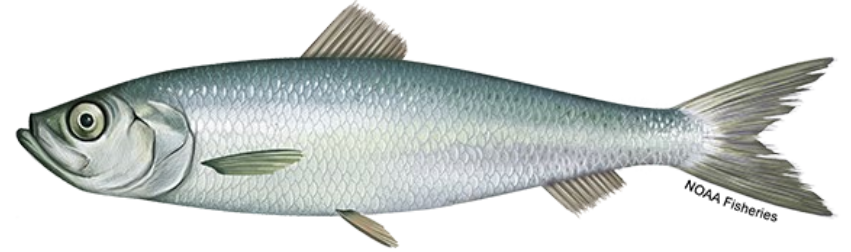


2027-2031 Atlantic Herring OFLs and ABCs

**ATLANTIC HERRING PLAN DEVELOPMENT TEAM & ASMFC
TECHNICAL COMMITTEE**

**SCIENTIFIC AND STATISTICAL COMMITTEE
AUGUST 12, 2026
NEW BEDFORD, MA AND WEBINAR**



**New England Fishery
Management Council**

TERMS OF REFERENCE

- A. Consider the information provided by the Council's Atlantic Herring Plan Development Team (PDT) and ASMFC's Technical Committee (TC) on the most recent stock assessment for Atlantic herring and its peer review, and information on stock projections.
- B. Recommend OFLs and ABCs for Atlantic herring for fishing years (FY) 2027-2031 that will prevent overfishing, are consistent with the Council's Atlantic herring ABC control rule and rebuilding plan, and consider the Council's Risk Policy Statement and Concept.



2027-2031 SPECIFICATIONS

Specifications include:

1. Overfishing limit (OFL), acceptable biological catch (ABC), using ABC control rule and rebuilding plan
2. Management uncertainty, annual catch limit (ACL), management area sub-ACLs, river herring and shad catch caps (status quo), and other components



