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MEMORANDUM

DATE: October 1, 2025

TO: Scientific and Statistical Committee

FROM: Scallop Plan Development Team

SUBJECT: **Atlantic Sea Scallop OFLs and ABCs for FY 2026 and FY 2027 (default)**

This memorandum forwards information to support the development of overfishing limit (OFL) and acceptable biological catch (ABC) recommendations for Atlantic sea scallops for fishing year (FY) 2026 and the default values for FY 2027. The Scallop Plan Development Team (PDT) met several times between July 23 and October 1, 2025, to develop this memo.

Overview

To develop OFL and ABC recommendations, the PDT reviewed survey information from the 2025 field season, relevant fishery and observer data, the 2025 Research Track assessment information and peer review report, and prior SSC and PDT reports.

At the August 19, 2025 meeting, the SSC discussed the added uncertainty presented by the use of a combined stock reference points for setting OFLs and ABCs for Atlantic sea scallops, and recommended developing several options for setting OFLs and ABCs, including two that would deviate from the current Scallop ABC control rule. As specified in 50 CFR 648.53, $F_{OFL} = F_{MSY}$, and F_{ABC} = the F associated with a 25% probability (p*) of exceeding F_{OFL}. The options for setting Scallop OFLs and ABCs are as follows:

1. Apply the current Scallop ABC control rule to the combined stock reference point (F_{OFL}=0.49) as produced in the 2025 research track assessment to produce stock-wide OFLs and ABCs.
2. Apply the current Scallop ABC control rule to the Georges Bank reference point (F_{OFL}=0.36) to produce stock-wide OFLs and ABCs.
3. Modify the Scallop ABC control rule to use a lower p* value to calculate the F_{ABC} based on the combined stock reference point (F_{OFL}=0.49).

The PDT discussed these options at several meetings between August 27 and September 30, and due to resource constraints, developed estimates of the OFL and ABC under only Option 1 and Option 2. Option 3 was not developed due to time and resource constraints. The OFL and ABC recommendations were developed using parameters from the 2025 Research Track assessment and applying the ABC control rule.

[1] https://s3.us-east-1.amazonaws.com/nefmc.org/1.3-211007-Memo-PDT-to-SSC-RE-ABC-OFL-2022-2023.pdf
[2] The 2022, 2023, 2024, and 2025 estimates include biomass from the Gulf of Maine.

The PDT recommends 1) revised scallop shell-height meat-weights relationships used to develop survey biomass estimates, 2) adjustments to 2025 survey data in the Southern Flank to account for extreme heterogeneity, and 3) revised natural mortality assumptions used in the Scallop Area Management Simulation (SAMS) model for areas at the southern end of the range. The PDT recommends Option 1 for setting the OFL and ABC for 2026 and 2027 (default) (Table 1).

Table 1 – Options developed by Scallop PDT for OFL and ABC for FY 2026 and 2027 (default).

Option	Reference Points	Year	OFL (mt)	ABC (mt)
Option 1 – Apply current Scallop ABC control applied to combined stock reference points (*PDT Recommended*)	F_{OFL}=0.49 F_{ABC}=0.36	2026	19645	15412
		2027	21741	17060
Option 2 – Apply current Scallop ABC control to Georges Bank regional reference points (Deviation from ABC Control Rule)	F_{OFL}=0.36 F_{ABC}=0.29	2026	15599	13016
		2027	17709	14786

Summary of Adjustments to the Methods used to develop OFL and ABC estimates:

Adjustments to the 2025 survey data:

- Shell-Height to Meat-Weight (SHMW) Relationships: For Georges Bank and the Mid-Atlantic, SHMW parameters were updated through the 2025 Atlantic Sea Scallop Research Track Assessment (RTA). To address concerns over lack of fit to 2024-2025 data, the PDT recommends additional modifications to the SHMW parameters developed through the 2025 RTA, including the use of updated data through 2025. As with previous years, the PDT recommends using area-specific SHMW parameter estimates from the recent dredge surveys conducted in the Nantucket Lightship - South (NLS-South) area to account for the unique characteristics of scallops in this region. Gulf of Maine specific shell-height meat-weight relationships have not been developed or reviewed as part of a stock assessment. The PDT recommends using SHMW parameter estimates from recent dredge surveys supplemented with meat weight data collected to support the drop camera surveys, except for Platts Bank and Machias Seal Island, where the PDT recommends using parameter estimates from only the dredge survey data.
- Treatment of optical survey data for the Southern Flank area: To account for the extreme heterogeneity in the observed scallop densities in the 2025 optical surveys of the Southern Flank, the PDT recommends not using a simple average of the survey estimates in this specific SAMS area. A simple mean risks overinflating the resulting biomass and abundance estimates by applying the very high densities observed in a small area to the entire Southern Flank. Instead, the PDT's recommended approach is to restratify the high-density stations, along with the adjacent stations, using nine 9 nm^2 grid (81 nm^2 area). For each cell, mean density would be calculated using all available optical survey data, then expanded to the 81 nm^2 grid area, which would be combined with estimates for the area outside of grid to produce combined survey estimates for the total area.

Adjustments to projections for FY 2026 (SAMS model):

- Natural mortality: Natural mortality estimates for all areas increased through the 2025 research track assessment, from M=0.2 to M=0.27 for Georges Bank and the Gulf of Maine and from M=0.25 to M=0.4 in the Mid-Atlantic, with M=0.56 in the most recent years. While these estimates are reasonable spatial averages, the PDT considered spatial variation in M in the Mid-Atlantic due to observations of elevated M in the southern and

inshore Mid-Atlantic resource (Table 16). The PDT's recommended approach used the Beverton-Holt length-based mortality estimator to estimate M for the southern and inshore areas of the Mid-Atlantic.

- Growth: Growth parameters were not revised through the 2025 Research Track assessment. For all areas except for the NLS-South, the growth parameters from the 2020 Management Track assessment were used. For the NLS-South, the growth parameters for the NLS-West were used. The PDTs rationale for this change is that the current cohort in the NLS-South is growing somewhat faster than the very slow-growing 2012 cohort, but slower than the average growth rate for scallops on Georges Bank.

Shell Height Meat Weight Parameters

The PDT agreed that 2025 survey biomass estimates were likely underestimated using the SHMW equations developed in the 2025 Research Track assessment, and has recommended deviations from the 2025 Research Track SHMW equations in an effort to accurately characterize scallop condition in specific regions. The PDT developed several revisions to the 2025 Research Track SHMW equation, including:

1. Adding VIMS meat weight data from the 2018-2025 dredge surveys.
2. Adjusting the year effects for both the Georges Bank and Mid-Atlantic SHMW equations.
    a. The baseline year effect for 2010 was used for both the Mid-Atlantic and Georges Bank SHMW relationships. In the CASA model, these baseline relationships are used to calculate SHMW anomalies based on observer data but are not appropriate for projections. For example, the meat yield in 2010 was the lowest in the time series for Georges Bank
    b. As the PDT did not observe a trend in the predicted meat weights for Georges Bank (Figure 1), the year effect was revised to the time-series mean. For the Mid-Atlantic, the SHMW equation applied a smoother for the year effect, and a strong negative trend in the predicted meat weights was observed over time, leading the PDT to use the 2023 year effect.
3. Adding a SAMS area-specific fixed-effect to the Georges Bank SHMW equation.

The PDT reviewed the final model fit for Georges Bank (Figure 2) and used the revised Georges Bank and Mid-Atlantic SHMW equations in the calculation of 2025 survey biomass estimates. The final SHMW equations used are shown in Table 13.

Figure 1 – Predicted meat weights using the 2025 research track equation for Georges Bank (left) and Mid-Atlantic (right).

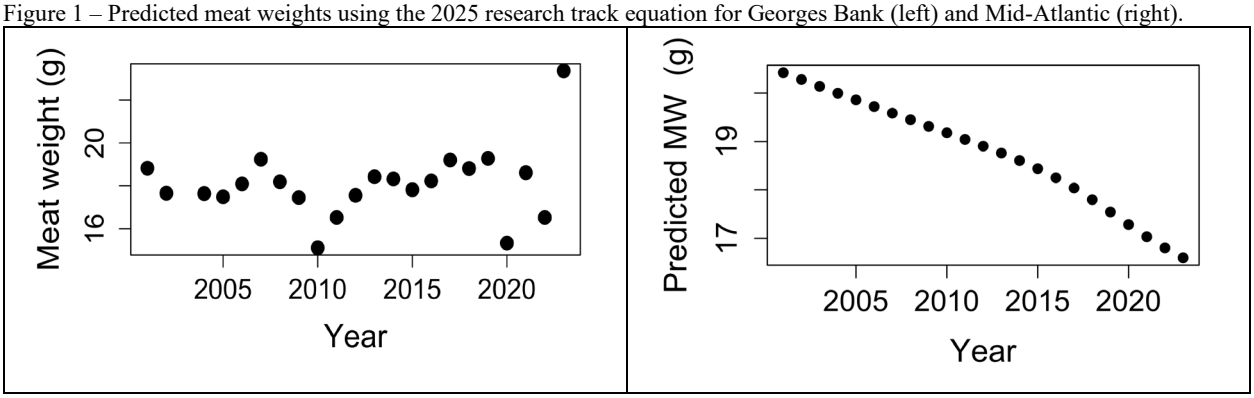


Figure 2 – Georges Bank SHMW model fit. Data are from stations with depths between 60 and 80m. Model was predicted at 70m depth and mean latitude of 40.92°N.

