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**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**50 CFR Part 648**

**[Docket No. 151215999-6960-02]**

**RIN 0648-BF64**

**Fisheries of the Northeastern United States; Atlantic Herring Fishery; Specification of Management Measures for Atlantic Herring for the 2016-2018 Fishing Years**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Final rule.

**SUMMARY:** NMFS is implementing final specifications and management measures for the 2016-2018 Atlantic herring fishery. This action sets harvest specifications and river herring/shad catch caps for the herring fishery for the 2016-2018 fishing years, as recommended to NMFS by the New England Fishery Management Council. The river herring/shad catch caps are area and gear-specific. River herring and shad catch from a specific area with a specific gear counts against a cap for trips landing more than a minimum amount of herring. The specifications and management measures in this action meet conservation objectives while providing sustainable levels of access to the fishery.

**DATES:** Effective [*insert date 30 days after date of publication in the FEDERAL REGISTER*].

**ADDRESSES:** Copies of supporting documents used by the New England Fishery Management Council, including the Environmental Assessment (EA) and Regulatory

Impact Review (RIR)/Initial Regulatory Flexibility Analysis (IRFA), are available from: Thomas A. Nies, Executive Director, New England Fishery Management Council, 50 Water Street, Mill 2, Newburyport, MA 01950, telephone (978) 465-0492. The EA/RIR/IRFA is also accessible via the Internet at <http://www.greateratlantic.fisheries.noaa.gov/>.

**FOR FURTHER INFORMATION CONTACT:** Shannah Jaburek, Fishery Management Specialist, (978) 282-8456, fax (978) 281-9135.

**SUPPLEMENTARY INFORMATION:**

**Background**

NMFS published a proposed rule for the 2016-2018 specifications on June 21, 2016 (81 FR 40253). The comment period on the proposed rule ended on July 21, 2016. NMFS received 32 comments, which are summarized in the “Comments and Responses” section of this final rule.

Regulations implementing the Atlantic Herring Fishery Management Plan (FMP) appear at 50 CFR part 648, subpart K. Regulations at § 648.200 require NMFS to make final determinations on the herring specifications recommended by the New England Fishery Management Council in the **Federal Register**, including: The overfishing limit (OFL); acceptable biological catch (ABC); annual catch limit (ACL); optimum yield (OY); domestic annual harvest (DAH); domestic annual processing (DAP); U.S. at-sea processing (USAP); border transfer (BT); management area sub-ACLs; and the amount to be set aside for the research set aside (RSA) (up to 3 percent of any management area sub-ACL) for 3 years. These regulations also allow for river herring/shad catch caps to be developed and implemented as part of the specifications. The 2016-2018 herring

specifications are consistent with these provisions, and provide the necessary elements to comply with the ACL and accountability measure (AM) requirements of the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Complete details on the development of the herring specifications and river herring/shad catch caps were included in the proposed rule; NMFS has not repeated that information here.

### Herring Specifications

**Table 1. Atlantic Herring Specifications**

<b>2016-2018 Atlantic Herring Specifications</b>	
	<b>2016-2018 (mt)</b>
<b>Overfishing Limit</b>	138,000 – 2016 117,000 – 2017 111,000 – 2018
<b>Acceptable Biological Catch</b>	111,000
<b>Management Uncertainty</b>	6,200
<b>Optimum Yield/ACL</b>	104,800*
<b>Domestic Annual Harvest</b>	104,800
<b>Border Transfer</b>	4,000
<b>Domestic Annual Processing</b>	100,800
<b>U.S. At-Sea Processing</b>	0
<b>Area 1A Sub-ACL</b>	30,300*
<b>Area 1B Sub-ACL</b>	4,500
<b>Area 2 Sub-ACL</b>	29,100
<b>Area 3 Sub-ACL</b>	40,900
<b>Fixed Gear Set-Aside</b>	295
<b>Research Set-Aside</b>	3 percent of each sub-ACL
* If New Brunswick weir fishery catch through October 1 is less than 4,000 mt, then 1,000 mt will be subtracted from the management uncertainty buffer and added to the ACL and Area 1A Sub-ACL.	

An operational update to the herring stock assessment, completed in May 2015, indicated that herring was not overfished and overfishing was not occurring. However, the assessment contained a retrospective pattern suggesting that spawning stock biomass

(SSB) is likely overestimated and fishing mortality (F) is likely underestimated.

Following an adjustment for the retrospective pattern, the assessment estimated the herring stock at approximately double its target biomass ( $SSB_{MSY}$ ) and F at approximately half the fishing mortality threshold ( $F_{MSY}$ ).

The herring ABC of 111,000 mt (a 3-mt decrease from status quo) for 2016-2018 is based on the current control rule (constant catch with 50-percent probability that  $F > F_{MSY}$  in last year) and is consistent with the Council's Scientific and Statistical Committee's (SSC) advice. The OFL is 138,000 mt in 2016, 117,000 mt in 2017, and 111,000 mt in 2018. While the ABC control rule does not explicitly adjust for herring's role in the ecosystem, herring's high biomass (approximately 74 percent of unfished biomass) and low fishing mortality (ratio of catch to consumption by predators is 1:4) likely achieves ecosystem goals, including accounting for herring's role as forage. The herring ABC is typically reduced from the OFL to account for scientific uncertainty. Using the current constant catch control rule means that the ABC will equal the OFL in 2018. When the SSC considered the ABC of 111,000 mt, it concluded that the probability of the stock becoming overfished during 2016-2018 is near zero. Further, this final rule is consistent with the status quo specifications that set ABC equal to OFL in 2015 and overfishing did not occur.

Under the FMP, the herring ACL is reduced from ABC to account for management uncertainty, and the primary source of management uncertainty is catch in the New Brunswick weir fishery. Catch in the weir fishery is variable, but has declined in recent years. This final rule implements a management uncertainty buffer of 6,200 mt,

which is equivalent to the value of the buffer in 2015. To help ensure catch in the New Brunswick weir fishery does not exceed the management uncertainty buffer, NMFS specifies a buffer greater than the most recent 3-year and 5-year average catch in the New Brunswick weir fishery. The resulting stockwide ACL will be 104,800 mt.

