Atlantic (SNE/MA) yellowtail flounder (Level 2) and the Groundfish PDT’s development of possible OFLs and ABCs for FY 2026-2030.

The 2025 management track assessment for SNE/MA yellowtail flounder was an update to the Woods Hole Assessment Model (WHAM) developed during the Yellowtail Flounder Research Track Assessment that concluded last year. This is the first management track assessment using the WHAM model for this stock. In addition to the transition to the state-space model, other major changes between the previous 2022 ASAP model and the current 2025 WHAM model

include model specification changes, inclusion of the Gulf Stream Index (GSI) as an environmental correlate informing recruitment and dropping larval survey indices.

The 2025 assessment indicates that estimates of SSB and recruitment remain at historical lows, as do catches. SSB in 2024 was estimated to be 38 mt, which is 14% of the biomass target (SSB<sub>MSY</sub> proxy of 270 mt). The stock thus remains overfished and is in a rebuilding plan with a rebuilding date of 2029. Overfishing is not occurring and fishing mortality in 2024 was estimated to be 0.051, representing 14% of the overfishing threshold (F<sub>MSY</sub> proxy = 0.374). The reference points for this stock were based on the spawning potential ratio (SPR) proxy estimates assuming a target SPR of 40%. No retrospective adjustments were made to the assessment results.

The SSC was presented with OFLs and ABCs based on five-year projections (2026-2030) of SSB and catch at a target F of 0.26, which is 70% of F<sub>MSY</sub> as indicated by the rebuilding plan and hence consistent with Option B of the Council's groundfish ABC control rule. A sensitivity run was also presented with OFLs and ABCs based on 70% of F<sub>MSY</sub> for the first three years (2026-2028) and then holding the OFLs and ABCs constant at the FY 2028 levels for FY 2029 and 2030. The rationale for the sensitivity run was the increasing uncertainty in the projections in later years.

#### Terms of Reference Findings

The SSC recommends an OFL of 46 mt and an ABC of 33 mt for FY 2026, an OFL of 56 mt and an ABC of 33 mt for FY 2027, an OFL of 56 mt and an ABC of 33 mt for FY 2028, an OFL of 56 mt and an ABC of 33 mt for FY 2029, and an OFL of 56 mt and an ABC of 33 mt for FY 2030 for the Southern New England/Mid-Atlantic yellowtail flounder stock. However, the SSC also recommends that the PDT recalculate the OFLs for FY 2028-2030 based on the recommended constant ABCs, and the SSC would accept the updated OFL values. The recommended OFLs and ABCs aim to prevent overfishing, are consistent with the Council's ABC control rules, and consider the Council's Risk Policy Statement.

#### Rationale Including Significant Sources of Uncertainty

The SSC deliberated at length about the use of the control rule or the sensitivity run and the additional possibility of holding ABCs constant across all five years at the FY 2026 level, like the approach taken during the last ABC setting cycle for this stock in 2022 (for a three year time period). The SSC had strong concerns about the assessment and projections. With no age data available for the past five years, the terminal year starting point for projections is highly uncertain and recruitment in the terminal year is based on the long-term average influenced by the recent decrease in the Gulf Stream Index. Uncertainty is compounded by WHAM not being able to handle zero values, i.e., values of zero in survey data as missing and indistinguishable from missing data due to survey gaps. Recruitment has been chronically low, and the reliance of setting future catch limits based on projected recruitment and "paper fish" is especially acute for this stock. SSB in the terminal year of 2024 was estimated to be 38 mt, and thus similar in magnitude to the catch for FY 2026 at 70% of F<sub>MSY</sub> of 33 mt, which relies heavily on an assumption that projections materialize. The stock is in a rebuilding plan and even if the projections did materialize, the stock will not rebuild on time (based on projected SSB from the PDT memo under catch levels indicated by the rebuilding plan's 70% of F<sub>MSY</sub>). The SSC

recognized that all the ABCs being considered are extremely low and to some degree in the noise relative to historical levels, that the projected increases are likewise small in absolute magnitude, and that given low utilization the realized catches will likely continue to be very low. Nonetheless, the SSC had concerns about even the constant ABC of 33 mt approach given the profoundly poor status of the stock and its flatlined SSB trend.

