2019-2021 Specifications Planning Document

The Atlantic herring fishery specifications are annual amounts specified for three fishing years at a time (January – December), including:

- Overfishing Limit (OFL);
- Acceptable Biological Catch (ABC);
- Stockwide 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).

Purpose and Need

The purpose and need together explain why the action is being taken and what objectives the action intends to achieve.

Purpose = objective or goal of an action vs. Need = requirement, or underlying problem.

DRAFT

The need for this action is to meet regulatory requirements and adjust management measures to prevent overfishing and help achieve optimum yield in the fishery consistent with the status of the Atlantic herring resource and the requirements of the Magnuson Stevens Act.

The purpose of this action is to specify the overfishing limit (OFL) and acceptable biological catch (ABC) for the Atlantic herring fishery, and to set specifications for the 2019-2021 fishing years including measures to address and minimize the catch and bycatch of river herring and shad (RH/S) to the extent practicable by setting RH/S catch caps.

2016-2018 Specifications

Table 1 - Preferred alternative for 2016-2018 Atlantic herring fishery specifications

Specifications	Alternative 3 *Preferred Alternative*
OFL	2016 – 138,000 2017 – 117,000 2018 – 111,000
ABC	111,000
Management Uncertainty	6,200 (Value in 2015)
ACL/OY	104,800
DAH	104,800
DAP	100,800
USAP	0
BT	4,000
Area 1A Sub-ACL (28.9%)	30,300
Area 1B Sub-ACL (4.3%)	4,500
Area 2 Sub-ACL (27.8%)	29,100
Area 3 Sub-ACL (39%)	40,900
RSA	3%
FGSA	295

Table 2 - Preferred alternative for seasonal (monthly) sub-ACL divisions (2016-2018)

Area	Seasonal sub-ACL division
1A	0% January-May; 100% June-December
1B	0% January-April; 100% May-December

Table 3 – RH/S catch caps (Option 2 is the preferred alternative)

RH/S Catch Cap Area	2016-2018 RH/S Catch Cap (mt)	
	Option 1 (Median)	**Option 2 (Weighted Mean)**
GOM	Midwater Trawl – 11.3	Midwater Trawl – 76.7
CC	Midwater Trawl – 29.5	Midwater Trawl – 32.4
SNE/MA	Midwater Trawl – 83.9 Bottom Trawl – 24.0	Midwater Trawl – 129.6 Bottom Trawl – 122.3
GB	0	0

For this action there is potentially one topic that may require the action to be a framework.

Overfishing definition reference points (based on new benchmark assessment)

Modifying the reference points requires a change to the herring regulations – consideration of this measure would require this action to be a framework action (more than a specifications process).

Herring FMP Overfishing Definition

The Council establishes the following overfishing definition reference points for Atlantic herring. If stock biomass is equal or greater than B_{MSY} , overfishing occurs when fishing mortality exceeds F_{MSY}. If stock biomass is below B_{MSY} , overfishing occurs when fishing mortality exceeds the level that has a 50 percent probability to rebuild stock biomass to B_{MSY} in 5 years ($F_{Threshold}$). The stock is in an overfished condition when stock biomass is below ½ BMSY and overfishing occurs when fishing mortality exceeds $F_{Threshold}$. These reference points are thresholds and form the basis for the control rule.

The control rule also specifies risk averse fishing mortality targets, accounting for the uncertainty in the estimate of F_{MSY}. If stock biomass is equal to or greater than $1/2B_{MSY}$, the target fishing mortality will be the lower level of the 80 percent confidence interval about F_{MSY}. When biomass is below B_{MSY} , the target fishing mortality will be reduced consistent with the five-year rebuilding schedule used to determine $F_{Threshold}$.

Potential Alternatives:

1. No Action - old overfishing definition reference points (2015 assessment update)
   MSY = 77,247mt
   Fmsy = 0.24
   SSBmsy = 311,145mt

2. Updated overfishing definition reference points based on 2018 benchmark assessment
   Stock recruit relationship could no longer be estimated – so used F40% as proxy for Fmsy
   New reference points
   MSY proxy = 112,000mt
   Fmsy proxy = 0.51
   SSBmsy proxy = 189,000mt (1/2 SSB msy = 94,500mt)
   These reference points no longer rely on poorly estimated S/R relationship – cannot compare these values to old values, estimate of fully recruited F has changed from age 5+ to 7/8+ fish.

ACL alphabet soup

(some of these have had alternatives in the past and some just stay the same from previous actions)

OFL ≥ ABC ≥ ACL

OFL – Scientific Uncertainty = ABC (Determined by SSC)

ABC – Management Uncertainty = Stockwide ACL = OY

OY ≥ DAH

DAH = DAP + BT

a) Management uncertainty buffer

Has been based on:

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 last package set it at 6,200 mt.

b) Border transfer (BT)

The last package set it at 4,000 mt.

Trend seems to be declining compared to earlier years, 0-500 mt from 2004-2010, then increased to under 1,000mt in 2011-2013.

