Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: Atlantic Menhaden Management Board

FROM: Atlantic Menhaden Advisory Panel

DATE: October 13, 2020

SUBJECT: Recommendations on 2021-2022 Fishery Specifications

The Advisory Panel (AP) met virtually at 5:00 PM on October 8, 2020 to (1) review updated fecundity (FEC) target and threshold ecological reference points (ERP); (2) provide recommendations on the 2021-2022 fishery specifications; and (3) elect a new AP Chair. AP members in attendance represented commercial harvesters and processors, recreational anglers, and conservation coalition members. Additionally, three AP members were unable to participate and instead submitted written comments ahead of time, which were raised during the meeting by the AP Chair.

Participating AP Members:
Vincent Balzano (ME)
Melissa Dearborn (NY)
Jeff Deem (VA – written comment)
Paul Eidmen (NJ)
Bob Hannah (MA – written comment)
Peter Himchak (NJ)
Ken Hinman (VA – written comment)
Jeff Kaelin (NJ, Chair)
James Kellum (VA)
Meghan Lapp (RI)
Patrick Paquette (MA)
David Sikorski (MD)
Scott Williams (NC)

The following is a summary of the meeting and discussion had by the AP members. Individual AP comments, which were summited by both participating and non-participating members, are appended to this report.

ERP Fecundity Target and Threshold
ASMFC Staff reviewed the updated FEC target and threshold based on the ERP fishing mortality (F) target and threshold approved by the Board in August 2020. The AP asked clarifying questions to better understand the ERP assessment and how the FEC reference points were calculated. There were no recommendations made by the AP.

2021-2022 Total Allowable Catch Alternatives
7 AP members spoke or submitted comment in favor of status quo (216,000 mt) for 2021-2022. Rationale included:

- Given the precautionary nature of previous TAC decisions, which resulted in F below the ERP F target in recent years, a risk of 66% of exceeding the ERP F target will not adversely impact the role menhaden play in the environment.
- It is overly precautionary to set the TAC for menhaden based on the risk of exceeding the ERP F target. For example, the federal risk policy for setting an acceptable biological catch (ABC) is based on risk of exceeding the overfishing limit (OFL), a value akin to the ERP F threshold; status quo has a 0% chance of exceeding the F threshold in both years.

- Since the striped bass population is overfished, there is less demand for menhaden right now and it was explained previously that even setting the TAC to zero for menhaden would not be enough to restore the striped bass population.
- Given the precautionary nature of the TAC in recent years, maintaining the TAC at current levels for the next 2-years is reasonable, and supportive of the environment and the fishery.
- The TAC should remain status quo particularly during this time of economic crisis due to the COVID-19 pandemic. Additionally, harvest in 2020 will be well below the TAC due to lost fishing opportunity thus providing an additional buffer to the fishery.

5 AP members spoke or submitted comment in favor of setting the TAC at a level associated with a 50% probability of exceeding the ERP F target in 2021 and 2022. Rationale included:

- Fishing at the ERP F target is intended to maintain a forage base for striped bass and other predator species that support important commercial and recreational fisheries; 50% risk tolerance of exceeding that F target is appropriate and consistent with past decisions.
- The Board should continue on the path of ecosystem-based management and not revert back to single-species management approaches. These TAC values are guided by new ERP modeling and management approaches which the Board committed to in August with the adoption of ERPs.
- It's important the Board give the ERP models every opportunity to do what they are intended to do; future decisions should be consistent with the ERPs that have been implemented.
- These decisions go beyond helping rebuild the striped bass population. Anything less than a 50% probability isn't appropriate. The value of other fisheries that depend on menhaden as forage must continue to be considered.
- Yes, there is good abundance of menhaden right now, and that is the result of precautionary management actions; these new ERPs allow for continued success.

Elect New AP Chair

Megan Lapp (RI) was elected the new AP Chair. Ms. Lapp will assume the chair position following the 2020 ASMFC Annual Meeting. The AP thanked Mr. Kaelin for his years of professionalism and service as Chair of the AP.

Other Comments

AP members shared on-the-water experiences in recent years, and commented that there have been more small fish and fewer large, older fish in the catch particularly in the Northeast. The AP also expressed concern about the 6,000 pounds incidental catch provision, namely that participation (effort) has increased to concerning levels in recent years and the harvest under the provision does not count towards the TAC. The AP recommends that these issues be addressed in the next management document for Atlantic menhaden.

The AP adjourned at 6:45 PM.

Max Appelman

From: Jeff Deem <deemjeff@erols.com>
Sent: Wednesday, October 7, 2020 1:28 PM
To: Max Appelman
Cc: Jeff Kaelin
Subject: [External] Menhaden AP

Max:
Good afternoon.

I understand you will be handling the Menhaden AP meeting tomorrow afternoon. I wanted to let you know that I may not be able to participate. I have surgery tomorrow morning for a Parkinson's Disease treatment that may take five hours. If I am able I will be on line. If not, I have a few questions that I would like answered if possible.

First, I have seen a study that stated that Menhaden provide only 20% of a striped bass' diet. In determining the amount of forage required for striped bass did they use menhaden as 20% or does it assume using menhaden to meet 100% of the forage needs for the desired striped bass stock size?

Second, why are recruits predicted to drop dramatically if fecundity is expected to rise.?

I have not heard who is willing step into the Chairman's position other than Megan Lapp. If there are other volunteers I would have to consider them all. At the moment, I have no problem with her in that seat.

On the TAC. This fishery has grown so substantially that we allocated percentages to states that had not seen enough menhaden for a directed fishery in 50 years, if ever. I am comfortable with leaving the TAC where it is or adding a slight increase unless we see a substantial drop in the stock size.

Thanks for your time. I hope to be on line.
Jeff Deem

Max Appelman

From: Ken Hinman <khinman@wildoceans.org>
Sent: Wednesday, October 7, 2020 8:06 PM
To: Kirby Rootes-Murdy; ATLANTIC MENHADEN ADVISORY PANEL
Cc: Spud Woodward; Max Appelman; JEFF KAELIN; ATLANTIC MENHADEN INTERESTED
Subject: [External] RE: REMINDER: Atlantic Menhaden AP Webinar scheduled for October 8 from 5-7pm- Draft Agenda and Memos

Dear Kirby, Max, Spud, Jeff *et al*,

Because of a prior commitment to do volunteer work in Lexington, I will be unable to participate in the Atlantic Menhaden Advisory Panel webinar tomorrow evening. I have read the materials from the Technical Committee (stock projection memo) and, as you know, have been participating in the development of ecological reference points (ERPs) for menhaden for two decades now. So I am providing my position on the proposed TAC for 2021-22 and accompanying rationale for inclusion in the AP summary.

Position: Adopt a Total Allowable Catch that has no more than a 50% chance of exceeding the ERP target, i.e., the maximum fishing mortality rate (F) on menhaden that sustains striped bass at their biomass target. According to the TC's stock projection memo (Table 1), that would correspond to a TAC of no more than 176,800 tons in 2021 and 187,100 tons in 2022.

Rationale: Such a conservative TAC would also provide a buffer to account for the overfished status of Atlantic herring and the poor condition of alternative prey species (river herring, shad, butterfish and mackerel, e.g.), the needs of other dependent predators (seabirds, marine mammals, sharks and large pelagic fishes), and other uncertainties, which is precisely what an ERP should do.

In my opinion, anything less would not constitute an ecosystem-based approach to managing menhaden and could not be characterized as such. The ASMFC has invested significant time and resources to get us to this "point," and the Menhaden Management Board should be strongly urged by the Advisory Panel to take this action which will benefit so many Commission-managed species and the fisheries that depend on them, directly and indirectly.

Thank you for considering my views and I hope you have a productive meeting.

Best regards,

Ken Hinman
Lovettsville, Virginia

From: Kirby Rootes-Murdy [mailto:krootes-murdy@asmfc.org]
Sent: Friday, October 02, 2020 11:26 AM
To: ATLANTIC MENHADEN ADVISORY PANEL
Cc: Spud Woodward; Max Appelman; JEFF KAELIN; ATLANTIC MENHADEN INTERESTED
Subject: REMINDER: Atlantic Menhaden AP Webinar scheduled for October 8 from 5-7pm- Draft Agenda and Memos

Good Morning Atlantic Menhaden AP members,

Max Appelman

From: Robert Hannah <zoey01930@yahoo.com>
Sent: Thursday, October 8, 2020 2:51 PM
To: Max Appelman
Subject: [External] Scheduled AP Webinar

Good afternoon Max,
Do to a family matter that just arose I will not be able to participate in this evenings meeting. How ever I do have a few comments and concerns I would like to be included in the minutes of the meeting.
As a stakeholder in the Fisheries, I would like the TAC to stay as Status Quo.
However I do have concerns about the "year classes" from the 2020 season. There was a change in the catch/year classes that until this year were not noted. We saw very few 5-6 year old fish that were landed; mostly 2-4 year old class fish. Which makes me wonder if there is a gap in the year classes. Typically up north we would see and be fishing on the older year class fish.
Another area that concerns me is the 6 thousand pound permits. This permit was originally put in place as a By-Catch permit for the Rock Fisherman in the Chesapeake. However states have now turned it into a full time Seine Fishery, growing in numbers yearly.
All of these added permits will have a dramatic impact on the limited numbers of fish and the Fisheries as a whole. And unless I am mistaken this catch is not counted in the yearly TAC.
Thank you for including me in this meeting. I would like to be kept informed and participate in future meetings.
Regards, Robert Hannah

Sent from my iPad

Max Appelman

From: Peter Himchak <Peter.Himchak@cookeaqua.com>
Sent: Thursday, October 8, 2020 6:55 PM
To: Max Appelman
Cc: JEFF KAELIN
Subject: [External] My comments on the TAC setting process for 2021 and 2022

Max, Kindly accept my comments as an AP member.

Comments for the ASMFC Atlantic Menhaden Advisory Panel Webinar

October 8, 2020

In my 45 year career in fisheries management, I have had the privilege and benefit of serving on both the Mid-Atlantic Fishery Management Council (6 years) and many ASMFC Management Boards (8 years), after serving on many ASMFC Technical Committees.

I am quite familiar with the concept of risk analysis, especially when dealing with target and threshold reference points, and the overarching goal of maintaining resource sustainability and preventing overfishing.

I served on the MAFMC during the development of the ABC Control Rules and Risk Policies for the conservation and management of all federally managed species under the Magnuson Act.

In setting an Acceptable Biological Catch (ABC), the Councils' risk policies mandated that there could not be greater than a 50% risk of exceeding the Overfishing Limit (OFL), that is, a value akin to a threshold reference point, either F or biomass, used in the ASMFC process.

