Atlantic States Marine Fisheries Commission

Atlantic Menhaden Management Board

November 9, 2022
1:30 – 5:30 p.m.
Hybrid Meeting

Draft Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary.
This meeting will include a 10-minute break.

1. Welcome/Call to Order (*M. Bell*) 1:30 p.m.

2. Board Consent 1:30 p.m.
   - Approval of Agenda
   - Approval of Proceedings from August 2022

3. Public Comment 1:35 p.m.

4. Set 2023 Specifications **Final Action** 1:45 p.m.
   - Review Technical Committee Report of Stock Projections *(J. Newhard)*

5. Consider Addendum I to Amendment 3 on Commercial Allocations, Episodic Event Set Aside Program, and Incidental Catch/Small-scale Fisheries for Final Approval **Final Action** 3:15 p.m.
   - Review Public Comment Summary (*J. Boyle*)
   - Review Advisory Panel Report *(M. Lapp)*
   - Consider Final Approval of Addendum I

6. Other Business/Adjourn 5:30 p.m.

The meeting will be held at The Ocean Place (1 Ocean Boulevard, Long Branch, NJ; 732.571.4000) and via webinar; click here for details

Atlantic States Marine Fisheries Commission

MEETING OVERVIEW

Atlantic Menhaden Management Board
Wednesday, November 9, 2022
1:30 p.m. – 5:30 p.m.
Hybrid Meeting

Chair: Mel Bell (SC) Assumed Chairmanship: 10/21	Technical Committee Chair: Josh Newhard (USFWS)	Law Enforcement Committee Representative: Robert Kersey (MD)
Vice Chair: Conor McManus (RI)	Advisory Panel Chair: Meghan Lapp (RI)	Previous Board Meeting: August 3, 2022
Voting Members: ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, PRFC, VA, NC, SC, GA, FL, NMFS, USFWS (18 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from August 3, 2022

3. Public Comment – At the beginning of the meeting public comment will be taken on items not on the agenda. Individuals that wish to speak at this time should use the webinar raise your hand function and the Board Chair will let you know when to speak. For agenda items that have already gone out for public hearing and/or have had a public comment period that has closed, the Board Chair may determine that additional public comment will not provide additional information. In this circumstance, the Board Chair will not allow additional public comment on an issue. For agenda items that the public has not had a chance to provide input, the Board Chair may allow limited opportunity for comment. The Board Chair has the discretion to limit the number of speakers and/or the length of each comment.

4. 2023 Menhaden Specifications (1:45–3:15 p.m.) Final Action

Background

- The Board sets an annual or multi-year TAC using the best available science.
- The TC completed projection runs for the 2023-2025 years based on recommendations from the Board **(Briefing Materials).**

Presentations

- Review of 2023-2025 stock projections by J. Newhard

5. Consider Addendum I to Amendment 3: *Commercial Allocations, Episodic Event Set Aside Program, and Incidental Catch/Small-scale Fisheries* for Final Approval (3:15-5:30 p.m.) Final Action

Background

- In August 2021, the Board initiated a draft addendum to consider changes to commercial allocations, the episodic event set aside (EESA) program, and the incidental catch and small-scale fisheries provision (IC/SSF) based on the Board work group report.

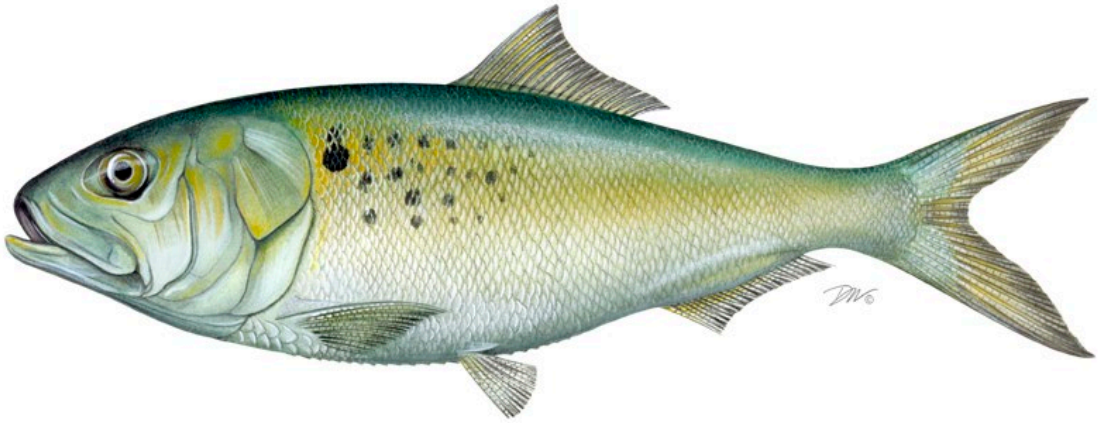
• The Board approved Draft Addendum I for public comment in August 2022. Public hearings were held for ME, NH, MA, RI, NY, NJ, DE-MD-PRFC, VA, and NC **(Briefing Materials)**. • The Advisory Panel met via webinar on October 18th to provide recommendations regarding Addendum I **(Supplemental Materials)**.
Presentations • Overview of options and public comment summary by J. Boyle • Advisory Panel Report by M. Lapp
• Select management options and implementation dates • Approve final document

6. Other Business/Adjourn

Atlantic States Marine Fisheries Commission

DRAFT ADDENDUM I TO AMENDMENT 3 OF THE ATLANTIC MENHADEN INTERSTATE FISHERY MANAGEMENT PLAN FOR BOARD REVIEW

Commercial Allocations, Episodic Event Set Aside Program, and Incidental Catch/Small-Scale Fisheries



Sustainable and Cooperative Management of Atlantic Coastal Fisheries

November 2022

Draft Document for Board Review

Atlantic States Marine Fisheries Commission Seeks Your Input on Atlantic Menhaden Management

The public is encouraged to submit comments regarding this document during the public comment period. Comments will be accepted until **11:59 p.m. EST on September 30, 2022**. Regardless of when they were sent, comments received after that time will not be included in the official record.

You may submit public comment in one or more of the following ways:

1. Attend public hearings pertinent to your state or jurisdiction; given COVID-19, it is likely most hearings will occur via webinar.
2. Refer comments to your state's members on the Atlantic Menhaden Board or Atlantic Menhaden Advisory Panel, if applicable.
3. Mail, fax, or email written comments to the following address:

   James Boyle
   Senior Fishery Management Plan Coordinator
   Atlantic States Marine Fisheries Commission
   1050 North Highland St., Suite 200 A-N
   Arlington, VA 22201
   comments@asmfc.org (subject line: Atlantic Menhaden Draft Addendum I)

If you have any questions please call James Boyle at 703.842.0740.

Commission's Process and Timeline

August 2021	Atlantic Menhaden Board Tasks Staff to Develop Draft Addendum I
August 2021 – July 2022	Staff Develops Draft Addendum I for Board Review
August 2022	Atlantic Menhaden Board Reviews Draft Addendum I and Considers Its Approval for Public Comment
September 2022	Board Solicits Public Comment and States Conduct Public Hearings
November 2022	**Board Reviews Public Comment, Selects Management Options and Considers Final Approval of Addendum I**
TBD	Provisions of Addendum I are Implemented

1. INTRODUCTION

The Atlantic States Marine Fisheries Commission (ASMFC) is responsible for managing Atlantic menhaden (*Brevoortia tyrannus*) in state waters (0–3 miles from shore) under the authority of the Atlantic Coastal Fisheries Cooperative Management Act, and has done so through an interstate fishery management plan (FMP) since 1981. The states of Maine through Florida have a declared interest in the fishery and are responsible for implementing management measures consistent with the interstate FMP. Management authority in the Exclusive Economic Zone (3-200 miles from shore) lies with NOAA Fisheries. For the purposes of this Addendum, the term "state" or "states" also includes the Potomac River Fisheries Commission.

At its August 2021 meeting, the ASMFC's Atlantic Menhaden Management Board (Board) approved the following motion:

Move to initiate an addendum to consider changes to commercial allocation, the episodic events set aside, and the small-scale/incidental catch provision. The purpose of this action is to address the issues outlined in the Atlantic Menhaden work group memo and the PDT should use the strategies provided in the work group memo as a starting point.

The Addendum proposes options to adjust states' commercial allocation to better align with availability; adjust the percentage of the episodic event set aside (EESA) program; and reduce incidental catch and small-scale fisheries (IC/SSF) landings from recent levels.