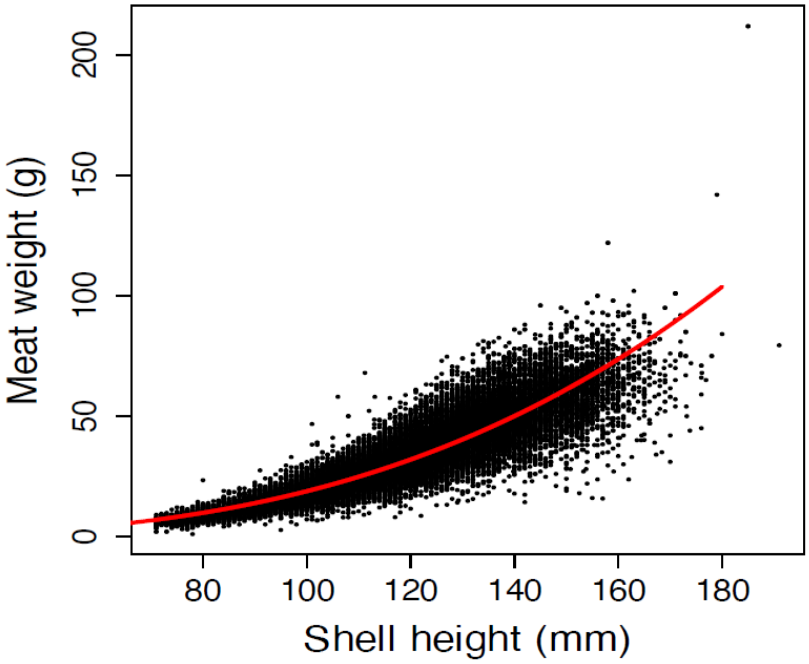
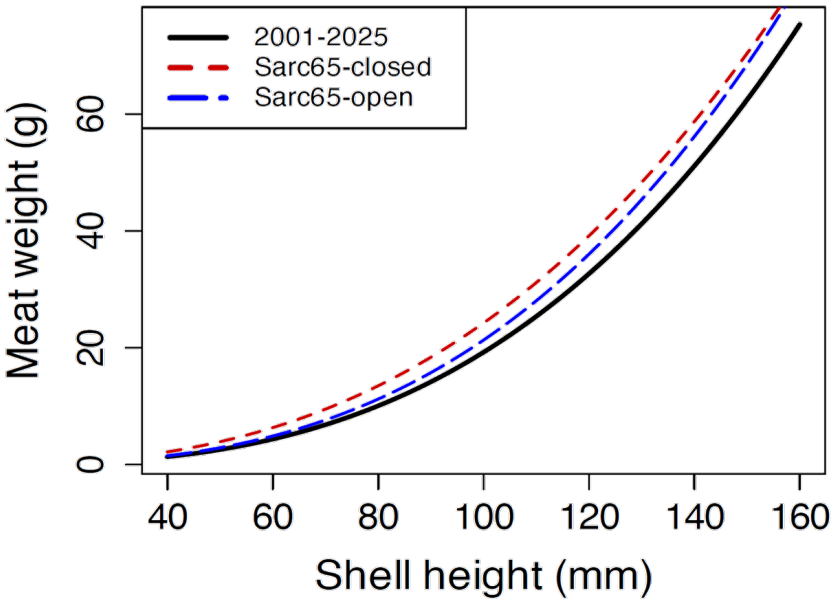


Figure 3 – The final revised 2025 research track shell height meat weight curve relative to the SARC65 curves for Georges Bank Open and Georges Bank Closed.



The PDT recommends using SHMW parameters based on dredge survey data from 2025 for biomass calculations of the NLS-South. While biomass has increased substantially in this area, given the potential for different growth characteristics for the current cohort of scallops in this area relative to the very slow-growing 2012 cohort in this area, the PDT recommends utilizing biological data from only the 2025 dredge survey of the area to better inform SHMW relationships when projecting biomass. As the Council is not considering access to this area in FY2026, the PDT notes that additional years of dredge survey data would be added to update the SHMW relationship for this cohort before the Council considers allocating trips to this area. The

PDT also notes that the difference in biomass estimates based on SARC 65 versus 2025 dredge parameters for the NLS-South is relatively small .

Table 2 – Comparison of biomass estimates from the 2025 School for Marine Science and Technology drop camera survey using different shell height meat weight equations in the NLS-South. Stations were 1.5 nautical miles apart. The VIMS 2025 equation was compared to the SARC 65 NLS-South specific equation and the new generic Georges Bank RTA 2025 equation. All values are for scallops greater than or equal to 40 mm in shell height. All other figures and tables in this report refer to the newly adopted area..

	Biomass estimate using: VIMS 2025	Biomass estimate using: SARC 65 specific	Biomass estimate using: RTA 2025 GB
NLS South			
Average meat weight (g)	3.06	3.51	4.06
Biomass (mt)	24041	27590	31920
Standard error	5214	5984	6923
Exploitable average meat weight (g)	3.74	4.35	4.93
Exploitable biomass (mt)	3262	3796	4305
Exploitable standard error	707	823	934

Southern Flank data treatment

To account for the extreme heterogeneity in the observed scallop densities in the 2025 optical surveys of the Southern Flank, the PDT recommends not using a simple average of the survey estimates. A simple mean risks overinflating the resulting estimates by applying the very high densities observed in a small area to the entire Southern Flank. Instead, the PDT's recommended approach is to restratify the high-density stations, along with the adjacent stations, using nine 9 nm^2 grid (81 nm^2 area) (Figure 4 and Figure 5). For each cell, mean density would be calculated using all available optical survey data, then expanded to the 81 nm^2 grid area, which would be combined with estimates for the area outside of grid to produce combined survey estimates for the total area (Table 3 and Table 4).

Table 3 – 2025 survey density estimates restratified across each numbered grid cell, as well as the resulting mean densities using all surveys and using only the optical surveys.

Grid #	SMAST Mean #/m^2	HabCam Mean #/m^2	HabCam Images	VIMS Mean #/m^2	Mean #/m^2 from all surveys	Mean #/m^2 from optical surveys
1	0.10		0	0.01	0.06	
2	0.10	0.03	65		0.06	0.03
3	0.10	0.04	53	0.06	0.07	0.04
4	0		0		0	
5	**97.3**	**12.31**	**126**	**0.04**	**36.55**	**14.93**
6	1.27		0	1.01	1.14	
7	0	0	121		0	0
8	0	0.08	102		0.04	0.08
9	0	0.01	48		0.01	0.01

Figure 4 – 9 x 9 nm grid cells relative to the Southern Flank area and 2025 survey coverage. SMAST drop camera station (blue), VIMS dredge stations (red), and CFF HabCam tracks (green).

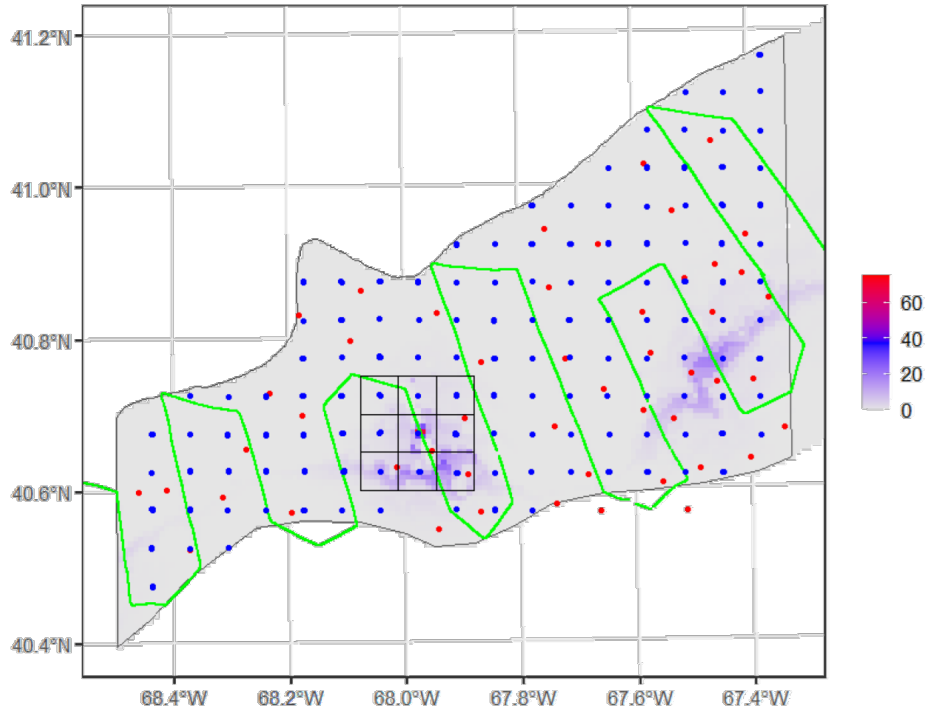


Figure 5 – 9 x 9 nm grid cells, included 2025 survey data.

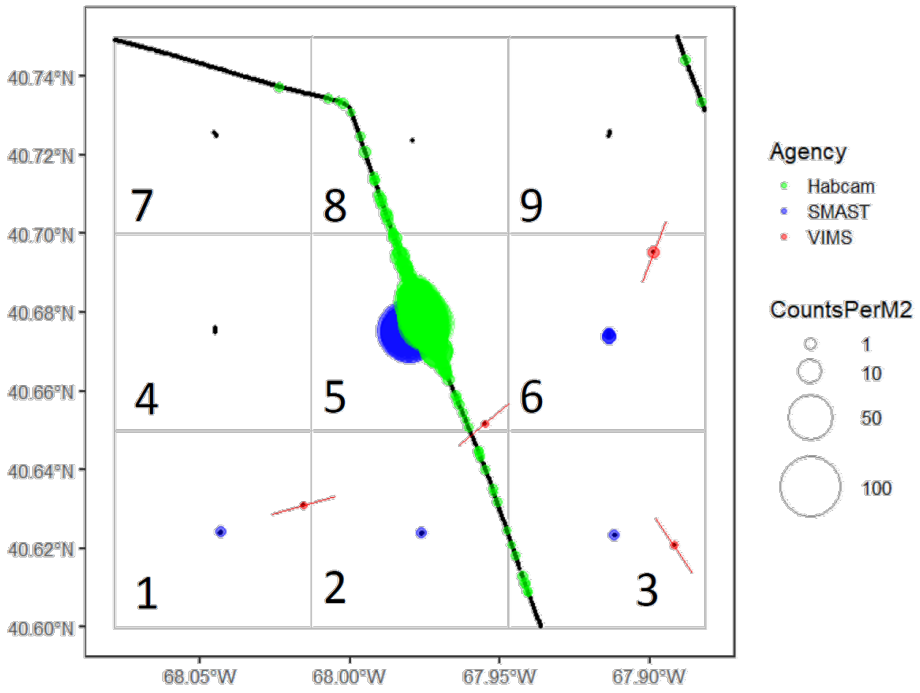


Table 4 – Resulting estimates for the Southern Flank

	Abundance (mil)	Biomass (mt)	Biomass SE (mt)	Mean weight (g)	Density (#/m^2)	Area (km^2)
High density box	197	2101	82	10.66	0.71	278
Remaining area	264	2938	114	11.13	0.06	4102
SF total	**461**	**5033**	**196**	**10.92**	**0.11**	**4227**

Table 5 – Initial reported survey estimates for the Southern Flank before any data adjustments were made

	Abundance (mil)	Biomass (mt)	Biomass SE (mt)	Mean weight (g)
Dredge	260	3146	304	11.6
Drop Camera	3321	15,999	11,759	4.82
HabCam	1,008	7,439	3,136	7.2

Spatial Estimates of Natural Mortality

The 2025 sea scallop research track assessment estimated M = 0.4 for the Mid-Atlantic, but a higher M = 0.56 in the most recent years. While these estimates are reasonable spatial averages, M has been higher in the southern and inshore Mid-Atlantic in recent years. A Beverton-Holt length-based mortality estimator was used to estimate Z.

$$Z = \frac{K(L_\infty - \bar{L})}{\bar{L} - L_c}$$

where K and L_∞ are the von Bertalanffy growth coefficients and $\bar{L}$ is the mean length (shell height) greater than a cutoff value L_c. For these purposes, L_c = 42.5 mm. This estimator assumes equilibrium, but it will be approximately correct if many years are used to estimate the mean shell height. Mean shell heights were estimated for $2016 - 2024$ from the dredge survey.