Given these strong reservations, and following the suggestion from the Council's Executive Director, the SSC ultimately elected to follow Option C of the Council's groundfish control rule, wherein catch is based on incidental bycatch only. At the time of the meeting, suitable estimates of bycatch were not available and delaying recommendations until such estimates could be produced would inappropriately delay the management process. In the absence of other values, the SSC therefore recommended holding ABCs constant for FY 2026-2030 at the FY 2026 level of 33 mt based on 70% of  $F_{MSY}$ . The SSC believes these ABCs will limit the risk of overfishing on a severely overfished stock and ideally, if environmental conditions allow, promote rebuilding. The recommended ABCs are well above recent catch levels given extremely low levels of utilization. Thus, holding ABCs constant and making the fishery bycatch-only are unlikely to cause socioeconomic hardship.

By following Option C, the intent of the SSC is that the stock will be made bycatch-only, reflective of its continued poor status and the consensus that there is no catch level for a targeted fishery that is appropriate. The SSC thus additionally recommends that the Council consider setting ABCs lower than the 33 mt recommended here, at levels based on bycatch and that avoid negative socioeconomic impact, as appropriate estimates become available from the PDT. The SSC also requests that in the future ABCs based on bycatch will be provided the next time this stock is considered.

As was the case of Cape Cod/Gulf of Maine yellowtail flounder and Southern New England/Mid Atlantic winter flounder, the SSC recommended that OFLs be allowed to increase following the projections based on the constant ABC of 33 mt. At the time of the meeting, suitable values for such OFLs were not available for FY 2028 onwards. The SSC thus recommended the OFLs for FY 2028-2030 be held constant at the FY 2027 level of 56 mt with the intent that, if possible, they will be recalculated based on projections assuming catches at the recommended constant ABCs.

#### *Additional Comments and Research Recommendations*

A few other comments about the stock assessment were made. An average value for the Gulf Stream Index (GSI) over recent years (2012-2024) is currently used to inform recruitment for projections. Methods for making GSI predictions, drawing on other disciplines, should be explored. As suggested elsewhere, appropriate treatment of zero values in WHAM should be evaluated; as noted in the assessment report, zero values occur frequently in recent years for this stock. The SSC struggled to understand the concurrent strong decrease in the  $SSB_{MSY}$  proxy and slight increase in  $F_{MSY}$  in the 2025 assessment and suggested investigation into whether yield per recruit has changed and the possibility that the 40% spawning potential ratio proxy should be revisited.

Summary of Recommendations

1. The SSC recommends an OFL of 46 mt and an ABC of 33 mt for FY 2026, an OFL of 56 mt and an ABC of 33 mt for FY 2027, an OFL of 56 mt and an ABC of 33 mt for FY 2028, an OFL of 56 mt and an ABC of 33 mt for FY 2029, and an OFL of 56 mt and an ABC of 33 mt for FY 2030. However, the FY 2028 through 2030 OFLs should be recalculated if possible.
2. The SSC recommends the fishery be made bycatch-only and that the Council consider setting ABCs at lower levels than recommended here based on bycatch values, as those become available.

Fishing Year	OFL (mt)	ABC (mt)
2026	46	33
2027	56	33
2028	56*	33
2029	56*	33
2030	56*	33

\*recalculate OFL if possible.

**DOCUMENTS**

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

1. Presentation on the status of regional science and management by Council Executive Director
2. Presentation by Council staff
3. Groundfish PDT memo to SSC re FY 2026 – 2030 OFLs and ABCs for several groundfish stocks, October 14, 2025
4. September 2025 Management Track Assessment
  - a. *2025 Management Track Assessment Peer Review Report*, October 4, 2025
  - b. Stock Assessment Support Information [portal](#)\*
5. Risk Policy Matrices for groundfish stocks (combined)
6. Framework Adjustment 69, Affected Environment Human Communities (Section 5.7), [March 11, 2025](#)
7. Previous SSC recommendations
  - a. Acadian redfish and white hake
    - i. Meeting materials, [October 27, 2023](#)

- ii. SSC report, [November 13, 2023](#)
  - b. Cape Cod/Gulf of Maine yellowtail flounder and Southern New England/Mid-Atlantic yellowtail flounder
    - i. Meeting materials, [November 9, 2022](#)
    - ii. SSC report, [November 23, 2022](#)
  - c. Gulf of Maine winter flounder and Georges Bank winter flounder
    - i. Meeting materials, [October 26-27, 2022](#)
    - ii. SSC report, [November 23, 2022](#)
  - d. Southern New England/Mid-Atlantic winter flounder
    - i. Meeting materials, [August 25, 2022](#)
    - ii. SSC report, [September 13, 2022](#)
8. Correspondence (if any)

### 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

\* The NEFSC [Stock Assessment Support Information](#) portal includes reports, presentations, and supporting materials for all NEFSC stock assessments.