2. OVERVIEW

2.1 Statement of the Problem

Since the implementation of Amendment 3 (2017), dynamics in the commercial menhaden fishery have changed, most notably the rise of landings in the Gulf of Maine and an increase in quota transfers to the New England region; an increase in landings under the IC/SSF provision; and an annual reliance by some states on the EESA program. To sufficiently address the issues posed by these changes, the addendum addresses three separate but related components of the management program: 1) commercial allocation, 2) the IC/SSF provision, and 3) EESA program.

2.1.1 Commercial Allocations

The current allocations have resulted in the Total Allowable Catch (TAC) not being fully used coastwide, while some states do not have enough quota to maintain current fisheries. Quota transfers alone are not enough to ameliorate this issue. Some states have become reliant on the EESA and IC/SSF provision to maintain their fishery while other states regularly do not land their allocation.

2.1.2 Episodic Event Set Aside (EESA) Program

Over 90% of the EESA has been used in all years since 2016. With the increase in Atlantic menhaden availability to the Northeast, the program has become a secondary regional quota for several states to continue fishery operations in state waters. The dependency on the EESA highlights the mismatch of Atlantic menhaden distribution and availability to current commercial allocations.

2.1.3 Incidental Catch and Small-Scale Fisheries (IC/SSF)

The IC/SSF provision was intended to provide continued access for low-volume landings of menhaden once a state's directed fisheries quota was met and reduce regulatory discards. In recent years, menhaden availability at the northern part of its range has resulted in directed fishery quotas being met earlier in the year. Additionally, the coastwide landings under this category have exceeded a number of states directed fishery quotas and ranged from 1-4% of the annual TAC. Landings under this provision have only caused the overall TAC to be exceeded in a single year, 2021 (by 0.56%), but without changes, landings could remain at high levels or increase, potentially leading to more frequent exceedance of the TAC. Finally, the language in Amendment 3 has led to different interpretations of when landings fall under this provision (*i.e.* once a state's sector allocation is met or only once the full state allocation is met) and should be clarified.

2.2 Background

2.2.1 Allocation

Under Amendment 3, each state is allocated a 0.5% minimum quota and the remainder of the TAC is allocated based on a three-year average of landings from 2009-2011. On an annual basis, states have the option to relinquish part of or all of their fixed minimum quota by December 1st of the preceding fishing year. Any quota relinquished by a state is redistributed to other states that have not relinquished their quota, based on landings data from 2009-2011. Any overage of quota allocation is determined based on final allocations (inclusive of transfers), and the overage amount is subtracted from that state's quota allocation in the subsequent year on a pound-for-pound basis.

Amendment 2 (2012) also based state allocations on the three-year average of landings from 2009-2011; however, there was no fixed minimum. Table 1 shows a comparison of state quotas under Amendments 2 and 3, and highlights the influence of the 0.5% fixed minimum on states' allocations.

Table 1. A comparison of state allocations under menhaden Amendment 2 and Amendment 3. Both Amendments used a 2009-2011 allocation timeframe; Amendment 3 included a 0.5% fixed minimum. While under Amendment 2, Pennsylvania was not a part of the Board and did not have an allocation, therefore is noted with a "-".

State	Amendment 2 Allocation (%)	Amendment 3 Allocation (%)
Maine	0.04%	0.52%
New Hampshire	0%	0.50%
Massachusetts	0.84%	1.27%
Rhode Island	0.02%	0.52%
Connecticut	0.02%	0.52%
New York	0.06%	0.69%
New Jersey	11.19%	10.87%
Pennsylvania	-	0.50%
Delaware	0.01%	0.51%
Maryland	1.37%	1.89%
PRFC	0.62%	1.07%
Virginia	85.32%	78.66%
North Carolina	0.49%	0.96%
South Carolina	0%	0.50%
Georgia	0%	0.50%
Florida	0.02%	0.52%

From 2018 to 2020, total landings (directed, IC/SSF, and EESA) increased among the New England states of Maine, New Hampshire, and Massachusetts (Table 2). Maine and Massachusetts have both increased their percentage of coastwide total landings in recent years, with Maine's percentage increasing every year from 2016-2020 and Massachusetts from 2016-2021. A number of states have maintained directed fisheries while their landings have represented less than 0.2% of coastwide total landings (Connecticut, Delaware, North Carolina, and Florida). In 2021, Massachusetts, Rhode Island, Connecticut, Maryland, and PRFC increased their percentage of coastwide total landings, relative to the previous year. Virginia's percentage of the coastwide landings decreased greatly in 2020 relative to 2019 because the state's largest fishery and processing plant was shut down for several weeks due to the COVID-19 pandemic.

Table 2. State total landings as a percentage of coastwide (CW) landings, 2016-2021. Total landings include directed bait, reduction, IC/SSF, and EESA landings. Amendment 3 allocations for directed bait and reduction landings were implemented beginning in 2018. To protect confidentiality, information for New Hampshire, Pennsylvania, South Carolina, and Georgia have been removed. **These are proportions of the coastwide landings; they do not represent allocations.**

State	% of 2016 CW Landings	% of 2017 CW Landings	% of 2018 CW Landings	% of 2019 CW Landings	% of 2020 CW Landings	% of 2021 CW Landings
Maine	1.50%	2.31%	3.48%	4.91%	6.33%	5.28%
New Hampshire				0.99%	1.02%	
Massachusetts	0.76%	0.96%	1.37%	1.51%	2.17%	2.30%
Rhode Island	0.00%	0.45%	0.17%	0.01%	0.05%	0.83%
Connecticut	0.02%	0.05%	0.20%	0.03%	0.03%	0.04%
New York	0.37%	0.40%	0.11%	0.21%	1.09%	0.77%
New Jersey	11.47%	12.15%	11.97%	10.96%	12.22%	10.60%
Pennsylvania						
Delaware	0.02%	0.02%	0.04%	0.02%	0.04%	0.01%
Maryland	1.40%	0.76%	0.74%	0.73%	0.64%	0.65%
PRFC	0.63%	0.55%	0.79%	0.51%	0.54%	0.59%
Virginia	83.66%	82.08%	80.85%	79.93%	75.66%	77.65%
North Carolina	0.10%	0.20%	0.17%	0.12%	0.15%	0.10%
South Carolina						
Georgia						
Florida	0.07%	0.07%	0.06%	0.05%	0.06%	0.03%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Since implementation of Amendment 3, the number of quota transfers has increased over time with 7, 17, 15, and 16 quota transfers occurring in 2018, 2019, 2020, and 2021, respectively. However, not every state transferred quota consistently; only Maine, Connecticut, Maryland, and Florida either gave or received quota every year from 2018-2021. Maine, New Hampshire, Massachusetts, and New Jersey had a net increase in quota through transfers in all four years. The net increase in quota by state over the four years ranged from 275,000 to 22.86 million pounds (Table 3). While the transfer of quota away from a state does not necessarily represent a decrease in abundance of menhaden, the transfer of quota to the New England states has coincided with increasing availability of menhaden regionally and the need for bait fish as the availability of Atlantic herring has decreased.

Table 3. Quota transfers in pounds by state for 2013-2021.

State	2013	2014	2015	2016	2017	2018	2019	2020	2021	2018-2021 Net Total	2018-2021 Average
ME				1,800,000	195,180	5,400,000	6,573,592	5,450,000	5,437,698	22,861,290	5,715,323
NH							3,373,592	2,300,000	2,686,318	8,359,910	2,786,637
MA	-500,000	-260,000	-508,685	-35,986			1,300,000	2,350,000	2,492,791	6,142,791	2,047,597
RI	15,000	50,000	33,685	35,986			-400,000	-1,800,000	1,240,675	-959,325	-319,775
CT						-500,000	-2,400,000	-2,000,000	-2,000,000	-6,900,000	-1,725,000
NY	1,000,000	210,000	475,000	492,823	300,000	-1,000,000	-1,900,000	500,000		-2,400,000	-800,000
NJ									275,000	275,000	275,000
PA								-500,000	-1,086,318	-1,586,318	-793,159
DE						-150,000		-100,000		-250,000	-125,000
MD						-1,500,000	-1,000,000	-1,350,000	-1,000,000	-4,850,000	-1,212,500
PRFC									-900,000	-900,000	-900,000
VA				-1,500,000		-1,000,000	-1,000,000			-2,000,000	-1,000,000
NC	-575,000			-877,823	-495,180		-600,000	-1,800,000	-2,000,000	-4,400,000	-1,466,667
SC							-2,347,184	-1,650,000	-1,775,000	-5,772,184	-1,924,061
GA									-1,971,164	-1,971,164	-1,971,164
FL	60,000			85,000		-1,250,000	-1,600,000	-1,400,000	-1,400,000	-5,650,000	-1,412,500

2.2.2 Episodic Event Set Aside Program (EESA)

The EESA Program was first implemented under Amendment 2 and clarified under Technical Addendum I later that year. Amendment 3 made no additional changes to the program. Annually, 1% of the TAC is set aside for episodic events, which are defined as any instance in which a qualified state has reached its quota allocation prior to September 1st and the state can prove the presence of unusually large amounts of menhaden in its state waters. To demonstrate a large amount of menhaden in state waters, a state can use surveys (e.g., aerial, seine) to indicate high biomass; landings information; or information highlighting the potential for fish kills, associated human health concerns, and that harvest would reduce or eliminate the fish kill. The goal of the program is to add flexibility in managing menhaden by allowing harvest during an episodic event, reduce discards, and prevent fish kills. States eligible to participate in the EESA program are limited to Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, and New York. When a state declares into the EESA, they are required to implement daily trip level harvester reporting and submit weekly reports to the ASMFC; restrict harvest and landings to state waters; and implement a maximum daily trip limit no greater than 120,000 pounds per vessel.

