

**Virginia Marine Resources Commission
Violations of
Code of Virginia § 28.2-203
Fishery Management Plans**

January 18, 2023



**Phil Zalesak, President
Southern Maryland Recreational Fishing Organization**

Summary

Conclusion

Based on the latest scientific, biological, and economic information, the Atlantic menhaden reduction fishery is causing localized depletion of Atlantic menhaden in the Chesapeake Bay to the detriment of fish, birds, and mammals dependent on Atlantic menhaden for their survival.

Recommendation

Limit the Atlantic menhaden reduction fishery to federal waters east of the western boundary of the Exclusive Economic Zone.

Virginia Marine Resources Commission
Violations of the Code of Virginia 28.2-203
Regarding Atlantic Menhaden

1. Conservation and management measures shall prevent overfishing while achieving the optimum yield from each fishery. The "optimum yield" of a fishery means the amount of fish or shellfish which will provide the greatest overall benefit to the Commonwealth, with particular reference to commercial fishing for food production and to recreational fishing;
2. Conservation and management measures shall be based upon the best scientific, economic, biological and sociological information available;
3. To the extent practicable, an individual stock of fish shall be managed as a unit throughout the territorial waters of the Commonwealth, and interrelated stocks of fish shall be managed as a unit or in close coordination;
4. Conservation and management measures shall not discriminate among user groups. If it becomes necessary to allocate or assign fishing privileges among various user groups, such allocation shall be (i) fair and equitable to all fishermen; (ii) reasonably calculated to promote conservation; and (iii) carried out in such manner that no person acquires an excessive share of such privileges;

Standard 1

Conservation and management measures shall prevent overfishing while achieving the optimum yield from each fishery. The "optimum yield" of a fishery means the amount of fish or shellfish which will provide the greatest overall benefit to the Commonwealth, with particular reference to commercial fishing for food production and to recreational fishing

- The mortality rate of striped bass in the Chesapeake Bay, a commercially and recreationally important fish tied to food production, is directly impacted by the mortality rate of Atlantic menhaden in the Chesapeake Bay.
- The reduction fishery is a Canadian owned company with the profits going to Canada not the Commonwealth of Virginia

Predator Fish Dependent on Atlantic Menhaden

“A suite of five key predator and prey species were identified from diet data and other considerations (referred to as ERP focal species). Atlantic striped bass, bluefish, spiny dogfish, and weakfish were identified as key predator species of Atlantic menhaden.”

Ref: SEDAR 69 Ecological Reference Points Stock Assessment Report Atlantic Menhaden, January 2020, page iii

Equilibrium Striped Bass Bratio @ Ftarget over range of Menhaden F

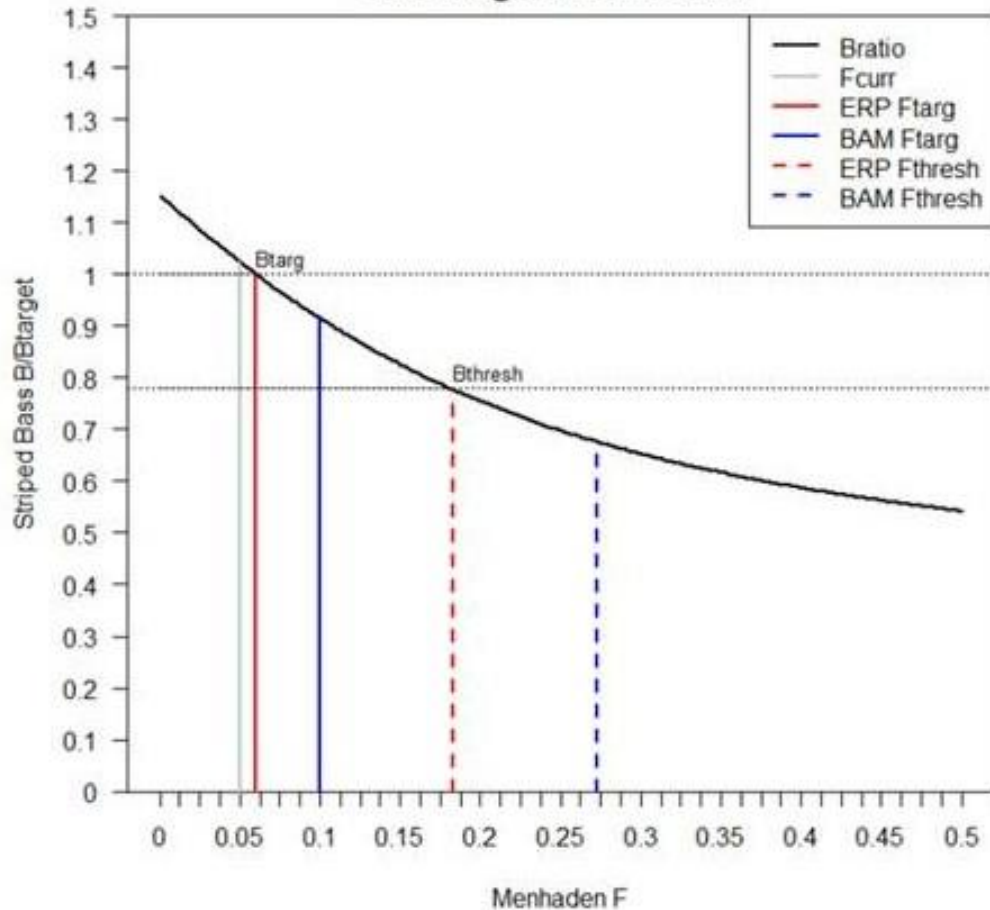
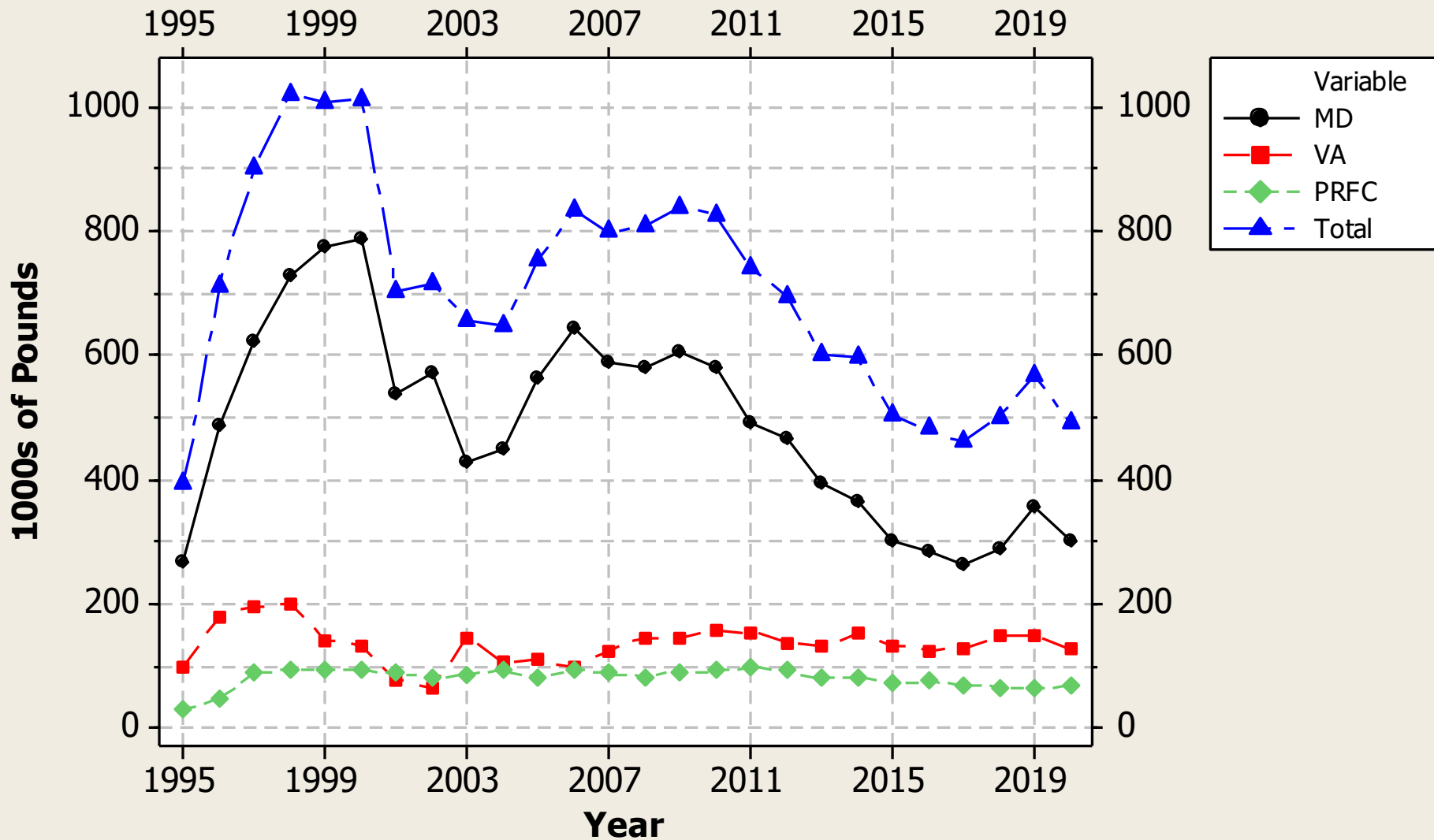


