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**Amendment 4 to the Atlantic  
Herring FMP:  
Annual Catch Limits  
and  
Accountability Measures**

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**Amendment 4 - Issues**

1. Annual Catch Limits/Accountability Measures (ACLs/AMs)
2. Catch Monitoring Program
3. Measures to Address River Herring Bycatch
4. Criteria for Midwater Trawl Access to Groundfish Closed Areas
5. Measures to Address Interactions with Mackerel Fishery

## **Herring FMP Overview**

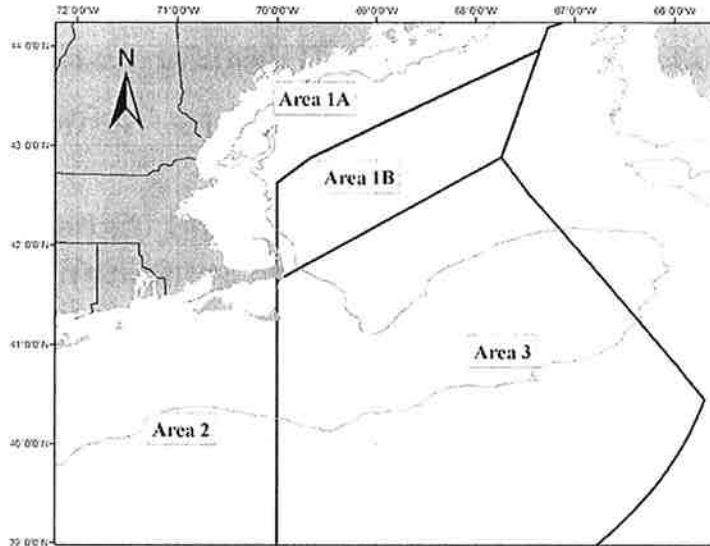
Herring FMP became effective January 2001

- One management unit for entire stock complex, four separate management areas
- Area-specific “Hard” TAC-based management approach in each area
- Fishery specifications process to set OY, ABC, DAH, DAP, other specs, and area-specific TACs (annual)
- Directed fishery in area closes when 95% of TAC is projected to be reached
- Days out and spawning restrictions implemented in ASMFC Interstate Plan

## **Major Elements of Amendment 1**

- Updated Reference Points ( $MSY$ ,  $B_{MSY}$ ,  $F_{MSY}$ )
- Management Area Boundary Changes
- Limited Access Program
- Purse Seine/Fixed Gear-Only Area
- Three-Year Specification Process
- Research Set-Asides
- Definition of Midwater Trawl Gear
- Measures for Fixed Gear Fisheries

## New Management Areas (A1)



## Limited Access (A1)

Limited Access	Limited Access in All Management Areas
(Area 1 Qualification Criteria) Access to All Areas	Current permit requirement plus 500 mt in one year between 1/1/93-12/31/03
(Areas 2/3 Qualification Criteria) Access to Areas 2/3 Only	Current permit requirement plus 250 mt in one year between 1/1/93-12/31/03
Limited Access Incidental Catch Permit	15 mt in one year between 1/1/88-12/31/03 25 mt possession limit, one landing per calendar day
Open Access Incidental Catch Permit	3 mt possession limit, one landing per calendar day

## Herring Fishery Overview

- Managed in cooperation with ASMFC
- January 1 – December 31 fishing year
- TACs, limited access, and purse seine/fixed gear area
- About 42 limited access directed fishery permits and 40 limited access incidental catch permits (~99% of herring landings)
- About 2,000 open access permit holders
- Specifications process to set OY, TACs, and other specs for three years
- Haddock catch cap for incidental catch

## 2008-2009 Fishery Specifications

	2007	2008/2009
ABC	194,000	194,000
U.S. OY	145,000	145,000
DAH	145,000	145,000
DAP	141,000	141,000
JVPt	0	0
JVP	0	0
IWP	0	0
USAP	20,000 (Areas 2 and 3 only)	20,000 (Areas 2 and 3 only)
BT	4,000	4,000
TALFF	0	0
RESERVE	0	0
TAC Area 1A	50,000 (5,000 Jan-May)	45,000 (43,650 fishery, 5,000 Jan-May)
TAC Area 1B	10,000	10,000 (9,700 fishery)
TAC Area 2	30,000	30,000 (29,100 fishery)
TAC Area 3	55,000	60,000 (58,200 fishery)
Research Set-Aside	N/A	Area 1A RSA 1,350 Area 1B RSA 300 Area 2 RSA 900 Area 3 RSA 1,800

