



**BILLING CODE 3510-22-P**

**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**50 CFR Part 635**

**[Docket No. 180212159-9102-02]**

**RIN 0648-BH75**

**Atlantic Highly Migratory Species; Shortfin Mako Shark Management Measures; Final Amendment 11**

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

**ACTION:** Final rule.

**SUMMARY:** NMFS is amending the 2006 Consolidated Atlantic Highly Migratory Species (HMS) Fishery Management Plan (FMP) based on the results of the 2017 stock assessment and a subsequent binding recommendation by the International Commission for the Conservation of Atlantic Tunas (ICCAT) for North Atlantic shortfin mako sharks. The North Atlantic shortfin mako shark stock is overfished and is experiencing overfishing. Consistent with the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and the Atlantic Tunas Convention Act (ATCA), NMFS is implementing management measures that will reduce fishing mortality on shortfin mako sharks and establish the foundation for rebuilding the shortfin mako shark population consistent with legal requirements. The final measures could affect U.S. commercial and recreational fishermen who target and harvest shortfin mako sharks in the Atlantic Ocean, including the Gulf of Mexico and Caribbean Sea, by increasing live releases and reducing landings. NMFS is also clarifying the definition of fork length (FL) in the definitions

section of the HMS regulations.

**DATES:** This final rule is effective on March 3, 2019.

**ADDRESSES:** Copies of the Final Amendment 11 to the 2006 Consolidated HMS FMP, including the Final Environmental Impact Statement (FEIS) containing a list of references used in this document, the dusky shark stock assessments, and other documents relevant to this rule are available from the HMS Management Division Website at

*<https://www.fisheries.noaa.gov/topic/atlantic-highly-migratory-species>.*

**FOR FURTHER INFORMATION CONTACT:** Guý DuBeck or Karyl Brewster-Geisz at (301) 427-8503.

**SUPPLEMENTARY INFORMATION:**

**Background**

The North Atlantic shortfin mako stock is managed primarily under the authority of the Magnuson-Stevens Act and also under ATCA. The 2006 Consolidated HMS FMP and its amendments are implemented by regulations at 50 CFR part 635. A brief summary of the background of this final rule is provided below. Additional information regarding Atlantic shark management can be found in the FEIS accompanying this final rule for Amendment 11, the 2006 Consolidated HMS FMP and its amendments, the annual HMS Stock Assessment and Fishery Evaluation (SAFE) Reports, and online at *<https://www.fisheries.noaa.gov/topic/atlantic-highly-migratory-species>*.

The North Atlantic shortfin mako shark (*Isurus oxyrinchus*) is a highly migratory species that ranges across the entire North Atlantic Ocean and is caught by numerous countries. The stock is predominantly caught offshore in association with fisheries that primarily target tunas and tuna-like species. While these sharks are a valued component of U.S. recreational and

commercial fisheries, U.S. catch represents only approximately 9 percent of the species' total catch in the North Atlantic by all reporting countries. International measures are, therefore, critical to the species' effective conservation and management.

Based on a 2017 ICCAT assessment, on December 13, 2017, NMFS issued a status determination finding the stock to be overfished and experiencing overfishing, applying domestic criteria. The 2017 assessment estimated that total North Atlantic shortfin mako catches across all ICCAT parties are currently between 3,600 and 4,750 metric tons (mt) per year. The assessment further indicated that such total catches would have to be at or below 1,000 mt (72-79 percent reductions) to prevent further population declines, and total catches of 500 mt or less would be expected to stop overfishing and begin rebuilding the stock.

Based on this information and given that the stock is primarily caught in association with ICCAT fisheries, ICCAT at its November 2017 meeting adopted management measures for Atlantic shortfin mako in Recommendation 17-08. The measures largely focused on maximizing live releases of Atlantic shortfin mako sharks, allowing retention only in certain limited circumstances, increasing minimum size limits for retention, and improving data collection in ICCAT fisheries. ICCAT stated that the measures in the Recommendation were "expected to prevent the population from decreasing further, stop overfishing and begin to rebuild the stock."

On March 2, 2018, NMFS implemented an interim final rule using emergency authority under the Magnuson-Stevens Act, 16 U.S.C. § 1855(c), to quickly implement measures in the HMS recreational and commercial fisheries consistent with Recommendation 17-08. The emergency measures were initially effective for 180 days, and on August 22, 2018, they were extended to March 3, 2019 (83 FR 42452). This final rule is intended to replace these emergency measures with long-term measures.

A Notice of Intent (NOI) to prepare an EIS for Amendment 11 of the Consolidated HMS FMP was published in the **Federal Register** on March 5, 2018 (83 FR 9255) and provided notice of the availability of an Issues and Options document for scoping. Based on the alternatives presented and commented on during scoping, NMFS published a proposed rule for Draft Amendment 11 on July 27, 2018 (83 FR 35590), and the Environmental Protection Agency (EPA) published the notice of availability of the Draft Environmental Impact Statement (DEIS) on July 27, 2018 (83 FR 35637). The details of this rulemaking can be found in the proposed rule and are not repeated here.

During the comment period on the proposed rule and DEIS, which lasted for 73 days, NMFS conducted six public hearings (Texas, Florida, North Carolina, New Jersey, and Massachusetts) and a public webinar. In addition, NMFS presented Draft Amendment 11 to the Atlantic HMS Advisory Panel, four Atlantic Regional Fishery Management Councils (the New England, Mid-Atlantic, South Atlantic, and the Gulf of Mexico Fishery Management Councils), and the Atlantic States Marine Fisheries Commission. The comment period ended on October 8, 2018. The comments received on Draft Amendment 11 and its proposed rule, and responses to those comments, are summarized below in the section labeled “Response to Comments.”

This final rule implements the measures preferred and analyzed in the FEIS for Amendment 11 to the 2006 Consolidated HMS FMP in order to address and establish a foundation for rebuilding the North Atlantic shortfin mako shark stock, which ICCAT will adopt in 2019 after obtaining additional scientific information, as set out in Recommendation 17-08. It also includes a clarification to the regulatory definition of “FL (fork length),” as proposed and discussed in the DEIS and FEIS. The FEIS analyzed the direct, indirect, and cumulative impacts on the human environment as a result of the preferred management measures. The FEIS,

including the preferred management measures, was made available on December 21, 2018 (83 FR 65670). On February 15, 2019, the Assistant Administrator for NOAA signed a Record of Decision (ROD) adopting these measures as Final Amendment 11 to the 2006 Consolidated HMS FMP. A copy of the FEIS, including Final Amendment 11 to the 2006 Consolidated HMS FMP, is available from the HMS Management Division (see **ADDRESSES**). In the FEIS, NMFS divided the alternatives into the following four broad categories for organizational clarity and to facilitate effective review: commercial fishery, recreational fishery, monitoring, and rebuilding. NMFS fully considered 29 alternatives within these categories and is implementing five measures, one in the commercial fishery, two in the recreational fishery (each regarding a different regulation type), one regarding monitoring, and one regarding rebuilding the stock, to meet the objectives of the rule and achieve at least a 75 percent reduction in U.S. shortfin mako shark landings consistent with the suggested level of reduction recommended in the stock assessment. The stock assessment recommends this level of reduction throughout the stock's range, and all ICCAT parties fishing on the stock are committed to take the specified measures to achieve the needed reductions. NMFS' detailed analyses of the alternatives are provided in the FEIS for Draft Amendment 11 (see **ADDRESSES** for how to get a copy of the FEIS) and a summary is provided in the FRFA below.

In developing the final measures, NMFS considered the commercial retention restrictions and the 83-inch FL recreational minimum size limit temporarily put in place through the emergency interim final rule, public comments received on that rule, other conservation and management measures that have been implemented in the HMS fisheries since 2008 that have affected shark fisheries or shark bycatch in other fisheries, and public comments received on the proposed rule and DEIS, including comments provided at the September 2018 HMS Advisory

Panel meeting. In response to public comment on the proposed rule and the DEIS, NMFS made three changes from the proposed rule in the final rule. The first change adopts a new commercial measure that is a modified version of the previously preferred measure. A second change adopts a different recreational size limit measure that was not preferred in the proposed rule. A third change clarifies the application of retention restrictions for the few permit holders who hold a commercial shark permit and a permit that also allows recreational landings of sharks. All other proposed conservation measures, as well as the proposed clarification of the definition of “fork length,” did not change between the proposed and final rules. Measures that are different from the proposed rule, or measures that were proposed but not implemented, are described in detail in the section titles, “Changes from the Proposed Rule.”

### **Response to Comments**

NMFS received a total of 30 individual written comments on the proposed rule from fishermen, dealers, and other interested parties along with State of North Carolina, Commonwealth of Massachusetts, the Mid-Atlantic and New England Fishery Management Councils, several shark conservation or other environmental groups, including Oceana, and several commercial and recreational groups. Oral comments were received from the South Atlantic Fishery Management Council. All written comments can be found at <http://www.regulations.gov/> by searching for RIN 0648-BH75. All of the comments received are summarized below.

*Comment 1:* NMFS received multiple comments expressing support for Amendment 11 management measures as well as comments opposing implementation of ICCAT shortfin mako shark recommendations. Commenters in support of Amendment 11 wanted management measures to prevent overfishing of shortfin mako sharks by placing limits and restrictions on

fishing that results in mortality of shortfin mako sharks. They also stressed the need for international cooperation if shortfin mako shark measures are to be effective and the need for all countries fishing on the stock to implement comparable regulations as required by ICCAT. In addition, some commenters cited the importance of shortfin mako sharks to the health of ocean ecosystems. One commenter opposed any management measures for shortfin mako sharks, citing their understanding of previous ICCAT stock assessment issues, including the underlying uncertainties with other shark stock assessments such as the porbeagle shark assessment. Specifically, this commenter stated that ICCAT had recommended similar regulations for porbeagle sharks after a stock assessment, and later changed the results after the United States supplied additional information.

*Response:* NMFS agrees that shortfin mako sharks play an important role in maintaining ocean ecosystems, and notes that there are statutory obligations to effectively manage shark fisheries, prevent overfishing, and achieve long-term sustainability of the stock. NMFS has determined that the management measures in this rule will address overfishing and begin the process of rebuilding the North Atlantic shortfin mako shark stock as required by law, understanding that any effective rebuilding plan or measures to end overfishing depend on effective international measures, given that the United States contributes to only a portion of the fishing mortality on the stock.

NMFS believes that the 2017 ICCAT stock assessment for shortfin mako sharks is not appropriately compared to the previous stock assessment for porbeagle sharks and generally does not agree with the commenter's implication that the ICCAT assessments are routinely flawed. The 2017 ICCAT stock assessment for shortfin mako sharks included many improvements in the data and modeling compared to previous shark stock assessments, including past porbeagle and

shortfin mako shark assessments. NMFS has determined that the 2017 SCRS shortfin mako shark stock assessment is the best scientific information available for shortfin mako sharks, and NMFS is using the results, as appropriate, as required under National Standard 2 of the Magnuson-Stevens Act.

*Comment 2:* NMFS received comments about the stock assessment methodology and results. A commenter had concerns that the methodology applied in evaluating the results of different stock assessment models used in the 2017 shortfin mako stock assessment introduced an inappropriate negative bias in the overall assessment results. Other commenters were concerned about the large change in stock status between all the most recent previous ICCAT stock assessment results, the conversion rates used to convert dressed weight to whole weight of sharks, the potential for under-reporting of harvest by other ICCAT members particularly those countries that have larger fishing fleets than the United States, and the potential implications of the Marine Recreational Information Program (MRIP) catch estimates. These commenters requested that NMFS postpone implementing Amendment 11 until the next shortfin mako shark stock assessment is completed.

*Response:* While there is always uncertainty in stock assessment data inputs, model outputs, and the subsequent interpretation of results, the SCRS methodologies appropriately considered how to best address such uncertainties in this particular context. The SCRS described these sources of uncertainty and concluded that the 2017 stock assessment was an improvement over previous assessments for shortfin mako sharks, and reflects the best scientific information available on the status of the stock. ICCAT reviewed and accepted the results for use in management, and made specific recommendations which the United States is obligated to implement as necessary and appropriate under ATCA. NMFS is also required to take action to



end overfishing and rebuild the stock under the Magnuson-Stevens Act given the stock's status as overfished with overfishing occurring. If future stock assessments reach different conclusions regarding shortfin mako shark stock status, and changes to management measures are recommended by ICCAT, or if NMFS determines that different measures are needed to address management of the stock, then such changes may be considered at that time.

Regarding the comment expressing concern that the United States used incorrect conversion rates for dressed weight to whole weight of sharks, this issue has also come up in the context of reporting to ICCAT. As discussed with the ICCAT Advisory Committee at its Fall meeting, the United States surveyed other countries regarding the conversion rates and the manner in which those countries dress their sharks and then reviewed the data it submitted to ICCAT. Based on this review of the data and the survey of other countries' conversion factors, the United States found errors in the shortfin mako shark commercial landings data previously submitted to ICCAT and determined that changing the conversion rate to match that used by Spain and Canada was appropriate. Accordingly, the United States submitted revised estimates to ICCAT of U.S. harvest for all years. NMFS has accordingly updated all the numbers from the DEIS in the FEIS to reflect the updated analyses, since the numbers in the DEIS were based on the ICCAT submissions. As a result of these revised estimates, the U.S. proportion of shortfin mako catches compared to all catches by all countries was reduced from 11 percent to 9 percent. For U.S. harvest, these changes also resulted in a recalculation of the relative contribution of commercial and recreational fisheries to domestic shortfin mako shark mortality. The proportion of recreational to commercial harvest is not equally split with recreational harvest accounting for 58 percent and commercial harvest (including landings and dead discards) accounting for 42 percent.

*Comment 3:* NMFS received comments regarding the timing and process of this rulemaking. Commenters urged NMFS to implement management measures immediately based on the best available science to rebuild the stock and end overfishing. Other commenters are concerned that this rulemaking is premature since ICCAT could make changes in upcoming meetings. Some commenters felt the United States should not act unilaterally, and implement a rebuilding plan without ICCAT. Another commenter stated that NMFS has two years to implement rebuilding plans and management measures once the stock is determined to be overfished and requested that NMFS wait to implement Amendment 11.