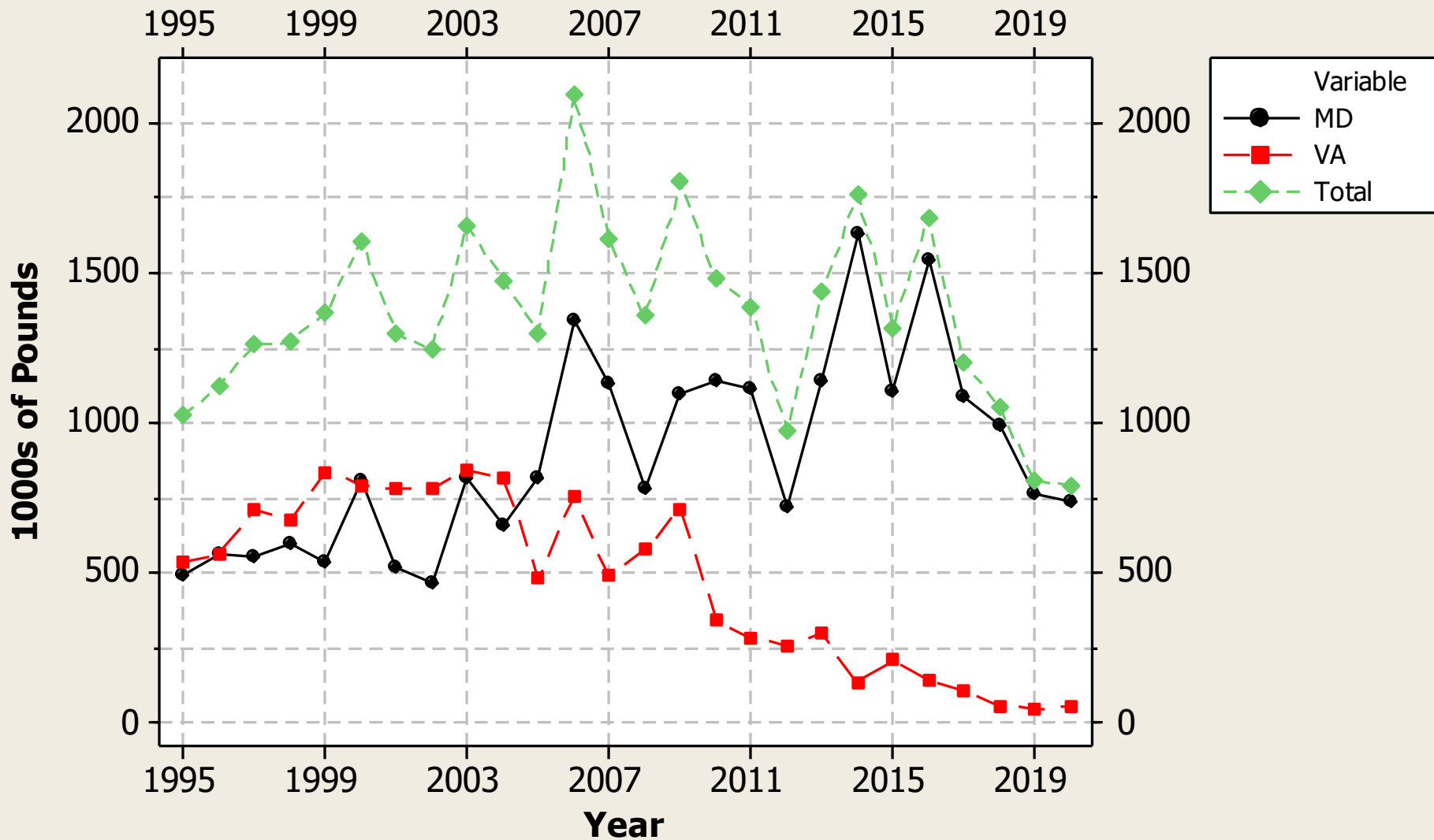
Figure 148. Terminal year biomass ratio (B/B_{TARGET}) from the NWACS-MICE model for age 6+ striped bass over a range of Atlantic menhaden F with striped bass fished at their F target. Vertical solid and dotted lines indicate the BAM single-species target and threshold F as well as the current F and the proposed ERP target and threshold F for Atlantic menhaden.

