Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • asmfc.org

MEMORANDUM

TO: **American Lobster Management Board**

FROM: **American Lobster Technical Committee**

DATE: **September 16, 2026**

SUBJECT: **American Lobster Data Update through 2025**

An annual Data Update process between American lobster stock assessments was recommended during the 2020 stock assessment to more closely monitor changes in stock abundance. The objective of this process is to present information—including any potentially concerning trends—that could support additional research or consideration of changes to management. Data sets updated during this process are generally those that indicate exploitable lobster stock abundance conditions expected in subsequent years and include:

- Young-of-year (YOY) settlement indicators
- Trawl survey indicators, including recruit abundance (71-80 mm carapace length lobsters) and survey encounter rate
- Ventless trap survey (VTS) sex-specific abundance indices (53 mm+ carapace length lobsters)
- Combined recruit abundance (71-80 mm carapace length lobsters) from Gulf of Maine (GOM) state spring and fall trawl surveys and VTS

VTS abundance indices are presented here in addition to several abundance indicators used in the stock assessment. During its October 2025 meeting, the American Lobster Management Board tasked the Technical Committee (TC) to include a combined recruit index for the GOM/GBK stock, similar to what was used in Addendum XXVII, as a part of future Data Updates to the Board. The combined recruit index presented in this update is consistent with the recruit index established in Addendum XXVII and averages relative recruit abundance across: 1) a combined Maine/New Hampshire and Massachusetts spring trawl survey three-year running average index, 2) a combined Maine/New Hampshire and Massachusetts fall trawl survey three-year running average index, and 3) a model-based VTS three-year running average index. As determined when developing the index for Addendum XXVII, individual survey indices are scaled to their 2017 values so indices are on a consistent scale before combining into the combined recruit index. All data are from the Gulf of Maine sub-stock, so this index is presented with the Gulf of Maine sub-stock indicators.

For all indicators other than the combined recruit index, an updated status based on the mean value over the most recent five years (2021-2025) is provided for each time series, for comparison to the five-year means provided at the end of the most recent stock assessment (2019-2023). Indicator status (negative, neutral, or positive – see table below) was determined relative to the percentiles of the stock assessment time series excluding the final five years used to determine status in the stock assessment (i.e., 1st year of the data set through 2018). Annual data points are presented in figures as shapes that indicate the status of the annual data point. A dashed red vertical line separates new data added in the current Data Update from data previously presented. A solid red horizontal line indicates the current five-year mean used as status for comparison to the assessment status. This line is broken where

missing data points occur during the five-year period. See Section 5 in the 2025 stock assessment report for more detail on indicator calculations.

Indicator	< 25th percentile	Between 25th and 75th percentile	> 75th percentile
YOY settlement (larval or YOY)	Negative	Neutral	Positive
Trawl survey recruit abundance	Negative	Neutral	Positive
Trawl survey encounter rate	Negative	Neutral	Positive
Ventless trap survey abundance	Negative	Neutral	Positive

For the combined recruit index, the annual index values represent proportional change of the running three-year average from the peak three-year average (2015-2017). For example, the 2025 index value represents proportional change of the 2023-2025 average from the 2015-2017 average. The proportional changes in the combined index are expected to approximate comparable changes in overall future abundance of the stock. For more details on the combined recruit index calculations, see Addendum XXVII.

Note that updated five-year means during the 2025 assessment for several trawl survey-based indicators remain impacted by COVID-19 survey terminations. Updated five-year means during the 2025 assessment and updated in this Data Update are also impacted by additional (unrelated to COVID-19) survey terminations for the NEFSC trawl survey in spring 2023 and fall 2025 and the CT trawl survey in spring and fall 2025. See the appendix for details on data changes throughout previous Data Update. Below are the results of updates by sub-stock.

Gulf of Maine (GOM)

Overall, Gulf of Maine indicators show a mix of conditions that are primarily neutral with marginal changes and variability since the stock assessment. Some brief improvements observed in the previous update reverted with this update, while the combined recruit index increased above the value in the terminal year of the stock assessment (2023).

- YOY conditions are unchanged since the stock assessment (Table 1 and Figure 1).
    - All updated five-year means are neutral, including ME statistical area (SA) 512 which had briefly improved to positive during last year's update.
    - All available annual ME indicators declined in 2025.
    - Delays to the start of the ME survey in 2025 followed by poor weather and vessel and staffing issues led to reduced sampling and no samples collected from SA 511.
    - It is important to note that changes in YOY indicators are not expected to be detected in the recruit indicators for several years.
- Trawl survey recruit abundance indicators are unchanged since the stock assessment (Table 2 and Figure 2).
    - Three of the five-year means remain neutral and three remain positive.
    - Three annual indicators in 2025 were the highest since at least 2019 (NEFSC spring and MA spring and fall).
    - Five of six annual values are not available for 2020 due to COVID-19 sampling restrictions and the NEFSC survey value is not available for spring 2023 due to vessel issues or fall 2025 due to a lapse in appropriations.

- Trawl survey encounter rates show marginal deterioration, with one of six indicators changing to a poorer condition since the stock assessment (Table 3 and Figure 3).
    - One of the inshore updated five-year means changed from neutral to negative since the stock assessment. Both offshore means remain positive while the other three, all inshore, remain neutral.
    - The MA spring survey values have been negative in three of the four last years, the first negative observations across indicators since 2008.
    - Note that the ME/NH survey encounter rates (spring and fall) are still high within a narrow range relative to other surveys.
    - Five of six annual values are not available for 2020 due to COVID-19 sampling restrictions and the NEFSC survey value is not available for spring 2023 due to vessel issues and fall 2025 due to a lapse in appropriations.
- Ventless trap survey indicators are unchanged since the stock assessment (Table 4 and Figure 4).
    - Four updated five-year means are negative and four are neutral, including males in SA 513 which had briefly improved to positive during last year's update.
    - Statuses are variable across the stock with no clear latitudinal pattern.
    - The indicators for SA 513 have been more stable through time than the indicators for the other three areas.
- The combined recruit index increased slightly from lower values the previous two years (Figure 5).
    - The 2025 combined index value (2023-2025 average) is 0.61 which represents a 39% decline from the index peak in 2017 (2015-2017 average abundance of 1.00).
    - All individual indices contributing to the combined index show similar patterns across years.

Georges Bank (GBK)

Overall, Georges Bank indicators show a mix of positive and neutral conditions that are unchanged since the stock assessment. Note that there are no YOY or VTS indicators for this sub-stock area.

- Trawl survey recruit abundance indicators are unchanged since the stock assessment (Table 5 and Figure 6).
    - Both updated five-year means remain neutral.
    - Both indicators have been increasing since 2021.
    - No values are available for 2020 due to COVID-19 sampling restrictions, the spring value is not available for 2023 due to vessel issues, and the fall value for 2025 is not available due to a lapse in appropriations.
- Trawl survey encounter rates are unchanged since the stock assessment (Table 6 and Figure 7).
    - Both of the updated means remain positive.
    - The terminal annual values are at time series highs for both seasons (2025 in spring and 2024 in fall).
    - No values are available for 2020 due to COVID-19 sampling restrictions, the spring value is not available for 2023 due to vessel issues, and the fall value for 2025 is not available due to a lapse in appropriations.

Southern New England (SNE)

Overall, Southern New England indicators show continued negative conditions since the stock assessment. There were slight but consistent increases across RI indicators in 2025. However, most updated indicators are at or near time series lows.