*Response:* Amendment 11 is responsive to ICCAT Recommendation 17-08, which is a binding recommendation under the ICCAT Convention, and the United States is obligated to implement it through regulations as necessary and appropriate under ATCA. Due to the requirements in Recommendation 17-08 and the status of shortfin mako sharks, NMFS worked to immediately implement the requirements in Recommendation 17-08 via an emergency interim final rule (83 FR 8946; March 2, 2018). Under sections 305(c) and 304(e)(6) of the Magnuson-Stevens Act, NMFS has the authority to implement interim measures to reduce overfishing on an emergency basis for 180 days. Those measures can be extended again for another 186 days if necessary. NMFS later extended the emergency rule for another 186 days; these emergency measures expire on March 3, 2019 (83 FR 42452; August 22, 2018). NMFS aims to have the management measures in Amendment 11 in place by the time the emergency rule expires or soon thereafter. If ICCAT changes the measures in Recommendation 17-08 at future meetings, then the United States will be responsive to those changes, consistent with ATCA and the Magnuson-Stevens Act. NMFS does not have discretion to delay implementation of management measures adopted at ICCAT simply because we anticipate there may be additional or different ICCAT

recommendations in the future. This action does not implement a unilateral rebuilding plan in U.S. waters for shortfin mako sharks. This action establishes the foundation for an international, ICCAT-recommended rebuilding plan, understanding that ICCAT intends to adopt such a plan in the future and that the United States will advocate for its development at that forum.

Regarding the comment on the two-year timeframe to implement management measures being a reason to delay implementation, we note that we have an obligation to implement the measures under ATCA and the ICCAT treaty, and that the Magnuson-Stevens Act requires NMFS to take measures to end overfishing and to rebuild the stocks. The regulatory process to amend the 2006 Consolidated HMS FMP is a lengthy process involving significant public input and review; the two-year reference in the Magnuson-Stevens Act is not to be read as a delay in starting that process, which could prevent measures from being timely implemented. Section 304(e)(6) allows for interim measures to reduce overfishing to be put in place until a FMP amendment can be finalized; this section of the Magnuson-Stevens Act only allows for these interim measures to be put in place pursuant to section 305(c), which limits the amount of time emergency measures can be effective to 366 days. Based on these regulations, NMFS published the emergency interim final rule per the authority in sections 305(c) and 304(e)(6) of the Magnuson-Stevens Act, and is implementing long-term management measures to address overfishing and establish a foundation for rebuilding shortfin mako sharks with Amendment 11, consistent with the Magnuson-Stevens Act.

*Comment 4:* NMFS received comments in support of adding a sunset clause to this rulemaking, which would remove regulations implemented by Amendment 11 if ICCAT makes changes to Recommendation 17-08.

*Response:* A “sunset clause” on regulations to address overfishing of shortfin mako sharks would not be consistent with the ICCAT recommendation, or the need to rebuild the stock, which could take decades based on the 2017 stock assessment. If ICCAT recommends changes to management measures in the future, NMFS would implement necessary and appropriate responsive regulatory changes at that time, consistent with applicable laws.

*Comment 5:* NMFS received comments regarding the implementation of the ICCAT regulations and fishing operations by other countries. The commenters had concerns that other countries are not implementing the Recommendation and about the pace of the U.S. implementation when compared to other countries. Commenters also wondered if other ICCAT countries have electronic monitoring systems or observers for their fleets. In addition, the commenters believe that U.S. fishermen will be held accountable for an excessive share of the conservation burden in future ICCAT management measures.

*Response:* NMFS acknowledges that countries other than the United States are responsible for the majority of North Atlantic shortfin mako shark fishing mortality, hence the need for international coordination through ICCAT on measures to end overfishing and rebuild the stock. Regardless of other countries’ capability to adequately implement and enforce ICCAT recommendations, the United States remains obligated under ATCA to implement ICCAT recommendations. As a responsible party to ICCAT, NMFS will continue to work collaboratively within the ICCAT process and advocate for an effective international rebuilding plan, emphasizing the need for all parties to address their relative share of contributions to fishing mortality and for equitable management measures.

*Comment 6:* NMFS should implement an EFH designation for shortfin mako sharks.

*Response:* NMFS has recently updated EFH designations for shortfin mako sharks under Amendment 10 to the 2006 Consolidated HMS FMP. This process was initiated with the publication of the draft Atlantic HMS 5 Year Review on March 5, 2015 (80 FR 11981). In this review, NMFS identified new literature and data that should be considered in EFH delineation exercises, and recommended updating boundaries for shortfin mako sharks. There was insufficient information available per the guidelines listed at § 600.815(a)(8)) to warrant a Habitat Area of Particular Concern for shortfin mako sharks. NMFS published a draft Environmental Assessment, which included proposed updates for shortfin mako shark EFH, on September 8, 2016 (81 FR 62100). NMFS received a number of written comments and comments at public meetings. Many comments included suggestions for EFH boundaries based on academic research. NMFS completed a review of EFH-related literature in developing the FEIS (see Chapter 3 and Chapter 4 of Amendment 10 for a review of shortfin mako habitat and biology, and EFH impacts, respectively), and did not identify sufficient literature warranting changes to the recently updated EFH boundaries for shortfin mako sharks. However new data from ongoing surveys, research, and tagging programs was used to update EFH boundaries. EFH updates for shortfin mako sharks were finalized September 6, 2017 (82 FR 42329). Maps of final EFH boundaries for shortfin mako are available in Appendix G of the Final Environmental Assessment. EFH boundaries may also be viewed in the EFH Mapper, an online dynamic mapping tool maintained by the NMFS Office of Habitat Conservation (<https://www.habitat.noaa.gov/protection/efh/efhmapper/>). This office also maintains an EFH Data Inventory, which includes shapefiles of EFH boundaries that may be downloaded by the public (<https://www.habitat.noaa.gov/protection/efh/newInv/index.html>). The next 5-year review process for HMS EFH will be initiated in 2022.

*Comment 7:* NMFS received several comments suggesting that management measures for shortfin mako sharks should be more restrictive than those implemented in this rulemaking, including prohibiting all retention of shortfin mako sharks, or other more restrictive measures, as the science recommends.

*Response:* NMFS disagrees that more restrictive measures are required or necessary at this time. The management measures in Amendment 11 are consistent with those recommended in ICCAT Recommendation 17-08 and with NMFS' obligations to address overfishing and rebuilding, understanding that the stock is fished internationally and requires international measures to effectively address these issues. The selected measures are expected to reduce U.S. shortfin mako shark catch consistent with the SCRS recommendation (72-79 percent), while still permitting fishermen to retain shortfin mako sharks under limited circumstances. Given the species' North Atlantic-wide range and that United States catches constitute only approximately nine percent of total North Atlantic shortfin mako shark catch, the United States cannot unilaterally end overfishing and rebuild the stock through domestic regulations alone, even if there were to be a total prohibition on possession (which has not been recommended by ICCAT). Ending overfishing and rebuilding the stock can only be accomplished through international coordination with nations that harvest the majority of shortfin mako sharks. NMFS will work with ICCAT members to evaluate the effectiveness of these measures, update stock assessment projections, establish a rebuilding plan, and develop additional measures if necessary.

*Comment 8:* NMFS received comments in support of the proposed preferred commercial alternative (A2), as well as other comments that suggested modifications to Alternative A2. Several commenters along with the State of Georgia and the South Atlantic and New England Fishery Management Councils supported Alternative A2 (the preferred Alternative at the

proposed rule stage) since this Alternative is consistent with ICCAT Recommendation 17-08, utilized electronic monitoring, and allowed NMFS to collect real time landings and additional data. NMFS also received comments including from the State of North Carolina, Commonwealth of Massachusetts, and HMS Advisory Panel members supporting Alternative A2 with modifications. Specifically, the State of North Carolina along with other individuals suggested a modification that would allow the retention of dead shortfin mako sharks caught as bycatch in gillnet and bottom longline fisheries. The Commonwealth of Massachusetts and some HMS Advisory Panel members suggested a modification that would allow the retention of dead shortfin mako sharks by any vessel as long as there is an electronic monitoring system or an observer on board the vessel, similar to Alternative A5. These commenters also supported Alternative A3, which would allow vessels the option to opt out of the electronic monitoring system review.

*Response:* ICCAT Recommendation 17-08 included a variety of measures to reduce shortfin mako shark fishing mortality and to increase live releases in response to the 2017 ICCAT North Atlantic shortfin mako shark stock assessment. Among these measures was the option to require the release of shortfin mako sharks brought to the vessel alive in ICCAT fisheries. This option also allows for the retention of shortfin mako sharks in ICCAT fisheries that are dead at haulback, provided an electronic monitoring system is installed, or an observer is on board to verify the disposition of the shark. In Draft Amendment 11, NMFS preferred to implement Alternative A2, which limited the retention of dead shortfin mako sharks to those caught on vessels with an electronic monitoring system. While the draft amendment preferred alternative did not limit the gear types that could be used to catch and retain dead shortfin mako sharks, the requirement to have an electronic monitoring system installed largely limited the

measure to pelagic longline vessels since these vessels are already required to have electronic monitoring systems. Alternative A2 would satisfy the requirements of Recommendation 17-08 and also decrease fishing mortality of shortfin mako sharks. A large number of commenters expressed support for this measure. A full analysis of the ecological and socioeconomic impacts for Alternative A2 is provided in Chapter 4 of the FEIS.

However, during the public comment period, commenters that expressed support for the preferred Alternative A2 in Draft Amendment 11 also voiced support for allowing retention of dead shortfin mako sharks in other, non-ICCAT fishery gear types. Although Alternative A2 did not limit the ability to retain dead shortfin mako sharks to pelagic longline vessels, the requirement to install a costly electronic monitoring system to do so may have effectively limited the allowance for retention to the pelagic longline fishery. HMS-permitted pelagic longline vessels are already required to have electronic monitoring systems on board, but vessels using other gear types are unlikely to install the costly system in order to retain shortfin mako sharks, especially considering the relatively low ex-vessel value. Thus, the practical effect of Alternative A2 could be to limit the measure to pelagic longline vessels. To address the public comments on the Proposed Rule for Amendment 11, NMFS is implementing Alternative A7, an alternative added and analyzed in the FEIS and adopted in this final rule. Alternative A7 is a slight modification and outgrowth of Alternative A2. Under preferred Alternative A7, shortfin mako sharks caught using gillnet, bottom longline, or pelagic longline gear on properly-permitted vessels could be retained, provided they are dead at haulback. In the case of pelagic longline vessels, an electronic monitoring system would still be required, as proposed, but an electronic monitoring system would not be required on vessels that use bottom longline or gillnet gear. To be responsive to public comments, NMFS reviewed the available data for shortfin



mako shark interactions by vessels that use bottom longline and gillnet gear. After reviewing the information and considering past actions, NMFS decided to add Alternative A7 as the preferred alternative. One of the alternatives in the proposed rule analyzed and considered retention within the bottom longline and gillnet fisheries, and public comment on the alternatives resulted in the development of Alternative A7. Commenters thus could reasonably have anticipated this alternative, which is a logical outgrowth of the alternatives considered, and is consistent with the ICCAT measure's application to sharks "caught in association with ICCAT fisheries." This alternative is largely the same as Alternative A2 except that it allows retention of dead shortfin mako sharks in the bottom longline and the gillnet fisheries without requiring an observer or electronic monitoring system on board. Shortfin mako sharks are rarely caught with bottom longline and gillnet gear. Based on observer data, only 40 shortfin mako sharks were caught with bottom longline and gillnet gear from 2012 to 2017. Due to the low number of observed interactions, it is doubtful any of these landings were the result of targeted fishing so it is unlikely more could be done to avoid them. NMFS will also continue to track landings and consider additional measures if it appeared that an increase in retention results from this action, which is extremely unlikely. Retaining an additional six to seven dead sharks per year will have no additional negative effects on the stock than considered in the proposed rule, and the United States will still achieve the needed reductions in mortality with this alternative. In addition, allowing retention by these gear types will reduce regulatory dead discards in the non-ICCAT fisheries.

No other commercial gear types would be able to land shortfin mako sharks under this alternative. While it is possible for other commercial gears to catch shortfin mako sharks (e.g., rod and reel and bandit gear), these gears are primarily recreational and are rarely used to fish for

sharks commercially. Buoy gear in particular can interact with shortfin mako sharks but is not an authorized gear; this rule does not change that. Under this alternative, all shortfin mako sharks would need to be released if caught commercially on these other commercial gears, with the exception described below for those vessels that hold both a commercial shark permit and a permit with a shark endorsement that allows for recreational shark landings. This approach is consistent with previous rulemakings that implemented ICCAT recommendations for sharks (e.g., prohibiting retention of silky, hammerhead, oceanic whitetip, or porbeagle sharks in ICCAT fisheries: 76 FR 53652, August 29, 2011; 77 FR 60632, October 4, 2012; 81 FR 57803, August 24, 2016). In those cases, NMFS applied ICCAT measures for sharks only to the pelagic longline fishery and the handgear fisheries when swordfish or tunas are retained because they are considered ICCAT fisheries for tunas and tuna-like species. NMFS consistently determined that U.S. bottom longline and gillnet vessels are not part of an ICCAT fishery because these gears do not regularly catch or land ICCAT managed species such as swordfish or tunas. In other words, Alternative A7, which would allow landings of dead shortfin mako sharks caught by these non-ICCAT fishery gear types, is consistent with past U.S. actions.

Additionally, ICCAT Recommendation 17-08 allows retention of shortfin mako sharks that are dead at haulback without the verification of electronic monitoring or observers in certain limited circumstances, including for vessels under 12 meters. Most vessels that have a Directed shark LAP and use bottom longline or gillnet gear have vessel lengths that are below 12 meters. In 2017, bottom longline vessels that interacted with sharks (based on coastal fisheries and HMS logbook reports) averaged 11.4 meters in length. In 2017, gillnet vessels that interacted with sharks (based on coastal fisheries and HMS logbook reports) averaged 9.6 meters in length. Thus, given past rulemakings and given the length of most vessels that target sharks, allowing

landings of dead shortfin mako sharks by these other gear types is appropriate and consistent with ICCAT Recommendation 17-08.