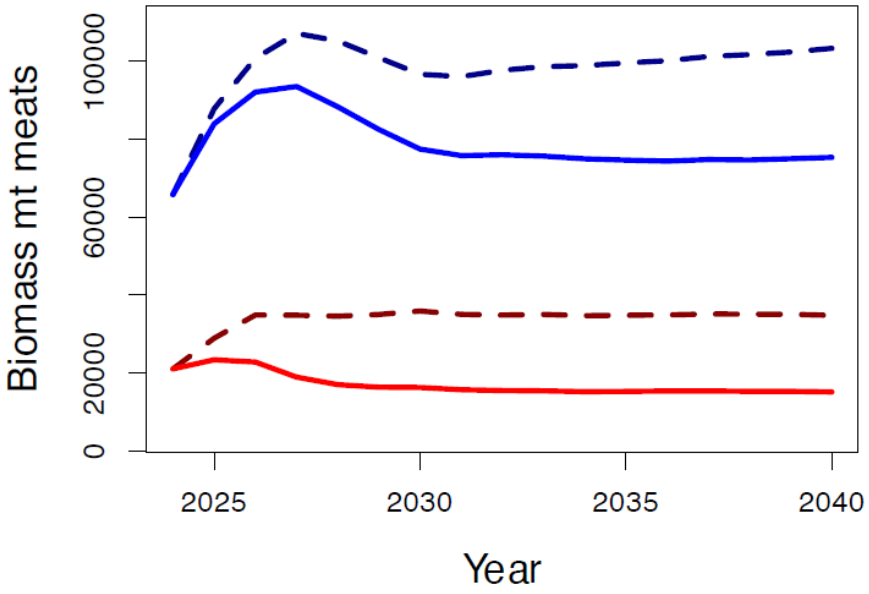
As seen in Table 6, the southern and inshore areas had the highest estimated Z values despite having little or no fishing during this period. The four northernmost areas (BI, LI, NYB, NYB-Closure, and HCS) all had relatively low Z values despite moderate fishing effort. The ET area was intermediate between the high mortality areas and the low mortality areas.

With revised Mid-Atlantic recruitment parameters from the 2025 research track assessment, when compared with the natural mortality estimates used in FW39 using an otherwise identical model configuration, one-year projected biomass was reduced by approximately 19% in the Mid-Atlantic and 4% on Georges Bank and the Gulf of Maine compared to the FW39 projection (Figure 6). Long-term, biomass was reduced by 56% in the Mid-Atlantic and 27% on Georges Bank and the Gulf of Maine (Figure 6).

Table 6 – PDT recommended natural mortality parameters by SAMS area for Framework 40.

SAMS Area	Mean Shell Height	Z	M (FW39)	M (FW40)
BI	88.76	0.62	0.25	0.4
LI	92.23	0.45	0.25	0.4
NYB	86.48	0.60	0.25	0.4
HCS	85.08	0.50	0.25	0.4
MAB-Nearshore	81.70	0.82	0.25	0.8
ET	83.31	0.65	0.25	0.5
DMV	74.16	0.97	0.6	0.95
VIR	49.86	5.99	4.2	6.0

Figure 6 – Projection comparison between FW39 (dashed lines) using natural mortality estimates from the 2020 Management Track and an equivalent model configuration with revised natural mortality and recruitment parameters for FW40 (solid lines). Georges Bank biomass is shown in blue, Mid-Atlantic biomass is shown in red.



2026 & 2027 OFL and ABC Calculations

The updated OFL and ABC options for the Georges Bank and Mid-Atlantic regions are based on the combined reference points from the 2025 research track assessment (F_{OFL}=0.49; F_{ABC}=0.36; $F_{GB\ OFL}$ =0.36; $F_{GB\ ABC}$=0.29). Based on adjustments to the Scallop FMP through Amendment 21 and methods approved by the SSC in October 2021, scallops in the Gulf of Maine region (including the Northern Gulf of Maine management area) are included in the OFL and ABC estimates. In the absence of region specific reference points and a stock assessment model for the Gulf of Maine, the OFL and ABC estimates for the Gulf of Maine were derived using the Georges Bank F_{MSY} estimates from the 2025 research track assessment ($F_{GB\ OFL}$ =0.36; $F_{GB\ ABC}$=0.29). The approach of using Georges Bank reference points as a proxy was recommended by the SSC in October 2021 and is explained in detail in the October 7, 2021, Scallop PDT memo to the SSC[3]. The Council concurred with the SSC's approach of including scallop biomass from the Gulf of Maine in the overall OFL and ABC.

Under Option 1, the updated OFL and ABC for the Georges Bank and Mid-Atlantic regions are based on the combined reference points (Georges Bank and Mid-Atlantic), while under Option 2, the updated OFL and ABC for both regions would be based on the Georges Bank regional reference points only. The PDT considered Option 1 and Option 2, and was supportive of the concept of considering stock-wide OFLs and ABCs that reflect the region specific reference points for Georges Bank. The PDT agreed with the SSC's recommendation to consider alternative options in light of the recent results of the 2025 Research Track assessment. The PDT notes that the use of a combined reference points for both Georges Bank and the Mid-Atlantic ignores the different population dynamics of scallops in each region, and increased the risk of not identifying overfishing occurring in one region of the combined unit stock. For example, based on the last assessment, overfishing was occurring on Georges Bank in 2023. The PDT's discussion regarding Option 1 and Option 2 considered that both options would represent the lowest legal limits the scallop fishery has been subject to, and that recommended harvest is expected to remain below either OFL and ABC value due to a large proportion of scallop biomass currently inside of closed areas. Lastly, the PDT understands that deviation from the ABC control rule would require modifying the ABC control rule through a management action. Therefore, the PDT did not consider there to be sufficient benefit to the OFL and ABC estimates under Option 2 to justify deviating from the ABC control rule, and recommends the OFL and ABC estimates under Option 1.

The PDT's recommended OFL and ABC estimates for 2026 are much lower than the 2026 (default) projections that were recommended by the SSC last year, and are the lowest values since 2011. OFL and ABC estimates have been declining since 2019 (Figure **7**). Biomass has declined to the lowest levels observed in over 25 years, in large part driven by below average recruitment in recent years (Figure 8, Figure 9, Figure 10). The F_{MSY} estimate from the recent assessment (F=0.49) is lower than the F_{MSY} from the 2020 Management track assessment (F=0.61), which also contributes to the low OFL and ABC estimates. The biomass projection for 2027 is slightly higher than the estimate for 2026 due to the growth of a large set of scallops on Georges Bank in the NLS-South. Based on 2026 projections, 66% of the total biomass for the stock is contained on Georges Bank, and 31.7% of the total biomass for the stock is contained within just the NLS-S. 45.2% of the population is considered exploitable (Table). The PDT cautions that if higher than expected natural, incidental, or discard mortality occurs, biomass estimates will be overestimated, especially for 2027.

Table 7 - Estimated biomass (mt) and exploitable biomass (mt) for FY 2026.

	Biomass	Exploitable Biomass	Percent Exploitable
Georges Bank	56,808	21,292	37.5%
Mid-Atlantic	24,447	13,474	55.1%
Gulf of Maine	4,860	4,199	86.4%
Total	**86,115**	**38,965**	**45.2%**

Table 8 - 2026 Scallop ABC (mt, excluding discards) estimates by region under both options.

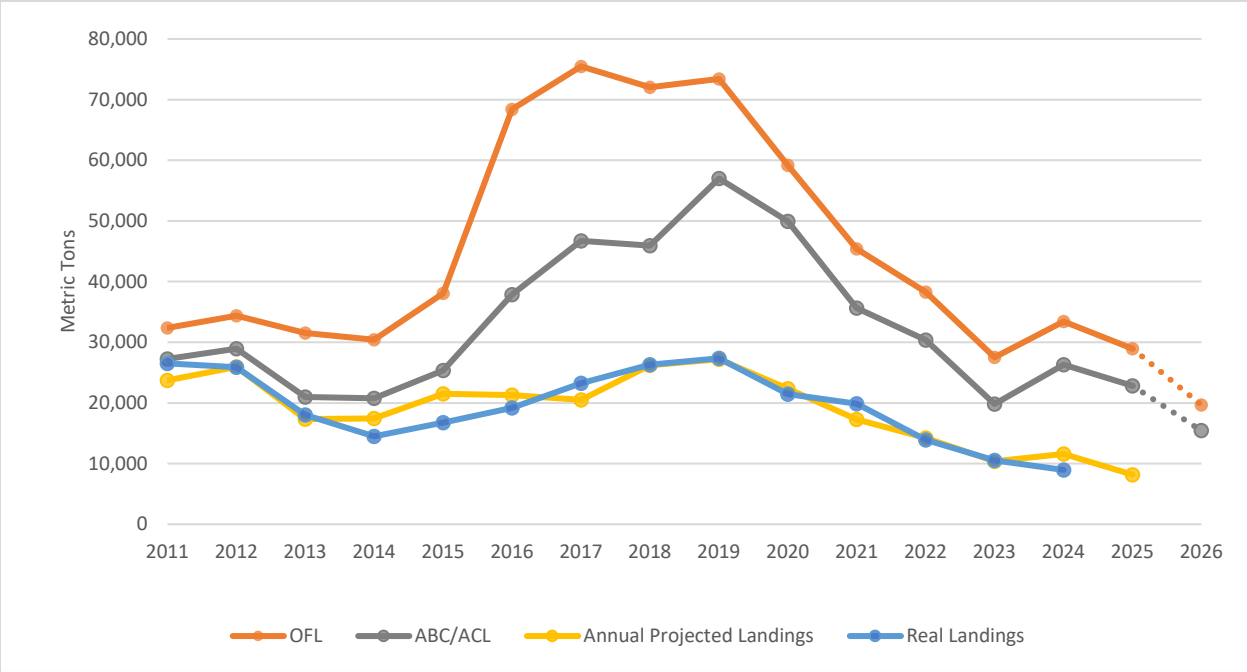
	ABC at F=0.36	Percent Total of ABC
Georges Bank	7,916	62.0%
Mid-Atlantic	3,939	30.9%
Gulf of Maine	902	7.1%

Recruitment and Outlook

Recruitment continues to be average to below-average across both the Mid-Atlantic and Georges Bank. While scallop biomass is projected to increase between 2025 and 2026, the increases are driven by the continued growth of three-year old scallops on Georges Bank, and in particular the NLS-South and Closed Area I – Sliver. Recruitment in both the NLS-South and Closed Area I-Sliver is considered to be strong, but not at the magnitude of the 2012 or 2013 year classes. In the Mid-Atlantic, continued growth of three-year old scallops recruits were observed in the Elephant Trunk and Hudson Canyon South areas, and to a lesser extent in the New York Bight (NYB) region. Scallop biomass in 2025 was estimated to be 65,556 mt, far lower than the recent peak biomass estimated in 2017 of 265,277 mt.