- YOY conditions are unchanged since the stock assessment (Table 7 and Figure 8).
    - Updated status for the five-year means both remain negative.
    - No YOY have been caught during the MA survey for the last eleven years.
- Trawl survey recruit abundance indicators are unchanged since the stock assessment (Table 8 and Figure 9).
    - Updated status for the five-year means all remain negative.
    - The MA survey observed no recruit lobsters throughout 2025.
    - Six of eight annual values are not available for 2020 due to COVID-19 sampling restrictions, the NEFSC survey value is not available for spring 2023 due to vessel issues and fall 2025 due to a lapse in appropriations, and neither season value is available for the CT survey in 2025 due to boat operation obstacles.
- Trawl survey encounter rates are unchanged since the stock assessment (Table 9 and Figure 10).
    - Updated status for the five-year means all remain negative.
    - Six of eight annual values are not available for 2020 due to COVID-19 sampling restrictions, the NEFSC survey value is not available for spring 2023 due to vessel issues and fall 2025 due to a lapse in appropriations, and neither season value is available for the CT survey in 2025 due to boat operation obstacles.
- Ventless trap survey indices show slight deterioration, with one of four indicators changing to a poorer condition since the stock assessment (Table 10 and Figure 11).
    - Updated status for one five-year mean deteriorated from neutral to negative, while three remain negative.
    - It is important to note that the ventless trap survey has only taken place during depleted stock conditions coinciding with an adverse environmental regime, so interannual variability can be misleading without the context of a longer time series encompassing varying stock conditions.

Tables and Figures

Table 1. GOM abundance indicators: YOY indices.

YOUNG-OF-YEAR INDICES					
Survey	*ME*				*MA*
	511	*512*	*513 East*	*513 West*	*514*
1981					
1982					
1983					
1984					
1985					
1986					
1987					
1988					
1989			1.64		
1990			0.77		
1991			1.54		
1992			1.30		
1993			0.45		
1994			1.61		
1995		0.02	0.66		0.91
1996		0.05	0.47		
1997		0.05	0.46		0.10
1998		0.00	0.14		0.03
1999		0.04	0.65		0.43
2000	0.00	0.10	0.13	0.17	0.07
2001	0.24	0.43	2.08	1.17	0.39
2002	0.13	0.29	1.38	0.85	1.00
2003	0.22	0.27	1.75	1.22	0.75
2004	0.18	0.36	1.75	0.67	1.02
2005	1.42	1.25	2.40	1.12	1.06
2006	0.49	1.06	1.57	1.08	0.45
2007	0.59	1.11	2.23	1.30	1.27
2008	0.32	0.59	1.27	1.10	0.33
2009	0.66	0.33	1.51	0.48	0.17
2010	0.16	0.64	1.25	0.63	0.44
2011	0.41	0.98	2.33	0.90	0.58
2012	0.44	0.62	1.27	0.30	0.08
2013	0.09	0.22	0.34	0.12	0.00
2014	0.16	0.47	1.04	0.42	0.11
2015	0.15	0.22	0.42	0.03	0.00
2016	0.13	0.21	0.42	0.14	0.08
2017	0.21	0.36	0.65	0.23	0.08
2018	0.27	0.34	0.62	0.22	0.03
2019	0.43	0.64	0.94	0.45	0.06
2020	0.29	0.51	1.06	0.33	0.19
2021	0.06	0.12	0.38	0.28	0.28
2022	0.13	0.59	0.71	0.42	0.11
2023	0.44	0.95	1.43	0.57	0.22
2019-2023 mean	0.27	0.56	0.90	0.41	0.17
2024	0.50	0.82	1.15	0.59	0.08
2025		0.36	0.15	0.13	0.08
2021-2025 mean	0.28	0.57	0.76	0.40	0.15
25th	0.16	0.18	0.51	0.23	0.08
median	0.22	0.34	1.26	0.63	0.33
75th	0.43	0.60	1.60	1.09	0.67

Figure 1. GOM abundance indicators: YOY indices.

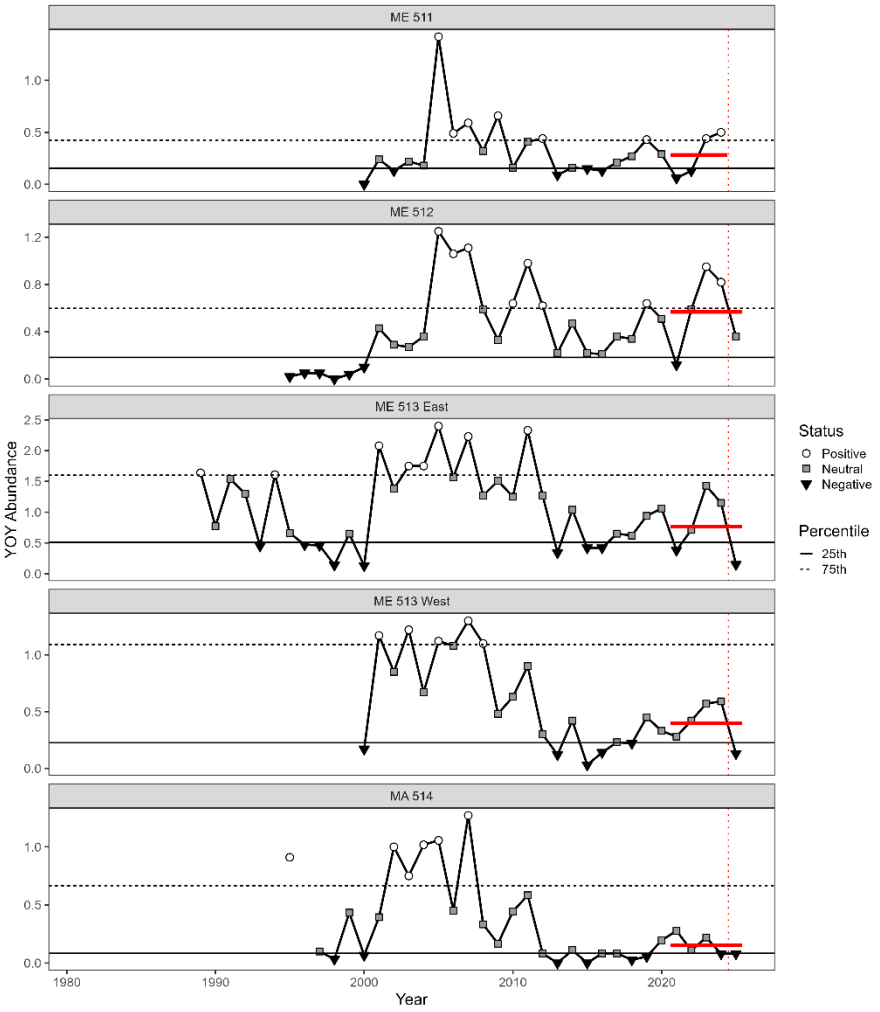


Table 2. GOM abundance indicators: trawl survey recruit abundance.

