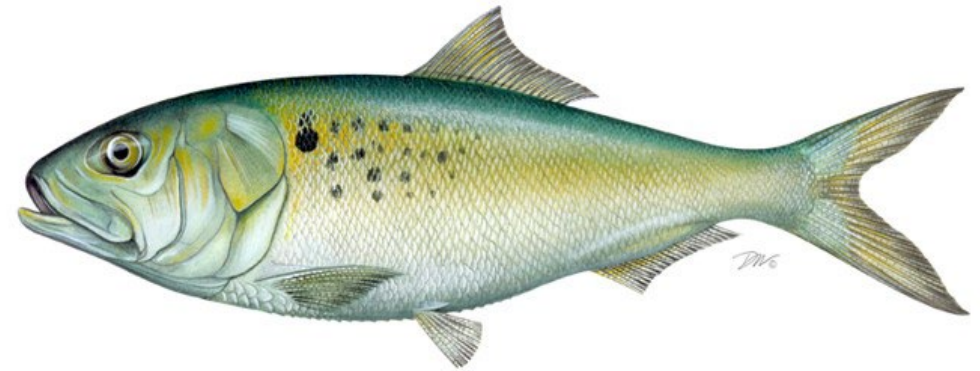


Atlantic Menhaden Draft Addendum II to Amendment 3 for Board Review

August 5, 2026



- Overview and Timeline
- Review Draft Options
 - Reducing the Chesapeake Bay Cap
 - Chesapeake Bay Cap Distribution
 - Revisit Chesapeake Bay Cap
- **Board action for consideration today:**
 - **Consider approval of Draft Addendum II for public comment**

Draft Addendum I Timeline

Date	Action
October 2025	Atlantic Menhaden Board Initiates Draft Addendum II
November 2025 – July 2026	Plan Development Team Develops Draft Addendum II for Board Review
August 2026	Atlantic Menhaden Board Reviews Draft Addendum II and Considers Its Approval for Public Comment
August– October 2026	Public Comment Period, including Public Hearings
November 2026	Board Reviews Public Comment, Selects Management Options and Considers Final Approval of Addendum II
TBD	Provisions of Addendum II are Implemented

3.1 Bay Cap Amount

- Option A. Status Quo: Chesapeake Bay Cap remains at 51,000 mt.
- Option B. One-time Reduction in the Bay Cap
 - Sub Option B1: Reduce by 10% to 45,900 mt
 - Sub Option B2: Reduce by 20% to 40,800 mt
 - Sub Option B3: Reduce by 30% to 35,700 mt
 - Sub Option B4: Reduce by 50% to 25,500 mt

3.1 Bay Cap Amount

- Option C. Linking the Bay Cap to Coastwide TAC

Option	Proportion	Basis		Cap in 2027 under status quo TAC (186,840 mt)
C1a	27.3%	2026 Bay Cap : 2026 TAC		51,000 mt
C1b	24.6%	10% reduction to 2026 Bay Cap : 2026 TAC		45,900 mt
C1c	21.8%	20% reduction to 2026 Bay Cap : 2026 TAC		40,800 mt
C1d	19.1%	30% reduction to 2026 Bay Cap : 2026 TAC		35,700 mt
C1e	13.6%	50% reduction to 2026 Bay Cap : 2026 TAC		25,500 mt
Option	Upper Limit	Lower Limit	Basis	
C2a.	51,000 mt	None	Upper: Current Bay Cap Lower: n/a	
C2b	51,000 mt	25,500 mt	Upper: Current Bay Cap Lower: Maximum Reduction Under Consideration	
C2c.	87,216 mt	None	Upper: Highest Cap since management with TAC Lower: n/a	
C2d.	87,216 mt	25,500 mt	Upper: Highest Cap since management with TAC Lower: Maximum Reduction Under Consideration	
C2e.	75,000 mt	29,000 mt	Upper/Lower: Approximate 95% confidence intervals around the approximate 2012-2016 mean Chesapeake Bay reduction harvest. Note: if Sub-Option C1e is selected, the lower limit for this option will be 25,500 mt.	



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Questions?

3.2 Chesapeake Bay Cap Distribution

3.2.1 Quota Periods

3.2.2 Overages and Rollovers

3.2.1 Quota Periods

- Option A. Status Quo. The Bay Cap remains an annual measure.