The Council is considering rotational closures of NLS-South, Area II, and the NYB-Closure in FY2026 with the goal of optimizing yield and protecting juvenile scallops. Opportunities for access area fishing are likely to be very limited, and the Council is considering options that allocate one, 12,000 lb trip to Area I, as well as not allocating any access area trips in FY2026.

Figure 7 - Scallop Fishery total landings (2011-2024), OFL, ABC/ACL , and APL for Georges Bank and the Mid-Atlantic (2011-2025), with PDT recommendation for 2026 OFL/ABC.[4]



[4] The 2022, 2023, 2024, and 2025 estimates include biomass from the Gulf of Maine.

Figure 8 - Sea scallop recruitment (age 1) in the Mid-Atlantic, 1975-2023. (Source: 2025 Research Track Assessment).

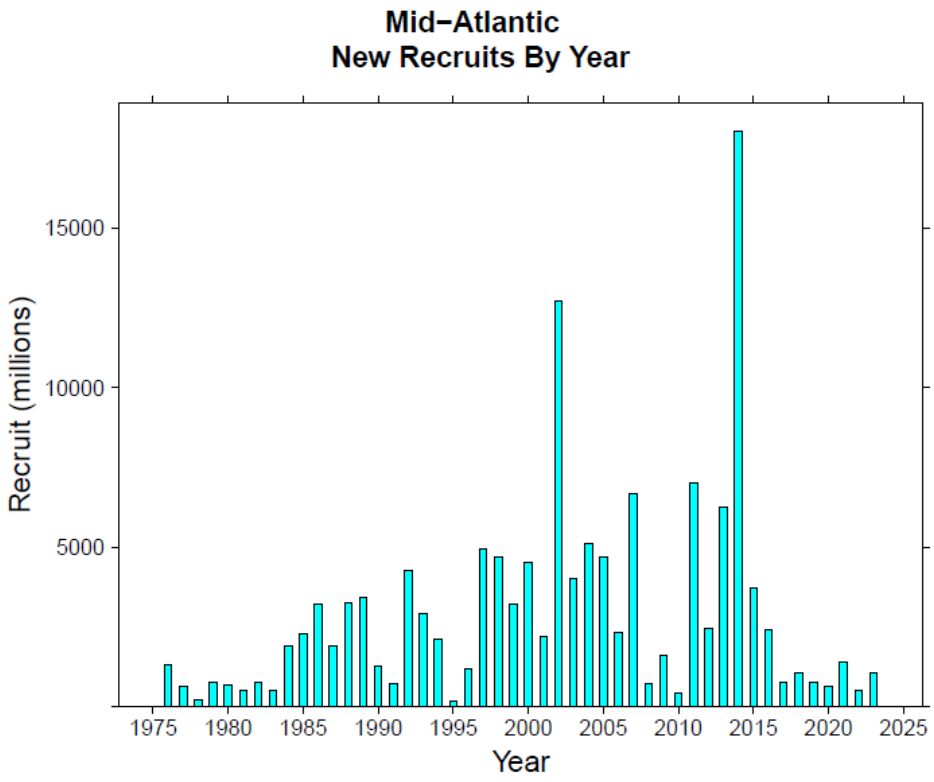


Figure 9 - Sea scallop recruitment (age 1) in Georges Bank Closed, 1975-2023. (Source: 2025 Research Track Assessment).

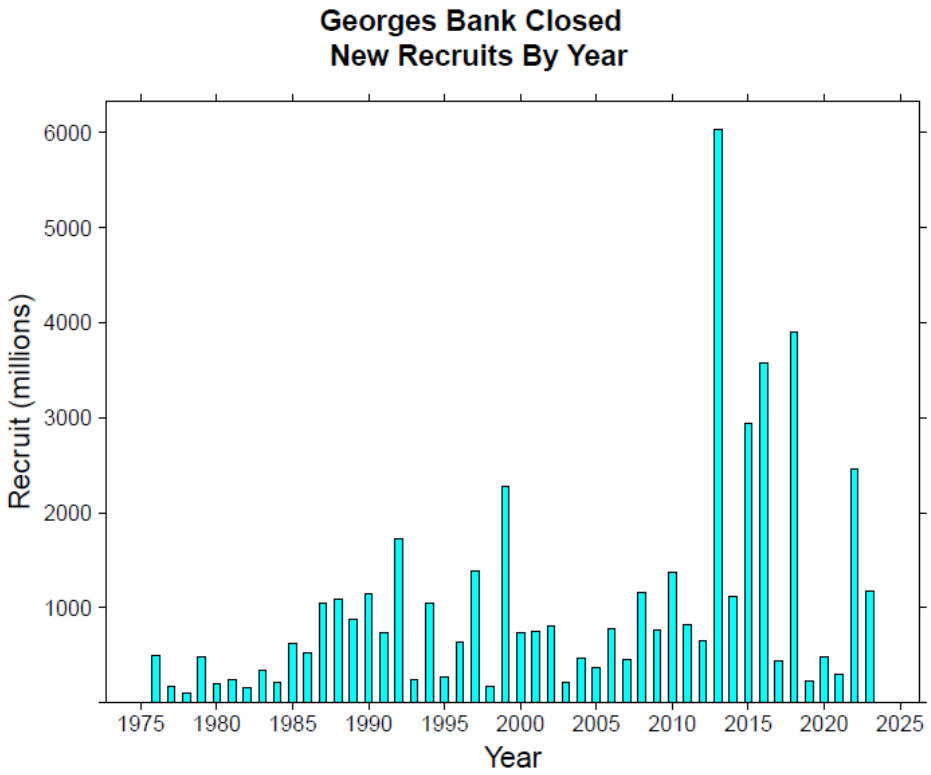
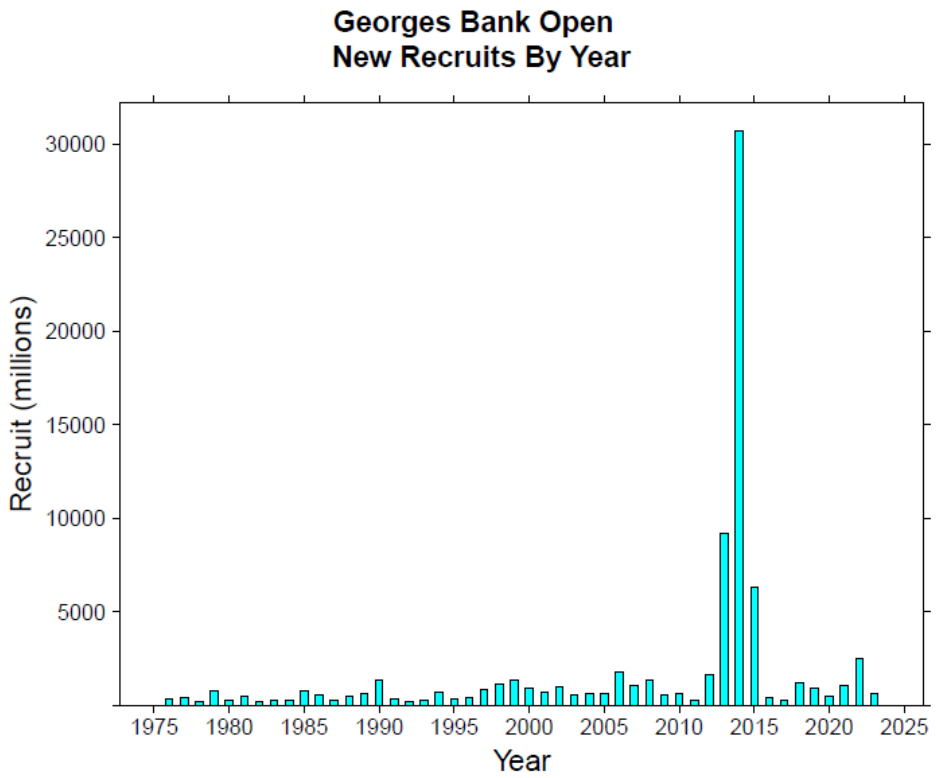


Figure 10 - Sea scallop recruitment (age 1) in Georges Bank Open, 1975-2023. (Source: 2025 Research Track Assessment).



Scallop Rotational Management

While the OFL and ABC establish bounds for resource removals, in recent years, scallop rotational management has resulted in realized harvests (and corresponding fishing mortality rates) below these legal limits, however discard rates and discard mortality are uncertain. Fishery allocations are based on an average F that is below the reference points for this fishery. For example, in fishing year 2025, the ABC is 17,901 mt (not including discards), whereas fishery Annual Projected Landings were 8,180 mt. Based on initial discussions of rotational management alternatives for FW40, it is reasonable to expect that fishery removals in FY2026 will continue to be below the OFL and ABC estimates recommended in this memo. The Council considers a range of additional issues and uncertainties as part of the annual rotational management process, such as the proportion of available biomass that the fishery is likely to target ('effective biomass'), discard rates and mortality, and projection model uncertainty.

Responses to SSC Recommendations made in 2024:

In October 2024, the SSC recommended the OFL and ABC as developed by the PDT. The SSC made other comments and recommendations, which the PDT responds to here:

1. *SSC Comment: The SSC supports continued monitoring of changes in the dynamics of this stock (i.e., recruitment, growth, and natural mortality) and research to understand the role of environmental drivers as this represents the most pressing concern facing the future of this fishery. NEFSC staff and the PDT have been monitoring this issue and it is being examined in the Research Track Assessment. The SSC also suggests a*

retrospective-type analysis on historical area-specific SAMS projections; a quantitative measure of past bias could be used as a tool to inform future projections. Transitioning the CASA model into the "next generation" of assessments would also be a natural progression; a state-space model with parameters that can be connected to environmental variables could result in more accurate estimates of biomass and fishing mortality rate and reference points with an improved understanding of uncertainty and the relationship between scallops and the ecosystem. Additional sampling or analyses of Gulf of Maine scallops would obviate the need for Georges Bank proxies of F_{MSY} and growth parameters. The inclusion of more comprehensive socioeconomic data as context for SSC decision making would be helpful to better understand the social implications of the suggested OFLs and ABCs. Finally, the Council should consider more formal use of risk tables to characterize ecosystem considerations around bycatch risk in the area management decision making process.

