

Atlantic Herring Fishery Management Plan

Framework Adjustment 8 and 2021-2023 Atlantic Herring Fishery Specifications

Including an Environmental Assessment and
Initial Regulatory Flexibility Analysis



DRAFT – Under Development

April 2020 Council Meeting

Prepared by the
New England Fishery Management Council
In consultation with the
National Marine Fisheries Service and the
Mid-Atlantic Fishery Management Council



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FRAMEWORK ADJUSTMENT 8 TO THE ATLANTIC HERRING FISHERY MANAGEMENT PLAN AND 2021-2023 ATLANTIC HERRING FISHERY SPECIFICATIONS

Proposed Action: Propose fishery specifications for FY2021-2023 and adjust measures in herring plan that potentially inhibit mackerel fishery from achieving optimum yield.

Type of Statement: Draft Environmental Assessment

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Abstract: The New England Fishery Management Council, in consultation with NOAA National Marine Fisheries Service, has prepared Framework Adjustment 8 to the Atlantic Herring Fishery Management Plan, which includes a draft environmental assessment that presents the range of alternatives to achieve the goals and objectives of the action. The proposed action focuses on fishery specifications for FY2021-2023 and adjusting measures in the herring plan that potentially inhibit the mackerel fishery from achieving optimum yield. The document describes the affected environment and valued ecosystem components and analyzes the impacts of the alternatives on both. It addresses the requirements of the National Environmental Policy Act, the Magnuson Stevens Fishery Conservation and Management Act, the Regulatory Flexibility Act, and other applicable laws.

1.0 EXECUTIVE SUMMARY

This document contains the New England Fishery Management Council (Council) recommendations for the Atlantic herring fishery specifications for the 2021-2023 fishing years (Table 1), consistent with the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Atlantic Herring Fishery Management Plan (FMP), approved by the National Marine Fisheries Service (NMFS) on October 27, 1999. This document also proposes adjustments in the herring plan that potentially inhibit the mackerel fishery from achieving optimum yield. In addition, this document includes information and supporting analyses required under other applicable law, including the National Environmental Policy Act (NEPA) and Regulatory Flexibility Act (RFA).

The Atlantic herring fishery specifications are annual amounts specified for the 2021-2023 fishing years (January – December), including:

- Overfishing Limit (OFL);
- Acceptable Biological Catch (ABC);
- Stock-wide Atlantic Herring Annual Catch Limit (ACL) = U.S. Optimum Yield (OY);
- Domestic Annual Harvest (DAH);
- Domestic Annual Processing (DAP);
- U.S. At-Sea Processing (USAP);
- Border Transfer (BT, U.S.-caught herring transferred to Canadian vessels for export);
- Management Area sub-ACLs;
- Research Set-Asides (RSA);
- Fixed Gear Set-Aside (FGSA); and
- Seasonal (Monthly) Sub-ACL Divisions

In addition, annual gear-specific and area-specific catch caps for river herring and shad (RH/S) are specified for trips landing more than 6,600 pounds of Atlantic herring (3 mt) during the 2021-2023 fishing years.

Proposed Action

The Council's preferred alternative includes ...

Table 1. Preferred alternative for 2021-2023 Atlantic herring fishery specifications (Note: default from FW6 left as reference for 2021 – will be replaced)

Herring Fishery Specification	2021	2022	2023
Overfishing Limit (OFL)	69,064		
Acceptable Biological Catch (ABC)	16,131		
Management Uncertainty	4,560		
Optimum Yield / Annual Catch Limit (OY/ACL)	11,571*		
Domestic Annual Harvest (DAH)	11,571		
Border Transfer (BT)	100		
Domestic Annual Processing (DAP)	11,471		
U.S. At-Sea Processing (USAP)	0		
Area 1A Sub-ACL (28.9%)	3,344		
Area 1B Sub-ACL (4.3%)	498		
Area 2 Sub-ACL (27.8%)	3,217		
Area 3 Sub-ACL (39%)	4,513		
Fixed Gear Set-Aside (FGSA)	30		
Research Set-Aside (RSA) as % of Sub-ACLs	3%		
* If the New Brunswick weir fishery catch through October 1 is less than the associated trigger for the management uncertainty buffer (See Table 10), then 1,000 mt of the management uncertainty buffer will be added to the ACL.			

Seasonal sub-ACL divisions – Area 1A is allocated 0% of the sub-ACL for January – May and 100% from June – December. Area 1B is allocated 0% of the sub-ACL for January – April and 100% May – December.

Table 2. Preferred alternative for 2021-2023 river herring / shad catch caps (Note – default for 2021 left in this table – will be replaced if this action adopts new caps)

RH/S Catch caps	2021	2022	2023
Midwater Trawl Gulf of Maine	76.7 mt		
Midwater Trawl Cape Cod	32.4 mt		
Midwater Trawl Southern New England and Mid-Atlantic	129.6 mt		
Bottom Trawl Southern New England and Mid-Atlantic	122.3 mt		

Affected Environment

The Affected Environment for the 2021-2023 Atlantic herring fishery specifications is in Section 6.0. The Affected Environment is described based on valued ecosystem components (VECs). VECs represent the resources, areas, and human communities that may be affected by the measures under consideration in this management action. VECs are the focus, since they are the “place” where the impacts of management actions are exhibited. The VECs for consideration in the 2021-2023 Atlantic herring fishery specifications include: Atlantic Herring; Non-Target Species (focused on haddock and river herring/shad); Protected Resources; Physical Environment and Essential Fish Habitat (EFH); and Fishery-Related Businesses and Communities. More information on the mackerel resource and fishery have been included in this action since there are measures specifically considered in this action to improve access to the mackerel fishery.