Given the variability of the New Brunswick weir catch and the likelihood that weir catch may be less than 6,200 mt, NMFS also specifies a New Brunswick weir fishery payback provision. Specifically, NMFS will subtract 1,000 mt from the management uncertainty buffer and add it to the ACL if the weir fishery harvests less than 4,000 mt by October 1. The 1,000 mt added to the ACL would also increase the sub-ACL for Herring Management Area 1A. NMFS selects the October 1 date to trigger the payback provision for two reasons. First, there is typically only minimal catch in the New Brunswick weir fishery after October 1 (less than four percent of total reported landings from 1978 to 2014) so the likelihood of weir catch exceeding the management uncertainty buffer after October 1 is low. Second, adding 1,000 mt to the Area 1A sub-ACL in October is expected to allow herring vessels to access the additional harvest before catch in the herring fishery is limited in Area 1A. NMFS implements a 2,000-lb (907-kg) herring possession limit in Area 1A when it projects that 92 percent the sub-ACL has been harvested. If New Brunswick weir catch is less than 4,000 mt by October 1, the management uncertainty buffer will be reduced to 5,200 mt, the ACL will be increased to 105,800 mt, and the Herring Management Area 1A sub-ACL will be increased to 31,300 mt. The New Brunswick weir fishery payback provision was last in effect during fishing years 2010-2012, so this final rule puts the payback provision back

in place for 2016-2018. NMFS is currently awaiting final data to decide whether or not to subtract 1,000 mt from the management uncertainty buffer and increase the ACL and the Area 1A sub-ACL.

BT is a processing allocation available to Canadian dealers. The MSA provides for the issuance of permits to Canadian vessels transporting U.S.-harvested herring to Canada for sardine processing. The amount specified for BT has equaled 4,000 mt since 2000. As there continues to be interest in transporting herring to Canada for sardine processing, NMFS maintains BT at 4,000 mt.

The Atlantic Herring FMP specifies that DAH will be set less than or equal to OY and be composed of DAP and BT. DAP is the amount of U.S. harvest that is processed domestically, as well as herring that is sold fresh (i.e., bait). DAP is calculated by subtracting BT from DAH. DAH should reflect the actual and potential harvesting capacity of the U.S. herring fleet. Since 2001, total landings in the U.S. fishery have decreased, but herring catch has remained somewhat consistent from 2003-2014, averaging 91,925 mt. When previously considering the DAH specification, the Council evaluated the harvesting capacity of the directed herring fleet and determined that the herring fleet is capable of fully utilizing the available yield from the fishery. This determination is still true. NMFS therefore sets DAH at 104,800 mt and DAP at 100,800 mt for the 2016-2018 fishing years in this final rule.

A portion of DAP may be specified for the at-sea processing of herring in Federal waters. When determining this USAP specification, the Council considered the availability of shore-side processing, status of the resource, and opportunities for vessels

to participate in the herring fishery. During the 2007-2009 fishing years, the Council maintained a USAP specification of 20,000 mt (Herring Management 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 was authorized—were considerably lower than recent sub-ACLs for Areas 2 and 3. 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, NMFS set USAP at zero for the 2010-2015 fishing years. Lacking any additional information that would support changing this specification, NMFS maintains the USAP at zero for fishing years 2016-2018.

The herring ABC specification recommended by the SSC for 2016-2018 is not substantially different from the 2013-2015 ABC specification because, in part, key attributes of the herring stock (SSB, recruitment, F, and survey indices) have not significantly changed since the 2013-2015 herring specifications. Therefore, NMFS determined that there is no new information on which to modify the allocation of the total ACL between the herring management areas. This final rule maintains status quo percentage allocations for the herring sub-ACLs for the 2016-2018 specifications. The resulting sub-ACLs are slightly lower than 2013-2015 specifications (see Table 1).

NMFS maintains the 2016-2018 RSA specification at 3 percent of each herring management area sub-ACL. The herring RSA is removed from each sub-ACL prior to

allocating the sub-ACL to the fishery. If an RSA proposal is approved, but a final award is not made by NMFS, or if NMFS determines that the RSA cannot be utilized by a project, NMFS shall reallocate the unallocated or unused amount of the RSA to the respective sub-ACL. On February 29, 2016, NMFS fully awarded the herring RSA for fishing years 2016-2018.

Herring regulations at § 648.201(e) specify that up to 500 mt of the Herring Management Area 1A sub-ACL shall be allocated for the fixed gear fisheries (weirs and stop seines) in Area 1A that occur west of 67°16.8' W. long. This set-aside shall be available for harvest by the fixed gear fisheries within Area 1A until November 1 of each year; any unused portion of the allocation will be restored to the Area 1A sub-ACL after November 1. During the 2013-2015 fishing years, the fixed gear set-aside was specified at 295 mt. Because the proposed Area 1A sub-ACL for the 2016-2018 fishing years is not substantially different from the Area 1A sub-ACL in 2015, NMFS maintains the fixed gear set-aside at 295 mt.

### **River Herring/Shad Catch Caps**

Framework 3 to the Atlantic Herring FMP established gear and area-specific river herring/shad catch caps for the herring fishery in 2014. These included catch caps for 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. The caps are intended to minimize river herring and shad 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 river herring and

shad is to avoid the implementation of a herring possession limit. Herring regulations at § 648.201(a)(4)(ii) state that once 95 percent of a catch cap is harvested, the herring possession limit for vessels using that gear type and fishing in that area is reduced to 2,000 lb (907 kg) for the remainder of the fishing year. Once a 2,000-lb (907-kg) possession limit is in effect for a particular gear and area, the herring fishery's ability to harvest the herring sub-ACL associated with that area is limited. The herring fleet's avoidance of river herring and shad combined with the catch caps are expected to minimize river herring and shad bycatch and bycatch mortality. Additionally, the herring fishery is expected to be able to harvest the herring ACL, provided the fishery continues to avoid river herring and shad.

