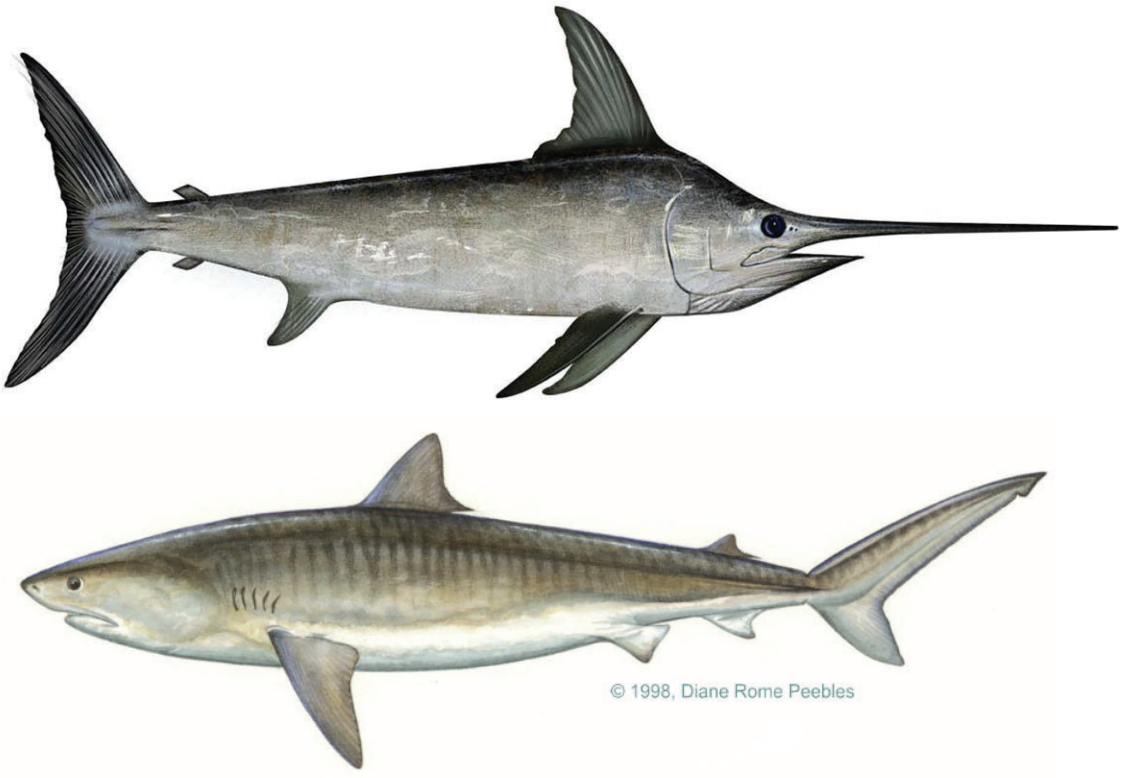
Final Environmental Assessment,
Regulatory Impact Review,
and
Final Regulatory Flexibility Analysis
for a

FINAL RULE TO MODIFY NORTH ATLANTIC SWORDFISH AND SHARK RETENTION LIMITS FOR CERTAIN PERMIT HOLDERS AND ADD INSEASON ADJUSTMENT AUTHORIZATION CRITERIA



United States Department of Commerce National Oceanic and Atmospheric Administration
National Marine Fisheries Service Office of Sustainable Fisheries
Highly Migratory Species Management Division

April 29, 2021

Abstract

Action:	Revise current North Atlantic swordfish and Atlantic shark retention limits and criteria to make inseason adjustments for certain permit holders in U.S. Atlantic and Caribbean waters.
Type of statement:	Final Environmental Assessment, Regulatory Impact Review, and Final Regulatory Flexibility Analysis
Lead Agency:	National Marine Fisheries Service: Office of Sustainable Fisheries
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Abstract:

This Final Environmental Assessment analyzes the potential environmental impacts of several alternatives that could increase the flexibility of and provide consistency between the swordfish retention limits for commercial swordfish fishermen fishing with similar gears within U.S. Atlantic and Caribbean waters; adjust shark retention limits and change regulatory procedures for commercial shark fishermen in the U.S. Caribbean; and increase administrative efficiencies by managing the swordfish fishery in two regions with one action as needed (i.e., inseason adjustment). The goal is to improve efficiency of management while also avoiding overharvests in these fisheries. Specifically, this action considers modifying the swordfish and shark retention limits and adding regulatory criteria for inseason adjustment of those swordfish and shark retention limits for certain permit holders. This final action would also streamline Atlantic highly migratory species (HMS) regulations to align swordfish retention limits for commercial swordfish permits established for HMS Commercial Caribbean Small Boat permit holders under Amendment 4 to the 2006 Consolidated Atlantic HMS Fishery Management Plan with those established in Amendment 8 to the 2006 Consolidated Atlantic HMS Fishery Management Plan for Swordfish General Commercial permit holders and HMS Charter/Headboat permit holders.

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1.0 Introduction

1.1 Regulatory Authorities

The National Marine Fisheries Service (NOAA Fisheries), on behalf of the Secretary of Commerce, is responsible for managing Atlantic highly migratory species (HMS[1]), including the federal Atlantic shark, tuna, billfish, and swordfish fisheries, under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; 16 U.S.C. 1801 et seq.), Section 304(g), and the Atlantic Tunas Convention Act (ATCA; 16 U.S.C. 971 et seq.). Under the Magnuson-Stevens Act, NOAA Fisheries must, consistent with ten National Standards, manage fisheries to maintain optimum yield on a continuing basis, while preventing overfishing. Since 1993, NOAA Fisheries has implemented several fishery management plans (FMPs), FMP amendments, and numerous regulations relating to Atlantic HMS fisheries under the authority of the Magnuson-Stevens Act. Currently, Atlantic HMS fisheries are managed under the 2006 Consolidated Atlantic HMS Fishery Management Plan (FMP), its amendments, and implementing regulations at 50 Code of Federal Regulations (CFR) part 635.

On April 27, 2020, NOAA Fisheries released a Draft Environmental Assessment (EA) and published a proposed rule (85 FR 23315) examining the potential impacts of modifying the swordfish and shark retention limits and adding regulatory criteria for inseason adjustment of those retention limits for certain permit holders. The management measures in this final rulemaking, which consider comments received on the Draft EA and proposed rule, are taken under the authority of the Magnuson-Stevens Act and ATCA. The alternatives in this EA and final rule analyze the potential environmental, economic, and social impacts of options that could increase the flexibility for commercial swordfish fishermen fishing within U.S. Atlantic and Caribbean waters, while also avoiding overfishing. In addition to the Magnuson-Stevens Act and ATCA, any management measures must also be consistent with other applicable laws including, but not limited to, the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), and the Coastal Zone Management Act. This document is prepared, in part, to comply with NOAA Fisheries' responsibilities under NEPA, as implemented by the regulations published by the Council on Environmental Quality (CEQ), 50 CFR Parts 1501-1508[2], and NOAA Administrative Order 216-6A (NAO 216-6A): Compliance with the National Environmental Policy Act, Executive Orders 12114,

[1] The Magnuson–Stevens Act, Section 3, defines the term "highly migratory species" as tuna species, marlin (*Tetrapturus* spp. and *Makaira* spp.), oceanic sharks, sailfishes (*Istiophorus* spp.), and swordfish (*Xiphias gladius*). 16 U.S.C. § 1802(21). Further, the Magnuson-Stevens Act, Section 3, defines the term "tunas species" as albacore tuna (*Thunnus alalunga*), bigeye tuna (*Thunnus obesus*), bluefin tuna (*Thunnus thynnus*), skipjack tuna (*Katsuwonus pelamis*), and yellowfin tuna (*Thunnus albacares*). 16 U.S.C. § 1802(44).

[2] This EA has been prepared using the 1978 CEQ NEPA Regulations (40 CFR 1500-1508). NEPA reviews initiated prior to the effective date of the 2020 CEQ regulations may be conducted using the 1978 version of the regulations. The effective date of the 2020 CEQ NEPA Regulations was September 14, 2020. This review began on September 6, 2018 and the agency has decided to proceed under the 1978 regulations.

Environmental Effects Abroad of Major Federal Actions; 11988 and 13690, Floodplain Management; and 11990, Protection of Wetlands, issued April 22, 2016 and its associated Companion Manual. Given the amount of time that transpired from the Draft EA to this Final EA, the included analysis has been updated with an additional year of fisheries data where appropriate. In addition, the total annual revenue calculation in Table 4.2 was revised from the Draft EA to better estimate the total annual revenue for each alternative by focusing on the average number of trips taken by the fleet multiplied by the ex-vessel revenue per trip. The addition and adjustments of these data have not changed the applicable results or conclusions of the analysis in the Draft EA.

The alternatives in this EA involve issues that affect commercial fishing for North Atlantic swordfish and Atlantic sharks for certain permit holders in the Atlantic Ocean, including the Gulf of Mexico and Caribbean Sea.

1.2 Management History

Swordfish Management History

This section provides a brief overview of Atlantic swordfish management relative to the final action. More detail regarding the history of Atlantic swordfish management can be found in Chapter 3 of this document.

The first Atlantic Swordfish FMP was completed and implemented in 1985 by the South Atlantic Fishery Management Council in cooperation with other Atlantic Regional Fishery Management Councils. This FMP laid the groundwork for defining approved fishing methods, determining optimum yield and status of the stocks, implementing variable season closures, and regulating foreign fishing in U.S. waters. Swordfish management was transferred from the Fishery Management Councils to NOAA Fisheries in the early 1990s. In the 1990s after the transfer to NOAA Fisheries, numerous management initiatives were implemented including establishment of three limited access permits, a minimum size limit, commercial quota changes, and a prohibition on driftnets for swordfish fishing.