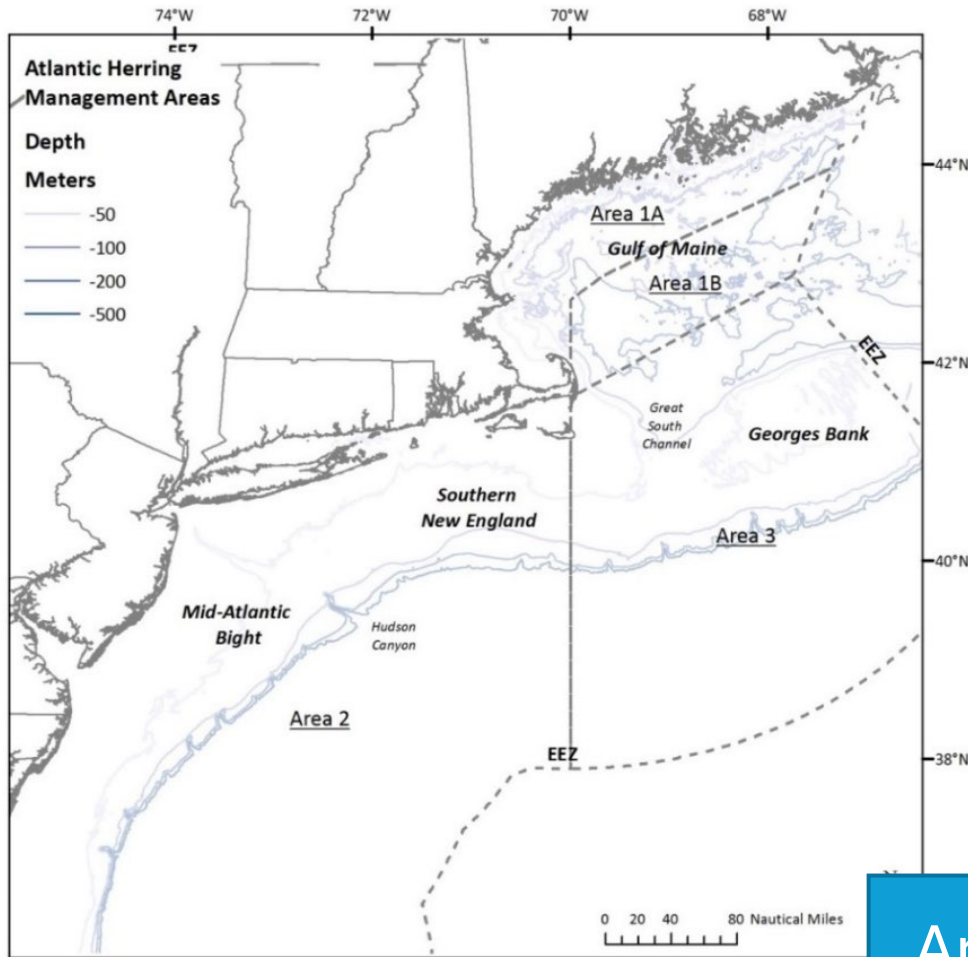
SPECIFICATIONS ACTION TIMELINE

March 2	Herring PDT
March 23	Herring AP
April 15	Council: update on action
April 27	Herring PDT/TC
May 20	Herring AP
May 21	Herring Committee
May 26	Herring PDT/TC
June 8	Herring AP & Committee
June 9	Herring PDT/TC
June 23-25	Council: progress report
June 29-30	2026 June Management Track Assessment Peer Review
July 7	Herring PDT/TC
July 14	Herring PDT/TC
August 4	ASMFC: Update to Atlantic Herring Management Board
August 7	Herring PDT/TC
August 11-12	SSC Meeting: Herring ABC/OFLs
August 18	Herring AP & Committee webinar
September 2	Herring AP & Committee meeting
September 15-17	Council: final action
September – December	Action submission
January 1, 2027	Target implementation



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SPECIFICATIONS AND MANAGEMENT AREAS



OFL



ABC



ACL

Scientific Uncertainty

- ABC control rule and rebuilding plan

Management Uncertainty

- Canadian NB weir fishery
- State water catch
- Discards

Area 1A
(28.9%)

Area 1B
(4.3%)

Area 2
(27.8%)

Area 3
(39%)



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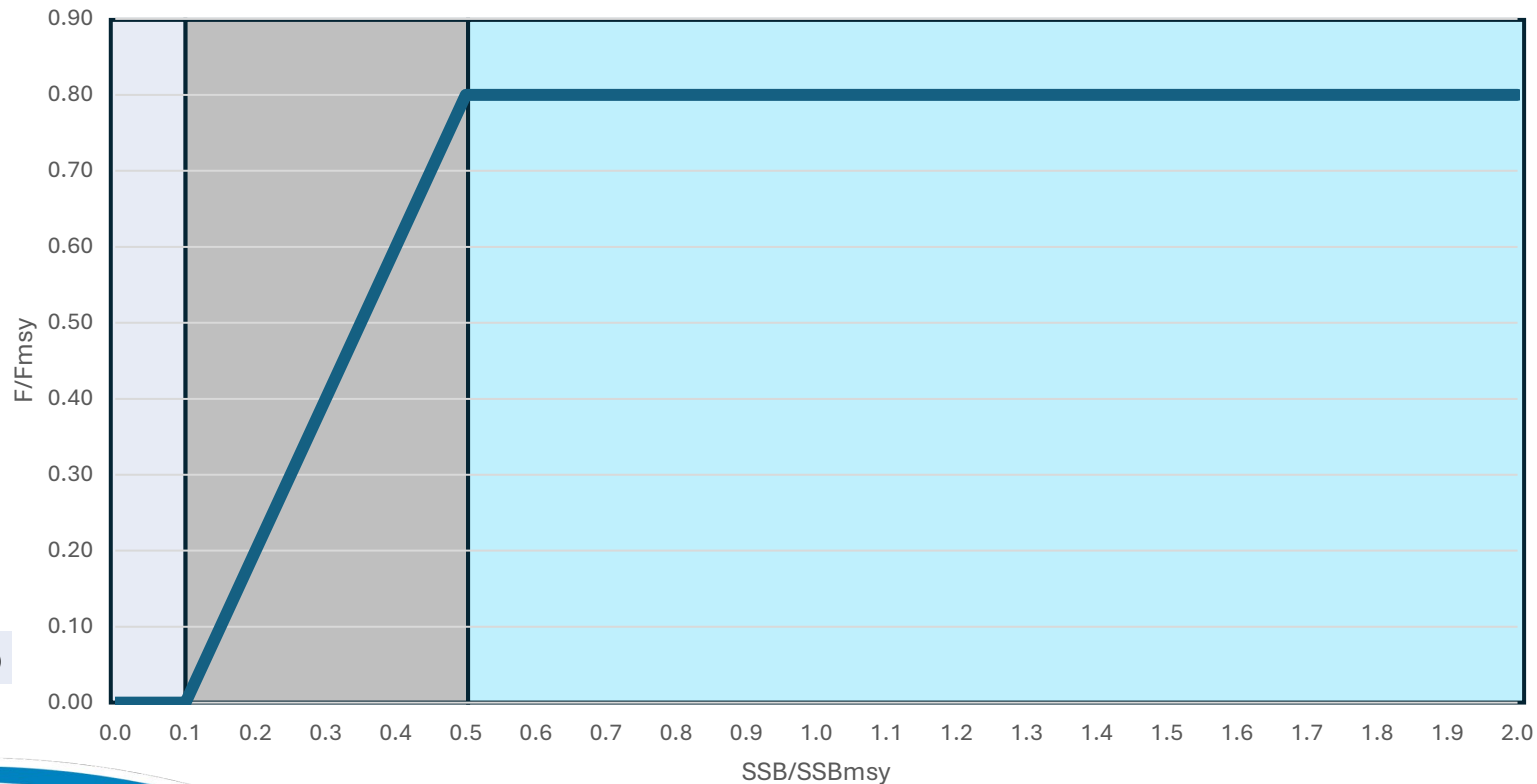
ATLANTIC HERRING ABC CONTROL RULE