PDT Response: The 2025 research track assessment identified and documented ecosystem impacts on the abundance, distribution, and composition of the Atlantic sea scallop population in the Mid-Atlantic, Georges Bank, and Gulf of Maine. The PDT notes that the Peer Review Panel identified consideration of time-varying natural mortality as a potential next step to better examine direct and indirect effect of environmental factors, as well as further research into scallop stock structure (p. 6; Summary Report).

The PDT acknowledges the benefits of a retrospective analysis of historical area-specific SAMS projections. This is documented as part of a Strategy in the Council's draft Scallop Long-Term Strategic Plan and may be recommended as a 2026 priority for scallop-related work. Similarly, transitioning the CASA model to a state-space model would also yield large benefits for assessment of the stock. While the 2025 research track assessment continued use of the CASA model, this recommendation was also highlighted by the Peer Review Panel in their summary report (p. 23).

The PDT supports the continued surveying of the Gulf of Maine scallop resource and the development of estimates of F_{MSY} and growth parameters for this region. Regarding the inclusion of more comprehensive socioeconomic data to aid the SSC's decision making, a revised Risk Policy Matrix in accordance with the Council's revised Risk Policy was included in the meeting materials along with this memo.

References:

Chang, J.H., Shank, B.V. and Hart, D.R. 2017. A comparison of methods to estimate abundance and biomass from belt transect surveys. *Limnology and Oceanography: Methods*, *15*(5), pp.480-494.

Hart, D. R., Munroe, D. M., Caracappa, J. C., Haidvogel, D., Shank, B. V., Rudders, D. B., Klinck, J. M., Hofmann, E. E., and Powell, E. N. 2020. Spillover of sea scallops from rotational closures in the Mid-Atlantic Bight (United States). – ICES Journal of Marine Science, 77: 1992–2002.

Hennen, D.R. and Hart, D.R. 2012. Shell Height-to-Weight Relationships for Atlantic Sea Scallops (*Placopecten magellanicus*) in Offshore U.S. Water. Journal of Shellfish Research, 31(4):1133-1144.

Hodgdon, C.T., Torre, M., and Chen, Y. 2020. Spatiotemporal variability in Atlantic sea scallop (*Placopecten magellanicus*) growth in the Northern Gulf of Maine. J. Northw. Atl. Fish. Sci., 51: 15–31. https://doi.org/10.2960/J.v51.m729

NEFSC. 2014. 59th Northeast Regional Stock Assessment Workshop (59th SAW) Assessment Report. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 14-09; 782 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026, or online at https://repository.library.noaa.gov/view/noaa/4803

NEFSC. 2018. 65th Northeast Regional Stock Assessment Workshop (65th SAW) Assessment Summary Report. Northeast Fish Sci Cent Ref Doc. 18-08; 38 p. Online at: https://doi.org/10.25923/vvpm-jy75

Rudders, D., S. Roman, A. Trembanis, and D. Ferraro. 2019. A study to assess the effect of tow duration and estimate dredge efficiency for the VIMS sea scallop dredge survey: final report. Marine Resource Report No. 2019-04. Virginia Institute of Marine Science, William & Mary. https://dx.doi.org/doi:10.25773/g9sh-qt28

Yochum, N. and DuPaul, W.D. 2008. Size-selectivity of the northwest Atlantic sea scallop (*Placopecten magellanicus*) dredge. Journal of Shellfish Research, Vol. 27, No.2, 265-271.

Zang, Z., Ji, R., Hart, D. R., Chen, C., Zhao, L., & Davis, C. S. 2022. Modeling Atlantic sea scallop (*Placopecten magellanicus*) scope for growth on the Northeast US Shelf. Fisheries Oceanography, 31(3), 271-290.

Table 9 – Final combined survey estimates for 2025 by SAMS areas, including values from the GOM and Northern Gulf of Maine Management Area.

2025 Survey Estimates- Final version - Sep 10, 2025																	
		Dredge				**Drop Camera**				**HabCam**				**Mean**			
Region	**Subarea**	**Num**	**Bmsmt**	**SE**	**MeanWt**	**Num**	**Bmsmt**	**SE**	**MeanWt**	**Num**	**Bmsmt**	**SE**	**MeanWt**	**Num**	**Bmsmt**	**SE**	**MeanWt**
GB	CL1-Sliver	260	4802	1821	18.5	412	6213	932	15.1					336	5508	1023	16.4
GB	CL1-Access	10	232	93	23.2	31	790	170	25.6					20	511	97	25.0
GB	CL2-N	107	3927	1061	36.7	199	5268	710	26.4					153	4598	638	30.0
GB	CL2-S	37	776	49	21.0	92	1948	218	21.2	24	740	58	30.8	51	1155	77	22.6
GB	CL2-Ext	124	1357	216	10.9	166	1953	140	11.8	78	1505	83	19.3	123	1605	90	13.1
GB	SF	260	3146	304	12.1	3321	5629	2360	1.7	461	5164	154	11.2	1347	4646	795	3.4
GB	NLS-N	28	182	22	6.5	53	1107	223	21.0					40	645	112	15.9
GB	NLS-S	2045	9308	1085	4.6	7864	28271	6131	3.6	2046	10379	597	5.1	3985	15986	2085	4.0
GB	NLS-W	13	313	49	25.0	35	727	324	21.0	26	631	149	24.3	24	557	120	22.9
GB	NF	40	776	243	19.4	139	2148	618	15.5					89	1462	332	16.4
GB	GSC	276	5372	606	19.5	211	2889	316	13.7					244	4131	342	17.0
GB	**TOTAL**	**2940**	**25389**	**1698**	**8.6**	**12110**	**50730**	**6663**	**4.2**					**6077**	**35295**	**2380**	**5.8**
MAB	BI	28	485	119	17.5					12	196	7	16.3	20	341	60	17.2
MAB	LI	1000	10586	1174	10.6					452	5916	69	13.1	726	8251	588	11.4
MAB	NYB	467	4153	347	8.9					223	2125	18	9.5	345	3139	174	9.1
MAB	MAB-Nearshore	5	67	9	13.3									5	67	9	13.3
MAB	HCS	777	7882	749	10.1									777	7882	749	10.1
MAB	ET	362	3727	280	10.3					562	6079	66	10.8	462	4903	144	10.6
MAB	DMV	9	41	4	4.6									9	41	4	4.6
MAB	VIR	11	46	9	3.3									11	46	9	4.2
MAB	**TOTAL**	**2659**	**26987**	**1467**	**10.2**									**2355**	**24670**	**981**	**10.5**
GOM	Stellwagen South-SMAST	25	394	105	15.9	23	297	22	12.9					24	345	54	14.4
GOM	Stellwagen South-Outside SMAST	1	32	14	29.5									1	32	14	29.5
GOM	Stellwagen South - Total	26	426	119	16.4									25	378	55	15.1
NGOM	WGOM Closure					84	3410	237	40.7					84	3410	237	40.7
NGOM	Fippennies					25	708	65	27.9					25	708	65	27.9
NGOM	Cashes					1	25	7	25.0					1	25	7	25
NGOM	Stellwagen-SMAST	19.2	548.2	179	28.6	17	389	52	23.3					18	469	186	26.1
NGOM	Stellwagen-Outside SMAST	2.9	98.5	56	34.0									3	99	56	34.0
NGOM	Jeffreys-SMAST	13.4	349	88	26.1	8	188	16	23.5					11	269	89	25.1
NGOM	Jeffreys-Outside SMAST	0.9	38	37	41.9									1	38	37	41.9
NGOM	Platts	2	43	31	21.7	3	60	10	18.8					3	52	33	19.9
NGOM	Ipswich	6.7	162	50	24.1	5	130	11	27.7					6	146	51	25.6
NGOM	Machias Seal Island	12.3	214	77	17.4									12	214	77	17.4
NGOM	***TOTAL***	*57*	*1452*	*232*	*25.3*	*143*	*4910*	*252*	*34.4*					*41*	*5214*	*238*	*127.9*
NGOM	**TOTAL - Open**	**57**	**1452**	**232**	**27.5**	**59**	**1500**	**86**	**25.4**					**41**	**1071**	**247**	**26.3**
GRAND TOTAL														**8,498**	**65,556**	**3,654**	**159**

Figure 11 - 2025 Georges Bank SAMS Areas.

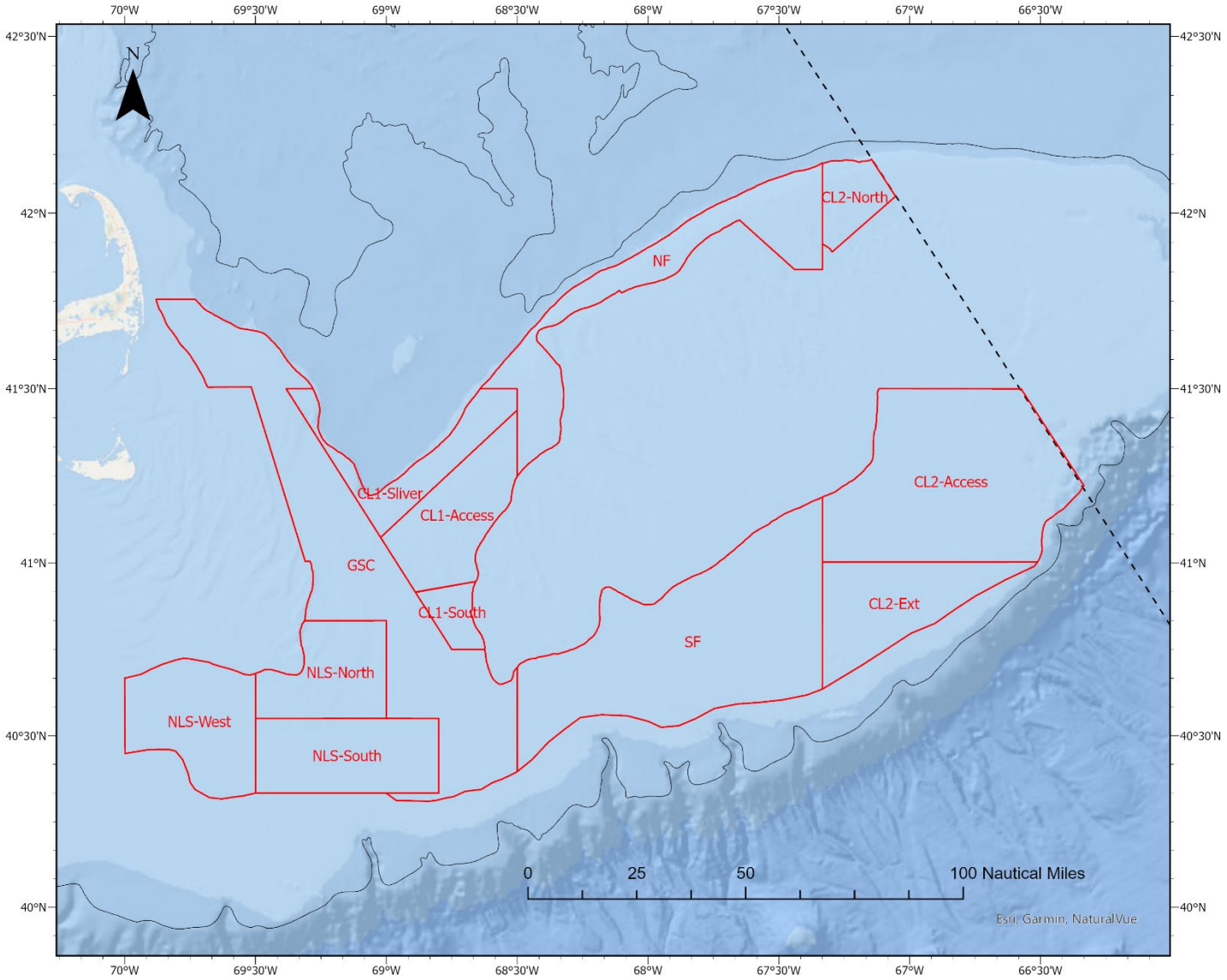


Figure 12 – 2025 Mid-Atlantic Bight SAMS Areas.