In 1999, the International Commission for the Conservation of Atlantic Tunas (ICCAT) established a 10-year rebuilding plan. Based on these guidelines, the United States completed development of a domestic rebuilding plan for North Atlantic swordfish in 2000.

Over the years since that time, several management measures have been implemented that primarily affected commercial swordfish fishermen fishing with pelagic longline (PLL) gear. These measures included: time/area closures; mandatory use of circle hooks; bait restrictions; gear requirements; mandatory protected species workshop training; mandatory vessel monitoring systems; changes to authorized gears; commercial and recreational retention limits; and vessel upgrading restrictions. In 2009, North Atlantic swordfish were assessed and the North Atlantic swordfish stock was found to be fully rebuilt with no overfishing occurring. In 2012, the cleithrum to caudal keel minimum size measurement was modified from 29 inches to 25 inches, to provide a more equivalent alternative dressed swordfish measurement to the existing 47-inch lower jaw-fork length minimum size (Figure 1.1).

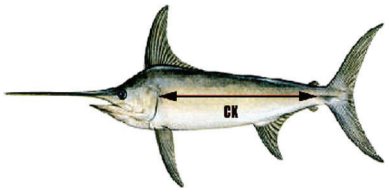	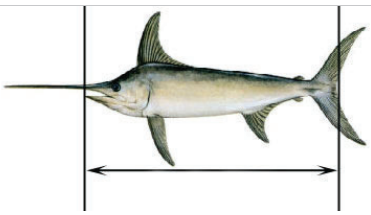
Cleithrum to Caudal Keel-a curved measurement, from the point on the cleithrum that provides the shortest possible measurement along the body contour to the anterior portion of the caudal keel. If the head of the swordfish is no longer naturally attached, this measurement is the sole criterion for determining the size of the swordfish.	**Lower Jaw Fork Length**-a straight-line measurement, not following the body contour, from the tip of the lower jaw to the fork of the caudal fin. If the head of the swordfish is naturally attached, this measurement is the sole criterion for determining the size of the swordfish.

Figure 1.1 Swordfish Minimum Size Measurements

In 2012, NOAA Fisheries implemented Amendment 4 to the 2006 Consolidated Atlantic HMS FMP (Amendment 4, 77 FR 59842, October 1, 2012) to better manage the traditional small-scale commercial handgear fishing fleet in the U.S. Caribbean region (Figure 1.2), enhance fishing opportunities, improve profits for the fleet, and provide NOAA Fisheries with an improved capability to monitor and sustainably manage those fisheries. Specifically, Amendment 4 created an open access HMS Commercial Caribbean Small Boat permit for the traditional small-scale commercial handgear fishing fleet in the U.S. Caribbean Region and implemented an initial swordfish retention limit of two swordfish per vessel per trip. This permit is only valid within the Caribbean region; this limitation on the use of the permit would not be changed in this rulemaking. Additionally, Amendment 4 implemented regulations that would allow modification of these limits only through the framework regulatory procedures in the 2006 Consolidated HMS FMP. *See* 50 CFR 635.34 (b). This means that in order for NOAA Fisheries to modify the initial swordfish retention limit established by Amendment 4, it would have to carry out a rulemaking in accordance with the framework procedures.

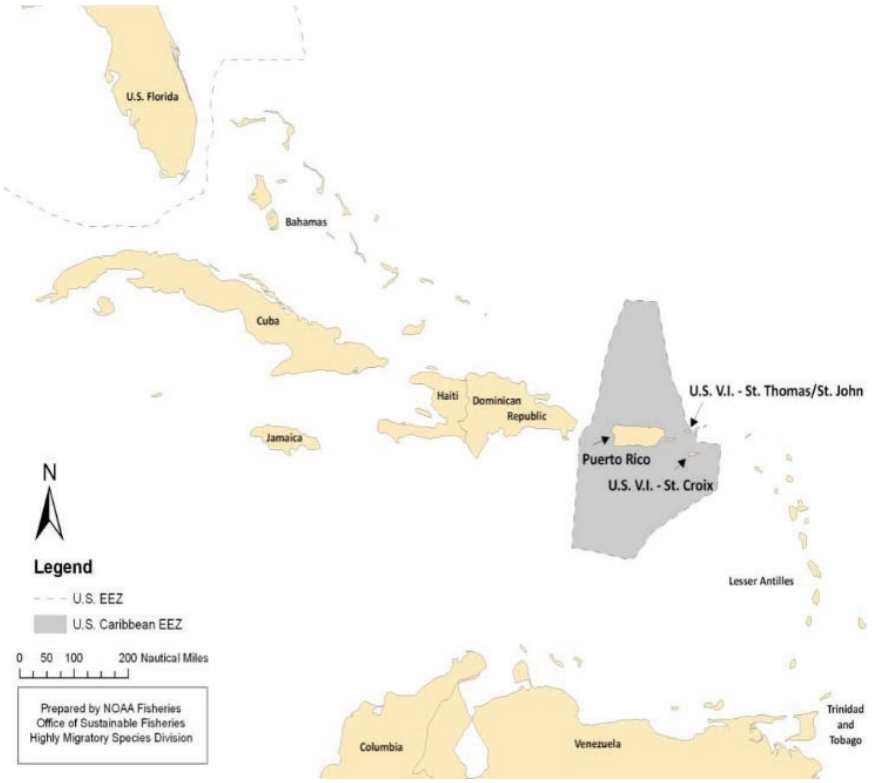

Figure 1.2 U.S. Caribbean Region and corresponding federal water boundary

In 2013, NOAA Fisheries implemented Amendment 8 to the 2006 Consolidated Atlantic HMS FMP (Amendment 8, 78 FR 52011, August 21, 2013) to provide additional opportunities for U.S. fishermen to harvest swordfish using selective handgears that have low bycatch. Specifically, Amendment 8 established a new open access Swordfish General Commercial permit; established a fishery-wide zero to six swordfish per vessel per trip retention limit range for the new permit; and codified retention limits within that range. The default swordfish retention limits were set at two swordfish per vessel per trip for the U.S. Caribbean region, three swordfish per vessel per trip for the Northwest Atlantic and Gulf of Mexico regions, and a zero fish retention limit in the Florida Swordfish Management area (Figure 1.3). Amendment 8 also implemented regulations allowing NOAA Fisheries to adjust these retention limits through inseason adjustment authority. This means that NOAA Fisheries can modify the current default regional limits based on pre-established criteria codified at 50 CFR 635.27, instead of through a framework adjustment. These retention limits were also applied to HMS Charter/Headboat permit holders when on a non-for-hire trip. In 2018, NMFS implemented the commercial sale endorsement for HMS Charter/Headboat permitted vessels that intend to sell their catch (82 FR 57543, December 6, 2017). A commercial trip in this document is defined as HMS Charter/Headboat permit holders with a commercial sale endorsement on a non-for-hire trip catching swordfish with the intent to sell their catch. In order to provide additional opportunities for fishermen to catch the U.S. North Atlantic swordfish quota, and after considering the specified regulatory criteria, NOAA Fisheries has consistently adjusted the North Atlantic swordfish retention limit for the Swordfish General Commercial permit and HMS Charter/Headboat permit with a commercial sale endorsement upward from the default limit to the maximum of six swordfish per vessel per trip in the Northwest Atlantic, Gulf of Mexico, and

Caribbean regions in each of the past six years that the permit has been in existence. The default limit in the Florida Swordfish Management Area has not been adjusted from zero fish since inception of the Swordfish General Commercial permit. These trip limits and the trip limit adjustments did not affect the trip limits established for the three Swordfish Limited Access Permits–Directed, Incidental, and Handgear. Additionally, nothing in this current rulemaking will affect the limits already established for the limited access permits.