I find it confounding and overly precautionary that the emphasis on setting menhaden TAC projections for 2021 and 2022 are all highlighted by the risk of exceeding the target ERP value (Table 2) and there is little to no discussion on the non-existent to minimal risk associated with exceeding a threshold ERP values under any of the scenarios (Table 3).

I realize that the target ERP is defined as the maximum F on menhaden and therein, I think, lies the misguided discussion on risk, because if one reads the entire definition of the target ERP F, it is based on keeping striped bass at their biomass target when striped bass are fished at their F target.

The striped bass resource is overfished and overfishing is occurring, hence the current biomass of striped bass is significantly below its target biomass, and even below its threshold biomass. So, what biomass of striped bass currently exists that does not have access to sufficient numbers of menhaden as forage? None!

It has been pointed out in the SEDAR 69 ERP Assessment Report and presented by ERP WG representatives that no decrease in the menhaden TAC, even to the extent of a moratorium, alone, can restore striped bass to their target biomass.

It will take serious management action through an AM 7 to restore striped bass to their target biomass by 2029. In the meantime, the industries are being forced to leave more and more menhaden in the water for an unachievable goal.

The ASMFC has managed menhaden in such a precautionary manner since the implementation of AM 2 in 2013 that even with the development of ecological reference points, the resource was demonstrated to be below the target ERP F.

In this context, even a risk analysis of 70% of exceeding a target ERP F is should not be troublesome in diminishing the ecological role that menhaden serve in the ecosystem.

The commercial fisheries for menhaden have been critically constrained for many years under a precautionary TAC, always a risk assessment on target values and not threshold values, that simply asking to maintain an existing TAC of 216,000 mts. for the next 2 years is reasonable and supportive of the ecosystem.

The Board is being asked to set a short term 2 year menhaden TAC and the TAC is being driven by the need for forage, primarily for striped bass. The striped bass resource has less than a 50% probability of achieving its target biomass by 2029. So, why is the industry being asked to consider anything less than the current TAC, that would be a significant increase of fish left in the water when there are already sufficient numbers of menhaden in the water already to serve their ecological functions.

Peter Himchak

Max Appelman

From: paulyfish reeltherapy.com <paulyfish@reeltherapy.com>
Sent: Wednesday, October 14, 2020 8:21 AM
To: Max Appelman; Toni Kerns
Subject: [External] Addition to my comments on the Management board option

10 13 20
Dear Max:
Atlantic menhaden serve as forage for striped bass, bluefish, weakfish, summer flounder, bluefin tuna and other species that drive the recreational fishing economy in on the East coast, as well as whales, dolphins, birds that contribute to ecotourism activities.
The Atlantic States Marine Fisheries Commission's visionary action in August 2020 to adopt Ecological Reference Points for Atlantic menhaden management was an important acknowledgment of the key role menhaden play in the ecosystem. Now, at its October meeting, the Commission must effectively implement this new system by setting a coast-wide catch limit that is likely to succeed in meeting the new ecological target.
According to the Atlantic Menhaden Technical Committee, the TAC that would lead to a 50% probability of exceeding the new ecosystem target fishing mortality rate for 2021-2022 (combined) is 176,800 mt per year. This catch limit would be consistent with other species managed by the Commission.
However, given the poor condition of other forage species, especially Atlantic herring, the Board should adopt an additional conservation buffer to assure adequate forage for striped bass and other species. In fact, Atlantic herring are now overfished, justifying a substantial reduction in catch to assure adequate forage for striped bass and other species.
In the ecological reference points decision document presented by the ERP Work Group to Management Board in August, the "threshold scenario," (which included Atlantic herring at levels higher than current levels but below 2017 levels), required Target F=.03, far lower than the current ERP Target F =.19.
For this reason and others, I am requesting that the Menhaden Management Board adopt the most conservative 2021-2022 Total Allowable Catch limit (TAC) option of 148,700 MT. This option has a 25% probability of exceeding the ERP Target.
We thank you for your ongoing managerial leadership and we look forward to collaborating with you to rebuild striped bass and other key species managed by the ASMFC.
Sincerely,

Paul
Capt. Paul Eidman
Menhaden Advisory panel member

Capt. Paul Eidman
732.614.3373
paulyfish@reeltherapy.com

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www.reeltherapy.com
www.menhadendefenders.org
www.anglersconservationnetwork.org
www.anglersforoffshorewind.org

Comments Submitted by Stakeholders

October 8, 2020

Kirby Rootes-Murdy
Senior Fishery Management Plan Coordinator
Atlantic States Marine Fisheries Commission (ASMFC)
1050 North Highland Street, Suite 200 A-N
Arlington, Virginia 22201

Dear Mr. Rootes-Murdy and members of the ASMFC Atlantic Menhaden Management Board:

On behalf of conservation-minded recreational anglers from Maine to Florida, we urge the ASMFC to adopt a precautionary Total Allowable Catch (TAC) for Atlantic menhaden that has no more than a 50% probability of exceeding the fishing mortality (F) target under the newly adopted Ecological Reference Points (ERPs) for 2021-2022.

We commend the Board for its decision to adopt ERPs at its August meeting, recognizing the integral role that menhaden play as forage for a broad array of fishes, marine mammals, and seabirds. Among the species menhaden supports are iconic target species for recreational anglers. Striped bass, which is the most intensely targeted recreational species along the Atlantic coast (16.6 million trips in 2018),[1] feed heavily on menhaden and was the most sensitive species to menhaden harvest in the NWACS-MICE model used to develop ERPs.[2] Further south, tarpon, which are an important contributor to East Florida's $5 billion marine recreational fishing economy,[3] rely on menhaden during seasonal migrations up and down the South Atlantic coast.

With ERPs in place, the Board should move to implement management measures based on what now represents the best available science for menhaden management. And in line with precautionary approaches to setting the menhaden TAC in recent years—the TACs for 2017-2020 were never projected to have more than a 20.5% probability of exceeding the single-species target F[4,5,6]—the Board should move to select a TAC that has no more than a 50% probability of exceeding the new ERP target F. According to the Atlantic Menhaden Technical Committee, the TACs that would lead to a 50% probability of exceeding the ERP target F for 2021-2022 combined is 176,800 mt.[7] While this TAC represents an approximate 18% reduction from the current 216,000 mt TAC, it is similar to the TACs implemented for 2013-2014 (170,800 mt) and for 2015-2016 (187,880 mt).

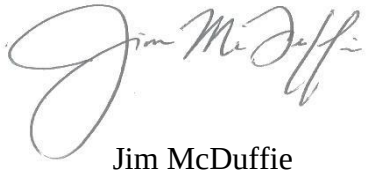
In practice, however, a 50% probability of success should be considered a bare minimum given recent deterioration in the status of some stocks included in the NWACS-MICE model, along with the fact that the model only includes a handful of the numerous species that depend on menhaden. The recently adopted ERPs assume 2017 stock status for the five species other than menhaden included in the model. However, the recent stock assessment update for Atlantic herring—the sole menhaden prey substitute included in the model, which was neither overfished nor experiencing overfishing in 2017—determined that the species is now overfished, with recruitment having declined since 2013 and now at record-low levels.[8] This decline in Atlantic

herring is likely to lead to increased predation pressure on menhaden not currently captured in the NWACS-MICE model. Moreover, a key predator of menhaden, striped bass, has also become overfished since 2017.[9] While reducing directed fishing mortality on striped bass is the most critical factor in helping the stock to rebuild, ensuring a robust forage base will help to ensure the species' ability to recover. Lastly, while the NWACS-MICE model represents the best available science for menhaden management, it only includes a small number of managed finfish species, to the exclusion of other menhaden predators such as marine mammals, seabirds, and fishes such as tarpon. In the absence of a more comprehensive ecosystem model, adopting a TAC with a precautionary buffer that ensures a greater than 50% probability of meeting the target F will help to account for the needs of these predators, while also recognizing recent declines in the striped bass and Atlantic herring stocks.

In August, the Board set a nationwide precedent by adopting ERPs for Atlantic menhaden and thus formally accounting for its ecosystem role in management. We urge the Board to take the crucial next step and adopt a precautionary approach to protecting both forage species and the predators that depend on them and support valuable coastal fisheries. We thank you for your consideration.

Sincerely,

Willy Goldsmith, Ph.D.
Executive Director
American Saltwater Guides Association



Jim McDuffie
President and CEO
Bonefish & Tarpon Trust

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[1] Personal communication from the National Marine Fisheries Service, Fisheries Statistics Division (Oct 6, 2020).
[2] ASMFC (Feb 2020). Atlantic Menhaden Assessments Overview. http://www.asmfc.org/uploads/file/5e5e84fbAtlanticMenhadenAssessmentsOverview_Feb2020.pdf
[3] NOAA Fisheries. 2019. Addendum to Fisheries Economics of the United States 2016. https://www.fisheries.noaa.gov/resource/document/addendum-fisheries-economics-united-states-2016
[4] ASMFC (Oct 2016). Timeline for Atlantic Menhaden Action. Presentation to the Atlantic Menhaden Management Board. http://www.asmfc.org/files/Meetings/2016AnnualMeeting/AtlanticMenhadenBoardPresentationsOct2016.pdf
[5] ASMFC (Nov 2017). Atlantic Menhaden Draft Amendment 3. Presentation to the Atlantic Menhaden Management Board. http://www.asmfc.org/files/Meetings/AtlMenhadenBoardNov2017/AtlanticMenhadenBoardPresentations_Nov2017.pdf
[6] ASMFC (Aug 2019). 2019 Fishery Management Plan Review for Atlantic Menhaden. Presentation to the Atlantic Menhaden Management Board. http://www.asmfc.org/files/Meetings/2019SummerMtg/AtlMenhadenBoardPresentations_Aug2019.pdf
[7] ASMFC (Sep 2020). Atlantic Menhaden Technical Committee Stock Projection Memo. http://www.asmfc.org/files/Meetings/79AnnualMeeting/AtlanticMenhadenBoard.pdf
[8] NOAA Fisheries Northeast Fisheries Science Center (Sep 2020). 2020 Management Track Peer Review Committee Report. https://s3.amazonaws.com/nefmc.org/9a_2020-Management-Track-Assessment-Report-Revised-8-12-2020_508.pdf
[9] ASMFC (May 2019). ASMFC Stock Assessment Overview: Atlantic Striped Bass. https://www.asmfc.org/uploads/file/5cc9ba4eAtlStripedBassStockAssessmentOverview.pdf

CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

October 13, 2020

Kirby Rootes-Murdy
Senior Fishery Management Plan Coordinator
Atlantic States Marine Fisheries Commission
1050 North Highland Street, Suite 200 A-N
Arlington, VA 22201

Re: Chesapeake Bay Foundation Comments on Fishery Specifications for Atlantic Menhaden

The Chesapeake Bay Foundation, Inc. (CBF) respectfully submits the following comments regarding the Atlantic States Marine Fisheries Commission's (ASMFC) upcoming specification setting effort for the Atlantic Menhaden fishery for the 2021 and 2022 fishing seasons. CBF is a 501(c)(3) non-profit organization, founded in 1967 whose mission is to restore and protect the ecological health of the Chesapeake Bay. CBF's 300,000 members and e-subscribers across the United States, have long expressed a particular interest in the management of Atlantic Menhaden (menhaden) due to its vital role in the ecosystem. This has led to CBF's strong advocacy efforts over the last 20 plus years for a precautionary approach to management of the menhaden resource in the Chesapeake Bay and along the entire Atlantic Coast.