As noted in Framework 3, available data are not robust enough to specify biologically-based catch caps that reflect river herring and shad abundance or to evaluate the potential impacts of catch caps on the river herring and shad stocks. Specific biological impacts on river herring and shad are influenced by fishing activity, environmental factors, climate change, restoration efforts, and other factors. In the absence of sufficient data to specify biologically-based catch caps, the caps have been set using recent river herring and shad catch data with the intent of keeping catch below its highest levels to limit fishing mortality on river herring and shad. Limiting fishing mortality is expected to result in positive impacts on the stocks.

To date the values of the caps have been specified using the median catch of river herring and shad catch over the previous 5 years (2008-2012). The 2016-2018 river herring/shad catch caps, as specified below in Table 2, are calculated using a revised

methodology and updated data over a longer time period. The revised methodology uses a weighted mean catch of river herring and shad (versus median catch). This methodology better accounts for the inter-annual variability in the level of sampling by both observers and portside samplers by weighting years with higher sampling levels more heavily than years with lower sampling levels. Additionally, the revised methodology includes previously omitted catch data, including some shad landings and trips from catch cap areas where trips did not meet the 6,600-lb (3-mt) herring landing threshold, and updated extrapolation methodology (using sampled trips to estimate catch on unsampled trips). Lastly, by using a longer time series (the most recent 7 years versus 5 years), the value of the caps can be based on more data, especially the most recent catch information, to better ensure the catch caps reflect the herring fishery's interactions with river herring and shad and overall fishing effort.

NMFS determined that using a longer time series, including more recent and previously omitted data, as well as using a weighted mean to generate the values for river herring/shad catch caps is consistent with using the best available science. Setting cap amounts using recent catch data better reflects current fishing behavior and catch levels. Similarly, relying more heavily on years with higher levels of sampling should provide cap values that more precisely reflect recent catch. Additionally, catch data may indirectly reflect stock abundance. For example, increases in stock abundance may potentially result in increased incidental catch whereas decreases in abundance may result in decreased incidental catch. Therefore, setting catch cap amounts based on catch data are expected to result in catch caps that are more consistent with current fishing activity,

and possibly stock conditions, while balancing the incentive to avoid river herring and shad against the opportunity for the herring fishery to harvest the ACL.

NMFS is adjusting the river herring/shad catch caps to reflect the use of best available scientific data and a revised, superior methodology. This adjustment increases the catch caps for three of the four river herring/shad catch caps in the herring fishery. Based on fishing practices to date, however, NMFS expects river herring and shad catch to remain below the catch cap amounts. For example, the herring industry currently has harvested only 57 percent of the total river herring and shad catch allowed under the 2015 river herring/shad catch caps. Because river herring and shad catch is currently well below allowable catch limits, NMFS does not expect that any catch cap increases implemented in this action will result in a substantial increase in river herring and shad catch. Rather, NMFS anticipates that the 2,000-lb (907-kg) herring possession limit that will result if a cap is harvested will continue to provide a strong incentive for the herring industry to avoid catching river herring and shad and that the herring industry will continue to harvest less than the river herring and shad catch allowed under the adjusted catch caps.

**Table 2. River Herring/Shad Catch Caps**

<b>2016-2018 River Herring/Shad Catch Caps</b>		
<b>Area</b>	<b>Gear</b>	<b>Amount (mt)</b>
Gulf Of Maine	Midwater Trawl	76.7
Cape Cod	Midwater Trawl	32.4
Southern New England/Mid-Atlantic	Midwater Trawl	129.6
Southern New England/Mid-Atlantic	Bottom Trawl	122.3
Total	All Gears	361.0

## **Comments and Responses**

NMFS received 32 comment letters on the proposed rule: 9 from interested members of the public; 3 from herring industry participants; 2 from other fishing industry participants (Massachusetts Lobstermen's Association (MLA) and the Cape Cod Commercial Fishermen's Alliance ); 4 from local watershed groups (Jones River, Ipswich River, Mystic River, and the Herring Ponds Watershed Associations); and 12 from non-governmental organizations (NGOs), including 6 prominent environmental advocacy groups (Conservation Law Foundation, Earth Justice, the Herring Alliance, Save the Bay-Narragansett, the Mohegan Tribe, and Alewife Harvesters of Maine). Two of the environmental advocacy group comments were form letters that contained signatures and personalized comments, including: A letter from PEW Charitable Trusts with 10,593 signatures and 931 personalized comments; and a letter from Earth Justice with 2,298 signatures and 234 personalized comments.

*Comment 1:* Three herring fishery participants and the MLA commented in support of the proposed 2016-2018 herring specifications and river herring/shad caps.

*Response:* NMFS approved the 2016-2018 herring specifications and river herring/shad catch caps because they promote achieving optimal yield, fishery conservation, are based upon best available science, and are consistent with the goals and objectives of the Atlantic Herring FMP.

*Comment 2:* The Cape Cod Commercial Fishermen's Alliance, Jones River

Watershed Association, Herring Alliance, Mohegan Tribe, and Earth Justice opposed setting the ABC equal to the OFL in 2018. Their comments claimed that the 2018 ABC does not adequately account for scientific uncertainty. Earth Justice commented that NMFS could revise the specifications to account for scientific uncertainty in a number of ways. They suggested NMFS could implement ABCs in 2017 and 2018 with the same scientific uncertainty buffer that was set for 2016 (27,000 mt) or implement the 2017 scientific uncertainty buffer (6,000 mt) in 2018. They further commented that NMFS could request advice from the SSC for an appropriate buffer in 2018. Additionally, the Herring Alliance, Mohegan Tribe, and Earth Justice commented that NMFS should use its authority to implement a revised ABC that appropriately buffers for scientific uncertainty in 2018.

*Response:* NMFS disagrees. The recent herring stock assessment update completed in May 2015 contained a retrospective pattern suggesting that the spawning stock biomass (SSB) is likely overestimated and fishing mortality (F) is likely underestimated. The assessment was adjusted to account for the retrospective pattern. Even with the adjustment to account for the scientific uncertainty associated with the retrospective pattern, the assessment estimated the herring stock at approximately double its target biomass ( $SSB_{MSY}$ ) and F is approximately half the fishing mortality threshold ( $F_{MSY}$ ). The stock assessment update generated catch projections for 2016-2018 based on the constant catch control rule. When the SSC evaluated the resulting ABC, it supported the resulting ABC and did not recommend specifying a scientific uncertainty buffer between OFL and ABC in 2018. Because the recent stock assessment update adjusted for

scientific uncertainty and the SSC did not recommend that an additional scientific uncertainty buffer be specified for 2018, NMFS implements an ABC that equals OFL in 2018.