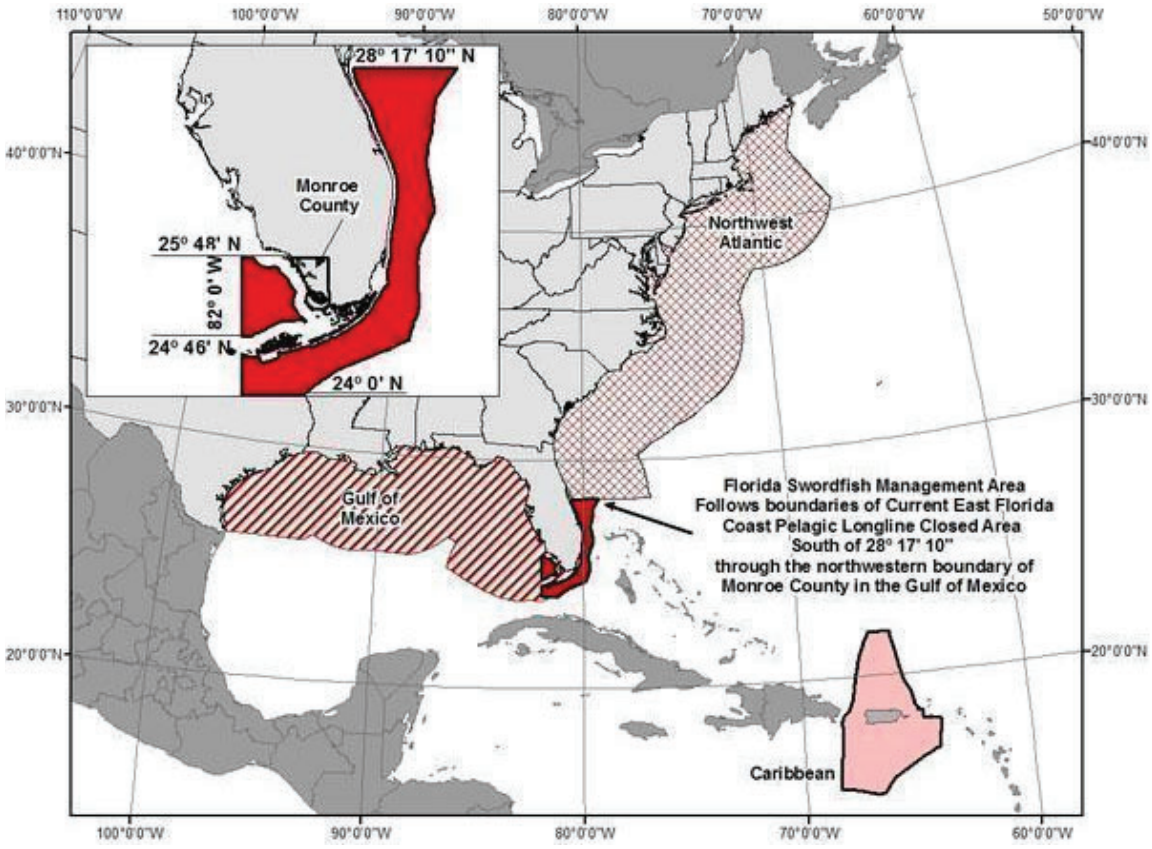

Figure 1.3 Final management regions for Amendment 8

In 2017, ICCAT's Standing Committee on Research and Statistics (SCRS) reassessed North Atlantic swordfish and found that the stock remained not overfished and that overfishing was not occurring. SCRS also indicated that the North Atlantic swordfish stock has been rebuilt since at least 2013. Landings attributable to the Swordfish General Commercial permit and Commercial Caribbean Small Boat permit count against the applicable semi-annual directed fishery quota, which in recent years has been set at 3,028.2 mt dressed weight (dw) and split equally (1,514.1 mt dw) between two semi-annual periods (January through June and July through December). The United States has not fully harvested its swordfish quota since 2003; therefore, there is a need to continue to provide additional opportunities for fishermen to catch the U.S. quota.

NOAA Fisheries received comments from Advisory Panel members at three HMS Advisory Panel meetings (September 2017, March 2018, and September 2019), the Caribbean Fishery Management Council, territorial governments, and in general discussions with

commercial and recreational fishermen to increase the retention limits for the HMS Commercial Caribbean Small Boat, Swordfish General Commercial, and HMS Charter/Headboat, with a commercial sale endorsement, permits. These commenters believed that, with the available swordfish quota and growing interest in harvesting swordfish in the territories (i.e., Puerto Rico and the U.S. Virgin Islands), NOAA Fisheries could increase the default swordfish retention limit for the HMS Commercial Caribbean Small Boat permit from two to six swordfish per vessel per trip, similar to the current upper swordfish retention limit for the Swordfish General Commercial permit. These commenters also requested an increase to the maximum retention limit beyond six swordfish to allow for the expanded use of the permits in areas that require longer transit times to reach fishing grounds.

Currently, adjusting the regional swordfish retention limits for the three open access swordfish commercial permits codified under Amendment 4 (HMS Commercial Caribbean Small Boat permit) and Amendment 8 (Swordfish General Commercial and HMS Charter/Headboat permit on a commercial trip) requires following two different regulatory procedures, a framework adjustment and an inseason adjustment procedure, respectively (Table 1.1). Framework adjustment procedures allow NOAA Fisheries to adjust swordfish retention limits through a full rulemaking process that typically takes six months or more to enact. Inseason adjustment procedures allow NOAA Fisheries to set and adjust the swordfish retention limits within the codified range for each region using pre-established criteria, on an as needed basis, through a more streamlined process. Unlike framework adjustments, inseason adjustments can be completed and effective in a few days. At this time, there are no inseason adjustments allowed for the HMS Commercial Caribbean Small Boat permit. This inability to adjust retention limits on an inseason basis for that permit means that NOAA Fisheries currently has to take two separate regulatory actions to adjust the swordfish retention limits for the three swordfish commercial permits. Specifically, in the U.S. Caribbean region, which is the only region where all three permits are valid and available, use of the two different regulatory procedures with different time frames is likely to create confusion among fishermen. This rulemaking considers alternatives to increase the efficiency of management and remove any confusion by setting up the same inseason adjustment procedure to adjust swordfish retention limits for all three open access permits.

Revising existing swordfish retention limits and regulatory procedures for the three open access permits could provide more flexibility, efficiency, and consistency regarding when and how NOAA Fisheries could change the swordfish retention limits within the four swordfish management regions. This rulemaking would not change the commercial North Atlantic swordfish quota.

Table 1.1 Codified Retention Limits and Regulatory Procedures for Swordfish and Shark Commercial Permits in the U.S. Caribbean region

Rulemaking	Permit	Retention Limit Range	Retention Limit	Regulatory Procedure to Change Retention Limits
Amendment 4	HMS Commercial Caribbean Small Boat	None	2 swordfish per vessel per trip 0 sharks per vessel per trip	Framework adjustment
Amendment 8	Swordfish General Commercial/HMS Charter/Headboat with a commercial sale endorsement	0-6 swordfish per vessel per trip	Default limit set at 2 swordfish per vessel per trip	Framework or Inseason Adjustment

Shark Management History

This management history focuses on commercial shark fisheries in the U.S. Caribbean, particularly fisheries under the HMS Commercial Caribbean Small Boat permit. For a full description of the management history of Atlantic Shark Fisheries please refer to Chapter 3 of Amendments 6, 9, and 11 to the 2006 Consolidated Atlantic HMS FMP.

Sharks have been managed by the Secretary of Commerce since 1993. At that time, NOAA Fisheries implemented the FMP for Sharks of the Atlantic Ocean, which established three management complexes: large coastal sharks, small coastal sharks, and pelagic sharks (NOAA Fisheries, 1993). This 1993 FMP implemented commercial quotas for large coastal sharks and pelagic sharks and established recreational retention limits for all sharks, consistent with the large coastal sharks rebuilding program. As a result of the 1996 amendments to the Magnuson-Stevens Act, NOAA Fisheries implemented an FMP in 1999 that revised much of the management of Atlantic sharks, including establishing new commercial quotas, a commercial size limit, a recreational retention limit, a new rebuilding plan for large coastal sharks, and a limited access fishing permit program for the commercial fishery. Between 1999 and 2008, NOAA Fisheries changed many of the shark management measures, including revising quotas, eliminating the commercial minimum size, adjusting the recreational retention and size limits, establishing a time/area closure off the coast of North Carolina, establishing a mechanism for changing the species on the prohibited species list, requiring shark dealers to attend shark identification workshops, and requiring gillnet, bottom longline, and pelagic longline fishermen to attend workshops on the safe handling and release of protected resources.

In 2008, NOAA Fisheries implemented Amendment 2 to the 2006 Consolidated HMS FMP (Amendment 2, 73 FR 35778, June 24, 2008; 73 FR 40657, corrected version published July 15, 2008). Management measures implemented in Amendment 2 included, but were not limited to, establishing rebuilding plans for porbeagle, dusky, and sandbar sharks consistent with stock assessments; implementing commercial quotas and retention limits consistent with stock assessment recommendations to prevent overfishing and rebuild overfished stocks; modifying recreational measures to reduce fishing mortality of overfished/overfishing stocks; modifying reporting requirements; requiring that all Atlantic sharks be offloaded with fins naturally attached; collecting shark life history information via the implementation of a shark research program; and implementing time/area closures recommended by the South Atlantic Fishery Management Council.

In 2010, NOAA Fisheries implemented Amendment 3 to the 2006 Consolidated HMS FMP (Amendment 3, 75 FR 30483, June 1, 2010; 75 FR 50715, corrected version August 17, 2010; 76 FR 70064, updated information on the effective date of Atlantic Smoothhound Shark Fishery Management Measures, November 10, 2011). Management measures implemented in Amendment 3 included, but were not limited to, rebuilding blacknose sharks and ending overfishing of blacknose and shortfin mako shark. This amendment also added smoothhound sharks (smooth dogfish (*Mustelus canis*) and Florida smoothhound (*M. norrisi*)) under NOAA Fisheries management. The implementing regulations were published on June 1, 2010 (75 FR 30483), followed by a final rule to delay the smoothhound measures (76 FR 70064, November 10, 2011) in order to fully consider the Shark Conservation Act implications (i.e., requiring that all sharks landed in the United States be landed with their fins naturally attached to the carcass with a limited exception for smooth dogfish) and allow time for Section 7 consultation under the ESA to be completed.

In 2011, NOAA Fisheries developed Amendment 5 to the 2006 Consolidated HMS FMP to rebuild scalloped hammerhead and blacknose sharks and address overfishing of Atlantic and Gulf of Mexico dusky sharks, among other issues.

In 2012, NOAA Fisheries implemented Amendment 4 to the 2006 Consolidated HMS FMP (Amendment 4, 77 FR 59842, October 1, 2012) to better manage the traditional small-scale commercial handgear fishing fleet in the U.S. Caribbean region, among other things. As described above, Amendment 4 created an open access HMS Commercial Caribbean Small Boat permit for the traditional small-scale commercial handgear fishing fleet in the U.S. Caribbean region and in addition to implementing a swordfish retention limit, a shark retention limit was also implemented. The retention limit was set at zero sharks per vessel per trip. Amendment 4 analyzed a retention limit range of zero to three non-prohibited large coastal sharks per vessel per trip and 0-16 small coastal and pelagic sharks (combined) per vessel per trip, with no size limits and an initial limit of zero sharks per vessel per trip. Similar to the swordfish retention limits, the shark retention limits established by Amendment 4 can only be modified through framework regulatory procedures, *see* 50 CFR 635.34 (b), which requires carrying out a rulemaking for a framework adjustment to adjust the limit. This means that in order for NOAA Fisheries to modify the initial shark retention limit established by Amendment 4, it would have to carry out a rulemaking for a framework adjustment to adjust the limit. The zero retention limit did not affect the trip limits established for the two shark limited access permits–directed and incidental, or the trip limits under the Smoothhound Shark Commercial Fishing permit.