Striped Bass Commercial Harvest in the Chesapeake Bay



Ref: ASMFC Draft Amendment 7 to the Interstate Fishery Management Plan for Atlantic Striped Bass, 2/2022, Table 15, page 132

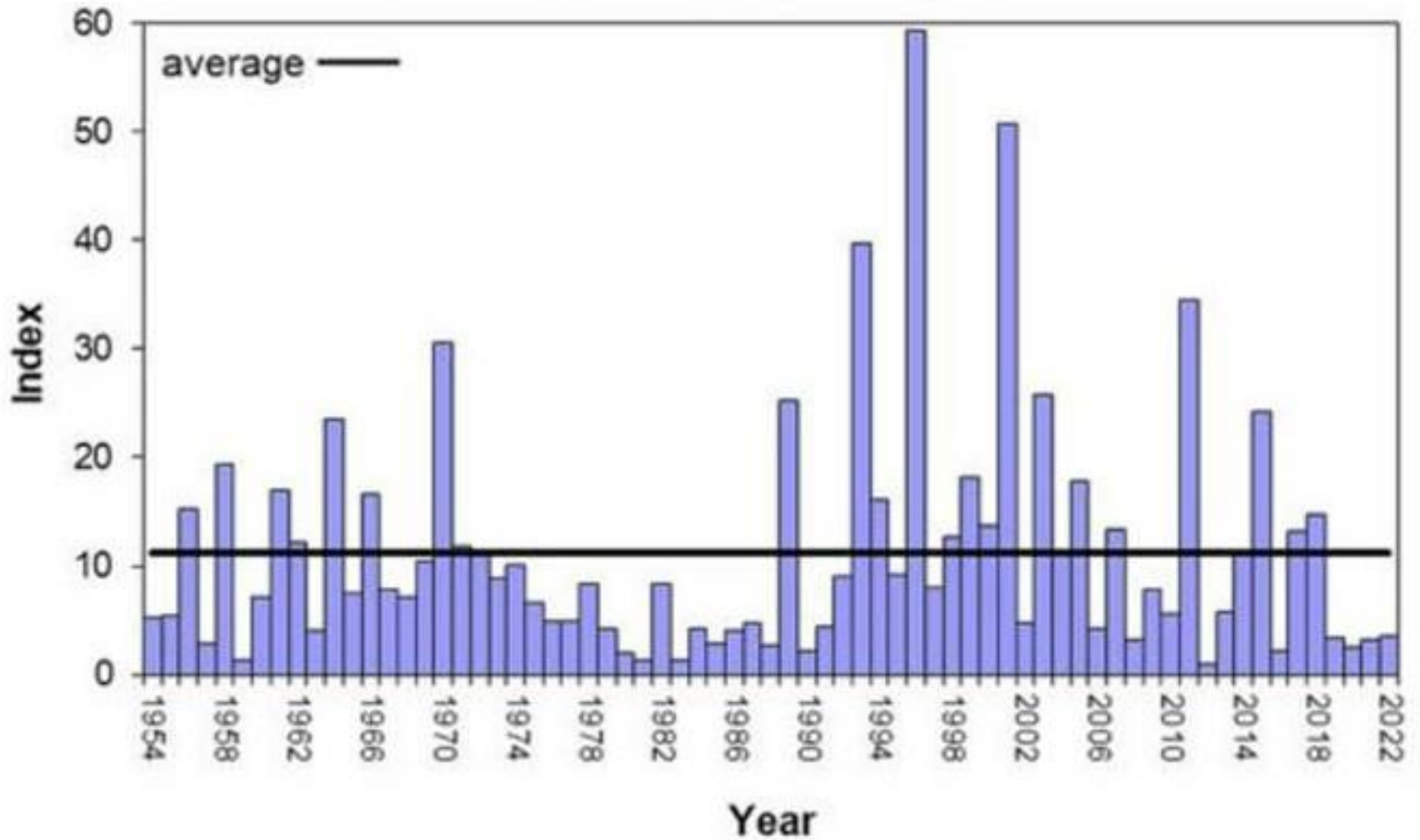
Striped Bass Recreational Harvest in the Chesapeake Bay



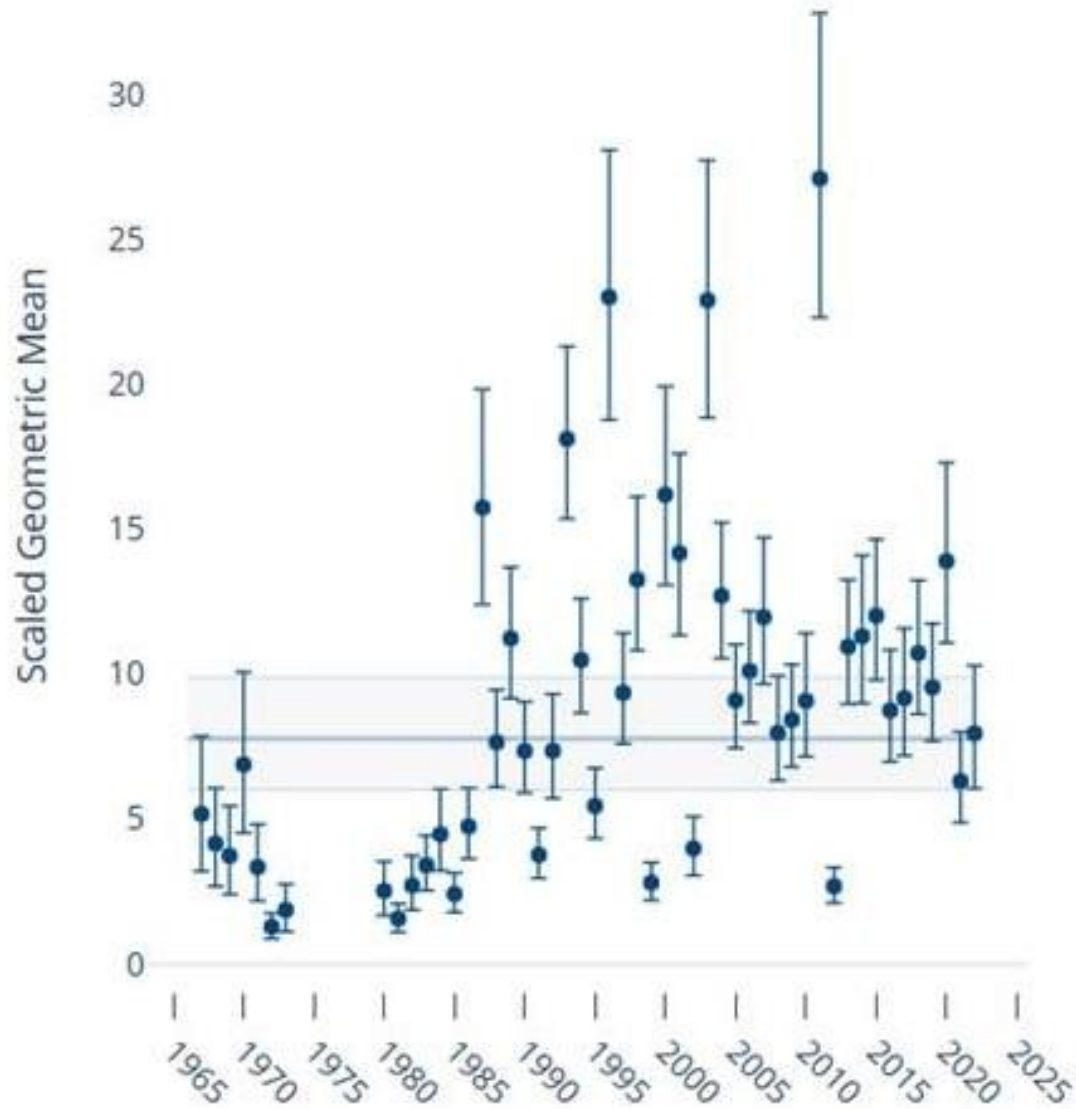
Ref: ASMFC Draft Amendment 7 to the Interstate Fishery Management Plan for Atlantic Striped Bass, 2/2022, Table 18, page 135

