



New England Fishery Management Council

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DATE: August 5, 2026
TO: Scientific and Statistical Committee
CC: NEFMC Atlantic Herring Committee & ASMFC Atlantic Herring Management Board
FROM: NEFMC Atlantic Herring Plan Development Team & ASMFC Atlantic Herring Technical Committee
SUBJECT: Atlantic Herring OFLs and ABCs for Fishing Years 2027 through 2031

The New England Fishery Management Council's (Council) Atlantic Herring Plan Development Team (PDT) and the Atlantic States Marine Fisheries Commission's (Commission) Atlantic Herring Technical Committee (TC) held joint meetings by webinar on July 7 and July 14, 2026, to discuss the recent 2026 management track stock assessment.

Overview

This memorandum provides information to support fishing year (FY) 2027 through 2031 overfishing (OFL) and acceptable biological catch (ABC) recommendations from the Scientific and Statistical Committee (SSC). The PDT/TC reviewed 2024 and 2026 stock assessments, the 2026 peer review report, SSC reports, and PDT reports. A [summary of past specifications](#) was included in the materials for the SSC's Dynamic Reference Points Workshop. Appendix I details the Risk Policy scoring for Atlantic herring.

The PDT/TC did not provide recommendations for specific OFLs and ABCs.

Summary of Projections

The PDT/TC focused its analysis on addressing the [peer review panel's recommendations](#) under Term of Reference 5: Conduct short-term stock projections when appropriate (pp. 16-17).

This TOR was Partially Met as the Panel considered the OFLs (or Fmsy) and ABC projections based on the RT methodology to be useful but likely to be overly optimistic especially in light of the sensitivity analyses.

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After considerable discussion, the Panel concluded that the PDT and SSC should view the projections and sensitivity analysis as context for catch advice setting but that each has challenges that limit their utility.

The PDT/TC applied the Council's ABC control rule for Atlantic herring and rebuilding plan (following Amendment 8 and Framework Adjustment 9) to develop the standard projections. The range of projections the PDT/TC developed reflects more optimistic (1 & 4) to more pessimistic scenarios (2, 3, and 5). See Tables 1-5.

1. Standard projections (consistent with the stock assessment report)
2. Sensitivity on #1 to project NAA at the most recent 5-year average (as presented to the peer review panel)
3. Additional sensitivity on #1 to project recruitment at the most recent 10-year average
4. Additional sensitivity on #1 to modify catch assumptions - estimated US catch for 2026 (assumes 75% of the ACL is caught) and 5-year average Canadian catch (in 2026 and projection years)
5. Additional sensitivity – project recruitment at the most recent 10-year average and NAA at most recent 5-year average (combination of #2 and #3)

In addition, the PDT ran a simulation analysis on recruitment to look at WHAM-like recruitment estimates (i.e., similar length, signal, and noise) to compare different assumptions of trailing average recruitment in the projections (Figure 1). The simulation demonstrates 1) not to expect to detect a significant ARy1 correlation in a noisy declining timeseries, and 2) that using a trailing window of recruitment for projections does more good than harm.

In general, the PDT found a very low probability of detecting an ARy1 in a simulated trending timeseries (although, it increases with timeseries length). Using the geometric mean of the full timeseries (which is equivalent to the recruitment scaling parameter used by WHAM) with a declining trend results in increasingly over-optimistic projections. This can be improved substantially by using a trailing geometric mean (10 years achieved the lowest RMSE). If, in fact, there is no underlying trend and it's all noise, using a trailing 10-year window performs about the same as using the full-time series.

Tables

Table 1. Standard projections (consistent with the stock assessment report). Light gray indicates the bridge year (2026), and dark gray indicates the short-term projection period (2027-2031). Bold identifies the year the stock is projected to be rebuilt with at least a 50% probability of achieving the rebuilding target.