Additionally, nothing in this current rulemaking will affect the limits already established for the shark limited access and smoothhound shark permits.

In 2015, NOAA Fisheries implemented Amendment 6 to the 2006 Consolidated Atlantic HMS FMP (Amendment 6, 80 FR 50074, August 18, 2015). Management measures implemented in Amendment 6 included, but were not limited to establishing regional and sub-regional quotas for large coastal and small coastal sharks in the Atlantic and Gulf of Mexico, removing upgrading restrictions for shark limited access permit holders, and increasing the large coastal shark retention limit for shark directed limited access permit holders to a maximum of 55 large coastal sharks other than sandbar sharks per trip with a default of 45 large coastal sharks other than sandbar sharks per trip.

In March 2015, the Southeast Data, Assessment, and Review (SEDAR) 39 stock assessments for smoothhound sharks were completed. Notice of stock status determinations of no overfishing and not overfished for Atlantic smooth dogfish and Gulf of Mexico smoothhound sharks published on June 29, 2015 (80 FR 36974). These stock assessments provided information that allowed NOAA Fisheries to establish scientifically-based quotas. In 2016, NOAA Fisheries implemented Amendment 9 to the 2006 Consolidated HMS FMP (Amendment 9, 80 FR 73128, November 24, 2015). Management measures under Amendment 9 included, but were not limited to establishing an effective date for previously-adopted smoothhound shark management measures finalized in Amendment 3; adjusting the commercial quota for the smoothhound shark fishery based on the 2015 stock assessments; implementing the smooth dogfish-specific provisions of the Shark Conservation Act (i.e., all sharks landed from federal waters in the United States be landed with their fins naturally attached to the carcass, with limited exception for smooth dogfish); implementing the Biological Opinion for all Atlantic HMS fisheries other than the pelagic longline fishery (See Section 3.4 for more information); and implementing Atlantic shark gillnet vessel monitoring system requirements.

NOAA Fisheries has received comments from Advisory Panel members at three HMS Advisory Panel meetings (September 2017, March 2018, and September 2019), the Caribbean Fishery Management Council, some non-governmental organizations, and in general discussion with commercial and recreational fishermen to increase the shark retention limits for the HMS Commercial Caribbean Small Boat permit. There is a growing interest in harvesting sharks in the territories (i.e., Puerto Rico and the U.S. Virgin Islands) at incidental levels. Fishermen have requested that NOAA Fisheries increase the shark retention limit of the HMS Commercial Caribbean Small Boat permit from zero to three sharks per vessel per trip, in order to retain sharks for personal consumption or to sell at the local market or restaurants. As discussed above, at this time, there are no inseason adjustments allowed for the HMS Commercial Caribbean Small Boat permit.

1.3 Final Action, Purpose and Need

Final Action: NOAA Fisheries is modifying the existing retention limits and the regulatory procedures for modifying the retention limits for the three open access swordfish commercial permits (HMS Commercial Caribbean Small Boat, Swordfish General Commercial, and HMS Charter/Headboat with a commercial sale endorsement), and modifying the existing shark

retention limits and regulatory procedures for the HMS Commercial Caribbean Small Boat permit.

Purpose: The purpose of this final action is to provide consistency between the three open access swordfish handgear permits, all of which allow similar gears to be used within U.S. Atlantic and Caribbean waters, and to provide increased fishing opportunities for sharks in the U.S. Caribbean. Furthermore, this final action would increase administrative efficiencies and increase management flexibility by managing these open access swordfish commercial permits similarly.

Need: This final action would be responsive to repeated public requests from Advisory Panel members for NOAA Fisheries to increase the current swordfish and shark retention limits for the HMS Commercial Caribbean Small Boat permit. In addition, this final action is responsive to the Caribbean Fishery Management Council, some non-governmental organizations, and commercial and recreational fishermen who have shown interest in increasing the current swordfish retention limits for HMS Commercial Caribbean Small Boat, Swordfish General Commercial, and HMS Charter/Headboat, with a commercial sale endorsement, permits, with the goal of more fully utilizing available swordfish quota, while also avoiding overharvest in these fisheries.

1.4 Scope and Organization of this Document

In considering the management measures outlined in this document, NOAA Fisheries must comply with a number of federal statutes, including NEPA. Under NEPA, the purpose of an EA is to provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a finding of no significant impact (FONSI) and to aid in the Agency's compliance with NEPA when no EIS is necessary.

In developing this document, NOAA Fisheries adhered to the procedural requirements of NEPA, the 1978 CEQ regulations for implementing NEPA (40 CFR 1500-1508), and NOAA Administrative Order (NAO) 216-6A and its accompanying Companion Manual to:

- Fully integrate NEPA into the agency planning and decision making process;
- Fully consider the impacts of NOAA Fisheries proposed actions on the quality of the human environment;
- Involve interested and affected agencies, governments, organizations and individuals early in the agency planning and decision making process when significant impacts are or may be expected to affect the quality of the human environment from implementation of proposed major federal actions; and
- Conduct and document environmental reviews and related decisions appropriately and efficiently.

The following definitions were generally used to characterize the nature of the various impacts evaluated in this EA. Chapter 4 describes more specifically how these definitions were used for each alternative.

- Short-term or long-term impacts. These characteristics are determined on a case-by-case basis and do not refer to any rigid time period. In general, short-term

impacts are those that would occur only with respect to a particular activity or for a finite period. Long-term impacts are those that are more likely to be persistent and chronic.

- Direct or indirect impacts. A direct impact is caused by a final action and occurs contemporaneously at or near the location of the action. An indirect impact is caused by a final action and might occur later in time or be farther removed in distance but still be a reasonably foreseeable outcome of the action.
- Minor, moderate, or major impacts. These relative terms are used to characterize the magnitude of an impact. Minor impacts are generally those that might be perceptible but, in their context, are not amenable to measurement because of their relatively minor character. Moderate impacts are those that are more perceptible and, typically, more amenable to quantification or measurement. Major impacts are those that, in their context and due to their intensity (severity), have the potential to meet the thresholds for significance set forth in CEQ regulations (40 CFR 1508.27) and, thus, warrant heightened attention and examination for potential means for mitigation to fulfill the requirements of NEPA.
- Adverse or beneficial impacts. An adverse impact is one having unfavorable, or undesirable outcomes on the man-made or natural environment. A beneficial impact is one having positive outcomes on the man-made or natural environment. A single act might result in adverse impacts on one environmental resource and beneficial impacts on another resource.
- Cumulative impacts. CEQ regulations implementing NEPA define cumulative impacts as the "impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time within a geographic area.

This document, as an EA, assesses the potential environmental, economic, and social impacts of modifying swordfish and shark retention limits and the regulatory procedures for adjusting retention limits for certain HMS open-access permits. The chapters that follow describe the management measures and potential alternatives (Chapter 2), the affected environment as it currently exists (Chapter 3), the probable consequences on the human environment that may result from the implementation of the management measures and their alternatives, including the potential impacts on the fisheries (Chapter 4), and any cumulative impacts from this action (Chapter 4.6).

This EA analyzes the potential direct, indirect, and cumulative ecological, social, and economic impacts associated with four and three different alternative suites of management measures, for swordfish and sharks, respectively, that are described in Chapter 2.

In this final action, NOAA Fisheries is responsible for complying with a number of federal requirements, including NEPA. As such, the purpose of the EA is to provide an environmental analysis to support the NOAA Fisheries final action to amend the 2006

Consolidated Atlantic HMS FMP and to encourage and facilitate public involvement in the environmental review process.

In addition to NEPA, NOAA Fisheries must comply with other federal statutes and requirements such as the Magnuson-Stevens Act, Executive Order 12866 (E.O. 12866, Regulatory Planning and Review), and the Regulatory Flexibility Act. This document comprehensively analyzes the alternatives considered for all these requirements.

Thus, Chapter 4 provides a summary of all the economic analyses and associated data. Chapter 6 meets the requirements under E.O. 12866, and Chapter 7 provides the Final Regulatory Flexibility Analysis required under the Regulatory Flexibility Act. Chapters 8 through 11 provide additional information that is required under various statutes. While some of the chapters were written in a way to comply with the specific requirements under these various statutes and requirements, it is the document as a whole that meets these requirements and not any individual chapter.

2.0 Summary of the Alternatives

NEPA requires that any federal agency proposing a major federal action consider all reasonable alternatives, in addition to the final action. The evaluation of alternatives in an EA assists NOAA Fisheries in ensuring that any unnecessary impacts are avoided through an assessment of alternative ways to achieve the underlying purpose of the project that may result in less environmental harm.

To warrant detailed evaluation, an alternative must be reasonable[3] and meet the purpose and need of the action (*See* Chapter 1). Screening criteria are used to determine whether an alternative is reasonable. The following discussion identifies the screening criteria used in this EA to evaluate whether an alternative is reasonable; evaluates various alternatives against the screening criteria (including the final measures) and identifies those alternatives found to be reasonable; identifies those alternatives found not to be reasonable; and for the latter, provides the basis for this finding. Alternatives considered but found not to be reasonable are not evaluated in detail in this EA.