RECRUIT ABUNDANCE (SURVEY)						
Abundance of lobsters 71 - 80 mm CL (sexes combined)						
Survey	*NEFSC*		*ME/NH*		*MA 514*	
	Spring	*Fall*	*Spring*	*Fall*	*Spring*	*Fall*
1981	0.17	0.23			6.38	4.84
1982	0.29	0.43			2.74	3.85
1983	0.31	2.57			1.76	9.76
1984	0.22	2.57			2.15	6.13
1985	0.16	1.42			4.48	9.60
1986	0.29	3.33			3.01	3.80
1987	0.78	0.59			2.47	1.16
1988	0.78	2.94			2.52	4.12
1989	0.52	2.56			4.48	7.51
1990	0.37	2.88			6.11	15.36
1991	0.64	1.45			2.73	7.55
1992	0.54	1.39			4.31	8.95
1993	0.39	1.98			5.12	3.19
1994	0.17	5.39			7.59	13.77
1995	1.50	3.73			4.54	12.12
1996	0.78	4.74			3.09	12.10
1997	2.07	3.85			4.59	6.46
1998	1.64	2.66			4.50	7.47
1999	1.51	3.11			4.29	8.73
2000	4.84	3.10		24.09	4.24	8.87
2001	1.09	1.55	9.28	17.81	4.32	1.58
2002	1.14	1.97	22.00	22.41	3.43	5.00
2003	1.45	0.78	10.65	18.32	1.96	0.66
2004	0.87	2.75	7.55	12.29	2.46	1.30
2005	0.35	0.95	18.51	25.90	4.35	2.11
2006	2.23	1.29	18.07	18.30	6.09	5.30
2007	1.66	0.65	15.91	16.82	0.77	1.61
2008	1.01	2.47	17.88	31.61	2.54	6.12
2009	2.22	2.25	24.72	32.67	3.19	8.88
2010	1.38	2.46	17.66	37.35	2.22	9.39
2011	4.67	5.43	39.25	46.09	5.24	15.04
2012	5.12	3.10	36.55	37.12	3.03	11.30
2013	4.89	8.17	34.50	37.86	4.83	12.20
2014	5.20	9.70	50.79	41.95	3.35	7.06
2015	6.54	8.18	38.51	67.99	7.05	17.91
2016	6.04	10.21	50.83	60.07	13.61	17.41
2017	7.04	6.02	48.53	48.13	7.85	13.58
2018	6.35	6.25	42.77	55.84	5.25	25.69
2019	7.52	3.52	46.37	50.85	10.69	14.59
2020				34.65		
2021	4.64	3.69	32.86	32.19	6.39	10.16
2022	5.35	3.79	22.78	24.86	8.61	6.27
2023		7.62	25.08	32.09	4.51	8.78
2019-2023 mean	5.84	4.65	31.77	34.93	7.55	9.95
2024	4.06	5.80	33.11	40.73	2.65	6.28
2025	6.54		30.06	34.68	9.28	16.21
2021-2025 mean	5.15	5.22	28.78	32.91	6.29	9.54
25th	0.42	1.47	17.72	20.37	2.73	4.30
median	1.11	2.61	23.36	32.67	4.30	7.53
75th	2.23	3.82	39.07	44.02	5.05	11.90

Figure 2. GOM abundance indicators: trawl survey recruit abundance.

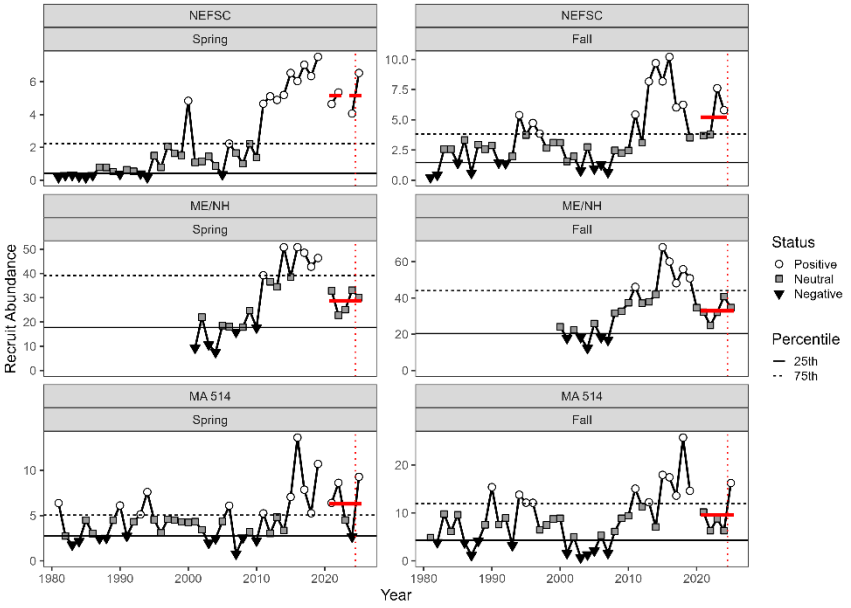


Table 3. GOM abundance indicators: trawl survey encounter rate.

SURVEY LOBSTER ENCOUNTER RATE						
Proportion of postive tows						
Survey	NEFSC		ME/NH		MA 514	
	Spring	Fall	Spring	Fall	Spring	Fall
1981	0.45	0.28			0.86	0.73
1982	0.35	0.24			0.50	0.70
1983	0.30	0.38			0.76	0.76
1984	0.30	0.41			0.76	0.76
1985	0.38	0.49			0.71	0.67
1986	0.34	0.49			0.68	0.83
1987	0.42	0.24			0.85	0.54
1988	0.38	0.38			0.76	0.58
1989	0.37	0.43			0.78	0.95
1990	0.45	0.34			0.86	0.95
1991	0.41	0.32			0.87	0.94
1992	0.44	0.24			0.93	0.77
1993	0.44	0.41			0.97	0.82
1994	0.45	0.42			1.00	0.93
1995	0.43	0.44			0.93	0.93
1996	0.54	0.54			0.91	0.95
1997	0.64	0.38			0.93	0.86
1998	0.52	0.41			0.76	0.69
1999	0.52	0.42			0.73	0.91
2000	0.64	0.44		0.94	0.93	0.98
2001	0.56	0.42	0.88	0.86	0.93	0.72
2002	0.76	0.53	0.94	0.95	0.91	0.73
2003	0.69	0.49	0.92	0.85	0.82	0.55
2004	0.86	0.36	0.89	0.86	0.84	0.56
2005	0.77	0.38	0.95	0.91	0.95	0.67
2006	0.72	0.60	0.93	0.93	0.91	0.88
2007	0.72	0.43	0.97	0.85	0.51	0.54
2008	0.84	0.49	0.92	0.86	0.83	0.75
2009	0.82	0.63	0.98	0.92	0.89	0.87
2010	0.85	0.78	0.98	0.96	0.87	0.98
2011	0.83	0.74	0.99	0.96	0.89	0.85
2012	0.86	0.78	0.98	0.98	0.91	0.95
2013	0.87	0.73	1.00	0.93	0.96	0.95
2014	0.90	0.71	1.00	0.99	0.79	0.96
2015	0.93	0.69	1.00	0.96	0.98	0.95
2016	0.94	0.75	1.00	0.96	0.96	0.97
2017	0.86	0.82	0.99	0.94	0.84	0.98
2018	0.86	0.77	0.98	0.96	0.84	0.90
2019	0.83	0.71	0.99	0.95	0.85	0.93
2020				0.96		
2021	0.90	0.75	1.00	0.91	0.86	0.90
2022	0.79	0.76	0.98	0.90	0.78	0.85
2023		0.80	0.96	0.91	0.85	0.83
2019-2023 mean	0.84	0.75	0.98	0.93	0.84	0.88
2024	0.88	0.75	0.98	0.95	0.62	0.95
2025	0.87		0.98	0.93	0.71	0.91
2021-2025 mean	0.86	0.77	0.98	0.92	0.76	0.89
25th	0.43	0.38	0.93	0.89	0.78	0.72
median	0.60	0.44	0.98	0.94	0.86	0.86
75th	0.84	0.62	0.99	0.96	0.93	0.95

Figure 3. GOM abundance indicators: trawl survey encounter rate.