From 2013 through July 2022, the EESA has been used by Maine (6 years), Rhode Island (5 years), Massachusetts (2 years), and New York (2 years). Up to three states have participated at the same time. The starting date of states declaring into the program has ranged from mid-May to mid-August, with New York and Rhode Island opting in earlier than Maine and Massachusetts. Over 90% of the set-aside has been used in all years since 2016. In 2018 and 2019, Maine was the only state to declare into the EESA program and landed approximately 4.6 and 4.4 million pounds, respectively. In 2021, Maine, Massachusetts, and Rhode Island declared into the EESA program and combined the three states landed approximately 4.9 million pounds. Multiple states have implemented harvest control measures beyond the FMP's 120,000-pound

trip limit, including: lower daily landings limits, weekly limits, limited landing days, and biomass thresholds for when the commercial fishery can operate.

The increasing reliance on the EESA program by some states has coincided with the decline in Atlantic herring and the increased availability of Atlantic menhaden in the Gulf of Maine. For more than a hundred years, there is evidence that periodic abundance of menhaden in the Gulf of Maine may last from 1 to 20 years then disappear for 1 to 20 years (Figure 1). In order to use the EESA and minimize disruptions to fishing activities, some states have sought creative ways at keeping their directed fishery open. In 2021, a number of states requested quota transfers as a group while fishing in the EESA, allowing for multiple quota transfers to be processed while the states continued to participate in the EESA program, in an effort to enable their directed fishery to resume after exiting the EESA with minimal interruption.

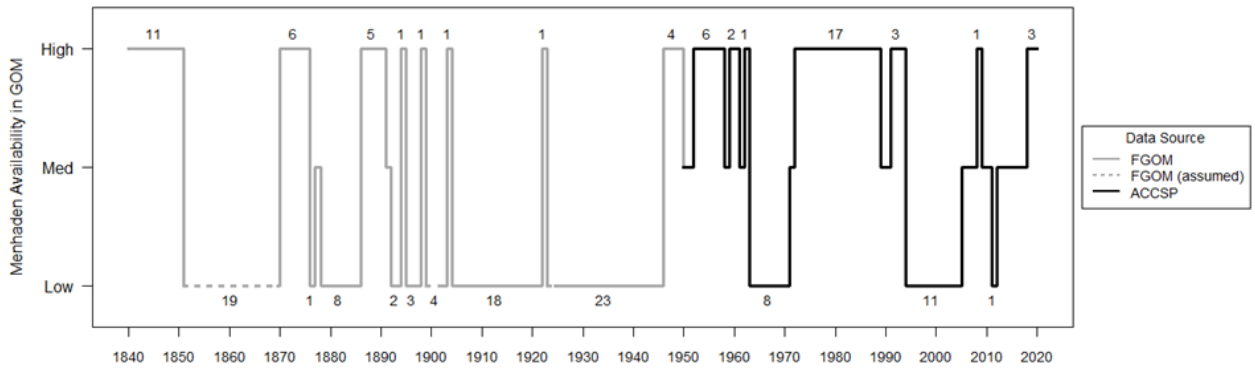


Figure 1. Reconstructed history of availability of Atlantic menhaden to the Gulf of Maine. The number of consecutive years in either a "High" or "Low" availability state are labeled. Data sources: *Fishes of the Gulf of Maine* (Bigelow and Schroeder 2002) and the Atlantic Coastal Cooperative Statistics Program (ACCSP).

2.2.3 Incidental Catch and Small-Scale Fisheries (IC/SSF)

A bycatch allowance was first implemented under Amendment 2, modified under Addendum I to Amendment 2 (2016), and modified again under Amendment 3. As outlined in Amendment 3, under the IC/SSF provision, after a state's allocation is met, small-scale directed and non-directed gear types may continue to land up to 6,000 pounds of menhaden per trip per day. The following gear types are identified in Amendment 3 as eligible to participate:

Small-scale gears: cast nets, traps (excluding floating fish traps), pots, haul seines, fyke nets, hook and line, bag nets, hoop nets, hand lines, trammel nets, bait nets, and purse seines which are smaller than 150 fathoms long and 8 fathoms deep.

Non-directed gears: pound nets, anchored/stake gillnets, drift gill net, trawls, fishing weirs, fyke nets, and floating fish traps.

Since Amendment 2, not all states transition from a directed fishery to an incidental catch or small-scale fishery under the same conditions. Both New Jersey and Virginia subdivide their

quotas among sectors and have done so since state quotas were implemented in 2013. Virginia allocates its annual quota to three sectors: the reduction sector, the purse seine bait sector, and the non-purse seine bait sector. New Jersey allocates the majority of its annual quota to the purse-seine fishery, and the remaining quota is allocated to all other gear types. Once the non-purse seine bait sector or "other gears" fishery has harvested its portion of the state's allocation, that fishery moves into an IC/SSF regardless of whether the entire state's quota has been harvested. This has resulted in Virginia and New Jersey reporting IC/SSF landings when they have not harvested their overall quota allocation for a given year. Since the inception of the IC/SSF provision, both states have reported landings following the closure of Virginia's non-purse seine bait fishery and New Jersey's "other gears" fishery as IC/SSF.

Prior to 2016, several states' IC/SSF landings are considered confidential, therefore only information from 2016-2021 is included in Table 4. From 2016-2021, 11 different states have had IC/SSF landings, with the most number of states (8) reporting IC/SSF in a year occurring in 2016 and the fewest (1) occurring in 2019. The annual coastwide total IC/SSF landings ranged from approximately 2.1 million pounds to 13.9 million pounds. The highest amount occurred in 2020, when Maine landed the majority at 13.6 million pounds, representing 53% of Maine's total landings that year. From 2016-2017 and 2018-2019, landings in this category increased by over 200%, with Maine being the only state with IC/SSF landings in 2019. From 2018-2020, the TAC remained constant at 216,000 mt while IC/SSF landings as a percentage of the annual TAC rose from less than 1% (2018) to nearly 3% (2020).

Table 4. IC/SSF landings in pounds from 2016-2021. Only states with these landings in this time period are included in the table. C = confidential (Some states are listed as confidential to protect the confidentiality of other states). Source: state compliance reports

State	2016	2017	2018	2019	2020	2021
Maine		5,373,940	2,995,145	10,750,929	13,605,497	12,508,195
Massachusetts					49,350	172,335
Rhode Island	39,540	135,748				C
Connecticut		126,986				C
New York	281,017	807,392			282,169	425,212
New Jersey	195,523		204,240		20,190	C
Delaware	20,823	29,285				
Maryland	995,698					
PRFC	105,669	670,447				
Virginia	325,692		110,281			
Florida	111,165	263,643				
Total	2,075,127	7,407,441	3,309,666	10,750,929	13,957,206	13,186,879
Percent Change		257%	-55%	225%	30%	-6%

Since 2013, a majority of landings under this provision occur on trips that land either 1,000 pounds or less (52%), or greater than 5,000 pounds but less than 6,000 pounds (20%). However, landings per trip has increased in recent years (in 2021, 21% of trips < 1,000 pounds; 50% of trips >5,000 pounds; Figure 2). From 2017 to 2021, the majority of these landings have been caught by purse seine (83%, average for the time series). The share of IC/SSF landings using purse seine gear has increased from 57% in 2017 to approximately 88% from 2019 to 2021 (Table 5).