In November 2017, ASMFC's Atlantic Menhaden Management Board (the Board) approved Amendment 3 to the Interstate Fishery Management Plan for Atlantic menhaden "with the goal of managing the menhaden resources in a way that balances menhaden's important ecological role, primarily as a prey species, with the needs of all user groups."[1] This past summer, in support of that stated goal, the Board unanimously approved the use of ecological reference points (ERPs) for the management of Atlantic menhaden. This decision was years in the making and the Board should be commended for taking such an important step in the management of this important forage species.

The Board's upcoming fishery specification decision will be extremely important in trying to reach the previously stated objectives for the Atlantic menhaden fishery using the newly adopted ERPs to set a total allowable catch (TAC). In order to meet the objective of ensuring Atlantic menhaden's ecological role, we urge ASMFC's Atlantic

[1] Letter from Robert E. Beal, Atlantic States Marine Fisheries Commission, to The Honorable Wilbur Ross, Secretary of Commerce, p. 1, November 15, 2019

Menhaden Management Board to adopt a TAC that has no more than 50% probability of exceeding the ERP target for menhaden during the 2021 and 2022 fishing seasons.

ASMFC management boards have commonly adopted management options with at least a 50% chance of reaching their management objective in the past. In addition, this minimal level of assurance of management success is required by National Standard 1 for the eight regional fishery management councils. Given the uncertainty noted in the projection analysis performed by the Atlantic menhaden Technical Committee (TC), adoption of a TAC with at least a 50% chance of success will help ensure the ecosystem needs are met by leaving sufficient forage in the water[2].

From an ecological perspective there are numerous reasons for setting a fishery specification with at least a 50% chance of meeting the ERP target. First, it will help ensure that striped bass, a species that is currently considered "overfished" based on the most recent stock assessment[3] and highly dependent upon menhaden, can begin to rebuild with sufficient forage in place to help ensure these predators are in no way prey limited as their population rebounds. Next, with several other important forage species including Atlantic herring[4] and American shad[5] currently considered overfished or depleted based on recently released assessments, adopting a TAC with at least a 50% chance of success will help ensure the wide array of piscivorous predators in the Mid-Atlantic region will have adequate forage throughout their geographic range.

The Board will also need to consider setting a separate TAC for the 2021 and 2022 seasons or keeping a single TAC for both years. Based on the TC's projection memo, menhaden recruitment is expected to fall after the 2020 fishing season[6]. Falling recruitment is of particular concern here in the Chesapeake Bay region were low recruitment has been experienced for over 20 years. In order to hopefully minimize any drop in recruitment in future years, we believe it is in the best interest of the menhaden resource to set the TAC at a single more conservative level for the next two years.

We appreciate your consideration of these comments. As noted, this fishery specification decision will be extremely important for not only ensuring a healthy population of Atlantic menhaden, but also the host of predators that are dependent on them as an essential part of their diet. Continued precautionary management by the Board will help ensure not only a more prolific menhaden population, but a more robust Mid-Atlantic ecosystem that will help ensure the recovery of a number of menhaden predators whose current populations are at levels that are raising management concerns.

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[2] Atlantic Menhaden Technical Committee. Stock Projection Memo. September 30, 2020

[3] Atlantic States Marine Fisheries Commission. Summary of the 2019 Benchmark Stock Assessment for Atlantic Striped Bass. 2019

[4] Wilberg, M., Houde, E., Serchuk, F. 2020 Management Track Peer Review Committee Report. 2020

[5] Atlantic States Marine Fisheries Commission. 2020 American Shad Benchmark Stock Assessment and Peer Review Report. 2020

[6] Atlantic Menhaden Technical Committee. Stock Projection Memo. September 30, 2020

Sincerely,

Chris Moore

Chris Moore
Senior Regional Ecosystem Scientist
Chesapeake Bay Foundation

cc: Alison Prost, Vice President, Environmental Protection & Restoration, CBF
Peggy Sanner, Virginia Executive Director, CBF
Christy Everett, Hampton Roads Director, CBF
Allison Colden, Maryland Fisheries Scientist, CBF

October 13, 2020

Via Electronic Mail
Mr. Spud Woodward
Chairman, Menhaden Management Board
Atlantic States Marine Fisheries Commission
1050 N. Highland Street, Suite 200 A-N
Arlington, VA 22201

RE: Total Allowable Catch for the Atlantic Menhaden Fishery, 2021-22

Dear Chairman Woodward:

The Menhaden Fisheries Coalition, representing menhaden harvesters for bait and reduction purposes, as well as those who rely on this fishery, respectfully asks the Menhaden Management Board to adopt a status quo total allowable catch (TAC) for the next two years. This request is consistent with the current ecological reference point (ERP) target of 0.19 given current ecosystem conditions, the status of the menhaden resource, and present socio-economic realities. We explain why below and hope you and the members of the Menhaden Board will give these comments serious and thoughtful consideration.

The Menhaden Fisheries Coalition has supported and continues to support management of menhaden to maintain both the fishery itself (and those who depend upon it) and the stock's role in the ecosystem. More specifically, the Coalition supports the use of current ERP fishing mortality rate (F) target, which the Board adopted at its August 2020 meeting.

The primary issue facing the Board next week is the trade-off in terms of foregone allowable catch to marginally increase the certainty with which that target will be achieved. For example, to get to a 50 percent certainty, it would require nearly a 20 percent cut in the menhaden TAC. For reasons explained below, we do not believe the benefits of increased certainty outweigh the negative impacts that would result.

As we noted in our letter to the Board prior to the August 2020 meeting, the Commission's management of this stock has achieved an F that has mostly been at or below the ERP target over the past 19 years. In only four years since 1998 was the target exceeded, and then by only a small amount. Menhaden has not been overfished on an ecological basis since the early 1980s. Consistently, menhaden biomass, measured in terms of fecundity, has been above ecosystem target levels over the same timeframe (in fact, back to the early 1990s). Both conditions – F below, and fecundity above, target – prevailed in 2017, the year of the latest (peer-reviewed) stock assessment.

The most surprising aspect of these results is that there were no active management measures in place until 2013, when the first fishery-wide TAC was established. Furthermore, since Amendment 2 established the initial TAC, the Board has not managed the stock using single-species reference points, but rather by *ad hoc* ecosystem management achieved through precautionary catch limits.

We recognize that the projections show that maintaining the current TAC for the next two years has a 65 percent chance of exceeding the target in 2021, and 60 percent in 2022. No doubt, this likelihood should be considered as the Board makes its decision.

But there are other factors which should weigh in this decision. First of all, fishing at the status quo has a zero percent chance of resulting in overfishing. Second, the stock is projected to remain above its ERP fecundity target levels even if the current harvest level is maintained. Third, and perhaps most importantly, the ERP target F is premised on the assumption that striped bass are their target biomass levels and being sustainably fished. Neither of these conditions currently prevail.

In other words, the ERP target is currently the best estimate of fishing mortality rates necessary to provide forage for a fully rebuilt striped bass population.

Further, the other assumptions used to develop the target are that the other predators in the model – weakfish, bluefish, and dogfish – are at 2017 abundance. Both spiny dogfish and bluefish have subsequently been assessed and have been found to be below 2017 levels. Atlantic herring, the other prey species in the model, is also less abundant than 2017. However, sensitivity analyses have shown that the model over-estimates the importance of herring to striped bass.

It appears, then, that even if maintaining the status quo TAC might result in an F slightly above the target, the current menhaden population is large and healthy enough to provide ample extra forage for its depleted primary predators. Thus, there is little to no risk that the amount of menhaden left in the water will be too low to satisfy its ecological role. This is one reason that a higher risk of exceeding the target should be deemed acceptable.

Another is that, while the Commission has not finalized its risk policy, the current draft under consideration would allow for setting a TAC at a level with a 60 to 65 percent probability of exceeding the target. The conditions under which such a result would be deemed acceptable include a population which is below its target F and above its biomass target. Both are true for the menhaden fishery. Another factor is the amount of uncertainty in the stock assessment. The menhaden stock assessment is among the most robust in fisheries management.

The final factor—short-term socio-economic impacts—is perhaps the most important. The TAC needed to achieve a 50 percent probability the target would not be exceeded in 2021 is 176,800 mt. That is a reduction of over 39,000 mt, or a decrease of 18 percent, from current levels. While the impact a reduced TAC may have on overfished predator stocks is uncertain, it is certain that such dramatic cuts will have high negative short-term social and economic impacts.

The confluence of coronavirus pandemic, which has reduced demand for many fish stocks, and the need to reduce herring catches, has led to the menhaden fishery being one of the few bright spots for coastal fishing communities. Demand for menhaden products and menhaden as bait are extremely strong, even as other revenue sources are drying up for many communities.

The lobster and crab fisheries are particularly feeling the squeeze as prices for their products are dropping while the cost of bait is increasing. Next year, no more than 5,000 mt of herring will be allowed to be harvested. To add to that an 18 percent cut in menhaden catches will cause hardship for all these fisheries at a time when they and their communities can ill afford it.

Thus all the conditions specified in the draft risk policy are met that would allow for a higher probability of exceeding the target: low F, high abundance, low uncertainty in the assessment, and large, negative short-term socio-economic impacts. We also note that this draft risk policy is even more risk-averse than most similar policies utilized at the federal level, which generally focus on probabilities that thresholds, not targets, will be exceeded. Generally speaking, federal risk policies allow for some risk – as much as 50 percent – that overfishing will occur. Here, the status quo presents no such risk.

In summation, the Menhaden Fisheries Coalition strongly encourages you and your fellow Board members to maintain the current TAC for the next two years. You should reject the argument that to do so ignores the ERP target and is an abandonment of the Board's objective to manage menhaden on an ecological basis. Rather, accepting a higher risk of exceeding the target F is a straightforward application of routine fisheries management principles and an exercise of managerial discretion which recognizes that assumed conditions – principally a rebuilt striped bass population – do not reflect current reality.