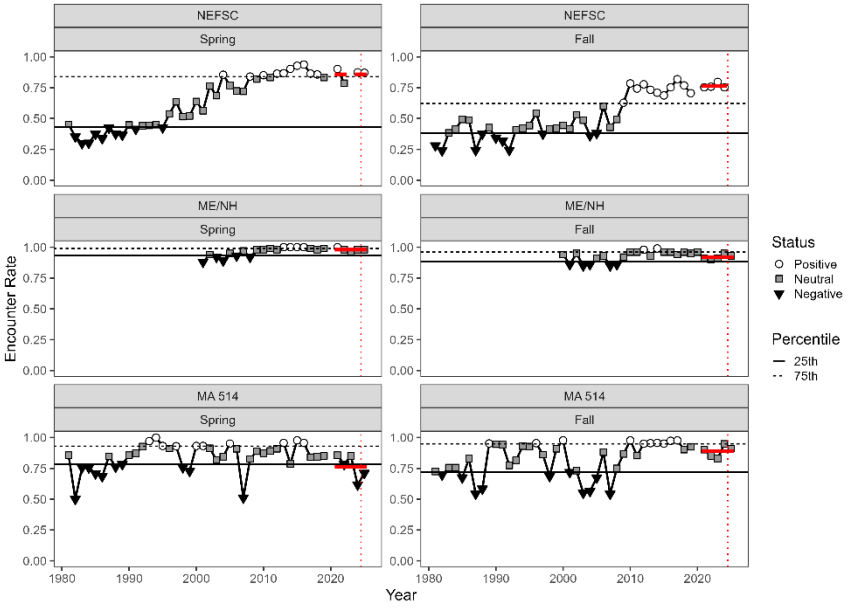


Table 4. GOM abundance indicators: ventless trap survey abundance.

VENTLESS TRAP ABUNDANCE								
Abundance of lobsters ≥ 53 mm CL								
Survey	*511*		*512*		*513*		*514*	
	Female	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*
1981								
1982								
1983								
1984								
1985								
1986								
1987								
1988								
1989								
1990								
1991								
1992								
1993								
1994								
1995								
1996								
1997								
1998								
1999								
2000								
2001								
2002								
2003								
2004								
2005								
2006	7.66	5.35	6.87	5.36	5.71	4.33	3.08	3.38
2007	5.07	3.92	3.95	3.81	5.79	4.29	1.85	1.83
2008	4.94	3.87	5.79	4.93	5.73	4.91	2.75	2.50
2009	3.60	2.65	6.30	5.33	6.86	5.48	2.69	2.63
2010	5.66	3.89	6.96	5.67	6.59	5.22	2.48	2.20
2011	8.70	6.52	11.12	8.46	7.29	5.54	3.46	2.59
2012	10.94	7.63	12.06	9.43	11.43	7.70	5.21	4.51
2013	11.17	7.95	11.91	8.64	9.35	6.45		
2014	10.41	6.63	11.95	8.03	7.74	4.94	3.15	2.34
2015	8.50	4.64	10.41	7.67	8.56	5.45	4.00	3.14
2016	14.61	9.15	14.39	10.72	10.77	7.49	4.78	3.55
2017	11.71	7.07	11.64	8.50	8.46	5.52	3.38	2.45
2018	15.12	9.43	11.30	8.21	9.58	6.34	3.47	2.42
2019	12.96	8.28	8.24	5.93	8.66	5.20	2.85	1.92
2020	7.68	5.48	7.94	5.95	9.26	6.55	2.50	1.68
2021	7.35	5.44	5.97	5.23	8.25	5.90	1.76	1.37
2022	6.70	4.96	4.86	4.21	7.84	6.19	1.62	0.96
2023	4.95	3.86	5.17	4.56	8.35	6.31	1.80	1.49
2019-2023 mean	7.93	5.60	6.44	5.18	8.47	6.03	2.10	1.48
2024	5.99	4.36	6.02	4.73	9.48	7.38	1.58	0.99
2025	7.22	4.88	6.05	5.13	7.38	5.31	1.73	1.19
2021-2025 mean	6.44	4.70	5.61	4.77	8.26	6.22	1.70	1.20

25th	5.66	3.92	6.87	5.36	6.59	4.94	2.74	2.40
median	8.70	6.52	11.12	8.03	7.74	5.48	3.26	2.54
75th	11.17	7.63	11.91	8.50	9.35	6.34	3.60	3.20

Figure 4. GOM abundance indicators: ventless trap survey abundance.

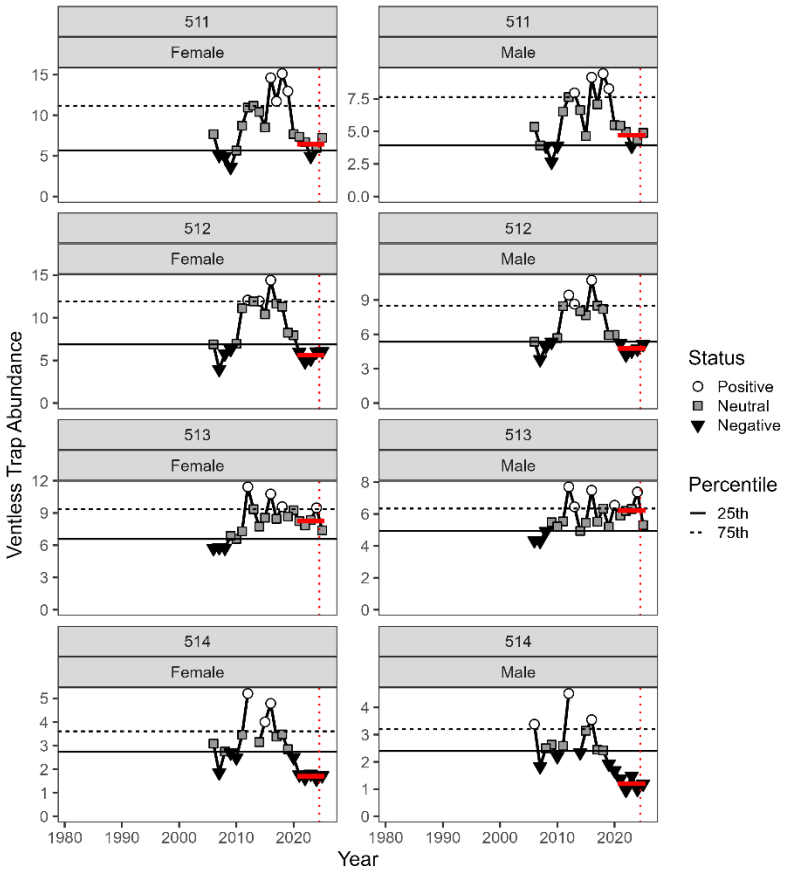


Figure 5. GOM recruit abundance indices aggregated into a combined index (top) and presented individually.