*Comment 3:* The Cape Cod Commercial Fishermen's Alliance, Jones River Watershed Association, Herring Alliance, Mohegan Tribe, and Earth Justice opposed setting the ABC equal to the OFL in 2018. Their comments noted that this introduces unnecessary risk of overfishing.

*Response:* NMFS disagrees. Herring are currently not overfished and overfishing is not occurring. While setting the ABC equal to the OFL in 2018 has a 50-percent probability of overfishing in 2018, the overall probability of overfishing herring during 2016-2018 is near zero. In addition, the realized catch in the fishery is generally well below ABC, further reducing the likelihood of overfishing. Lastly, setting the ABC equal to OFL in 2018 would continue to provide the herring fishery with some economic stability, an important consideration in the Council's harvest risk policy

*Comment 4:* The Herring Alliance, Mohegan Tribe, and Earth Justice oppose using the current constant catch control rule because it does not adjust the ABC to explicitly account for herring's role as forage in the ecosystem and recommend that NMFS consider further reductions in ABC.

*Response:* NMFS disagrees. When generating ABC catch projections for 2016-2018, the 2015 stock assessment update adjusted for predator consumption of herring by maintaining a relatively high natural mortality rate. Additionally, the recent stock assessment update indicated that herring has a high biomass (approximately 74 percent of

unfished biomass) and low fishing mortality (ratio of catch to consumption by predators is 1:4). The constant catch ABC control rule is expected to maintain the high herring biomass, bolstered by two very large year classes, and low fishing mortality. Thus, the ABC control rule should meet forage demands and maintain a biomass level consistent with forage-based control rules in the short-term while the Council continues its consideration of herring's role as forage in Amendment 8 to the Atlantic Herring FMP. For these reasons, NMFS concludes that the current constant control rule, as well as the associated ABC, sufficiently account for herring's role as forage in the ecosystem during 2016-2018.

*Comment 5:* Earth Justice commented that the ABC was not selected as part of a reasonable range of alternatives as required by the National Environmental Policy Act (NEPA) because none of the alternatives accounted for scientific uncertainty in 2018. They also stated that the EA acknowledged this lack of uncertainty buffer is not consistent with the best available science.

*Response:* NMFS disagrees. As described above, the ABC sufficiently accounts for scientific uncertainty. The Council developed three ABC alternatives and fully analyzed them in the EA supporting this action. NEPA requires a Federal agency to consider a range of alternatives, and that the alternatives are reasonable alternatives (i.e., those that meet the stated purpose and need, and objectives, for the action). The SSC recommended that the ABC for 2016-2018 remain relatively similar or modestly reduced compared to status quo. Consistent with SSC advice, the range of ABC alternatives considered in the EA were similar but reduced from status quo. For the status quo

alternative, the EA cautioned that setting ABC equal to OFL for all three years appears to be inconsistent with best available science. The EA also explained that the ABC implemented in this action is more precautionary and expected to have *more positive* impacts than the status quo ABC because the scientific uncertainty buffer between the OFL and ABC during 2016 and 2017 results in a lower risk of overfishing. For these reasons, NMFS has determined that the range of ABC alternatives considered in this action was sufficient and consistent with the requirements of NEPA.

*Comment 6:* One member of the public commented that the herring ACL should be decreased to 90,000 mt.

*Response:* NMFS disagrees. The commenter provided no basis for setting the ACL at 90,000 mt. The most recent stock assessment update indicated herring was not overfished and overfishing was not occurring. Setting specifications always requires a balance between conservation and harvesting opportunity. The most current data show that an ABC of 111,000 mt would have a low positive economic impact on fishery-related businesses and communities while equaling less than half a sustainable fishery morality rate.

*Comment 7:* The Alewife Harvesters of Maine commented in favor of the proposed decrease of the Gulf of Maine river herring/shad catch cap. It also commented in support of using the revised methodology with the longer time series and weighted mean, however, it “would propose a more gentle increase in catch cap that accounts for the biological uncertainty, raising the cap to the full weighted mean estimate over the course of several years.”

*Response:* NMFS agrees with the Alewife Harvesters of Maine that using a longer time series and weighted mean is appropriate to calculate river herring/shad catch caps. But NMFS disagrees with the suggestion that the value of the cap, rather than the methodology, should be the primary consideration when setting catch caps. The catch cap methodology uses the best available science to reflect recent fishing behavior and recent catch levels. Without a reasonable basis for developing different methodologies for each area or gear type, the methodology used to calculate one catch cap should apply to all catch caps.

*Comment 8:* Five interested members of the public, six state and local advocacy groups, all four river watershed associations, Conservation Law Foundation, Earth Justice, Herring Alliance, and letters from PEW Charitable Trust and Earth Justice on behalf of numerous U.S. citizens expressed concern that raising the river herring/shad catch caps will set back ongoing efforts by the states and local advocacy groups to restore river herring and shad to sustainable levels. Additionally, the Mohegan Tribe, Mystic River Watershed, Earth Justice, and Conservation Law Foundation suggests that the herring fishery may be a contributing factor to declines in Southern New England river herring and shad stock, based on a study by Hasselman et al. in 2015.

