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Mr. Jim Estes  
Deputy Division Director  
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Mr. William R. Orndorf  
1950 Palomino Road  
Melbourne, FL 32934

October 16, 2020

Dear ASMFC Florida Representatives,

Today the undersigned ask Florida State's delegation to the Atlantic States Marine Fisheries Commission to demonstrate conservation leadership when voting to establish the 2021-2022 coast-wide Total Allowable Catch limits for Atlantic Menhaden at the upcoming Atlantic Menhaden Management Board meeting on October 20<sup>th</sup>.

Atlantic menhaden serve as forage for tarpon, redfish, king mackerel, cobia and many other species that drive the recreational fishing economy in the state of Florida, 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 acknowledgement 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.

**Specifically, we request that the Florida delegation to the Atlantic States Marine Fisheries Commission advocate and vote for a 2021-2022 Total Allowable Catch limit (TAC) that the Commission's own scientific advisors predict will have no more than a 50% probability of exceeding the newly adopted Ecological Reference Point Target Fishing Mortality.**

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. 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). **Setting the Total Allowable Catch at this level or lower would have little to no negative impact on commercial fishers who harvest and land Atlantic menhaden in Florida and would better position forage fish availability to facilitate sustainable populations of Florida's ecologically and economically important predators and gamefish.**

There are many reasons that Florida's State delegation to the Atlantic States Marine Fisheries Commission should not consider Atlantic menhaden catch limits that have less than a flip of a coin chance of maintaining fishing mortality rates at or below the newly adopted Ecosystem Based Reference Point target, not the least of which is that doing so would be inconsistent with the leadership that the State legislature and Governor DeSantis have already taken on fisheries conservation.

We thank you for your ongoing managerial leadership and we look forward to collaborating with you to advance ecosystem-based management approaches for other key species managed by the ASMFC.

Sincerely,

Rob Kramer  
President  
Wild Oceans  
Tallahassee, FL 32318

Jason Schratwieser  
President  
International Game Fish Association  
Dania Beach, FL 33004

Brett Fitzgerald  
Executive Director  
Angler Action Foundation  
Lake Worth, FL 33460

Preston T. Robertson  
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Florida Wildlife Federation, Inc.  
Tallahassee, FL 32301

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Derek June  
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Nikole Heath  
Social Media Director and Event  
Coordinator  
Force-E Scuba Centers  
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Hannah Medd, MSc.  
President  
American Shark Conservancy  
Palm Beach Gardens, FL 33418

cc: Jessica McCawley, Director, FWC Division of Marine Fisheries Management

**National Audubon Society \* Conservation Law Foundation \* National Wildlife Federation \* Wild Oceans**

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 undersigned organizations write in support of the Atlantic Menhaden Management Board (Board) using the Ecological Reference Points (ERPs) adopted at the August, 2020 meeting to set an Atlantic Menhaden Total Allowable Catch (TAC) for 2021 and 2022 at the Board's October, 2020 meeting. **We urge you to adopt a TAC for menhaden that represents a  $\leq 50\%$  probability of exceeding the ERP target of  $F=0.19$ .** Setting a TAC at  $\leq 50\%$  risk of exceeding the ERP fishing mortality target should not significantly limit commercial catches but would ensure that myriad coastal and marine predators, including striped bass, other large predatory fish, coastal birds, sea turtles, and marine mammals have sufficient access to this critical food resource, which will benefit other coastal businesses as well.

According to the analyses developed in the last two months by the Atlantic Menhaden Technical Committee (TC) at the request of the Board, setting a TAC that has a  $\leq 50\%$  probability of exceeding the ERP target would result in a TAC of  $\leq 176,800$  metric tons (mt) for 2021. Given uncertainties inherent in the future stock projections, we believe the TAC of  $\leq 176,800$  mt should be maintained for the 2022 fishing year. In addition to implementing the new ERP framework, this approach ensures F does not result in a  $>50\%$  risk of exceeding the established Target.