## Updated Fishery Information

### Total 2008 Catch from IVR

Management Area	IVR Catch (mt)	% of TAC
Area 1A (Jan 1 <sup>st</sup> – May 31 <sup>st</sup> )	0	NA
Area 1A (June 1 <sup>st</sup> – Dec 31 <sup>st</sup> )	41,640	NA
Area 1A TOTAL	41,640	92.5% of 45,000
Area 1B	8,104	81% of 10,000
Area 2	19,256	64.2% of 30,000
Area 3	11,800	19.7% of 60,000
<b>Total</b>	<b>80,800</b>	<b>55.7% of 145,000</b>

## Amendment 4 – ACLs/AMs

- Amendment 4 measures address the process for establishing ACLs/AMs
- Focus on fishery specification process – modifications proposed for MSRA consistency with ACL/AM provisions
- OFL, ABC, ACLs themselves to be set through specifications process (3 years)
- AMs established in Amendment 4 but can be modified through specifications and other actions

## **ACLs/AMs – NEW TERMS**

- Stocks in a Fishery – Atlantic Herring
  - Require status determination criteria
  - Guidelines do not require all target and non-target stocks – at the Council's discretion
  - Other stocks may be included in the future, if appropriate
- Overfishing Level (OFL) –  $F_{MAX} \times \text{Biomass}$ 
  - Can fluctuate above/below MSY depending on stock size
- Acceptable Biological Catch (ABC) – max catch recommended for harvest
  - New definition of ABC for Atlantic herring specifications
  - Considers/addresses scientific uncertainty
  - Council is bound by SSC recommendations

$$\text{OFL} \geq \text{ABC} \geq \text{ACL}$$

## **NEW TERMS**

- Annual Catch Limit (ACL) – catch level selected for harvest
  - Considers/addresses management uncertainty
  - The level of catch to determine whether accountability measures are necessary
  - One stock complex ACL for Atlantic herring (U.S. OY) and sub-ACLs for each management area
  - Canadian catch, State waters catch, and possibly discards to be accounted for when specifying ACLs
- Accountability Measures (AMs) – measures to ensure that the ACL will not be exceeded (precautionary) and mitigate/correct any ACL overages that may occur (consequential)

## **ACL/AM Process**

- Measures in Amendment 4 are primarily process-related (specifications)
- One stock-wide ACL to be established = OY
- Management Area TACs will be sub-ACLs, subject to accountability measures
- Herring PDT will develop recommendations for ABC and ACLs – provide Discussion Document to SSC:
  - OFL estimates for next three years
  - ABC recommendation and related discussion re. scientific uncertainty
  - Evaluation of whether ABC and ACLs have been exceeded in earlier years
  - ACL discussion will address management uncertainty

## **ACL/AM Process**

- SSC will review Discussion Document(s), recommend ABC and comment on other related issues as may be requested
- PDT will also provide recommendations regarding ACL and sub-ACL options, including discussion of management uncertainty (SSC may comment if requested); PDT will also evaluate AMs and provide recommendations as appropriate
- Council will be bound by ABC recommendation from SSC but may consider different options for sub-ACLs
- Sub-ACLs evaluated by the Herring PDT through specifications process (ex., risk analysis)
- AMs will be established in Amendment 4 but can be modified/adjusted through specs process as necessary

## Specifications – Option 1

CURRENT SPECIFICATIONS	PROPOSED (AMENDMENT 4) SPECIFICATIONS
Allowable Biological Catch (ABC)	Overfishing Limit (OFL)
	Acceptable Biological Catch (ABC)
U.S. Optimum Yield (OY)	U.S. Optimum Yield (OY) (Stock-Wide ACL)
Domestic Annual Harvesting (DAH)	Domestic Annual Harvesting (DAH)
Domestic Annual Processing (DAP)	Domestic Annual Processing (DAP)
Total Joint Venture Processing (JVPT)	Total Joint Venture Processing (JVPT)
Joint Venture Processing (JVP)	Joint Venture Processing (JVP)
Internal Waters Processing (IWP)	Internal Waters Processing (IWP)
U.S. At-Sea Processing (USAP)	U.S. At-Sea Processing (USAP)
Border Transfer (BT)	Border Transfer (BT)
Total Allowable Level of Foreign Fishing (TALFF)	Total Allowable Level of Foreign Fishing (TALFF)
RESERVE	RESERVE
TAC Area 1A	TAC Area 1A (sub-ACL)
TAC Area 1B	TAC Area 1B (sub-ACL)
TAC Area 2	TAC Area 2 (sub-ACL)
TAC Area 3	TAC Area 3 (sub-ACL)
Research Set-Aside	Research Set-Aside (and/or Other Set-Aside)