*Response:* NMFS recognizes and supports the effort, time, and resources that states and local advocacy groups have devoted to river herring and shad restoration efforts. However, NMFS disagrees with the commenters that raising the river herring/shad catch caps will set back those efforts. Although the comments suggest otherwise, NMFS cannot directly link catch levels of river herring and shad in the herring

fishery to impacts on river herring and shad recovery efforts by the states in specific rivers and streams. NMFS considered the Hasselman et al. study, despite it being published almost two months after the Council took final action at its meeting on September 29, 2015. NMFS acknowledges that certain river herring stocks may be disproportionately affected by the herring fishery, but points out the study also cautions that currently river herring and shad catch in the ocean cannot be confidently assigned to a specific population of origin. Instead, the catch caps are designed to minimize bycatch and bycatch mortality so that the catch of river herring and shad is kept below recent levels and limit fishing mortality to provide an opportunity for positive impacts on stocks. The incentive for the herring fishery to avoid river herring and shad catch comes from the potential that river herring and shad catch will limit the fishery's ability to harvest the ACL. While this action increases the value of caps off Cape Cod and in Southern New England, the incentive to avoid river herring and shad catch remains while the caps are in place and are set based on fishing activity. NMFS has determined that the river herring/shad catch caps implemented in this action will support ongoing conservation efforts by the states and local advocacy groups and will help achieve conservation and management objectives outlined in the River Herring Conservation Plan coordinated by the Atlantic States Marine Fisheries Commission and NMFS.

*Comment 9:* Three NGOs, one interested member of the public, the Mystic River Watershed Association, Conservation Law Foundation, Earth Justice, Herring Alliance, and letters from PEW Charitable Trust and Earth Justice submitted on behalf of numerous U.S. citizens commented that the caps do not provide an incentive to avoid

river herring and shad. One interested member of the public, Conservation Law Foundation, Earth Justice, Herring Alliance, and letters from PEW Charitable Trust and Earth Justice on behalf of numerous U.S. citizens commented that the herring industry has stayed well within the current river herring/shad catch caps since 2015 and does not need more river herring and shad catch to operate. Additionally, the Conservation Law Foundation, Earth Justice, Herring Alliance, The Mohegan Tribe, and Save the Bay-Narragansett further suggest that NMFS use its authority to implement river herring/shad catch caps that reduce catch and stay consistent with the incentive to avoid and minimize river herring and shad catch.

*Response:* NMFS disagrees with the commenters that the catch caps do not provide an incentive for the herring fishery to avoid river herring and shad catch. River herring/shad catch caps were first implemented in the herring fishery in 2014. As described previously, caps have been based on recent catch with the intent of keeping catch below its highest levels. Once 95 percent of a catch cap is harvested, the herring possession limit for vessels using that gear type and fishing in that area is reduced to 2,000 lb (907 kg) for the remainder of the fishing year. Implementation of this possession limit in a catch cap area decreases the herring fishery's ability to harvest the herring sub-ACL associated with that areas as well as the herring ACL.

The incentive to minimize the catch of river herring and shad is to avoid the implementation of a herring possession limit. For example, catch tracked against the Southern New England/Mid-Atlantic bottom trawl cap is currently 21 mt compared to 51 mt at this same time last year. This suggests that the existence of the catch caps is an

effective incentive to avoid river herring and shad catch and more restrictive caps are not required to provide an incentive to continue to avoid river herring and shad catch.

The University of Massachusetts and Massachusetts Division of Marine Fisheries operate a river herring avoidance program for vessels participating in the herring fishery. This program is funded, in part, by the herring RSA for 2016-2018. The participation level of midwater trawl and bottom trawl vessels in the avoidance program has increased in recent years and currently includes the majority of midwater trawl and bottom trawl vessels. The river herring avoidance program provides vessels with near real-time information on where herring vessels are encountering river herring and encourages vessels to avoid and/or leave those areas. Select vessels that comply with the requirements of the avoidance program are able to harvest the herring RSA. Both the river herring avoidance program and the opportunity to harvest the herring RSA provide additional incentive for herring vessels to avoid river herring and shad.

For these reasons, NMFS concludes the catch caps implemented in this action are consistent with the incentives to avoid and minimize catch to the extent practicable.

*Comment 10:* Conservation Law Foundation, Earth Justice, Save the Bay-Narragansett, and the Earth Justice form letter stated that using a longer time series and a weighted mean to calculate the catch caps, compared to prior years, increases bias toward outlier years. Earth Justice, Conservation Law Foundation, Herring Alliance, Save the Bay-Narragansett, and the Earth Justice letter on behalf of 2,298 citizens commented that the industry had an incentive to catch more river herring and shad in 2013 and 2014 because it knew that more river herring and shad catch would mean higher catch caps in

the future. Earth Justice and Save the Bay-Narragansett also commented that using the revised methodology is arbitrary and capricious in that it rewards the fleet for increasing river herring and shad catch 2013 and 2014.

*Response:* Catch caps were implemented in Framework 3 to minimize river herring and shad bycatch and bycatch mortality to the extent practicable, while allowing the herring fishery an opportunity to fully harvest the herring ACL. Additionally, catch caps were intended to be adjusted when new information became available. The catch caps implemented in this action were calculated using updated data and a revised methodology.

Catch caps for the 2016-2018 fishing years were calculated by using previously omitted catch data and a longer time series (most recent 7 years rather than 5 years). This ensures that the value of the catch caps are based on more data, especially the most recent catch information, to better ensure the catch caps reflect the herring fishery's interactions with river herring and shad and overall fishing effort. Because catch data may indirectly reflect stock abundance, setting catch caps based on recent catch data are expected to result in catch caps that are more consistent with current fishing activity, and possibly stock conditions. Commenters provided no information to substantiate claims that the herring industry intentionally caught more river herring and shad in 2013 and 2014 in order to artificially inflate catch caps. Therefore, NMFS concludes extending the time series used to calculate caps to include the two most recent years (2013 and 2014) best reflects the recent catch of river herring and shad, makes the best use of new information, and is consistent with Framework 3.

Using a weighted mean, rather than the median or unweighted mean, to calculate catch caps best accounts for the inter-annual variability in the level of sampling (both observer and portside) of river herring and shad catch. Caps calculated using the median catch of river herring and shad would base the value of the cap on the total number of catch estimates, giving equal weight to all years regardless of sampling level. Using the unweighted mean, caps would be based on the average catch each year regardless of sampling level. In contrast, using a weighted mean to calculate catch caps adjusts for the sampling level each year and incorporates those averages into the overall average, thereby giving more weight to years with more sampling versus years with less sampling. Therefore, using a weighted mean helps account for the fluctuations in levels of sampling relative to observed catch of river herring and shad to help mitigate the effects of any outlier years.

