Progress Update on Ecological Reference Point Benchmark Assessment

K. Drew, ASMFC

Oct. 17, 2023

Timeline

	Milestone	Date
✓	**Methods Scoping Webinar**	**May 23-25, 2023**
✓	New data submission deadline	**Sep. 1, 2023**
✓	**Data & Methods Workshop**	**October 2-5, 2023**
	2023 Data Submitted	Feb.– Aug. 2024
	Methods Workshop II	**October 2024**
	Assessment Workshop	**February 2025**
	TC call to approve reports	**July 14, 2025**
	Peer Review Workshop	**August 2025**
	Assessments presented to Board	**Oct./Nov. 2025**

Data & Methods Workshop

- Reviewed new data sources for menhaden and their predators

- Identified new predators to explore adding to the intermediate complexity models
  - Nearshore piscivorous birds (e.g., osprey, cormorants)
  - Bluefin tuna
  - Smooth dogfish/elasmobranch group
  - Blue catfish considered but not pursued

Data & Methods Workshop

- Discussed high priority updates to ecosystem models
  - NWACS-MICE and NWACS-Full model
  - VADER multispecies statistical catch-at-age model
  - Ecosystem harvest control rule simulator

- Highest priority is increasing spatial and seasonal detail in the models, but will likely not produce fully spatial reference points or management advice

Data & Methods Workshop

- Discussed ongoing ecosystem indicator work in Chesapeake Bay:
  - MD: Chesapeake Bay health indicators (~2023)
  - VIMS: State of the Ecosystem Report (~2024)

- ERP WG recommended allowing those projects to come to completion to avoid duplicating effort

- If the Board wants to develop indicators linked to management area for the Bay or other areas, task the WG with that after the benchmark

Atlantic Menhaden Research Planning

Robert J. Latour

ASMFC Atlantic Menhaden Board

October 17, 2023

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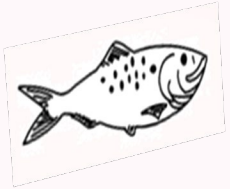
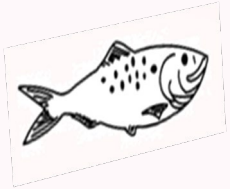
Virginia Institute of Marine Science



Background

- 2023 Virginia Legislative Session – active Atlantic menhaden discussions
- Senator Lynwood Lewis – Senate Bill 1388
  - Introduced Jan 11, VIMS shall study everything…
  - Substitute Feb 3, language modified
  - Amendment Feb 6, timeline modified
  - Amendment Feb 14, overhauled, VIMS shall develop plans…



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Virginia Senate Bill 1388

An Act to direct the Virginia Institute of Marine Science to develop plans for studying the ecology, fishery impacts, and economic importance of menhaden populations in the waters of the Commonwealth; report.

[S 1388]
Approved March 22, 2023

Be it enacted by the General Assembly of Virginia:

1. *§ 1. That the Virginia Institute of Marine Science (VIMS) shall* ***develop plans for studying the ecology, fishery impacts, and economic importance of menhaden populations in the waters of the Commonwealth****. Such plans shall (i) include anticipated methodologies, timelines, and costs; (ii) identify relevant stakeholders for participation; and (iii) state whether VIMS is the most appropriate entity to perform the study. In developing the plans, VIMS shall collaborate with and receive input from the Menhaden Management Advisory Committee established in § 28.2-208.2 of the Code of Virginia and the Atlantic Menhaden Technical Committee of the Atlantic States Marine Fisheries Commission and other relevant stakeholders.*

VIMS shall, no later than September 1, 2023, provide a report on its findings to the Chairmen of the Senate Committee on Agriculture, Conservation and Natural Resources and the House Committee on Agriculture, Chesapeake and Natural Resources and the Secretary of Natural and Historic Resources.