For nearly two decades, the Board has managed menhaden in a manner that has created conditions that have allowed for successful management of important predator stocks. That is, for about 20 years, menhaden have been fished at levels suggested by the ecosystem model. Undoubtedly, the commitment to continue managing menhaden for its ecological role will pay dividends as ending overfishing and rebuilding of these stocks occurs. Under current conditions, however, there is no apparent risk to these objectives by maintaining the current TAC, which will also support the fisheries, people, and communities that depend upon the menhaden fishery.

Thank you very much for your time and attention to these comments.

Sincerely,

/s/ Wayne Reichle
Chairman, Menhaden Fisheries Coalition
President, Lund's Fisheries, Inc. Cape May, NJ

cc: Members of the Atlantic Menhaden Management Board

From:	Tom Lilly
To:	Tina Berger
Subject:	[External] Fwd: CHANGES REQUESTED TO SECURE SOME BALANCE TO CHESAPEAKE BAY
Date:	Monday, October 12, 2020 10:39:02 AM
Attachments:	2020-07-24_172246 Katie Drew.pdf 2020-08-25_220701 WATTS.pdf 2020-10-12_095502 CBF Release.pdf 2020-09-05_160101 Cierci.pdf 2020-09-05_163750 MILLER.pdf

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Tina Please distribute this...Sending the last 2 scans by next mail...can you acknowlege ? Thanks

To The ASMFC Commissioners, Policy Board, Menhaden Board and Menhaden Technical Committee., Bob Beal ..... Will you please consider these things before you make an allocation to Virginia? Your past allocation resulted in one company, Omega Protein, receiving 90.04% of the Virginia allotment or 335,348,569 pounds of menhaden.

If you managers knew there is enough menhaden left in the Chesapeake Bay to properly feed and grow our precious wildlife while the factory fishing was going on, that would be one thing. However, we understand you have never had that critical information. (scan Drew 2246) . There seems to be complete uncertainty whether the bay's forage base is ever rebuilt because there are 12 industrial sized purse seiners targeting the flow of food. There is complete uncertainty whether the most important obligation the Commission and the State agencies have to the Bay and its people is being fulfilled. That obligation is to conserve their natural resources by allocating menhaden where they do the most ecological, social and economic good. Our question is " Should the board proceed with setting a TAC or an allocation to Virginia when they do not know if the bay fish and wildlife will have adequate forage during the season" ? To proceed with a Virginia allocation which is based solely on history and not based on science or the proper socio-economic factors or any standard of fairness or equality would seem to violate your basic rules and principles Are we correct here or not?

There are certain "inconvenient" facts about Chesapeake Bay's two iconic and represenative species. ospreys and striped bass. There are thousands of nesting ospreys covering our 200 mile long main Bay. Our Ospreys, like our large striped bass breeding stock, are highly dependent on menhaden. When Osprey brood feeding demands peak they are not finding enough menhaden. So many babies are starving that Ospreys are dying out in the main bay according to Dr. Bryan Watts of the Center for Conservation Biology of William and Mary College, Virginia, one of the country's most experienced avian biology researchers. (scan 0701). If there are menhaden to be found Ospreys will find them and they are not finding enough of them.This fact alone should be enough to make the managers realize that the Omega purse seiners are removing far too much menhaden from the bay. A recent CBF press release echoes Dr Watt's letter. (scan 5502) What do you value ? Saving the ospreys ,that represent our many struggling bird species on Chesapeake Bay or the commercial taking of menhaden ? Please discuss this at the upcoming meeting.

The second "inconvenient" fact in the CBF press release is that menhaden in the striped bass diet has fallen fron 70% to 8%. The large breeding stock is far below target. Director Bob Beal describes the Bay fisheries as in poor condition. Are those two facts/opinions not enough to reduce the Virginia allocation substantially ? If not what would be? Researchers from Maryland DNR have concluded that the mycobacteriosis that devastated Bay striped bass during the early 1990s was due to insufficient menhaden when the stock rebounded after the moratorium. We are setting up exactly the same scenerio right now as the stock multiplies due to conservation measures. because we are not allowing the forage base to rebuild in Chesapeake Bay. Do the Board members agree there is substantial risk here that can be eliminated by reducing the Virginia allocation ? As we said, there are 12 industrial sized purse seine ships targeting the schools of memhaden as the schools try to migrate back into the Bay.. Dr. Cierci and Dr. Miller have written on this subject (scans 0101 and 3750) Do the Board members agree with what Dr, Cierci and Dr. Miller have to say? If so what action are you taking?

What do you value? Continuing to give Omega Protein 15,000 schools of menhaden forage or restricting that fishing in some reasonable way so the ecology of Chesapeake Bay can be restored and the striped bass spawning stock rebuilt? To understand the declines in the commercial catches, the watermen, the fishermen and the charters from data from VMRC and MD DNR see scan (4349)

Please review the attached Amendment 3 comparisons to see the vast differences in benefits between saving the menhaden to benefit the people of Virginia and Maryland compared to giving the resource to Omega Protein. For example.... the benefits are four thousand to one (Omega fishermen vs Virginia and Maryland fishermen).....two thousand to one (Omega Protein, one business vs 2,000 traditional bay food fish watermen and charter operations) , 120 vs 3,700 (crew members on Omega Boats vs crew on watermen and charter boats) $6 million vs $885 Million (retail spending Omega (estimate) vs retail from anglers) , 9 vs 284,000 (Omega fishing boats vs. Virginia and Maryland fishing boats) , $6 million vs $ 1.59 billion (investment in fishing boats by Omega vs Bay owners) (see scan 4500)

Thank you for your consideration Thomas Lilly Menhaden Project 443 235 4465

AMENDMENT 3 COMPARISON . We consider the number of people, jobs and businesses that are affected by whether menhaden are allocated to Omega Protein or to "user groups" three and four. These are the people , the jobs and businesses, that benefit by leaving menhaden in the water to feed and grow abundant and healthy fish

OMEGA	MARYLAND	VIRGINIA	BENEFIT RATIOS
(1.) BUSINESSES AFFECTED (2019 data)			
One foreign Owned company	645 Charter Businesses 683 finfish watermen	269 Charter Businesses 270 Finfish watermen	1 versus 1,867 businesses

There were 88,009 Virginia charter trips in 2000 , the trips dropped from 65,943 in 2015 to 33,197 in 2019. . there were 412,000 number of anglers in 2009 to 294,000 in 2019.
There were 18,199 Maryland charter trips in 2,000, 16,771 in 2010 and 9,571 in 2019., according to the figures the Number of anglers stayed constant around 112,000.
The number of finfish watermen in Maryland was 1,112 in 2000. In 2010 it was 953 and in 2018 was 783.

CONCLUSION Reducing the allocation to Omega would benefit 1,867 traditional Maryland and Virginia small businesses. If fishing improved by 20% it would allow many of these people to stay in business and increase the chances younger people would continue to work on the water. That alone is a very meaningful goal to achieve. Charter captains could provide more successful fishing for up t0 400,000 to 500,000 customers in just our two states.

(2.) COMMERCIAL CREWS AFFECTED			
8 purse seiners with 15 crew, 120 crew	1,328 working boats with 2,656 crewmen	523 working boats with 1,046 crewmen	120 versus 3,702 (crew)

CONCLUSION

Fewer watermen and fewer fish means much less fresh Maryland and Virginia caught Fresh fish for our local markets and restaurants . There is a lot of dollars added as fresh fish moves from the waterman at the dock to the wholesaler to the distributor and then to the retail level of markets and restaurants. The 935 finfish watermen sell to over 90 independent fish wholesalers in the two states . All of this economic activity occurs only when menhaden are left in the water to grow abundant healthy fish for our watermen to catch. None of this happens when the menhaden are taken and exported.

(3.) FISHERMEN AFFECTED			
Omega has 120 Fishermen	228,000 anglers includes 30,000 Seniors add at least 30,000 children	428,000 fishermen	120 versus 656,000 fishermen

CONCLUSION Maryland has seen a decline in salt water anglers of over 50,000 and Virginia over 20,000. Many of these people have given up the thing they enjoyed most. The numbers are not there but this means thousands of kids aren't fishing, People in our area are not fishing close to what it was just a few years ago. Based on average spending this is a loss of over 100 Million dollars annually to the two states.

(4.) RETAIL SPENDING BY ANGLERS...SALES TAX COLLECTION ...WAGES.....JOBS

OMEGA	MARYLAND	VIRGINIA	TOTAL/RATIO
$ 6 million spending	$225 million spending	$360 million	$6 million vs $885 million
$ 20 thousand tax	$13.5 million tax	$18 million tax	$.30 vs $21.5 million tax
$ 20 million wages	$108 million wages	$139 million	$20 vs $274 million
300 jobs	1,972 jobs	2,864 jobs	300 vs. 4,836 jobs

CONCLUSION The ASMFC striped bass Amendment 6 section 2.2.5 states the impact of recreational striped bass fishing as $7.7 billion and supporting 104,867 jobs. When menhaden serve their natural purpose of growing more abundant healthy fish their value is spread up and down the Atlantic Coast to the economic benefit of hundreds of thousands of our fellow citizens not just to one foreign fish meal company

(5.) ECONOMIC IMPACT OF RETAIL SPENDING ON FISHING BOATS.....JOBS SUPPORTED.....
TAX REVENUE (NMMA report – Michigan State University)

OMEGA	MARYLAND	VIRGINIA	TOTALS/RATIOS
8 boats	142,952 power boats	264,379 power boats	
	100,000 boats fishing	184,000 boats fishing	8 vs. 284,000 boats
Retail spending...			
$4-6 million	$1.0 billion total , average	$1.2 billion total,average	$ 6 million vs.
	$5,600 @ is $560 million	$5,600 @ is $1.03 billion	$1.59 billio

Businesses directly involved (boat building, motor work, supplies, services and dealers);

Unknown –	50% total Md. Businesses is	50% total Va. Businesses is	
Estimate 30	521	378	30 vs. 899

Existing Jobs for recreational boating vs Omega existing jobs for 8 boats in use same categories

Unknown-			
Estimate 100	6,641	6,628	100 vs 13,239

(reference National Marine Manufacturing Assoc....scans 0196,0197)

(6) INVESTMENT IN FISHING BOATS

OMEGA	MARYLANDERS	VIRGINIANS	TOTALS/RATIOS
8 boats @	60,000 boats @	66,000 boats@	8 vs 126,000 boats

$600,000 is $4.8 million	$20,000@ is $1.2 billion	$20,000 is $1.32 billion	$4.8 million vs. $2.52 billion

COMMENT The Omega boats are owned by one foreign company to our knowledge. The 100,000 plus boats used for fishing by Maryland and Virginia families often are often the favorite way that families spend quality time together enjoying Chesapeake Bay , its rivers and creeks. Collectively these Maryland and Virginia friends and families spend 4,304,000 days saltwater fishing according to the ASA . For the entire Atlantic states this total would be over 99 million days. If fishing on the Chesapeake rebounded even twenty percent from its low rate now we could see a million or more days of enjoyable fishing by families, friends and kids in Maryland and Virginia resulting in hundreds of millions of dollars of economic impact.