Impacts of the Alternatives

The impacts of the alternatives considered by the Council on each VEC described in the Affected Environment are in Section 7.0 and summarized in Table 3. Overall,

Table 3. Summary of potential impacts of the alternatives under consideration in Framework 8 across the valued ecosystem components

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2.3 ACRONYMS

ABC	Acceptable Biological Catch
ACL	Annual Catch Limit
ALWTRP	Atlantic Large Whale Take Reduction Plan
AM	Accountability Measure
AP	Advisory Panel
APA	Administrative Procedures Act
ASMFC	Atlantic States Marine Fisheries Commission
B _{MSY}	Biomass that would allow for catches equal to Maximum Sustainable Yield when fished at the overfishing threshold (F _{MSY})

BiOp, BO	Biological Opinion, a result of a review of potential effects of a fishery on Protected Resource species
CEQ	Council on Environmental Quality
DFO	Department of Fisheries and Oceans (Canada)
DMF	Division of Marine Fisheries (Massachusetts)
DMR	Department of Marine Resources (Maine)
EA	Environmental Assessment
EEZ	Exclusive economic zone
EFH	Essential fish habitat
ESA	Endangered Species Act
F	Fishing mortality rate
FEIS	Final Environmental Impact Statement
FMP	Fishery management plan
FW	Framework
FY	Fishing year
GARFO	Greater Atlantic Regional Fisheries Office
GB	Georges Bank
GOM	Gulf of Maine
HAPC	Habitat area of particular concern
HPTRP	Harbor Porpoise Take Reduction Plan
IFM	Industry-funded monitoring
LOA	Letter of authorization
MA	Mid-Atlantic
MAFMC	Mid-Atlantic Fishery Management Council
MMPA	Marine Mammal Protection Act
MPA	Marine protected area
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSY	Maximum sustainable yield
NEMAP	Northeast Area Monitoring and Assessment Program
NEFMC	New England Fishery Management Council
NEFOP	Northeast Fisheries Observer Program
NEFSC	Northeast Fisheries Science Center
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OBDBS	Observer database system
OY	Optimum yield
PDT	Plan Development Team
PRA	Paperwork Reduction Act
RFA	Regulatory Flexibility Act
RPA	Reasonable and Prudent Alternatives
SARC	Stock Assessment Review Committee
SAW	Stock Assessment Workshop
SIA	Social Impact Assessment
SMB	Squid Mackerel Butterfish FMP (MAFMC)
SNE	Southern New England
SNE/MA	Southern New England-Mid-Atlantic
SSB	Spawning stock biomass
SSC	Scientific and Statistical Committee
TEWG	Technical Expert Working Group
TRAC	Trans-boundary Resources Assessment Committee

VEC Valued Ecosystem Component
VMS Vessel monitoring system
VTR Vessel trip report

3.0 INTRODUCTION AND BACKGROUND

3.1 PURPOSE AND NEED

To be completed later as Council develops this action.

3.2 GOALS AND OBJECTIVES

This action has two goals. First, the 2021-2023 Atlantic herring fishery specifications are intended to meet the overall goal of the Atlantic Herring FMP, as modified in Amendment 1 to, “manage the Atlantic herring fishery at long-term sustainable levels consistent with the National Standards of the Magnuson-Stevens Fishery Conservation and Management Act.”

The specific measurable actions, or objectives identified to achieve the primary goal of this action were also defined in Amendment 1. Specifically, the stated objectives for setting specifications in this FMP are to: harvest the resource consistent with the definition of overfishing; prevent overfishing of discrete spawning components; avoid adverse effects on the age structure of the stock; optimize yield; minimize the race to fish; provide opportunities in other fisheries; promote and support research; promote compatible U.S. and Canadian management of this stock; and continue close coordination with other federal, state, and ASMFC management plans and promote real-time management of the fishery.

The secondary goal of this action is to consider adjustments to the herring plan that potentially inhibit the mackerel fishery from achieving optimum yield. The specific measurable actions, or objectives for the secondary goal of this action are: 1) consider an increase in the incidental herring possession limit up to 40,000 pounds; and 2) modify the seasonal closure of Area 1B, which is currently closed January through April.

4.0 ALTERNATIVES UNDER CONSIDERATION

NOTE: The Herring Committee has not spent a significant amount of time developing alternatives for this action yet. Many of these measures are held over from the last specification action (Framework 6). As the Committee develops this action the range of alternatives may look different than the draft items described below. These were included at this time to give the Council a sense of the potential range of options that may be further developed in this action.

4.1 2021-2023 ATLANTIC HERRING SPECIFICATIONS WITH ALTERNATIVES

4.1.1 Overfishing Limit and Acceptable Biological Catch

The SSC met in ??? and provided OFL and ABC recommendations for this action using the Amendment 8 ABC control rule (approved ???), (See Appendix II).

Amendment 8 ABC control rule: *The control rule is biomass-based, when biomass is greater than 0.5 for the ratio of SSB/SSB_{MSY} , the maximum fishing mortality allowed is 80% of F_{MSY} , so 20% of F_{MSY} is left for herring predators. Under this policy as biomass declines, fishing mortality declines linearly, and if biomass falls below 0.1 for the ratio of SSB/SSB_{MSY} , then ABC is set to zero, no fishery allocation (Figure 1).*

Amendment 8 also implemented that ABC should be set for three years but with annual application of the control rule. This allows ABC to vary between years within a three-year period, the ABC may not be constant if biomass is projected to change during a specification timeframe.

Figure 1. ABC control rule adopted in Amendment 8.