In 2013-2014 five vessels were issued permits and in 2015-2017 four vessels were issued permits.

Table 4 – 2013-2017 Herring border transfer landings (mt)

Year	Herring (mt)
2013	838
2014	796
2015	45
2016	0
2017	0

Source: CFDERS dealer reported landings as of 2018/07/31

c) USAP specification

Part of DAP may be allocated for at-sea processing by domestic vessels that exceed the vessel size limits. In 2007-2009 there was a 20,000 USAP for Areas 2 and 3 only.

But operation never materialized – any new info? The last package set this at 0mt.

d) Research set-aside (RSA)

Allowed in any or all herring management areas with sub-ACL of 0-3%.

The last package set the allocation at 3% of each area.

e) Fixed gear set-aside (FGSA)

Amendment 1 to the Atlantic Herring FMP allows up to 500 mt of Atlantic herring to be set-aside until November 1 for fixed gear fishermen fishing West of Cutler. It is returned to the Area 1A sub-ACL if not utilized.

The FGSA was set to 295 mt for the 2013-2015 specifications in Area 1A and the Council maintained that allocation of 295 mt for the FGSA for the 2016-2018 fishing years.

Area sub-ACLs

Primary rationale: to prevent overfishing on one stock component correct.
2010-2012 specs is the last time the PDT really evaluated the area sub-ACL allocations. Those % have been maintained since.
If a different split is considered what would rationale be for having different percentages?

1A	28.9%
1B	4.3%
2	27.8%
3	39%

Seasonal sub-ACLs

For the 2016-2018 specs - "the Council has also determined that there is no need to consider changing the seasonal (monthly) divisions of the Area 1A and Area 1B sub-ACLs.

Note – A8 already considering an alternative to modify the seasonal restrictions in Area 1B (Alt. 9).
If alternatives are considered, what would the rationale be? Andy data available?

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

RH/S catch caps – same method for setting caps, any alternative approaches?

Framework 3 to the Atlantic Herring FMP established gear and area-specific RH/S catch caps for the herring fishery in 2014. These catch caps apply to midwater trawl vessels fishing in the Gulf of Maine, off Cape Cod, and in Southern New England, as well as for small-mesh bottom trawl vessels fishing in Southern New England that land greater than 6,600 lb of herring. The caps are intended to minimize RH/S bycatch and bycatch mortality to the extent practicable while allowing the herring fishery an opportunity to fully harvest the herring ACL. The incentive to minimize the catch of RH/S is to avoid the implementation of a herring possession limit.

As noted in Framework 3, available data are not robust enough to specify biologically-based catch caps that reflect RH/S abundance or to evaluate the potential impacts of catch caps on the RH/S stocks. In the absence of sufficient data to specify biologically-based catch caps, the caps have been set using recent RH/S catch data with the intent of keeping catch below its highest levels to limit fishing mortality on RH/S. Limiting fishing mortality is expected to result in positive impacts on the stocks.

Initially the values of the caps were specified using the median catch of RH/S catch over the previous 5 years (2008-2012). The 2016-2018 RH/S catch caps were calculated using a revised methodology and updated data over a longer time period (seven years instead of five). The revised methodology used a weighted mean catch of RH/S (versus median catch). Appendix I of the 2016-2018 specifications includes the Herring PDT's analysis.

During that action the PDT was very clear that the method used to set caps in that action would not be workable for future actions. The PDT warned that using the same method (weighted mean of RH/S to herring catch rate from previous 7 years) and just updating the years of data would include years the fishery has been under catch caps, which would likely influence the annual rates. Also, catch rates from a specific point of time could not be connected to the trajectory of RH/S stocks and Atlantic herring, and stocks may be going up and down.

For this action

The PDT would not support developing the same alternative used in the 2016-2018 package and recommends the Committee revisit the goals of these caps, acknowledging the limitations in the data available to set the cap. Are the goals still the same, and are they still relevant based on updated assessments of RH/S and Atlantic Herring compared to the last specification package? It may be possible to investigate the methods considered in the current mackerel action, but they have issues as well (i.e. use years when caps have been in place, based on a Kall, or total catch of herring and mackerel combined). Before a RH/S assessment is available it will be difficult to set these caps without a total estimate of population size.

Original goal from Framework 3:

The first goal of Framework 3 is to establish a process for setting river herring/shad (RH/S) catch caps in the Atlantic herring fishery to achieve the following objectives:

- Provide strong incentive for the industry to continue to avoid river herring/shad and reduce river herring/shad catch to the extent practicable;
- Enhance coordination with the Mid-Atlantic Council to address overlapping fisheries; and
- Promote flexibility to adjust the catch cap(s) in the future as more information becomes available.

The second goal of this framework adjustment is to specify RH/S catch caps and related measures in the Atlantic herring fishery for the 2014 and 2015 fishing years. The RH/S catch caps and related measures specified for 2014 and 2015 are intended to allow the directed Atlantic herring fleet to fully utilize the yield available to the fishery if the fleet can continue to avoid RH/S.