Atlantic Herring: Council Adopts 2021-2023 Specifications; Adjusts Herring Measures to Facilitate Mackerel Harvest

During the first day of its September 29-October 1, 2020 webinar meeting, the New England Fishery Management Council took final action on Framework Adjustment 8 to the Atlantic Herring Fishery Management Plan. Next, the framework will be submitted to the National Marine Fisheries Service (NMFS/NOAA Fisheries) for review and final approval.

Framework 8 contains two parts:

• Specifications for the 2021-2023 fishing years for Atlantic herring; and
• Adjustments to measures in the herring plan that potentially inhibit the Atlantic mackerel fishery from achieving optimum yield (OY).

The Council based the 2021-2023 catch limits on the best scientific information available, which included:

1. Results from the 2020 Management Track Stock Assessment for Atlantic herring;
2. Overfishing limit (OFL) and acceptable biological catch (ABC) recommendations from its Scientific and Statistical Committee (SSC), which followed the ABC control rule in Amendment 8; and
3. Input from the Herring Plan Development Team.

The SSC initially considered a higher ABC for 2023 but ended up recommending that the Council maintain the 2022 ABC of

### 2021-2023 Atlantic Herring Specifications (in Metric Tons)

<table>
<thead>
<tr>
<th>Specification</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overfishing Limit (OFL)</td>
<td>23,423</td>
<td>26,292</td>
<td>44,600</td>
</tr>
<tr>
<td>Acceptable Biological Catch (ABC)</td>
<td>9,483</td>
<td>8,767</td>
<td>8,767</td>
</tr>
<tr>
<td>Management Uncertainty</td>
<td>4,669</td>
<td>4,669</td>
<td>4,669</td>
</tr>
<tr>
<td>Optimum Yield / Annual Catch Limit (OY/ACL)</td>
<td>4,814*</td>
<td>4,098*</td>
<td>4,098*</td>
</tr>
<tr>
<td>Domestic Annual Harvest</td>
<td>4,814</td>
<td>4,098</td>
<td>4,098</td>
</tr>
<tr>
<td>Border Transfer</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Domestic Annual Processing</td>
<td>4,814</td>
<td>4,098</td>
<td>4,098</td>
</tr>
<tr>
<td>U.S. At-Sea Processing</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Area 1A Sub-ACL (28.9%)</td>
<td>1,391</td>
<td>1,184</td>
<td>1,184</td>
</tr>
<tr>
<td>Area 1B Sub-ACL (4.3%)</td>
<td>207</td>
<td>176</td>
<td>176</td>
</tr>
<tr>
<td>Area 2 Sub-ACL (27.8%)</td>
<td>1,338</td>
<td>1,139</td>
<td>1,139</td>
</tr>
<tr>
<td>Area 3 Sub-ACL (39%)</td>
<td>1,877</td>
<td>1,598</td>
<td>1,598</td>
</tr>
<tr>
<td>Fixed Gear Set-Aside</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Research Set-Aside as % of Sub-ACLs</td>
<td>3%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

* If the New Brunswick weir fishery catch through October 1 is less than the associated “trigger,” then 1,000 mt of the management uncertainty buffer will be added to the Area 1A sub-ACL.
8,767 metric tons (mt) in 2023 for this framework. The Council agreed to do so for two primary reasons:

- The lower ABC helps reduce scientific uncertainty, which the SSC deemed important, especially since the new assessment concluded that the resource is now overfished, even though overfishing is not occurring; and
- Both the SSC and Council viewed the 2023 ABC as a placeholder. A new management track assessment for herring is scheduled for 2022, and the 2023 specifications will be updated based on the 2022 assessment results.

The Council takes into account management uncertainty when it sets specifications. While management uncertainty comes from several sources, the biggest one is the weir fishery in New Brunswick, Canada since the Council cannot control catches in that fishery. For the 2021-2023 specifications, the Council voted to set the management uncertainty buffer at 4,669 mt, which reflects the most recent 10-year catch totals from that New Brunswick fishery.

Given the low catch limits available to the U.S. fishery in the near future, the Council voted to set border transfers at zero for the next three fishing years. Typically, the Council allocates a small percentage of fish to at-sea transfers from U.S. vessels to Canadian vessels, which buy herring from U.S. boats for the food-fish market. Border transfer activity has not occurred for the past several years, so the allocation has not be utilized since 2015.