When the Board voted unanimously to adopt ERPs for menhaden, it did so recognizing the benefits to other Commission-managed species and the fisheries that depend on them. The suite of other species included in the NWACS-MICE model used to develop and test the ERPs are in poor condition. Striped bass, bluefish and weakfish are all overfished, and spiny dogfish is heavily exploited. Most concerning is the current state of the Atlantic herring population which is overfished at just 29% of its target biomass. These factors, together with the uncertainties associated with the newest Atlantic Menhaden Stock Assessment<sup>1</sup>, call for a conservative approach to managing menhaden. Therefore, any TAC option that would result in a  $>50\%$

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<sup>1</sup> SEDAR (Jan. 2020). SEDAR 69: Benchmark Stock Assessment Report: Atlantic Menhaden. [http://www.asmfc.org/uploads/file/5e4c3a4bAtlMenhadenSingleSpeciesAssmt\\_PeerReviewReports.pdf](http://www.asmfc.org/uploads/file/5e4c3a4bAtlMenhadenSingleSpeciesAssmt_PeerReviewReports.pdf)

probability of exceeding the ERP Target would be inconsistent with the fishery management plan's objective, to "maintain the Atlantic menhaden stock at levels which sustain viable fisheries and support predators which depend on the forage base."<sup>2</sup> In addition, the Board should consider a buffer to further reduce the TAC to more fully account for these risks and uncertainties.

### **The adoption of an ERP for Atlantic Menhaden and Associated Board Action**

At its August, 2020 meeting, the Board adopted an ERP target of  $F=0.19$ , representing the maximum fishing mortality rate ( $F$ ) on menhaden that sustains striped bass at their biomass target when striped bass are fished at their  $F$  target. With this action the Board established a framework to explicitly manage this forage species to protect its vital role coastwide. We applaud this major step forward to achieving the ASMFC's goal of achieving ecosystem-based management of its fisheries. Once implemented, the new ERP framework will go far to ensure there is sufficient forage for wildlife including seabirds, marine mammals, and sea turtles, as well as commercially and recreationally caught fish species.

At its August meeting the Board requested the TC generate TAC projections that have a 25%-60% probability of exceeding the ERP target, in 5% increments, using 2021-2022 combined and as separate years. The Board also requested the TC calculate the percent risk of exceeding the ERP target and threshold if the current TAC was changed by -10% to +10% in 5% increments.

### **The importance of adoption of a TAC for Menhaden that represents a risk of $\leq 50\%$ of exceeding the ERP target of $F=0.19$ .**

A TAC for 2021 that is set to manage menhaden to its ERP target with a high degree of certainty is important for many reasons. It implements the ecosystem-based ERP framework by prioritizing menhaden's role in sustaining the Atlantic coast ecosystem. The ERPs are designed to be responsive to highly-dependent predators. Striped bass was selected as the primary predator against which to evaluate forage requirements through ERPs due to its high level of sensitivity to menhaden biomass. This is vital because, as the TC has previously stated, in the models used to develop the ERPs, coastal piscivorous birds including Brown Pelicans, Bald Eagles, Ospreys, Northern Gannets, Common Loons, terns and gulls are about as sensitive to menhaden biomass as striped bass.

A risk-averse TAC is also needed in light of the overfished condition of Atlantic herring. This oil-rich forage fish is an important dietary component of many predators that also consume menhaden, including seabirds, marine mammals, and many species of commercially and recreationally important fish. The 2020 update stock assessment for Atlantic herring adopted by the New England Fishery Management Council found that Atlantic herring spawning stock biomass (SSB) has been declining since 2014. Atlantic herring SSB in 2019 was 78,883 mt, the lowest since the late 1980s, at a mere 29% of the  $SSB_{Target}$  and 57.9% of the  $SSB_{Threshold}$ .

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<sup>2</sup> ASMFC. 2017. Amendment 3 to the Interstate Fishery Management Plan for Atlantic Menhaden.