MARINAS AFFECTED BY THE QUALITY OF COMMERCIAL AND SPORT FISHING

Omega operates from one Marina.	There are over 500 marinas In Maryland (marinas.com)	There are over 300 marinas in Virginia	1 versus 800

CONCLUSION There is a direct connection between the frequency of use of our marinas, boat ramps and parks both on the bay and ocean. We believe numbers of people fishing and fishboat use has declined by over 50% in a few short years.

< 87 Results for **katie drew**

Re: [External] Our discussion

From: Katie Drew <kdrew@asmfc.org>
To: THOMAS LILLY <foragematters@aol.com>
Cc: PHILIP ZALESAK <flypax@md.metrocast.net>
Date: Thu, Feb 27, 2020 12:04 pm

Hi, Tom--

Per our phone discussion:

1.) Yes, ASMFC has access to fairly timely reporting for reduction fishery landings in Chesapeake Bay (generally speaking, landings from the bait fishery in Chesapeake Bay are not finalized until the following year). We do not know how many menhaden are left in the water in Chesapeake Bay specifically. We can estimate how many menhaden will be left after a fishing season on a coastwide level (Bay and ocean combined) based on our model projections, but the model projections and the stock assessment do not have the spatial structure to calculate how many menhaden are in the Bay vs. the coast.

2.) We do not have the ability to measure or calculate the number of menhaden in the Maryland portion of Chesapeake Bay on a daily/weekly/monthly level.

Katie

From: Tom <foragematters@aol.com>
Sent: Wednesday, February 26, 2020 4:25 PM
To: Katie Drew
Cc: PHILIP ZALESAK
Subject: [External] Our discussion

Katie;
Nice speaking to you. Please confirm that the ASMFC receives information as to the volume of the weekly and monthly menhaden catch by Omega but does not have a measure of how much menhaden is left in the water, in Virginia, as that fishing progresses daily, weekly and monthly.
Is it also correct to say that the ASMFC does not have a means to measure and does not know the amount of menhaden in the water in the Maryland Chesapeake Bay on any given day , week or month as the menhaden season progresses ?
As usual, thanks for your help.

Sent from my iPhone

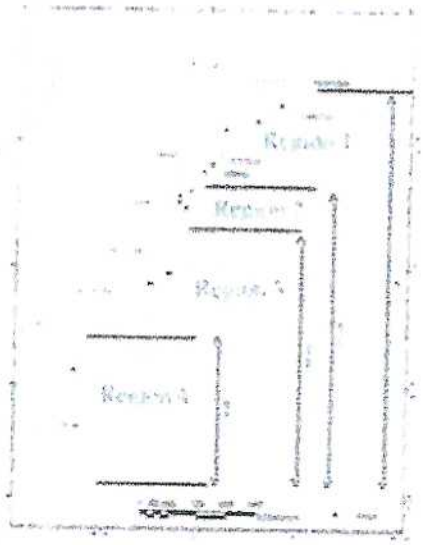

Figure 1. Atlantic menhaden regions studied for migration - Region 2 encompasses the Chesapeake Bay Region (reference (e))

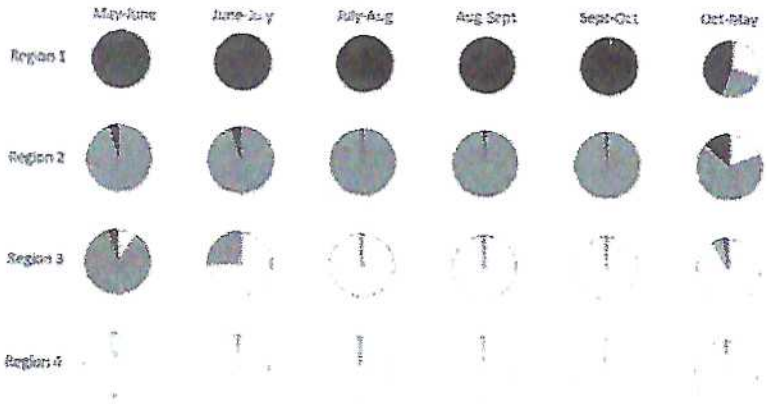

Figure 2. Estimated movement rates for each month May through October and between October and May. Each pie chart shows the fraction of the population in a region that was estimated to move to each of the other regions. Note migration during the reduction fishing season in Region 2. There is very little migration (reference (e)).

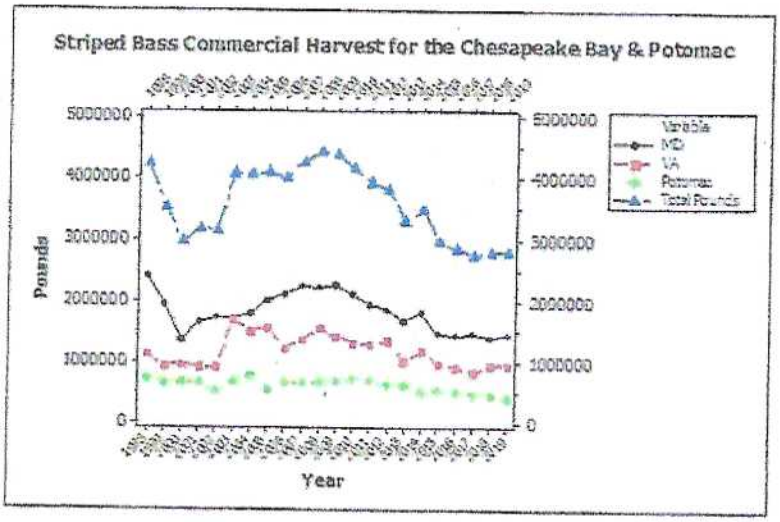

Figure 3. Decline in the Commercial Harvest of Striped Bass in the Chesapeake Bay and Potomac River since 1998 (Source: MD DNR, VMRC, and the PRFC)

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– 30 –

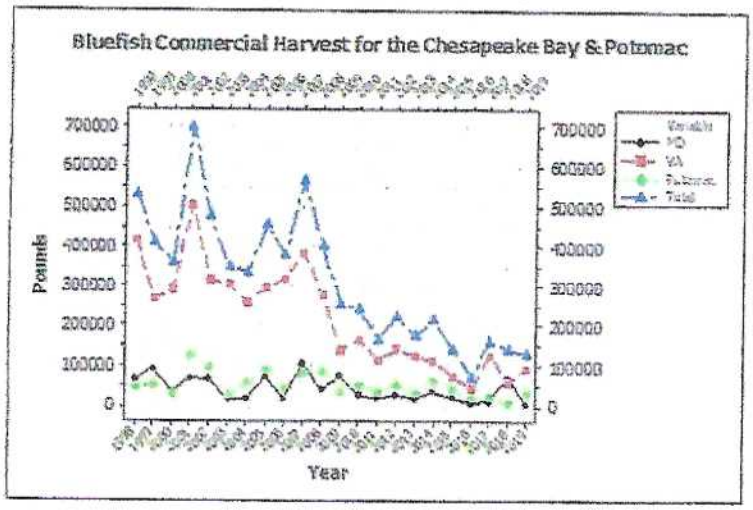

Figure 4. Decline in Commercial Harvest of Bluefish in the Chesapeake Bay and Potomac River since 1998 (Source: MD DNR, VMRC, and PRFC)

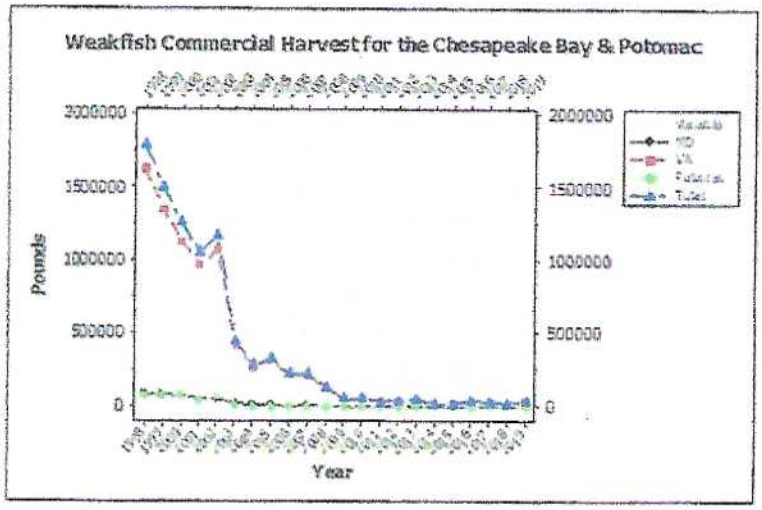

Figure 5. Decline in the Commercial Harvest of Weakfish in the Chesapeake Bay and Potomac River since 1998 (Source: MD DNR, VMRC, and PRFC)

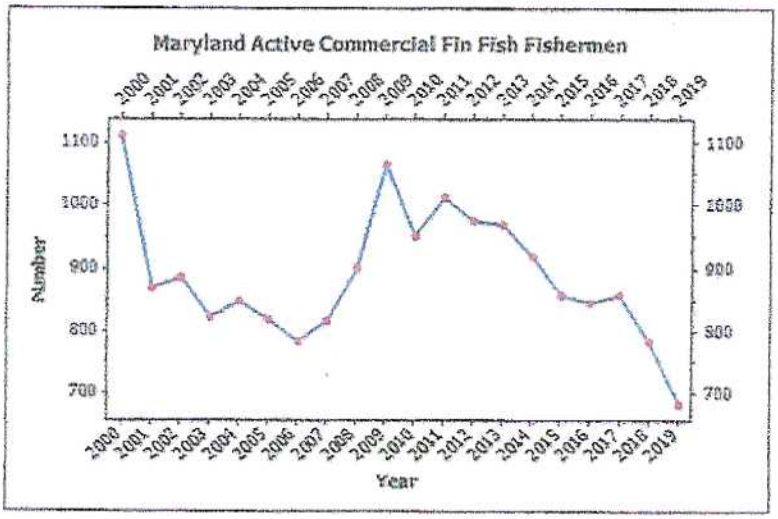

Figure 6. Decline in Maryland Commercial Fin Fish Fishermen since 2000 (Source: Gina Hunt, MD DNR – 2/28/2020)