Biomass-based

When biomass is greater than 0.5 for the ratio of SSB/SSB_{MSY} , the maximum fishing mortality allowed is 80% of F_{MSY} .

As biomass declines, fishing mortality declines linearly, and if biomass falls below 0.1 for the ratio of SSB/SSB_{MSY} , then ABC is set to zero, no fishery allocation.

The Council's ABC control rule explicitly accounts for the role of Atlantic herring as forage in the ecosystem by limiting fishing mortality at 80% of F_{MSY} .



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REBUILDING PLAN

- Effective date, August 18, 2022.
- Framework Adjustment 9 established a rebuilding plan for Atlantic herring based on the Council's ABC Control Rule.
 - Rebuilding projections indicated herring can rebuild in 5 years (by FY 2026) under this rebuilding plan, assuming long-term average recruitment.
 - The rebuilding plan continues to use the herring ABC control rule.
 - Last updated in 2024; projected 50% chance of rebuilding by 2031.

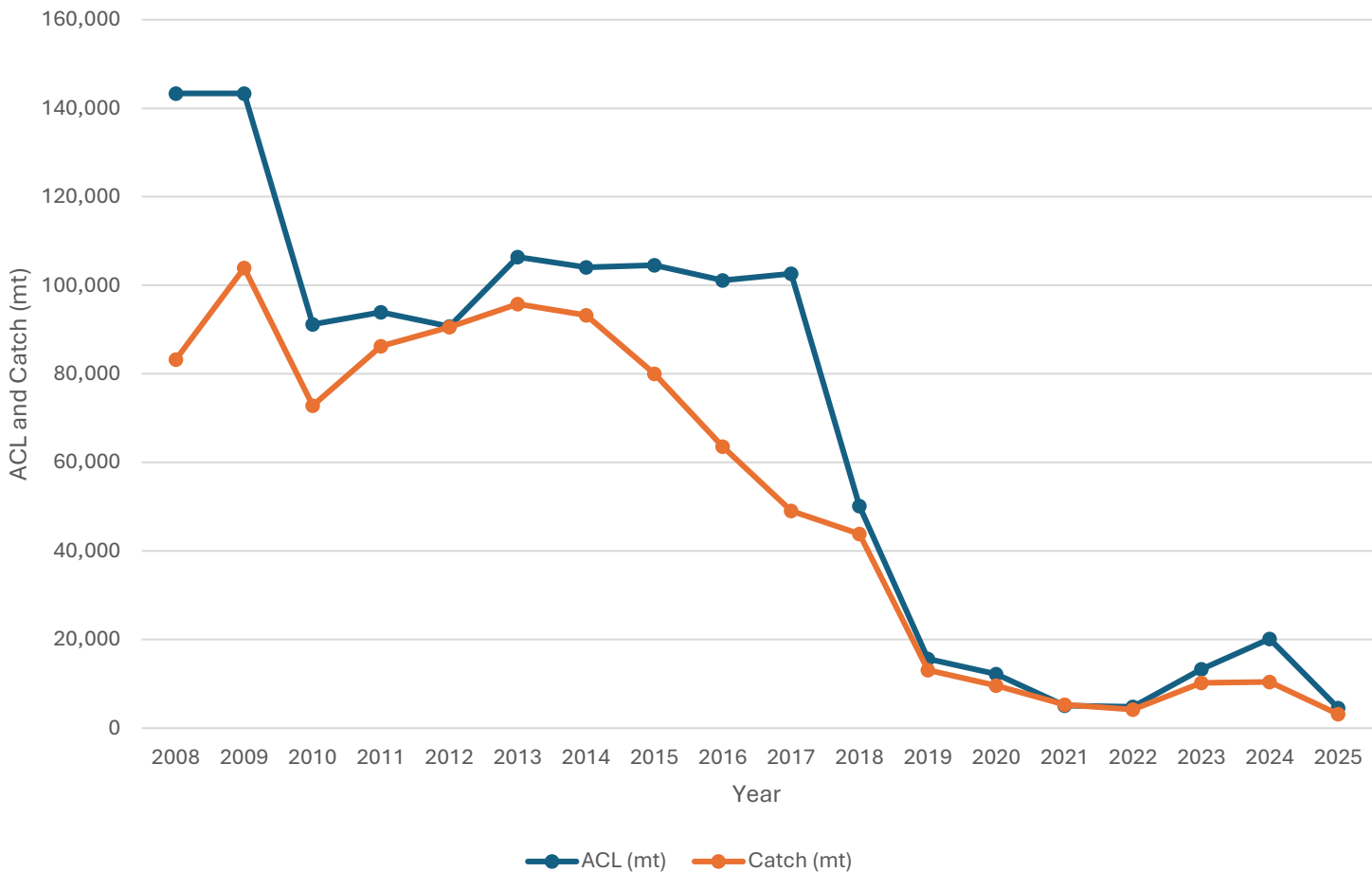


RECENT FISHERY PERFORMANCE & CURRENT SPECIFICATIONS

Current Specifications

Year	OFL	ABC	ACL
2025	20,802	8,587	4,556
2026	23,491	13,165	9,134
2027	31,075	13,165	9,134

US Atlantic Herring Fishery Performance, 2008-2025



Data Source: NOAA/GARFO.

Note: 2025 data are preliminary; from year-end in-season quota monitoring report.



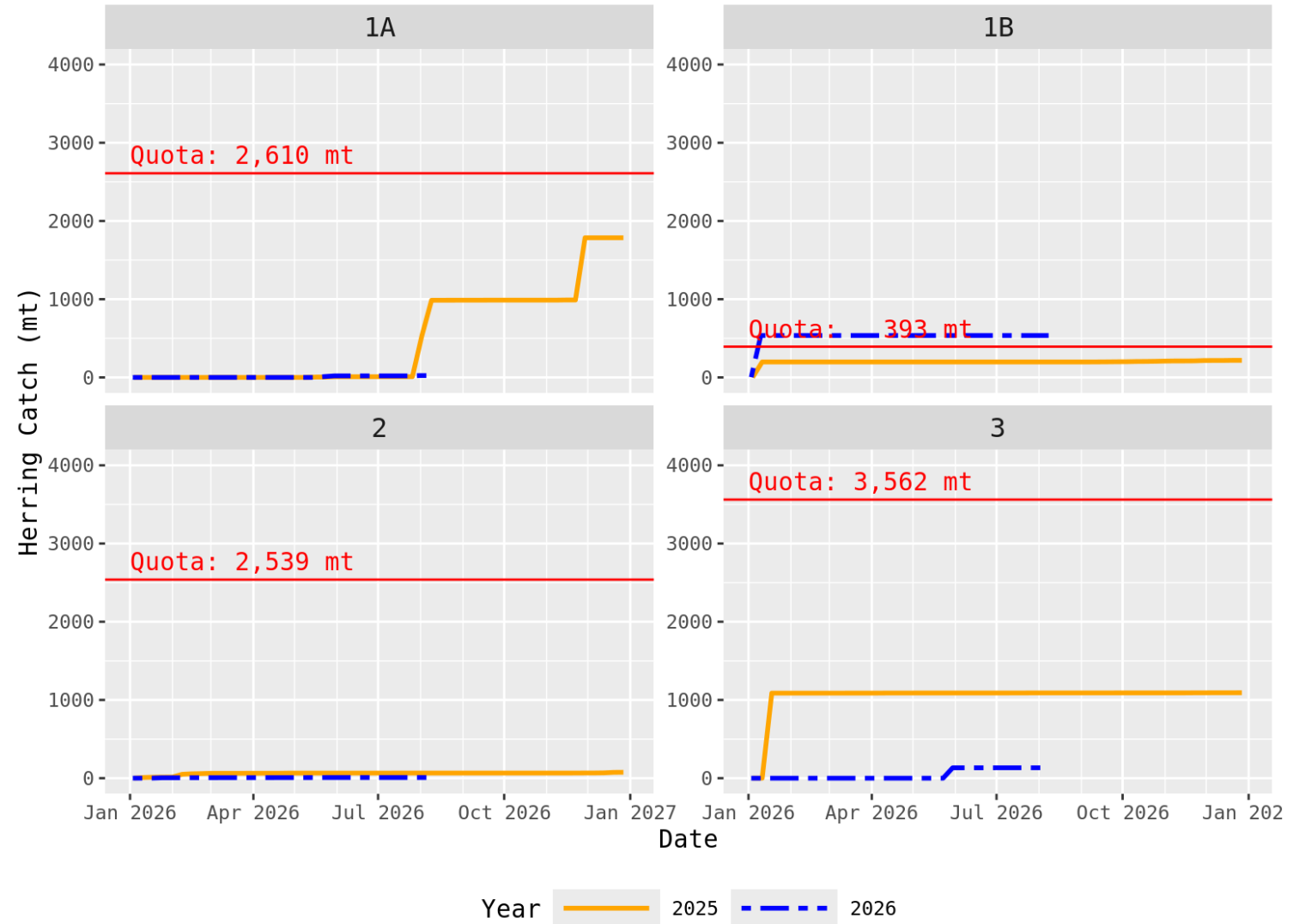
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IN-SEASON QUOTA MONITORING