The revised methodology was developed by the Herring Plan Development Team (PDT). The PDT is the Council's technical group responsible for developing and preparing analyses to support the Council's management actions. The PDT is responsible for generating analyses to calculate quotas, caps, or any other technical aspects of the FMP. For the 2016-2018 catch caps, the PDT reviewed updated river herring and shad catch data and generated a range of catch cap alternatives for the Council's consideration. The PDT concluded that using a weighted mean and longer time series would be the most technically sound approach for specifying the values of the caps because it is consistent with using the best available science. The Council ultimately decided to adopt the river herring/shad catch caps based on the revised methodology recommended by the PDT.

Using the revised methodology to calculate river herring/shad catch caps is consistent with using the best available science and it balances the incentive to avoid river herring and shad against the opportunity for the herring fishery to harvest the ACL. For these reasons, NMFS disagrees that the basis for setting river herring/shad catch caps implemented through this action, including the revised methodology, is arbitrary and capricious.

*Comment 11:* Conservation Law Foundation, Earth Justice, and Save the Bay-Narragansett expressed concern that basing the river herring/shad catch caps on historical landings and not on biological status is problematic and not scientifically sound. The Ipswich River Watershed also commented that there is no science to support raising the caps.

*Response:* NMFS disagrees. As described previously, available data are not robust enough to specify biologically-based catch caps that reflect river herring and shad abundance. Harvest limits are often based on recent catch when estimates of relative abundance are not available. For example, the herring ABC recommended by the SSC and implemented for 2010-2012 was based on recent catch because of scientific uncertainty associated with the 2009 herring stock assessment. In the absence of sufficient data to specify biologically-based catch caps, the catch caps are set based on recent catch data with the intent of keeping catch below its highest levels to limit fishing mortality on river herring and shad. Limiting catch to recent levels is expected to result in positive impacts on the stocks.

*Comment 12:* Letters generated by PEW Charitable Trusts and Earth Justice on

behalf of numerous U.S. citizens commented that river herring and shad should be added as stocks in the Atlantic Herring FMP and managed based on science.

*Response:* The intent of this action is to set herring specifications and river herring/shad catch caps for the 2016-2018 fishing years. Adding river herring and shad as stocks in the fishery and developing management measures for both the river herring and shad stocks under the Atlantic Herring FMP are beyond the scope of this action and would require a regulatory amendment.

*Comment 13:* Earth Justice commented that the revised methodology used to set the river herring/shad catch caps for the 2016-2018 fishing years is not consistent with the Mid-Atlantic Fishery Management Council's (MAFMC) approach for setting the same cap in the Atlantic Mackerel, Squid, and Butterfish FMP. They also commented that implementing the proposed river herring/shad catch caps would interfere with the catch measures first implemented by the MAFMC and are thus inconsistent with the MSA's requirement that new regulations be consistent with existing FMPs, amendments, MSA, and applicable law as stated in U.S.C. 1854(b)(1).

*Response:* The MSA requires regulations to be consistent with the FMP. The MSA provision cited by the commenters does not require measures to be the same between FMPs. NMFS has determined that the river herring/shad catch caps for the herring and mackerel fisheries, including the associated methodologies for setting caps, are consistent with the Atlantic Herring FMP and the Atlantic Mackerel, Squid, and Butterfish FMP, respectively.

When the MAFMC developed the river herring and shad catch cap for the

mackerel fishery, the catch cap was based on median river herring and shad catch in the mackerel fishery during 2005-2012. This methodology was identical to the river herring and shad catch cap methodology developed by the Council for the 2014-2015 herring fishery. However, the Council considers both observer and portside sampling data to set catch caps while the MAFMC only considers observer data. The MAFMC continues to use the median river herring and shad catch estimate from 2005-2012 to set the catch cap for the mackerel fishery. However, if the mackerel fishery harvests 10,000 mt of mackerel in a given year, the river herring and shad catch cap is scaled up to match the median river herring and shad catch estimate based on the mackerel ACL.

NMFS agrees that river herring/shad catch caps for the herring and mackerel fisheries should not cause management inconsistencies between the two fisheries. Midwater trawl and bottom trawl vessels often participate in both the herring and mackerel fisheries. When fishing trips meet the minimum harvest threshold for catch caps in the herring fishery (6,600 lb (3 mt) of herring) and the minimum harvest threshold for the catch cap in the mackerel fishery (20,000 lb (9,072 kg) of mackerel), then river herring and shad catch on those trips is counted against both caps and vessels would be subject to the most restrictive catch cap. Rather than management inconsistencies, river herring/shad catch caps in both the herring and mackerel fisheries provide an additional incentive to avoid river herring and shad catch, thereby potentially limiting fishing mortality on these species.

*Comment 14:* Three NGOs, one interested member of the public, the Mystic River Watershed Association, Conservation Law Foundation, Earth Justice, Herring

Alliance, and letters from PEW Charitable Trust and Earth Justice submitted on behalf of numerous U.S. citizens commented that raising the river herring/shad catch caps does not minimize bycatch and is inconsistent with the MSA and the goals and objectives of the Atlantic Herring FMP. Earth Justice further commented that raising the catch caps is inconsistent with National Standard 9, which requires that conservation and management measures minimize bycatch to the extent practicable. Lastly, Earth Justice commented that the small-mesh bottom trawl fleet in Southern New England discards an estimated 73 percent of its river herring and shad catch at sea, but NMFS does not explain how it plans to minimize this bycatch, consistent with the MSA.

*Response:* NMFS disagrees. The MSA, specifically National Standard 9, does not require the elimination of bycatch or bycatch mortality, nor does it require minimizing bycatch at the exclusion of other considerations. Rather, National Standard 9 requires minimizing bycatch and bycatch mortality to the extent practicable, which includes a consideration of the net benefits to the nation. This consideration includes evaluating the negative impacts on affected stocks and other species in the ecosystem, incomes accruing to participants in the directed fishery in both the short and long-term, changes in fishing practices and behavior, and environmental consequences.