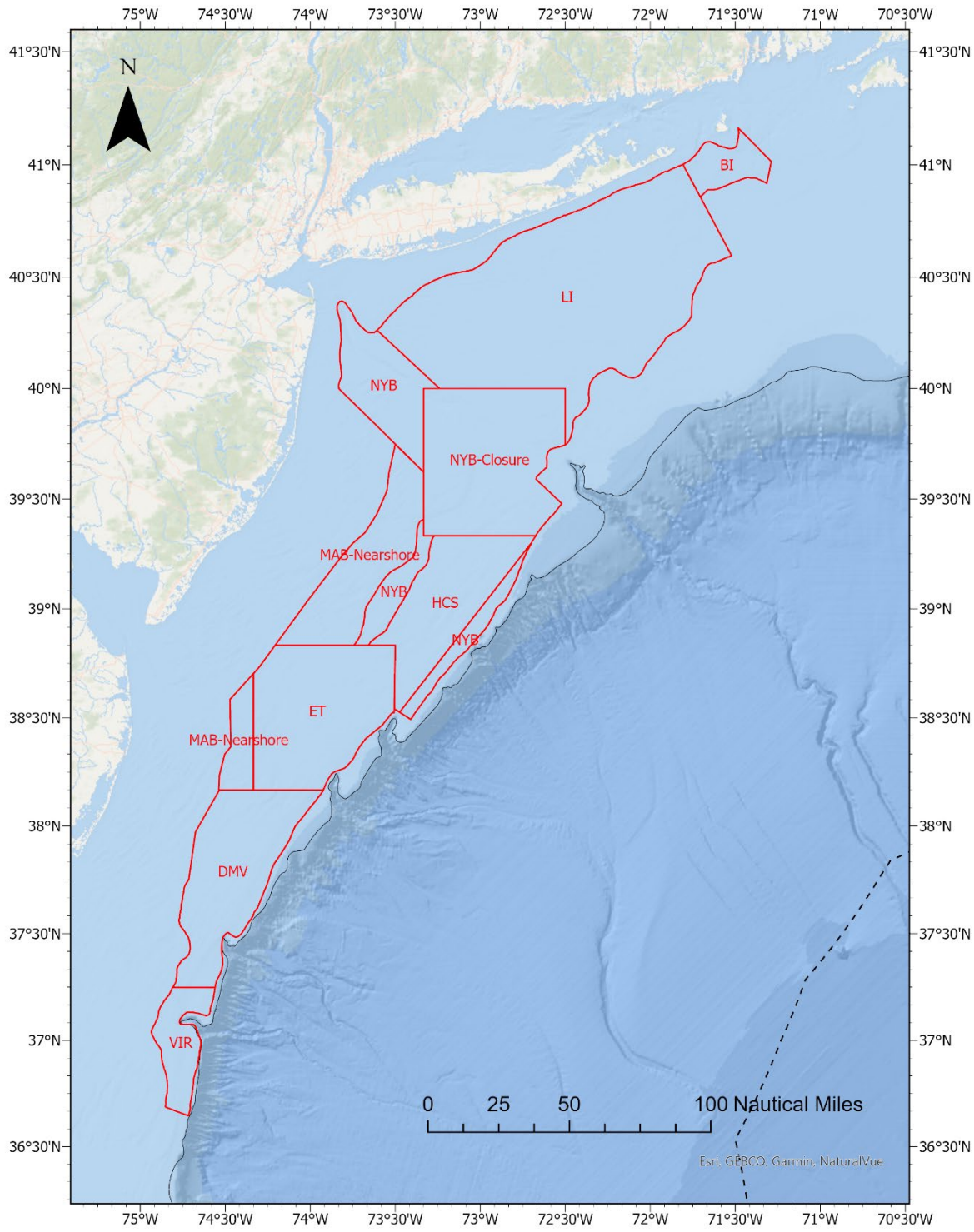


Figure 13 - 2025 Scallop RSA Survey Coverage for the Gulf of Maine, Georges Bank, and the Mid-Atlantic. 2025 CFF HabCam survey of the southern Mid-Atlantic not shown.

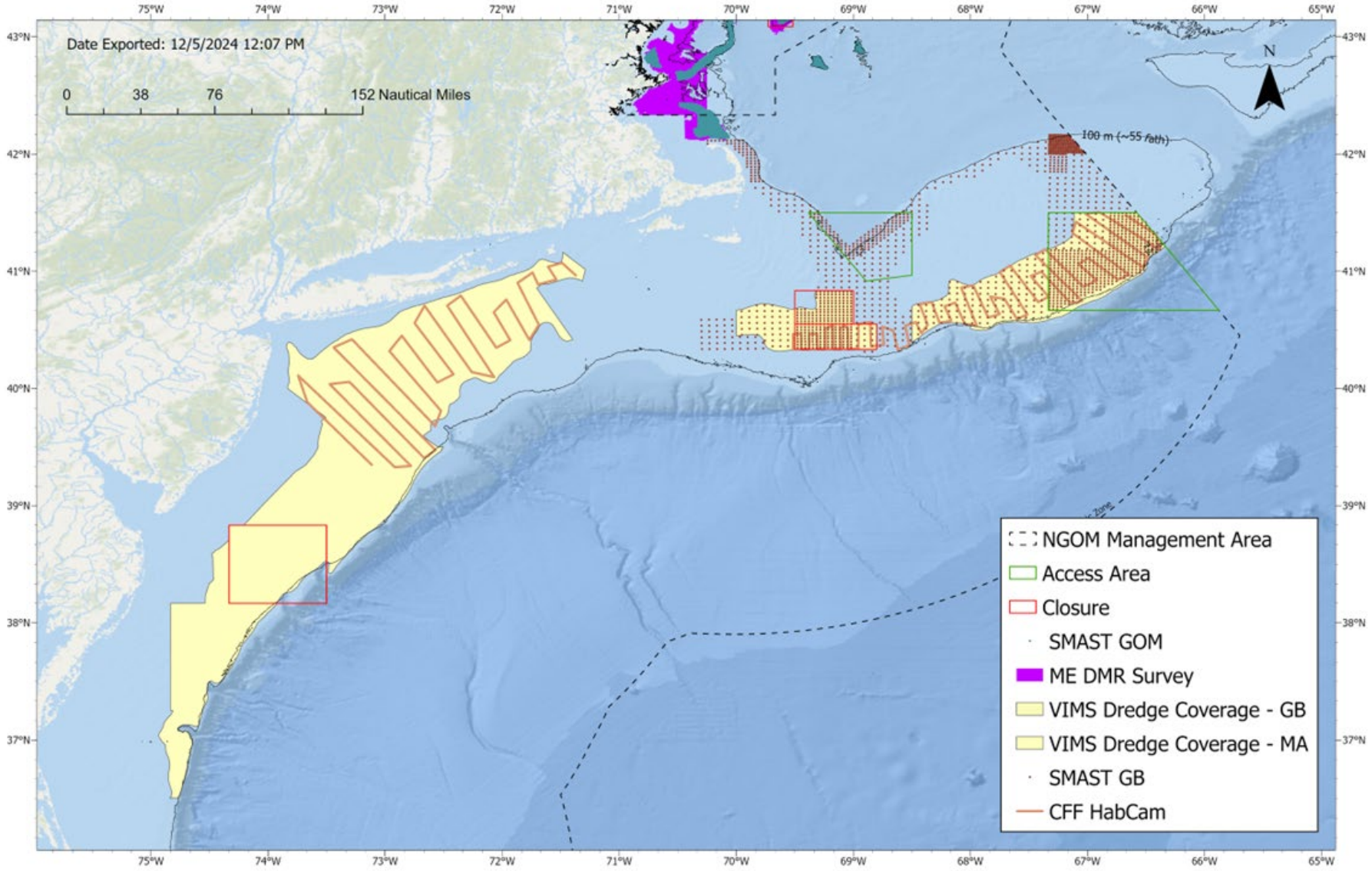
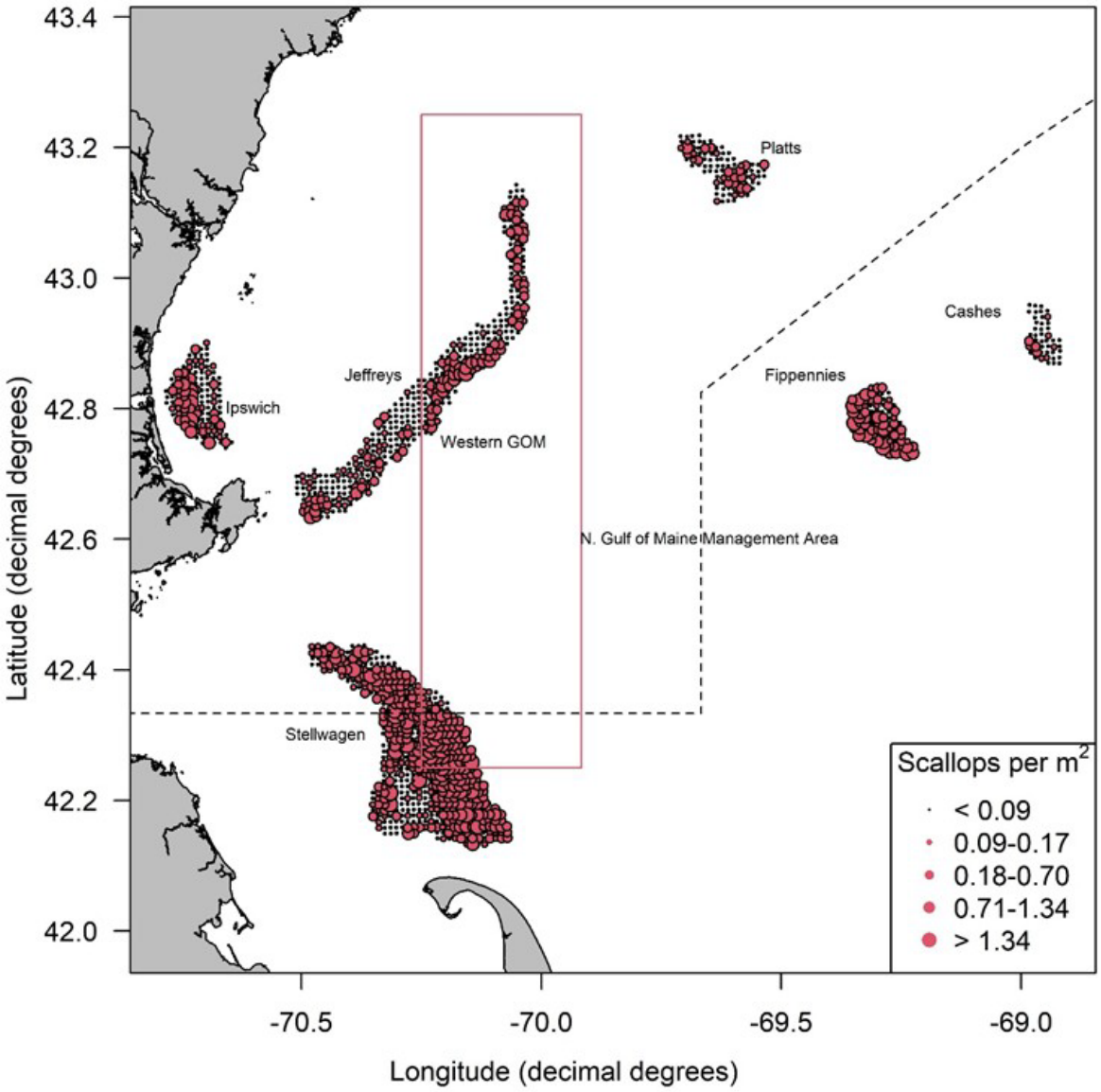