### **REFERENCES**

ICES. 2020. Workshop on Catch Forecast from Biased Assessments (WKFORBIAS; outputs from 2019 meeting). ICES Scientific Reports. 2:28. 38 pp. <http://doi.org/10.17895/ices.pub.5997>



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Daniel Salerno, *Chair* | Cate O'Keefe, PhD, *Executive Director*

## MEMORANDUM

**DATE:** January 26, 2026  
**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 white hake for Fishing Years 2026 to 2030

The Scientific and Statistical Committee (SSC) met via webinar on January 21, 2026, to address Terms of Reference (TOR) for white hake. The SSC had recommended OFLs and ABCs for this stock in October 2025 for Fishing Years (FY) 2026-2030 based on 70%  $F_{MSY}$ , which is consistent with the white hake rebuilding plan (Option B of the ABC control rule). In December 2025, the Council asked the SSC to reconsider its recommendation, specifically to consider an option based on 75%  $F_{MSY}$ . This memorandum updates the SSC recommendation.

**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. Richard Merrick, Dr. Mateja Nenadovic, Dr. Fred Serchuk, Dr. Michelle Staudinger, Dr. Sam Truesdell, Dr. Hiro Uchida, and Dr. John Wiedenman.

### ***TERMS OF REFERENCE***

- A. Consider the results of the most recent stock assessment for white hake and information provided by the Council's Groundfish Development Team (PDT). Reconsider prior SSC recommendations for FY 2026-2030 OFL and ABC for white hake based on 75%  $F_{MSY}$ , considering the Council's groundfish ABC control rule, Risk Policy, and white hake rebuilding plan.

### ***TOR FINDINGS***

The SSC received a presentation from the Groundfish PDT on possible OFLs and ABCs for white hake for FY 2026-2030, recapping the outcomes of the 2025 management track assessment for white hake, prior SSC recommendations, and updated work of the PDT since the SSC last discussed white hake in October 2025. The 2025 assessment for white hake uses an age-structured model (ASAP) that found the stock status is not overfished and overfishing is not occurring. White hake is in a rebuilding plan with a rebuild date of 2031 and the fishing mortality rate ( $F_{rebuild}$ ) is set at 70%  $F_{MSY}$ .

After deliberation, the SSC reaffirmed its recommendations made in October 2025, to set OFLs and ABCs using 70%  $F_{MSY}$ . The SSC recommends an OFL of 1,943 mt and an ABC of 1,393 mt for FY 2026, an OFL of 1,760 mt and an ABC of 1,261 mt for FY 2027, an OFL of 1,640 mt and an ABC of 1,174 mt for FY 2028, an OFL of 1,618 mt and an ABC of 1,157 mt for FY 2029, and an OFL of 1,698 mt and an ABC of 1,215 mt for FY 2030 for the white hake stock. The recommended OFLs and ABCs aim to prevent overfishing, are consistent with the Council's ABC control rules and white hake rebuilding plan, and consider the Council's Risk Policy Statement.

#### ***RATIONALE INCLUDING SIGNIFICANT SOURCES OF UNCERTAINTY***

The SSC discussed new information provided by the PDT, prior information that was still relevant, and its remit under the groundfish ABC control rules implemented to meet Magnuson-Stevens Act (MSA) National Standards.

The new information provided by the PDT to the SSC included additional, quantified details regarding short-term socioeconomic ramifications of recommending catch advice per 70%  $F_{MSY}$  instead of 75%  $F_{MSY}$ . These included assessments made via the quota change model (QCM) that calculated the potential FY 2026 difference in revenue between these two catch levels at about \$2M, which included predicted differences in white hake and other groundfish landings expected to be constrained by white hake. Notably, the PDT report specified that the QCM is not suitable to make longer-term predictions of differences in catch, including potentially how fishing at 75%  $F_{MSY}$  could negatively affect future landings if it exacerbated the potential for white hake to rebuild, further depleting the spawning stock biomass (SSB).