Atlantic Herring recruitment has been declining since 1965, and precipitously so since 2009. In 2019, it was less than 20% of  $R_{med}$ .<sup>3</sup>

At the same time, herring are a key part of striped bass diets.<sup>4</sup> After the 2018 benchmark stock assessment, striped bass were declared overfished with overfishing occurring in 2017, the terminal year of the assessment. The Striped Bass Management Board put in place rebuilding measures that includes reducing fishing mortality for this cherished sport species. Given the significant dependence of striped bass on menhaden as forage, especially in light of the overfished condition of herring; plus the overfished status of striped bass and the inherent uncertainty in rebuilding projections, it is critical that sufficient menhaden are left in the water to help striped bass rebuild. Though some have claimed that no amount of menhaden left in the water will enable striped bass to rebuild to their target SSB based on the multi-species model because the Striped Bass Management Board must effectively enact measures to reduce F, conservatively managing menhaden will help the striped bass population to move in the right direction.

### **Uncertainties in stock assessment and future research**

Further uncertainties also warrant a conservative approach. First, as noted above, estimates of predator consumption or productivity for several of the predators used in the ERP models were in an overfished state at the terminal year of the models. In addition, the ERP models developed for this assessment did not include spatial or seasonal dynamics, meaning that prosecution of the fishery in certain places and at certain times could induce negative effects on the local or even coastwide population. Menhaden have only recently returned to the Gulf of Maine in appreciable quantities, for example, so a conservative approach will help to support that continued abundance.

Also, the natural mortality rate applied to Atlantic menhaden in the most recent benchmark stock assessment<sup>5</sup> was high, more than 2.5 times greater than that estimated by NOAA Fisheries for other forage species such as Pacific sardine, Atlantic sardine, and Atlantic herring. This difference between many other national and international stock assessments speaks to the significant uncertainty in estimates of menhaden stock size, exploitation rate and stock sustainability.

Finally, the Board, ERP Work Group, TC, Advisory Panel, and the wider public must continue to work to improve how menhaden are managed in the context of their predators, related prey like Atlantic herring, and the ecosystem. As some of the undersigned noted in our August letter to the

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<sup>3</sup> Wilberg, M., E. Houde, & F. Serchuk (2020). 2020 Management Track Peer Review Committee Report.

[https://s3.amazonaws.com/nefmc.org/2020-Management-Track-Assessment-Report-Revised-8-12-2020\\_508.pdf](https://s3.amazonaws.com/nefmc.org/2020-Management-Track-Assessment-Report-Revised-8-12-2020_508.pdf)

<sup>4</sup> SEDAR. 2020. SEDAR 69 – Atlantic Menhaden Ecological Reference Points Stock Assessment Report. SEDAR, North Charleston SC. 560 pp. available online at: <http://sedarweb.org/sedar-69>

<sup>5</sup> SEDAR (Jan. 2020). SEDAR 69: Benchmark Stock Assessment Report: Atlantic Menhaden.

[http://www.asmfc.org/uploads/file/5e4c3a4bAtlMenhadenSingleSpeciesAssmt\\_PeerReviewReports.pdf](http://www.asmfc.org/uploads/file/5e4c3a4bAtlMenhadenSingleSpeciesAssmt_PeerReviewReports.pdf)

Board, we support the research and modeling recommendations of the ERP Work Group, including:

- evaluating other models (e.g., Multi-Species Statistical Catch-At-Age, Stock Synthesis) for use in addition to or as a replacement for the NWACS-MICE and/or BAM models;
- incorporating additional species, both predator and prey, into multi-species models and ERP-generation, especially groups found in the model to be sensitive to menhaden abundance (e.g., nearshore piscivorous birds); and,
- continuing to address uncertainties related to the changing population status of stocks like Atlantic herring and striped bass.

Thank you for your continued commitment to ecosystem-based management of Atlantic menhaden.