As discussed previously, the incentive to minimize the catch of river herring and shad is to avoid the implementation of a herring possession limit. Once a 2,000-lb (907-kg) possession limit is in effect for a particular gear and area, the herring fishery's ability to harvest the herring sub-ACL associated with that area or the herring ACL is limited. This potential economic loss must be weighed against the role of river herring and shad

in the herring fishery. River herring and shad are not target species in the herring fishery. Rather, they are harvested because they co-occur with herring and the incidental catch and bycatch of these species is low. Thus, the river herring/shad catch caps are not designed to eliminate all incidental catch. The caps are also not designed to remain static or continually decrease over time. These design features would not provide the flexibility for a full consideration of the net benefits to the nation because they may preclude an opportunity for herring industry to harvest its allowable catch.

When evaluating the river herring/shad catch caps recommended by the Council, NMFS considered the ecological and economic considerations associated with the catch caps, as well fishing practices and behavior. The catch caps are intended to minimize river herring and shad bycatch and bycatch mortality to the extent practicable, while allowing the herring fishery an opportunity to fully harvest the herring ACL. The total catch of river herring and shad (both retained and discarded) is tracked against the catch caps. Because total catch of river herring and shad catch is counted against the catch caps, these caps not only help minimize the retained catch of river herring and shad, but they also help minimize any river herring and shad catch that is discarded at sea. As described in the responses to previous comments, NMFS concludes that catch caps are calculated using new and updated information and are based on the best available science. NMFS also concludes that if vessels continue to avoid river herring and shad, they would have an opportunity to harvest the herring ACL. Additionally, NMFS concludes that catch caps may limit fishing mortality on river herring and shad, thereby supporting ongoing Federal, state, and local conservation efforts. For these reasons,

NMFS determines the river herring/shad catch caps implemented in this action reduce bycatch and bycatch mortality to the extent practicable and are consistent with the MSA, National Standard 9, and the Atlantic Herring FMP.

*Comment 15:* The Mystic River Watershed Association, Conservation Law Foundation, Herring Alliance, and Earth Justice all commented that there is a lack of onboard monitoring and that it is highly likely that more river herring and shad are/will be discarded at sea than reported.

*Response:* In 2016, NMFS increased observer coverage allocated to New England midwater trawl vessels to approximately 440 days, consistent with the standardized bycatch reporting methodology (SBRM). This is an increase of 401 days (175 percent) over the 160 days observed on the New England midwater trawl fleet in 2015. Three of the four river herring/shad catch caps implemented in this action are for vessels using midwater trawl gear. Additionally, observer coverage allocated to New England small-mesh bottom trawl vessels in 2016 (798 days) is expected to be similar to days observed in 2015 (933 days). The increase in observer coverage should help NMFS more precisely track catch against river herring/shad catch caps. Portside sampling by the Commonwealth of Massachusetts and the State of Maine is expected to continue into the future, collecting data on river herring and shad that are landed by midwater trawl and small-mesh bottom trawl vessels participating in the herring fishery. NMFS is currently considering if it would be appropriate to use portside sampling data along with observer data to track the catch of river herring and shad. Lastly, the Council is considering

increasing monitoring in the herring fishery in the Industry-Funded Monitoring Omnibus Amendment. The Council is expected to take final action on this amendment in early 2017.

*Comment 16:* Conservation Law Foundation, Herring Alliance, and Alewife Harvesters of Maine commented that all the biological uncertainty surrounding river herring and shad estimates demands a precautionary approach to management that requires either no increase in the catch caps or a more gradual increase.

*Response:* The river herring/shad catch caps were developed by the Council to minimize river herring and shad bycatch to the extent practicable while allowing the herring fishery an opportunity to fully harvest the herring ACL. While NMFS acknowledges the uncertainty in the abundance estimates in the stock assessment for river herring and shad, that uncertainty was not intended to directly factor into the calculation of the river herring/shad catch caps. In fact, because of the absence of sufficient data to specify biologically-based catch caps, the catch caps are set based on recent catch data. The methodology used to calculate the catch caps, which accounts for variability of catch from year to year, incorporates precaution by keeping the catch caps below the highest catch levels and by establishing an incentive for the herring industry to avoid river herring and shad catch.

*Comment 17:* Save the Bay-Narragansett commented that catch caps are being increased based on socio-economic concerns and that only the Council, and its supporting scientists, and the herring industry support increases to the catch caps.

*Response:* NMFS must consider all factors, biological and socio-economic factors, when determining whether to accept or reject the Council's recommendations. NMFS has determined that the Council's recommended river herring/shad catch caps are consistent with the Atlantic Herring FMP, the MSA, and other applicable laws, and that comments opposing the increased catch caps provide no compelling information to reject the Council's recommendations.

### **Classification**

The Assistant Administrator for Fisheries, NOAA, has determined that this rule is consistent with the national standards and other provisions of the MSA and other applicable laws.

This final rule has been determined to be not significant for purposes of Executive Order 12866.

NMFS, pursuant to section 604 of the Regulatory Flexibility Act (RFA), has completed a final regulatory flexibility analysis (FRFA) in support of this action. The FRFA incorporates the IRFA, a summary of the significant issues raised by the public comments in response to the IRFA, NMFS responses to those comments, and a summary of the analyses completed in the 2016-2018 herring specifications EA. A summary of the IRFA was published in the proposed rule for this action and is not repeated here. A description of why this action was considered, the objectives of, and the legal basis for this action is contained in the preamble to the proposed rule (81 FR 40253), and is not repeated here. All of the documents that constitute the FRFA are available from NMFS and a copy of the IRFA, the RIR, and the EA are available upon request (see

**ADDRESSES)** or via the Internet at *www.greateratlantic.fisheries.noaa.gov*.

*A Summary of the Significant Issues Raised by the Public in Response to the IRFA, a Summary of the Agency's Assessment of Such Issues, and a Statement of Any Changes Made in the Final Rule as a Result of Such Comments*

NMFS received 32 comment letters on the proposed rule. Those comments, and NMFS' responses, are contained in the Comments and Responses section of this final rule and are not repeated here. None of the comments addressed the IRFA and NMFS did not make any changes in the final rule based on public comment.