Year	Mobile Catch (mt)	Fixed Catch (mt)	Canada (NB) Catch (mt)	SSB (mt)	Mobile Gear OFL (mt)	Mobile Fleet F	SSB/SSBmsy	OFL (mt)	ABC (mt)	ACL (mt)	P(overfished)	P(overfishing)	P(rebuild)
2026	9,134	4,031	-	26,103	-	0.38	0.14	-	13,165	8,034	0.99	0.75	-
2027	939	5,283	5,131	77,841	11,486	0.02	0.41	16,769	6,222	1,091	0.59	-	0.15
2028	13,015	5,283	5,131	140,644	20,305	0.17	0.75	25,587	18,297	13,166	0.32	0.04	0.37
2029	22,354	5,283	5,131	184,357	27,608	0.22	0.98	32,890	27,637	22,506	0.21	0.19	0.49
2030	27,572	5,283	5,131	214,544	34,019	0.22	1.14	39,301	32,854	27,723	0.16	0.19	0.56
2031	32,886	5,283	5,131	235,978	40,505	0.22	1.25	45,788	38,169	33,038	0.13	0.19	0.61
2032	36,801	5,283	5,131	250,221	45,279	0.22	1.33	50,562	42,084	36,953	0.11	0.19	0.64
2033	39,060	5,283	5,131	258,497	48,035	0.22	1.37	53,318	44,343	39,212	0.10	0.19	0.66
2034	40,325	5,283	5,131	263,183	49,578	0.22	1.40	54,861	45,608	40,477	0.09	0.19	0.67
2035	41,049	5,283	5,131	265,870	50,461	0.22	1.41	55,744	46,332	41,201	0.09	0.19	0.67
2036	41,466	5,283	5,131	267,418	50,969	0.22	1.42	56,252	46,748	41,617	0.09	0.19	0.67

Table 2. Sensitivity to project NAA at the most recent 5-year average (as presented to the peer review panel). Light gray indicates the bridge year (2026), and dark gray indicates the short-term projection period (2027-2031). The stock is not projected to be rebuilt under this projection scenario.

Year	Mobile Catch (mt)	Fixed Catch (mt)	Canada (NB) Catch (mt)	SSB	Mobile Gear OFL (mt)	Mobile Fleet F	SSB/SSBmsy	OFL (mt)	ABC (mt)	ACL (mt)	P(overfished)	P(overfishing)	P(rebuild)
2026	9,134	4,031	-	18,150	-	0.52	0.10	-	13,165	8,034	1.00	0.97	0.00
2027	-	5,283	5,131	41,108	6,378	0.00	0.22	11,661	5,283	152	0.90	0.00	0.01
2028	2,291	5,283	5,131	64,576	9,265	0.06	0.34	14,548	7,574	2,443	0.72	0.00	0.05
2029	5,551	5,283	5,131	76,039	11,090	0.13	0.40	16,373	10,834	5,703	0.63	0.03	0.07
2030	7,644	5,283	5,131	81,238	12,286	0.17	0.43	17,569	12,926	7,795	0.60	0.06	0.08
2031	8,995	5,283	5,131	83,844	13,275	0.18	0.45	18,557	14,277	9,146	0.58	0.08	0.09
2032	9,779	5,283	5,131	85,042	13,865	0.19	0.45	19,147	15,061	9,930	0.57	0.09	0.09
2033	10,117	5,283	5,131	85,403	14,092	0.19	0.45	19,375	15,400	10,269	0.57	0.09	0.09
2034	10,215	5,283	5,131	85,452	14,154	0.19	0.45	19,436	15,498	10,367	0.57	0.09	0.09
2035	10,229	5,283	5,131	85,432	14,163	0.19	0.45	19,445	15,512	10,381	0.57	0.09	0.09
2036	10,224	5,283	5,131	85,411	14,160	0.19	0.45	19,442	15,507	10,376	0.57	0.09	0.09

Table 3. Additional sensitivity to project recruitment at the most recent 10-year average. Light gray indicates the bridge year (2026), and dark gray indicates the short-term projection period (2027-2031). The stock is not projected to be rebuilt under this projection scenario.