*Comment 9:* NMFS received a suggestion for potential management measures if more commercial regulations are needed to protect the shortfin mako stock. The commenter suggested that NMFS implement a seasonal incidental limit of 18 shortfin mako sharks per trip during the summer months.

*Response:* The preferred alternatives in Final Amendment 11 are consistent with ICCAT Recommendation 17-08 and are designed to address the United States' contribution to the overfishing of shortfin mako sharks. If future ICCAT SCRS analyses determine that additional shortfin mako shark mortality reductions are needed, NMFS would consider other options, consistent with any ICCAT recommendations. At this time, a seasonal commercial limit of shortfin mako sharks is not consistent with ICCAT Recommendation 17-08 and it is unclear if it would achieve mortality reduction targets.

*Comment 10:* NMFS received a comment that the combination of preferred alternatives at the proposed rule stage, specifically Alternatives A2 and B3, would cause commercial shark permits that are held with HMS Charter/Headboat permits to be "worthless." Such fishermen hold both permits to allow them to sell sharks caught as bycatch when fishing for tuna with handline gear. The proposed combination of alternatives would require such a dual-permitted vessel to use only pelagic longline gear, to have an electronic monitoring system, and to only land shortfin mako sharks that were greater than 83 inches fork length that were dead at haulback. These requirements would apply even when fishing on a for-hire trip.

*Response:* The commenter was correct that under the proposed alternatives it was unlikely that a dual-permitted vessel (which could include a variety of permits including, for

example, those vessels that hold a commercial shark permit and an Atlantic Tunas General category permit that allows for retention of sharks when participating in a registered tournament) could land shortfin mako sharks. Additionally, NMFS realized this concern about permit combinations could apply to many combinations of the commercial and recreational alternatives considered. NMFS did not intend for this effect as a result of the proposed rule. As such, in the FEIS, NMFS is clarifying how the recreational limits would apply to the few individuals who hold a commercial shark vessel permit in addition to one of a variety of other vessel permits, such as HMS Charter/Headboat, that allow for recreational landings of sharks. These vessels generally fish with rod and reel or other handgear as opposed to pelagic longline, bottom longline, or gillnet gear. However, these vessels are part of the ICCAT fishery as they regularly target tunas, billfish, and swordfish. For the sake of clarity, NMFS would restrict these permit holders to the recreational shark requirements when shortfin mako sharks are onboard and prohibit them from selling any sharks when recreationally retaining shortfin mako sharks.

*Comment 11:* NMFS received comments both in support of and opposed to Alternative B3, which was the preferred alternative at the proposed rule stage. Some commenters, along with the Commonwealth of Massachusetts and the New England Fishery Management Council, supported Alternative B2 and management measures to protect shortfin mako sharks until they reach maturity. These commenters generally felt that the United States strongly supported the adopted size restrictions at ICCAT, and that NMFS should not now go beyond the recommendations. These commenters noted that the same minimum size under the emergency rule reduced U.S. landings beyond the suggested reduction of 72 to 79 percent. Other commenters noted that NMFS underestimated potential reductions in landings in their analysis of the recreational alternatives because they did not account for reductions in the number of trips

that would target shortfin mako sharks. The State of North Carolina supported Alternative B3 and specifically noted that if NMFS chooses Alternative B2 instead, NMFS should include shark sex identification facts on the HMS shark endorsement quiz and other outreach material. Commenters from the Gulf of Mexico supported Alternative B3 because they commonly interact with shortfin mako sharks larger than 83 inches fork length (FL). NMFS also received comments from individuals as well as the State of Georgia and the South Atlantic Fishery Management Council in support of the Alternative B3, which would establish a single recreational size limit of 83 inches FL, and is consistent with the measure established in the emergency rule. In general, these commenters felt the one size limit in Alternative B3 would remove any confusion recreational fishermen may have in identifying shortfin mako sharks by sex. Additionally, NMFS received requests for NMFS to consider other minimum sizes that are smaller than the preferred alternative of 83 inches FL. These commenters felt that NMFS should protect the larger, breeding female sharks over 83 inches FL and implement a smaller minimum size, such as 72 or 75 inches FL, for male sharks since those sharks still provide a decent amount of meat.

*Response:* Based on the public comment and current recreational estimated harvest under the emergency regulations (83 inches FL for all shortfin mako sharks), NMFS has decided to change the preferred alternative in the Final Amendment 11 to Alternative B2, which establishes different minimum sizes for male and female shortfin mako shark retention (71 inches FL size limit for male and 83 inches FL size limit for female shortfin mako sharks). In Draft Amendment 11 and the emergency interim final rule, the minimum size limit was increased to 83 inches FL for both males and females (Alternative B3) to significantly reduce shortfin mako shark recreational mortality and address overfishing. One size was used for both sexes for

reasons discussed in the emergency interim final rule and proposed rule. Updated data gathered from operations occurring under the emergency interim rule provisions indicate, however, that this approach would be unnecessarily restrictive for the longer term. While the shortfin mako shark landings under the 83-inch FL size limit met the suggested reduction target by weight, the size limit exceeded the target reduction in numbers of sharks harvested. As described in Chapter 4 of the FEIS, Large Pelagics Survey (LPS) data indicated there was a substantial reduction in recreational trips targeting shortfin mako sharks as a result of implementation of the emergency interim rule. The recreational landings data observed in the LPS suggest that the separate size limits for male and female sharks now preferred under Alternative B2 should still accomplish the suggested mortality reduction targets while having less detrimental economic impacts on the recreational shark fishery.

Furthermore, studies have indicated that protecting sub-adult sharks is key to conserving and rebuilding shark populations (see Chapter 4 of the FEIS). Sub-adults are generally those juvenile sharks that are a year or two away from becoming mature adults. While the now-preferred Alternative B2 will allow greater harvest of male shortfin mako sharks, those sharks will still be mature individuals as 71 inches FL is the size of maturity for male shortfin mako sharks. Given that studies have indicated that protecting sub-adult sharks is key to conserving and rebuilding shark populations, Alternative B2 ensures that sub-adults would still be adequately protected by establishing minimum size limits for male and female sharks based on their size at maturity. NMFS also anticipates that the now-preferred Alternative B2, which allows recreational fishermen the opportunity to harvest smaller male sharks, will help relieve fishing pressure on the larger female sharks, which were estimated to comprise approximately 75 percent of the harvest under the preferred alternative from the emergency interim final rule

(Alternative B3), which established only one size for both males and females. Landings data from the LPS shows that female shortfin mako sharks over 83 inches FL historically made up only about 12 percent of the overall harvest. Under a single 83 inches FL size limit it is highly likely most vessels that successfully harvest a shark over 83 inches FL will have already caught and released several smaller male sharks first. Since recreational fishermen are only allowed to harvest one shortfin mako shark per vessel per day, establishing a separate and significantly smaller size limit for male sharks will greatly increase the probability that the first legal sized shark a vessel interacts with will thus be a male shark which should lead to fewer female sharks ultimately being harvested.

Since the final preferred alternative (Alternative B2) establishes a different minimum size limit for each sex of shortfin mako shark species, NMFS intends to include information on properly distinguishing between male and female sharks on all related outreach materials, webpage, and the shark endorsement video (which is mandatory for all HMS permit holders that wish to retain sharks recreationally). NMFS also expects to provide such information to registered HMS shark tournaments to make sure participants are aware of the separate size limits and how to distinguish between male and female sharks. NMFS will continue to monitor recreational landings of shortfin mako sharks, and would take action to increase the minimum size limit if recreational landings targets are not met or if enforcing separate size limits by sex proves to be impractical.

*Comment 12:* NMFS received a comment stating that the seasonal recreational alternatives would not allow Gulf of Mexico fishermen ample opportunity to land shortfin mako sharks since they primarily target the species outside of the months considered in the alternative.

*Response:* NMFS did not prefer Alternative B6, or any of its sub-alternatives, in the proposed rule due to the potential for inequitable fishing opportunities this alternative could create in terms of regional access to the shortfin mako shark recreational fishery. NMFS now prefers Alternative B2, which establishes a minimum size limit of 71 inches FL for male and 83 inches FL for female shortfin mako sharks, which would mean all recreational fishermen would have the same regulations regardless of where and when they decide to fish.

*Comment 13:* NMFS received comments in support of the no action recreational alternative (Alternative B1). Specifically, commenters supported keeping the shortfin mako shark recreational minimum size at status quo (54 inches FL) since they feel the population decline is not due to the recreational fishery and the recreational fishery should not be impacted by other fisheries.

*Response:* While NMFS recognizes that the U.S. recreational fishery for shortfin mako sharks only makes up a small portion of the overall international harvest, its contribution to the total U.S. catch is larger than the commercial fishery landings. According to data presented in the Final Amendment 11, the U.S. recreational fishery accounts on average for 58 percent of the total U.S. catch, while the commercial fishery accounts on average for 42 percent. Therefore, U.S. recreational fisheries have a significant role to play in reducing fishing mortality on shortfin mako sharks, and must be included in management of this overfished stock. Furthermore, the no action alternative would fail to meet the minimum requirements set forth in ICCAT Recommendation 17-08 and would be inconsistent with U.S. obligations under the ICCAT treaty, ATCA, and other legal requirements.

*Comment 14:* NMFS received comments in support of Alternative B8, which would establish a tagging program to implement a per season limit for recreational fishermen.



*Response:* At this time, NMFS does not intend to implement a tagging program for recreationally harvested shortfin mako sharks since the final preferred alternative (Alternative B2) to establish minimum sizes would sufficiently reduce the recreational harvest levels. In addition, tagging programs are complicated to implement for a variety of reasons including the need to assign a limited number of tags via raffle, and the extra time and resources required to track them when reported. As discussed in the FEIS, NMFS would need to assign tags via raffle as the number of HMS permit holders with shark endorsements far exceeds the number of shortfin mako sharks that could be harvested and still meet the recommended reduction target of 72 to 79 percent. For these reasons, NMFS does not prefer a tagging program at this time.

*Comment 15:* NMFS received a comment suggesting that we change the shortfin mako shark recreational fishery to be similar to the bluefin tuna recreational fishery regulations. The commenter suggested a shortfin mako shark recreational fishery where permit holders would be restricted to one trophy shark over 83 inches FL, one smaller shark between 65 to 83 inches FL, and a 2 shark per season limit per recreational shark permit.

*Response:* The management regime suggested in this comment would be similar to the implementation of a tagging program in that such a program would require NMFS to monitor a seasonal bag limit. Similar to the tagging program, NMFS has determined that such a management program is unnecessary to accomplish the recommended reduction in landings as the minimum size limits currently under consideration would reduce overall harvest to far fewer than two sharks per permitted vessel per season. Furthermore, a 65 inch FL size limit for shortfin mako sharks would be below the size limits stipulated in ICCAT Recommendation 17-08, and would fail to meet U.S. obligations to implement binding ICCAT recommendations under ATCA.

*Comment 16:* NMFS received support and opposition for the preferred alternative (Alternative B9) to implement circle hooks in the recreational fishery. Some commenters along with the Commonwealth of Massachusetts and the South Atlantic and New England Fishery Management Councils supported the preferred alternative due to the benefits of live release of sharks that may provide enhanced survivorship in some species. The State of Georgia opposed the implementation of circle hooks in the recreational fishery for sharks in federal waters due to its "questionable administration by law enforcement officers" and the unnecessary burden it will place on recreational anglers. In addition, the State of Georgia noted that it does not intend to adopt circle hooks in state waters.

*Response:* Research shows that the use of circle hooks reduces gut-hooking and increases post-release survival in shortfin mako sharks. French et al. (2015) examined the effects of recreational fishing techniques, including hook type, on shortfin mako sharks and found that circle hooks were more likely to hook shortfin mako sharks in the jaw compared to J-hooks. In the study, circle hooks were most likely to hook in the jaw (83 percent of the time) while J-hooks most commonly hooked in the throat (33 percent of the time) or gut (27 percent of the time). J-hooks only hooked in the jaw of shortfin mako sharks 20 percent of the time. Jaw-hooking is correlated with increased odds of post release survival. For these and other reasons (*e.g.*, endangered species interactions), NMFS prefers this alternative. In addition, circle hooks are already required by HMS permitted commercial and recreational, except for north of 41° 43' N latitude (near Chatham, Massachusetts), fishermen.

While NMFS recognizes the State of Georgia's concern regarding enforceability, circle hooks have been required by HMS recreational permit holders since January 1, 2018, and other states, such as the State of New York, also requires the use of circle hooks when fishing for

sharks. In Amendment 5b to the 2006 Consolidated HMS FMP, NMFS required the use of non-offset, non-stainless steel circle hooks by HMS recreational permit holders with a shark endorsement when fishing for sharks recreationally, except when fishing with flies or artificial lures, in federal waters south of 41° 43' N latitude (near Chatham, Massachusetts). The final preferred Alternative (Alternative B9) would remove this line and require circle hooks when fishing recreationally for sharks in all areas, except when fishing with flies or artificial lures.

*Comment 17:* NMFS received a comment inquiring whether the new MRIP estimates would impact this rulemaking or future stock assessment.

*Response:* Recently, NMFS released new MRIP effort and catch estimate time series following the implementation of the new Fishing Effort Survey (FES) designed for the collection of private boat and shore-based fishing effort data, and its calibration with the data collected by the historic Coastal Household Telephone Survey (CHTS). The implications of the revised estimates on all managed species will not be fully understood for several years until they make their way through the rigorous scientific stock assessment process. In the coming years, the new and revised data will be incorporated into stock assessments at the domestic and international level as appropriate. However, NOAA Fisheries' primary source of recreational catch data for shortfin mako sharks is the Large Pelagic Survey (LPS) which does not rely on the FES, and as a result the estimates generated by the LPS used in this rulemaking have not changed.

*Comment 18:* NMFS received a comment stating that banning tournament fishing for sharks would help to end overfishing, and that NMFS would be justified in doing so on the grounds that tournament awards add a commercial component to what is supposed to be a recreational fishery. The commenter also stated that recreationally harvested fish should only be used for personal consumption, and not monetized.