Maryland's Juvenile Striped Bass Index

Arithmetic Mean (AM) Catch per Haul

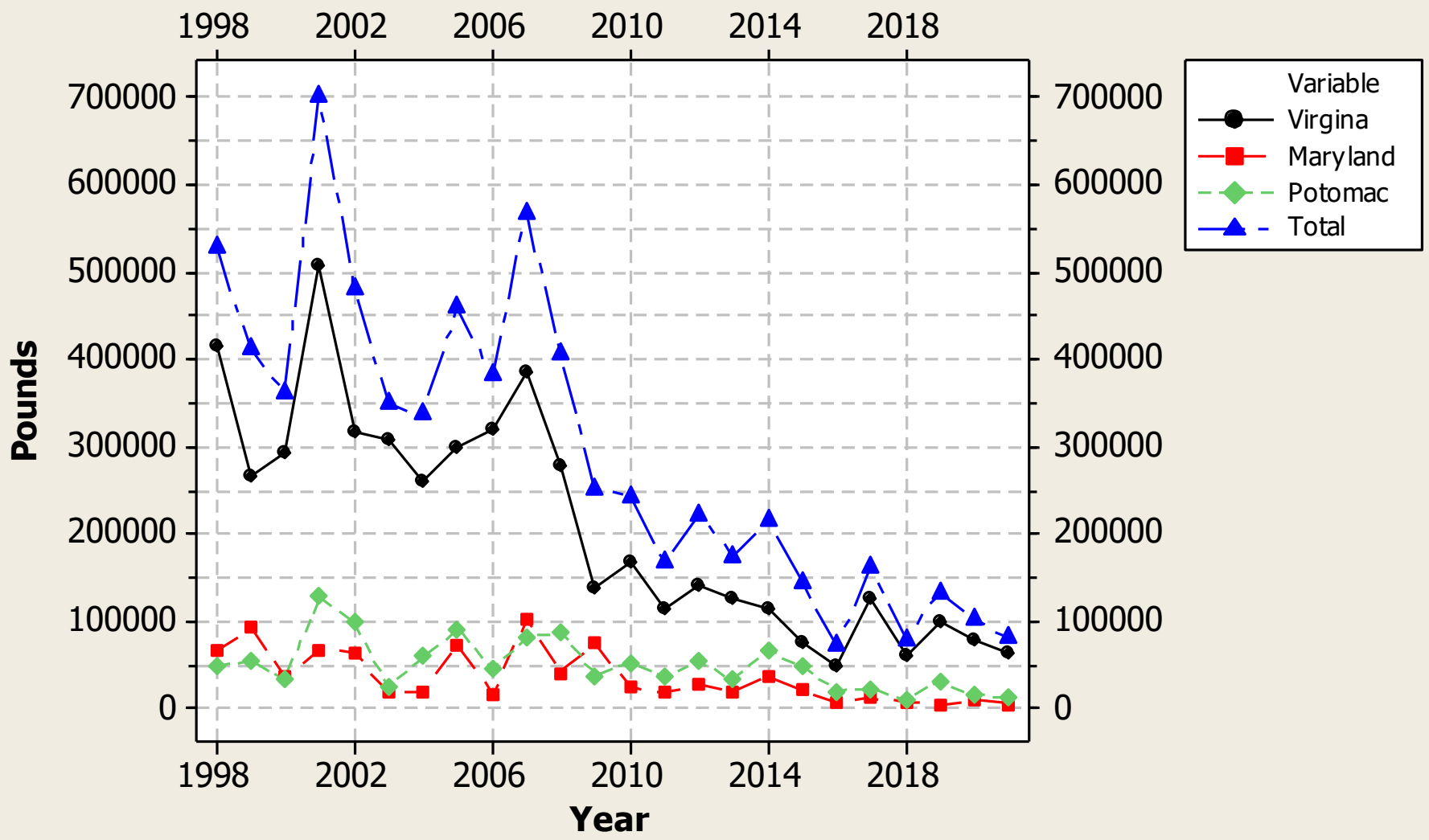


Virginia Striped Bass Recruitment Index for 2022



[Ref: Juvenile striped bass abundance remains steady in Virginia waters | Virginia Institute of Marine Science \(vims.edu\)](#)