Screening Criteria–To be considered "reasonable" for purposes of this EA, an alternative must meet the following criteria:

- An alternative must be consistent with the 10 National Standards set forth in the Magnuson-Stevens Act.
- An alternative must be administratively feasible. The costs associated with implementing an alternative cannot be prohibitively exorbitant or require unattainable infrastructure.
- An alternative cannot violate other laws (e.g., ESA, MMPA, etc.).
- An alternative must be consistent with the 2006 Consolidated Atlantic HMS FMP and its amendments.

This chapter includes a full range of reasonable alternatives designed to meet the purpose and need for the final actions described in Chapter 1. These alternatives are listed below. The environmental, economic, and social impacts of these alternatives are discussed in later chapters. In response to public comments on the draft EA and proposed rule (see Appendix I), NOAA Fisheries made some changes in this final action by selecting a different swordfish retention limit alternative and combining two alternatives to create a new shark retention limit preferred alternative. These changes still meet the same purpose and need.

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[3] "Section 1502.14 (of the 1978 CEQ Regulations) requires the EA to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant." (CEQ, *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations,* 46 FR 18,026, Mar. 23, 1981)).

2.1 Alternatives for Inseason Adjustment of Retention Limits under the HMS Commercial Caribbean Small Boat Permit

NOAA Fisheries considered and analyzed three alternatives (Table 2.1) that would modify the mechanism to adjust swordfish and shark retention limits for the HMS Commercial Caribbean Small Boat permit and meet the objectives stated in Chapter 1.0.

Alternative A1-No Action

Maintain current ability to adjust the regional retention limits only through framework adjustments. Under this alternative, NOAA Fisheries would maintain the current ability to adjust the swordfish and shark retention limit for vessels issued the HMS Commercial Caribbean Small Boat permit only through framework adjustments. *See* 50 CFR 635.34(b).

Alternative A2 (Preferred Alternative)

Adopt the Swordfish General Commercial Permit inseason adjustment authorization criteria to adjust the regional swordfish retention limit for the HMS Commercial Caribbean Small Boat permit. Under this alternative, the HMS Commercial Caribbean Small Boat permit default swordfish retention limit could be modified on an as needed basis within the range selected in the retention limit alternatives (Alternatives B1 through B4) through inseason adjustment procedures identical to those established for the Swordfish General Commercial permit and codified at 50 CFR 635.24 (b)(4)(iv).

Before making any inseason adjustments to the regional retention limit, NOAA Fisheries would consider the following criteria and other relevant factors:

A. The usefulness of information obtained from biological sampling and monitoring of the North Atlantic swordfish stock;
B. The estimated ability of vessels participating in the fishery to land the amount of swordfish quota available before the end of the fishing year;
C. The estimated amounts by which quotas for other categories of the fishery might be exceeded;
D. Effects of the adjustment on accomplishing the objectives of the FMP and its amendments;
E. Variations in seasonal distribution, abundance, or migration patterns of swordfish;
F. Effects of catch rates in one region precluding vessels in another region from having a reasonable opportunity to harvest a portion of the overall swordfish quota; and;
G. Review of dealer reports, landing trends, and the availability of swordfish on the fishing grounds.

Alternative A3 (Preferred Alternative)

Adopt the shark inseason trip limit adjustment authorization criteria to adjust the regional shark retention limit for the HMS Commercial Caribbean Small Boat permit. Under this alternative, the HMS Commercial Caribbean Small Boat permit default shark retention limit could be modified on as a needed basis within the range selected in the retention limit alternatives (Alternatives C1 through C3) through inseason adjustment procedures identical to those codified at 50 CFR 635.24(a)(8).

In adjusting the trip limit(s), NOAA Fisheries would consider the following criteria and other relevant factors:

A. The amount of remaining shark quota in the relevant area or region, to date, based on dealer reports;
B. The catch rates of the relevant shark species/complexes, to date, based on dealer reports;
C. Estimated date of fishery closure based on when the landings are projected to reach 80 percent of the quota given the realized catch rates;
D. Effects of the adjustment on accomplishing the objectives of the 2006 Consolidated HMS FMP and its amendments;
E. Variations in seasonal distribution, abundance, or migratory patterns of the relevant shark species based on scientific and fishery-based knowledge; and/or,
F. Effects of catch rates in one part of a region precluding vessels in another part of that region from having a reasonable opportunity to harvest a portion of the relevant quota.

Table 2.1 Current and Proposed Mechanism to Adjust the Swordfish and Shark Retention Limit for the HMS Commercial Caribbean Small Boat Permit

	Alternative A1 (No Action)	**Alternative A2 (*Preferred Alternative*)**	**Alternative A3 (*Preferred Alternative*)**
Mechanism to adjust the regional Swordfish and Shark Retention Limits	Framework adjustment	Swordfish General Commercial Permit inseason criteria	Shark trip limit inseason criteria

2.2 Retention Limit Alternatives for Swordfish

NOAA Fisheries considered and analyzed four commercial alternatives that would modify the swordfish retention limits for the HMS Commercial Caribbean Small Boat permit, Swordfish General Commercial permit, and the HMS Charter/Headboat permit when a vessel is on a commercial trip. The following alternatives represent a range of options that NOAA Fisheries considered based, in part, on public comments and the need to provide more fishing opportunities to harvest the U.S. swordfish quota. For example, some comments requested NOAA Fisheries increase the default swordfish retention limit up to six for the HMS Commercial Caribbean Small Boat permit, while other comments requested NOAA Fisheries increase the limit beyond six swordfish to allow for the expanded use of these permits in areas that require longer transit times to reach fishing grounds. The swordfish retention limit alternatives that follow are described under the assumption that the preferred alternative A2 for swordfish inseason adjustment authority is adopted (Table 2.2). Alternative B2 was preferred in the draft EA, but is no longer preferred. Based upon additional public comments and for reasons described in Chapter 4, a new preferred alternative, Alternative B4, was selected.

Alternative B1-No Action

Keep the current swordfish retention limits and retention limit ranges for HMS Commercial Caribbean Small Boat permit holders, Swordfish General Commercial permit holders, and HMS Charter/Headboat permit holders with a commercial sale endorsement. Under this alternative, NOAA Fisheries would maintain the current retention limit of two swordfish per vessel per trip for vessels issued an HMS Commercial Caribbean Small Boat permit. NOAA Fisheries would also maintain the existing range of zero to six swordfish per vessel per trip within all regions (Figure 1.3) for Swordfish General Commercial permit holders and for HMS Charter/Headboat permit holders with a commercial sale endorsement. The default retention limits established for these permits would remain at: 1) Northwest Atlantic region–three swordfish per vessel per trip; 2) Gulf of Mexico region–three swordfish per vessel per trip; 3) U.S. Caribbean region–two swordfish per vessel per trip; and, 4) Florida Swordfish Management Area–zero swordfish per vessel per trip.

Table 2.2 Possible Swordfish Retention Limits and Retention Limit Ranges Considered for each Swordfish Management Region for the HMS Commercial Caribbean Small Boat (CCSB) Permits, Swordfish General Commercial (SGC) Permits and HMS Charter/Headboat (CHB) Permits with a commercial sale endorsement

Swordfish Management Regions	Alternative B1 (No Action)	Alternative B2	Alternative B3	Alternative B4 (*Preferred Alternative*)
Retention Limit Range	None for CCSB; 0-6 per vessel per trip for SGC and CHB	0-6 per vessel per trip for CCSB; 0-6 per vessel per trip for SGC and CHB	0-18 per vessel per trip for all permits	0-18 per vessel per trip for all permits
Default NW Atlantic and Gulf of Mexico Limit	3 per vessel per trip for SGC and CHB	6 per vessel per trip for SGC and CHB	18 per vessel per trip for SGC and CHB	18 per vessel per trip for SGC and CHB
Default Florida Swordfish Management Area Limit	0 per vessel per trip for SGC and CHB	0 per vessel per trip for SGC and CHB	0 per vessel per trip for SGC and CHB	0 per vessel per trip for SGC and CHB
Default U.S. Caribbean Limit[†]	2 per vessel per trip for all permits	6 per vessel per trip for all permits	6 per vessel per trip for all permits	18 per vessel per trip for all permits

† Number in this table would be the default retention limit for HMS Commercial Caribbean Small Boat if selecting inseason adjustment alternative under the "A" Alternative suite.

Alternative B2

Maintain the default swordfish retention limit of zero swordfish per vessel per trip for the Florida Management Region and establish a default swordfish retention limit of six swordfish per vessel per trip for all other regions and for HMS Commercial Caribbean Small Boat and Swordfish General Commercial permit holders, and HMS Charter/Headboat permit holders with a commercial sale endorsement, which is consistent with the current adjusted retention limits for Swordfish General Commercial permit holders and HMS Charter/Headboat permit holders with a commercial sale endorsement. For these permit holders in all regions, the retention limit range would be zero to six swordfish per vessel per trip. Under this alternative, the default retention limits would be: 1) Northwest Atlantic region–six swordfish per vessel per trip; 2) Gulf of Mexico region–six swordfish per vessel per trip; 3) U.S. Caribbean region–six swordfish per vessel per trip; and, 4) Florida Swordfish Management Area–zero swordfish per vessel per trip.

This alternative was preferred at the proposed rule stage primarily because it would have provided fishermen additional opportunities to harvest the U.S. swordfish quota given that the U.S quota is currently underharvested. However, after considering public comment, NOAA Fisheries decided Alternative B4 would better accomplish the goals and objectives highlighted in Chapter 1.