*Response:* While tournaments do make up a significant portion of the recreational shark fishery, NMFS is not in favor of prohibiting shark tournaments as a means to address overfishing of shortfin mako sharks for a number of reasons. First, tournaments can provide significant economic benefits to the coastal communities in which they are held. Second, banning tournament or sport fishing while still allowing recreational harvest would constitute an inequitable access of the resource to the problem of overfishing between tournament and non-tournament recreational fishermen, and would set a precedent that would conflict with the management of other U.S. fisheries. Retention of HMS, including shortfin mako sharks submitted for weigh-in to tournaments, is authorized under the regulations by the permitted vessel that caught the fish. Even in cases where anglers donate their fish to the tournament, the tournament is not allowed to sell the fish, but may only donate the fish for human consumption to food banks or other charities.

For HMS fisheries, most tournament participants hold recreational permits or commercial permits that only allow for recreational landings of sharks when used during a registered HMS tournament. None of these participants are allowed to sell their catch. Many commercial businesses are associated with recreational fisheries including for-hire vessels, bait and tackle shops, and fishing guides. Like tournaments, all of these operations service recreational anglers. The distinction between recreational and commercial fishing lies solely in whether the fish themselves are sold commercially, not in whether a business associated with an activity is providing a commercial service. Many shark tournaments are already moving to catch-and-release formats, or are shying away from targeting shark species that are not widely considered to be edible.

*Comment 19:* NMFS received support and opposition for the preferred alternative of no action Alternative C1. Some commenters along with the Commonwealth of Massachusetts, State of Georgia, and South Atlantic Fishery Management Council supported the preferred alternative since it would not add any additional reporting requirements for fishermen. However, commenters also were concerned that some registered HMS tournaments are currently not required to report their catches of all HMS. Some commenters opposed the preferred alternative since it would create inconsistency with the SCRS advice to gather more data and information on shortfin mako sharks and therefore would negatively impact science and stock assessments. Some individuals along with the Mid-Atlantic Fishery Management Council suggested that NMFS should implement mandatory reporting for all recreationally landed and discarded shortfin mako sharks. The Mid-Atlantic Fishery Management Council stated that it is imperative to collect data from commercial and recreational fishermen on landings and discards. Other commenters would like equivalent monitoring and accountability requirements for all U.S. HMS fisheries, and to fully and accurately account for all sources of fishing mortality.

*Response:* There are already a number of reporting requirements under current HMS regulations for commercial and recreational fishermen fishing for shortfin mako sharks. HMS commercial fishermen report shortfin mako shark catches through vessel logbooks along with dealer reporting of landings. Under Alternative C1, HMS recreational anglers fishing from Maine to Virginia would continue to be required to report shortfin mako shark landings and releases if intercepted by the LPS, and data would continue to be collected on shortfin mako shark catches by the APIS, which is part of MRIP. As of January 1, 2019, all registered HMS tournaments will be selected for tournament reporting, which should account for a significant component of recreational shortfin mako shark landings (83 FR 63831; December 12, 2018). In

addition, most for-hire vessels fishing in the federal waters in the Mid-Atlantic area (New York to New Carolina) are currently required by the Mid-Atlantic Fishery Management Council to submit electronic vessel trip reports for all their trips within 24 hours, thus providing another major data stream for shortfin mako shark landings. These current reporting systems will allow NMFS to effectively monitor the recreational harvest of the stock using a combination of traditional intercept surveys, tournament reporting, and electronic reporting making the implementation of mandatory 24-hour reporting unnecessary at this time.

NMFS understands that some constituents do not think there is equitable reporting across HMS fisheries; however, the current reporting systems mentioned above should account for all sources of fishing mortality for shortfin mako sharks. NMFS will continue to monitor the landings by commercial and recreational fishermen to determine if the current reporting systems are sufficiently accounting for shortfin mako shark mortality.

*Comment 20:* NMFS received a comment in support of requiring mandatory reporting with vessel monitoring systems (VMS) if it would simplify commercial fishermen's reporting burden, improve the reporting of HMS catches across all gears, and improve scientific data. The commenters were not supportive of the alternative that would create another unnecessary burden on commercial fishermen.

*Response:* NMFS agrees that requiring mandatory reporting of shortfin mako sharks via VMS could potentially, and unnecessarily, increase burden to HMS commercial vessels that already report in other ways (vessel logbooks, dealer reports of landings, and electronic monitoring system) that are sufficient reporting systems for improving data collection for shortfin mako sharks. In addition, given the current reporting requirements for all HMS commercial vessels that already enable inseason monitoring and management of shortfin mako

sharks, NMFS did not prefer this alternative at this time. Furthermore, NMFS is already implementing electronic HMS logbooks on a voluntary basis to improve the timeliness of reporting, and provide data for management.

*Comment 21:* NMFS received support and opposition for the preferred alternative. Some commenters along with the Commonwealth of Massachusetts, the State of Georgia, and the South Atlantic and Mid-Atlantic Fishery Management Councils supported the preferred alternative to develop an international rebuilding plan with ICCAT to assist with rebuilding the stock and work with other countries to implement international management measures. A commenter who opposed the preferred alternative wants NMFS to implement a domestic rebuilding plan along with the international plan, while other commenters prefer that NMFS wait until ICCAT takes further action before finalizing the rebuilding plan.

*Response:* North Atlantic shortfin mako shark distribution spans a large portion of the North Atlantic Ocean basin and many countries besides the United States interact with the species. Therefore, NMFS believes that addressing overfishing and preventing an overfished status can only effectively be accomplished through international efforts where other countries that have large landings of shortfin mako sharks actively and equitably participate in mortality reduction and rebuilding plan discussions. Because of the small U.S. contribution to North Atlantic shortfin mako shark mortality, domestic reductions of shortfin mako shark mortality alone would not end overfishing of the entire North Atlantic stock. For these reasons and for the reasons described in response to comment 3 above, NMFS prefers Alternative D3, which would establish the foundation for developing an international rebuilding plan for shortfin mako sharks.

*Comment 22:* NMFS received a comment in support of the alternative to remove shortfin mako sharks from the pelagic shark management group and establish a separate management group with quota for the species.

*Response:* At this time, NMFS does not prefer a shortfin mako shark-specific quota. ICCAT Recommendation 17-08 did not include individual country allocations for shortfin mako sharks upon which to base a domestic quota. It is also not clear that a quota would adequately protect the stock by reducing mortality because quotas allow for sharks that are live at haulback to be landed. Also, it is difficult at this time to determine if setting a species-specific quota for shortfin mako sharks would have positive ecological benefits for the stock, as this scenario was not explored in the stock assessment. A species-specific quota for shortfin mako sharks would require authorized fishermen to discard all shortfin mako sharks once the quota is reached, potentially leading to an increase in regulatory discards, which would not result in decreased mortality of shortfin mako sharks and thus, contribute to the health of the stock. Additionally, commercially, shortfin mako sharks are most often caught with pelagic longline gear incidental to other target catch. Since shortfin mako sharks are rarely targeted, establishing a shortfin mako shark quota is unlikely to stop incidental fishing mortality.

NMFS believes that ending overfishing and preventing an overfished status would be better accomplished through the measures preferred in final Amendment 11 and through further critical international efforts where other countries that have large landings of shortfin mako sharks could participate in mortality reduction discussions instead of a species-specific quota within the U.S. fisheries. NMFS will continue to monitor progress in the international forum and the needs of the stock, as well as whether this action has its intended effect, and will consider whether additional measures are appropriate in the future.



*Comment 23:* NMFS received a comment in support of the alternative to establish bycatch caps for all fisheries that interact with shortfin mako sharks. Specifically, the commenter noted that NMFS should count the number of shortfin mako sharks caught in all fisheries, cap the number of shortfin mako sharks that can be caught, and implement accountability measures to control, track, and limit the number of shortfin mako sharks that are killed in each fishery.

*Response:* At this time, NMFS does not prefer bycatch caps for all fisheries that interact with shortfin mako sharks. NMFS has reviewed all data available and found that shortfin mako sharks are primarily caught in HMS fisheries with pelagic longline gear when commercial fishermen are harvesting swordfish and tuna species, and with rod and reel gear when recreational fishermen are targeting sharks or other HMS. The species is rarely caught in other fisheries or with other gear types. To the extent they are, the final preferred commercial alternative, Alternative A7, limits any landing to shortfin mako sharks that are dead at haulback. Because shortfin mako sharks are rarely seen in fisheries other than the ones listed, establishing bycatch caps in non-pelagic longline or non-recreational handgear fisheries is unlikely to provide additional protection. As ICCAT has not established an overall TAC for shortfin mako sharks, it is difficult to determine at what level NMFS would establish a bycatch cap. Given that shortfin mako sharks are rarely caught on these other gear types, a bycatch cap would be unlikely to change fishing behavior or result in sufficient ecological benefits that compensate for administrative and regulatory burden. However, if shortfin mako shark interactions increase in those fisheries, which would then indicate fishing behavior has changed in some form, then NMFS may consider additional measures such as establishing a bycatch cap in these fisheries in the future.

*Comment 24:* NMFS received a comment suggesting that we increase the minimum recreational size limit for porbeagle sharks.

*Response:* This comment is beyond the scope of this rulemaking. The purpose of Amendment 11 is to develop and implement management measures that would address overfishing and take steps towards rebuilding the North Atlantic shortfin mako shark stock. The most recent stock assessment for porbeagle sharks indicated that the stock was overfished, but overfishing was no longer occurring, and showing signs of early rebuilding. At this time, NMFS does not have any new scientific information to justify increasing the minimum recreational size limit for porbeagle sharks.

#### **Changes From the Proposed Rule (83 FR 35590; July 27, 2018)**

This section explains the changes in the regulatory text from the proposed rule to the final rule. Some changes were made in response to public comment, and others clarify text for the final rule. The changes from the proposed rule text in the final rule are described below.

1. § 635.20 (e)(2) and (e)(6). Modification to the recreational minimum size limit for shortfin mako sharks

This final rule implements separate size limits for male (71 inches FL) and female (83 inches FL) shortfin mako sharks under Alternative B2 as opposed to the single size limit of 83 inches FL (Alternative B3) that was preferred in the proposed rule and implemented in the emergency interim final rule. NMFS decided to change the preferred alternative due to public comment and updated data on the effects of the emergency interim final rule measure on estimated landings and directed effort for shortfin mako sharks in the recreational fishery. The minimum sizes in the final rule also directly match the measures in the ICCAT recommendation, which provided different minimum sizes for males and females.

For the emergency interim rule and the proposed rule, NMFS assumed in the recreational analyses that directed effort for shortfin mako sharks would not change as a result of a change in the minimum retention size, but the 2018 LPS data found that effort actually went down substantially. Thus, NMFS now understands the estimates of expected landings reductions in the earlier actions to be overly conservative. Furthermore, public comment reflected that fewer recreational trips were taken due to the larger minimum size limit and reduced likelihood of catching and landing a shortfin mako shark above the size limit. Thus, in the final rule, it is appropriate to reduce the minimum size limit for males to 71 inches FL, consistent with the ICCAT recommendation. The minimum size for female mako sharks will remain at 83 inches FL.

The differing minimum size limits in the preferred alternative are expected to achieve the needed reduction in landings and fishing mortality while protecting reproductive-age female shortfin mako sharks, but with fewer socio-economic impacts to recreational fishermen. By reducing the minimum size for retaining male shortfin mako sharks, fishermen may more frequently harvest smaller, mature male sharks instead of the larger female sharks, which will leave more female sharks that are critical to reproduction of the stock in the population. This approach, which reduces fishing pressure on the female spawning stock, is consistent with general scientific advice about sharks. (Cortes 2002, Chapple and Botsford 2013).

According to length composition information from the LPS from 2012 through 2017, this final action would reduce the number of recreational landings of male shortfin mako sharks by up to 47 percent and female shortfin mako sharks by up to 78 percent for an average reduction in total mortality of 65 percent, if fishing effort for shortfin mako sharks were to remain the same. However, the reduction in landings under this alternative is likely to be somewhat greater than

that because recreational fishermen likely will continue taking fewer trips targeting shortfin mako sharks as a result of the changes in size limits. Effort data collected via the LPS suggests that in 2018 there was a large reduction in directed fishing trips targeting shortfin mako sharks under the 83-inch FL size limit implemented by the emergency interim final rule compared to the previous six-year average. Directed trips in the LPS region (Maine to Virginia) for shortfin mako sharks from June through August 2018 declined an estimated 34 percent compared to the six-year average from 2012 through 2017. This reduction in directed trips resulted in greater than projected reductions in shortfin mako shark landings. The June through August time period traditionally accounts for over 90 percent of directed trips for shortfin mako sharks. Based on the LPS data from 2012 through 2017, shortfin mako sharks were the primary target species in approximately 67 percent of trips that caught and 75 percent of trips that landed the species. As such, a reduction in directed fishing effort could substantially reduce the landings expected under this alternative, while achieving the needed fishing mortality reductions in conjunction with other measures in the final rule.

As explained above in the comment and response section, such reductions in fishing effort should result in landings reductions that more closely result in the ICCAT reduction target of 72 to 79 percent than those that would have resulted from the single 83-inch FL size limit (Alternative B3), which resulted in greater reductions. Thus, NMFS is implementing two separate size limits for shortfin mako sharks.

Public comment reflects that some people are concerned about the ability of recreational shark anglers to differentiate between male and female sharks. NMFS is adding information on how to distinguish the sex of sharks in shark outreach materials, including the Shark Endorsement educational video that all HMS permit holders must watch if they wish to receive a

shark endorsement needed to retain sharks recreational.

2. §§ 635.21(a)(4), (c)(1), (d)(5), and (g)(6); 635.24 (a)(4); and 635.71 (d)(27) and (d)(28).

Modification to authorized commercial gear to retain shortfin mako sharks.