Bluefish Commercial Harvest in the Chesapeake Bay

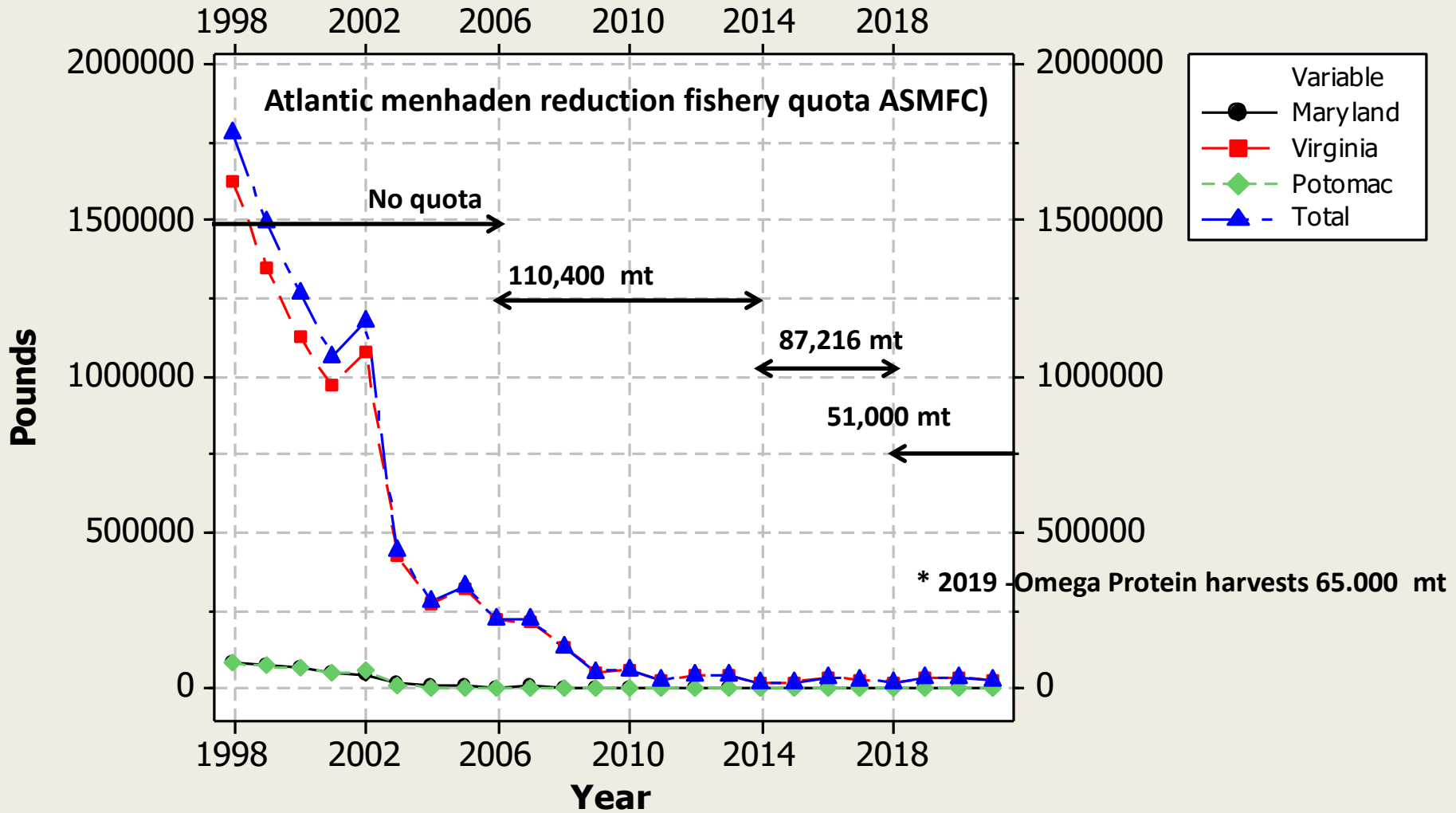


References: MD DNR, VMRC, PRFC

Bluefish 36 inches (1983)



Weakfish Commercial Harvest in the Chesapeake Bay



References: MD DNR, VMRC, PRFC, ASMFC

Economic Impact of the Striped Bass Fishery

Chesapeake Bay Contribution to Coastal Stock (>60%)

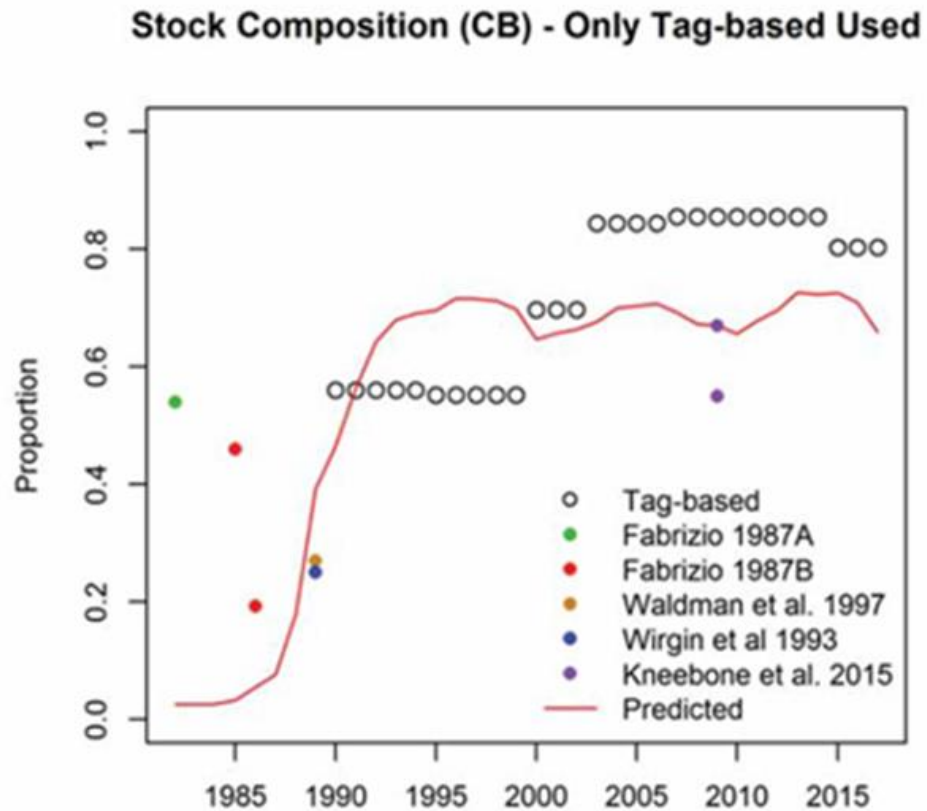


Figure B7.9. Observed versus predicted stock composition for the Chesapeake Bay stock. Literature values not used in the model fitting are indicated by the solid circles for comparison.