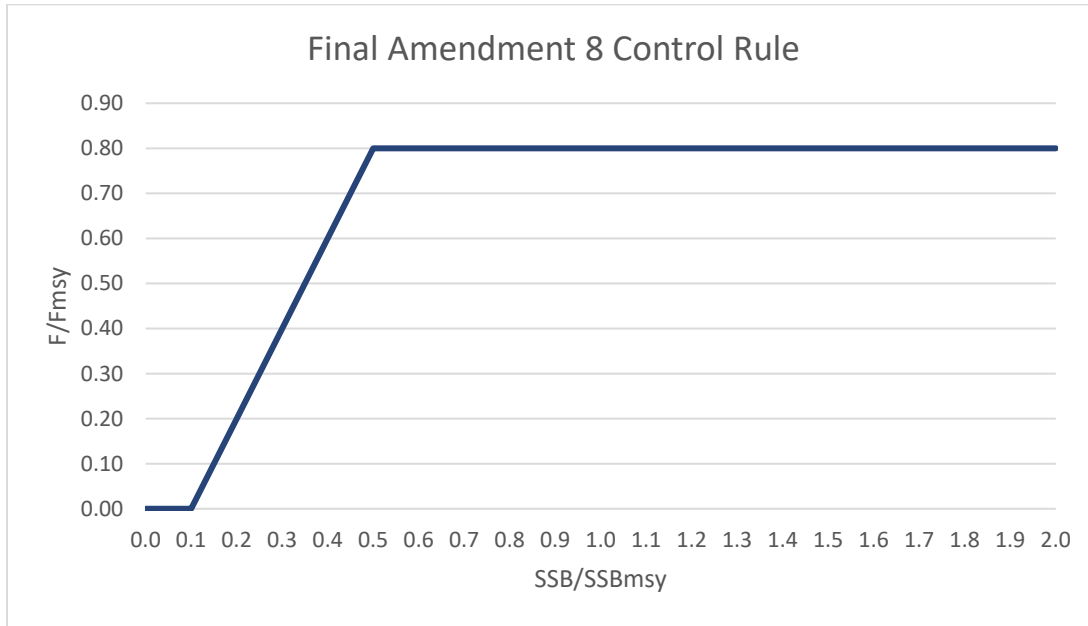


Table 4. SSC recommendations for OFL and ABC for 2021-2023 fishing years

Year	OFL (mt)	ABC (mt)
2021	59,788	16,131
2022		
2023		

4.1.1.1 No Action OFL/ABC (Alternative 1)

No Action (Alternative 1) would maintain the 2021 Atlantic herring fishery specifications that were implemented by Framework 6 (Table 6). Specification of Atlantic herring ABC would be 21,266 mt for all three fishing years (FY2021-2023), which is higher??? than the SSC recommendation (Table 5).

Table 5. OFL/ABC Alternative 1 (No Action) for 2019-2021 Atlantic herring specifications

	Alternative 1 2021	Alternative 1 2022	Alternative 1 2023
OFL (mt)	30,668	30,668	30,668
ABC (mt)	21,266	21,266	21,266

Rationale: No Action would maintain the same OFL and ABC values implemented under Framework 6. This would provide more stability for the fishery but would include OFL and ABC values above levels recommended by the SSC??? and would not be based on the best available data using more updated information.

4.1.1.2 OFL and ABC consistent with the Amendment 8 ABC control rule (Alternative 2)

Alternative 2 would implement the OFL and ABC consistent with the ABC control rule that was approved in Amendment 8, described in more detail in Section 4.1.1. These OFL and ABC recommendations were reviewed and approved by the SSC (Table 7).

Table 6. OFL/ABC Alternative 2 for 2021-2023 Atlantic herring specifications

	Alternative 2 2021	Alternative 2 2022	Alternative 2 2023
OFL (mt)			
ABC (mt)			

Rationale: Alternative 2 would set OFL and ABC consistent with the ABC control rule approved in Amendment 8. [Will add more detail from PDT memo and SSC meeting].

4.1.2 Management Uncertainty and Annual Catch Limit

The difference between the Atlantic herring acceptable biological catch (ABC) and the stock-wide annual catch limit (ACL) equates to what the Council specifies as management uncertainty. The management uncertainty specification further ensures that Atlantic herring catch will not exceed the ABC in a given year by buffering against uncertainty related to the management system. Management uncertainty is deducted from the ABC to derive a stock-wide ACL, which is the U.S. Atlantic herring optimum yield (OY).

During the 2016-2018 specifications process, the Council considered a range of deductions for management uncertainty based on three possible factors:

1. Canadian catch of Atlantic herring (New Brunswick (NB) Weir Fishery);
2. Uncertainty around estimates of state waters Atlantic herring catch; and
3. Uncertainty around estimates of Atlantic herring discards.

The potential sources of management uncertainty were reviewed for this action and it was determined that the same three sources likely encompass most of the management uncertainty in this fishery. After the options are described below the associated triggers for each option are presented, as well as a summary of other measures in the FMP that address management uncertainty (See Section 6.1.3).

4.1.2.1 Management uncertainty options and associated ACLs

4.1.2.1.1 No Action management uncertainty buffer used in FY2019

Under No Action, the management uncertainty buffer used in FY2020 would be implemented again for 2021-2023, 4,560 mt. That amount would be subtracted from the ABC to produce the fishery-wide ACL.

Rationale: The No Action alternative for management uncertainty is the allocation used in the previous specifications package. This value was calculated by taking the last ten years of NB weir catch to determine a potential management uncertainty buffer. NB weir catch has been very variable over the years with some high catches followed by lower catches. When this option was selected in Framework 6 the Council identified this alternative as preferred because there did not seem to be an apparent trend in recent NB weir catches; therefore, using more years could better capture the variability. While 2018 catch levels were relatively high for recent years, above 11,000 mt., the Council was not aware of any information to suggest this would happen again in 2019 or 2020. There have been high catches in the past as well that were not followed by high catches in subsequent years. This buffer is larger than all NB weir catch from the last ten years except for three years (2018, 2013 and 2010).

4.1.2.1.2 3-year average (2017-2019) (Option 1)

The management uncertainty buffer for 2021-2023 would be based on the most recent 3-year average (2017-2019) catch totals from the NB weir fishery (Table 29), ??? mt. That amount would be subtracted from the ABC to produce the fishery-wide ACL.