Sincerely,

Anna Weinstein  
National Audubon Society

Zach Cockrum  
National Wildlife Federation

Erica Fuller  
Conservation Law Foundation

Pam Lyons Gromen  
Wild Oceans



# TOWN OF WELLFLEET

300 MAIN STREET WELLFLEET MASSACHUSETTS 02667

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www.wellfleet-ma.gov

Dear ASMFC Commissioners:

October 16, 2020

The Wellfleet Natural Resources Advisory Board requests the Atlantic States Marine Fisheries Commission to demonstrate conservation leadership when voting to establish the 2021-2022 coast-wide Total Allowable Catch limits for Atlantic Menhaden at the upcoming Atlantic Menhaden Management Board meeting on October 20th.

Atlantic menhaden serve as forage for striped bass, bluefish, weakfish, summer flounder, bluefin tuna and other species that drive the recreational fishing economy in the Commonwealth of Massachusetts, as well as whales, dolphins, birds that contribute to many 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 acknowledgement 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.

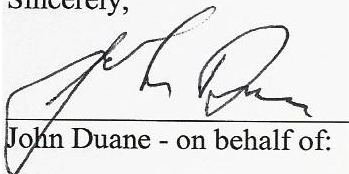
**Specifically, we request that the Massachusetts delegation to the Atlantic States Marine Fisheries Commission advocate and vote for a 2021-2022 Total Allowable Catch limit (TAC) that the Commission's own scientific advisors predict will have no more than a 50% probability of exceeding the newly adopted Ecological Reference Point Target Fishing Mortality. 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.**

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. 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). **Setting the Total Allowable Catch at this level or lower would have no negative impact on commercial fishermen who harvest and land Atlantic menhaden in Massachusetts and would better position forage fish availability to facilitate the coast-wide recovery of striped bass, bluefish, and weakfish to their target levels.**

There are many reasons why our State delegation to the Atlantic States Marine Fisheries Commission should not consider Atlantic menhaden catch limits that have less than a 50 /50 chance of maintaining fishing mortality rates at or below the newly adopted Ecosystem Based Reference Point target, not the least of which is that doing so would be inconsistent with the leadership that the State legislature and Governor Baker have already taken on fisheries conservation.

We thank you for your ongoing managerial leadership and look forward to collaborating with you to rebuild striped bass and other key species managed by the ASMFC which are so critical to the socio-economic wellbeing of all residents of Massachusetts.

Sincerely,



John Duane - on behalf of:

The Wellfleet Natural Resources Advisory Board

*John Riehl (Chair), John Duane, Thomas Flynn*

*Laura Hewitt, Thomas Slack*



10.14.20

Dear ASMFC NY Representatives,

In 2019 the New York State Legislature and Governor Cuomo took decisive action to help maintain abundant Atlantic menhaden and a productive marine ecosystem by restricting the use of purse seines to harvest menhaden in New York State waters. This action was universally supported by fishermen, marine businesses, scientists, whale enthusiasts, and environmental advocates. Today the undersigned ask New York State's delegation to the Atlantic States Marine Fisheries Commission to continue New York's leadership when they vote to establish the 2021-2022 coast-wide Total Allowable Catch limits for Atlantic menhaden at the upcoming Atlantic Menhaden Management Board meeting on October 20th.

Atlantic menhaden serve as forage for striped bass, bluefish, weakfish, summer flounder, bluefin tuna and other species that drive the recreational fishing economy in the state of New York, as well as for whales, dolphins, and 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 acknowledgement 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.

**Specifically, we request that the New York delegation to the Atlantic States Marine Fisheries Commission advocate and vote for a conservative 2021-2022 Total Allowable Catch limit (TAC) that the Commission's own scientific advisors predict will have no more than a 50% probability of exceeding the newly adopted Ecological Reference Point Target Fishing Mortality Rate. An additional conservation buffer is also advisable given the scientific and management uncertainty, and the poor condition of other forage species such as Atlantic herring.**

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. 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). **Setting the Total Allowable Catch at this level would have no negative impact on baymen and commercial fishermen who catch and land Atlantic menhaden in New York and would better position forage fish availability to facilitate the coast-wide recovery of striped bass, bluefish, and weakfish to their target levels.**

There are many reasons that New York State delegation to the Atlantic States Marine Fisheries Commission should not consider Atlantic menhaden catch limits that have less than a flip of a coin chance of maintaining fishing mortality rates at or below the newly adopted Ecosystem Based Reference Point target, not the least of which is that doing so would be inconsistent with the leadership that the New York State legislature and Governor Cuomo have already taken on this important issue.