The commercial measure preferred in the proposed rule (Alternative A2) only allowed the retention of shortfin mako sharks that were dead at haulback by vessels with a functioning electronic monitoring system on board the vessel. While the proposed measure did not limit the gear types that could be used to catch and retain dead shortfin mako sharks, the requirement to have an electronic monitoring system installed effectively limited the measure to pelagic longline vessels since those vessels are already required to have electronic monitoring systems. In response to public comments, NMFS reviewed the available data for shortfin mako shark interactions by vessels that use bottom longline and gillnet gear. Available data indicates that allowing fishermen to retain dead shortfin mako sharks caught in bottom longline or gillnet gear is unlikely to impact the overall mortality or harvest totals, since these gear types rarely interact with the species. Specifically, commercial shark fishermen using bottom longline or gillnet gear rarely, if ever, catch shortfin mako sharks. Since 2012, only six shortfin mako shark were observed in the bottom longline shark fishery and 34 were observed in the gillnet shark fishery. ICCAT Recommendation 17-08 allows retention of shortfin mako sharks that are dead at haulback without the verification of electronic monitoring or observers in certain limited circumstances, including for vessels under 12 meters. Most vessels that have a shark LAP and use bottom longline or gillnet gear have vessel lengths that are below 12 meters. In 2017, bottom longline vessels that interacted with sharks (based on coastal fisheries and HMS logbook reports) averaged 11.4 meters in length. In 2017, gillnet vessels that interacted with sharks (based on coastal fisheries and HMS logbook reports) averaged 9.6 meters in length. Thus,

given past rulemakings and given the length of most vessels that target sharks, allowing landings of dead shortfin mako sharks by these other gear types is appropriate and consistent with ICCAT Recommendation 17-08. As a result, in the final rule, NMFS will allow for the retention of shortfin mako sharks that are dead at haulback by properly-permitted vessels that are fishing with bottom longline or gillnet gear even if they do not have a functioning electronic monitoring system on board. The changes in the regulatory text specifies that vessels with bottom longline or gillnet gear onboard must release all live shortfin mako sharks.

3. § 635.22 (c)(1) and (c)(7). Modifications regarding Atlantic HMS Charter/Headboat, Atlantic Tunas General category, and Swordfish General Commercial permit holders.

Based on public comment, NMFS is clarifying how the recreational limits would apply to the few individuals who hold a commercial shark vessel permit in addition to one of a variety of other vessel permits, such as HMS Charter/Headboat, that allow for recreational landings of sharks under certain circumstances. These individuals generally fish with rod and reel or other handgear as opposed to pelagic longline, bottom longline, or gillnet gear. While they hold a commercial shark permit, for the most part, these individuals are fishing for sharks recreationally. However, under the combination of measures in the proposed rule, these individuals would not be allowed to land any shortfin mako sharks as they would not have the electronic monitoring equipment required under the proposed commercial measures. For the sake of clarity and in response to public comment, this rule specifies that the recreational shark requirements, including the no sale requirement, apply for these individuals when shortfin mako sharks are onboard.

### **Classification**

Pursuant to the Magnuson-Stevens Act, the NMFS Assistant Administrator has

determined that the final rule is consistent with the 2006 Consolidated HMS FMP and its amendments, other provisions of the Magnuson-Stevens Act, ATCA, and other applicable law.

The Assistant Administrator for Fisheries, NOAA, finds good cause to waive the 30-day delay in effective date under 5 U.S.C. 553(d)(3) of the Administrative Procedure Act. .

Delaying the effectiveness of these regulations could undermine the purpose of this action to put in place measures to address overfishing of shortfin mako sharks. Similar measures were originally implemented by emergency interim final rule under Section 305(c) of the Magnuson-Stevens Act, and have been in place for since March 2018. The emergency measures will expire on March 3, 2019, and a lapse in these measures would be confusing to the regulated community, complicate enforcement efforts, and potentially harm the long-term sustainability of the stock. While NMFS originally timed the rulemaking to allow for a delay in effectiveness, a lapse in government appropriations resulted in a government shutdown for 35 days in December 2018-January 2019. If these measures are not implemented before the emergency rule expires, technically the management measures for the stock would revert to those that existed prior to the emergency rule. This means the recreational minimum size limit for shortfin mako sharks would revert to 54 inches FL, the use of circle hooks by recreational fishermen would not be required across the range of the species stock, and commercial fishermen would no longer be required to release shortfin mako sharks that are alive at haulback. This would be confusing for the regulated community, which would then be required to switch to the new regulations only 30 days later. In the event of a short lapse between the emergency rule and implementation of this final rule, NMFS would notify the regulated community of the situation and encourage voluntary compliance with the emergency rule measures for consistency but compliance would not be assured. Thus, the need to implement these measures in a timely manner to reduce the risk of

overfishing shortfin mako sharks constitute good cause to make the rule effective immediately upon publication in the *Federal Register*. Furthermore, prior to the release of this final rule, on December 14, 2018, NMFS published a notice of availability of the Final EIS supporting this action, thereby providing the public and affected entities prior notice of the final measures contained in this rule.

This final rule has been determined to be not significant for purposes of Executive Order 12866. The Agency has consulted, to the extent practicable, with appropriate state and local officials to address the principles, criteria, and requirements of Executive Order 13132.

In compliance with section 604 of the Regulatory Flexibility Act (RFA), NMFS prepared a Final Regulatory Flexibility Analysis (FRFA) for this final rule. The FRFA analyzes the anticipated economic impacts of the final actions and any significant economic impacts on small entities. The FRFA is below.

Section 604(a)(1) of the RFA requires a succinct statement of the need for and objectives of the rule. Consistent with the provisions of the Magnuson-Stevens Act and ATCA, NMFS plans to modify the 2006 Atlantic HMS FMP in response to ICCAT Recommendation 17-08 and the stock status determination for shortfin mako sharks. NMFS has identified the following objectives with regard to this action: address overfishing of shortfin mako sharks; take steps towards rebuilding; establish the foundation for rebuilding the North Atlantic shortfin mako stock; and modify the 2006 Consolidated HMS FMP in response to ICCAT Recommendation 17-08 and the stock status determination for shortfin mako sharks.

Section 604(a)(2) requires a summary of significant issues raised by public comment in response to the IRFA and a summary of the assessment of the Agency of such issues, and a statement of any changes made in the rule as a result of such comments. NMFS did not receive



any comments specifically on the IRFA, however the Agency did receive some comments regarding the anticipated or perceived economic impact of the rule. Summarized public comments and the Agency's responses to them are included above. We did not receive any comments from the Chief Counsel for Advocacy of the Small Business Administration in response to the proposed rule or the IRFA.

Section 604(a)(4) of the Regulatory Flexibility Act requires Agencies to provide an estimate of the number of small entities to which the rule would apply. The Small Business Administration (SBA) has established size criteria for all major industry sectors in the United States, including fish harvesters. Provision is made under SBA's regulations for an agency to develop its own industry-specific size standards after consultation with SBA Office of Advocacy and an opportunity for public comment (see 13 CFR 121.903(c)). Under this provision, NMFS may establish size standards that differ from those established by the SBA Office of Size Standards, but only for use by NMFS and only for the purpose of conducting an analysis of economic effects in fulfillment of the agency's obligations under the RFA. To utilize this provision, NMFS must publish such size standards in the Federal Register (FR), which NMFS did on December 29, 2015 (80 FR 81194, December 29, 2015). In this final rule, effective on July 1, 2016, NMFS established a small business size standard of \$11 million in annual gross receipts for all businesses in the commercial fishing industry (NAICS 11411) for RFA compliance purposes. NMFS considers all HMS permit holders to be small entities because they had average annual receipts of less than \$11 million for commercial fishing. The Small Business Administration (SBA) has established size standards for all other major industry sectors in the U.S., including the scenic and sightseeing transportation (water) sector (NAICS code 487210, for-hire), which includes charter/party boat entities. The Small Business Administration (SBA)

has defined a small charter/party boat entity as one with average annual receipts (revenue) of less than \$7.5 million.

Regarding those entities that would be directly affected by the recreational management measures, HMS Angling (Recreational) category permits are typically obtained by individuals who are not considered businesses or small entities for purposes of the RFA because they are not engaged in commercial business activity. Vessels with the HMS Charter/Headboat category permit can operate as for-hire vessels. These permit holders can be regarded as small entities for RFA purposes (*i.e.*, they are engaged in the business of fish harvesting, are independently owned or operated, are not dominant in their field of operation, and have average annual revenues of less than \$7.5 million). Overall, the recreational alternatives would have impacts on the portion of the 3,635 HMS Charter/Headboat permit holders who hold a shark endorsement. There were also 287 registered HMS tournaments in 2017, which could be impacted by this rule. Of those registered HMS tournaments, 75 had awards or prizes for pelagic sharks.

Regarding those entities that would be directly affected by the preferred commercial management measures, the average annual revenue per active pelagic longline vessel is estimated to be \$187,000 based on the 170 active vessels between 2006 and 2012 that produced an estimated \$31.8 million in revenue annually. The maximum annual revenue for any pelagic longline vessel between 2006 and 2016 was less than \$1.9 million, well below the NMFS small business size standard for commercial fishing businesses of \$11 million. Other non-longline HMS commercial fishing vessels generally earn less revenue than pelagic longline vessels. Therefore, NMFS considers all Atlantic HMS commercial permit holders to be small entities (*i.e.*, they are engaged in the business of fish harvesting, are independently owned or operated, are not dominant in their field of operation, and have combined annual receipts not in excess of

\$11 million for all its affiliated operations worldwide). The preferred commercial alternatives would apply to the 280 Atlantic tunas Longline category permit holders, 220 directed shark permit holders, and 268 incidental shark permit holders. Of these 280 permit holders, 88 pelagic longline vessels were actively fishing in 2017 based on logbook records. Based on HMS and Coastal Fisheries Logbook data, an average of 20 vessels per year that used gear other than pelagic longline gear interacted with shortfin mako sharks between 2015 and 2017.

NMFS has determined that the preferred alternatives would not likely directly affect any small organizations or small government jurisdictions defined under RFA, nor would there be disproportionate economic impacts between large and small entities. Furthermore, there would be no disproportionate economic impacts among the universe of vessels based on gear, home port, or vessel length.

Section 604(a)(5) of the RFA requires agencies to describe any new reporting, record-keeping and other compliance requirements. The action does not contain any new collection of information, reporting, or record-keeping requirements.

Section 604(a)(6) of the RFA requires agencies to describe the steps taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected. Alternative A1, the No Action alternative, would keep the non-emergency rule regulations for shortfin mako sharks. Once the emergency rule for shortfin mako sharks expires, management measures would revert back to those effective before March 2018 (*e.g.*, no requirement to release shortfin mako sharks that are alive at haulback). Directed and incidental shark LAP holders

would continue to be allowed to land and sell shortfin mako sharks to an authorized dealer, subject to current limits, including the pelagic shark commercial quota. Short-term direct economic impacts on small entities would likely be neutral since commercial fishermen could continue to catch and retain shortfin mako sharks at a similar level and rate as the status quo.

In recent years, about 181,000 lb dw of shortfin mako sharks have been landed and the commercial revenues from shortfin mako sharks have averaged approximately \$373,000 per year, which equates to approximately 1 percent of overall HMS ex-vessel revenues.

Approximately 97.5 percent of shortfin mako commercial landings, based on dealer reports, were made by pelagic longline vessels. There were 88 pelagic longline vessels that were active in 2017 based on logbook reports. Therefore, the average revenue from shortfin mako shark landings per pelagic longline vessel is \$4,133 per year.

Even though pelagic longline gear is the primary commercial gear used to land shortfin mako sharks, other gear types also interact with this species. Based on HMS and Coastal Fisheries Logbook data, an average of 20 vessels per year that used gear other than pelagic longline gear interacted with shortfin mako sharks between 2015 and 2017. Therefore, these vessels that used gear other than pelagic longline gear landed an average of only \$933 worth of shortfin mako sharks per year.

Under Alternative A2, retention of shortfin mako sharks would only be allowed if the following three criteria are met: 1) the vessel has been issued a Directed or Incidental shark LAP, 2) the shark is dead at haulback, and 3) there is a functional electronic monitoring system on board the vessel. This alternative is designed to be consistent with one of the limited provisions allowing retention of shortfin mako sharks under ICCAT Recommendation 17-08. Under the current HMS regulations, all HMS permitted vessels that fish with pelagic longline gear are

already required to have a functional electronic monitoring system (79 FR 71510; December 2, 2014) and either a Directed or an Incidental shark LAP. Vessels utilizing other gear types (*i.e.*, gillnet or bottom longline) are not required to have an electronic monitoring system under current regulations but could choose to install one if the operator wishes to retain shortfin mako sharks that are dead at haulback and if the vessel holds a commercial shark LAP. Under this alternative, the electronic monitoring system would be used to verify and ensure that only shortfin mako sharks dead at haulback were retained.

This alternative would be consistent with ICCAT Recommendation 17-08 and would reduce the number of landings by pelagic longline vessels on average by 74 percent based on observer data from 2012-2017. A 74 percent reduction in shortfin mako landings would reduce revenues by an average of \$3,058 per vessel for the 88 activate pelagic longline vessels and would eliminate all of the \$933 in landing per vessel by the 10 non-pelagic longline vessels that landing shortfin mako sharks since those vessels are unlikely to have electronic monitoring systems currently installed. Those non-pelagic longline vessels would need to pay to install electronic monitoring systems if they wish to retain shortfin mako sharks, introducing an additional expense for those vessels if it there were an economic incentive for those vessels to try to retain shortfin mako sharks under this alternative. Overall, this alternative would have minor economic costs on small entities because these measures would reduce the number of shortfin mako sharks landed and sold by these fishing vessels. However, shortfin mako sharks are rarely a target species and are worth less than other target species. Although this alternative was preferred at the DEIS stage, NOAA Fisheries now prefers Alternative A7 which is a slightly modified version of Alternative A2. Because Alternative A7 is responsive to public comment while still meeting management goals, NOAA Fisheries no longer prefers Alternative A2.