Figure 2. Percent of incidental trips by size in pounds, 2013-2021. Source: state compliance reports

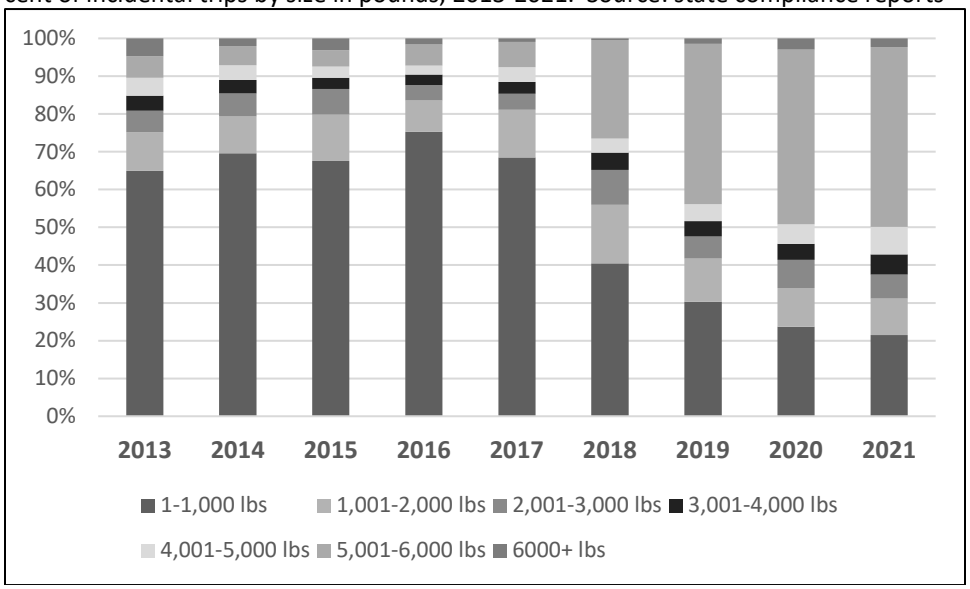


Table 5. Annual summary of total IC/SSF landings in pounds as a fraction of coastwide TAC; and the fraction of total IC/SSF landings coming from small-scale directed purse seine fishing. *2021 Total landings include adjustments from validation but purse seine landings and percentage are based on the compliance report figures. Source: ACCSP; state compliance reports

Year	Total landings	% of TAC	landings from purse seine	% from purse seine
2013	4,376,741	1.20%	0	0%
2014	6,831,462	1.90%	0	0%
2015	5,991,612	1.50%	0	0%
2016	2,075,127	0.50%	0	0%
2017	7,407,441	1.80%	4,291,347	58%
2018	3,290,066	0.70%	2,419,194	74%
2019	10,750,929	2.40%	9,545,747	89%
2020	13,957,206	3.10%	12,332,677	88%
2021*	13,186,879	3.08%	10,850,372	88%

2.3.0 Social and Economic Impacts

Atlantic menhaden provide social and economic value to a diverse group of stakeholders both directly, to commercial and recreational menhaden fishing communities, and indirectly, to those who derive value from finfish, coastal birds, or marine mammals that predate upon menhaden. Menhaden-specific ERPs were developed and implemented to account for these diverse needs. The ERPs aim to provide sufficient menhaden to support sustainable menhaden fisheries, as well as menhaden's important role as a forage fish. Ensuring a stable forage base could increase the abundance of species that predate upon menhaden, such as other finfish, coastal birds, or marine mammals. An increase in abundance of these species could, in turn, lead to positive social and economic impacts for individuals, groups, or communities which rely on these resources for consumptive (e.g., commercial or recreational harvest) or non-consumptive purposes (e.g., bird or whale watching). Individuals who hold non-use values associated with affected species may also benefit from increased abundances (e.g., existence value from knowing a particular environmental resource exists or bequest value from preserving a natural resource or cultural heritage for future generations). Estimating potential economic or social impacts to these stakeholders as a result of menhaden-specific ERPs is challenging given complex and dynamic ecological relationships as well as the lack of socioeconomic data, especially for nonmarket goods and services.

This Addendum includes several measures which could carry social and economic impacts, notably potential changes to commercial allocations, the episodic event set aside program, and the incidental catch/small-scale fisheries provisions. The impacts of these changes on an individual stakeholder group will depend not only on the direction of these changes (e.g., whether the allocation is increasing or decreasing), but also a number of other social and economic factors. The extent and distribution of positive or negative socioeconomic effects arising from changes to allocations, or other provisions, is dependent on price elasticities (responsiveness of demand to a change in price), substitute products, fishing costs, alternative employment opportunities, fishing community structure, and possibly other factors.

Identifying quota allocation methods which are fair and equitable among fishery sectors, gear types, and regions will enhance socioeconomic net benefits if changes in allocation result in higher value or more efficient use of the menhaden resource. Efficiency improving shifts in allocation, while potentially beneficial overall, could disadvantage individual stakeholders through reductions in harvests, revenues, and profits.

A 2017 socioeconomic study of the commercial bait and reduction fisheries, funded by the ASMFC, contains several findings which elucidate possible social and economic impacts resulting from changes in menhaden management. While this study was conducted to inform Amendment 3, its findings may still be informative to the measures included in this Addendum. However, it is important to note that the study was focused on potential changes to the coastwide TAC, not the measures being considered in this Addendum. A study focused on, for

example, allocation changes might have different results based on the different spatial scales and tradeoffs considered.

In the 2017 study, researchers interviewed and surveyed industry members to uncover salient themes, analyzed historic landings data to resolve market relationships, performed economic impact analyses to consider the effects of various TAC changes, and conducted a public opinion survey to assess attitudes toward menhaden management (see Whitehead and Harrison, 2017 for the full report). Interviews and surveys of commercial fishers and other industry members found mixed opinions on several subjects; however, many agreed that the demand for menhaden bait, oil, and meal had increased in recent years. Exogenous demand increases, if leading to increases in ex-vessel prices, could benefit menhaden bait and reduction industry members.

Analysis of historic landings data revealed that prices for menhaden were negatively related to landings levels, but that this relationship was small and insignificant in some instances. In particular, state-level analysis showed ex-vessel price was insensitive to landings. This finding suggested that reductions in the TAC might reduce commercial fishery revenues as decreases in landings are not fully compensated by higher prices. The effects of a change in the allocation of TAC among states is not clear. However, it was found that ex-vessel prices of menhaden were not uniform along the coast, with some states having higher prices than others, suggesting a change in allocation could influence fleet revenues.

Economic impact analyses of changes to the TAC found income and employment decreases (increases) corresponding to TAC decreases (increases), with the largest impacts concentrated in New Jersey and Virginia. For example, the analysis suggests that when totaling direct, indirect, and induced economic changes in the bait fishery, a 5% increase in the TAC from the 2017 baseline would result in 18 more jobs, a $476,000 increase in total earnings, and a $1.7 million increase in total economic output. Looking at the reduction sector, a 5% increase in the TAC from the 2017 baseline is estimated to increase total economic output (includes direct, indirect, and induced economic effects) by $3.6 million in Northumberland county and add 77 full and part-time jobs The difference in economic impacts between the bait and reduction sector is largely due to the difference in scale between the sectors, i.e., a 5% increase to reduction landings would be much higher in metric tons than a 5% increase to bait landings. In addition, it is important to note that economic impact analyses such as the one conducted in this study are a coarse assessment of potential economic impact, and they often do not take into account specific fishery and market dynamics.

Interestingly, subsequent analysis of coastal county income and employment changes in response to changes in bait landings (not reduction landings) showed little effect, casting some doubt on the conclusion that adjustments in menhaden TAC consistently lead to changes in fishery income and employment in the bait fishery. It may also be that the magnitude of impact is dependent on the size of the fishery in each state and the ability of fishermen to harvest other species. Nonetheless, it is reasonable to expect that if the TAC were to remain fixed but be allocated to states differently, those states receiving increased allocation would have

positive economic impacts if the increase in allocation would lead to an increase in harvest. For those that received decreased quota, the expected impacts would depend on the expected impacts on harvest: if the reduced allocation would reduce harvest, negative economic impacts would be expected; however, if the reduced allocation was less than or equal to the state's latent quota, i.e., would not have any expected impacts on harvest, no economic impacts would be expected.

3. PROPOSED MANAGEMENT PROGRAM

This addendum considers modifying the following components of the management program: 1) commercial allocations, 2) IC/SSF provision, and the 3) EESA program. An objective is listed for each component to guide evaluation of proposed options for addressing the issues identified in the statement of the problem. **When the Board takes final action on the addendum, there is the opportunity to select any measure within the range of options that went out for public comment, including combining options across issues.**

In response to concerns that 2020 landings were atypical due to impacts from the COVID-19 pandemic, the full extent of which are unknown and possibly variable between states, the Board elected to exclude 2020 landings data in the commercial allocation options of this draft addendum, thereby minimizing the effects of COVID-19 on allocation.