We thank you for your ongoing managerial leadership and we look forward to collaborating with you to rebuild striped bass and other key species in your portfolio.

Sincerely,

Captain David Blinken  
Northflats Guiding  
East Hampton, NY 11937

Mike Bottini  
Long Island Nature Organization  
Sag Harbor NY, 11963

Merry Camhi, PhD  
Director, New York Seascope  
Wildlife Conservation Society  
New York Aquarium  
Brooklyn, NY 11224

Captain Vinnie Catalano  
Joey C. Charters  
Greenport, NY 11944

Captain Andrew Derr  
Long Island on the Fly  
Greenport, NY 11944

Captain Paul Dixon  
To The Point Charters  
East Hampton, NY 11937  
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Peter Douma  
Windward Outfitters  
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Captain Paul Eldman  
Menhaden Defenders  
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Adriene Esposito  
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Citizens Campaign for the Environment  
Farmingdale NY, 11735

Captain Tom Falco  
Jenny E Charters, Inc  
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Curtis Fisher  
Regional Executive Director, National Wildlife  
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Captain Ernie French  
Fly Fish Montauk  
Montauk, NY  
[www.flyfishmontauk.com](http://www.flyfishmontauk.com)

John Gans  
Northeast Field Representative  
Theodore Roosevelt Conservation Partnership

Captain Bryan Goulart  
Point to Point Charters  
<http://www.nysaltfly.com/home.htm>

George Jackman, PhD  
Senior Habitat Restoration Manager  
Riverkeeper, Inc.  
Ossining, NY 1062

Arthur Kopelman PhD  
President  
Coastal Research & Education Society of Long  
Island, Inc.  
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Jeffrey Levinton, Ph.D.  
Distinguished Professor, Stony Brook University  
Department of Ecology & Evolution  
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Carl LoBue  
NY Oceans Program Director  
The Nature Conservancy  
Cold Spring Harbor, NY

Bill Lucey  
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Kevin McAlister  
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Defend H2O  
Sag Harbor, NY 11963

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Policy Director  
New York League of Conservation Voters  
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Policy Manager  
Audubon New York  
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Assistant Professor, Stony Brook University  
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Fish Guys Photo  
Calverton, NY 11933

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Professor and Executive Director  
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Institute of Ocean Conservation Science; SoMAS  
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Stuyve Pierrepont  
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Klaus (Cooky) Rondinella  
President  
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Christine Santora  
Stony Brook University  
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John Waldman, PhD.  
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Captain Sal Zatkowski  
Lucky Dog  
Montauk NY, 11954



October 16, 2020

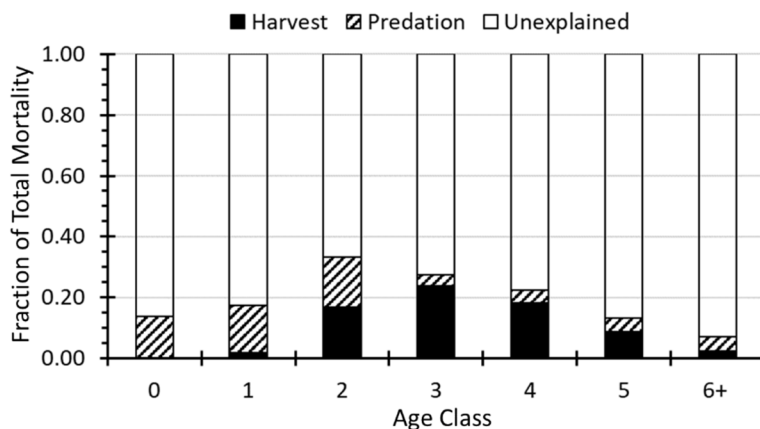
A.G. Woodward, Chair  
 ASMFC Menhaden Management Board