Year	Mobile Catch (mt)	Fixed Catch (mt)	Canada (NB) Catch (mt)	SSB (mt)	Mobile Gear OFL (mt)	Mobile Fleet F	SSB/SSB _{msy}	OFL (mt)	ABC (mt)	ACL (mt)	P(overfished)	P(overfishing)	P(rebuild)
2026	9,134	4,031	-	26,100	-	0.38	0.139	-	13,165	8,034	0.99	0.75	0.00
2027	878	5,283	5,131	76,616	10,711	0.02	0.407	15,994	6,161	1,030	0.59	0.00	0.15
2028	9,433	5,283	5,131	100,027	14,978	0.17	0.531	20,260	14,715	9,584	0.47	0.03	0.23
2029	13,630	5,283	5,131	103,922	16,808	0.22	0.552	22,091	18,912	13,781	0.45	0.19	0.23
2030	15,105	5,283	5,131	106,440	18,607	0.22	0.566	23,889	20,388	15,257	0.44	0.19	0.23
2031	16,824	5,283	5,131	108,062	20,678	0.22	0.574	25,960	22,106	16,975	0.43	0.19	0.23
2032	17,137	5,283	5,131	108,294	21,059	0.22	0.575	26,342	22,420	17,289	0.42	0.19	0.22
2033	16,912	5,283	5,131	107,422	20,784	0.22	0.571	26,067	22,195	17,064	0.43	0.19	0.22
2034	16,764	5,283	5,131	106,878	20,604	0.22	0.568	25,886	22,046	16,915	0.43	0.19	0.21
2035	16,678	5,283	5,131	106,561	20,499	0.22	0.566	25,781	21,960	16,829	0.43	0.19	0.21
2036	16,629	5,283	5,131	106,378	20,439	0.22	0.565	25,722	21,912	16,781	0.43	0.19	0.21

Table 4. Additional sensitivity to modify catch assumptions - estimated US catch for 2026 (assumes 75% of the ACL is caught) and 5-year average Canadian catch (in 2026 and projection years). Light gray indicates the bridge year (2026), and dark gray indicates the short-term projection period (2027-2031). Bold identifies the year the stock is projected to be rebuilt with at least a 50% probability of achieving the rebuilding target.

Year	Mobile Catch (mt)	Fixed Catch (mt)	Canada (NB) Catch (mt)	SSB (mt)	Mobile Gear OFL (mt)	Mobile Fleet F	SSB/SSB _{msy}	OFL (mt)	ABC (mt)	ACL (mt)	P(overfished)	P(overfishing)	P(rebuild)
2026	6,850	3,617	-	27,599	-	0.28	0.15	-	10,468	6,862	0.99	0.52	0.00
2027	1,176	3,617	3,606	80,345	11,932	0.03	0.43	15,549	4,793	1,187	0.58	0.00	0.16
2028	13,972	3,617	3,606	144,385	20,940	0.18	0.77	24,557	17,589	13,983	0.31	0.05	0.38
2029	22,961	3,617	3,606	189,338	28,356	0.22	1.01	31,973	26,578	22,972	0.20	0.19	0.50
2030	28,314	3,617	3,606	220,467	34,933	0.22	1.17	38,550	31,931	28,325	0.15	0.19	0.58
2031	33,772	3,617	3,606	242,570	41,596	0.22	1.29	45,213	37,389	33,783	0.12	0.19	0.63
2032	37,811	3,617	3,606	257,254	46,522	0.22	1.37	50,139	41,428	37,822	0.10	0.19	0.65
2033	40,148	3,617	3,606	265,784	49,372	0.22	1.41	52,989	43,765	40,159	0.09	0.19	0.67
2034	41,454	3,617	3,606	270,598	50,965	0.22	1.44	54,582	45,071	41,465	0.09	0.19	0.68
2035	42,199	3,617	3,606	273,347	51,873	0.22	1.45	55,490	45,816	42,210	0.09	0.19	0.68
2036	42,625	3,617	3,606	274,922	52,394	0.22	1.46	56,011	46,242	42,636	0.08	0.19	0.69