Reference: 66th Northeast Regional Stock Assessment Workshop, April 2019

Atlantic Coast Economic Impact of Striped Bass (2016)

Commercial GDP: \$103,200,000
Commercial Jobs 2,664

Recreational GDP: \$7,731,600,000
Recreational Jobs 104,867

Comparisons Between the Fisheries

Table R-7. 2016 Comparison of commercial and recreational impacts: North Carolina to Maine

	Commercial Fishery	Recreational Fishery	Total	Commercial Fishery	Recreational Fishery	Total
Pounds landed (000s)	4,978.3	43,731.9	48,710.2	10%	90%	100%
Jobs supported	2,664	104,867	107,531	2%	98%	100%
Income (\$millions)	\$72.7	4,726.0	\$4,726.1	< 1%	>99%	100%
GDP (\$millions)	\$103.2	7,731.6	\$7,731.7	< 1%	>99%	100%

Ref: The Economic Contributions of Recreational and Commercial Striped Bass Fishing, Southwick Associates, 4/12/19

Striped Bass Economic Impact to Maryland (2016)

Commercial GDP: \$10,919,100

Commercial Jobs 584

Recreational GDP: \$802,791,200

Recreational Jobs 10,193

Comparisons Between the Fisheries

Table MD-8. Comparison of commercial and recreational impacts: Maryland 2016

	Commercial Fishery	Recreational Fishery	Total	Commercial Fishery	Recreational Fishery	Total
Pounds landed (000s)	1,709.4	10,919.1	12628.5	14%	86%	100%
Jobs supported	584	10,193	10,777	5%	95%	100%
Income (\$000s)	\$12,569.6	\$496,859.8	\$509,429.7	2%	98%	100%
GDP (\$000s)	\$17,109.7	\$802,791.2	\$819,900.9	2%	98%	100%

Ref: The Economic Contributions of Recreational and Commercial Striped Bass Fishing, Southwick Associates, 4/12/19

Striped Bass Economic Impact to Virginia (2016)

Commercial GDP: \$12,198,100
Commercial Jobs 384

Recreational GPD: \$106,623,300
Recreational Jobs 1,444

Comparisons Between the Fisheries

Table VA-7. Comparison of commercial and recreational impacts: Virginia

	Commercial Fishery	Recreational Fishery	Total	Commercial Fishery	Recreational Fishery	Total
Pounds landed (000s)	1,333.6	1,024.4	2358.0	57%	43%	100%
Jobs supported	384	1,444	1828	21%	79%	100%
Income (\$000s)	\$9,016.0	\$67,550.7	\$76,566.7	12%	88%	100%
GDP (\$000s)	\$12,198.1	\$106,623.3	\$118,821.4	10%	90%	100%

Ref: The Economic Contributions of Recreational and Commercial Striped Bass Fishing, Southwick Associates, 4/12/19

Omega Protein (Reedville, VA)

Payroll

\$25 million dollars

Jobs

250

[Virginia Mercury, 10/27/22](#)

<https://www.virginiamercury.com/2022/10/27/sportfishing-group-presents-petition-to-move-omega-protein-out-of-chesapeake-bay/>

Standard 2

Conservation and management measures shall be based upon the **best scientific, economic, biological and sociological information available**

- The Commission's fundamental violation of the Code of Virginia is **ignoring the science of "localized depletion" of Atlantic menhaden in the Chesapeake Bay.** Report on the evaluation (see reference below).
- Localized depletion is a reduction in menhaden population below the level of abundance that is sufficient to maintain its basic ecological, economic and social/cultural functions.
- In 2023 the **Virginia reduction fishery is allocated over 2/3 of the total allowable catch for the entire Atlantic Coast which is over 158,000 metric tons or ¾ of a billion fish.** That allocation is based on history not science. There is absolutely no science which supports allocating 75.20% of the total allowable catch for the entire Atlantic Coast to Virginia.

Ref: Report on the evaluation of the Chesapeake Bay Fisheries Science Program: Atlantic Menhaden Research Program, Laurel, MD, April 22-24, 2009, page 4

Omega Protein Purse Seine Settings



Localized Depletion

Atlantic menhaden are not overfished in the Atlantic Ocean.

However, according to a 2019 study co-authored by Dr. Michael Wilberg of the Chesapeake Biological Laboratory, Atlantic Menhaden largely remained within the same coastal region from June to October.

This is the principal time of intense reduction harvesting in the Chesapeake Bay.

This combination facilitates localized depletion of Atlantic menhaden in the Chesapeake Bay.

Atlantic Menhaden Migration Pattern By Region



According to a 2019 study co-authored by Dr. Michael Wilberg of the Chesapeake Biological Laboratory:

“Atlantic Menhaden largely remained within the same coastal region from June to October.”

This is the principal time of intense reduction harvesting.”

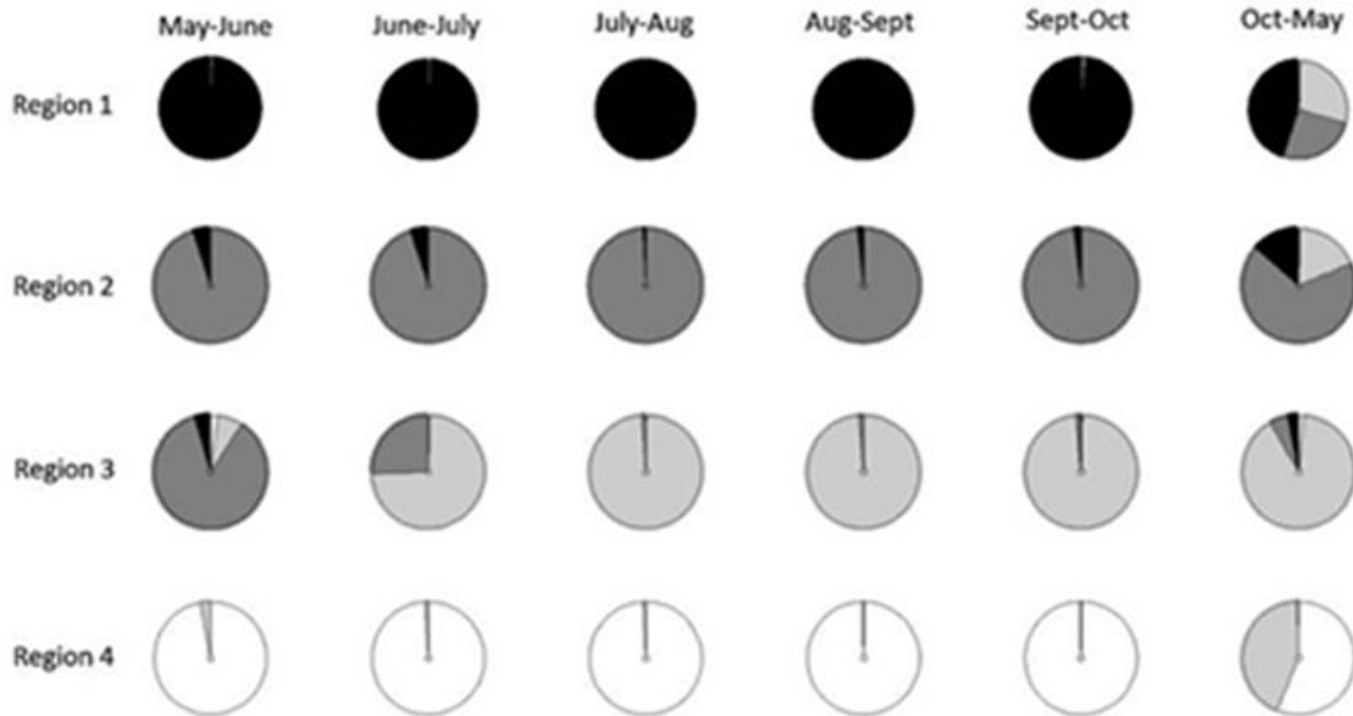
This combination facilitates localized depletion.