Dear Mr. Woodward & Board Members,

I respect the MMB’s August decision to advance ERPs, particularly given that intensive fishing has reduced the menhaden stock abundance and greatly impacted its dependent predators. It is now imperative that the MMB implement a TAC that sustains menhaden at a level that meets their ecological function and the food requirements of dependent highline Atlantic coast fishery ecosystem predators (e.g., striped bass, tarpon, bluefin tuna, sharks, among others). This will require decision-makers to carefully consider how uncertainties in the model(s), environment, and management processes may influence the various estimates. As the TC succinctly stated in their September 30 memo , TAC (sic) *“projections are highly uncertain and subject to model assumptions”*, making this nascent process the most challenging paradigm shift in USA fishery management.

**There are NO “Extra” Fish**

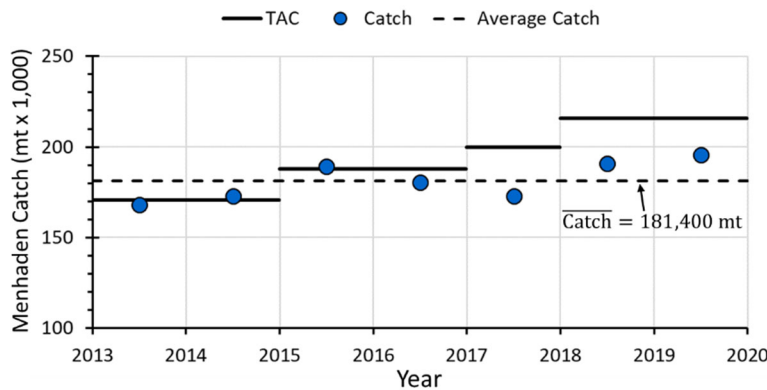
Every menhaden left in the water is important to fulfilling the population’s functional role in the ecosystem as mediators of water quality and principal prey for predators. To accurately evaluate the risks exploitation poses to this goal requires precise knowledge of menhaden population dynamics. Current assessment estimates that the fraction of age-structured abundance removed from the water by fishing is substantial (approximately 25% of year class strength); however, the amount of unexplained total mortality (i.e., that which can’t be explained by either fishing [harvest] or predation mortality) is even greater (**Fig. 1**). More importantly, use of a more defensible mortality rate, in line with national-international standards, indicates that menhaden population age class loss from fishing would be >75%.



**Figure 1.-** Atlantic menhaden total mortality components at age. Unexplained mortality is that which cannot be associated with either fishing or predation. Data from BAM (SEDAR 69) and NWACS-MICE (ERP Stock Assessment Report, 2019) models.

Menhaden live to at least 12 years. However, due principally to sparse representation of older age classes in the catches, only 7 year classes were modeled. Currently, exploitation targets the younger immature age groups, limiting their chances to spawn. Verification of the

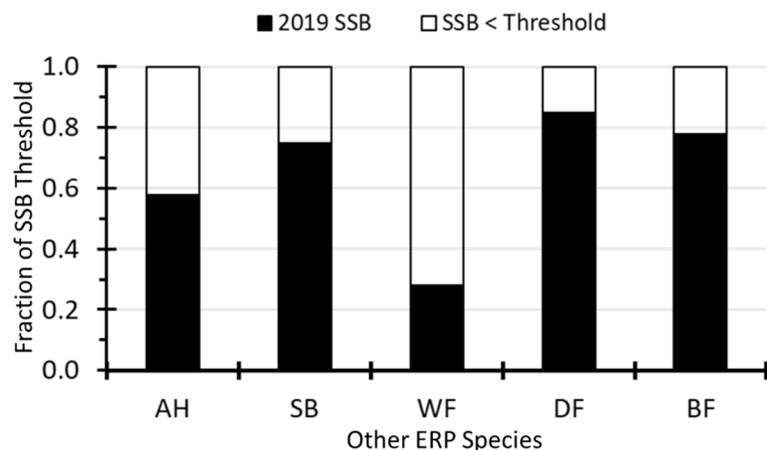
large “virtual” menhaden stock size comprised of significant numbers of large/old menhaden is impossible to validate since there is no dedicated fishery-independent menhaden population survey in Atlantic coastal waters. Compounding this uncertainty is the fact that menhaden recruitment in 2017 was estimated at the lowest levels seen since the 1960s, a period of intensive fishing. For a short-lived species like menhaden, this indicates that there are no “extra” fish now, nor will there be over the next 3-5 years. It also brings further questions as whether the menhaden population is sustainable and of sufficient size to support the large number of its dependent predators. Since initial implementation of TACs by ASMFC in 2013, and their subsequent ramp up, menhaden catches have remained relatively flat (**Fig. 2**). Thus, many factors have collectively contributed to statistical and practical uncertainty in stock status. The information at hand strongly suggests a greater exploitation rate than believed and provides empirical evidence for a much smaller menhaden stock size.