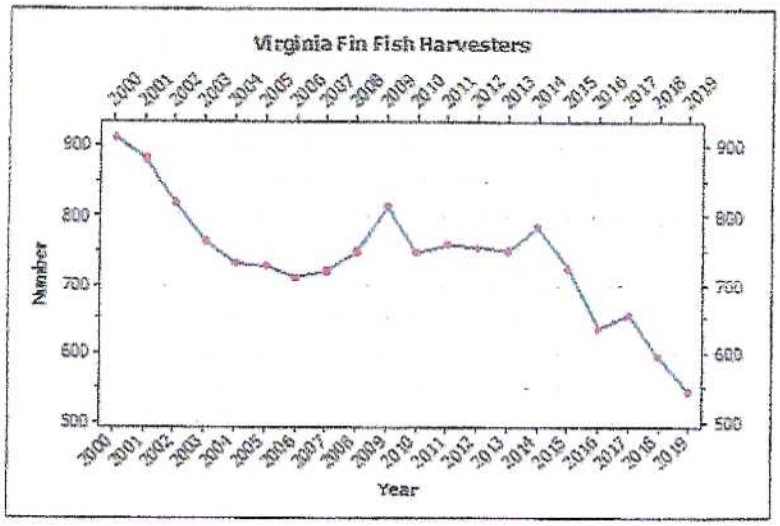

Figure 7. Decline in Virginia Fin Fish Harvesters since 2000 (Source: Pat Geer, VMRC – 4/21/2020)

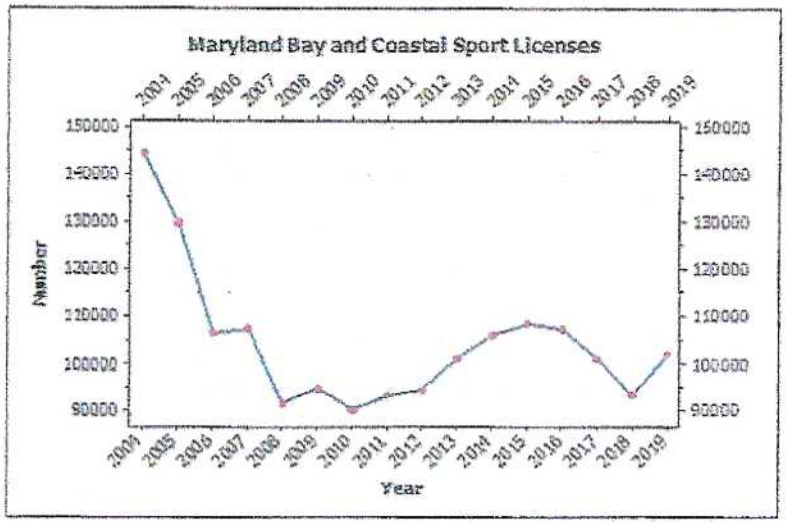

Figure 8. Decline in Maryland Resident Bay and Coastal Sport Licenses since 2004 (Source: Paul Genovese, MD DNR – 8/20/2019)

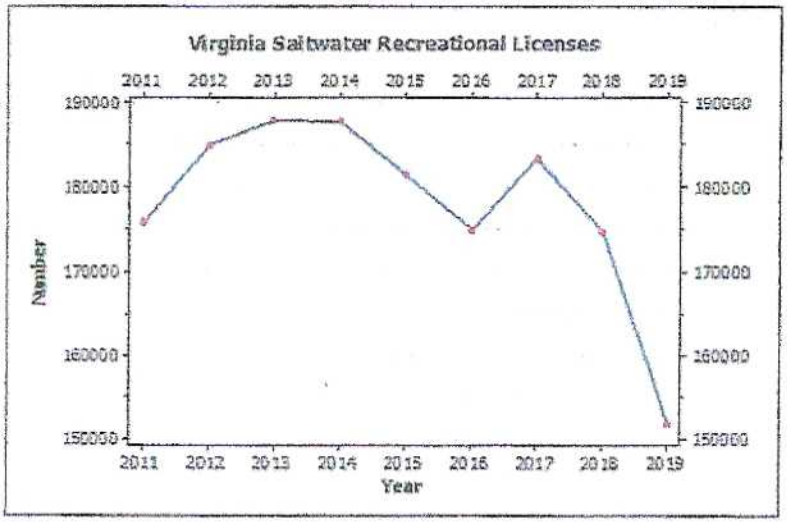

Figure 9. Decline in Virginia Recreational Saltwater Licenses (Source: Alicia Nelson, VMRC - 10/23/19)

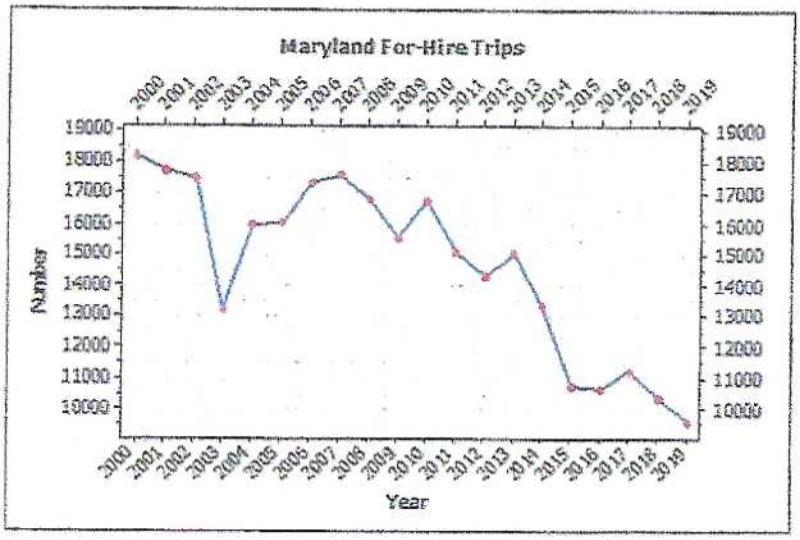

Figure 10. Decline in Total Number of For-Hire Trips (Source – Gina Hunt, MD DNR – 2/28/2020)

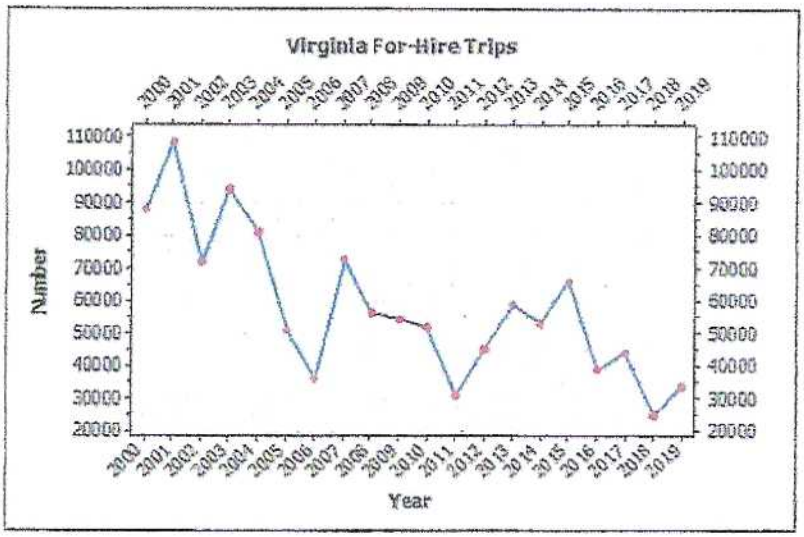

Figure 11. Decline in Total Number of For-Hire Trips (Source: Pat Geer, VMRC – 4/21/2020)

The Center for Conservation Biology

William & Mary

20 August 2020

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The Honorable Ralph Northam
Governor, State of Virginia
PO Box 1475
Richmond, VA 23218

Dear Governor Northam,

The menhaden is a keystone fish within the Chesapeake Bay ecosystem. Many of our most iconic species including the bald eagle, osprey, great blue heron and brown pelican depend on menhaden stocks to sustain their breeding populations within the Bay. Other species such as common loons and northern gannets that stage within the Chesapeake also depend on menhaden to fuel their migrations. Approximately 30% of the North Atlantic gannet population comes into the Bay during the spring to feed on menhaden before flying north to breeding grounds in Newfoundland.

Deep withdraws of menhaden stocks for the reduction fishery is having an impact on consumer species. We have conducted fieldwork with osprey throughout the lower Chesapeake Bay for 50 years and data demonstrate ongoing impacts. Through three generations of graduate students (1975-2006) we have observed shifts in diet and an associated reduction in productivity. Fish delivery rates were more than three times higher in 1975 compared to 2006. Menhaden, once the dominant fish in the diet now represents less than 30%. Shifts in diet away from menhaden have been coincident with a 90% reduction in menhaden stocks (Maryland, DNR haul surveys). No other fish species available to consumers provides the energy content of menhaden. 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.

Menhaden provide critical ecosystem services within the Chesapeake Bay. We request that the needs of the broader ecosystem be considered when setting harvest policy and that menhaden stocks be maintained at levels that support a healthy Chesapeake Bay ecosystem.

Sincerely,

Bryan Watts

Bryan D. Watts, Ph.D.
Mitchell A. Byrd Professor of Conservation Biology
Director, Center for Conservation Biology
College of William and Mary

From: Cieri, Matthew
Matthew.Cieri@maine.gov
Subject: Re: YOUR REMARK ??
Date: Aug 2, 2020 at 10:17:54 AM
To: Tom Lilly foragematters@aol.com

Hi Tom,

Yes, that is correct. That is what our work showed. At the current striped bass fishing mortality, striped bass won't rebuild no matter how low they set menhaden fishing mortality.