3.1 Commercial Allocation

Objective: Allocations should be adjusted to 1) align with the availability of the resource 2) enable states to maintain current directed fisheries with minimal interruptions during the season; 3) reduce the need for quota transfers and; 4) fully use the annual TAC without overage.

To account for the various combinations of allocation methods and timeframes the following management options have been divided into two steps. The first step outlines the method for setting the minimum allocation, and the second step outlines the approach used to allocate the remaining TAC. An option must be chosen in each step to complete an allocation package. Options under each of the following steps were developed using total landings information including quota transfers, and landings under the IC/SSF provision and EESA program.

Step 1:

3.1.1 Allocation options for addressing the minimum allocation.

The current fixed minimum allocation of 0.5% has been consistently underutilized by several states, with some states transferring or relinquishing some or all of their quota, and others keeping their unused quota. The Amendment 3 provisions of EESA, IC/SSF, and quota transfers have been utilized every year since the Amendment was implemented, indicating the latent quota created by the fixed minimum could be adjusted to reduce reliance on these provisions.

Some states have highly variable landings, which will likely lead to them rarely exceeding their allocation under some allocation option below. It is important to keep in mind nearly all states have the potential to reach their quota prior to the end of the year under any allocation strategy under the current TAC. Any latent quota reduction produced by selecting the tiered option below will automatically be reallocated to the states based on the allocation method selected in step 2 (section 3.1.2).

Option A. Status Quo: Each state is allocated a 0.5% fixed minimum quota. Total TAC assigned under this option is 8.0% (i.e. 16 states x 0.50%= 8%).

Option B. Three-tiered fixed minimum approach: This option would assign states into three tiers (0.01%, 0.25%, or 0.50%) based on total landings. Pennsylvania, South Carolina, and Georgia would be included in tier one and receive 0.01%. Tier two includes Connecticut, Delaware, North Carolina, and Florida, with each state receiving 0.25%. The remaining states would be in tier three and receive 0.5% of the TAC. The three states in tier one have consistent small-scale, bycatch fisheries, or have harvested no Atlantic menhaden from 2009-2020. The 0.01% coupled with the timeframe allocation assigned in Step 2 below would have covered their limited landings from 2009-2020 under all combinations. Depending on the selection made in Step 2 below, the tier two states would have had sufficient quota to cover their landings every year from 2009-2020, except North Carolina, which could have had up to two years that would have not been covered depending on the timeframe selected, but in nearly all other years they would have used less than half of their allocation. Total TAC assigned under this option is 5.53% (i.e., 3 states x 0.01% + 4 states * 0.25% + 9 states * 0.50% = 5.53%).

Step 2:

3.1.2 Timeframes to base allocating the remaining TAC.

Option 1. Status Quo: Three-year average of landings from 2009-2011. This option only incorporates landings from a short unregulated time period and does not reflect current Atlantic menhaden distribution or fishery performance.

Option 2. 2018, 2019 & 2021

The quota allocation timeframe is based on the most recent average landings from 2018, 2019, and 2021. This timeframe reflects the most recent landings history and is more likely to align with current stock distribution, but does not reflect previous stock distribution or fishery performance.

Option 3. Weighted Time Frames

These options consider both recent and historical timeframes with sub-options of different weighting values. These options are similar to a long term average but focus on a shorter overall timeframe, and can either emphasize more recent fishery performance or weight recent and historical fishery performance equally.

- 3A. Weighted Allocation Timeframe #1 (2009-2011 and 2018, 2019 & 2021) includes the three most recent years, excluding 2020, and the first three years of quality bait fishery data during the unregulated time period.
  - Sub-Option 1. 25% 2009-2011 / 75% 2018, 2019 & 2021 – This weighting strategy emphasizes the more recent timeframe.
  - Sub-Option 2. 50% 2009-2011 / 50% 2018, 2019 & 2021 – This strategy weights both timeframes evenly.

Option 4. Moving Average

This option uses a three-year moving average to annually adjust allocations as the stock and fishery dynamics change. The three-year average is lagged to allow for finalizing data and time to inform states of their quota (i.e. 2018, 2019 & 2021 average used to set 2023 allocation). This option continually adjusts allocations to recent stock distribution and fishery performance, potentially reducing the need for reallocating in the future. Landings used to calculate the three-year moving average differ under each of the options and may include a state's base quota, any quota transferred to a state, catch under the EESA, and catch under the incidental catch set aside. Any state with harvest overage within the three-year time frame that is not covered by the provisions of the FMP will not have the overage portion of their landings count in calculating the moving average, and will still be required to pay any overage back pound for pound the year following the overage occurrence.

4A. No alterations to the Option. There will be no alterations to the option as described above and total landings will be used in the calculations under this option.

4B. Provision to limit states' moving average landings if total landings exceed the TAC.

State landings less than or equal to the coastwide TAC would be used in the calculation of the moving average, regardless of the source. If total landings (directed plus IC/SSF plus EESA) are below the TAC, then all landings would be included. If directed landings are below the TAC but IC/SSF and/or EESA landings bring total landings over the TAC, then only the portion of IC/SSF and EESA landings that achieve the TAC would count toward the moving average calculation.

Calculation Procedure: (This procedure is only for moving average calculation when the IC/SSF landings added to directed landings exceed the TAC) EESA participation requires opting in and out of the program by providing dated notice to ASMFC and weekly landings reporting at a minimum. Any overage of the EESA that is not reconciled through a transfer will be subtracted from a states total landings prior to calculation. If more than one state is participating at the time of the overage the percentage of each state's landings reported on the calendar

day(s) the overage occurred will be used to produce the state by state landings reduction required by the EESA overage.

The following will be calculated to determine the IC/SSF landings that are over the TAC to be removed from state landings prior to moving average calculation. The landings termed Excess IC/SSF landings in the calculations below do not include IC/SSF landings for a state that total landings, combined directed and IC/SSF landings, would not have exceeded a state's quota (i.e. a state closes its directed fishery early and operates under the IC/SSF restrictions, but never exceeds its quota). EESA landings included below will be after any adjustment made above (allowable EESA only).
IC/SSF Landings over the TAC = ((Total Landings) – TAC)) – (Overages that are not associated with the IC/SSF).
States Adjusted final Quota (AFQ) = (((State's Base Quota) + or – (Transfers)) + (EESA landings))) – (Overages that are not associated with the IC/SSF).
State Excess IC/SSF Landings = (State's Total Landings) > State's AFQ.
Total Excess IC/SSF Landings = The Sum of all states Excess IC/SSF Landings.
State's % of Excess IC/SSF= (State Excess IC/SSF Landings) / (Total Excess IC/SSF Landings).
Reduction of a states IC/SSF Landings = (IC/SSF landings over the TAC) * (State's % of Excess IC/SSF).
State landings to be used in Moving average Calculation = ((States total Landings) – (Reduction of IC/SSF landings))-Overages

Overage Paybacks

Objective: Allow states to pay back overages in the second year following an overage to prevent the need to remove quota during a fishing year due to the timing of when landings data becomes available.

Since compliance reports are due August 1st and states are often working with preliminary landings data, especially at the gear-type level for states that further allocate their quota by sector, it is possible that overages will not be discovered until well into the next fishing year. Under Amendment 3, any overage would need to be paid back before the end of the fishing year after the overage occurred, which could cause states to need to remove quota from fisheries that have already occurred.

Option 1. Status Quo: Any overage of a quota allocation is subtracted for that specific quota allocation in the subsequent year on a pound for pound basis. Overage determination is based on final allocations, including transfers if applicable. Overages will be subtracted from the subsequent year's quota following submission of state compliance reports. Should overages change as preliminary data is finalized, quotas will be re-adjusted accordingly.

Option 2. Second Year After Overage: Any overage of a quota allocation is subtracted for that specific quota allocation in the second year following the overage on a pound for pound basis. Overage determination is based on final allocations, including transfers if applicable. Overages will be subtracted from the second year's quota following submission of state compliance reports. Should overages change as preliminary data is finalized, quotas will be re-adjusted accordingly.

Table 6. A1-3. Percent annual allocation by state using the 0.5% fixed minimum (Step 1, Option A) allocation and the 2009-2011; 2018, 2019 & 2021; and weighted timeframe allocations (Step 2, Options 1-3). Each of the two weighted timeframe combinations of 2009-2011/2018, 2019 & 2021 (Step 2, Option 3A), and 2009-2012/2017-2019 & 2021 (Step 2, Option 3B) are weighted 25% earlier /75% recent (Sub-Option 1) and 50% recent /50% earlier (Sub-Option 2).