Alternative B3

Maintain the default swordfish retention limit of zero for the Florida Management Region, adjust the default swordfish retention limit to six swordfish per vessel per trip for HMS Commercial Caribbean Small Boat permit holders, and adjust the default swordfish retention limit to 18 for Swordfish General Commercial permit holders, and HMS Charter/Headboat permit holders with a commercial sale endorsement. For these permit holders in all regions, the retention limit range would be 0-18 swordfish per trip. Under this alternative, the default retention limits would be: 1) Northwest Atlantic region–18 swordfish per vessel per trip; 2) Gulf of Mexico region–18 swordfish per vessel per trip; 3) U.S. Caribbean region–six swordfish per vessel per trip; and, 4) Florida Swordfish Management Area–zero swordfish per vessel per trip.

Alternative B4 (Preferred Alternative)

Maintain the default swordfish retention limit of zero for the Florida Management Region, and adjust the default swordfish retention limit to 18 swordfish per vessel per trip for all other regions and for HMS Commercial Caribbean Small Boat and Swordfish General Commercial permit holders, and HMS Charter/Headboat permit holders with a commercial sale endorsement. For these permit holders in all regions, the retention limit range would be 0-18 swordfish per trip. Under this alternative (*preferred alternative*), the default retention limits would be: 1) Northwest Atlantic region–18 swordfish per vessel per trip; 2) Gulf of Mexico region–18 swordfish per vessel per trip; 3) U.S. Caribbean region–18 swordfish per vessel per trip; and, 4) Florida Swordfish Management Area– zero swordfish per vessel per trip.

In the Draft EA, Alternative B4 was not a preferred alternative, instead, NOAA Fisheries preferred Alternative B2. However, some public comments on the proposed rule and Draft EA requested NOAA Fisheries implement a higher swordfish default retention limit given the health of the stock, the availability of the resource, and the capacity and need of some permit holders to transport more than six swordfish when traveling further offshore to fishing grounds. After reviewing all the public comments, NOAA Fisheries feels Alternative B4 is most appropriate in part because it will give fishermen the greatest opportunity to harvest the North Atlantic swordfish quota. Additionally, an increase in the default retention limit to 18 swordfish per vessel per trip for Swordfish General Commercial, and HMS charter/headboat, permit holders outside of the Florida Swordfish Management Area could provide additional fishing opportunities because trips that target swordfish farther offshore will now be profitable. Furthermore, the HMS CCSB permit is currently underutilized by commercial fishermen in the region, and a greater retention limit of swordfish that matches the retention limit of other permits could incentivize use of the HMS CCSB permit. If more fishermen in the region obtain the permit and comply with the reporting requirements, NOAA Fisheries and territorial governments might receive better, more complete landings information and give fishermen the greatest opportunity to harvest the North Atlantic swordfish quota. These social, economic, and administrative benefits would not undermine the sustainable harvest of North Atlantic swordfish, As detailed in Section 3.1, the North Atlantic swordfish stock is not overfished and overfishing is not occurring. The United States has not harvested its domestic allocation of the stock in a number of years and increased harvest would not jeopardize the sustainability of the fishery. Furthermore, the inseason adjustment criteria give NOAA Fisheries the ability to adjust retention limits regionally (down to zero fish, if necessary) in response to landing information. The healthy status of the North Atlantic swordfish stock in concert with the inseason adjustment criteria provide confidence that the Alternative B4 would not lead to overfishing.

2.3 Retention Limit Alternatives for Sharks

NOAA Fisheries considered and analyzed four commercial alternatives that would modify the shark retention limits for the HMS Commercial Caribbean Small Boat permit and meet the objectives stated in Chapter 1 (Table 2.3). The following alternatives represent a range of options that NOAA Fisheries has considered based, in part, on public comments requesting increased fishing opportunities to harvest sharks under the HMS Commercial Caribbean Small Boat permit. For example, commenters requested NOAA Fisheries increase the shark retention limit of the HMS Commercial Caribbean Small Boat permit from zero to three sharks per vessel per trip, in order to retain sharks for personal consumption or to sell at the local market or restaurants. As such, NOAA Fisheries considered a range of alternatives that encompasses the existing limit, the limit requested by the public for those species of most interest to the state and territorial fishermen (i.e. smoothhounds and tiger sharks), and a higher limit of six for all authorized managed shark species. The shark retention limit alternatives that follow are described under the assumption that the preferred alternative A3 for shark inseason adjustment authority is adopted. Alternative C2 was preferred in the draft EA, but is no longer preferred. Based upon additional public comments specific to the harvest of certain shark species and for reasons described in Chapter 4, a new preferred alternative, Alternative C4, was developed and selected.

Alternative C1-No Action

Keep the current shark retention limit for HMS Commercial Caribbean Small Boat permit holders. Under this alternative, NOAA Fisheries would maintain the current retention limit of zero sharks per vessel per trip for vessels issued an HMS Commercial Caribbean Small Boat permit.

Alternative C2

Establish a default shark retention limit of three smoothhound and/or tiger sharks (combined) per vessel per trip for the HMS Commercial Caribbean Small Boat permit holders. The retention limit range would be zero to three smoothhounds and/or tiger sharks (combined) per vessel per trip. The retention of any other shark species would not be allowed under this alternative.

Although this alternative was preferred at the proposed rule stage, NOAA Fisheries now prefers a newly developed Alternative C4. Because Alternative C4 is responsive to public comment while still meeting the management goals described in Chapter 1, NOAA Fisheries no longer prefers Alternative C2.

Alternative C3

Establish a default retention limit of six non-prohibited large coastal, small coastal, pelagic, and/or smoothhound sharks (combined) per vessel per trip for HMS Commercial Caribbean Small Boat permit holders. The retention limit range would be zero to six for non-prohibited large coastal, small coastal, pelagic, and smoothhound sharks (combined) per vessel per trip.

Alternative C4 (Preferred Alternative)

Establish a default shark retention limit of three non-prohibited large coastal, small coastal, and smoothhound sharks (combined) per vessel per trip for the HMS Commercial Caribbean Small Boat permit holders, with no retention of pelagic sharks, blacknose sharks, hammerhead sharks, silky, and sandbar sharks. Specifically, under this alternative, permit holders could retain tiger, blacktip, bull, spinner, lemon, Atlantic sharpnose, finetooth, bonnethead, and smoothhound sharks. The retention limit range would be zero to three non-prohibited large coastal, small coastal, and smoothhound sharks (combined) per vessel per trip.

At the proposed rule stage, NOAA Fisheries preferred Alternative C2, limiting the harvest to up to three tiger and/or smoothhound sharks (combined) per vessel per trip for HMS CCSB permit holders. Based on public comment, the Agency created and now prefers Alternative C4, a hybrid of Alternative C2 and Alternative C3. During the public comment period, some commenters expressed support for the Alternative C2, but also argued that smoothhound sharks are only caught incidentally and are not a target species. As a result, these commenters were concerned that Alternative C2 would place any shark meat demand solely on tiger sharks. The commenters also felt Alternative C2 could potentially result in fishermen discarding sharks until tiger or smoothhound sharks were landed, potentially increasing fishing effort, discards, and shark mortality. The commenters also opposed the retention of any prohibited species along with some specific species, including pelagic and hammerhead sharks, given concerns regarding those species' vulnerability to fishing pressure, stock status, and effects

on reef systems and ecotourism. Some commenters indicated that NOAA Fisheries should combine Alternative C2 with Alternative C3 to allow for fishing opportunities to harvest sustainably managed sharks, with a retention limit not to exceed six sharks, given the capacity and size of the vessels, while avoiding overharvest of specific shark species, including pelagic and hammerhead sharks. Commenters also requested NOAA Fisheries provide extensive outreach and education to fishermen and government agencies on species identification and permit requirements.

After considering public comment, NOAA Fisheries created this new alternative, Alternative C4. This alternative is preferred because it is responsive to public comments and would meet the management goals highlighted in Chapter 1 by providing increased fishing opportunities to harvest sustainably managed sharks at incidental levels while still avoiding overharvest of specific species. NOAA Fisheries anticipates that allowing the retention of sharks under the HMS CCSB permit will not only provide increased fishing opportunities to harvest sustainably managed sharks, but also improve catch and landings data in the U.S. Caribbean shark fishery as NOAA Fisheries expects more fishermen to acquire the HMS CCSB permit, given the ability to retain sharks. Increased participation and permitting would likely lead to improved data collection, more accurate stock assessments, and better management of the U.S. Caribbean shark fishery.

Table 2.3 Possible Shark Retention Limits and Retention Limit Ranges Considered for the HMS Commercial Caribbean Small Boat (CCSB) Permit

U.S. Caribbean	Alternative C1 (No Action)	Alternative C2	Alternative C3	Alternative C4 (*Preferred Alternative*)
Retention Limit Range	None	0-3 per vessel per trip	0-6 per vessel per trip	0-3 per vessel per trip
Default Retention Limit	0 per vessel per trip	3 Smoothhound or Tiger Sharks (Combined) per vessel per trip	6 Non-prohibited Large Coastal; Small Coastal; Pelagic; and Smoothhound Sharks (Combined) per vessel per trip	3 Non-prohibited Large Coastal; Small Coastal; and Smoothhound Sharks (Combined) per vessel per trip. No Retention of Pelagic, Blacknose, Hammerhead, Silky, and Sandbar Sharks Allowed

3.0 Affected Environment

This chapter describes the affected environment (the fishery, the gears used, the communities involved, etc.), and provides a view of the current condition of the fishery, which serves as a baseline against which to compare potential impacts of the different alternatives. This chapter also provides a summary of information concerning the biological status of North Atlantic swordfish and Atlantic sharks, the marine ecosystem, the social and economic condition of the fishing interests, fishing communities, and fish processing industries, and the best available scientific information concerning the past, present, and possible future conditions of the North Atlantic swordfish stock, ecosystem, and fisheries.