Option	Description	Length of Quota Periods	2027 Time of Year Example*	Percent of total Bay Cap
B1	Even Length & Even Harvest	9 weeks	May 3–Jul 4	33%
		10 weeks	Jul 5–Sep 12	33%
		9 weeks and 5 days	Sep 13–Nov 19	34%
B2	Even Length & Uneven Harvest	9 weeks	May 3–Jul 4	25%
		10 weeks	Jul 5–Sep 12	25%
		9 weeks and 5 days	Sep 13–Nov 19	50%
B3	Uneven Length & Even Harvest	11 weeks	May 3–Jul 18	33%
		6 weeks	Jul 19–Aug 29	33%
		11 weeks and 5 days	Aug 30–Nov 19	34%

3.2.2 Overages and Underages

- Option A. Status Quo. No paybacks
- Option B. Quota period overage payback with rollover of unused quota within a fishing year.
 - Underage Sub Option 1. Even rollover to Quota Periods 2 and 3

Example:

- Quota Periods of 5,000/5,000/10,000 pounds
 - If the fishery catches 7,000/3,000/10,000 pounds (i.e., a Period 1 overage with no Bay Cap overage), then the following year, Period 1 would be reduced by 2,000 pounds and Period 3 would be increased by 2,000 pounds, resulting in allocations of 3,000/5,000/12,000 pounds.

3.3 Revisit Bay Cap

- Option A. Status Quo. There is no set timeframe for the Board to revisit the Bay Cap.
- Option B. Revisit Provision. The Chesapeake Bay Cap will be revisited every three years following implementation of this draft addendum.



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Questions?

Charge: Investigate how proposed measures in Addendum II could impact jobs in the fishery

Approach: Review relevant existing literature and draft a memo to the Atlantic Menhaden Management Board interpreting research

Relevant existing literature:

- Kirkley, J.E., Hartman, T., McDaniel, T., McConnell, K. and Whitehead, J., 2011. An assessment of the social and economic importance of menhaden (*Brevoortia tyrannus*)(Latrobe, 1802) in Chesapeake Bay region. Virginia Institute of Marine Science, College of William and Mary, School of Marine Science, Department of Fisheries.
- Whitehead, J.C. and Harrison, J., 2017. Socioeconomic Analysis of the Atlantic Menhaden Commercial Bait and Reduction Fishery: A Report to the Atlantic States Marine Fisheries Commission. Arlington, VA: Atlantic States Marine Fisheries Commission, 180.

Findings (reduction sector)

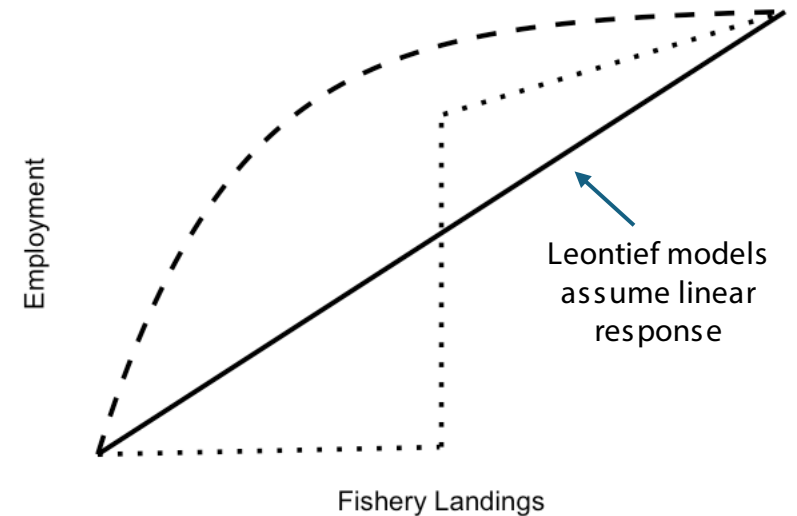
- Kirkley et al. (2011)
 - Explored regional economic impacts of the menhaden industry, including effects of reductions in the Chesapeake Bay quota cap
 - Reduction sector supports 519 full- and part-time jobs, including 347 in Northumberland County, Virginia
 - Chesapeake Bay quota reductions correspond to job losses of ~3.7 total jobs per 1,000mt reduction, including 2.1 jobs in the reduction sector
- Whitehead & Harrison (2017)
 - Use similar approach to Kirkley et al. (2011) but do not specifically explore impacts of reductions in Chesapeake Bay quota cap
 - Employment changes in Northumberland County estimated at one job per \$45,000 in landings (~\$60k in 2026 USD)