Figure 14 – 2025 Scallop RSA survey coverage for the Gulf of Maine by the SMAST drop camera relative to the Northern Gulf of Maine Management Area (dotted black line), Western Gulf of Maine Closure area (solid red line). Mean scallop density (all scallop sizes, including those less than 40mm shell height, per m^2).



Appendix I: 2025 Projections for 2026 – Outputs and Assumptions

2026 Projections for Georges Bank and the Mid-Atlantic:

1. Several changes were made to the model configuration from Framework 39. The NYB-Closure area was added, reverting to the SAMS area boundaries from 2024, with 9 areas in MA, 12 in GB, and 4 in the Gulf of Maine (see Figure 14).
2. Initialized using the average (mean) of available 2025 survey data.
3. Growth assumptions from the 2020 Management Track assessment were used. For the Nantucket Lightship – South area, the growth parameters for the Nantucket Lightship – West were used. In the GOM, growth was set to match GB estimates from the most recent period.

Table 10 - Projected biomass and exploitable biomass for 2026 for Georges Bank and Mid-Atlantic SAMS area and the Gulf of Maine.

SAMS/Region	**Biomass (mt)**	**Exploitable (mt)**	**ABC (GB/MA F=0.36; GOM F=0.29) (mt)**
HCS	4209	2058	594
Vir	12	0	0
ET	6671	3479	995
DMV	1172	18	7
NYB	1006	399	149
NYB Closure	7102	4913	1437
LI+BI	3778	2552	708
Inshore	497	55	49
MAB TOTAL	**24447**	**13474**	**3939**
CA1-N	4658	2656	741
CA1-Mid	912	311	82
CA2-N	5301	3703	863
CA2-S	1683	426	117
CA2-Ext	1657	253	253
NLS-W	1752	440	101
NLS-N	876	409	118
NLS-S	27258	5481	3534
GSC	5760	3180	860
NF	1426	963	259
SF	5525	2951	988
GB TOTAL	**56808**	**21292**	**7916**
Stell-S	540	280	96
Stell-NGOM	634	523	121
Ipswich	180	127	32
NGOM-Other	576	500	109
WGOM	2930	2769	543
GOM TOTAL	**4860**	**4199**	**902**

Table 11 - Comparison of the meat weight and growth parameters used in recent SAMS configurations for GB and MA.

	Meat weight	Growth
2015	SARC 59	SARC 59
2016	SARC 59, with changes to SH-MW parameters using VIMS 2016 data (NLS-S, NLS-NA, NLS-ext)	SARC 59, with reductions to growth in NLS
2017	SARC 50, with changes to SH-MW parameters in NLS using VIMS 2016 & 2017 data (NLS-S, NLS-NA).	SARC 59, with reductions to growth in NLS-S deep (>70m) based on observed growth between 2016 and 2017. Change ET-Flex L infinity to 110 mm based on observed growth in 2016 and 2017.
2018	SARC 65, with changes to SH-MW parameters in the NLS using VIMS 2016 – 2018 data	SARC 65, with reduction in L_∞ in NLS-W to 119mm. SARC 65 set the L_∞ of scallops in the NLS-S-deep at 110 mm.
2019	SARC 65, with changes to SH-MW parameters in the NLS using VIMS 2016 – 2019 data	SARC 65, with reduction in L_∞ in NLS-W to 119mm. SARC 65 set the L_∞ of scallops in the NLS-S-deep at 110 mm.
2020	SARC 65, with changes to SH-MW parameters in the NLS using VIMS 2016 – 2020 data (NLS-S, NLS-N, NLS-W)	SARC 65, scaled to the growth expectations from the 2020 management track assessment for all areas except NLS-South and CAII-SW.
2021	SARC 65, with changes to SH-MW parameters in the NLS-South using VIMS 2016 – 2021 data NGOM-Stellwagen-AOI using ME DMR/UMAINE 2021 SH-MW (w/ covariates)	SARC 65, scaled to the growth expectations from the 2020 management track assessment for all areas except NLS-South and CAII-SW.
2022	SARC 65, with changes to SH-MW parameters in the NLS-South using VIMS 2016 – 2022 data. Changes to NYB-closure using 2015-2022 data. Stellwagen Region using ME DMR/UMAINE 2021 SH-MW (w/ covariates). Other areas using Hart 2020 SHMW curves.	SARC 65, scaled to the growth expectations from the 2020 management track assessment for all areas except NLS-South and CAII-SW. GB growth applied to areas of the GOM.
2023	SARC 65, with changes to SH-MW parameters in the NLS-South using VIMS 2016 – 2023 data. Changes to NYB-closure using 2015-2023 data. DMR & SMAST (2016-2023) SH-MW for all GOM areas.	SARC 65, scaled to the growth expectations from the 2020 management track assessment for all areas except NLS-South and CAII-SW. GB growth applied to areas of the GOM.
2024	SARC 65, with changes to SH-MW parameters in the NLS-South using VIMS 2016 – 2023 data. DMR & SMAST (2016-2024) SH-MW for all GOM areas, except for Platts Bank and Machias Seal Island, which used the DMR SH-MW (2016-2024) parameters.	SARC 65, scaled to the growth expectations from the 2020 management track assessment for all areas except NLS-South and CAII-S. GB growth applied to areas of the GOM.
2025	2025 research track assessment, with changes to SH-MW parameters for Georges	SARC 65, scaled to the growth expectations from the 2020 management track assessment

	Bank (adjusted year effect to 2023, area-specific fixed-effects), NLS-South (VIMS 2016-2023, 2025 data), and Mid-Atlantic (adjusted year effect to time-series mean). DMR & SMAST (2016-2025) SH-MW for all GOM areas, except for Platts Bank and Machias Seal Island, which used the DMR SH-MW (2016-2025) parameters.	for all areas except NLS-South. GB growth applied to areas of the GOM.

Table 12 - 2025 Survey Data Treatments by SAMS areas for GB, MA, NGOM, and GOM.

GB	***SHMW equation, Dredge Efficiency***	***Treatment, notes***
CL1-Access (M)	2025 research track assessment (adjusted 2023 year effect, area-specific covariate)	Survey mean
CL1-Sliver (N)	2025 research track assessment (adjusted 2023 year effect, area-specific covariate)	Survey mean
CL1-South	2025 research track assessment (adjusted 2023 year effect, area-specific covariate)	Survey mean
CL2-North	2025 research track assessment (adjusted 2023 year effect, area-specific covariate)	Survey mean
CL2-S	2025 research track assessment (adjusted 2023 year effect, area-specific covariate)	Survey mean
CL2-Ext	2025 research track assessment (adjusted 2023 year effect, area-specific covariate)	Survey mean
NLS-North	2025 research track assessment (adjusted 2023 year effect, area-specific covariate)	Survey mean
NLS-South	VIMS 16-23, 2025	Survey mean
NLS-West	2025 research track assessment (adjusted 2023 year effect, area-specific covariate)	Survey mean
NF	2025 research track assessment (adjusted 2023 year effect, area-specific covariate)	Survey mean
GSC	2025 research track assessment (adjusted 2023 year effect, area-specific covariate)	Survey mean
SF	2025 research track assessment (adjusted 2023 year effect, area-specific covariate)	Restratified optical survey data within very-high density area with a 9x9 nm grid. Took mean of estimate within 9x9 nm grid, then added to the mean estimate of biomass outside of this grid.
MidAtlantic		
BI	2025 research track assessment (adjusted mean year effect)	Survey mean
LI	2025 research track assessment (adjusted mean year effect)	Survey mean
NYB	2025 research track assessment (adjusted mean year effect)	Survey mean

NYB-Closure	2025 research track assessment (adjusted mean year effect)	Survey mean
MAB-Nearshore	2025 research track assessment (adjusted mean year effect)	VIMS Dredge Data (no other survey data)
HCS	2025 research track assessment (adjusted mean year effect)	VIMS Dredge Data (no other survey data)
ET	2025 research track assessment (adjusted mean year effect)	Survey mean
DMV	2025 research track assessment (adjusted mean year effect)	VIMS Dredge Data (no other survey data)
VIR	2025 research track assessment (adjusted mean year effect)	VIMS Dredge Data (no other survey data)
Gulf of Maine and Northern Gulf of Maine		
NGOM - Stellwagen	DMR & SMAST (2016-2024) SH-MW	Survey mean, GB Open Selectivity
Ipswich Bay	DMR & SMAST (2016-2024) SH-MW	Survey mean, GB Open Selectivity
NGOM Other	DMR & SMAST (2016-2024) SH-MW, except for Platts Bank and Machias Seal Island, which use DMR (2016-2024)	Survey mean for Jeffreys Ledge and Platts Bank, DMR dredge data for Machias Seal Island.
GOM Closed	DMR & SMAST (2016-2024) SH-MW	SMAST Drop Camera only, inside WGOM closed area on Stellwagen and Jeffreys, Fippennies Ledge, Cashes Ledge.
Stellwagen South	DMR & SMAST (2016-2024) SH-MW	Survey mean

Table 13 – Final shell-height meat weight equations used for the development of 2025 survey biomass estimates.