**Figure 2.-** Time-series of Atlantic menhaden TACs from 2013-2019 (solid lines), with observed catches (blue dots) and average catch (dashed line). Average catch for 2013-2019 was 181,400 metric tons ( $F = 0.1656$ ) or about 52.5% risk of exceeding the ERP target.

### Need to Remove Impediments to Fisheries Recovery

The substantial model, environment, and management uncertainty above clearly indicate that the upper limit for a menhaden TAC must be  $\leq 176,800$  mt ( $F = 0.1619$ ). Furthermore, the Atlantic coastal fishery ecosystem is significantly stressed and underlies the justification for trepidation in MMB management actions. Notably, many managed fishery resources under ASMFC jurisdiction are currently below their sustainability thresholds, particularly those used in the ERP analyses (**Fig. 3**).



**Figure 3.-** Relationship of ERP model species' spawning stock biomass (SSB) to their respective sustainability thresholds. AH is Atlantic herring, SB is striped bass, WF is weakfish, DF is dogfish, and BF is bluefish. Note that “status quo” in 2019 showed all “other” species to be below their thresholds, and thus overfished.

For example, Atlantic herring are overfished (as compared to their 2017 “status quo” assumption); recruitment has declined to the lowest levels since 1965, and SSB is the lowest since the 1980s, at 58% of threshold. The severe reduction of this key alternative prey resource places even greater ecosystem dependence on an very abundant menhaden population. Reduced abundance of both prey and predator, reduces the likelihood of predator population recovery, even with reductions in predator fishing mortality. Assessment science has clearly shown that menhaden fishing reduces unexploited striped bass population size by 30%. But, striped bass are now overfished, 40% and 25% below their biomass target and threshold, respectively. This, by itself, should be the primary reason for trepidation in TACs.

The accepted ERP target and thresholds appear to be too liberal, particularly in light of the 2020 Atlantic herring assessment and the poor condition of the “other” fishery resources used in the NWACS-MICE modeling. In these analyses, all “other” species were held at their “status quo” (Scenario 1). In fact, a more realistic assessment should minimally have chosen Scenario 3 (“all at B threshold”), which would have set ERP  $F_{target} = 0.03$  and  $F_{threshold} = 0.32$ . But the facts now, as shown in Fig. 3, indicate that a TAC decision must be rendered in the context where all “other” fishery resources are actually below their B thresholds.

**So, we really need a TAC buffer too!**

There must be greater numbers of menhaden left in the sea to facilitate the recovery of the dependent species of high economic and ecological importance, and further, to ensure the sustainability of menhaden. Atlantic striped bass don’t have a chance of rebuilding without sufficient food (menhaden) left in the water. Thus, continued intensive fishing on menhaden greatly reduces the probability of striped bass recovery. Given the evidence, then even setting the TAC at >176,800 mt is a very “risky” proposition. Therefore, TACs with > 50% chance of exceeding the target should not be under consideration. The MMB must adopt a TAC that won’t undermine the stated purpose of ERPs, and by acting conservatively, will not expose the fishery and the ecosystem to unwarranted risks. Adopting this stance will ensure a high likelihood of achieving ASMFC conservation goals for this interrelated complex of managed species. Finally, the best available science indicates that a risk-averse menhaden TAC should be set at a 25% probability of exceeding ERP target. To that end, I personally recommend choice of a TAC of  $\leq 148,700$  mt that incorporates a surety buffer of not exceeding the ERP target. *De facto*, this prudent strategy would also ensure ecological support for other essential and depleted species, as consumption of menhaden is currently lower than that of a balanced, sustainable Atlantic coastal ecosystem.