Rationale: This alternative is based on the same *method* used to set the management uncertainty buffer in the 2016-2018 specification package, 3-year average of NB weir catch from the most recent three years available. The value is not the same as the 2016-2018 specification package because the years are different, in this case 2017-2019. Using the same method as the last package the management uncertainty buffer this time would be ??? mt.

4.1.2.1.3 5-year average (2015-2019) (Option 2)

The management uncertainty buffer for 2021-2023 would be based on the most recent 5-year average (2015-2019) catch totals from the NB weir fishery (Table 32), ??? mt. That amount would be subtracted from the ABC to produce the fishery-wide ACL.

Rationale: This alternative uses the last five years of NB weir catch to determine a potential management uncertainty buffer. This option was considered in previous action as well but was not selected. This alternative produces the lowest value, but it is still in the same general range. NB weir catch has been very variable over the years with some high catches followed by lower catches.

4.1.2.1.4 10-year average (2010-2019) (Option 3)

The management uncertainty buffer for 2021-2023 would be based on the most recent 10-year average (2010-2019) catch totals from the NB weir fishery (Table 32), ??? mt. That amount would be subtracted from the ABC to produce the fishery-wide ACL.

Rationale: This alternative uses the last ten years of NB weir catch to determine a potential management uncertainty buffer, and was the method used in the last specifications package (FY2019-2021). This alternative produces a value in the middle of other options considered. NB weir catch has been very variable over the years with some high catches followed by lower catches. The Council identified this alternative as preferred in the last specification package because there is no apparent trend in recent NB weir catches; therefore, using more years could better capture the variability. While 2018 catch levels were relatively high for recent years, above 11,000 mt., the Council is not aware of any information to suggest this will happen again in 2021 or beyond. There have been high catches in the past as well that were not followed by high catches in subsequent years.

4.1.3 Border Transfer

The Border Transfer (BT) specification is U.S.-caught herring transshipped to Canada via Canadian carrier vessels and used for human consumption. This specification is not a set-aside; rather, it is a maximum amount of Atlantic herring caught by U.S. vessels from Area 1A that can be transshipped to

Canadian vessels for human consumption. GARFO tracks BT utilization through a separate dealer code. Specification of BT has remained at 4,000 mt since the implementation of the Atlantic Herring FMP, until it was reduced to 0 mt in the in-season adjustment that reduced overall herring quotas in FY2019 and it was set at 100 mt for FY2020 and 2021 in the last specifications package. Border transfer has decreased from almost 1,000 mt in 2013 to zero in the last few years (2016-2018; Table 24). BT reached over 3,000 mt in 1996, but for many years since has been 0-1,000 mt.

4.1.3.1 No Action – maintain border transfer at 0mt (Alternative 1)

Alternative 1 (No Action) would set border transfer at 0 mt for FY2020 and FY2021, the same value as in 2019. If selected, U.S. vessels would not be permitted to transfer herring to Canadian vessels at-sea.

Rationale: The Council recommended border transfer be set to 0 mt in the 2019 in-season action. Overall quotas were being reduced substantially from about 50,000 mt to 15,000 mt so it was desirable to preserve as much herring as possible for the bait market in the U.S., compared to potentially transferring some herring to Canadian vessels at sea for the food market.

4.1.3.2 Set border transfer at up to 250 mt (Alternative 2)

The Council recommends border transfer be set at 100 mt in FY2020 and FY2021. If selected, U.S. vessels would be allowed to transfer herring to Canadian vessels that have a permit for this activity. Vessels would be subject to additional reporting requirements for border transfer.

Rationale: This alternative considered border transfer to be set up to 250 mt. While this specification has traditionally been set at 4,000 mt, the Council felt that level was too high under the current quota levels. Although this activity has not occurred in recent years (Table 24), it has been a traditional part of the U.S. herring fishery and is important for positive trade relations between several U.S. and Canadian seafood companies. The Council recognizes that this activity may not take place because the incentives to export herring for food may not be strong because of expected high domestic bait prices, but the Council wanted to help maintain positive trade relations between Canada and the U.S. and recognize this historical part of the fishery in some way by setting the limit above 0 mt.

4.2 2019-2021 ATLANTIC HERRING SPECIFICATIONS WITHOUT ALTERNATIVES

The Council does not always consider alternatives for all the herring fishery specifications. The specifications that do not have alternatives and were approved by the Council at the April 2019 Council meeting, are included in this section.

4.2.1 Domestic Annual Harvest

The Atlantic Herring FMP specifies that domestic annual harvest (DAH) is set less than or equal to OY. Domestic annual harvest (DAH) is based on the expected catch from U.S. fishing vessels during the upcoming fishing year and equals OY for the U.S. fishery.

$$\text{Stock-wide ACL} = \text{OY} \leq \text{DAH}$$

The Herring FMP, as modified by Amendment 4, also specifies that domestic annual harvest (DAH) will be composed of domestic annual processing (DAP) and the amount of Atlantic herring that can be taken in U.S. waters and transferred to Canadian herring carriers for transshipment to Canada (border transfer or BT).

$$\text{DAH} = \text{DAP} + \text{BT}$$

When specifying DAH for the Atlantic herring fishery, important considerations relate to the actual and potential capacity of the U.S. harvesting fleet. Recent fishery performance (landings) is also an important factor in this fishery. The Herring FMP was implemented in 2001 and since that time total landings in the U.S. fishery have decreased.

Table 18 summarizes total Atlantic herring catch as a percentage of the total available catch in each year from 2003-2018. Atlantic herring catch has been somewhat consistent over the time period (and in previous years); however, the quota allocated to the fishery (stock-wide ACL/OY) has decreased 50% over the twelve-year period from 2003-2014. Allocations and landings increased after 2014 for several years, increased for several years, and decreased dramatically more recently.