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Stakeholder Workshop

- August 8-9, William & Mary
- 20 attendees – broad representation
- Facilitator – Institute for Engagement and Negotiation, UVA
- Consensus based recommendations
- Themes: Ecology, Fishery Impacts, Economic Importance
- Collegial and productive

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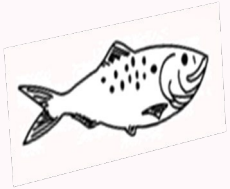
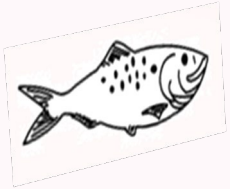


Ecology

1) Estimate the seasonal abundance of Atlantic menhaden in Chesapeake Bay
   - Analysis of commercial data
   - New survey methods – aerial, Simrad EK80

2) Evaluate movement rates of Atlantic menhaden between the Atlantic coast and Chesapeake Bay
   - Hydroacoustic tagging

3) Assess impacts of predator demand and consumption of Atlantic menhaden
   - Enhanced predator sampling, consumption estimation



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Fishery Impacts

1) Analyze spatiotemporal patterns in Atlantic menhaden commercial fishing effort in Chesapeake Bay
   - Availability of fish
   - Distributional changes of fishing

2) Assess the possibility of localized depletion of Atlantic menhaden in Chesapeake Bay
   - Synthesize results of Ecology topics 1-3

3) Quantify changes in the recreational fisheries in Chesapeake Bay
   - Patterns participation, effort, harvest

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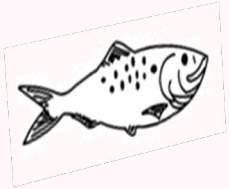

Economic Importance

1) Assess the economic impacts of management decisions on Atlantic menhaden fisheries and related industries
   - Use results of topic 2 (below); economic tradeoffs

2) Conduct a contemporary assessment of the social and economic importance of Atlantic menhaden to the Chesapeake Bay region
   - Economic impact model for commercial sectors
   - Non-market valuation for recreational sector

3) Quantify the bioeconomic impact of Atlantic fishery removals from the Chesapeake Bay to those from the Atlantic coast
   - Simulation analysis

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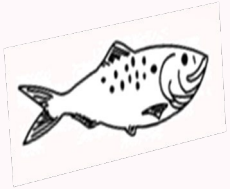

Contributors

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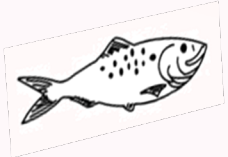

Acknowledgements

- Shanna Madsen - VMRC
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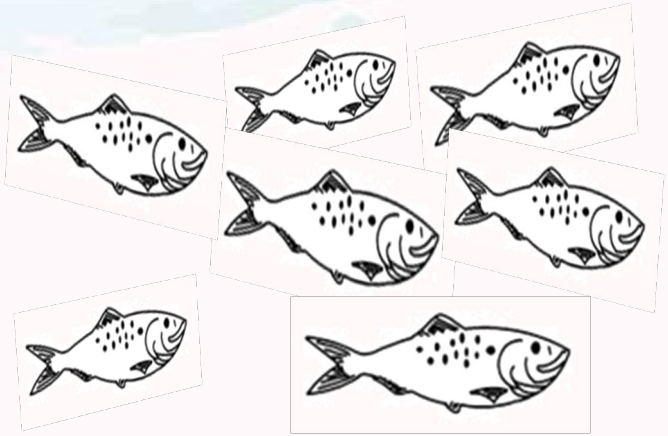
- Jim Gartland – VIMS
- Caroline DeVries - VIMS



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2022 Fishery Management Plan Review for Atlantic Menhaden

Atlantic Menhaden Management Board

October 2023

Overview

- Status of the FMP
- Status of the stock
- Status of the fishery
- Compliance requirements for 2022
  - Quota, biological sampling, Bay Cap
- PRT Recommendations
  - Bio-sampling requirements