3.1 Swordfish Stock Status and Biology

Life History

As described in more detail in Chapter 6.3 of Amendment 10 to the 2006 Consolidated Atlantic HMS FMP (82 FR 42329, September 7, 2017) and Chapter 9.9 of the 2018 ICCAT SCRS Report, North Atlantic swordfish are distributed widely in the Atlantic Ocean. Swordfish feed on a wide variety of prey including groundfish, pelagic fish, deep-water fish, and invertebrates. They are believed to feed throughout the water column, and from electronic tagging studies, are believed to undertake extensive diel vertical migrations. Swordfish mostly spawn in the western warm tropical and subtropical waters throughout the year, although seasonality has been reported in some of these areas. They are found in the colder temperate waters during summer and fall months. Young swordfish grow very rapidly, reaching about 140 centimeters lower-jaw fork length by age three, but grow slowly thereafter. Females grow faster

than males and reach a larger maximum size. Tagging studies have shown that some swordfish can live up to 15 years. Swordfish are difficult to age, but about 50 percent of females were considered to be mature by age five, at a length of about 180 centimeters. However, more recent information suggests a smaller length and age at maturity.

North Atlantic Swordfish Stock Status

North Atlantic swordfish stock assessments are conducted by ICCAT's SCRS. The most recent North Atlantic swordfish stock assessment was in 2017. North Atlantic swordfish were found to be not overfished with overfishing not occurring (Table 3.1). Additional details on stock statuses and their determination can be found in Chapter 2 of the 2020 HMS Stock Assessment and Fishery Evaluation (SAFE) Report.

Habitat

The Magnuson-Stevens Act requires NOAA Fisheries to identify and describe essential fish habitat (EFH) for each life stage of managed species (16 U.S.C. 1855(b)(1), as implemented by 50 CFR 600.815), and to evaluate the potential adverse effects of fishing activities on EFH, including the cumulative effects of multiple fisheries activities (50 CFR 600.815(a)(2)). NOAA Fisheries originally described and identified EFH and related EFH regulatory elements for all HMS in the management unit in 1999, some of which were updated in 2003 via Amendment 1 to the 1999 HMS FMP (68 FR 45237; August 1, 2003). EFH boundaries published in the 1999 HMS FMP and Amendment 1 to the 1999 HMS FMP were updated in Final Amendment 10 to the 2006 Consolidated Atlantic HMS FMP.

Table 3.1 North Atlantic Swordfish Stock Status

Species	North Atlantic Swordfish
Current Relative Biomass Level	B_{2015}/B_{MSY} = 1.04 (0.82-1.39)
B_{MSY}	82,640 t (51,580-132,010)
International Threshold	B_{MSY}
Domestic Minimum Stock Size Threshold	0.8 B_{MSY} (52,048 t)
International Stock Status	Not overfished
Domestic Stock Status	Not overfished
Current Relative Fishing Mortality Rate	F_{2011}/F_{MSY} = 0.78 (0.62–1.01)
Maximum Fishing Mortality Threshold	F_{MSY} = 0.17 (0.10-0.27)
International Stock Status	Overfishing is not occurring
Domestic Stock Status	Overfishing is not occurring

3.2 Shark Stock Status and Biology

Life History

As described in more detail in Chapter 3 of Amendment 6 to the 2006 Consolidated Atlantic HMS FMP, sharks have a low reproductive potential compared to many other fish. Various factors determine this low reproductive rate: slow growth, late sexual maturity, one- to two-year reproductive cycles, a small number of young per brood, and specific requirements for nursery areas. Some shark species reproduce by laying eggs, while others nourish their embryos through a placenta. These biological factors leave many species of sharks vulnerable to overfishing.

A large number of shark species are known to inhabit the waters along the U.S. Atlantic coast, including the Gulf of Mexico and the waters around Puerto Rico and the U.S. Virgin Islands. Forty-two species are managed by the HMS Management Division of NOAA Fisheries. Based on ecology and fishery dynamics, NOAA Fisheries divided these Atlantic sharks into five species groups or complexes for purposes of HMS management: (1) large coastal sharks, (2) small coastal sharks, (3) pelagic sharks, (4) prohibited species, and (5) smoothhound sharks (Table 3.2).

Table 3.2 Common names of shark species included within the five species complexes. Note: Retention of certain sharks vary depending on permits, gears, and other requirements.

Species Complex	Shark Species Included
Large Coastal Sharks (11)	Sandbar+, silky*, tiger, blacktip, bull, spinner, lemon, nurse, smooth hammerhead*^, scalloped hammerhead*°^, and great hammerhead*^ sharks
Small Coastal Sharks (4)	Atlantic sharpnose, blacknose, finetooth, and bonnethead sharks
Pelagic Sharks (5)	Shortfin mako^, thresher, oceanic whitetip*^**, porbeagle^, and blue sharks
Prohibited Species (19)	Whale^, basking^, sand tiger, bigeye sand tiger, white^, dusky, night, bignose, Galapagos, Caribbean reef, narrowtooth, longfin mako^, bigeye thresher, sevengill, sixgill, bigeye sixgill, Caribbean sharpnose, smalltail, and Atlantic angel sharks
Smoothhound Sharks (3)	Smooth dogfish, Florida smoothhound, and Gulf smoothhound sharks

*Prohibited from commercial retention on pelagic longline gear and recreationally if swordfish, tunas, and/or billfish are also retained
+ Prohibited from retention with the exception of vessels selected to participate in the shark research fishery
° Distinct population segment (DPS) in the central and southwest Atlantic Ocean listed as threatened under the ESA
^ Listed under CITES Appendix II
** Listed as threatened throughout its range under the ESA

Atlantic Shark Stock Status

Atlantic shark stock assessments for large coastal, small coastal, and smoothhound sharks are generally completed by the Southeast Data, Assessment, and Review (SEDAR) process. Pelagic sharks are subject to exploitation by many different nations and exhibit trans-oceanic migration patterns. As a result, ICCAT's SCRS Subcommittee on Bycatch has recommended that ICCAT take the lead in conducting stock assessments for pelagic sharks. ICCAT's SCRS has assessed blue, shortfin mako, and porbeagle sharks to date. All SCRS final stock assessment reports can be found at www.iccat.int/assess.htm. In some cases, NOAA Fisheries also looks at available resources, including peer-reviewed literature, for external assessments that, if deemed appropriate, could be used for domestic management purposes. The details on all stock statuses for Atlantic sharks can be found in Chapters 1 and 3 of Amendment 6 to the 2006 Consolidated Atlantic HMS FMP and Chapter 2 of the 2020 SAFE Report. Table 3.3 summarizes stock assessment information and the current status of Atlantic shark species as of December 2019.

Table 3.3 Atlantic Shark Stock Status Summaries (Domestic and International): Overfished (and Years to Rebuild) and Not Overfished

Species	Current Relative Biomass Level	B_{MSY}	International Threshold	Domestic Minimum Stock Size Threshold	International Stock Status	Domestic Stock Status	Years to Rebuild	Rebuilding Start Date (End Date)
Northwest Atlantic porbeagle sharks	B_{2008}/B_{MSY} = 0.43-0.65	29,382-40,676 mt	B_{MSY}	(1-M) B_{MSY}‡‡*	Overfished	Overfished	100	7/24/2008 (2108)
North Atlantic blue sharks	B_{2013}/B_{MSY} = 1.35-3.45	*Unspecified* †	B_{MSY}	(1-M)B_{MSY}	Not likely overfished	Not Overfished		
North Atlantic shortfin mako sharks	B_{2015}/B_{MSY} = 0.57-0.95	62,555 mt-123,475 mt †††	B_{MSY}	(1-M) B_{MSY}‡‡*	Overfished	Overfished	‡‡**	‡‡**
Sandbar sharks	SSF_{2015}/SSF_{MSY} = 0.77	SSF_{MSY} = 681,000 (numbers of sharks)	*NA*	595,000 (1-M)SSF_{MSY}	*NA*	Overfished	66	1/1/2005 (2070)
Gulf of Mexico blacktip sharks	SSF_{2016}/SSF_{MSY} = 2.73	SSF_{MSY} = 14,400,000 (numbers of sharks)	*NA*	12,200,000 (1-M)SSF_{MSY}	*NA*	Not overfished		
Atlantic blacktip sharks	*Unknown*	*Unknown*	*NA*	(1-M)B_{MSY}	*NA*	*Unknown*		
Dusky sharks	SSF_{2015}/SSF_{MSY} = 0.41-0.64	*Unknown*†	*NA*	(1-M)SSB_{MSY}	*NA*	Overfished	~100	7/24/2008 (2107)
Scalloped hammerhead sharks	N_{2005}/N_{MSY} = 0.45	N_{MSY} = 62,000 (numbers of sharks)	*NA*	(1-M)N_{MSY}	*NA*	Overfished	10	7/3/2013 (2023)
Atlantic Bonnethead sharks	*Unknown*	*Unknown*	*NA*	*Unknown*	*NA*	*Unknown*		
Gulf of Mexico Bonnethead sharks	*Unknown*	*Unknown*	*NA*	*Unknown*	*NA*	*Unknown*		
Atlantic sharpnose sharks–Atlantic stock	SSF_{2011}/SSF_{MSY} = 2.07	SSF_{MSY} = 4,860,000 (numbers of sharks)	*NA*	(1-M)SSF_{MSY}	*NA*	Not overfished		
Atlantic sharpnose sharks-Gulf of Mexico stock	SSF_{2011}/SSF_{MSY}= 1.01	SSF_{MSY} = 17,900,000	*NA*	(1-M)SSF_{MSY}	*NA*	Not overfished		
Atlantic blacknose sharks–Atlantic stock	SSF_{2009}/SSF_{MSY} = 0.43-0.64	SSF_{MSY} = 77,577-288,360 (numbers of sharks)	*NA*	62,294-231,553 (1-M)SSF_{MSY}	*NA*	Overfished	30	7/3/2013 (2043)
Atlantic blacknose sharks–Gulf of Mexico stock	*Unknown*	*Unknown*	*NA*	(1-M)B_{MSY}	*NA*	*Unknown*		
Finetooth sharks	N_{2005}/N_{MSY} = 1.80	N_{MSY} = 3,200,000 (numbers of sharks)	*NA*	2,400,000 (1-M)N_{MSY}	*NA*	Not overfished		
Atlantic smooth dogfish	SSF_{2012}/SSF_{MSY} = 1.96-2.81	SSF_{MSY} = 4,746,000	*NA*	3,701,000 (1-M)SSF_{MSY}	*NA*	Not overfished		
Gulf of Mexico smoothhound shark complex	N_{2012}/N_{MSY} = 1.68-1.83	N_{MSY} = 7,190,000	*NA*	5.53E+06 (1-M)N_{MSY}	*NA*	Not overfished		