While expressing strong support for the Atlantic Herring Research Set-Aside (RSA) Program, the Council determined that, given the current low quotas, 0% of the annual catch limit (ACL) should be reserved for the RSA program in 2022 and 2023. The Council approved a 3% set-aside for 2021 so that an ongoing project could be completed.

As a result of these decisions, the quotas for Herring Management Areas 1A, 1B, 2, and 3 flowed from there and are shown in the table on page 1.

**CARRYOVER:** Also related to catch limits, the Council agreed to allow 5% of unharvested catch from 2019 and/or 2020 from each management area – not 10% as would be allowed under “no action” – to automatically roll over to fishing years 2021 and/or 2022 respectively. The Council viewed this as a “balance” between addressing the...
needs of the fishery while maintaining protection of the resource. This balance was considered to be especially important in light of the current low biomass situation. The Council recognized that additional fish may be caught in one particular management area through the carryover allowance, but this also could lead to less fish being available in another area because the overall annual catch limit cannot be exceeded. Since near-term allocations for all areas will be extremely low, the Council determined that the 5% carryover was more appropriate than 10% and is expected to have lower risks of unintended distributional impacts on various segments of the fishery that access the resource in different areas and seasons.

**RIVER HERRING/SHAD:** The Council made no changes to the river herring and shad catch caps that currently apply to the Atlantic herring fishery.

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**Q:** Why are herring quotas so low?

**A:** According to the new management track stock assessment, the resource is at an extremely low level of spawning stock biomass (SSB). The Council is using a new ABC control rule to set catch limits. The control rule is applied to the estimate of SSB (see box at right). In 2020, the projection of SSB was 21% of the maximum sustainable yield (MSY) level for the herring resource. At this low level of biomass, the maximum fishing mortality rate (F) allowed is 24% of the fishing mortality rate estimated to produce MSY for the herring resource.

**Q:** What did the assessment peer review panel say?

**A:** The peer review panel said that trends in relative abundance of herring from all four surveys used in the assessment “indicate a substantial decline in stock abundance during the past few years.” The panel added, “Survey indices in 2019 were at or near record-low values.”

**Q:** Did the assessment show any signs of recent, improved recruitment?

**A:** No. Fishery and survey data have not yet detected improved recruitment, which has been at record low levels for the past seven years as seen in this graphic.

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**What Does the ABC Control Rule Do?**

The Council adopted an ABC control rule for Atlantic herring as part of Amendment 8 to better account for herring’s important role as a forage species. The amendment is under review by NOAA Fisheries. This relatively new control rule was used to develop the ABC recommendations for 2021-2023 and 2019-2021.

The control rule is biomass based. When biomass is greater than 50% of SSB at MSY, the maximum fishing mortality rate can be up to 80% of F at MSY. When biomass falls below 50% of SSB at MSY, then the allowable fishing mortality rate declines linearly. When SSB falls to 10% of SSB at MSY or lower, fishing mortality is set at zero, which means the ABC is zero.
MACKEREL-RELATED ACTIONS: The Council voted to adjust two measures in the Atlantic herring plan that potentially inhibit mackerel fishermen from being able to more fully utilize the mackerel quota.

- The Council voted to adjust the current 2,000-pound incidental possession limit of herring in the mackerel fishery in Herring Management Areas 2 and 3 as follows:
  - When 90% of each area’s sub-ACL is reached, the mackerel fishery’s incidental catch limit of Atlantic herring would be limited to 40,000 pounds;
  - When 98% of each herring management area’s sub-ACL is reached, the incidental catch limit of Atlantic herring would be 2,000 pounds; and
  - If the total ACL for the herring fishery is reached at 95%, then the incidental “backstop” catch limit for the mackerel fishery would be 2,000 pounds.

- In Area 1B, which currently is subject to a seasonal closure from January through April, the Council voted to eliminate the closure to potentially allow directed mackerel harvests during the early winter months when mackerel typically are present in the area.

What are These Bar Graphs Showing: The proportion of herring on midwater trawl trips landing mackerel has varied over time. The number of trips where midwater trawl vessels landed primarily mackerel are shown on the left side of each bar graph, while the trips where midwater trawlers landed primarily herring are depicted on the right side of each graph. The bars in the middle depict trips where mackerel and herring were intermixed.

Questions? Contact Deirdre Boelke, the Council’s Atlantic herring plan coordinator, at (978) 465-0492, ext. 105, email dboelke@nefmc.org.