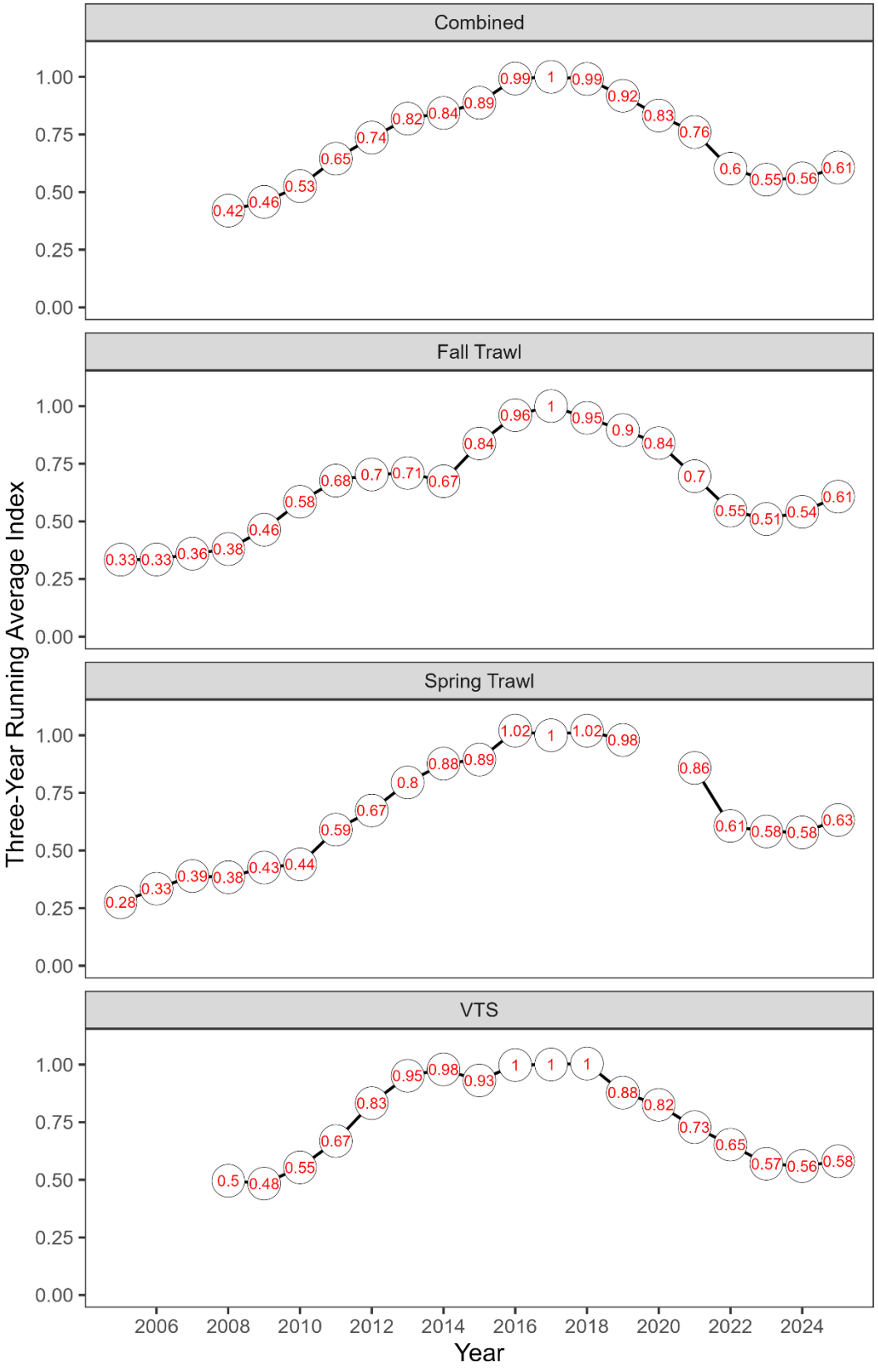


Table 5. GBK abundance indicators: trawl survey recruit abundance.

RECRUIT ABUNDANCE (SURVEY)		
Abundance of lobsters 71 - 80 mm CL (sexes combined)		
Survey	*NEFSC*	
	Spring	*Fall*
1981	0.07	0.30
1982	0.19	0.42
1983	0.17	0.19
1984	0.01	0.33
1985	0.12	0.06
1986	0.56	0.67
1987	0.45	0.57
1988	0.09	0.40
1989	0.04	0.14
1990	0.46	0.33
1991	0.08	0.31
1992	0.16	0.64
1993	0.49	0.23
1994	0.68	0.12
1995	0.00	0.22
1996	0.66	0.16
1997	0.76	0.92
1998	0.72	0.12
1999	0.60	0.29
2000	0.31	0.24
2001	1.26	0.37
2002	0.79	0.64
2003	0.32	0.18
2004	0.11	0.20
2005	0.05	0.14
2006	0.23	0.18
2007	0.03	0.13
2008	0.06	0.17
2009	0.13	0.17
2010	0.13	0.08
2011	0.04	0.16
2012	0.07	0.08
2013	0.07	0.14
2014	0.07	0.09
2015	0.03	0.19
2016	0.07	0.06
2017	0.16	0.19
2018	0.02	0.10
2019	0.07	0.06
2020		
2021	0.18	0.20
2022	0.19	0.27
2023		0.36
2019-2023 mean	0.15	0.22
2024	0.25	0.45
2025	0.25	
2021-2025 mean	0.22	0.32

25th	0.07	0.14
median	0.13	0.19
75th	0.45	0.32

Figure 6. GBK abundance indicators: trawl survey recruit abundance.

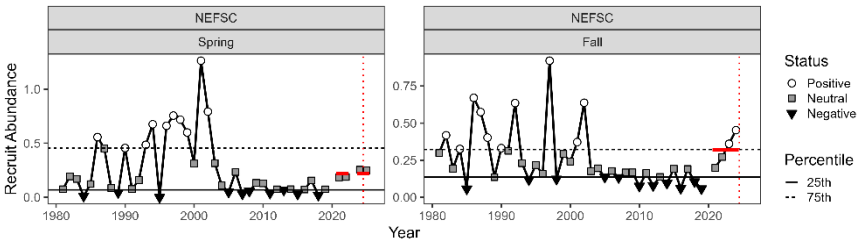


Table 6. GBK abundance indicators: trawl survey encounter rate.

SURVEY LOBSTER ENCOUNTER RATE		
Proportion of postive tows		
Survey	***NEFSC***	
	Spring	***Fall***
1981	0.26	0.52
1982	0.23	0.43
1983	0.20	0.38
1984	0.12	0.36
1985	0.21	0.38
1986	0.25	0.36
1987	0.19	0.34
1988	0.34	0.39
1989	0.19	0.39
1990	0.20	0.41
1991	0.20	0.42
1992	0.28	0.47
1993	0.22	0.36
1994	0.14	0.39
1995	0.13	0.42
1996	0.18	0.37
1997	0.13	0.49
1998	0.13	0.38
1999	0.19	0.56
2000	0.24	0.38
2001	0.26	0.47
2002	0.28	0.57
2003	0.26	0.43
2004	0.19	0.51
2005	0.17	0.56
2006	0.26	0.57
2007	0.25	0.46
2008	0.30	0.52
2009	0.33	0.55
2010	0.36	0.63
2011	0.30	0.69
2012	0.35	0.58
2013	0.33	0.66
2014	0.37	0.61
2015	0.27	0.59
2016	0.45	0.55
2017	0.40	0.56
2018	0.29	0.59
2019	0.36	0.57
2020		
2021	0.41	0.48
2022	0.34	0.62
2023		0.73
2019-2023 mean	0.37	0.60
2024	0.46	0.76
2025	0.50	
2021-2025 mean	0.43	0.65

25th	0.19	0.39
median	0.25	0.47
75th	0.30	0.56

Figure 7. GBK abundance indicators: trawl survey encounter rate.

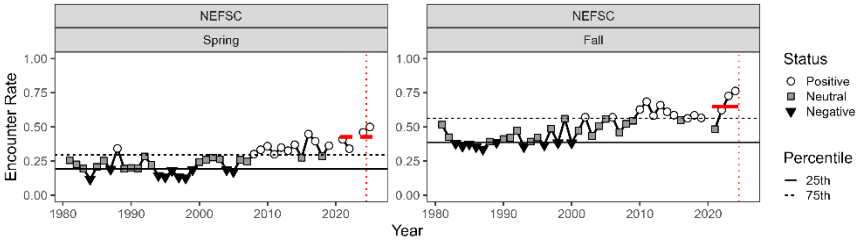


Table 7. SNE abundance indicators: YOY indices.

YOUNG-OF-YEAR INDICES		
Survey	***MA***	***RI***
1981		
1982		
1983		
1984		
1985		
1986		
1987		
1988		
1989		
1990		1.13
1991		1.45
1992		0.63
1993		0.51
1994		1.21
1995	0.17	0.34
1996	0.00	0.15
1997	0.08	0.96
1998	0.28	0.54
1999	0.06	0.91
2000	0.33	0.28
2001	0.11	0.72
2002	0.11	0.25
2003	0.00	0.70
2004	0.06	0.40
2005	0.17	0.54
2006	0.22	0.44
2007	0.17	0.54
2008	0.00	0.14
2009	0.06	0.06
2010	0.00	0.08
2011	0.00	0.00
2012	0.00	0.09
2013	0.17	0.19
2014	0.11	0.22
2015	0.00	0.17
2016	0.00	0.03
2017	0.00	0.03
2018	0.00	0.03
2019	0.00	0.03
2020	0.00	0.14
2021	0.00	0.08
2022	0.00	0.03
2023	0.00	0.01
2019-2023 mean	0.00	0.06
2024	0.00	0.04
2025	0.00	0.06
2021-2025 mean	0.00	0.04

25th	0.00	0.14
median	0.06	0.34
75th	0.17	0.63

Figure 8. SNE abundance indicators: YOY indices.