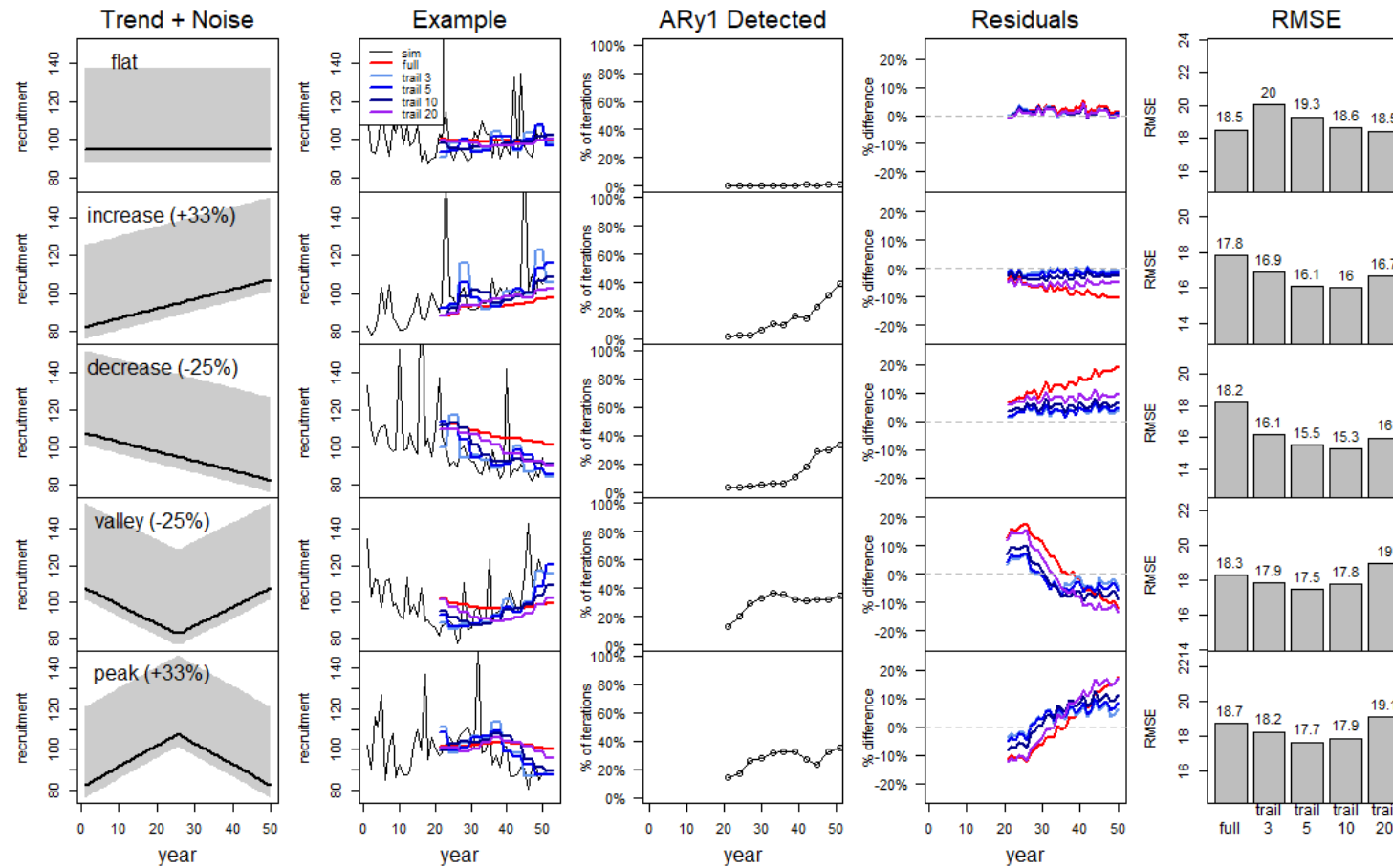
Table 5. Additional sensitivity to project recruitment at the most recent 10-year average and NAA at the most recent 5-year average. Light gray indicates the bridge year (2026), and dark gray indicates the short-term projection period (2027-2031). The stock is not projected to be rebuilt under this projection scenario.

Year	Mobile Catch (mt)	Fixed Catch (mt)	Canada (NB) Catch (mt)	SSB	Mobile Gear OFL (mt)	Mobile Fleet F	SSB/SSBmsy	OFL (mt)	ABC (mt)	ACL (mt)	P(overfished)	P(overfishing)	P(rebuild)
2026	9,134	4,031	-	18,147	-	0.52	0.10	-	13,165	8,034	1.0	1.0	0.0
2027	-	5,283	5,131	40,127	5,788	0.00	0.21	11,071	5,283	152	0.9	0.0	0.0
2028	1,477	5,283	5,131	41,579	6,203	0.06	0.22	11,485	6,760	1,629	0.9	0.0	0.0
2029	1,515	5,283	5,131	38,781	5,959	0.07	0.21	11,242	6,797	1,666	1.0	0.0	0.0
2030	1,355	5,283	5,131	38,207	6,055	0.06	0.20	11,338	6,638	1,507	1.0	0.0	0.0
2031	1,383	5,283	5,131	38,195	6,327	0.06	0.20	11,609	6,666	1,535	1.0	0.0	0.0
2032	1,388	5,283	5,131	38,092	6,349	0.06	0.20	11,631	6,670	1,539	1.0	0.0	0.0
2033	1,362	5,283	5,131	37,819	6,269	0.06	0.20	11,551	6,645	1,514	1.0	0.0	0.0
2034	1,333	5,283	5,131	37,673	6,222	0.06	0.20	11,505	6,615	1,484	1.0	0.0	0.0
2035	1,317	5,283	5,131	37,600	6,198	0.06	0.20	11,481	6,600	1,469	1.0	0.0	0.0
2036	1,310	5,283	5,131	37,565	6,186	0.05	0.20	11,469	6,592	1,461	1.0	0.0	0.0