State	Time Frame		2009-2011/2018,2019 & 2021	
	A1 Status Quo 2009-2011	A2 2018, 2019 and 2021	A3: A-1 25%/75%	A3: A-2 50%/50%
ME	0.52%	4.71%	3.66%	2.61%
NH	0.50%	1.19%	1.01%	0.84%
MA	1.27%	2.09%	1.88%	1.68%
RI	0.52%	0.81%	0.73%	0.66%
CT	0.52%	0.58%	0.56%	0.55%
NY	0.69%	0.85%	0.81%	0.77%
NJ	10.87%	10.77%	10.81%	10.85%
PA	0.50%	0.50%	0.50%	0.50%
DE	0.51%	0.52%	0.52%	0.52%
MD	1.89%	1.15%	1.34%	1.53%
PRFC	1.07%	1.07%	1.07%	1.07%
VA	78.66%	73.60%	74.85%	76.10%
NC	0.96%	0.62%	0.70%	0.79%
SC	0.50%	0.50%	0.50%	0.50%
GA	0.50%	0.50%	0.50%	0.50%
FL	0.52%	0.54%	0.54%	0.53%

Table 7. A4A. Percent annual allocation by state using the 0.5% fixed minimum allocation (Step 1, Option A) and the three year moving average allocation (Step 2, Option 4A) as it would have changed through time, and the year the timeframe would have been used to set allocations.

State	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2017-2019	2018, 2019 & 2021
ME	0.52%	0.51%	0.51%	0.51%	0.51%	0.97%	1.64%	2.76%	3.85%	4.71%
NH	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.52%	0.85%	1.19%
MA	1.27%	0.91%	0.77%	0.95%	1.09%	1.13%	1.24%	1.46%	1.69%	2.09%
RI	0.52%	0.52%	0.52%	0.55%	0.71%	0.72%	0.82%	0.71%	0.69%	0.81%
CT	0.52%	0.51%	0.51%	0.51%	0.51%	0.51%	0.53%	0.59%	0.59%	0.58%
NY	0.69%	0.67%	0.68%	0.70%	0.77%	0.79%	0.85%	0.77%	0.72%	0.85%
NJ	10.93%	13.45%	13.94%	12.81%	10.67%	10.89%	11.25%	11.41%	11.23%	10.77%
PA	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
DE	0.51%	0.52%	0.52%	0.53%	0.53%	0.53%	0.52%	0.52%	0.52%	0.52%
MD	1.90%	2.18%	2.33%	2.52%	2.16%	2.02%	1.71%	1.38%	1.18%	1.15%
PRFC	1.07%	1.20%	1.30%	1.41%	1.23%	1.15%	1.06%	1.11%	1.06%	1.07%
VA	78.60%	76.18%	75.57%	76.30%	78.57%	78.04%	77.15%	76.08%	74.92%	73.60%
NC	0.96%	0.83%	0.80%	0.64%	0.68%	0.67%	0.66%	0.64%	0.65%	0.62%
SC	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
GA	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
FL	0.52%	0.52%	0.54%	0.55%	0.57%	0.57%	0.57%	0.56%	0.55%	0.54%
Year in Use	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021/2022**	**2023**

Table 8. A4B. Percent annual allocation by state using the 0.5% fixed minimum allocation (Step 1, Option A) and the three year moving average allocation (Step 2, Option 4B), as it would have changed through time, and the year the timeframe would have been used to set allocations. Note: 2021 values only include landings under the TAC according to the calculation outlined in Option 4B.

State	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2017-2019	2018, 2019 & 2021
ME	0.52%	0.51%	0.51%	0.51%	0.51%	0.97%	1.64%	2.76%	3.85%	4.55%
NH	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.52%	0.85%	1.19%
MA	1.27%	0.91%	0.77%	0.95%	1.09%	1.13%	1.24%	1.46%	1.69%	2.09%
RI	0.52%	0.52%	0.52%	0.55%	0.71%	0.72%	0.82%	0.71%	0.69%	0.81%
CT	0.52%	0.51%	0.51%	0.51%	0.51%	0.51%	0.53%	0.59%	0.59%	0.58%
NY	0.69%	0.67%	0.68%	0.70%	0.77%	0.79%	0.85%	0.77%	0.72%	0.82%
NJ	10.93%	13.45%	13.94%	12.81%	10.67%	10.89%	11.25%	11.41%	11.23%	10.79%
PA	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
DE	0.51%	0.52%	0.52%	0.53%	0.53%	0.53%	0.52%	0.52%	0.52%	0.52%
MD	1.90%	2.18%	2.33%	2.52%	2.16%	2.02%	1.71%	1.38%	1.18%	1.15%
PRFC	1.07%	1.20%	1.30%	1.41%	1.23%	1.15%	1.06%	1.11%	1.06%	1.08%
VA	78.60%	76.18%	75.57%	76.30%	78.57%	78.04%	77.15%	76.08%	74.92%	73.76%
NC	0.96%	0.83%	0.80%	0.64%	0.68%	0.67%	0.66%	0.64%	0.65%	0.62%
SC	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
GA	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
FL	0.52%	0.52%	0.54%	0.55%	0.57%	0.57%	0.57%	0.56%	0.55%	0.54%
Year in Use	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021/2022**	**2023**

Table 9. B1-3. Percent annual allocation by state using the three tier minimum (Step 1, Option B) allocation the 2009-2011; 2018, 2019 & 2021 and weighted timeframe allocations (Step 2, Options 1-3). Each of the two weighted timeframe combinations of 2009-2011/2018, 2019 & 2021 (Step 2, Option 3A), and 2009-2012/2017-2019 & 2021 (Step 2, Option 3B) are weighted 25% earlier /75% recent (Sub-Option 1) and 50% recent /50% earlier (Sub-Option 2).

State	Time Frame		2009-2011/2018,2019 & 2021	
	B1 2009-2011	B2 2018, 2019 and 2021	B3: A-1 25%/75%	B3: A-2 50%/50%
ME	0.52%	4.82%	3.74%	2.67%
NH	0.50%	1.20%	1.03%	0.85%
MA	1.29%	2.13%	1.92%	1.71%
RI	0.52%	0.81%	0.74%	0.67%
CT	0.27%	0.33%	0.32%	0.30%
NY	0.70%	0.86%	0.82%	0.78%
NJ	11.21%	11.05%	11.09%	11.13%
PA	0.01%	0.01%	0.01%	0.01%
DE	0.26%	0.27%	0.27%	0.27%
MD	1.94%	1.17%	1.36%	1.55%
PRFC	1.09%	1.09%	1.09%	1.09%
VA	80.70%	75.57%	76.85%	78.13%
NC	0.72%	0.37%	0.46%	0.54%
SC	0.01%	0.01%	0.01%	0.01%
GA	0.01%	0.01%	0.01%	0.01%
FL	0.27%	0.29%	0.29%	0.28%

Table 10. B4A. Percent annual allocation by State using the three tier minimum allocation (Step 1, Option B) and the three year moving average allocation (Step 2, Option 4A), as it would have changed through time, and the year the timeframe would have been used to set allocations.

State	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2017-2019	2018, 2019 & 2021
ME	0.52%	0.51%	0.51%	0.51%	0.51%	0.98%	1.67%	2.82%	3.94%	4.82%
NH	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.52%	0.86%	1.20%
MA	1.29%	0.92%	0.78%	0.97%	1.10%	1.15%	1.26%	1.48%	1.73%	2.13%
RI	0.52%	0.52%	0.52%	0.55%	0.72%	0.73%	0.82%	0.72%	0.69%	0.81%
CT	0.27%	0.26%	0.26%	0.26%	0.26%	0.26%	0.28%	0.34%	0.34%	0.33%
NY	0.70%	0.67%	0.69%	0.71%	0.78%	0.80%	0.85%	0.77%	0.72%	0.86%
NJ	11.21%	13.80%	14.30%	13.14%	10.94%	11.17%	11.54%	11.71%	11.52%	11.05%
PA	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
DE	0.26%	0.27%	0.27%	0.28%	0.29%	0.28%	0.27%	0.28%	0.27%	0.27%
MD	1.94%	2.23%	2.38%	2.58%	2.20%	2.06%	1.74%	1.41%	1.20%	1.17%
PRFC	1.09%	1.22%	1.33%	1.44%	1.25%	1.17%	1.08%	1.12%	1.08%	1.09%
VA	80.70%	78.22%	77.59%	78.34%	80.67%	80.12%	79.21%	78.11%	76.91%	75.57%
NC	0.72%	0.59%	0.56%	0.40%	0.43%	0.42%	0.41%	0.40%	0.40%	0.37%
SC	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
GA	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
FL	0.27%	0.27%	0.29%	0.30%	0.32%	0.32%	0.32%	0.31%	0.31%	0.29%
Year in Use	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021/2022**	**2023**

Table 11. B4B. Percent annual allocation by State using the three tier minimum allocation (Step 1, Option B) and the three year moving average allocation (Step 2, Option 4B), as it would have changed through time, and the year the timeframe would have been used to set allocations. Note: 2021 values only include landings under the TAC according to the calculation outlined in Option 4B.