Alternative A3 is similar to Alternative A2 except that the ability to retain dead shortfin mako sharks would be limited to permit holders that opt in to a program that would use the existing electronic monitoring systems, which are currently used in relation to the bluefin tuna IBQ program, also to verify the disposition of shortfin mako sharks at haulback. In other words, this alternative would allow for retention of shortfin mako sharks that are dead at haulback by persons with a Directed or Incidental shark LAP only if permit holders opt in to enhanced electronic monitoring coverage. If the permit holder does not opt in to the enhanced electronic monitoring coverage, they could not retain any shortfin mako sharks.

The economic impacts to small entities under this alternative are expected to be similar to those under Alternative A2. Under this alternative, a portion of the pelagic longline fleet could opt out of any retention of shortfin mako sharks, resulting in a greater reduction in overall shark ex-vessel revenue for those vessels. Overall, the socioeconomic impacts associated with these reductions in revenue are not expected to be substantial, as shortfin mako sharks comprise less than one percent of total HMS ex-vessel revenues on average. Non-pelagic longline vessels would need to pay to install electronic monitoring systems if they wish to retain shortfin mako sharks, introducing an additional expense for those vessels. Due to the low commercial value of shortfin mako sharks and the high cost of electronic monitoring it is reasonable to expect that these fisheries will not install cameras and therefore will not retain shortfin mako sharks. Overall, this alternative would have minor economic costs on small entities by reducing the number of shortfin mako sharks landed and sold.

Alternative A4 would establish a commercial minimum size of 83 inches FL (210 cm FL) for retention of shortfin mako sharks caught incidentally during fishing for other species, whether the shark is dead or alive at haulback. Based on observer data, only 8 percent of shortfin

mako sharks are caught with pelagic longline gear greater than 83 inches FL. Thus, restricting fishermen to retaining 8 percent of shortfin mako sharks would represent a considerable reduction in number of shortfin mako sharks landed and in the resulting ex-vessel revenue. A 92 percent reduction in shortfin mako landings would reduce annual revenues by an average of \$3,802 per vessel for the 88 activate pelagic longline vessels and would reduce annual revenues by an average of \$858 per vessel for the 10 non-pelagic longline vessels that land shortfin mako sharks. However, the overall economic impacts associated with these reductions in revenue are not expected be substantial, as shortfin mako sharks comprise less than one percent of total HMS ex-vessel revenues on average. Additionally, the magnitude of shortfin mako landings by other gear types (*e.g.*, bottom longline, gillnet, handgear) is very small. Overall, this alternative would have minor economic impacts on small entities because these measures would reduce the number of shortfin mako sharks landed and sold by these fishing vessels, however, shortfin mako sharks are rarely a target species and are worth less than other more valuable target species.

Alternative A5 would allow fishermen to retain shortfin mako sharks caught on any commercial gear (*e.g.*, pelagic longline, bottom longline, gillnet, handgear) provided that an observer is on board that can verify that the shark was dead at haulback. Under this alternative, electronic monitoring would not be used to verify the disposition of shortfin mako sharks caught on pelagic longline gear, but instead pelagic longline vessels could only retain shortfin mako sharks when the sharks are dead at haulback and an observer is on board.

Since only five percent of pelagic longline gear trips are observed, this alternative would result in a 95 percent reduction in the number of shortfin mako sharks retained on pelagic longline gear. A 95 percent reduction in shortfin mako landings would reduce annual revenues by an average of \$3,926 per vessel for the 88 activate pelagic longline vessels and would reduce

annual revenues by an average of \$886 per vessel for the 10 non-pelagic longline vessels that land shortfin mako sharks. However, the overall economic impacts associated with these reductions in revenue are not expected to be substantial, as shortfin mako sharks comprise less than one percent of total HMS ex-vessel revenues on average. Additionally, the magnitude of shortfin mako landings by other gear types (*e.g.*, bottom longline, gillnet, handgear) is very small. Overall, this alternative would have minor economic costs on small entities because these measures would reduce the number of shortfin mako sharks landed and sold by these fishing vessels, however, shortfin mako sharks are rarely a target species and are worth less than other more valuable target species. Compared to the preferred Alternative A7, this alternative would place more restrictive limits on fishermen using pelagic longline, bottom longline, and gillnet gear. Observers are only occasionally on board vessels, so limiting the retention of shortfin mako sharks to trips with an observer would reduce the opportunity to retain dead individuals. The reduced opportunity to retain dead shortfin mako sharks would not reduce fishing mortality on the stock. Therefore, NMFS does not prefer this alternative at this time.

Alternative A6 would place shortfin mako sharks on the prohibited sharks list to prohibit any catch or retention of shortfin mako sharks in commercial HMS fisheries. In recent years, about 181,000 lb dw of shortfin mako sharks have been landed and the commercial revenues from shortfin mako sharks have averaged approximately \$373,000 per year, which equates to approximately one percent of overall HMS ex-vessel revenues. That revenue would be eliminated under this alternative. Approximately 97.26 percent of shortfin mako commercial landings, based on dealer reports, were made by pelagic longline vessels. There were 88 pelagic longline vessels that were active in 2017 based on logbook reports. Therefore, the average loss in annual revenue from shortfin mako shark landings per pelagic longline vessel would be



\$4,133 per year. The average loss in annual revenue from shortfin mako shark landings for vessel using other gear types would be \$933 per year. However, the overall economic impacts associated with these reductions in revenue are not expected be substantial, as shortfin mako sharks comprise less than one percent of total HMS ex-vessel revenues on average.

Additionally, the magnitude of shortfin mako landings by other gear types (*e.g.*, bottom longline, gillnet, handgear) is very small. Overall, this alternative would have minor economic costs on small entities because these measures would reduce the number of shortfin mako sharks landed and sold by these fishing vessels, however, shortfin mako sharks are rarely a target species and are worth less than other more valuable target species. Therefore, NMFS does not prefer this alternative at this time.

Based on public comment, Alternative A7 is a new alternative in this FEIS that is a logical outgrowth of the previously-preferred Alternative A2. Under preferred Alternative A7, shortfin mako sharks caught using gillnet, bottom longline, or pelagic longline gear on properly-permitted vessels could be retained, provided they are dead at haulback. In the case of pelagic longline vessels, an electronic monitoring system would be required, but not on bottom longline of gillnet vessels.

During the public comment period, some commenters that expressed support for the DEIS preferred alternative also voiced support for expanding the ability to retain dead shortfin mako sharks should not be limited solely to the pelagic longline gear, and they felt that requiring electronic monitoring systems on small vessels essentially would effectively create such a restriction. Although the DEIS preferred alternative did not limit the ability to retain dead shortfin mako sharks to pelagic longline vessels, the requirement to install a costly electronic monitoring system to do so may have limited the measure to the pelagic longline fishery. HMS-

permitted pelagic longline vessels are already required to have electronic monitoring systems on board, but vessels using other gear types are unlikely to install the costly system in order to retain shortfin mako sharks, especially considering the relatively low ex-vessel value. Thus, the practical effect of Alternative A2 could be to limit the measure to pelagic longline vessels. To address the public comments, NOAA Fisheries now prefers Alternative A7, a newly added alternative in the FEIS that is a slightly modified extension of Alternative A2. Under preferred Alternative A7, shortfin mako sharks caught using gillnet, bottom longline, or pelagic longline gear on properly-permitted vessels could be retained, provided they are dead at haulback. In the case of pelagic longline vessels, an electronic monitoring system would be required, but not on bottom longline or gillnet vessels.

This alternative would have a similar impact as Alternative A2 for pelagic longline vessels (reducing revenues by an average of \$3,058 per vessel), but it would not impact the estimated 10 non-pelagic longline vessels. Therefore, it would prevent the estimated \$933 in reduced landings per vessel for those non-pelagic longline vessels that would occur under Alternative A2. Allowing fishermen to retain dead shortfin mako sharks caught in bottom longline or gillnet gear is unlikely to have a large impact since these gear types rarely interact with the species. Overall, this alternative would have minor economic costs on small entities because these measures would reduce the number of shortfin mako sharks landed and sold by these fishing vessels. However, shortfin mako sharks are rarely a target species and are worth less than other more valuable target species. NMFS prefers this alternative because it achieves the objectives of the amendment and largely the same conservation benefit while easing costly requirements on small vessels and thus with less economic impact or restrictions on commercial fishermen.

While HMS Angling permit holders are not considered small entities by NMFS for purposes of the Regulatory Flexibility Act, Charter/Headboat permit holders and tournament operators are considered to be small entities and could be potentially impacted by the various recreational alternatives, as described below.

NMFS received public comment that indicated the proposed suite of measures presented in Alternatives B2 through B8 particularly restricted vessels with multiple HMS permits. These vessels generally fish with rod and reel or other handgear as opposed to pelagic longline, bottom longline, or gillnet gear. However, these vessels are part of the ICCAT fishery as they regularly target tunas, billfish, and swordfish. For the sake of clarity, we are therefore limiting them to the recreational shark requirements when shortfin mako sharks are onboard, and prohibiting them from selling any sharks when recreationally retaining shortfin mako sharks.

For these alternatives, a vessel issued both a Federal Atlantic commercial shark vessel permit under §635.4(e) and an HMS Charter/Headboat permit with a shark endorsement under §635.4(b) could land shortfin mako sharks in accordance with the recreational size limits under §635.20(e), but could not retain them commercially. This will limit the ability of a small number of vessels to generate commercial revenue from sharks while landing shortfin mako sharks under the recreational size limits. In fact, there were only 35 General Category and 14 Charter/Headboat vessels with Directed or Incidental Shark permits in 2017. Between 2012 and 2017, shortfin mako sharks caught on hook and line or handline only composed less than 1 percent of commercial landings. On an individual vessel basis, a prohibition on the landing of shortfin mako sharks is unlikely to affect the profitability of a commercial charter/headboat trip or the value of a shark incidental limited access permit on the open market. Ex-vessel prices for shortfin mako sharks are only around \$1.50 per pound while prices for yellowfin, bigeye, and

bluefin tuna can range from \$3.50 to \$8.00 per pound (2017 SAFE Report). Thus, shortfin mako sharks are less valuable than target tuna species. Furthermore, other incidentally-caught sharks could still be legally retained and sold.

Similarly, a vessel issued both a Federal Atlantic commercial shark vessel permit under §635.4(e) and an Atlantic Tunas General category permit under §635.4(d) or a Swordfish General Commercial permit under §635.4(f) with a shark endorsement could land shortfin mako sharks in accordance with the recreational size limits under §635.20(e) when fishing in a registered HMS tournament §635.4(c)(2). If a shortfin mako shark is retained by such vessels, any other shark species being retained cannot exceed the recreational retention limits under §635.22(c) and cannot be sold.

Alternative B1, the no action alternative, would not implement any management measures in the recreational shark fishery to decrease mortality of shortfin mako sharks. This would result in no additional economic impacts on small entities associated with this fishery in the short-term.

Under Alternative B2, the preferred alternative, the minimum size limit for the retention of shortfin mako sharks would be increased from 54 inches FL to 71 inches FL for male and 83 inches FL for female shortfin mako sharks.

Under the proposed rule and Draft Amendment 11, Alternative B2 was not a preferred alternative. Instead, NMFS had preferred Alternative B3 which implemented a single size limit of 83 inches FL for all shortfin mako sharks. NMFS has decided to change that for a number of reasons including public comment, greater than estimated landings reductions under the 83 inch FL size limit implemented under the emergency interim rule, evidence of reduced directed effort for shortfin mako sharks under the emergency interim rule, and because this alternative would

not increase harvest of mature female sharks compared to the 83 inch size limit implemented by the emergency interim final rule.

NMFS received a number of public comments urging the agency to adopt this alternative as the preferred alternative, and implement the size limits specified in one of the measures of the ICCAT recommendation. Commenters pointed out that the U.S. delegation had supported the recommendation, and that U.S. recreational landings consisted of less than 5 percent of total international landings of shortfin mako sharks. As such, the added reduction in landings by implementing the 83 inch FL minimum size limit for both sexes would result in a minimal reduction of total international landings while greatly impacting the U.S. recreational fishery. Furthermore, any increases in shortfin mako landings under Alternative B2 would consist solely of male sharks as the minimum size limit for female sharks would remain the same.

This increase in the minimum size limit is projected to reduce recreational landings by at least 65 percent in numbers of sharks landed, and 50 percent in the weight of sharks landed. While this alternative would not establish a shortfin mako fishing season, such a significant increase in the minimum size limit would likely result in some reduction in directed fishing effort for shortfin mako sharks. Effort data collected via the LPS suggests there has been a significant reduction in directed fishing trips targeting shortfin mako sharks compared to the five year average under the 83 inch size limit implemented by the emergency interim final rule. Estimates of directed trips for shortfin mako sharks declined by 34 percent compared to the six year average from 2012 through 2017 resulting in greater than projected reductions in shortfin mako shark landings. This time period (June through August) traditionally accounts for over 90 percent of directed trips for shortfin mako sharks. Based on the LPS data from 2012-2017, shortfin mako sharks were the primary target species in approximately 67 percent of trips that

caught and 75 percent of trips that landed them. As such, a reduction in directed fishing effort could substantially reduce the landings expected under this alternative. While this alternative is unlikely to affect directed effort as significantly as the 83 inch size limit, NMFS anticipates directed effort will not fully recover to previous levels.

Under Alternative B3, the minimum size limit for retention of shortfin mako sharks would be increased to 83 inches FL for both males and female sharks consistent with the measure implemented in the emergency rule. Assuming no reduction in directed fishing effort, this increase in the minimum size limit would result in an 83 percent reduction in the number of sharks landed, and a 69 percent reduction in the weight of sharks landed. Such a large increase in the minimum size limit and associated reduction in landings is unlikely to have no effect on directed fishing effort, in fact, an approximately 34 percent reduction in directed effort was observed in the summer of 2018 following the implementation of this size limit under the emergency interim final rule. An 83 percent reduction in shortfin mako sharks harvested would thus reduce the percentage of directed trips harvesting them by about 6 percent. At least three tournaments directed at shortfin mako sharks in the Northeast chose to cancel 2018 events due to the more stringent current 83 inches FL minimum size limit. Tournaments account for over half of directed recreational trips for shortfin mako sharks, and 77 percent of them in the month of June when effort is at its highest. This could result in a substantial reduction in directed fishing trips for shortfin mako sharks, thus leading to moderate adverse economic impacts on some charter/headboats and tournament operators. NMFS no longer prefers Alternative B3 at this time as reduction in directed fishing effort following implementation of the emergency interim final rule suggests this alternative may be more restrictive than needed to achieve the reductions targets recommended by ICCAT, and could place an undue burden on the recreational fishery.