As of August 6, 2026

Source: [NOAA/GARFO](#)

Area	Quota (mt)	Cumulative Catch (mt)	% Quota Caught
1A	2,610	23.5	0.9%
1B	393	535.4	136.2%
2	2,539	8.8	0.3%
3	3,562	133.2	3.7%
ACL	9,134	700.9	7.7%



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PDT/ TC DOCUMENTS

PDT/TC Report:

- Overview
- Summary of Projections
- Projections
- Appendix I: Risk Policy scoring

Risk Policy Report:

- PDT scoring, Council weighting → Z-score, risk tolerance graph
- Risk Policy matrix

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



PROJECTIONS – STANDARD AND SENSITIVITIES

Projections	Numbers-at-Age (NAA) Assumption	Recruitment Assumption	Catch Assumption
#1 – Standard <i>*Presented to peer review</i>	NAA random effects not carried forward	Independent identically distributed (iid) random effects	2026 US catch = 100% of ACL Canadian catch = latest 10-year average
#2 – NAA at recent 5-year average <i>*Presented to peer review</i>	Latest 5-year average	iid random effects	2026 US catch = 100% of ACL Canadian catch = latest 10-year average
#3 – Recruitment at recent 10-year average	NAA random effects not carried forward	Latest 10-year average	2026 US catch = 100% of ACL Canadian catch = latest 10-year average
#4 – Changes to bridge year assumptions	NAA random effects not carried forward	iid random effects	2026 US catch = 75% of ACL Canadian catch = latest 5-year average
#5 – NAA at 5-year average and recruitment at 10-year average	Latest 5-year average	Latest 10-year average	2026 US catch = 100% of ACL Canadian catch = latest 10-year average
New – Changes to bridge year assumptions and recruitment at 10-year average	NAA random effects not carried forward	Latest 10-year average	2026 US catch = 75% of ACL Canadian catch = latest 5-year average
Additional – Changes to bridge year assumptions, 10-year average recruitment, 5-year average NAA	Latest 5-year average	Latest 10-year average	2026 US catch = 75% of ACL Canadian catch = latest 5-year average

1) STANDARD PROJECTIONS

**PRESENTED TO PEER REVIEW*

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

Stock projected to rebuild under this scenario.



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2) NAA AT MOST RECENT 5-YEAR AVERAGE

**PRESENTED TO PEER REVIEW*

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

Stock is not projected to be rebuilt under this scenario.



3) RECRUITMENT AT MOST RECENT 10-YEAR AVERAGE

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	-	26,100	-	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

Stock is not projected to be rebuilt under this scenario.



4) MODIFY CATCH ASSUMPTIONS – 75% OF US ACL CAUGHT, 5-YEAR AVERAGE CANADIAN CATCH

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	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

Stock projected to rebuild under this scenario.



5) ADDITIONAL SENSITIVITY – NAA AT 5-YEAR AVERAGE AND RECRUITMENT AT 10-YEAR AVERAGE

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

Stock is not projected to be rebuilt under this scenario.