Findings (bait sector)

- Whitehead & Harrison (2017)
 - Overview of bait sector:
 - Lower volume, higher unit price, lower infrastructure compared to reduction sector
 - Landings spread throughout the coast, concentrated in New Jersey and Virginia
 - Diversified across species →menhaden made up <10% annual earnings for majority of survey respondents
 - Estimate economic impacts of ~\$124k direct and indirect output, ~\$36k in earnings, and ~1.5 jobs per 1,000 metric ton increase in quota
 - Regression analysis of county-level employment and income suggested limited response from changes in bait landings (2005-2013)

Limitations and caveats

- Neither study explored potential impacts of seasonal harvest restrictions
 - Impacts may arise if seasonal restrictions constrain periods of high catch efficiency, limit ability to maintain processing throughput
- Both studies used Leontief input-output models, which do not account for market adjustments or adaptive industry behavior and may overstate long-term employment effects
 - Employment impacts likely non-linear and characterized by thresholds driven by high fixed costs and processing volume requirements
- Employment & income regressions correlative not causative



Final notes

- Economic impacts of reduction and bait sectors likely differ
 - Reduction sector is geographically concentrated, has high infrastructure costs, and a limited ability to absorb output shocks
 - Bait sector is geographically diffuse, has lower infrastructure costs, and is highly diversified and so may be better able to absorb output shocks
- Committee on Economics & Social Sciences recommends additional research:
 - Industry employment drivers
 - Cost and production structures (reduction & bait)
 - Bait demand drivers, harvester diversification and output substitution



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Guidance to Technical Committee on Projections

K. Drew, ASMFC

August 5, 2026

- Annual Meeting 2025
 - Board received ERP benchmark assessment + single-species update
 - Board accepted ERP assessment for management use
 - Board set specs for 2026 (single year)
- Annual Meeting 2026
 - Board receives updated projections
 - Board sets specs for 2027 through (potentially) 2029

- Stock assessment will not be updated
- Projections will be updated:
 - Include final 2025 landings
 - Add an extra year to project through 2029
 - Additional Board requests?

1. The TACs associated with a 40-60% probability of exceeding the ERP F target for 2026-2028 combined and as separate years.

Probability of exceeding the ERP F Target	TAC for 2026-2028	2026 TAC	2027 TAC	2028 TAC
40%	106,100	106,100	111,800	120,900
45%	107,400	107,400	113,500	123,000
50%	108,450	108,450	115,300	124,800
55%	109,700	109,700	117,000	127,200
60%	111,000	111,000	119,200	129,700

→ Different assumptions about landings in 2024 and 2025

1. Percent risk of exceeding the ERP F target and ERP F threshold for different ($\pm 20\%$) total allowable catch (TAC) projections.

TAC (Status quo -/+)	Probability of Exceeding the ERP Target			Probability of Exceeding the ERP Threshold		
	2026	2027	2028	2026	2027	2028
(-20%)	100%	100%	100%	0%	0%	0%
(-15%)	100%	100%	100%	0%	0%	0%
(-10%)	100%	100%	100%	0%	1%	1%
(-5%)	100%	100%	100%	0%	1%	1%
(0%)	100%	100%	100%	1%	4%	4%
(+5%)	100%	100%	100%	1%	10%	8%
(+10%)	100%	100%	100%	4%	18%	14%
(+15%)	100%	100%	100%	11%	29%	23%
(+20%)	100%	100%	100%	22%	41%	32%

→ Different assumptions about landings in 2024 and 2025

- Range of probabilities of exceeding F target
 - 2025: 40%-60%
 - Range of increases/decreases to current TAC (186,840 mt)
 - 2025: 20% increase to 20% decrease
- What would the Board like to see for Annual Meeting 2026?