State	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2017-2019	2018, 2019 & 2021
ME	0.52%	0.51%	0.51%	0.51%	0.51%	0.98%	1.67%	2.82%	3.94%	4.66%
NH	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.52%	0.86%	1.21%
MA	1.29%	0.92%	0.78%	0.97%	1.10%	1.15%	1.26%	1.48%	1.73%	2.13%
RI	0.52%	0.52%	0.52%	0.55%	0.72%	0.73%	0.82%	0.72%	0.69%	0.82%
CT	0.27%	0.26%	0.26%	0.26%	0.26%	0.26%	0.28%	0.34%	0.34%	0.33%
NY	0.70%	0.67%	0.69%	0.71%	0.78%	0.80%	0.85%	0.77%	0.72%	0.83%
NJ	11.21%	13.80%	14.30%	13.14%	10.94%	11.17%	11.54%	11.71%	11.52%	11.07%
PA	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
DE	0.26%	0.27%	0.27%	0.28%	0.29%	0.28%	0.27%	0.28%	0.27%	0.27%
MD	1.94%	2.23%	2.38%	2.58%	2.20%	2.06%	1.74%	1.41%	1.20%	1.17%
PRFC	1.09%	1.22%	1.33%	1.44%	1.25%	1.17%	1.08%	1.12%	1.08%	1.09%
VA	80.70%	78.22%	77.59%	78.34%	80.67%	80.12%	79.21%	78.11%	76.91%	75.73%
NC	0.72%	0.59%	0.56%	0.40%	0.43%	0.42%	0.41%	0.40%	0.40%	0.37%
SC	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
GA	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
FL	0.27%	0.27%	0.29%	0.30%	0.32%	0.32%	0.32%	0.31%	0.31%	0.29%
Year in Use	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021/2022**	**2023**

3.2 EESA Program

Objective: Ensure sufficient access to episodic changes in regional availability in order to minimize in-season disruptions and reduce the need for quota transfers and IC/SSF landings.

3.2.1 Increase the Set-Aside

Goal: In combination with reallocation or separately, ensure the states of Maine to New York have increased bait quota for this program to reduce the need for in-season quota transfers or reliance on the IC/SSF provision in response to the increased presence of Atlantic menhaden biomass in the Northeast.

For both Options 1 and 2, the mandatory provisions, declaring participation, procedure for unused set aside, and procedure for set aside overages (Sections 4.3.6.1- 4.3.6.4) as outlined in Amendment 3 (Section 4.3.6.3) will remain in effect.

For Option 2 only, there are two sub-options for the Board's consideration. To allow for additional flexibility in managing the EESA depending on states' allocations and the need to reduce quota transfers, the following sub-options allow for the EESA to be set during the TAC setting process, rather than through adaptive management as outlined in Amendment 3.

Option 1. Status Quo (1%) – The EESA would remain at 1% of the total coastwide TAC. Should any quota remain unused after October 31st, annually, it would revert back into the common pool.

Option 2. Increase up to 5% - This option would allow the Board to increase the EESA to a specific percentage greater than or equal to 1% and less than or equal to 5%. The designated percentage of EESA would be subtracted from the total coastwide TAC prior to the distribution of allocation to states. Depending upon the option(s) chosen under Section 3.1, re-adjusting the fixed minimum quota could offset the possible increase in the EESA (see note below).

Sub-option 1. EESA is set as a static amount of 1-5%: The Board may choose an EESA between 1 and 5% and the chosen option is static until a subsequent Amendment or Addendum.

Sub-option 2. Set the EESA during Specifications at an amount between 1-5%: Under this option the Board will set the EESA at an amount between 1 to 5% during the Specification process as part of approving the TAC. The TAC and EESA may be set annually or on a multi-year basis depending on Board action.

Note (only applies if a tiered minimum approach is selected): The 0.5% fixed minimum from Amendment 3 allocated 8.0% of the TAC prior to timeframe based allocation of state quotas. If the fixed minimum was replaced by the three-tiered minimum allocation strategy, the 8.0% would be reduced to 5.53%. The amount of quota left by selecting the tiered option (2.47%), will be reallocated to the states, but increasing the EESA to 2.47% or less will result in a similar value in pounds being removed from the TAC prior to time frame based allocation. In Amendment 3, nine percent of the TAC either went to the EESA or the fixed minimum allocation.

3.3 IC/SSF Provision

Objective: Sufficiently constrain landings to achieve overall management goals of: 1) meeting the needs of existing fisheries, 2) reducing discards, and 3) indicating when landings can occur and if those landings are a part of the directed fishery.

In this section, there are four sub-topics to address IC/SSF landings. They include proposed changes to the timing of when states can begin landing under this provision (3.3.1); permitted gear types (3.3.2); changes to the IC/SSF trip limit (3.3.3); and considering a new accountability system for IC/SSF landings (3.3.4).

3.3.1 Timing of IC/SSF Provision

Goal: Address the timing of when a state begins fishing under the provision since it impacts the duration that landings occur.

Option 1. No change (Status quo): Once a quota allocation is reached for a given state, the fishery moves to an incidental catch fishery. Currently, individual states interpret "*after a quota allocation is met for a given state*" differently (i.e., whether this refers to the entire allocation or a sector, fishery, or gear allocation).

Option 2. Sector/fishery/gear type allocation within a state is met: Currently, states such as New Jersey and Virginia further divide their state allocation into sector and gear type specific allocations. The provision would confirm that once a sector/fishery/gear type specific allocation is reached for a state, that state's sector/fishery/gear type fishery can begin landing catch under the provision.

Option 3. Entire states allocation met: Once the entire quota allocation for a given state is reached, regardless of sector/fishery/gear type fishery allocations, the menhaden fishery moves to landing under the IC/SSF provision.

3.3.2 Permitted Gear Types of the of IC/SSF Provision

Goal: Address the volume of landings under the provision by considering removing specific gear types

Note: Under Amendment 3, fyke nets were listed under both gear types which may lead to two different possession limits for the same gear type under 3.3.3 below, should the possession limit for directed gear types be modified. Therefore, under Options 2 and 3, fyke nets have been removed from the small-scale directed gear type category and maintained only in the non-directed gear type category. Additionally, trammel nets are defined as a directed gear under Amendment 3, but at the request of the Board was moved into the non-directed gear type category for Options 2 and 3 below. Option 1 Sub-Options 2 and 3 provide a mechanism for the classifications to be changed without changing permitted gear types.

Option 1. No changes to permitted gear types (Status quo): The provision would apply to both small-scale directed gears and non-directed gears. Small scale directed gears shall include cast nets, traps (excluding floating fish traps), pots, haul seines, fyke nets, hook and line, bag nets, hoop nets, hand lines,trammel nets bait nets, and purse seines which are smaller than 150 fathoms long and eight fathoms deep. Non-directed gears include pound nets, anchored/stake gillnets, drift gill net, trawls, fishing weirs, fyke nets, and floating fish traps.

Sub-Option 1 (Status quo). All gear types will retain the classifications as defined in Amendment 3.

Sub-Option 2. Fyke nets will be removed from the small-scale directed gear type category, thereby becoming listed only as a non-directed gear.

Sub-Option 3. Fyke nets will be removed from the small-scale directed gear type category, thereby becoming listed only as a non-directed gear, and trammel nets will be reclassified as a non-directed gear type.

Option 2. No purse seines, all other small-scale and non-directed gears maintained: The provision would apply to both small-scale directed gears and non-directed gears, but exclude purse seine gears. This option is included due to the growth of directed landings from small-scale purse seine gears in recent years (Table 6). Landings from purse seine gears would count against a state's directed fishery quota. Small-scale directed gears shall include cast nets, traps (excluding floating fish traps), pots, haul seines, hook and line, bag nets, hoop nets, hand lines, and bait nets. Non-directed gears include pound nets, anchored/stake gillnets, trammel nets, drift gill net, trawls, fishing weirs, fyke nets, and floating fish traps.