NEW - MODIFY CATCH ASSUMPTION (75% US ACL CAUGHT, 5-YEAR CANADIAN CATCH AVERAGE) + 10-YEAR AVERAGE RECRUITMENT

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	6,850	3,617	-	27,598	-	0.28	0.15	-	10,467	6,861	0.99	0.52	0.00
2027	1,104	3,617	3,606	79,304	11,166	0.03	0.42	14,783	4,721	1,115	0.58	0.00	0.15
2028	10,272	3,617	3,606	103,807	15,613	0.18	0.55	19,230	13,889	10,283	0.45	0.04	0.24
2029	14,234	3,617	3,606	108,796	17,553	0.22	0.58	21,170	17,851	14,245	0.43	0.19	0.24
2030	15,845	3,617	3,606	112,223	19,518	0.22	0.60	23,135	19,462	15,856	0.41	0.19	0.25
2031	17,710	3,617	3,606	114,516	21,768	0.22	0.61	25,385	21,327	17,721	0.40	0.19	0.25
2032	18,135	3,617	3,606	115,198	22,287	0.22	0.61	25,904	21,752	18,146	0.39	0.19	0.25
2033	17,981	3,617	3,606	114,597	22,098	0.22	0.61	25,715	21,598	17,992	0.39	0.19	0.24
2034	17,876	3,617	3,606	114,218	21,971	0.22	0.61	25,588	21,493	17,887	0.39	0.19	0.24
2035	17,816	3,617	3,606	113,997	21,897	0.22	0.61	25,514	21,433	17,827	0.39	0.19	0.24
2036	17,782	3,617	3,606	113,872	21,856	0.22	0.61	25,473	21,399	17,793	0.39	0.19	0.24

Stock is not projected to be rebuilt under this scenario.



ADDITIONAL - MODIFY CATCH ASSUMPTION (75% US ACL CAUGHT, 5-YEAR CANADIAN CATCH AVERAGE) + 10-YEAR AVERAGE RECRUITMENT + 5-YEAR AVERAGE NAA