Figure

Figure 1. PDT's recruitment simulation to look at WHAM-like recruitment estimates (i.e., similar length, signal, and noise) to compare different assumptions of trailing average recruitment in the projections.

Simulations: 100 iterations of 50 years of trend + 2 SD of lognormal noise
Projections: geomean of past values every 3 years, starting in year 20



APPENDIX I

2026 PDT Scoring Report for Atlantic Herring

Executive Summary

Scores were discussed among the Atlantic Herring Plan Development Team (PDT) on July 7 and 14, 2026. These scores and weights can be viewed in the [NEFMC Risk Policy Application](#) and are combined to determine the level of risk that should be considered when making management decisions for Atlantic herring. Further information on the scores and the rationale for each factor provided by the PDT are included below.

Report Year	Stock	Factor	Score
2026	Atlantic herring	biomass	-4
2026	Atlantic herring	recruitment	-4
2026	Atlantic herring	climate	-1
2026	Atlantic herring	commercial	2
2026	Atlantic herring	recreational	NA

SSB / Stock Status

Score: -4

Rationale: The terminal year SSB (2025; 35,258 mt) is below the SSB threshold of 94,107 mt ($188,214 \times 0.5$). The 2026 SSB_{msy} is 188,214 mt.

Sources: 2026 Atlantic Herring Management Track Stock Assessment

Recruitment

Score: -4

Rationale: Used the complete time series dataset to calculate the 25th and 75th percentiles (upper and lower quantile), establishing 3 regimes (below-average, average, above-average recruitment). In the last 5 years (2021-2025), there were no above-average years, 1 average year, and 4 below-average years, resulting in a score of -4.

Sources: 2026 Atlantic Herring Management Track Stock Assessment

Climate Vulnerability

Score: -1

Level: Species level

Rationale: Moderate climate vulnerability. Pre-scored

Sources: Hare et al 2016

Commercial Fishery Characterization

Score: 2

Stress Level: Moderate stress

Utilization

Sub-factor Score: 0

Rationale: Based on fishery catch and ACLs for FY 2023, 2024 and 2025.

Sources: [2025-2027 Atlantic Herring Specifications SIR](#), Table 4 (US quota and catch, FY 2008-2023); 2024, received from GARFO; [full year in-season report for FY 2025](#).

Communities

Sub-factor Score: 1

Rationale: Set at 1 for all NEFMC stocks based on a regional port commercial fishing activity analysis.

Sources: NEFMC Risk Policy Concept Appendix I

Revenue

Sub-factor Score: 1

Rationale: Fishery revenue has been below average in 3 of the last 5 years (2021-2023) using a time series from 2012-2024. Calculated the 25th percentile (\$7,822,524) and 75th percentile (\$35,749,339) to identify the below average, average, and above average states, then identified the state for each year from 2020-2024.

Sources: NOAA Fishery Performance Measures herring FMP revenue data, accessed 7/2026.

Fisheries Interactions

Sub-factor Score: 0

Rationale: The Atlantic herring quota is not currently constraining any other fisheries, though it may limit the ability to prosecute the Atlantic mackerel fishery moving forward.

Sources: NA

AP Input

Sub-factor Score: 0

Rationale: Advisors generally agreed that the PDT scores for Commercial Fishery

Characterization were appropriate and still correct, though there were a few differing opinions and some additional context was provided. With regards to utilization, an Advisor noted that while the numbers are correct, the increased 2025 quota was not in place until December 2025, and there were challenges harvesting at that time due to weather. Also, a few Advisors felt that the Atlantic herring quota does impact the mackerel fishery, particularly as mackerel quotas are increasing.

Sources: NA

Recreational Fishery Characterization

There is no recreational fishery for this stock. Thus, there is no score for this factor.