In prior years when considering the DAH specification, the Council has evaluated the harvesting capacity of the directed Atlantic herring fleet and determined that the herring fleet is capable of fully utilizing the available yield from the fishery. Therefore, the DAH specification for the 2019-2021 fishing years would remain equal to the stock-wide Atlantic herring ACL, i.e., the U.S. OY specified by the Council for each of the 2019-2021 fishing years.

4.2.2 Domestic Annual Processing

Domestic Annual Processing (DAP) is defined in the Herring FMP as the amount of U.S. harvest that domestic processors will use, combined with the amount of the resource that will be sold as fresh fish (including bait). DAP was set equal DAH in 2019 since border transfer was 0 mt, and minus 100 mt for BT for 2020-2021 (Section 4.2.3).

Processing, with respect to the Atlantic herring fishery, is defined in the regulations as the *preparation of Atlantic herring to render it suitable for human consumption, bait, commercial uses, industrial uses, or long-term storage, including but not limited to cooking, canning, roe extraction, smoking, salting, drying, freezing, or rendering into meat or oil*. The definition of processing does not include trucking and/or transporting fish.

Because quotas have been reduced substantially in recent years, it is likely that the U.S. will be able to utilize all the available DAP in 2019-2021. Therefore, the DAP specification for the 2019-2021 fishing years would remain equal to the DAH specification minus the BT specification.

4.2.3 U.S. At-sea Processing

The Atlantic Herring FMP states that “part of DAP may be allocated for at-sea processing by domestic vessels that exceed the vessel size limits (Herring FMP, Section 3.6.6). This allocation will be called the ‘U.S. at-sea processing’ (USAP) allocation. The term ‘at-sea processing’ refers to processing activities that occur in the Exclusive Economic Zone outside state waters. When determining this specification, the Council will consider the availability of other processing capacity, development of the fishery, status of the resource, and opportunities for vessels to enter the herring fishery.” The USAP specification serves as a cap for USAP activities, it is not a separate allocation but a limit within the domestic catch limit to be used for this purpose.

During the 2007-2009 fishing years, the Council maintained a USAP specification of 20,000 mt (Areas 2/3 only) based on information received about a new at-sea processing vessel that intended to utilize a substantial amount of the USAP specification. At that time, landings from Areas 2 and 3 – where USAP is authorized – were considerably lower than allocated sub-ACLs for each of the past several years. Moreover, the specification of 20,000 mt for USAP did not restrict either the operation or the expansion of the shoreside processing facilities during the 2007-2009 fishing years. However, this operation never materialized, and none of the USAP specification was used during the 2007-2009 fishing years. Consequently, the Council set USAP at zero for the 2010-2012, 2013-2015, and 2016-2018 fishing years.

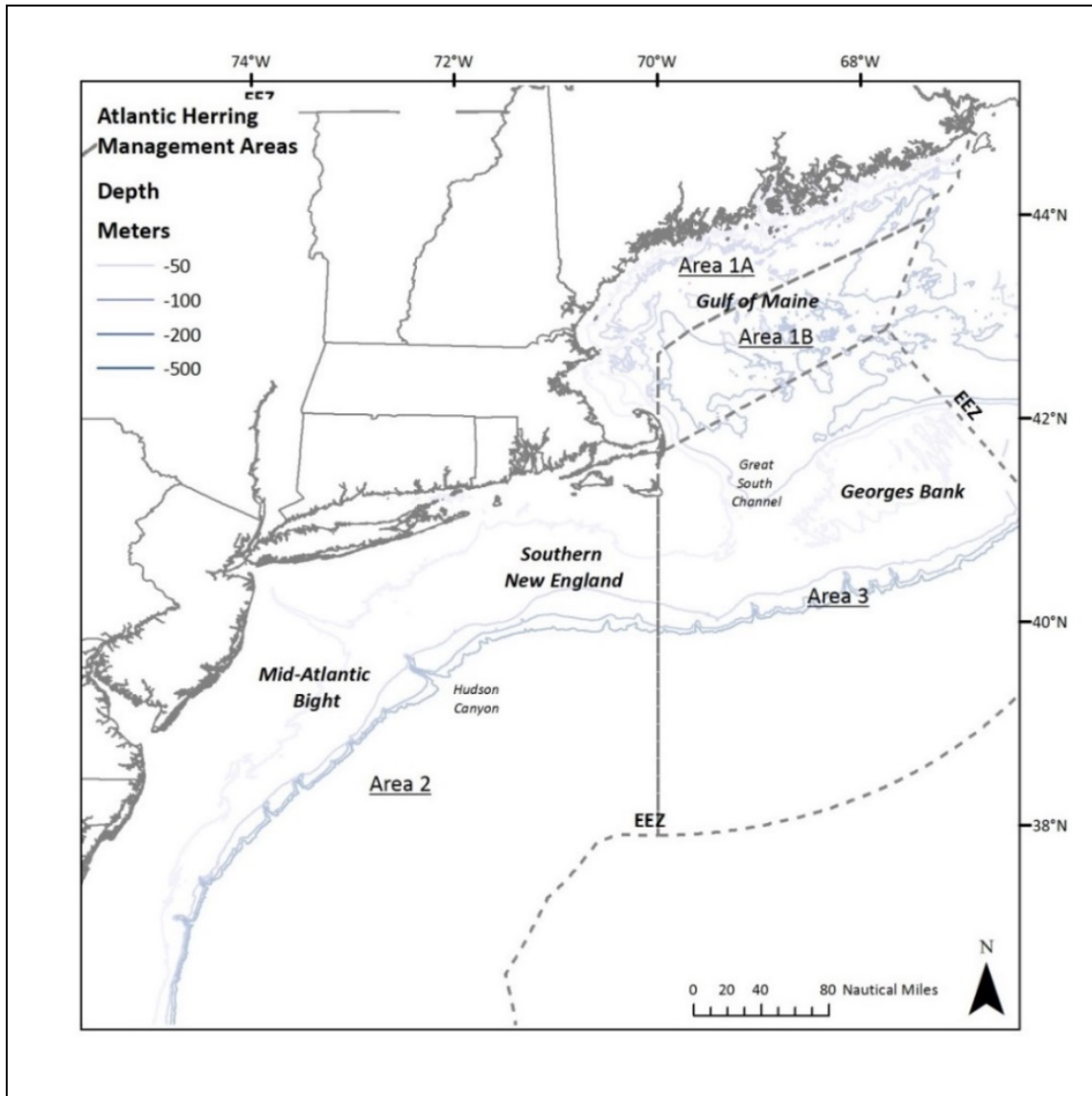
The Council has not received any information that would suggest changing this specification for the 2019-2021 fishing years. Therefore, the specification for the 2019-2021 fishing years will remain at 0 mt.