Under Alternative B4, recreational HMS permit holders would only be allowed to retain male shortfin mako sharks that measure at least 71 inches FL and female shortfin mako sharks that measure at least 108 inches FL. Assuming no reduction in directed fishing effort, this increase in the minimum size limit would result in a 77 percent reduction in the number of sharks landed. A 73 percent reduction in shortfin mako sharks harvested would thus reduce the percentage of directed trips harvesting them to approximately 9 percent. This could result in a significant reduction in directed fishing trips for shortfin mako sharks, thus leading to moderate adverse economic impacts on some charter/headboats and tournament operators.

Under Alternative B5, recreational HMS permit holders would only be allowed to retain male shortfin mako sharks that measure at least 71 inches FL and female shortfin mako sharks that measure at least 120 inches FL. Assuming no reduction in directed fishing effort, this increase in the size limit would result in a 78 percent reduction in the number of sharks landed, and a 74 percent reduction in the weight of sharks landed. A 78 percent reduction in shortfin mako sharks harvested would thus reduce the percentage of directed trips harvesting them to 8.6 percent. This could result in a significant reduction in directed fishing trips for shortfin mako sharks, thus leading to moderate adverse economic impacts on some charter/headboats and tournament operators.

Under Alternative B6a, the minimum size limit for the retention of shortfin mako sharks would be increased from 54 inches FL to 71 inches FL for male and 83 inches FL for female shortfin mako sharks, and a shortfin mako fishing season would be established from May through October. The fishing season established under this alternative would have little to no effect on shortfin mako fishing activity in the Northeast, but may reduce fishing effort in the South Atlantic and Gulf of Mexico regions; however, a lack of data on targeted trips for shortfin

mako sharks in this region makes any assessment of potential socioeconomic impacts difficult. However, this combination of increase in the size limit and fishing season is projected to reduce recreational landings by at least 65 percent in numbers of sharks landed, and 50 percent in the weight of sharks landed in the Northeast. A 65 percent reduction in shortfin mako sharks harvested would thus reduce the percentage of directed trips harvesting them to 13 percent. This reduction on directed trips could lead to moderate adverse economic impacts on some charter/headboats and tournament operators. NMFS does not prefer this alternative at this time, as it is unlikely to result in significantly greater reductions in landings than the preferred alternative, Alternative B2, and could potentially result in regional inequalities in access to the recreational shortfin mako shark fishery due to difference in seasonal abundance.

Under Alternative B6b, NMFS would establish a three-month fishing season for shortfin mako sharks spanning the summer months of June through August. This season would be combined with a 71-inch FL minimum size limit for males and 100 inch minimum size FL for females. Based on estimates from the LPS, on average 475 directed trips are taken for shortfin mako sharks each September and October, representing approximately 9 percent of all annual directed trips. No registered HMS tournaments held in September and October target sharks exclusively, so it is highly unlikely this alternative would result in the rescheduling of any tournaments due to the fishing season. It is much more likely that directed fishing effort would be affected by the increases in the minimum size limits. Assuming this increase in the size limit has minimal effect on fishing effort directly towards shortfin mako sharks within the season, this combination of season and increase in the size limit should result in a 79 percent reduction in the number of sharks landed, and a 74 percent reduction in the weight of sharks landed. This reduction could result in a significant reduction in directed fishing trips for shortfin mako sharks,



thus leading to moderate adverse economic impacts on some charter/headboat operators. NMFS does not prefer this alternative at this time as observed reductions in directed fishing effort following implementation of the emergency interim rule suggest this alternative may be more restrictive than is needed to meet the 72 to 79 percent reduction targets recommended by ICCAT.

Under Alternative B6c, NMFS would establish a two-month fishing season for shortfin mako sharks for the months of June and July. This season would be combined with a 71-inch FL minimum size limit for males and 90-inch minimum sizes FL for females. Based on estimates from the LPS, on average 1,264 directed trips are taken for shortfin mako sharks each August through October, representing approximately 26 percent of all annual directed trips. Only two registered HMS tournaments held in August through October target sharks exclusively, one out of New York that primarily targets thresher sharks and one out of Florida where participants fish exclusively from shore. Thus, it is highly unlikely this alternative would result in the rescheduling of any tournaments due to the fishing season. It is likely that directed fishing effort would also be affected by the increases in the minimum size limits. Assuming this increase in the size limit has minimal effect on fishing effort directly towards shortfin mako sharks within the season, this combination of season and increase in the size limit should result in a 77 percent reduction in the number of sharks landed, and a 69 percent reduction in the weight of sharks landed. Such a large increase in the size limit and associated reduction in landings is unlikely to have no effect on directed fishing effort. A 77 percent reduction in shortfin mako sharks harvested would thus reduce the percentage of directed trips harvesting them to 8 percent. This reduction in directed trips could lead to moderate adverse economic impacts on some charter/headboats and tournament operators. NMFS does not prefer this alternative at this time as observed reductions in directed fishing effort following implementation of the emergency

interim rule suggest this alternative may be more restrictive than is needed to meet the 72 to 79 percent reduction targets recommended by ICCAT.

Under Alternative B6d, NMFS would establish a one-month fishing season for shortfin mako sharks for the month of June only. This season would be combined with a 71 inches FL minimum size limit for males and 83 inches FL for females. Based on estimates from the LPS, on average 2,435 directed trips are taken for shortfin mako sharks each July through October, representing approximately 52 percent of all annual directed trips. Additionally, there are seven registered HMS tournaments held in July through October that target sharks exclusively, including three of four tournaments held in the state of Rhode Island, and the only tournament in Massachusetts to target sharks exclusively. It is likely that directed fishing effort would also be affected by the increases in the minimum size limits. Assuming this increase in the size limit has minimal effect on fishing effort directly towards shortfin mako sharks within the season, this combination of season and increase in the size limit should result in an 80 percent reduction in the number of sharks landed, and a 76 percent reduction in the weight of sharks landed. Such a large increase in the size limit and associated reduction in landings is unlikely to have no effect on directed fishing effort. An 80 percent reduction in shortfin mako sharks harvested would thus reduce the percentage of directed trips harvesting them to 8 percent. This reduction in directed trips could lead to moderate adverse economic impacts on some charter/headboats and tournament operators.

Under Alternative B6e, NMFS would establish a process and criteria for determining season dates and minimum size limits for shortfin mako sharks on an annual basis through inseason actions. This process would be similar to how the agency sets season opens and retention limits for the shark commercial fisheries and the Atlantic Tunas General category

fishery. NMFS would review data on recreational landings, catch rates, and effort levels for shortfin mako sharks in the previous years, and establish season dates and minimum size limits that would be expected to achieve the reduction targets established by ICCAT, and the objectives of the HMS fisheries management plan. This alternative would also allow NMFS to minimize adverse economic impacts to the HMS recreational fishery by allowing for adjustments to the season and size limits based on observed reductions and redistribution of fishing effort resulting from measures implemented in previous years. NMFS does not prefer this alternative at this time as the establishment of a shortfin mako shark fishing season has the potential to create regional inequalities in access to the fishery given its wide spatial and temporal nature as a highly migratory species. These potential inequalities would appear to be unjustified as there are alternatives available that are capable of meeting the reductions recommended by ICCAT without them.

Under Alternative B7, NMFS would implement a “slot limit” for shortfin mako sharks in the recreational fishery. Under a slot limit, recreational fishermen would only be allowed to retain shortfin mako sharks within a narrow size range (*e.g.*, between 71 and 83 inches FL) with no retention above or below that slot. Assuming no reduction in directed fishing effort, this alternative would be expected to result in similar reductions in landings as other alternatives analyzed here. While this alternative would not establish a shortfin mako fishing season, as described above in earlier alternatives, such a significant increase in the size limit would likely result in some reduction in directed fishing effort for shortfin mako sharks and shifting focus to other HMS species. This reduction in effort may be further exacerbated by the complicated nature of slot limits regulations. The amount of effort reduction by recreational fishermen would depend on how much HMS anglers and tournaments are satisfied to practice catch-and-release

fishing for sub-legal shortfin mako sharks or shift their fishing effort to other species. NMFS does not prefer this alternative at this time as there are less complicated options available that are capable of meeting the mortality reductions recommended by ICCAT.

Under Alternative B8, NMFS would establish a landings tag requirement and a yearly limit on the number of landings tags assigned to a vessel, for shortfin mako sharks over the minimum size limit. This requirement would be expected to negatively affect fishing effort. An increase in the minimum size limit and a yearly cap on landings for vessels would reduce effort drastically, while maintaining some opportunity for the recreational fleet. This effort reduction would adversely affect the charter fleet the most by limiting the number of trips on which they could land shortfin mako sharks each year. This effort reduction may also affect their ability to book trips. At least one tournament directed at shortfin mako sharks in the Northeast chose to cancel its 2018 event due to the more stringent current 83-inch FL minimum size limit. By excluding tournaments from a landings tag requirement there may be a direct beneficial economic impact for tournaments, as this would be an additional opportunity, beyond their tags, to land shortfin mako sharks for permit holders.

Alternative B9, the preferred alternative, would expand the requirement to use non-offset, non-stainless steel circle hook by all HMS permit holders with a shark endorsement when fishing for sharks recreationally, except when fishing with flies or artificial lures, in federal waters. Currently, this requirement is in place for all federally managed waters south of 41° 43' N latitude (near Chatham, Massachusetts), but this alternative would remove the boundary line, requiring fishermen in all areas to use circle hooks. Recreational shark fishermen north of Chatham, Massachusetts would need to purchase circle hooks to comply with this requirement, although the cost is modest. Additionally, it is possible that once the circle hook requirement is

expanded, fishermen in the newly impacted area could find reduced catch rates of sharks including shortfin mako sharks. If reduced catch rates are realized, effort in the recreational shark fishery, including the for-hire fleet, could be impacted by reduced number of trips or reduced demand for chartered trips.

Alternative B10 would place shortfin mako sharks on the prohibited sharks list to prohibit the retention of shortfin mako sharks in recreational HMS fisheries. HMS permit holders would be prohibited from retaining or landing shortfin mako sharks recreationally. In recreational fisheries, recreational fishermen would only be authorized to catch and release shortfin mako sharks. A prohibition on the retention of shortfin mako sharks is likely to disincentivize some portion of the recreational shark fishery, particularly those individuals that plan to target shortfin mako sharks. Businesses that rely on recreational shark fishing such as and tournament operators and charter/headboats may experience a decline in demand resulting in adverse economic impacts. NMFS does not prefer this alternative at this time as it would prohibit all retention of shortfin mako sharks in the recreational fishery. As such, Alternative B10 would create unnecessary inequalities between the commercial and recreational fishing sectors when other alternatives are available that can achieve the ICCAT recommended landings reduction in a more equitable fashion.

Alternative C1, the preferred alternative, would make no changes to the current reporting requirements applicable to shortfin mako sharks in HMS fisheries. Since there would be no changes to the reporting requirements under this alternative, NMFS would expect fishing practices to remain the same and direct economic impacts in small entities to be neutral in the short-term.

Under Alternative C2, NMFS would require vessels with a directed or incidental shark LAP to report daily the number of shortfin mako sharks retained and discarded dead, as well as fishing effort (number of sets and number of hooks) on a VMS. A requirement to report shortfin mako shark catches on VMS for vessels with a shark LAP would be an additional reporting requirement for those vessels on their existing systems. For other commercial vessels that are currently only required to report in the HMS logbook, the requirement would mean installing VMS to report dead discards of shortfin mako and fishing effort.

If a vessel has already installed a type-approved E-MTU VMS unit, the only expense would be monthly communication service fees, which it may already be paying if the vessel is participating in a Council-managed fishery. Existing regulations require all vessel operators with E-MTU VMS units to provide hail out/in declarations and provide location reports on an hourly basis at all times while they are away from port. In order to comply with these regulations, vessel owners must subscribe to a communication service plan that includes an allowance for sending similar declarations (hail out/in) describing target species, fishing gear possessed, and estimated time/location of landing using their E-MTU VMS. Given that most shortfin mako sharks are incidentally caught by pelagic longline vessels that are already required to have an E-MTU VMS system onboard, adverse economic impacts are not expected. If vessels with a shark LAP do not have an E-MTU VMS unit, direct, economic costs are expected as a result of having to pay for the E-MTU VMS unit (approximately \$4,000) and a qualified marine electrician to install the unit (\$400). VMS reporting requirements under this alternative could potentially provide undue burden to HMS commercial vessels that already report on catches, landings, and discards through vessel logbooks, dealer reports, and observer reports.

Alternative C3 would implement mandatory reporting of all recreational interactions (landed and discarded) of shortfin mako sharks in HMS fisheries. Recreational HMS permit holders would have a variety of options for reporting shortfin mako shark landings including a phone-in system, internet website, and/or a smartphone app. HMS Angling and Charter/Headboat permit holders currently use this method for required reporting of each individual landing of bluefin tuna, billfish, and swordfish within 24 hours. NMFS has also maintained a shortfin mako shark reporting app as an educational tool to encourage the practice of catch-and-release. Additionally, the potential burden associated with mandatory landings reports for shortfin mako sharks would be significantly reduced under the increased minimum size limits being considered in this rulemaking, although would still represent an increased burden over current reporting requirements. While HMS Angling permit holders are not considered small entities by NMFS for purposes of the Regulatory Flexibility Act, Charter/Headboat permit holders are considered to be small entities and would be potentially impacted by this alternative.

Under Alternative D1, NMFS would not establish a rebuilding plan or the foundation for rebuilding the shortfin mako shark stock. NMFS would still implement management measures in the HMS recreational and commercial fisheries to end overfishing consistent with the Magnuson-Stevens Act and with ICCAT Recommendation 17-08 and our obligations under ATCA. There would likely be no direct short-term impact on small entities from this alternative as there would be no change in fishing effort or landings of shortfin mako sharks that would impact revenues generated from the commercial and recreational fisheries.