The SSC was also presented with additional detailed projections of SSB and rebuilding timelines under both catch advice options as well as different recruitment assumptions. These indicated that under both options, white hake is not expected to be rebuilt on schedule (by 2031), with both options rebuilding the stock within the same year (by 2035, under the assumption of long-term recruitment). Notably, the stock is not expected to be able to rebuild on schedule even at  $F=0$  and under the more optimistic assumption of long-term recruitment. The PDT report clearly stated that the approaches used to assess differences in SSB and rebuild time were of insufficient precision to quantify with confidence the differences between the two catch advice options. The SSC discussed that the additional details regarding SSB and QCM were useful, and also that they were at least qualitatively similar to assumptions made during the October deliberations—i.e., that 70%  $F_{MSY}$  could be expected to have meaningful socioeconomic short-term costs born by the industry (as described per public comment and inferred per recent utilization data) and that it was likely that the stock would not be rebuilt under 70%  $F_{MSY}$  by the rebuild date, unless there was an unexpected increase in recruitment.

The SSC briefly discussed their remit for providing catch advice under the control rules developed to meet MSA National Standard 1, noting that the control rule states that catch advice should be consistent with rebuilding. Several SSC members noted that, because the catch advice at 70%  $F_{MSY}$  is inconsistent with the rebuilding plan, the SSC could be justified in setting catch at a substantially lower level. The SSC also noted that they were being asked by the Council to choose between two options—providing five years of catch advice at 70%  $F_{MSY}$  or at 75%  $F_{MSY}$ , and the SSC was uncomfortable with setting catch at 75%  $F_{MSY}$  for a full five years.

The SSC noted the potential reasons that could be used to justify 75%  $F_{MSY}$ , including:

1. The quantified short-term (FY 2026) socioeconomic predicted increase in revenue under this option (\$2M),
2. The small differences in expected SSB and rebuilding time under the two catch advice options, and
3. The perception, especially as informed by much appreciated public comment, that the existing white hake reference points might no longer reflect the true present-day productivity/capacity of the stock.

The SSC noted the potential reasons that could be used to justify 70%  $F_{MSY}$ , including:

1. Stronger adherence to the control rule that specifies that catch should promote rebuilding of stocks in rebuilding plans, and that providing the lower catch advice is preferable to advice that is expected to exacerbate the projected future overfished status of white hake.
2. Although there is uncertainty in the SSB that would result from the two catch options, catch at 70%  $F_{MSY}$  would likely result in greater SSB than would 75%  $F_{MSY}$ .
3. Fishing at 75%  $F_{MSY}$  could result in long-term socioeconomic costs; the greater stock reduction expected under 75%  $F_{MSY}$  led to more substantial harvest restrictions. It was noted that the QCM precluded calculations of present-day economic costs and benefits under the two scenarios, including the appropriate discounting of future harvest gains/losses. The QCM evaluations describe potential changes in revenue and do not describe uncertainty in the projected impacts.
4. None of the information presented suggested the assessment and resultant projections were flawed or overly pessimistic. Rather, the SSC noted, in agreement with the PDT's report, that the recruitment assumptions used in the assessment and projections were, if anything, optimistic—and that using alternative assumptions such as first-order auto-correlated recruitment, or stock-recruit-model based recruitment assumptions that accounted for the diminished stock size leading to lesser expected recruitment—would have resulted in lower projections and thus catch. The SSC especially noted the PDT's statement that a decision to increase catch would essentially suggest the assessment was overly pessimistic, which there is no evidence for this.

The discussion focused largely on the SSC's remit to provide advice most consistent with the control rule, that the SSB should be expected to be higher under the 70%  $F_{MSY}$ , and that the inability to precisely quantify the differences in rebuild time was insufficient justification for knowingly exacerbating the failure to rebuild. These points were the primary justifications for the SSC maintaining its recommendation for 70%  $F_{MSY}$ , which the SSC considered the best option for satisfying control rule Option B. This decision is consistent with the information provided by the PDT. The SSC's recommended ABCs are not likely to result in overfishing for this stock, as the projected harvest rate ( $F=0.123$ ) is less than the assessed overfishing rate.