*Description and Estimate of Number of Small Entities to Which this Rule Would Apply*

This final rule would affect all permitted herring vessels; therefore, the regulated entity is the business that owns at least one herring permit. From 2014 permit data, there were 1,206 firms that held at least one herring permit; of those, 1,188 were classified as small businesses. There were 103 firms, 96 classified as small businesses, which held at least one limited access permit. There were 38 firms, including 34 small businesses, which held a limited access permit and were active in the herring fishery. All four of the active large entities, held at least one limited access herring permit. The small firms with limited access permits had 60 percent higher gross receipts and 85 percent higher revenue from herring than the small firms without a limited access herring permit. Based on 2014 permit data, the number of potential fishing vessels in each permit category in the herring fishery are as follows: 39 for Category A (limited access, all herring management areas); 4 for Category B (limited access, Herring Management Areas 2/3); 46 for Category C (limited access, all herring management areas); 1,841 for Category D (open access, all

herring management areas); and 4 for Category E (open access, Herring Management Areas 2/3).

On December 29, 2015, NMFS issued a final rule establishing a small business size standard of \$11 million in annual gross receipts for all businesses primarily engaged in the commercial fishing industry (NAICS 11411) for RFA compliance purposes only (80 FR 81194, December 29, 2015). The \$11 million standard became effective on July 1, 2016, and is to be used in place of the U.S. Small Business Administration's (SBA) previous standards of \$20.5 million, \$5.5 million, and \$7.5 million for the finfish (NAICS 114111), shellfish (NAICS 114112), and other marine fishing (NAICS 114119) sectors, respectively, of the U.S. commercial fishing industry.

An IRFA was developed for this regulatory action prior to July 1, 2016, using SBA's previous size standards. Under the SBA's size standards, 4 of 38 active herring fishing entities with limited access permits were determined to be large. NMFS has qualitatively reviewed the analyses prepared for this action using the new size standard. The new standard could result in fewer commercial finfish businesses being considered small (due to the decrease in size standards).

Taking this change into consideration, NMFS has identified no additional significant alternatives that accomplish statutory objectives and minimize any significant economic impacts of the proposed rule on small entities. The ACLs are fishery wide and any closures would apply to the entire fishery, and should be felt proportionally by both large and small entities. Further, the new size standard does not affect the decision to prepare a FRFA as opposed to a certification for this regulatory action.

*Description of Projected Reporting, Recordkeeping, and Other Compliance*

*Requirements*

This final rule does not introduce any new reporting, recordkeeping, or other compliance requirements.

*Description of the Steps the Agency Has Taken to Minimize the Significant Economic Impact on Small Entities Consistent with the Stated Objectives of Applicable Statutes*

Specification of commercial harvest and river herring/shad catch caps are constrained by the conservation objectives set forth in the FMP and implemented at 50 CFR part 648, subpart K under the authority of the MSA. Furthermore, specifications must be based on the best available scientific information, consistent with National Standard 2 of the MSA. With the specification options considered, the measures in this final rule are the only measures that both satisfy these overarching regulatory and statutory requirements while minimizing, to the extent possible, impacts on small entities. This rule implements the herring specifications outlined in Table 1 and the river herring/shad catch caps outlined in Table 2. Other options considered by the Council, including those that could have less of an impact on small entities, failed to meet one or more of these stated objectives and, therefore, cannot be implemented. Under Alternatives 1 and 2 for harvest specifications, small entities may have experienced slight increases in both gross revenues and herring revenues over the preferred alternative due to higher ACLs. However, Alternative 1 would fail to create a sustainable fishery because the ABC exceeds the ABC recommended by the SSC for 2016-2018 and has an increased risk of overfishing as compared to the preferred alternative. The ABC

associated with Alternative 2 is equal to the ABC associated with the preferred alternative; however, the management uncertainty buffer is less under Alternative 2, resulting in a higher ACL than the preferred alternative. Rather than select an alternative with a higher ACL, the Council selected Alternative 3 to be more precautionary. Alternatives 1 and 2 for the river herring/shad catch caps failed to use the best available science as compared to the Alternative 3, which uses a longer time series, including more recent and previously omitted data, as well as a weighted mean, to best account for the inter-annual variability in the level of river herring and shad sampling, to generate the values for river herring/shad catch caps. The impacts of the specifications, as implemented by this final rule, are not expected to disproportionately affect large or small entities.

Section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996 states that, for each rule or group of related rules for which an agency is required to prepare a FRFA, the agency shall publish one or more guides to assist small entities in complying with the rule, and shall designate such publications as “small entity compliance guides.” The agency shall explain the actions a small entity is required to take to comply with a rule or group of rules. As part of this rulemaking process, a letter to permit holders that also serves as small entity compliance guide was prepared. Copies of this final rule are available from the Greater Atlantic Regional Fisheries Office (GARFO), and the compliance guide, *i.e.*, permit holder letter, will be sent to all holders of permits for the Atlantic herring fishery. The guide and this final rule will be posted or publicly available on the GARFO website.

**List of Subjects in 50 CFR Part 648**

Fisheries, Fishing, Recordkeeping and reporting requirements.

Dated: October 26, 2016.

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Samuel D. Rauch III,  
Deputy Assistant Administrator for Regulatory Programs,  
National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR part 648 is amended as follows:

**PART 648--FISHERIES OF THE NORTHEASTERN UNITED STATES**

1. The authority citation for part 648 continues to read as follows:

**Authority:** 16 U.S.C. 1801 *et seq.*

2. In § 648.201, add paragraph (h) to read as follows:

**§ 648.201 AMs and harvest controls.**

\* \* \* \* \*

(h) If NMFS determines that the New Brunswick weir fishery landed less than 4,000 mt through October 1, NMFS will allocate an additional 1,000 mt to the stockwide

ACL and Area 1A sub-ACL. NMFS will notify the Council of this adjustment and publish the adjustment in the **Federal Register**.

[FR Doc. 2016-26320 Filed: 10/31/2016 8:45 am; Publication Date: 11/1/2016]