Reference:

Estimation of movement and mortality of Atlantic menhaden during 1966–1969 using a Bayesian multi-state mark-recovery model Emily M. Liljestrand,*, Michael J. Wilberg, Amy M. Schueller, Published online 2/2019

Atlantic Menhaden Migration Pattern By Region

E.M. Liljestrand et al.



Ref: Estimation of movement and mortality of Atlantic menhaden during 1966–1969 using a Bayesian multi-state mark-recovery model Emily M. Liljestrand,*, Michael J. Wilberg, Amy M. Schueller, page 210, published online 2/2019

Atlantic States Marine Fisheries Commission Allocation of Atlantic Menhaden for 2023

Allocation	Percentage	Metric Tons	Pounds
Atlantic Coast	100.00%	233,550	514,884,330
Virginia	75.20%	175,630	387,193,016
Reduction Fishery	67.71%	158,137	348,628,592
Chesapeake Bay	21.84%	51,000	112,434,600
Atlantic Ocean	45.87%	107,137	236,200,420
Other States	24.80%	57,920	127,691,314

Ref: ASMFC Addendum 1 to Amendment 3 of the Atlantic Menhaden Interstate Fisheries Management Plan, 11/2022

You Can't Manage What You Can't Measure!

- **Neither the Atlantic States Marine Fisheries Commission (ASMC) nor the Virginia Marine Resources Commission (VMRC) knows what the Atlantic menhaden abundance (biomass) is in the Chesapeake Bay during the reduction fishery harvest.**
- **And it will take 5 – 7 years to determine the validity of the methodology which will provide only qualitative not quantitative data (see reference below).**

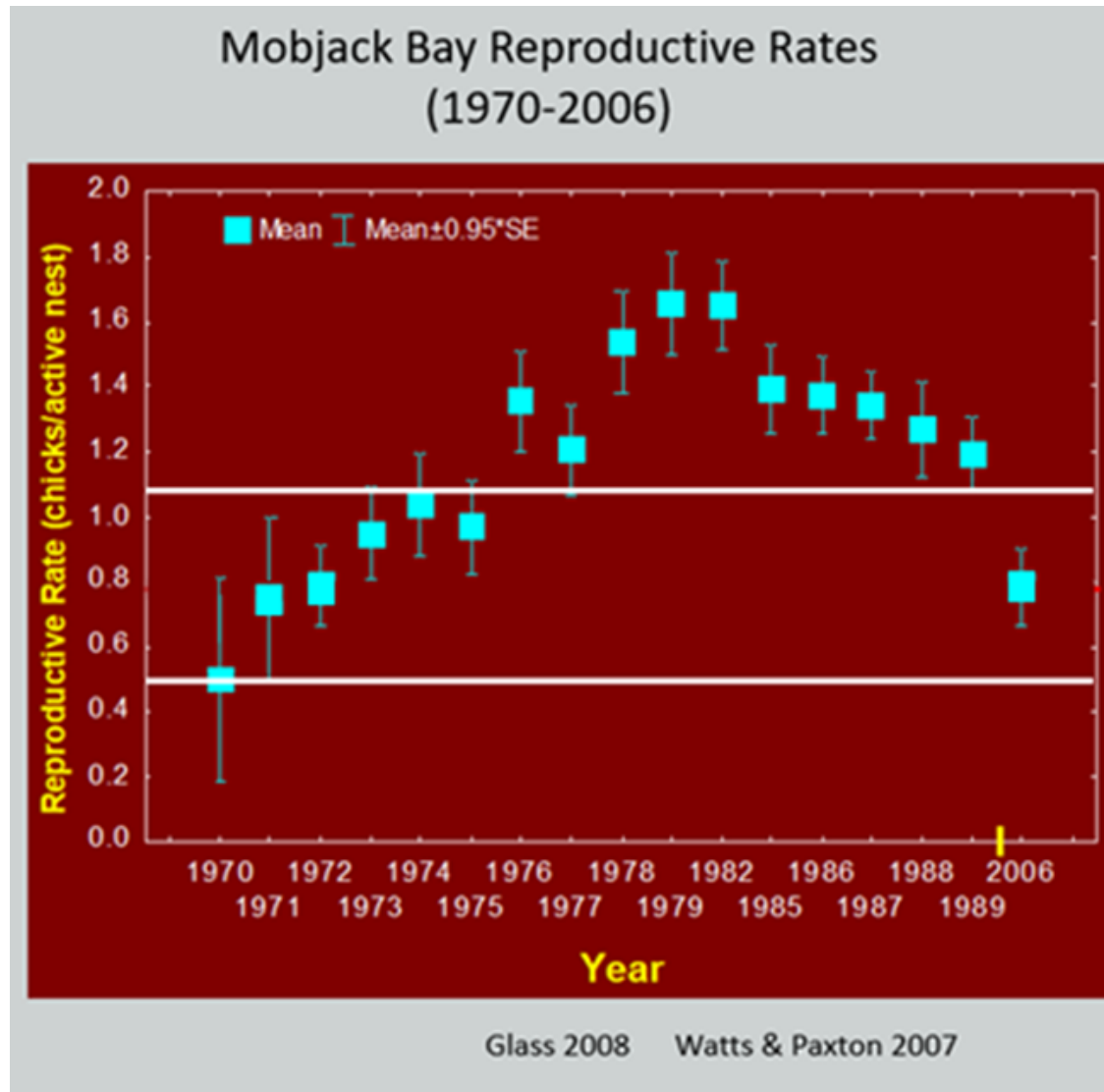
Ref: Memorandum from the Ecological Reference Point Work Group and Atlantic Menhaden Technical Committee to the Atlantic Menhaden Management Board, 4/26/2021

Dr. Bryan Watts
College of William and Mary

“Reductions in menhaden stocks have caused osprey productivity to decline to below DDT-era rates. These rates are insufficient to support the osprey population within the main stem of the Bay.”

Ref: Letter to Virginia Governor Ralph Northam, 8/20/2020

Osprey Reproductive Rate (Chicks/Active Nest)



Osprey Latest Science (2021)

Michael Academia, a graduate assistant at the College of William and Mary, updated this data set in 2021 and documented his findings in a paper he presented at the International Raptor Research Foundation Conference. This paper was **awarded the prestigious Andersen Memorial Award** at that meeting.