## Specifications – Option 2

CURRENT SPECIFICATIONS	PROPOSED (AMENDMENT 4) SPECIFICATIONS
Allowable Biological Catch (ABC)	Overfishing Limit (OFL)
	Acceptable Biological Catch (ABC)
U.S. Optimum Yield (OY)	U.S. Optimum Yield (OY) (Stock-Wide ACL)
Domestic Annual Harvesting (DAH)	Domestic Annual Harvesting (DAH)
Domestic Annual Processing (DAP)	Domestic Annual Processing (DAP)
Total Joint Venture Processing (JVPT)	N/A
Joint Venture Processing (JVP)	N/A
Internal Waters Processing (IWP)	N/A
U.S. At-Sea Processing (USAP)	U.S. At-Sea Processing (USAP)
Border Transfer (BT)	Border Transfer (BT)
Total Allowable Level of Foreign Fishing (TALFF)	N/A
RESERVE	N/A
TAC Area 1A	TAC Area 1A (sub-ACL)
TAC Area 1B	TAC Area 1B (sub-ACL)
TAC Area 2	TAC Area 2 (sub-ACL)
TAC Area 3	TAC Area 3 (sub-ACL)
Research Set-Aside	Research Set-Aside (and/or Other Set-Aside)



## **Scientific Uncertainty**

- To be addressed primarily between the OFL and the ABC – ABC may be set lower than OFL to account for scientific uncertainty
- Stock assessment will identify/discuss sources of uncertainty
- Possible sources of scientific uncertainty:
  - Mixing of herring stock components
  - Retrospective pattern in stock assessment (over-estimates B and under-estimates F)
  - Predator/prey relationships and forage issues – amount of herring that is consumed for predation and impacts on natural mortality

## **ABC/OY: Considerations for 2007-2009**

Herring PDT recommends that a buffer be established between ABC and OY:

- Significant retrospective pattern in stock assessment overestimates B and underestimates F
- Recruitment depends on favorable environmental conditions, variability is common
- A buffer allows continued expansion of the fishery while acknowledging herring's importance in the ecosystem (forage)

## **Management Uncertainty**

- To be addressed primarily between the ABC and the ACLs – ACLs may be set lower than ABC to account for management uncertainty
- Level of uncertainty will depend on catch monitoring program and ability to monitor all catch against ACLs
- Possible sources of uncertainty:
  - Bycatch/Discards
  - Canadian/state waters catch
  - Impact of ASMFC management measures on fishing patterns

## **Accountability Measures**

- **EXISTING AMs (No Action)**
  - In-Season Adjustments (Precautionary, but vague and requires time for public comment)
  - 95% Closure (Precautionary; 92% in some areas due to research set-aside)
  - Framework Adjustment Process (Precautionary/Consequential)
  - ASMFC Measures (indirect; days out of the fishery and spawning restrictions)

## **Accountability Measures**

### **ADDITIONAL AMs UNDER CONSIDERATION**

- Option 1 – Include language to authorize NMFS RA to close the fishery (prohibit possession) when 100% of ACL is projected to be reached (Precautionary)
- Option 2 – Lower the trigger for Closing Directed Fishery in the Following Fishing Year (Consequential)
  - Ex., if ACL is exceeded by 2%, then directed fishery will close at 93% in the following year (instead of 95%)

## **Accountability Measures**

### **ADDITIONAL AMs UNDER CONSIDERATION**

- Option 3 – Overage payback provisions
  - Option 3A – Direct deduction in the following fishing year
  - Option 3B – Review of overage to determine negative biological impact, if any
    - PDT would review overage to determine if negative impact, and to what extent
    - Impacts on stock components, spawning, productivity, and ecosystem
    - One-year lag time for review – overages in Year 1 would be addressed in Year 3

## **TIMING CONSIDERATIONS**

- ACL/AM provisions must be effective by January 1, 2011 for Atlantic herring – must be submitted no later than May 2010
- 2010-2012 specifications must address ACL/AM provisions for 2011 and 2012 – must be submitted Fall 2009
- TRAC Stock Assessment June 2009 (Update)
- ABC recommendation required by SSC for 2010 and beyond

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