4.2.4 Management Area Sub-ACLs for 2019-2021

The total ACL for Atlantic herring is divided into four separate sub-ACLs intended to minimize risk to individual stock components while maximizing opportunities for the fishery to achieve OY.

Area 1A is the inshore Gulf of Maine, Area 1B is considered offshore Gulf of Maine, Area 3 is primarily an offshore area of Georges Bank, and Area 2 includes all Southern New England and the Mid-Atlantic (Figure 2). The current herring management area boundaries have been in place since 2001 (Amendment 1). Since Framework 2, specifications for fishing years 2013-2015, the sub-ACLs have been allocated in the same proportions for the last seven fishing years: 28.9% for Area 1A, 4.3% for Area 1B, 27.8% for Area 2, and 39% for Area 3. The Council has specified that the sub-ACL proportions shall remain the same for 2019-2021 as well.

Figure 2. Atlantic herring management areas



4.2.5 Seasonal (monthly) Sub-ACL Divisions

The herring sub-ACL in two of the four management areas is allocated by season, allocating 0% for several months, essentially closing the area to herring fishing during those months. The Council has specified that the seasonal sub-ACL divisions that have been in place since 2013 remain in place for this action as well:

- Area 1A: 0% January-May; 100% June-December;
- Area 1B: 0% January-April; 100% May-December.

4.2.6 Research Set-Aside

The Research Set-Aside (RSA) program is a competitive grants process administered by the Northeast Fisheries Science Center. Proposals are requested for research, and incoming proposals are reviewed and ranked by a technical body. With competitive grants awarded through this process, different entities will apply. In the past, the Council has allocated either 0% or 3% of the sub-ACL for each management area for the RSA program. The regulations allow a set-aside of up to 3% in any or all herring management areas. The most recent specifications, FY2019-2021, deducted a 3% RSA from the ACL for all management areas and identified four research priorities: portside sampling, river herring bycatch avoidance, electronic monitoring, and research to support herring stock assessments.

The Council has specified that RSA for 2021-2023 be 3% of each herring management area sub-ACL.

NOTE: RSA funding cycle is currently not in sync with specifications cycle. This may not be an issue – but the Committee is likely to discuss further. RSA funds were recently awarded for 2019-2021, and this package is for 2021-2023, but herring specifications are expected to be on 2-year cycle in the near term. Should this action include RSA set-aside for 2022-2023, or 2022 only followed by 2023-2025 in the next package?

4.2.7 Fixed Gear Set-Aside

Amendment 1 to the Atlantic Herring FMP allows up to 500 mt of the Area 1A sub-ACL to be allocated for the fixed gear fisheries in Area 1A (weirs and stop seines) that occur west of 67°16.8' W long. (Cutler, Maine). This Fixed-Gear Set-Aside (FGSA) is available for harvest by fixed gear within the specified area until November 1 of each fishing year. Any portion of this allocation that has not been harvested by November 1 is transferred back to the sub-ACL allocation for Area 1A. Because this set-aside is taken from and returned (if unused) to 1A, it was proportionally reduced relative to the 1A sub-ACL rather than the overall ACL. Table 30 has updated catch estimates from the fixed gear fishery through 2014.

This set-aside acknowledges a historical, state water fishery that has taken place in Maine for many years. The set-aside has been 500 mt some years, was 295 mt from 2013-2018, and some years the Council has recommended it be set to zero. Most recently in 2019 it was set to 39 mt; this value was recommended by the Council as a reduction that would be proportional to other reductions in the fishery.

Amendment 2 to the Interstate FMP (ASMFC 2009) requires fishermen East of Cutler to report catch weekly through the federal IVR system. MEDMR requires the Maine state commercial fixed gear fishermen to comply with the federal IVR weekly reporting requirements and regulations as well as reporting monthly to MEDMR. That action also modified the date that FGSA reverts to Area 1A to December 31. The state of Maine has also implemented a closure to state permitted fixed gear operators when it is estimated that 92% of the fixed gear set-aside has been harvested. This state regulation coupled with mandatory daily reporting requirements has reduced the level of management uncertainty related to state water catch in the herring plan. The Council has specified that the fixed gear set-aside for 2020 and 2021 should be set at a level that is proportionally reduced relative to the 1A sub-ACL.

4.2.8 River Herring/Shad (RH/S) Catch Caps

The Council has specified that the RH/S catch caps implemented in the 2019 in-season adjustment implemented by NMFS will rollover for 2020 and 2021; MWT GOM = 76.7 mt, MWT Cape Cod = 32.4 mt, MWT SNE/MA= 129.6 mt, and BT SNE/MA = 122.3 mt (Table 9). These caps were first implemented in the 2016-2018 specifications package and were used again for 2019. These caps would be set based on removals from the reference period, before caps were in place. Since there is no biologically based estimate of RH/S, these caps at least represent a maximum amount of bycatch from a reference period.