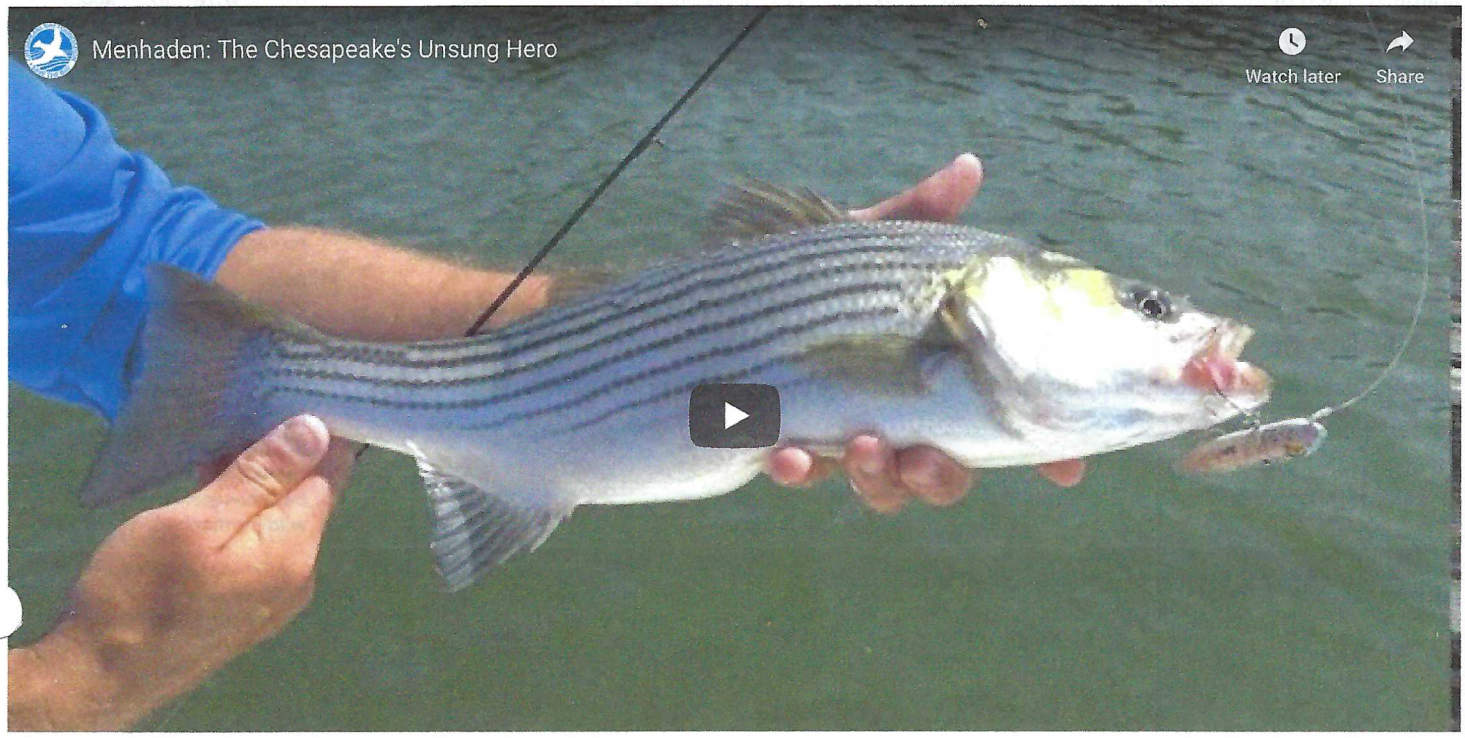
Any meaningful rebuilding of striped bass has include reductions in the striped bass fishing mortaiity from where it currentiy is. They can get part of the way there with reductions in menhaden fishing, but it won't be enough to rebuild the stock to target levels without reductions in striped bass fishing mortality.

Matt

From: Tom Lilly <foragematters@aol.com>
Sent: Sunday, August 2, 2020 12:06:20 AM
To: Cieri, Matthew <Matthew.Cieri@maine.gov>
Subject: YOUR REMARK ??

8/13 4536

ATLANTIC MENHADEN



42 9/05

The Most Important Fish in the Bay

UPDATE: August 5, 2020—the Atlantic States Marine Fisheries Commission has taken the first step to formally consider the importance of menhaden to other predators, including striped bass, bluefish, and weakfish, in its management framework. This is the first time that ASMFC has committed to including Ecological Reference Points, the value of the species to the ecosystem, in its fishery management plans. *(Read CBF's press release)* (http://www.cbf.org/news-media/newsroom/2020/all/asmfc-adopts-groundbreaking-change-to-menhaden-fishery-management.html)

Atlantic menhaden, *Brevoortia tyrannus*, are small, nutrient-packed fish that are central to the Chesapeake Bay's food chain and support one of the largest commercial fisheries on the Atlantic coast. As a result of their environmental and economic importance, management of the menhaden fishery is a political flashpoint across the region.

Why are menhaden (also called bunker or pogy) important in the Chesapeake Bay?

Menhaden have been called the "most important fish in the sea." In the Bay, they create a vital connection between the bottom and top of the food chain. They eat tiny plants and animals, called plankton, by filtering them from the water. In turn, menhaden are a rich food source for many predator fish—including rockfish (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/rockfish/) (striped bass), bluefish, and weakfish—as well as ospreys (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/ospreys/), bald eagles, dolphins, and whales. (See our video, *Why Whales Follow Menhaden into the Bay (http://www.cbf.org/news-media/multimedia/video/why-whales-follow-menhaden-into-the-bay.html).*)

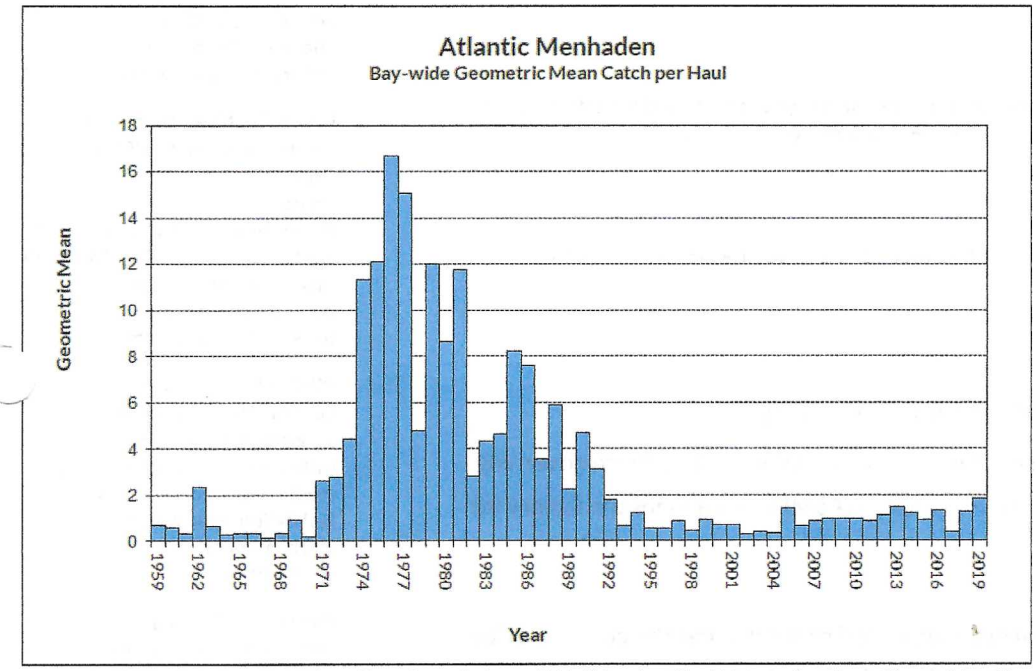
Rockfish, in particular, historically relied on menhaden for a large portion of their diet. Researchers have raised concerns that a lack of menhaden could make rockfish more vulnerable to disease.

Why should I care about menhaden?

If you enjoy feeling the tug of a big rockfish on the end of your line (and savoring the taste of it at dinner) or watching osprey snatch a silvery fish from the water, you have menhaden to thank! These small fish are the unsung heroes of the Chesapeake Bay, providing a rich food source for many of our favorite critters.

What are the threats facing menhaden?

The Bay is one of the most important nurseries for menhaden, helping to sustain the population along the Atlantic coast. Menhaden eggs hatch in the open ocean before drifting on currents into the Bay, where juvenile fish live and grow for their first year of life. But long-running scientific surveys show the number of young menhaden in the Chesapeake Bay dropped dramatically in the early 1990s and remains low.



This graph represents the average number of juvenile menhaden available ("abundance"), which has a direct impact for predators like striped bass and osprey. Unfortunately, the number of young menhaden produced in the Bay each year has been poor for the last 20 years.

DURELL, E.Q., AND WEEDON, C. 2019. STRIPED BASS SEINE SURVEY JUVENILE INDEX WEB PAGE. DNR.MARYLAND.GOV/FISHERIES/PAGES/JUVENILE-INDEX.ASPX. MARYLAND DEPARTMENT OF NATURAL RESOURCES, FISHERIES SERVICE

At the same time, almost three-quarters of all menhaden caught on the East Coast are harvested by the Omega Protein Corporation—a Canadian-owned company that fishes largely in or near the mouth of the Bay. Omega operates the sole remaining menhaden reduction facility on the U.S. East Coast in Reedville, Virginia. The plant reduces (cooks and grinds up) the fish for a variety of uses, such as nutritional supplements, food additives, and feed for livestock and fish farms.

Menhaden by the Numbers

70% The amount of an adult rockfish's diet historically filled by menhaden.

8% The amount of an adult rockfish's diet currently filled by menhaden.

of-menhaden-conservation.html)

Northern Green Frog (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/northern-green-frog-at-home-in-the-bog.html)

Ospreys (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/ospreys/)

Pelicans (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/moving-on-up-pelicans-are-at-home-on-the-bay.html)

River Otters (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/aquatic-ambassadors-river-otters-are-poster-pups-for-conservation.html)

Rockfish (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/rockfish/)

Sea Nettles (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/sea-nettles.html)

Smallmouth Bass (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/smallmouth-bass.html)

Sturgeon (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/sturgeon.html)

Terrapins (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/terrapins-swimming-for-shore.html)

Tundra Swans (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/tundra-swans-a-fading-winter-chorus-in-the-chesapeake.html)

Stay up to date about the Bay!

8%	*The rockfish population in the Chesapeake Bay is showing signs of malnourishment and increasing mortality.*
75%	The amount of an osprey nestling's diet filled by menhaden in the 1980s.
28%	The amount of an osprey nestling's diet filled by menhaden today. *Though the number of nests throughout the Bay region has improved, nestling mortality is as high as it was in the DDT era.*
65%	The annual removal of adult menhaden from East Coast waters.
2,500	The number of jobs supported by menhaden-dependent species in Virginia alone.
$236	In millions, the total amount fishing for menhaden-dependent species contributes to Virginia's economy.
8%	The current Atlantic menhaden population compared against historical levels.

Why is there a harvest cap for menhaden in the Bay?

Menhaden migrate along the Atlantic coast from Florida to Maine. An interstate governing body—the Atlantic States Marine Fisheries Commission (ASMFC)—manages the fishery for the 15 states that share the coastline.

Over the past two decades, **fishery managers have raised concerns that the concentration of fishing effort in Bay waters could disrupt the Bay's food chain**, harming populations of rockfish and other predator species. As a precaution, the ASMFC first set a cap for Omega's industrial menhaden harvest in the Bay in 2006. In 2017, the ASMFC voted to update the cap to reflect more recent menhaden harvest levels in the Bay.