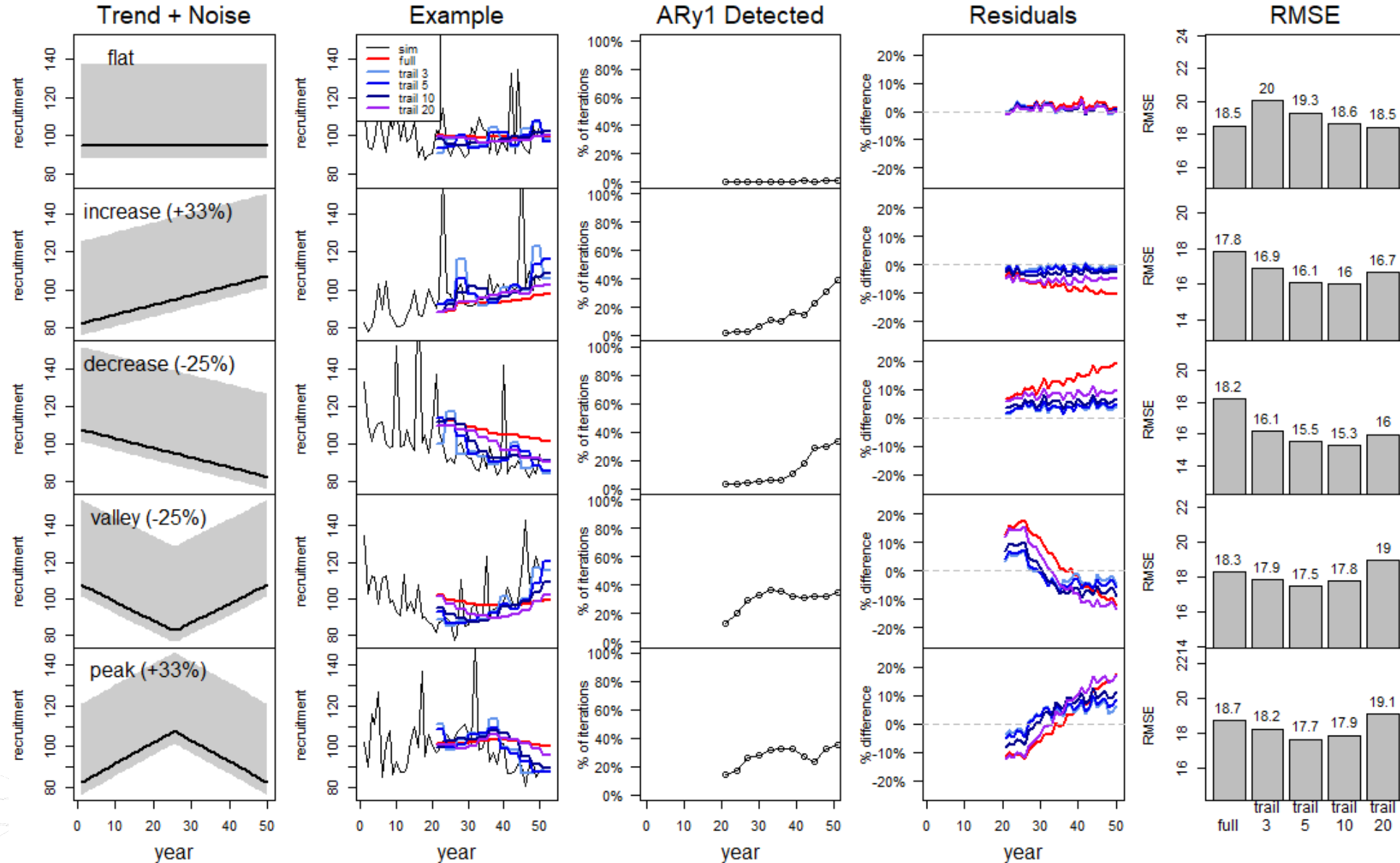
Year	Mobile Catch (mt)	Fixed Catch (mt)	Canada (NB) Catch (mt)	SSB	Mobile Gear OFL (mt)	Mobile Fleet F	SSB/SSBmsy	OFL (mt)	ABC (mt)	ACL (mt)	P(overfished)	P(overfishing)	P(rebuild)
2026	6,850	3,617	-	19,643	-	0.371	0.1040	10,467	6,861	1	0.825	0	
2027	57	3,617	3,606	42,259	6,151	0.002	0.2250	9,768	3,674	68	0.895	0	0.01
2028	1,735	3,617	3,606	44,286	6,629	0.068	0.2350	10,246	5,352	1,746	0.929	0	0.002
2029	1,822	3,617	3,606	41,844	6,416	0.074	0.2220	10,033	5,439	1,833	0.977	0	0
2030	1,685	3,617	3,606	41,509	6,543	0.067	0.2210	10,160	5,302	1,696	0.986	0	0
2031	1,747	3,617	3,606	41,644	6,848	0.066	0.2210	10,465	5,364	1,758	0.988	0	0
2032	1,770	3,617	3,606	41,630	6,895	0.066	0.2210	10,512	5,387	1,781	0.99	0	0
2033	1,751	3,617	3,606	41,410	6,830	0.066	0.2200	10,447	5,368	1,762	0.991	0	0
2034	1,725	3,617	3,606	41,295	6,793	0.065	0.2190	10,410	5,342	1,736	0.992	0	0
2035	1,711	3,617	3,606	41,240	6,774	0.065	0.2190	10,391	5,328	1,722	0.992	0	0
2036	1,705	3,617	3,606	41,214	6,765	0.065	0.2190	10,382	5,322	1,716	0.993	0	0

Stock is not projected to be rebuilt under this scenario.



RECRUITMENT SIMULATION

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



RISK POLICY APPLICATION

- Council completed weighting exercise in June 2026
- Herring PDT/TC and AP (commercial fishery characterization) completed scoring exercise on July 14 and via correspondence
- Risk Policy output provided **as additional qualitative information for consideration**; ABC Control Rule should still be used to develop specifications

Council weighting results, June 2026.

	SSB/ Stock Status	Recruitment	Climate Vulnerability	Recreational	Commercial
Mean (0-4)	3.44	2.89	2.11	2.06	2.83
Normalized	0.26	0.22	0.16	0.15	0.21