During the 2016-2018 specification process these values were derived from the method that was considered the best technical approach for determining recent RH/S catch estimates in support of the goals and objectives of Framework 3, primarily to provide strong incentive for the industry to continue to avoid RH/S and reduce RH/S catch to the extent practicable. When the PDT developed this method, it argued that these years represent a “reference period” before catch caps were adopted (2008-2014). Going forward, the PDT did not recommend including additional years to this reference period. Including the years that the fishery is under a cap may provide incentive for fishermen to increase their RH/S catch, which is in opposition to the goal of the RH/S catch caps.

Table 7. 2019 RH/S catch caps in the herring fishery, implemented by NMFS through in-season adjustment (mt)

	MWT GOM	MWT Cape Cod	MWT SNE/MA	BT SNE/MA
RH/S catch cap	76.7	32.4	129.6	122.3

4.3 SUMMARY OF SPECIFICATIONS ALTERNATIVES UNDER CONSIDERATION

This section is not a separate alternative, it combines several alternatives from above to illustrate the combination of several alternatives together. Table 10 summarizes the potential specifications under consideration for all measure combined, including the total ACL and sub-ACLs for each combination. There are three alternatives for OFL/ABC (Section 4.2.1) and four alternatives for the management uncertainty buffer (Section 4.2.2.1).

The two set-asides have not been removed from the ACL of relevant sub-ACLs yet (FGSA and RSA), but they have been provided in the columns to the right. Before final sub-ACLs are allocated, these set-asides would be removed first. In the case of the FGSA, that amount would be allocated back to Area 1A after November 1 if it is not utilized in-season.

Table 8. Summary of Atlantic herring specifications for all OFL/ABC and management uncertainty buffer alternatives
(Note: table from 2019-2021 specifications – will be updated for this action)

	Year	OFL	ABC	Management Uncertainty Buffer Options	ACL = DAH	Area Sub ACLs				Set-Asides*	
						Area 1A (28.9%)	Area 1B (4.3%)	Area 2 (27.8%)	Area 3 (39%)	FGSA (Area 1A only)	RSA
OFL / ABC Alternative 1	2019	30,668	21,266	6,200	15,066	4,354	648	4,188	5,876	39	452
				6,200	15,066	4,354	648	4,188	5,876	39	452
				5,888	15,378	4,444	661	4,275	5,997	40	461
				3,992	17,274	4,992	743	4,802	6,737	45	518
	2020	30,668	21,266	4,560	16,706	4,828	718	4,644	6,515	43	501
				6,200	15,066	4,354	648	4,188	5,876	39	452
				5,888	15,378	4,444	661	4,275	5,997	40	461
				3,992	17,274	4,992	743	4,802	6,737	45	518
	2021	30,668	21,266	4,560	16,706	4,828	718	4,644	6,515	43	501
				6,200	15,066	4,354	648	4,188	5,876	39	452
				5,888	15,378	4,444	661	4,275	5,997	40	461
				3,992	17,274	4,992	743	4,802	6,737	45	518
OFL / ABC Alternative 2a	2019	30,668	21,266	6,200	15,066	4,354	648	4,188	5,876	39	452
				6,200	9,931	2,870	427	2,761	3,873	26	298
				5,888	10,243	2,960	440	2,848	3,995	27	307
				3,992	12,139	3,508	522	3,375	4,734	31	364
	2020	41,830	16,131	4,560	11,571	3,344	498	3,217	4,513	30	347
				6,200	9,931	2,870	427	2,761	3,873	26	298
				5,888	10,243	2,960	440	2,848	3,995	27	307
				3,992	12,139	3,508	522	3,375	4,734	31	364
	2021	69,064	16,131	4,560	11,571	3,344	498	3,217	4,513	30	347
				6,200	9,931	2,870	427	2,761	3,873	26	298
				5,888	10,243	2,960	440	2,848	3,995	27	307
				3,992	12,139	3,508	522	3,375	4,734	31	364
OFL / ABC Alternative 2b	2019	30,668	21,266	6,200	15,066	4,354	648	4,188	5,876	39	452
				6,200	8,065	2,331	347	2,242	3,145	21	242
				5,888	8,377	2,421	360	2,329	3,267	22	251
				3,992	10,273	2,969	442	2,856	4,006	27	308
	2020	40,574	14,265	4,560	9,705	2,805	417	2,698	3,785	25	291
				6,200	8,065	2,331	347	2,242	3,145	21	242
				5,888	8,377	2,421	360	2,329	3,267	22	251
				3,992	10,273	2,969	442	2,856	4,006	27	308
	2021	68,718	14,265	4,560	9,705	2,805	417	2,698	3,785	25	291
				6,200	8,065	2,331	347	2,242	3,145	21	242
				5,888	8,377	2,421	360	2,329	3,267	22	251
				3,992	10,273	2,969	442	2,856	4,006	27	308

4.4 CARRYOVER OF UNHARVESTED CATCH

In the herring plan, any unharvested catch in a herring management area in a fishing year (up to 10% of that area's sub-ACL) shall be carried over and added to the sub-ACL for that herring management area for the fishing year following the year when total catch is determined (Framework 2, NEFMC 2012). Section 648.201 of the herring regulations specify the carryover provisions.

Under Framework 6, the Council specifically prohibited carryover of unused sub-ACLs from FY2018 to the 2020 fishing year, as well as carryover from FY2019 to 2021. The Council adopted that measure to temporarily prohibit the automatic carryover of unharvested herring catch in the near term due to concerns about potentially negative unintended consequences on some participants in the fishery. Framework 8 could consider similar prohibitions for unused 2020 and/or 2021 catch. Framework 6 stated that the prohibition on carryover was intended to be temporary in nature and would automatically sunset or expire. Framework 6 also stated that a subsequent action could modify the prohibition for carryover of FY2019. *[Note: this actin could potentially modify the prohibition for FY2019 – so that unused quota from 2019 could be carried over to FY2021]*

4.4.1 No Action – Maintain Current Carryover Provisions (Alternative 1)

No action would maintain the carryover of unharvested catch up to 10% of each sub-ACL. Specifically, up to 10% of each area's sub-ACL in 2020 would automatically rollover and be added to the sub-ACL for each herring management area in 2022; however, the overall ACL would not increase. The same would apply for unused sub-ACLs in future years.