In blatant disregard for the fishery management process, Omega knowingly exceeded the cap in 2019 (http://www.cbf.org/news-media/newsroom/2019/virginia/cbf-expresses-deep-concern-with-omega-proteins-announcement-it-will-violate-the-bay-menhaden-cap.html). The violation resulted in a unanimous ASMFC vote (http://www.cbf.org/news-media/newsroom/2019/virginia/fisheries-board-finds-virginia-out-of-compliance-with-menhaden-harvest-cap.html) referring Virginia to the U.S. Department of Commerce for noncompliance with interstate fishery rules. The Secretary of Commerce decided to uphold the ASMFC decision (http://www.cbf.org/news-media/newsroom/2019/virginia/us-commerce-department-takes-action-after-virginia-menhaden-limit-exceeded.html). The new harvest cap approved by the VMRC in April 2020 lowers the amount of menhaden that

SIGN UP (HTTP://WWW.US/STAY-UP-TO-DATE-ABOUT-THE-BAY.HTML)

In the News

08/05/20: ASMFC Adopts Groundbreaking Change to Menhaden Fishery Management (http://www.cbf.org/news-media/newsroom/2020/all/asmfc-adopts-groundbreaking-change-to-menhaden-fishery-management.html)

04/28/20: New Menhaden Limits Approved by VMRC, Preventing Fishery Shutdown (http://www.cbf.org/news-media/newsroom/2020/virginia/r-menhaden-limits-approved-by-vmrc-preventing-fishery-shutdown.html)

02/27/20: Menhaden Legislation Approved by Virginia House And Senate (http://www.cbf.org/news-media/newsroom/2020/virginia/n-legislation-approved-by-virginia-house-and-senate.html)

01/29/20: Menhaden Legislation Approved by Virginia House and Senate Committees (http://www.cbf.org/news-media/newsroom/2020/virginia/n-legislation-approved-by-virginia-house-and-senate-committees.html)

12/19/19: U.S. Commerce Department Takes Action after Virginia Menhaden Limit Exceeded (http://www.cbf.org/news-media/newsroom/2019/virginia/u-commerce-department-takes-action-after-virginia-menhaden-limit-exceeded.html)

11/21/19: CBF Statement on Gov. Northam's Call for Action on Menhaden (http://www.cbf.org/news-media/newsroom/2019/virginia/c

can be caught in the Chesapeake Bay to 51,000 metric tons per year. Due to Omega Protein's excess harvest during the 2019 fishing season, this year's level will be further lowered to 36,192 metric tons. The VMRC's action avoids a shutdown of the menhaden ishery due to noncompliance with the ASMFC.

statement-on-gov-northams-call-for-action-on-menhaden.html)

VIEW MORE (HTTPS://WWW MEDIA/NEWSR PRIMARY_ISSUI

How can better management protect menhaden and the Bay?

For more than 25 years (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/menhaden/timeline-of-menhaden-conservation.html), CBF has worked with partners toward a healthy menhaden population in the Chesapeake Bay to ensure that this nutrient-packed fish can fulfill its key role in the food chain. In 2012, ASMFC's Benchmark Stock Assessment showed the total menhaden population was at its lowest level on record. Peer-reviewed population estimates showed menhaden have been overfished for 32 of the past 54 years. A strong fisheries management plan was needed to rebuild the population, and once rebuilt, to maintain it. (See *A Timeline of Menhaden Conservation* (http://www.cbf.org/about-the-bay/more-than-just-the-bay/chesapeake-wildlife/menhaden/timeline-of-menhaden-conservation.html).)

For decades, management decisions and catch limits relied on "single species" stock assessments, independent of other species. In other words, **they accounted for demand from the fishing industry, but did not account for demand from rockfish, osprey, and other animals that rely on menhaden for food.** This did not necessarily mean there would be sufficient stock to sustain the larger ecosystem needs.

That changed in August 2020, when the ASMFC adopted benchmarks, known as ecological reference points (http://www.cbf.org/blogs/save-the-bay/2017/10/a-historic-opportunity-for-fish-and-fishermen.html), that will allow managers to **account for menhaden's role in the food chain** and set catch limits accordingly. CBF has been a strong proponent of this process and will continue to advocate for an ecosystem-based approach to menhaden management.

SAVE THE BAY

Founded in 1967, the Chesapeake Bay Foundation (CBF) is the largest independent conservation organization dedicated solely to saving the Bay.

October 13, 2020

Spud Woodward
Chair
Atlantic Menhaden Management Board
Atlantic States Marine Fisheries Commission
1050 North Highland Street, Suite 200 A-N
Arlington, Virginia 22201

Dear Chairman Woodward and Members of the Atlantic Menhaden Management Board,

As members of the recreational fishing and boating industry, we write to encourage the Board to capitalize on its visionary decision to establish ecological reference points (ERPs) by adopting a conservative total allowable catch which allows striped bass to reach its biomass target.

As you know, menhaden are an important food source for striped bass, bluefish, and other gamefish that keep Americans coming back to Atlantic waters and spending money in our coastal communities. Unfortunately, many menhaden predators are in decline, including striped bass, the species most dependent on menhaden as forage. Scientific studies have shown Atlantic menhaden make up between 23%[1] and 66%[2] of striped bass diets.

This is of particular concern to the recreational fishing and boating community because striped bass fishing is the largest marine recreational fishery in the United States, contributing billions of dollars to the economy. Striped bass are now overfished, so it is imperative that the ASMFC do what it can to improve the viability of this fishery, including leaving more menhaden in the water to help them rebuild.

According to the Atlantic Menhaden Technical Committee projections, in order to have a 50% probability of achieving the menhaden ERP fishing mortality (F) target that will bring striped bass back to its spawning stock biomass target (when striped bass are fished at their respective F target), menhaden catch must be reduced to 176,800 metric tons. Given the importance of menhaden to striped bass, we encourage the Board to adopt a more conservative quota, one that has a greater than 50% probability of achieving the ERP F target.

Furthermore, the purpose of the ecosystem modeling was to establish menhaden ERPs that enable striped bass to rebuild to its biomass target. To put it simply, if menhaden are not maintained at their ERP F target, then striped bass are unlikely to rebuild to their biomass target no matter what measures are put in place to reduce striped bass fishing mortality. Our community was supportive of measures to reduce the striped bass fishery to its F target and maintaining menhaden at their ERP F target is the complimentary management step needed to rebuild the valuable striped bass fishery.

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[1] Overton, A. S. 2003. Striped Bass predator-prey interactions in Chesapeake Bay and along the Atlantic coast. University of Maryland, Eastern Shore, Princess Anne

[2] Hartman, K. J., and S. B. Brandt. 1995. Comparative energetics and the development of bioenergetics models for sympatric estuarine piscivores. Canadian Journal of Fisheries and Aquatic Sciences 52:1647-1666

Our community is also concerned with the recent overfished status of Atlantic herring, an important alternative prey for striped bass identified through the development of ERPs. The ERP F target is based in part on the 2017 condition of Atlantic herring when the stock was above its SSB threshold. However, even after accounting for seasonal prey availability, if Atlantic herring were modeled at their current SSB level, menhaden F would need to be significantly reduced. Therefore, in the context of ecosystem-based management of forage, our community recommends that the Board use an additional buffer to account for management and scientific uncertainties.

The tradeoffs associated with setting a conservative quota for menhaden are worth it when you consider that saltwater recreational fishing along the Atlantic is enjoyed by 6 million anglers annually, contributing $11.3 billion to the economy and supporting 120,236 jobs. The jobs created by these fisheries are the lifeblood of our Atlantic coastal communities as more than 90% of the sportfishing and boating industry is made up of small businesses. As we recover economically from this unprecedented pandemic, it is vital that the recreational fishing community have abundant fishing opportunity and that gamefish have adequate forage.

Over the past decade, recreational fishing organizations, coastal businesses and hundreds of thousands of individual anglers and conservationists have called on managers to leave enough menhaden in the water to feed the wildlife that support vibrant recreational fishing, boating and other industries that boost coastal economies. As stewards of our shared public resources, we are partners in the ASMFC process and share a unified goal of healthy fish populations and fishing communities. We urge the Board to follow through on its visionary step to establish ecological reference points, by adopting a conservative coastwide total allowable catch that will help rebuild the iconic striped bass fishery.

Sincerely,

Glenn Hughes
President
American Sportfishing Association
Alexandria, VA

Chris Edmonston
President
BoatU.S.
Springfield, VA

Jeff Angers
President
Center for Sportfishing Policy
Baton Rouge, LA

Patrick Murray
President
Coastal Conservation Association
Houston, TX

Chris Horton
Senior Director Fisheries Policy
Congressional Sportsmen's Foundation
Washington, DC

Whit Fosburgh
President and CEO
Theodore Roosevelt Conservation Partnership
Washington, DC

Matt Gruhn
President
Marine Retailers Association of the Americas
Minneapolis, MN

Frank Hugelmeyer
President
National Marine Manufacturers Association
Washington, DC

Massachusetts Lobstermen's Association, Inc.

8 Otis Place ~ Scituate, MA 02066
781.545.6984

October 13, 2020

Mr. Robert E. Beal, Executive Director
Atlantic States Marine Fisheries Commission
1050 N. Highland Street, Suite 200 A-N
Arlington, VA 22201

Sent via: comments@asmfc.org

Dear Robert,

The Massachusetts Lobstermen's Association (MLA) submits the following comments on behalf of its 1800 members to the Atlantic States Marine Fisheries Commission as they greatly rely on the continued success of the Atlantic menhaden fishery to support their businesses and families alike. Whereas, scores of our Massachusetts commercial lobster/crab fishermen greatly depend on steady access to Atlantic menhaden for bait in order to conduct their commercial lobster/crab fishing businesses.

Whereas, the 2020 Atlantic menhaden stock assessment brought some favorable news for the Atlantic menhaden species and that the fishery is sustainably fishing. With the menhaden neither being over fished nor experiencing overfishing brings great relief to the lobster industry that greatly depends on menhaden as a bait source. This is a great accomplishment to everyone involved; from the fisheries managers to the fishermen, job well done.

Established in 1963, the MLA is a member-driven organization that accepts and supports the interdependence of species conservation and the members' collective economic interests. The MLA continues to work conscientiously through the management process with the MA Division of Marine Fisheries, the Atlantic States Marine Fisheries, and the New England Fisheries Management Council to ensure the continued sustainability and profitability of the many resources in which our fishermen depend upon.

The MLA does not support any cuts to the overall Total Allowable Catch (TAC) to the Atlantic menhaden fishery as it is currently harvesting less than 1% of the total biomass, leaving more than enough fish in the water for its ecosystem function; food. The commercial Atlantic menhaden fishery continues to comply with management changes all the while never seeming to attain these goals leaving the fisheries managers coming back for more.

How is it that the Atlantic menhaden fishery is sustainably harvesting less than 1% of the biomass and the striped bass biomass is still failing? Could it be more than what striped bass are eating and where they are eating it, or has Atlantic menhadens role in the ecosystem function become less desirable to the striped bass? There certainly are plenty of fish to go around and we do not want to lose any more Atlantic menhaden from the Total Allowable Catch.

Thank you for the opportunity to comment and your consideration is much appreciated.

Sincerely,

Beth Casoni

MLA, Executive Director