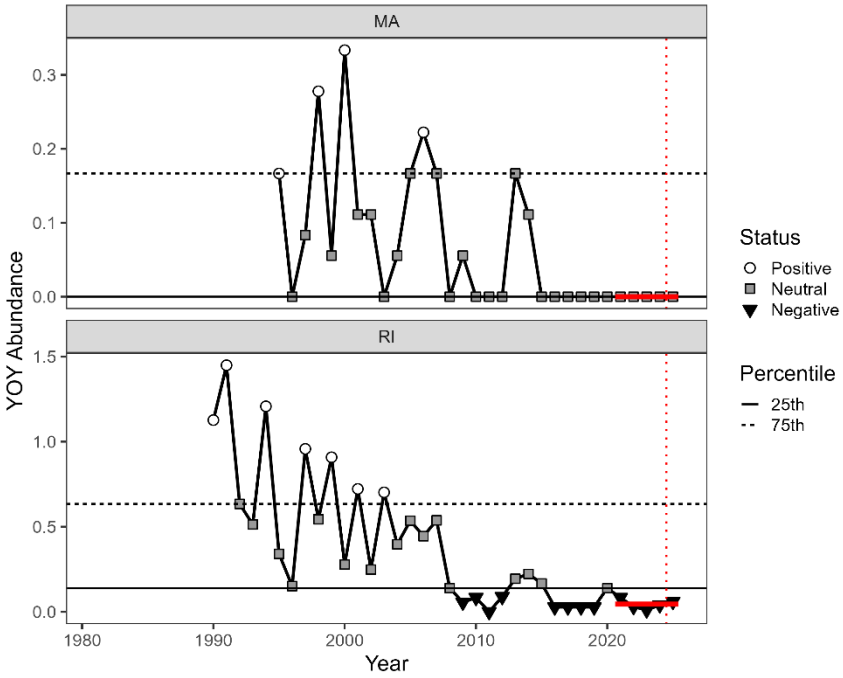


Table 8. SNE abundance indicators: trawl survey recruit abundance.

RECRUIT ABUNDANCE (SURVEY)								
Abundance of lobsters 71 - 80 mm CL (sexes combined)								
Survey	*NEFSC*		*MA*		*RI*		*CT*	
	Spring	*Fall*	*Spring*	*Fall*	*Spring*	*Fall*	*Spring*	*Fall*
1981	0.17	1.40	0.65	0.07	0.89	1.31		
1982	1.13	1.15	0.10	0.04	0.26	0.64		
1983	0.61	1.12	0.09	0.04	0.94	0.43		
1984	0.15	1.31	0.42	0.01	1.03	1.36	10.09	6.80
1985	3.05	1.65	0.34	0.09	0.28	0.97	3.08	3.93
1986	0.28	0.92	0.17	0.20	0.91	1.28	2.77	5.76
1987	1.54	0.96	0.26	0.17	0.79	3.14	2.93	6.86
1988	1.23	1.00	0.24	0.16	0.47	4.05	1.85	4.88
1989	0.15	2.57	0.14	0.43	0.91	3.26	4.86	5.28
1990	1.06	1.63	2.29	0.31	2.17	2.69	6.89	7.74
1991	0.47	0.98	1.18	0.87	4.77	3.10	10.83	10.32
1992	0.30	1.57	0.10	0.57	0.62	1.97	10.31	10.65
1993	1.02	0.61	0.25	0.52	7.81	8.29	7.78	15.18
1994	0.33	0.69	0.95	0.42	1.00	3.88	5.07	11.51
1995	0.13	0.93	1.14	0.03	1.33	4.50	12.13	11.20
1996	0.62	3.76	0.40	0.32	1.60	6.55	11.37	11.08
1997	2.62	2.49	1.45	0.12	2.58	6.10	15.42	24.99
1998	1.22	1.84	1.09	0.11	1.63	3.24	24.06	12.72
1999	3.74	1.21	0.75	0.19	1.71	2.07	24.57	12.96
2000	1.12	2.17	0.56	0.13	1.54	1.83	13.37	8.27
2001	0.60	0.86	0.18	0.03	2.97	2.17	10.77	7.41
2002	2.48	0.65	0.34	0.00	2.68	0.73	8.07	2.75
2003	0.55	0.67	0.07	0.00	0.29	0.93	3.52	4.08
2004	0.43	0.56	0.05	0.00	1.87	1.48	2.38	3.37
2005	0.22	0.51	0.08	0.00	1.07	2.53	2.26	1.54
2006	0.29	0.49	0.08	0.03	3.63	2.24	2.02	1.38
2007	0.30	0.55	0.08	0.00	0.68	2.68	2.65	1.12
2008	0.32	0.53	0.16	0.01	0.64	2.95	2.20	1.27
2009	0.10	0.24	0.16	0.05	1.14	1.36	1.20	1.33
2010	0.16	0.49	0.06	0.18	0.44	1.21	1.26	
2011	0.03	0.46	0.18	0.00	0.42	1.02	0.43	0.18
2012	0.07	0.70	0.07	0.21	0.30	0.18	0.44	0.08
2013	0.08	0.32	0.11	0.04	0.16	0.02	0.23	0.06
2014	1.47	0.49	0.04	0.00	0.02	0.14	0.15	0.05
2015	0.00	0.17	0.07	0.30	0.05	0.37	0.15	0.06
2016	0.57	0.47	0.05	0.14	0.57	0.25	0.16	0.00
2017	0.05		0.13	0.16	0.14	0.41	0.03	0.00
2018	0.05	0.27	0.02	0.01	0.18	0.68	0.00	0.01
2019	0.04	0.29	0.01	0.02	0.52	0.50	0.03	0.00
2020					0.23	0.32		
2021	0.00	0.43	0.01	0.00	0.27	0.07	0.03	0.00
2022	0.05	0.16	0.00	0.00	0.09	0.16	0.00	0.01
2023		0.14	0.00	0.01	0.07	0.05	0.00	0.00
2019-2023 mean	0.03	0.25	0.01	0.01	0.24	0.22	0.01	0.00
2024	0.10	0.07	0.05	0.00	0.02	0.07	0.01	0.00
2025	0.02		0.00	0.00	0.09	0.18		
2021-2025 mean	0.04	0.20	0.01	0.00	0.11	0.11	0.01	0.00
25th	0.15	0.51	0.08	0.02	0.42	0.78	1.23	1.16
median	0.38	0.86	0.16	0.10	0.91	1.65	2.93	4.48
75th	1.11	1.31	0.41	0.19	1.62	3.07	10.20	9.81

Figure 9. SNE abundance indicators: trawl survey recruit abundance.