The image is a composite graphic. At the top, a dark grey header contains the text "Food Supplementation Increases Reproductive Performance of Ospreys in the Lower Chesapeake Bay" in white. On the left of the header is the logo for "The CENTER for CONSERVATION BIOLOGY" and on the right is a crest. Below the header is a photograph of an osprey in flight above a nest of sticks on a wooden pier over a body of water. At the bottom, a dark grey footer contains the text "Michael Academia | M.Sc Biology Candidate | macademia@wm.edu | William and Mary" in white. On the left of the footer is the same "The CENTER for CONSERVATION BIOLOGY" logo, and on the right is a small image of an osprey's head.

The CENTER for CONSERVATION BIOLOGY

Food Supplementation Increases Reproductive Performance of Ospreys in the Lower Chesapeake Bay

Michael Academia | M.Sc Biology Candidate | macademia@wm.edu | William and Mary

The CENTER for CONSERVATION BIOLOGY

Food Supplementation Increases Reproductive Performance of Ospreys

Osprey Reproductive Performance Data



Food Supplementation Increases Reproductive Performance of Ospreys



Introduction | Methods | Results | Discussion | Acknowledgements | Works Cited

Food Addition Group



13 of the 16 nests succeeded at 81%.

3 nests failed during the first **1.38** weeks.

Productivity rate - **1.13** young per active nest.

Control Group



5 of 15 nests succeeded at 33%.

10 nests failed during the first **2.2** weeks.

Productivity rate - **0.47** young per active nest.

Ref: Food Supplementation Increases Reproductive Performance of Ospreys in the Lower Chesapeake Bay, Michael Academia of the College of William & Mary, October 6, 2022

**Dr. Noah Bressman Assessment
Salisbury University**

“Virginia based menhaden fishery is overfishing the stock in and around the Chesapeake Bay, which is preventing the important forage fish from making its way into the Bay and its tributaries.”

Ref: Dr. Noah Bressman email to Secretary Jeannie Riccio, Maryland Department of Natural Resources, 10/21/2021

Bunky Luffman
Director of Legislative and Constituent Services
Maryland Department of Natural Resources

“That said, if Virginia were to prohibit purse seining in their waters, it is likely that the unharvested Atlantic menhaden would contribute the larger stocks of menhaden, which would provide forage for species such as striped bass, bluefish, dophins, and osprey.”

Ref: Testimony submitted before the Maryland Senate (Committee for Health, Education, and Environment) regarding Joint Resolution 6 - 3/1/2022

Standard 3

To the extent practicable, an individual stock of fish shall be managed as a unit throughout the territorial waters of the Commonwealth, and interrelated stocks of fish shall be managed as a unit or in close coordination

There is no evidence that the VMRC is managing Atlantic menhaden and striped bass as a single unit within the context of localized depletion in the Chesapeake Bay.

Standard 4

Conservation and management measures shall not discriminate among user groups. If it becomes necessary to allocate or assign fishing privileges among various user groups, such allocation shall be (i) fair and equitable to all fishermen; (ii) reasonably calculated to promote conservation; and (iii) carried out in such manner that no person acquires an excessive share of such privileges;

Allocating over 90% of the Atlantic menhaden quota to one company is not a fair and equitable allocation and is a clear violation of the Code of Virginia.

VMRC Complaint / Incident Reports 2016 - 2022



[Ref: Menhaden Still Making a Stink | Salt Water Sportsman, 12/21/22](#)

VMRC Complaint / Incident Reports

2021 - 2022

06/14/21	One mile west of Cape Charles	2021-293	Boat-accident/incident	Recreational fisherman's boat became tangled in nets of fishing vessel and began to sink
06/24/21	West of Pungoteague Creek	2021-309	Fish Kill - Menhaden	Omega air stated that all fish sank, net started dragging and collecting sand
06/25/21	West of Nandua and Pungoteague Creek	2021-312	Fish Kill - Menhaden	Many fish dead occupying about 50 acres
07/26/21	Atlantic Ocean	21000415 and 2021-415	Fish Kill - Menhaden	Omega fish spotter stated that all of the fish sank
08/31/21	Back River Reef	2021-519	Finfish Violation - Recreational	Claim by Omega that recreational vessels were blocking their ability to fish the area
09/08/21	East of Buckroe Beach	2021-540	Fish Kill - Menhaden	Omega Protein fish kill of 250,000 fish in a mass about 4 1/2 miles long & 1/4 mile wide, 1000s of fish washed up on Buckroe Beach
07/05/22	Windmill Point	2022-432	Fish Kill - Menhaden	Units responding to menhaden spill at Windmill Point from Omega Protein
07/05/22	Silver Beach	2022-433	Fish Kill - Menhaden	Complaint of fish kill. Dead menhaden washing up. Omega Protein contacted for cleanup.

VMRC Commissioner and Board Members

Mr. Jamie Green	Commissioner of Marine Resources
Mrs. Lynn Kellum	President of the Ampro Shipyard & Diesel
Mr. Will Bransom	Avid saltwater angler, recreational diver, technical diver, and Commercial Captain.
Mr. Spencer Headley	Avid recreational angler and commercial fisherman on the Chesapeake Bay and its tributaries for over 35 years from Reedville, Virginia
Heather Lusk	Ms. Lusk is Vice President of H.M. Terry Co., Inc., a fourth-generation shellfish aquaculture company on the Eastern Shore.
James E. "J.J." Minor	Project Analyst for both Richmond's Department of Public Utilities and the Department of Economic and Community Development
Glen W. "Wayne" France	Active in Virginia commercial fisheries since the 1980's, holding commercial licenses for crab pots, peeler pots, oysters by tong and scrape and finfish.
John E. "Ed" Tankard III	President of Tankard Nurseries on Virginia's Eastern Shore familiar with the shellfish, finfish and aquaculture industries

VMRC

Menhaden Management Advisory Committee



CHAIRMAN	CITY	SEAT
Dr. Rob Latour	Gloucester Pt	At-large
COMMITTEE MEMBERS		
Monty Diehl	Reedville	Reduction
AJ Erskine	Kinsale	Bait
Craig Freeman	York	Recreational Angler
Daniel Knott	Gloucester	At-Large
Mike Leonard	Fredericksburg	Sportfishing Industry
Shanna Madsen	Hampton	ASMFC TC
Chris Moore	Virginia Beach	Conservation
Ken Pinkard	Reedville	Labor
Ken Schultz	Accomac	At-Large

Director of
Omega Protein
Fishing
Operations



Omega
Protein
Worker



Summary

Conclusion

Based on the latest scientific, biological, and economic information, the Atlantic menhaden reduction fishery is causing localized depletion of Atlantic menhaden in the Chesapeake Bay to the detriment of fish, birds, and mammals dependent on Atlantic menhaden for their survival.

Recommendation

Limit the Atlantic menhaden reduction fishery to federal waters east of the western boundary of the Exclusive Economic Zone.

Donate to:

Chesapeake Legal Alliance

<https://www.chesapeakelegal.org/>