Status of FMP

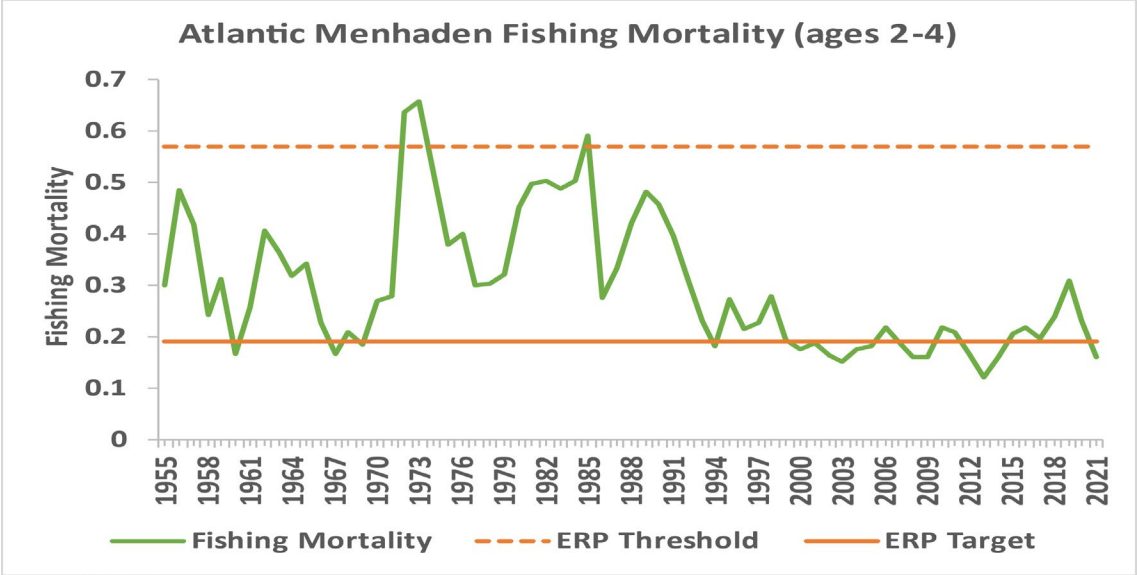
2022 fishery operated under Amendment 3 (Nov 2017)

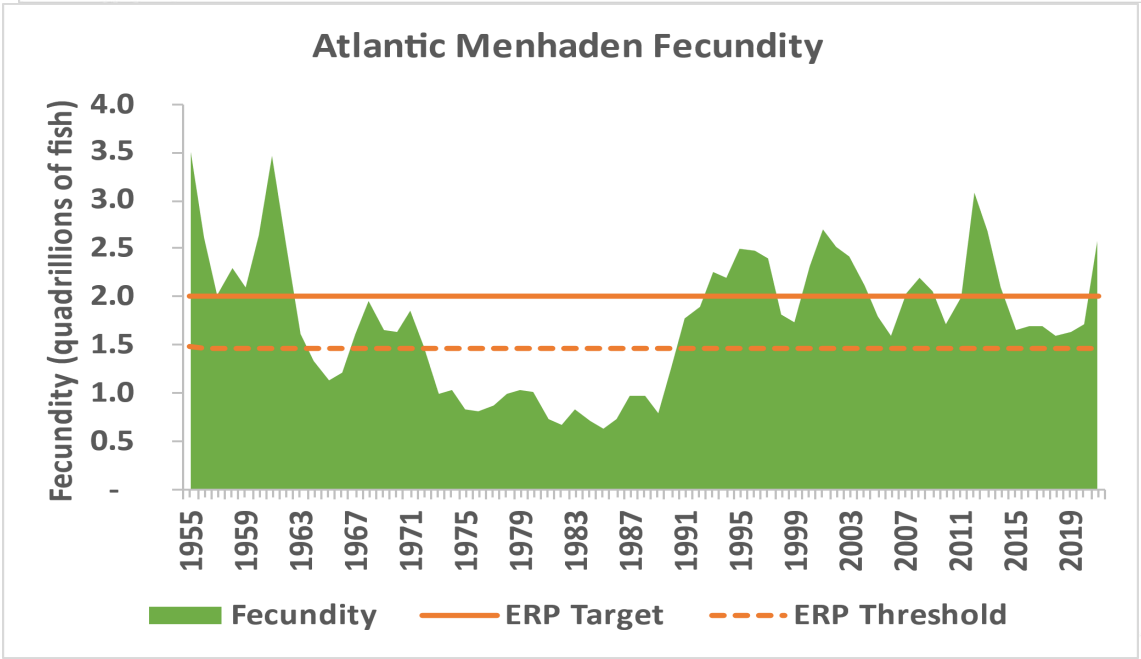
Changes from previous years:

- Board set TAC for 2021-2022 at 194,400 mt
  - Based on approved ERPs

Status of the Stock

- 2022 Assessment Update
- Stock is not overfished and overfishing is not occurring





Status of the Fishery, 2022

Total landings: 195,387 mt (430.8 mil pounds)

- 0.15% increase from 2021
- 0.51% over TAC

TAC: 194,400 MT (428.6 mil pounds)

- Directed harvest = 187,231 mt (412.8 mil pounds)
  - 1% decrease from 2021
  - 4% under the TAC

Incidental Catch: 8,156 mt (18 million pounds)

- 46% increase from 2021
- Does not count towards TAC

Status of the Fishery, 2022 (cont.)

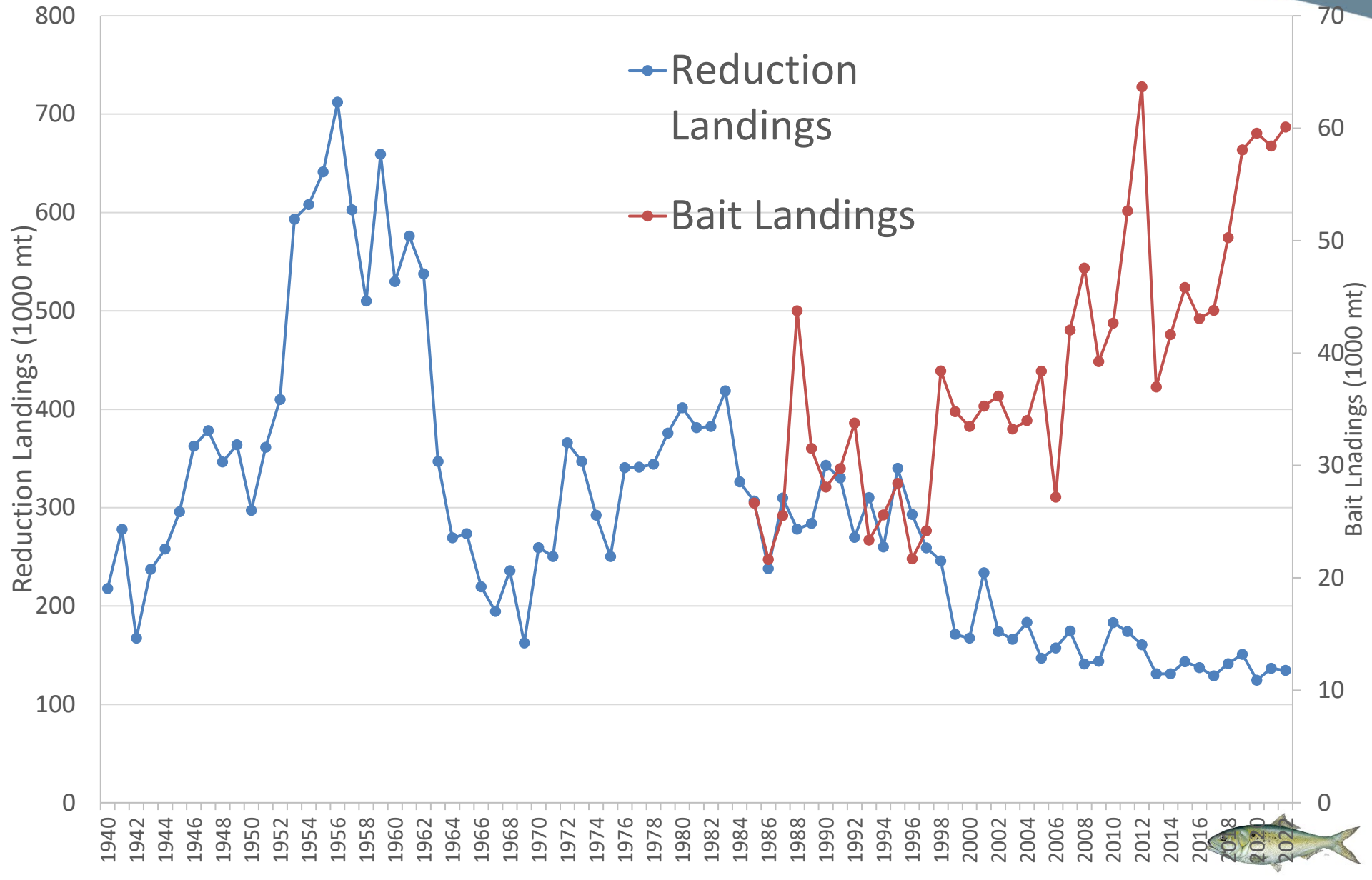
Reduction fishery: 134,477 mt (296 million pounds)