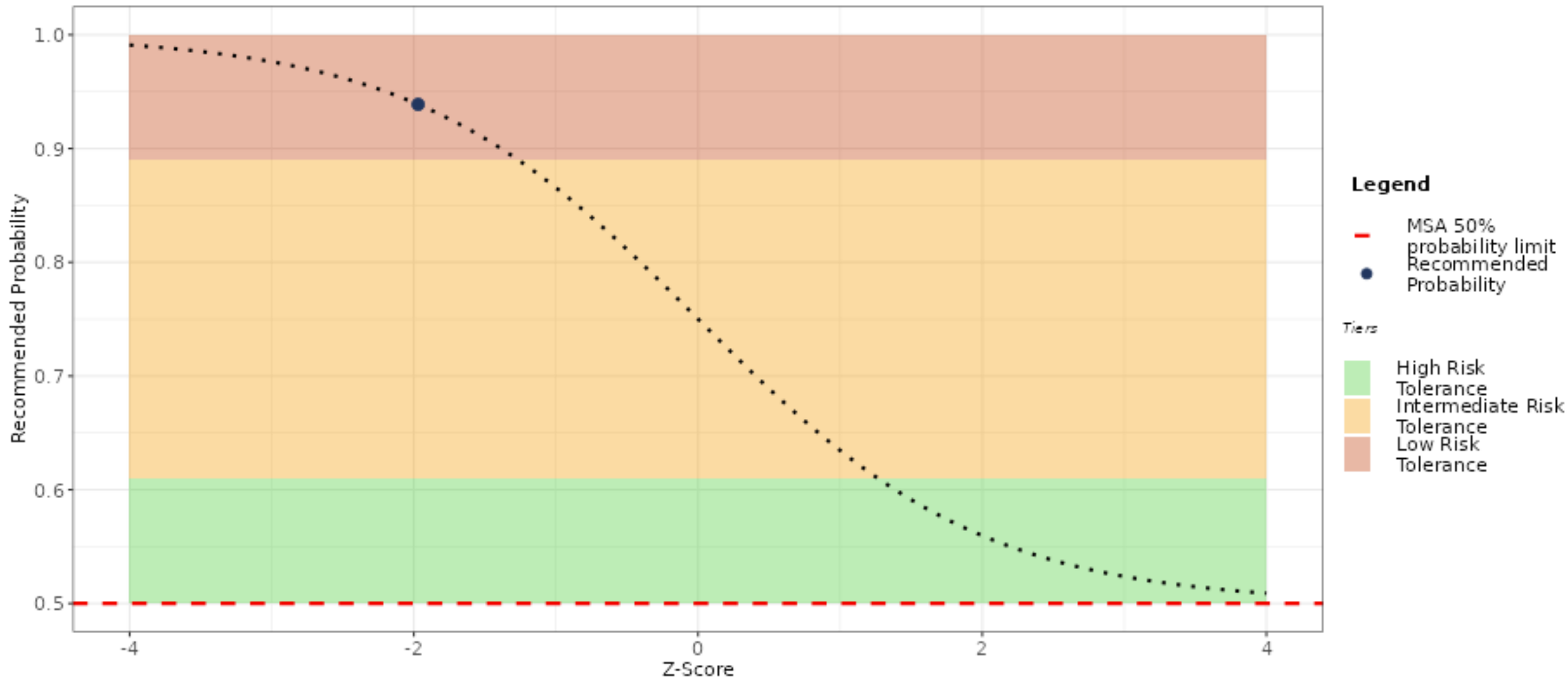


RISK POLICY APPLICATION

Factor	Score	Rationale
SSB / Stock Status	-4 (below threshold)	2025 SSB is <50% of SSBmsy proxy
Recruitment	-4 (persistent low recruitment)	Below-average recruitment in 4 of the last 5 years
Climate Vulnerability	-1 (moderate)	Moderate climate vulnerability. Pre-scored.
Commercial Fishery Characterization	2 (moderate stress)	- Scored in accordance with RP guidelines; AP agreed with most scoring/ that conditions are holding - Late implementation of updated herring specs in 2025 plus weather → lower utilization; low utilization in Area 2 in recent years - Impact on mackerel fishery with increased mackerel quotas
Recreational Fishery Characterization	N/A	No recreational fishery for Atlantic herring.

Z-SCORE = -1.97 → LOW RISK TOLERANCE





Z-SCORE = -1.97 → LOW RISK TOLERANCE



New England Fishery
Management Council

ADDITIONAL INFORMATION

- Herring fishery components
 - Lobster bait – primary market in summer; impacted by herring quotas/price
 - Food/other uses – aquaculture feed, pet/livestock food, industrial/biomedical purposes
- Links between herring and recreational fishery/ ecotourism industry
- Link between herring and mackerel fishery (often prosecuted together)
- River herring and shad bycatch
 - Accountability measures (catch caps) for RH/S
- From 2022 to 2024:
 - 20-25 participating vessels
 - \$3.3 - \$7.9 million in herring revenue

Data Source: [NOAA Commercial Fishery Performance Measures](#)

- Top ports: Stonington, Rockland, Portland (ME); Gloucester, New Bedford (MA); Narragansett/Pt. Judith (RI); Montauk (NY); Cape May (NJ)
 - Source: [Atlantic Herring Framework 9](#); using data through 2020



QUESTIONS?



New England Fishery
Management Council