Georges Bank	SHMW	Model	SAMS Effect
CL1-Access	2025 Scallop RT - GB (mean year effect, area specific)	W=exp(-4.4662+2.8935ln(SH)-0.007067*Depth-0.1325*Latitude+SamsEffect	0.1215
CL1-Sliver	2026 Scallop RT - GB (mean year effect, area specific)	W=exp(-4.4662+2.8935ln(SH)-0.007067*Depth-0.1325*Latitude+SamsEffect	0.0469
CL1-South	2027 Scallop RT - GB (mean year effect, area specific)	W=exp(-4.4662+2.8935ln(SH)-0.007067*Depth-0.1325*Latitude+SamsEffect	0.1215
CL2-North	2028 Scallop RT - GB (mean year effect, area specific)	W=exp(-4.4662+2.8935ln(SH)-0.007067*Depth-0.1325*Latitude+SamsEffect	0.0819
CL2-South	2029 Scallop RT - GB (mean year effect, area specific)	W=exp(-4.4662+2.8935ln(SH)-0.007067*Depth-0.1325*Latitude+SamsEffect	0.0856
CL2-Ext	2031 Scallop RT - GB (mean year effect, area specific)	W=exp(-4.4662+2.8935ln(SH)-0.007067*Depth-0.1325*Latitude+SamsEffect	-0.0684
NLS-North	2032 Scallop RT - GB (mean year effect, area specific)	W=exp(-4.4662+2.8935ln(SH)-0.007067*Depth-0.1325*Latitude+SamsEffect	0.0475
NLS-South	VIMS 2025	W=exp(-11.57360+3.10913ln(SH)	
NLS-West	2032 Scallop RT - GB (mean year effect, area specific)	W=exp(-4.4662+2.8935ln(SH)-0.007067*Depth-0.1325*Latitude+SamsEffect	-0.0493
NF	2033 Scallop RT - GB (mean year effect, area specific)	W=exp(-4.4662+2.8935ln(SH)-0.007067*Depth-0.1325*Latitude+SamsEffect	0.1363
GSC	2034 Scallop RT - GB (mean year effect, area specific)	W=exp(-4.4662+2.8935ln(SH)-0.007067*Depth-0.1325*Latitude+SamsEffect	-0.0243
SF	2035 Scallop RT - GB (mean year effect, area specific)	W=exp(-4.4662+2.8935ln(SH)-0.007067*Depth-0.1325*Latitude+SamsEffect	0.0282
Mid Atlantic			
BI	2018 Scallop RT - MA (2023 year effect)	W=exp(-12.7766+3.2834ln(SH)+0.0181*Latitude+[0.03895 - 0.00933ln(SH)] * Depth)	
LI	2019 Scallop RT - MA (2023 year effect)	W=exp(-12.7766+3.2834ln(SH)+0.0181*Latitude+[0.03895 - 0.00933ln(SH)] * Depth)	
NYB	2020 Scallop RT - MA (2023 year effect)	W=exp(-12.7766+3.2834ln(SH)+0.0181*Latitude+[0.03895 - 0.00933ln(SH)] * Depth)	
MAB-Nearshore	2021 Scallop RT - MA (2023 year effect)	W=exp(-12.7766+3.2834ln(SH)+0.0181*Latitude+[0.03895 - 0.00933ln(SH)] * Depth)	
HCS	2022 Scallop RT - MA (2023 year effect)	W=exp(-12.7766+3.2834ln(SH)+0.0181*Latitude+[0.03895 - 0.00933ln(SH)] * Depth)	
ET	2023 Scallop RT - MA (2023 year effect)	W=exp(-12.7766+3.2834ln(SH)+0.0181*Latitude+[0.03895 - 0.00933ln(SH)] * Depth)	
DMV	2024 Scallop RT - MA (2023 year effect)	W=exp(-12.7766+3.2834ln(SH)+0.0181*Latitude+[0.03895 - 0.00933ln(SH)] * Depth)	
VIR	2025 Scallop RT - MA (2023 year effect)	W=exp(-12.7766+3.2834ln(SH)+0.0181*Latitude+[0.03895 - 0.00933ln(SH)] * Depth)	
Gulf of Maine			

Machias Seal Island - NGOM	DMR (2016-2025)	W=exp(-14.69399+2.942ln(SH)+0.10236*Latitude+0.03614ln(DepthM))	
NGOM Exploratory Areas	DMR (2016-2025)		
N. Stellwagen – NGOM	DMR & SMAST (2016-2025)	W=exp(-9.916+2.942ln(SH)-0.2132ln(DepthM)-0.00003543*Latitude+0.090257022)	
Ipswich - NGOM	DMR & SMAST (2016-2025)	W=exp(-9.916+2.942ln(SH)-0.2132ln(DepthM)-0.00003543*Latitude-0.092964106)	
Jeffreys - NGOM	DMR & SMAST (2016-2025)	W=exp(-9.916+2.942ln(SH)-0.2132ln(DepthM)-0.00003543*Latitude+0.002856901)	
Platts - NGOM	DMR (2016-2025)	W=exp(182.0968+2.12241*ln(SH)-4.3775*Latitude-0.05176*Ln(DepthM))	
S. Stellwagen – South 42 20’	DMR & SMAST (2016-2025)	W=exp(-9.916+2.942ln(SH)-0.2132ln(DepthM)-0.00003543*Latitude+0.090257022)	
Ipswich – MA State	DMR & SMAST (2016-2025)	W=exp(-9.916+2.942ln(SH)-0.2132ln(DepthM)-0.00003543*Latitude)	
Jeffreys - WGOM	DMR & SMAST (2016-2025)	W=exp(-9.916+2.942ln(SH)-0.2132ln(DepthM)-0.00003543*Latitude)	
Fippennies - GOM	DMR & SMAST (2016-2025)	W=exp(-9.916+2.942ln(SH)-0.2132ln(DepthM)-0.00003543*Latitude)	
Cashes – GOM	DMR & SMAST (2016-2025)	W=exp(-9.916+2.942ln(SH)-0.2132ln(DepthM)-0.00003543*Latitude)	
WGOM Closure	DMR & SMAST (2016-2025)	W=exp(-9.916+2.942ln(SH)-0.2132ln(DepthM)-0.00003543*Latitude)	

Table 14 - Description of the SH-MW changes in Nantucket Lightship and New York Bight Closure SAMS areas from 2016 to 2025.

SAMS area	**SH-MW applied in 2016, FW28**	**SH-MW applied in 2017, FW29**	**SH-MW applied in 2018, FW30**	**SH-MW applied in 2019, FW32**	**SH-MW applied in 2020, FW33**	**SH-MW applied in 2021, FW34**	**SH-MW applied in 2022, FW36**	**SH-MW applied in 2023, FW38**	**SH-MW applied in 2024, FW39**	**SH-MW applied in 2025, FW40**
NLS-N	SARC 59	SARC 50	VIMS 2016-2018 Combined	VIMS 2016-2019 Combined	VIMS 2016-2020 Combined	SARC 65	SARC 65	SARC 65	SARC 65	2025 research track assessment (adjusted)
NLS-S 'Shallow' (>70m)	SARC 59	SARC 50	VIMS 2016-2018 Combined (South Shallow only	VIMS 2016-2019 Combined	VIMS 2016-2020 Combined (Merged into one SAMS area in 2020)	VIMS 2016-2021 Combined (Merged into one SAMS area in 2020)	VIMS 2016-2022 Combined	VIMS 2016-2023 Combined	VIMS 2016-2023 Combined	VIMS 2025 Combined
NLS-S 'Deep' (<70m)	VIMS 2016	VIMS 2016/2017 Combined (NLS S)	VIMS 2016-2018 Combined (Deep only)	VIMS 2016-2019 Combined						
NLS-Ext	VIMS 2016	SARC 50	SARC 65	N/A (part of GSC)	N/A (part of GSC)	N/A (part of GSC)	N/A	N/A		
NLS-W	VIMS 2016	VIMS 2016/2017 Combined (NLS W)	VIMS 2016-2018 Combined (West only)	VIMS 2016-2019 Combined	VIMS 2016-2020 Combined	SARC 65	SARC 65	SARC 65	SARC 65	2025 research track assessment (adjusted)
NYB-Closure	N/A						VIMS 2015-2022	VIMS 2015-2023	N/A	2025 research track assessment (adjusted)
Estimate of relative meat weight were derived using the following assumptions: Length = 100 mm, mean depth by SAMS area used. Mean depth for NLS-S SAMS area calculated by depth bin. Mean latitude by SAMS area used for SARC 50.										

Table 15 – FW40 growth parameters by SAMS area

FW40 (2020 Management Track growth)			
Subarea	**Years**	**L_∞**	**K**
GSC	12-16	135.7	0.397
NF	12-16	134.3	0.397
SF	12-16	123.9	0.397
CAI	12-16	134.5	0.397
CAII	12-16	132.3	0.397
CAII-S	12-16	146.9	0.397
NLS	12-16	136.1	0.397
NLS-S	15-16	119.1	0.487
DMV	08-12	130.5	0.547
ET	08-12	131.9	0.547
HCS	08-12	123.9	0.547
NYB	08-12	134.6	0.547
LI	08-12	133.5	0.547
Inshore	08-12	140.8	0.547

Table 16 – FW40 natural mortality parameters by SAMS area

Region	**Subarea**	**M**
Gulf of Maine	NGOM - Stellwagen	0.27
Gulf of Maine	Ipswich Bay	0.27
Gulf of Maine	NGOM Other	0.27
Gulf of Maine	GOM Closed	0.27
Gulf of Maine	Stellwagen South	0.27
Georges Bank	GSC	0.27
Georges Bank	NF	0.27
Georges Bank	SF	0.27
Georges Bank	CAI-N	0.27
Georges Bank	CAI-S	0.27
Georges Bank	CAII-S	0.27
Georges Bank	CAII-Ext	0.27
Georges Bank	NLS-N	0.27
Georges Bank	NLS-W	0.27
Georges Bank	NLS-S	0.27
Mid-Atlantic	DMV	0.95
Mid-Atlantic	ET	5
Mid-Atlantic	VIR	6
Mid-Atlantic	HCS	0.4
Mid-Atlantic	NYB	0.4
Mid-Atlantic	NYB-Closure	0.4
Mid-Atlantic	LI	0.4
Mid-Atlantic	Inshore	0.8