Sincerely,

A handwritten signature in black ink, appearing to read "Jerald S. Ault". The signature is fluid and cursive, with a long, sweeping tail that extends to the right.

Jerald S. Ault, Ph.D.

Professor and Chair, Department of Marine Ecosystems and Society  
University of Miami

**From:** [Barry Jorich](#)  
**To:** [Comments](#)  
**Subject:** [External] Limit the Atlantic Menhaden Harvest  
**Date:** Friday, October 16, 2020 11:20:48 AM

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Dear Chairman Armstrong,

As an avid angler, conservationist and outdoor enthusiast, I write to urge the Menhaden Management Board to adopt the ecological reference point with the more conservative allowable catch which would allow the striped bass to reach its biomass target. Menhaden are an important food source for a wide variety of marine animals including striped bass, whales, sharks, osprey and eagles just to name a few.

Unfortunately, many predators that consume menhaden are in decline, including the striped bass, the species most dependent on menhaden forage. This is of concern to the recreational fishing and boating community. Striped bass is the largest marine recreational fishery in the United States contributing billions of dollars to the economy. According to the Atlantic Menhaden Technical Committee projections, menhaden catch must be reduced to 176,800 metric tons if the striped bass is to meet its spawning stock biomass target. Simply put, if the menhaden catch is not reduced, the striped bass are unlikely to rebuild, no matter what measures are put in place to reduce striped bass fishing mortality.

The trade off associated with the setting a conservative quota for menhaden harvest are worth the short-term inconvenience. When you consider saltwater recreational fishing along the Atlantic is enjoyed by 6 million anglers annually, contributing \$11.3 billion to the economy and supporting over 120,000 jobs. The employment 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 stewards of our shared public resource, we are partners in the ASMFC process and share a unified goal of healthy fish populations and fishing communities. I respectfully request the board to follow through on its imaginative step to establish ecological reference points by adopting a conservative, coastwide allowable menhaden catch that will help rebuild the iconic Atlantic striped bass fishery.

Sincerely,

Barry Jorich  
11369 N Mertig Rd Apt N  
Hayward, WI 54843  
bjorich@gmail.com



This form letter was received by 31 individuals.

**From:** [steven.j.puffenbarger@everyactioncustom.com](mailto:steven.j.puffenbarger@everyactioncustom.com) on behalf of [Steven Puffenbarger](#)  
**To:** [Comments](#)  
**Subject:** [External] Please weigh in on fishing catch limits  
**Date:** Thursday, October 15, 2020 10:40:47 PM

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Dear Atlantic Menhaden Management Board,

As a recreational angler, I want to encourage the Menhaden Management Board to support a responsible catch limit for the Atlantic menhaden—a small oily baitfish that serves as the food source for striped bass and other sportfish.

The Atlantic States Marine Fisheries Commission will soon be considering this issue and it's of utmost importance to the fishing economy along the coast. I urge commissioners and state leaders to do the right thing by supporting the recreational fishing economy and science-based conservation.

I am asking specifically that the Commission adopt what is known as the "total allowable catch" for the commercial harvest of menhaden in 2021 and beyond. The best available science indicates that the total allowable catch for next year should be no more than 176,800 metric tons, and preferably 148,700 metric tons.

This decision will leave more menhaden in the water, and that is good for everyone, including striped bass and the anglers who pursue them.

Sincerely,  
Steven Puffenbarger  
Lexington Park, MD 20653  
[steven.j.puffenbarger@gmail.com](mailto:steven.j.puffenbarger@gmail.com)