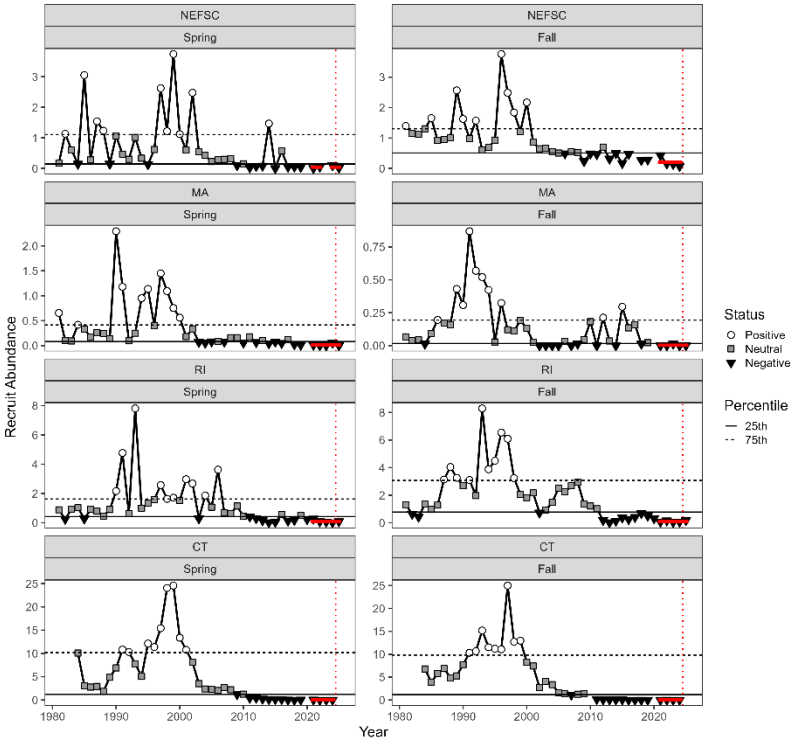


Table 9. SNE abundance indicators: trawl survey encounter rate.

SURVEY LOBSTER ENCOUNTER RATE								
Proportion of postive tows								
Survey	*NEFSC*		*MA*		*RI*		*CT*	
	Spring	*Fall*	*Spring*	*Fall*	*Spring*	*Fall*	*Spring*	*Fall*
1981	0.26	0.67	0.38	0.15	0.49	0.41		
1982	0.35	0.52	0.28	0.21	0.30	0.44		
1983	0.18	0.43	0.21	0.16	0.47	0.37		
1984	0.10	0.44	0.40	0.18	0.59	0.44	0.63	0.76
1985	0.29	0.47	0.51	0.22	0.31	0.50	0.57	0.69
1986	0.22	0.40	0.39	0.38	0.64	0.46	0.67	0.61
1987	0.19	0.41	0.28	0.18	0.35	0.47	0.63	0.76
1988	0.17	0.46	0.39	0.21	0.49	0.55	0.65	0.66
1989	0.18	0.53	0.50	0.33	0.52	0.57	0.75	0.63
1990	0.18	0.63	0.66	0.44	0.64	0.53	0.73	0.76
1991	0.20	0.56	0.41	0.39	0.77	0.69	0.81	0.77
1992	0.29	0.48	0.51	0.23	0.41	0.57	0.77	0.68
1993	0.20	0.40	0.54	0.26	0.50	0.71	0.73	0.75
1994	0.17	0.41	0.51	0.20	0.58	0.57	0.73	0.74
1995	0.09	0.51	0.44	0.13	0.55	0.67	0.77	0.68
1996	0.16	0.57	0.30	0.16	0.79	0.76	0.66	0.78
1997	0.39	0.43	0.45	0.21	0.75	0.71	0.71	0.81
1998	0.16	0.54	0.54	0.13	0.59	0.55	0.83	0.71
1999	0.29	0.44	0.41	0.21	0.76	0.59	0.78	0.79
2000	0.23	0.49	0.45	0.15	0.68	0.63	0.81	0.73
2001	0.29	0.39	0.28	0.18	0.65	0.60	0.77	0.58
2002	0.25	0.38	0.28	0.03	0.61	0.45	0.73	0.59
2003	0.17	0.44	0.14	0.03	0.51	0.41	0.71	0.64
2004	0.17	0.29	0.28	0.03	0.54	0.50	0.61	0.66
2005	0.14	0.32	0.34	0.15	0.49	0.45	0.63	0.54
2006	0.21	0.35	0.43	0.03	0.79	0.62	0.61	0.51
2007	0.19	0.33	0.34	0.10	0.44	0.54	0.70	0.53
2008	0.15	0.41	0.33	0.10	0.55	0.52	0.63	0.65
2009	0.24	0.46	0.50	0.05	0.57	0.41	0.49	0.55
2010	0.19	0.52	0.23	0.24	0.47	0.45	0.54	
2011	0.17	0.56	0.18	0.05	0.30	0.23	0.46	0.28
2012	0.19	0.56	0.18	0.15	0.27	0.16	0.43	0.20
2013	0.09	0.47	0.18	0.08	0.21	0.09	0.28	0.15
2014	0.22	0.41	0.13	0.08	0.07	0.23	0.26	0.10
2015	0.08	0.40	0.10	0.05	0.12	0.16	0.27	0.10
2016	0.21	0.38	0.08	0.11	0.30	0.14	0.25	0.03
2017	0.09		0.08	0.16	0.16	0.23	0.08	0.03
2018	0.12	0.42	0.11	0.06	0.09	0.18	0.09	0.01
2019	0.10	0.41	0.05	0.11	0.16	0.11	0.09	0.00
2020					0.16	0.16		
2021	0.04	0.29	0.08	0.00	0.20	0.12	0.06	0.03
2022	0.10	0.29	0.00	0.00	0.14	0.09	0.01	0.04
2023		0.29	0.00	0.03	0.18	0.05	0.00	0.01
2019-2023 mean	0.08	0.32	0.03	0.03	0.17	0.11	0.04	0.02
2024	0.15	0.25	0.03	0.00	0.02	0.07	0.03	0.01
2025	0.09		0.00	0.05	0.05	0.11		
2021-2025 mean	0.10	0.28	0.02	0.02	0.12	0.09	0.02	0.02
25th	0.17	0.40	0.21	0.08	0.32	0.41	0.52	0.52
median	0.19	0.44	0.34	0.16	0.51	0.49	0.65	0.64
75th	0.23	0.52	0.44	0.21	0.60	0.57	0.73	0.74

Figure 10. SNE abundance indicators: trawl survey encounter rate.

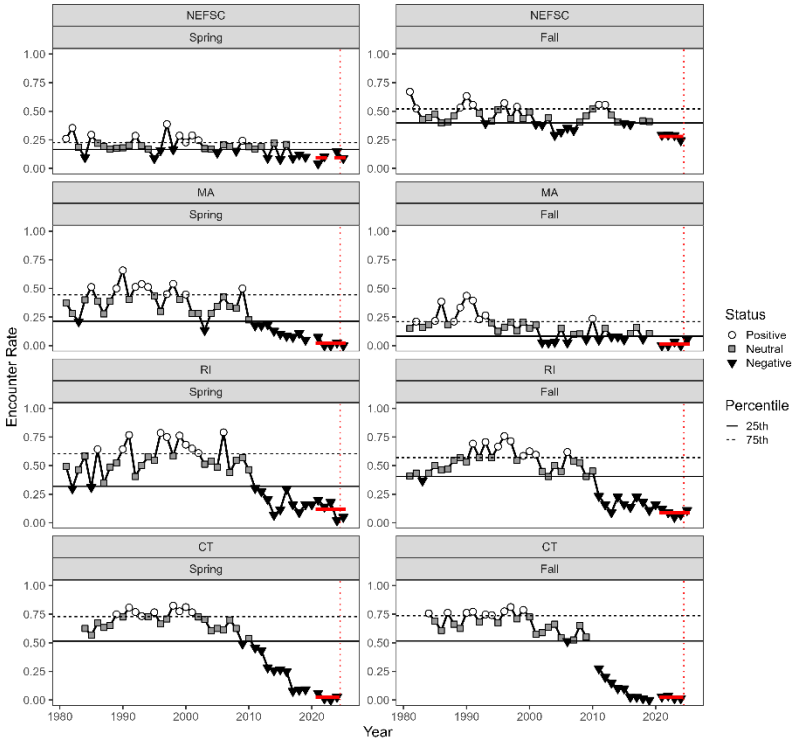
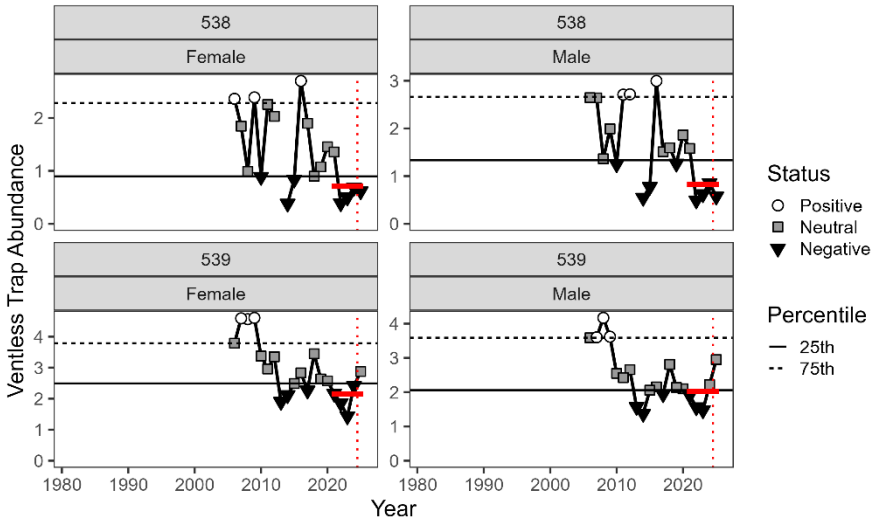