Option 3. Non-directed gears only: The provision shall apply to non-directed gears only. This includes pound nets, anchored/stake gillnets, trammel nets, drift gill net, trawls, fishing weirs, fyke nets, and floating fish traps.

3.3.3 Trip Limit for Directed Small-Scale Fisheries of IC/SSF Provision

Goal: Limit the annual volume of IC/SSF landings by considering reducing the trip limit.

The options below modify the trip limits for directed small-scale fisheries. Stationary multi-species gears are defined as pound nets, anchored/stake gill nets, fishing weirs, floating fish traps, and fyke nets. A trip is based on a calendar day such that no vessel may land menhaden more than once in a single calendar day. The use of multiple carrier vessels per trip to offload any bycatch exceeding the daily trip limit of Atlantic menhaden is prohibited. If Option 3 was selected in section 3.3.2 above, this section is no longer needed.

Option 1. No change to trip limit (Status quo): small-scale gears and non-directed gear types may land up to 6,000 pounds of menhaden per trip per day. Two authorized individuals, working from the same vessel fishing stationary multi-species gear, are permitted to work together and land up to 12,000 pounds from a single vessel – limited to one vessel trip per day.

For both Options 2 and 3 below, the proposed change in the trip limit would only apply to small-scale directed gears which include cast nets, traps (excluding floating fish traps), pots, haul seines, hook and line, bag nets, hoop nets, hand lines, bait nets, and purse seines which

are smaller than 150 fathoms long and 8 fathoms deep. Non-directed gears and stationary multi-species gears would still be able to land up to 6,000 pounds of menhaden per trip per day, with two individuals working from the same vessel fishing stationary multi-species gear, permitted to work together can land up to 12,000 pounds.

Option 2. 4,500 pound trip limit for directed gear types: The trip limit for the directed small-scale fishery shall be 4,500 pounds of menhaden per trip per day.

Option 3. 3,000 pound trip limit for directed gear types: The trip limit for the directed small-scale fishery shall be 3,000 pounds of menhaden per trip per day.

3.3.4 Catch Accounting of IC/SSF Provision

Goal: Create a system where annual IC/SSF landings are limited and there is accountability for overages.

Note: Under Option 2, the Board is not limited to one option. They can choose a combination of Option 2A and 2B or the sub-options. Furthermore, Options 1 and 2 do not affect the Board's authority to alter trip limits or permitted gear types through adaptive management, as outlined in Amendment 3 Section 4.3.5, regardless of whether the trigger is tripped.

Option 1. IC/SSF landings do not count against a state allocation nor the annual TAC (status quo): Landings under this provision will be reported as a part of the annual FMP Review (Amendment 3, Section 5.3: Compliance Report). Landings are reported by states as a part of Annual Compliance Reports. Should a specific gear type show a continued and significant increase in landings under the provision, or it becomes clear that a non-directed gear type is directing on menhaden under this provision, the Board has the authority, through adaptive management (Amendment 3, Section 4.6), to alter the trip limit or remove that gear from the IC/SSF provision.

Option 2. IC/SSF landings are evaluated against the annual TAC: Total landings under this provision would be evaluated against the annual TAC and will be reported as a part of the annual FMP Review (Amendment 3, Section 5.3: Compliance Report). Landings are reported by states as a part of Annual Compliance Reports. If IC/SSF landings cause the TAC to be exceeded, meaning the TAC is exceeded after adding total IC/SSF landings to total landings that occur under state quotas and EESA, the trigger is tripped, and the Board must take action as specified in Options 2A-2B below.

Option 2A. Modify the Trip Limit for Permitted Gear Types in the IC/SSF Provision: The Board will evaluate the current IC/SSF trip limit and permitted gear types and take action to reduce the trip limit for one or more permitted gear types in the IC/SSF provision.

Sub-Option 1. The trip limit will be adjusted for one or more permitted gear types in the IC/SSF provision via Board action.

Option 2B. Modify Permitted Gear Types in the IC/SSF Provision: The Board will evaluate the permitted gear types in the IC/SSF provision and take action to eliminate one or more gear types from the IC/SSF provision.

Sub-Option 1. Permitted gear types in the IC/SSF provision will be adjusted via Board action.

4. COMPLIANCE SCHEDULE

If the existing Atlantic menhaden management plan is revised by approval of this draft addendum, the measures would be effective January 1, 2023. Unless otherwise directed by the Board, allocations will be revisited no more than 3 years (2025) following implementation of this addendum, as outlined in Amendment 3.

5. LITERATURE CITED

ASMFC. 2012. Amendment 2 to the Atlantic Menhaden Fishery Management Plan. ASMFC, Arlington, VA 114 p.

ASMFC. 2016. Addendum I to Amendment 2 to the Atlantic Menhaden Fishery Management Plan. ASMFC, Arlington, VA 7 p.

ASMFC. 2017. Amendment 3 to the Atlantic Menhaden Fishery Management Plan. ASMFC, Arlington, VA 111 p.

Bigelow, H.B., and Schroeder, W.C. 2002. Fishes of the Gulf of Maine. 3rd ed. Edited by B.B. Collette and G. Klein-MacPhee. Smithsonian Institution Press, Washington, D.C.

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MEMORANDUM

TO: Atlantic Menhaden Management Board

FROM: Atlantic Menhaden Advisory Panel

DATE: November 1, 2022

SUBJECT: Advisory Panel Recommendations on Draft Addendum I Options

The Advisory Panel (AP) met via webinar on October 18, 2022 to formulate comments and provide recommendations on Draft Addendum I to Amendment 3. Panel members in attendance represented commercial harvesters and processors, recreational anglers, and conservation coalition members. The following is a summary of the meeting and the discussion had by the AP members. The AP did discuss preferred management options in the document and, given a consensus was not reached on many issues, all viewpoints are presented.

AP Attendance:
Meghan Lapp (RI, Chair)
Vincent Balzano (ME)
Michael Dawson (ME)
Will Caldwell (NY)
Melissa Dearborn (NY)
Peter Himchak (VA)
Jimmy Kellum (VA)
Barbara Garrity-Blake (NC)
ASMFC Staff: James Boyle and Emilie Franke

3.1: Quota Allocation
Step 1: Fixed Minimum
6 AP members support Option B: Three-tiered fixed minimum
- One AP member commented that the tiered approach best aligns with the goals and objectives of the addendum
- Four AP members commented that the tiered system would best support their respective states of NY and ME.

Step 2: Timeframe
4 AP members support Option 2: 2018, 2019, & 2021
- Two AP members commented that this option represents the current cycle of menhaden distribution and aligns with the comments they saw in the public hearings in ME.
- Two AP members commented that if this option was not feasible, then they would accept Option 3A Sub-option 1, which weights recent years more heavily (75/25). They also opposed Options 4A and 4B due to the wide variations in menhaden availability in certain areas in some years.

2 AP members support Option 3A Sub-option 2 (50/50)

3.2: Episodic Event Set Aside

2 AP members support Option 1: Status Quo (1%)

- One AP member commented that the allocation options in the addendum already address increasing quota in the northeast.
- Another AP member commented that 1% is already a lot of fish.

2 AP members support Option 2: Increase the set aside (1-5%)

- One AP member added their support for Sub-option 2 and commented that increasing the set aside would suit the objective of the EESA to respond to the northern influx of fish.

3.3: Incidental Catch/Small-Scale Fishery

Timing

1 AP member supports Option 1: Status Quo

- Another AP member commented that NY does not separate quota by sector, and they do not oppose Option 2 if it helps other states that wish to separate quota.

Gear Types

1 AP member supports Option 1: Status Quo

- The AP member commented that the restricted purse seine size is relatively small and that maintaining purse seines in the IC/SSF is critical to ME lobster fishers for bait, especially later in the season. The member added that the large turnout in both ME public hearings regarding this document was largely due to the unanimous and vocal support to keep the use of purse seines.

2 AP members support Option 2: Remove Purse Seines

- Two AP members commented their preference for Option 2, but would accept Option 1. Both members were adamant in their opposition to Option 3 (Non-directed only), as it would eliminate the IC/SSF fishery in NY due to the exclusive use of beach seines.

Trip Limits

3 AP members support Option 1: Status Quo

Catch Accounting

1 AP member supports Option 1: Status Quo

Other Comments

- One AP member wanted to express their desire to have beach seines considered separately from haul seines due to the vast differences between the gear types, particularly when describing the NY fishery.
- AP member Jeff Kaelin was unable to attend the meeting and shared the written comment for Lund's fisheries with the AP to express his preferred management options, which is included in the briefing materials as an organization letter.