- 2% decrease from 2021 (301.3 million pounds)
- 1.5% below the previous 5-year average (300.9 million pounds)

Chesapeake Bay Reduction Harvest and Cap

- 2022 Cap = 51,000 mt
- 2022 harvest= ~50,000 mt

Atlantic Menhaden Landings



2022 Incidental Fishery

Incidental fishery landings, 2013-2022

Year	Landings (pounds)	Trips	Number of States
2013	4,376,741	2,783	6
2014	6,831,462	5,275	8
2015	5,991,612	4,498	9
2016	2,075,127	2,222	9
2017	7,407,441	2,108	7
2018	3,309,666	1,224	3
2019	10,750,929	3,113	1
2020	13,957,206	3,565	4
2021	12,675,882	3,155	6
2022	17,980,167	4,134	3

Episodic Events Set Aside

- 2022 EESA = 1,992 mt (4.4 million pounds)
  - ME, MA were the only participating states
  - 64,000 pounds donated in January 2023
  - Remaining overage = 40,723 pounds

Year	States Declared Participation	EESA Quota (1% of TAC) (mt)	Landed (mt)	% EESA Quota Used
2014	RI	1,708	134	7.8%
2015	RI	1,879	854	45.5%
2016	ME, RI, NY	1,879	1,728	92.0%
2017	ME, RI, NY	2,000	2,129	106.5%
2018	ME	2,031	2,103	103.6%
2019	ME	2,160	1,995	92.4%
2020	ME, MA	2,160	2,080	96.3%
2021	ME, MA, RI	1,944	2,213	113.8%
2022	ME, MA	1,944	1,992	102.4%

Quota Transfers

- 24 quota transfers for 2022 fishing season
  - 16 in 2021

2022 Bio Samples

State	#10- samples required	#10 samples collected	Age samples collected	Length samples collected	Gear/Comments
ME	39	35	350	350	31 from PS; 4 from gillnets
NH	8	8	80	80	Purse Seine
MA	16	17	170	170	16 PS; 1 rod and reel
RI	1	1	10	10	Otter Trawl
CT	1	1	10	10	LIS Trawl: 167 tows in '22
NY	2	14	141	141	Cast net, Seine net
NJ	65	90	Processing	900	Purse Seine
	6	-	Processing	-	Other Gears
DE	1	1	10	10	Gillnet
MD	8	20	325	1,132	Pound net
PRFC	8	19	190	190	Pound net
VA	6	1	10	10	Pound net
	10	68	679	679	Gillnet
NC	1	7	71	1,236	Gillnet
Total	**172**	**282**	**2046**	**4918**	

De minimis

- To be eligible for *de minimis* status, a state's bait landings must be less than 1% of the total coastwide bait landings for the most recent two years

- The states of Pennsylvania, South Carolina, Georgia, and Florida requested and qualify for *de minimis* status for the 2023 fishing season

PRT Comments & Recommendations

- Biological Sampling Requirement
  - Maine fell short in 2021
  - PRT notes that substituting samples from fishery-independent sources may not be appropriate
  - PRT recommends this requirement be evaluated either in next management document or during next stock assessment*

Board Actions for consideration

- Approve the 2022 FMP Review and state compliance

- Approve *de minimis* status for Pennsylvania, South Carolina, Georgia, and Florida

Questions?