Rationale: The primary intent is to help optimize yield overall. There are constraints in this fishery that can inhibit the ability for the fishery to harvest the full sub-ACL in each area. Allowing some unharvested catch to rollover gives some flexibility to provide additional access to unharvested catch. Because the total ACL is not also adjusted upwards to account for the rollover, there is no additional risk of the fishery exceeding overall catch limits or causing overfishing. The total fishery would still be closed when 95% of the total ACL is projected to be caught in the year that rollover was granted. Because this measure allows a sub-ACL increase for a management area, but it does not allow a corresponding increase to the stockwide ACL the overall harvest would remain constrained by the stock-wide ACL. Consequently, the fleet would be required to forego harvest in one or more management areas in order to harvest the carryover available in an area. This measure maintains the management uncertainty buffer between ABC and the stock-wide ACL, while giving the fleet some flexibility in choosing where to harvest the stock-wide ACL

4.4.2 Prohibit Carryover for 2022 and 2023 (Alternative 2)

Under Alternative 2, unharvested quota from the 2020 herring management area sub-ACLs would *not* automatically rollover to 2022 herring management area sub-ACLs. Similarly, if there is unharvested quota at the end of 2021, it would not rollover to 2023. This alternative is intended to be temporary in nature; it would maintain the prohibition implemented under the last specifications package for two additional years. After 2023, the prohibition would automatically sunset or expire. In addition, if the Council initiates a subsequent action to revise 2023 specifications, this prohibition could be modified, and carryover could be reinstated for 2023.

Rationale: Alternative 2 was considered because ???

The Council is generally supportive of carryover in this fishery to help optimize yield, but when overall quotas are relatively small, and the carryover amounts are relatively large, the unintended consequences

and distributional impacts on different vessels from different areas could be problematic. It was also noted that adding carryover could cause a race to fish mentality to gain as much access to the resource before other users if fish are concentrated in one area. Furthermore, if the herring resource is as low as currently estimated, it may not be advantageous to harvest additional catch at this time. While the fishery would still close when 95% of the total ACL is caught, the rollover could enable more fish to be removed from one area compared to total removals being more spread out across all areas. Therefore, the Council is recommending that carryover be prohibited under these circumstances and on a temporary basis.

4.5 ADJUST MEASURES THAT POTENTIALLY INHIBIT MACKEREL FISHERY FROM ACHIEVING OPTIMUM YIELD

Two specific measures in the herring plan have been identified that potentially inhibit the mackerel fishery from achieving optimum yield in that fishery – the 2,000 lb. herring incidental catch possession limit and the seasonal closure of Area 1B from January through April. This action is considering several options to adjust these measures to improve access to the mackerel fishery since many participants in the herring fishery also prosecute mackerel.

4.5.1 Increase the herring incidental possession limit

When 92% of the sub-ACL for a herring management area (Area 1A, 1B, 2 and 3) or 95% of the total ACL for the herring fishery is projected to be caught a 2,000 lb. incidental catch limit is implemented to close the directed herring fishery. This relatively low possession limit makes it very challenging to target mackerel, especially in certain areas and seasons when herring and mackerel mix. In the reverse, when the mackerel ACL is projected to be caught a 20,000 lb. mackerel possession limit is implemented for that fishery.

4.5.1.1 Incidental catch limit

4.5.1.1.1 Option A – No Action (2,000 lbs.)

4.5.1.1.2 Option B - Increase the limit to 40,000 lbs.

4.5.1.1.3 Option C – Increase the limit to ???

4.5.1.2 Area(s) increased incidental catch limit applies to

4.5.1.2.1 Option A – All herring management areas (1A, 1B, 2 and 3)

4.5.1.2.2 Option B – Herring management areas 1B, 2 and 3 only (excluding Area 1A)

4.5.1.2.3 Option C – Herring management areas 2 and 3 only (excluding Area 1A and 1B)

4.5.1.3 Modify when the incidental catch limit is triggered

4.5.1.3.1 Incidental catch limit is triggered when ??? % of sub-ACL harvested

4.5.1.3.2 Incidental catch limit is triggered when ??? ? of total ACL is harvested

4.5.1.4 Modify the management uncertainty buffer to account for increased incidental catch of herring (could include here or reference other section???)

4.5.2 Modify the seasonal closure of Area 1B

Area 1B has been closed January through April for ??? years since Framework ???. Amendment 8

4.5.2.1 Eliminate the seasonal closure of Area 1B

4.5.2.2 Modify the seasonal closure to ???

5.0 ALTERNATIVES CONSIDERED BUT REJECTED

6.0 AFFECTED ENVIRONMENT

The Affected Environment is described in this action based on valued ecosystem components (VECs), including target species, non-target species, predator species, physical environment and Essential Fish Habitat (EFH), protected resources, and human communities. VECs represent the resources, areas and human communities that may be affected by the alternatives under consideration in this amendment. VECs are the focus, since they are the “place” where the impacts of management actions occur.

The Council recently completed Amendment 8 to the Atlantic Herring FMP that included a detailed Affected Environment. This action updates several key tables and figures with data through 2019, but for the most part references the information recently included in Amendment 8 (NEFMC, 2018). Because this action is considering several measures related to the mackerel fishery, this section of the Affected Environment has been expanded.

6.1 TARGET SPECIES (ATLANTIC HERRING)

6.2 NON-TARGET SPECIES (BYCATCH)

6.3 PROTECTED RESOURCES

6.4 PHYSICAL ENVIRONMENT AND ESSENTIAL FISH HABITAT

6.5 HUMAN COMMUNITIES

7.0 ENVIRONMENTAL IMPACTS OF ALTERNATIVES