The SSC noted that one source of uncertainty not accounted for was uncertainty in the calculations of socioeconomic costs and/or benefits under the quota change model. SSC members noted that any future expectations of revenue would need to be predicted and discounted for present day value for comparisons. It was also noted that there was unquantified uncertainty even in the FY 2026 revenue calculations under 70%  $F_{MSY}$ , including related to intra-

and inter-annual variation of past white hake quota lease prices, how these might change under the new catch advice, and run-on consequences these would have for other groundfish landings.

#### ***ADDITIONAL COMMENTS AND RESEARCH RECOMMENDATIONS***

The SSC's research recommendations remain unchanged since its November 12, 2025 memorandum, including transitioning to WHAM to explore model uncertainties and evaluating recruitment specifications for short-term projections. With regards to recruitment, a greater understanding of whether the recruitment projections and methods that are currently used are more realistic than those that may better reflect the current state of the stock (e.g., autocorrelated recruitment, those derived from dynamic linear stock-recruit modeling) would be useful, as a significant component of the deliberations included whether projections under 70%  $F_{MSY}$  represent optimistic or pessimistic predictions.

The SSC would like to emphasize its gratitude to the PDT for the further synthesis of information to best understand the socioeconomic tradeoffs of setting catch advice at 70%  $F_{MSY}$  and 75%  $F_{MSY}$ . The SSC would also like to thank the members of the public who provided additional comments that informed the SSC deliberations. While the reported economic impacts on white hake and other fisheries was appreciated, discussed, and understood by the SSC, the Committee believed that increasing fishing mortality could not be justified during its rebuilding plan at this time. In recent years, the SSC had recommended using 75%  $F_{MSY}$  instead of the rebuild catch guidance at 70%  $F_{MSY}$ ; however, the stock's slowed progress towards rebuilding and continued low recruitment ultimately led the SSC to recommend following the control rule at this time.

The SSC also discussed in what scenarios would economic effects from a catch advice decision warrant deviating from harvest control rules or outweigh the biological uncertainty. Through its deliberations on white hake over the last several months, the SSC believes this stock would benefit from being considered a case study for how harvest control rules could be modified to accommodate these scenarios (e.g., stocks no longer overfished, but not rebuilt and not projected to be rebuilt under recruitment assumptions). Additionally, such scenarios would be useful for consideration by the Risk Policy Working Group as they continue developing prospective plans and rubrics, and for additional discussions regarding the appropriate integration of National Standard 8 with the National Standard 1 and the related harvest control rules.

#### ***SUMMARY OF RECOMMENDATIONS***

- 1. SSC recommends an OFL of 1,943 mt and an ABC of 1,393 mt for FY 2026, an OFL of 1,760 mt and an ABC of 1,261 mt for FY 2027, an OFL of 1,640 mt and an ABC of 1,174 mt for FY 2028, an OFL of 1,618 mt and an ABC of 1,157 mt for FY 2029, and an OFL of 1,698 mt and an ABC of 1,215 mt for FY 2030.**
- 2. The SSC continues to recommend use of a state-space assessment modeling platform (e.g. WHAM) to explore the uncertainties previously described by the SSC and PDT.**

3. The SSC again recommends evaluating how recruitment should be specified in white hake short-term projections and reference points during the next assessment.

Fishing Year	OFL (mt)	ABC (mt)
2026	1,943	1,393
2027	1,760	1,261
2028	1,640	1,174
2029	1,618	1,157
2030	1,698	1,215

**DOCUMENTS**

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

1. Presentation by Council staff
2. Groundfish PDT memo to the SSC, January 14, 2026
3. September 2025 Management Track Assessment
  - a. 2025 Management Track Assessment Peer Review Report, October 4, 2025
  - b. Stock Assessment Support Information portal\*
4. Risk Policy Matrix for white hake
5. Framework Adjustment 69, Affected Environment Human Communities (Section 5.7), March 11, 2025
6. Previous SSC recommendations
  - a. Recruitment assumptions
    - i. Meeting materials: August 10, 2023
    - ii. SSC report: August 31, 2023
  - b. FY 2024-2025 OFLs and ABCs
    - i. Meeting materials (original meeting): September 8, 2023
    - ii. SSC report: September 15, 2023
    - iii. Meeting materials (addressing data correction): October 27, 2023
    - iv. SSC report: November 13, 2023

- c. FY 2026-2030 OFLs and ABCs
  - i. Meeting materials: October 21-22, 2025
  - ii. SSC report: November 12, 2025
- d. Correspondence

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