Table 10. SNE abundance indicators: ventless trap survey abundance.

VENTLESS TRAP ABUNDANCE Abundance of lobsters ≥ 53 mm CL				
Survey	*538*		*539*	
	Female	*Male*	*Female*	*Male*
1981				
1982				
1983				
1984				
1985				
1986				
1987				
1988				
1989				
1990				
1991				
1992				
1993				
1994				
1995				
1996				
1997				
1998				
1999				
2000				
2001				
2002				
2003				
2004				
2005				
2006	2.36	2.64	3.79	3.59
2007	1.84	2.64	4.59	3.60
2008	0.99	1.36	4.56	4.17
2009	2.39	1.99	4.61	3.62
2010	0.89	1.25	3.37	2.55
2011	2.25	2.71	2.96	2.43
2012	2.03	2.71	3.35	2.66
2013			1.90	1.57
2014	0.38	0.55	2.12	1.37
2015	0.84	0.77	2.49	2.06
2016	2.70	3.00	2.83	2.15
2017	1.90	1.51	2.27	1.94
2018	0.90	1.59	3.45	2.81
2019	1.08	1.26	2.63	2.14
2020	1.46	1.86	2.57	2.10
2021	1.36	1.58	2.17	1.91
2022	0.39	0.49	1.86	1.56
2023	0.50	0.62	1.43	1.47
2019-2023 mean	0.96	1.16	2.13	1.84
2024	0.68	0.85	2.41	2.22
2025	0.62	0.57	2.88	2.95
2021-2025 mean	0.71	0.82	2.15	2.02

25th	0.90	1.33	2.49	2.06
median	1.87	1.79	3.35	2.55
75th	2.28	2.66	3.79	3.59

Figure 11. SNE abundance indicators: ventless trap survey abundance.



Appendix: Data Update Data Changes

Ventless Trap Survey (Update through 2024)

Strata areas used to calculate ventless trap survey abundance indicators from the stratified random survey design as well as to weight observations in the model-based index used in the GOM combined recruit index changed marginally since the previous Data Update. This change was due to the transition from the retired *rgdal* R package to the modern replacement *sf* R package to calculate strata areas from shapefiles with strata spatial polygons. The transition resulted in similar trends over time within each time series, and less than 2% change from index values in the previous Data Update for areas with no data changes (see Rhode Island data changes below).

Northeast Fisheries Science Center (Update through 2024)

Updated indicators presented here for the NEFSC trawl survey are based on changes to the treatment of survey data developed during the 2025 stock assessment. This includes the removal of many survey strata in SNE that rarely captured lobster over the entire time series, removal of one strata in GBK that is no longer surveyed by the new survey vessel, and the use of gap-filling techniques to address cases where individual strata were unsampled in an otherwise mostly complete survey. Details of these changes are included in the 2025 stock assessment.

Additionally, as a general caveat, we recognize that the vessel change in 2009 for the federal trawl survey creates a bias in the trawl survey encounter rates across all regions. The NEFSC calibration study indicated that the new trawl vessel and gear catch more lobsters than previously. By extension, it is also more probable for lobsters to be present in a trawl than previously. While a calibration is applied to the recruit abundance to account for this, a similar calibration for encounter rates has not been developed. Thus, we expect encounter rates for the federal trawl survey are biased high, relative to the earlier time period, starting in 2009.

Rhode Island (Update through 2024)

The 2023 settlement survey abundance index value for Rhode Island has been modified to account for a calculation discrepancy between the state database and the coastwide data warehouse. The trajectory of the index remains the same, with recent values being the lowest in the time series. Additionally, minor QA/QC adjustments were made in the database to identify traps that should be excluded from analyses. Any index value adjustments were minor and produced no change in the indicator status throughout the time series.

Rhode Island (Update through 2023)

A slightly more conservative method for identifying traps to exclude from the VTS data set was adopted during the 2024 Data Update (terminal data year of 2023). For example, some traps with a hole in the funnel or side head were excluded whereas they were not in previous years. The table below compares the number of traps retained for index calculation between the 2024 Data Update and 2023 Data Update.

Year	2023 Data Update	2024 Data Update
2006	852	851
2007	848	848
2008	864	864
2009	804	804

2010	858	857
2011	858	858
2012	834	830
2013	839	836
2014	832	825
2015	854	846
2016	831	817
2017	833	831
2018	846	839
2019	858	850
2020	836	826
2021	864	851
2022	861	815

The only change in conditions the data change causes is for 2019 and 2020 annual values for both sexes which change from negative conditions during the 2023 Data Update to neutral conditions during the 2024 Data Update. The terminal five-year means are negative for both sexes during both Data Updates.

Maine (Update through 2022)

During the 2023 Data Update (terminal data year of 2022), a few errors were found in the upload process where data was not uploaded correctly and treated in a consistent manner as the assessment. For the Fall 2021 ME/NH Trawl Survey, the sex of sampled lobsters did not upload correctly, leading to 7 tows being excluded in error. These data have now been corrected and included. During the 2020 assessment, the stock assessment team, in consultation with survey staff, determined that a very large outlier tow in the Spring 2014 ME/NH Trawl Survey should be excluded from the assessment. However, this outlier tow was not excluded in the 2022 Data Update. It was excluded for the 2023 Data Update, consistent with the stock assessment. For the Maine settlement survey, data for 2013 was not uploaded completely and this has now been corrected.

Massachusetts (Update through 2022)

Following the 2022 Data Update (terminal year of 2021), an error was discovered in the data pull for the SNE VTS index that did not filter the frequency of trawl hauls per month in historical data to match the reduced sampling frequency in data since the footprint reduction (see below; reduced to 1 haul/month). This error was corrected in the data pull for the 2023 Data Update.

Massachusetts (Update through 2021)

Following the 2021 Data Update (terminal data year of 2020), there was a reduction in the spatial coverage of the SNE VTS (Statistical Area 538) due to reduced participation. This change necessitates dropping out data collected during earlier years from areas no longer sampled to calculate an index from a consistent survey footprint, resulting in changes to the indices. Note that the updated index increased slightly in scale (the reduced footprint excludes most of the interior of Buzzards Bay), but the pattern over time is generally consistent with the previous index.

Rhode Island (Update through 2021)

Some changes to the SNE VTS Statistical Area 539 (RI) data occurred between the 2021 Data Update (terminal data year of 2020) and 2022 Data Update (terminal data year of 2021). Upon further QA/QC in site or sample location, strata classification for select stations over time were rectified. Data as such were updated to reflect these changes during the 2022 Data Update.