Under Alternative D2, NMFS would establish a domestic rebuilding plan independent of a rebuilding plan adopted by ICCAT. While such an alternative could avoid overfishing shortfin

mako sharks in the United States by changing the way that the U.S. recreational and commercial fisheries operate, such a plan could not effectively rebuild the stock, since U.S. catches are only 9 percent of the reported catch Atlantic-wide. Such an alternative would be expected to cause short- and long-term direct economic impacts.

Under Alternative D3, the preferred alternative, NMFS would take preliminary action toward rebuilding by adopting measures to end overfishing to establish the foundation for a rebuilding plan. NMFS would then take action at the international level through ICCAT to develop a rebuilding plan for shortfin mako sharks. ICCAT may establish a rebuilding plan for shortfin mako sharks in 2019, and this rebuilding plan would encompass the objectives set forth by ICCAT based on scientific advice from the SCRS. This alternative would not result in any changes to the current recreational and commercial domestic regulations for shortfin mako sharks in the short-term. There would likely be no direct short-term impact on small entities from this alternative as there would be no change in fishing effort or landings of shortfin mako sharks that would impact revenues generated from the commercial and recreational fisheries. Management measures to address overfishing of shortfin mako sharks could be adopted in the future. These measures could change the way that the U.S. recreational and commercial shortfin mako shark fishery operates, which could cause long-term direct economic impacts. Any future action to implement international measures would be analyzed in a separate rulemaking.

Under Alternative D4, NMFS would remove shortfin mako sharks from the commercial pelagic shark management group and would implement a species-specific quota for shortfin mako sharks as established by ICCAT. A shortfin mako-specific quota would likely include both commercial and recreational catches, as do other ICCAT established quotas. In addition, NMFS would establish a new commercial pelagic shark species quota for common thresher and



oceanic whitetip sharks based on recent landings. The 2017 ICCAT stock assessment indicated that the North Atlantic population of shortfin mako sharks is overfished and experiencing overfishing. In November 2017, ICCAT adopted management measures (Recommendation 17-08) to address the overfishing determination, but did not recommend a TAC necessary to stop overfishing of shortfin mako sharks. Therefore, it is difficult at this time to determine how setting a species-specific quota for shortfin mako sharks would affect commercial and recreational fishing operations. However, this species-specific quota may provide long-term direct, minor adverse economic impacts if ICCAT established a TAC for the United States that is well below the total average harvest by the United States (*i.e.*, 330 mt ww or 168 mt dw) or below the current annual commercial quota for common thresher, oceanic whitetip, and shortfin mako (488 mt dw) as it could potentially limit the amount of harvest for fishermen. Short-term direct socioeconomic impacts would be neutral for Alternative D4 because initially there would be no reduction in fishing effort and practices.

Under Alternative D5, NMFS would take steps to implement area-based management measures domestically if such measures are established by ICCAT. ICCAT Recommendation 17-08 calls on the SCRS to provide additional scientific advice in 2019 that takes into account a spatial/temporal analysis of North Atlantic shortfin mako shark catches in order to identify areas with high interactions. Without a specific area to analyze at this time, the precise impacts on commercial and recreational fishery operations cannot be determined. Implementing area management for shortfin mako sharks, if recommended by the scientific advice, could lead to a reduction in localized fishing effort, which would likely have adverse economic impacts for small entities that land shortfin mako sharks.

Under Alternative D6, NMFS would annually allocate a specific number of “allowable” dead discards of shortfin mako sharks as a bycatch cap or sub-annual catch limit (ACL) that would apply to all fisheries, not just HMS fisheries. This alternative would impact the HMS pelagic longline and shark recreational fisheries similar to Alternative D4. However, this alternative could also impact non-HMS fisheries by closing those fisheries if the bycatch cap were reached. This alternative could lead to short-term adverse impacts since the bycatch caps could close fisheries if they are reached until those fishermen could modify fishing behavior to avoid shortfin mako sharks (even in fisheries where shortfin mako sharks are rarely, if ever, seen) and reduce interactions. In the long-term, this alternative would have neutral impacts as the vessels would avoid shortfin mako sharks. The impacts to small businesses are expected to be neutral in the short and long-term as their businesses would not change.

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, NMFS has prepared a listserv summarizing fishery information and regulations for Atlantic shark fisheries for 2019. This listserv also serves as the small entity compliance guide. Copies of the compliance guide are available from NMFS (see **ADDRESSES**).

NMFS prepared a FEIS for this final rule that discusses the impact on the environment that would result from this rule. A copy of the FEIS is available from NMFS (see **ADDRESSES**).

## List of Subjects in 50 CFR Part 635

Fisheries, Fishing, Fishing vessels, Foreign relations, Imports, Penalties, Reporting and recordkeeping requirements, Treaties.

Dated: February 15, 2019.

---

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 635 is amended as follows:

### **PART 635—ATLANTIC HIGHLY MIGRATORY SPECIES**

1. The authority citation for part 635 continues to read as follows:

**Authority:** 16 U.S.C. 971 *et seq.*; 16 U.S.C. 1801 *et seq.*

2. In § 635.2, revise definition of “FL (fork length)” to read as follows:

#### **§ 635.2 Definitions.**

\* \* \* \* \*

*FL (fork length)* means the straight-line measurement of a fish from the midpoint of the anterior edge of the fish to the fork of the caudal fin. The measurement is not made along the curve of the body.

\* \* \* \* \*

3. In § 635.20, lift the suspension on paragraph (e)(2) and revising it and by adding paragraph (e)(6) to read as follows:

#### **§ 635.20 Size limits.**

\* \* \* \* \*

(e) \* \* \*

(2) All sharks, except as otherwise specified in paragraphs (e)(3) through (6) of this section, landed under the recreational retention limits specified at § 635.22(c)(2) must be at least 54 inches (137 cm) FL.

\* \* \* \* \*

(6) For North Atlantic shortfin mako sharks landed under the recreational retention limits specified at § 635.22(c)(2), males must be at least 71 inches (180 cm) fork length, and females must be at least 83 inches (210 cm) fork length.

\* \* \* \* \*

4. Amend § 635.21 by:

- a. Adding paragraphs (a)(4), (c)(1)(iv), and (d)(5);
- b. Revising paragraphs (f)(2) and (3);
- c. Adding paragraph (g)(6); and
- d. Revising (k)(1) and (2).

The additions and revisions read as follows:

**§ 635.21 Gear operation and deployment restrictions.**

(a) \* \* \*

(4) Any person on board a vessel that is issued a commercial shark permit must release all shortfin mako sharks, whether alive or dead, caught with any gear other than pelagic longline, bottom longline, or gillnet gear, except that any person on board a vessel that is issued a commercial shark permit in combination with a permit that has a shark endorsement may retain

shortfin mako sharks subject to the recreational minimum size limits in § 635.20, the recreational retention limits in § 635.22, and authorized gear requirements in § 635.19.

\* \* \* \* \*

(c) \* \* \*

(1) \* \* \*

(iv) Has pelagic longline gear on board, persons aboard that vessel are required to promptly release in a manner that causes the least harm any shortfin mako shark that is alive at the time of haulback. Any shortfin mako shark that is dead at the time of haulback may be retained provided the electronic monitoring system is installed and functioning in compliance with the requirements at § 635.9.

\* \* \* \* \*

(d) \* \* \*

(5) If a vessel issued or required to be issued a permit under this part has bottom longline gear on board persons aboard that vessel are required to promptly release in a manner that causes the least harm, any shortfin mako shark that is alive at the time of haulback.

\* \* \* \* \*

(f) \* \* \*

(2) A person on board a vessel that has been issued or is required to be issued a permit with a shark endorsement under this part and who is participating in an HMS registered tournament that bestows points, prizes, or awards for Atlantic sharks must deploy only non-offset, corrodible circle hooks when fishing for, retaining, possessing, or landing sharks, except when fishing with flies or artificial lures.

(3) A person on board a vessel that has been issued or is required to be issued an HMS Angling permit with a shark endorsement or an HMS Charter/Headboat permit with a shark endorsement must deploy only non-offset, corrodible circle hooks when fishing for, retaining, possessing, or landing sharks, except when fishing with flies or artificial lures.

\* \* \* \* \*

(g) \* \* \*

(6) If a vessel issued or required to be issued a permit under this part has gillnet gear onboard, persons aboard that vessel are required to promptly release in a manner that causes the least harm any shortfin mako shark that is alive at the time of haulback.

\* \* \* \* \*

(k) \* \* \*

(1) A person on board a vessel that has been issued or is required to be issued a permit with a shark endorsement under this part and who is participating in an HMS registered tournament that bestows points, prizes, or awards for Atlantic sharks must deploy only non-offset, corrodible circle hooks when fishing for, retaining, possessing, or landing sharks, except when fishing with flies or artificial lures.

(2) A person on board a vessel that has been issued or is required to be issued an HMS Angling permit with a shark endorsement or a person on board a vessel with an HMS Charter/Headboat permit with a shark endorsement must deploy only non-offset, corrodible circle hooks when fishing for, retaining, possessing, or landing, except when fishing with flies or artificial lures.

\* \* \* \* \*

5. In § 635.22, revise paragraph (c)(1) and add paragraph (c)(7) as follows:

## § 635.22 Recreational Retention Limits

(c) \* \* \*

(1) The recreational retention limit for sharks applies to any person who fishes in any manner on a vessel that has been issued or is required to have been issued a permit with a shark endorsement, except as noted in paragraph (c)(7) of this section. The retention limit can change depending on the species being caught and the size limit under which they are being caught as specified under §635.20(e). A person on board a vessel that has been issued or is required to be issued a permit with a shark endorsement under §635.4 is required to use non-offset, corrodible circle hooks as specified in §635.21(f) and (k) in order to retain sharks per the retention limits specified in this section.

\* \* \* \* \*

(7) For persons on board vessels issued both a commercial shark permit and a permit with a shark endorsement, the recreational retention limit and sale prohibition applies for shortfin mako sharks at all times, even when the commercial pelagic shark quota is open. If such vessels retain a shortfin mako shark under the recreational retention limit, all other sharks retained by such vessels may only be retained under the applicable recreational retention limits and may not be sold. If a commercial Atlantic shark quota is closed under § 635.28(b), the recreational retention limit for sharks and no sale provision in paragraph (a) of this section will be applied to persons aboard a vessel issued a Federal Atlantic commercial shark vessel permit under §635.4(e), if that vessel has also been issued a permit with a shark endorsement under §635.4(b) and is engaged in a for-hire fishing trip or is participating in a registered HMS tournament per § 635.4(c)(2).

\* \* \* \* \*

6. In § 635.24, lift the suspension on paragraphs (a)(4)(i) and (iii), and revise them to read as follows:

**§ 635.24 Commercial retention limits for sharks, swordfish, and BAYS tunas.**

\* \* \* \* \*

(a) \* \* \*

(4) \* \* \*

(i) Except as provided in § 635.22(c)(7), a person who owns or operates a vessel that has been issued a directed shark LAP may retain, possess, land, or sell pelagic sharks if the pelagic shark fishery is open per §§ 635.27 and 635.28. Shortfin mako sharks may be retained by persons aboard vessels using pelagic longline, bottom longline, or gillnet gear only if the shark is dead at the time of haulback and consistent with the provisions of § 635.21(c)(1), (d)(5), and (g)(6) and 635.22(c)(7).

\* \* \* \* \*

(iii) Consistent with paragraph (a)(4)(ii) of this section, a person who owns or operates a vessel that has been issued an incidental shark LAP may retain, possess, land, or sell no more than 16 SCS and pelagic sharks, combined, per vessel per trip, if the respective fishery is open per §§ 635.27 and 635.28. Of those 16 SCS and pelagic sharks per vessel per trip, no more than 8 shall be blacknose sharks. Shortfin mako sharks may only be retained under the commercial retention limits by persons using pelagic longline, bottom longline, or gillnet gear, only if the shark is dead at the time of haulback and consistent with the provisions at § 635.21(c)(1), (d)(5), and (g)(6). If the vessel has also been issued a permit with a shark endorsement and retains a shortfin mako shark, recreational retention limits apply to all sharks retained and none may be sold, per § 635.22(c)(7).



\* \* \* \* \*

7. In § 635.30, paragraph (c)(4) is revised to read as follows:

\* \* \* \* \*

(c) \* \* \*

(4) Persons aboard a vessel that has been issued or is required to be issued a permit with a shark endorsement must maintain a shark intact through landing and offloading with the head, tail, and all fins naturally attached. The shark may be bled and the viscera may be removed.

\* \* \* \* \*

8. In § 635.71, revise paragraphs (d)(22), (23), (27), (28), and (29) to read as follows:

**§ 635.71 Prohibitions.**

\* \* \* \* \*

(d) \* \* \*

(22) Except when fishing only with flies or artificial lures, fish for, retain, possess, or land sharks without deploying non-offset, corrodible circle hooks when fishing at a registered recreational HMS fishing tournament that has awards or prizes for sharks, as specified in § 635.21(f) and (k).

(23) Except when fishing only with flies or artificial lures, fish for, retain, possess, or land sharks without deploying non-offset, corrodible circle hooks when issued an Atlantic HMS Angling permit or HMS Charter/Headboat permit with a shark endorsement, as specified in § 635.21(f) and (k).

\* \* \* \* \*

(27) Retain, land, or possess a shortfin mako shark that was caught with gear other than pelagic longline, bottom longline, or gillnet gear as specified at § 635.21(a).

(28) Retain, land, or possess a shortfin mako shark that was caught with pelagic longline, bottom longline, or gillnet gear and was alive at haulback as specified at § 635.21(c)(1), (d)(5), and (g)(6).

(29) As specified at § 635.21(c)(1), retain, land, or possess a shortfin mako shark that was caught with pelagic longline gear when the electronic monitoring system was not installed and functioning in compliance with the requirements at § 635.9.

\* \* \* \* \*

[FR Doc. 2019-02946 Filed: 2/20/2019 8:45 am; Publication Date: 2/21/2019]