* = In the 2017 stock assessment, the SCRS indicated that it is not possible to calculate biomass-based reference points (e.g., BMSY) absent additional knowledge (or basis for assumptions) regarding how future recruitment potential relates to spawning stock biomass. ** = South Atlantic swordfish are managed by ICCAT, and domestic stock status is not determined or reported in the United States stock status report. † = A value for BMSY (or its proxy) was not provided in the stock assessment. ††† = Only the BSP2-JAGS and JABBA models provided BMSY values in biomass. The BMSY range encompasses the 8 scenarios run of the BSP2-JAGS and JABBA models. The SS3 model provided BMSY values in numbers. ‡‡* = M is unknown. ‡‡** = To be established by ICCAT in 2019. ^ = A new assessment has been completed and domestic status has yet to be determined (at the time of this report's publication).
Sources: SCRS 2007, 2008, 2009a, 2009b, 2010, 2011, 2012a, 2012b, 2013, 2014, 2015, 2016, 2017; Gibson and Campana 2005; NOAA Fisheries 2006, 2007; Hayes et al. 2009; SEDAR 2011a, 2011b, 2011c, 2011d, 2013a, 2013b, 2015a, 2015b, 2016, 2018a, 2018b.

For additional HMS stock status determinations please consult Table 2.1 of the 2020 HMS SAFE Report. This table shows the history of domestic shark stock assessment.

Habitat

The Magnuson-Stevens Act requires NOAA Fisheries to identify and describe EFH for each life stage of managed species (16 U.S.C. 1855(b)(1), as implemented by 50 CFR 600.815, and to evaluate the potential adverse effects of fishing activities on EFH, including the cumulative effects of multiple fisheries activities (50 CFR 600.815(a)(2)). NOAA Fisheries originally described and identified EFH and related EFH regulatory elements for all HMS in the management unit in 1999, some of which were updated in 2003 via Amendment 1 to the 1999 HMS FMP (68 FR 45237; August 1, 2003). EFH boundaries published in the 1999 HMS FMP and Amendment 1 to the 1999 HMS FMP were updated in Final Amendment 10 to the 2006 Consolidated Atlantic HMS FMP.

3.3 Description of the Fishery

Please see Chapter 3.2.3 of Amendment 8 to the 2006 Consolidated Atlantic HMS FMP, which is incorporated here by reference and summarized below, for a description of the swordfish fishery in the United States.

North Atlantic Swordfish Permits, Retention Limits, and Economic Aspects

In the United States, eight categories of permits authorized for swordfish fishing are currently issued: HMS Angling, HMS Charter/Headboat, Incidental HMS Squid Trawl Permit, Directed Swordfish, Incidental Swordfish, Swordfish Handgear, Commercial Caribbean Small Boat, and Swordfish General Commercial. The majority of swordfish landed in Atlantic HMS fisheries are caught by Directed Swordfish Limited Access permit holders using pelagic longline gear and, to a lesser extent, buoy gear and handgear (rod and reel, handline, harpoon, and bandit gear).

Recreational fishing for any HMS-managed species requires the issuance of an HMS Angling permit or an HMS Charter/Headboat permit. Swordfish landed under the HMS Angling permit may not be sold and swordfish landed under an HMS Charter/Headboat permit may only be sold in certain instances. The recreational swordfish trip limits are: one per person with up to four per vessel per day (HMS Angling permit); one per paying passenger with up to six per vessel per day (Charter/Headboat permit, charter vessel); and one per paying passenger with up to 15 per vessel per day (Charter/Headboat permit, headboat vessel). HMS Charter/Headboat vessel permit holders with a commercial sale endorsement can fish with rod and reel and handline under open-access swordfish commercial retention limits when on a commercial trip.

The Incidental HMS Squid Trawl permit may only be issued to vessels that already possess an *Illex* squid moratorium permit and allows squid vessels to retain up to 15 incidentally-caught swordfish per trip. The other three permits (Directed, Incidental, and Handgear) are all commercial limited access permits, meaning that participants interested in entering the fishery must obtain a permit from an existing permit holder that is interested in getting out of the fishery. When the directed swordfish fishery is open, there is no retention limit for Directed and Handgear Limited Access permit holders. If the directed fishery is closed, Directed Limited Access permit holders can retain 15 swordfish per pelagic longline trip, two swordfish per

handgear trip, and no swordfish using harpoon. Incidental swordfish permits allow fishermen to land up to 30 swordfish while engaged in other fishing activities. Vessels issued Directed and Incidental Swordfish Limited Access permits must also be issued valid Atlantic Tunas Longline and Atlantic Shark permits to retain swordfish.

The HMS Commercial Caribbean Small Boat permit is open-access and valid only in the U.S. Caribbean region on vessels that are less than 45 feet long. This permit cannot be held in conjunction with any other HMS permit in a calendar year. This permit allows the commercial retention of bigeye, albacore, yellowfin, and skipjack (BAYS) tunas, swordfish, and sharks, although the retention limit for shark is set to zero. Vessels issued the HMS Commercial Caribbean Small Boat permit are authorized to possess rod and reel, handline, harpoon, bandit, and buoy gear to harvest swordfish. The current swordfish retention limit for the HMS Commercial Caribbean Small Boat permit is two fish per vessel per trip. As described in Amendment 4 to the 2006 Consolidated Atlantic HMS FMP, this retention limit was established because, at the time, the number of permits that would be issued in the U.S. Caribbean region was unknown. Therefore, in Amendment 4, while NOAA Fisheries analyzed a retention limit range of zero to six, NOAA Fisheries took a conservative approach by implementing a low retention limit. Since the implementation of the HMS Commercial Caribbean Small Boat permit few permits have been issued (Table 3.4) and the U.S. continues to underharvest its U.S. swordfish quota.

Table 3.4 2014-2020 Total Number of Trips and Active Vessels Landing Swordfish for HMS Commercial Caribbean Small Boat, Swordfish General Commercial, and HMS Charter/Headboat Permits

Permit	2014	2015	2016	2017	2018	2019	2020	Average Total Number of Trips Per Year
	Total Number of trips (total number of active vessels)							
HMS Commercial Caribbean Small Boat	5 (5)	3 (3)	3 (3)	3 (3)	3 (3)	8 (5)	2 (2)	4
Swordfish General Commercial	3 (3)	14 (10)	26 (16)	24 (13)	17 (15)	38 (24)	81 (19)	29
HMS Charter/Headboat	5 (5)	17 (6)	15 (11)	9 (8)	20 (14)	93 (23)	42 (23)	29

Source: eDealer and Territories landings data

The Swordfish General Commercial permit is open-access and can be held in conjunction with the Atlantic Tunas Harpoon and Atlantic Tunas General Category permits. Swordfish General Commercial permit holders can harvest swordfish using rod and reel, handline, harpoon, green-stick, and bandit gear. The swordfish retention limit under this permit may be set between zero and six swordfish per vessel per trip. The default retention limits for North Atlantic

swordfish are three in the northwest Atlantic and Gulf of Mexico, two in the U.S. Caribbean, and zero in the Florida Swordfish Management Area. Regional retention limits can be changed through inseason adjustment authority based on pre-established criteria codified at 50 CFR 635.27(a)(8). The swordfish retention limits were maintained at six swordfish throughout 2018 and 2019 by four inseason actions, published in December 2017 (82 FR 58761), July 2018 (83 FR 30884), and December 2018 (83 FR 65571) and June 2019 (84 FR 29088).

The swordfish commercial minimum sizes are 25 inches from cleithrum to caudal keel for swordfish landed with the head, or any portion of the head, removed, or 47-inch lower jaw fork length for swordfish landed with the head attached. Figure 1.1 illustrates the cleithrum to caudal keel and lower jaw fork length measurements. In addition, a swordfish that has been damaged by shark bites may be retained only if the remainder of the carcass meets the appropriate minimum size.

Pelagic longlining accounts for the majority of U.S. swordfish catches; with sizeable swordfish catches in the commercial and recreational handgear fisheries as well. In 2019, U.S. swordfish catches and landings were approximately 1,325.8 mt dw. Of these reported catches and landings, 1,097.1 mt dw were reported as captured with pelagic longline gear (NOAA Fisheries 2020). Approximately, 228.7 mt dw of swordfish are reported as captured with handline, rod and reel, harpoon, and trawl and unclassified gear. See Table 3.5 for distribution of swordfish landings from 2014 to 2019 by gear type and year, respectively.

Table 3.5 2014-2019 U.S. Atlantic Commercial Swordfish Landings in Metric Tons (mt) Dressed Weight (dw) by Gear Type

Gear	2014 (mt dw)	2015 (mt dw)	2016 (mt dw)	2017 (mt dw)	2018 (mt dw)	2019 (mt dw)
Longline*	1,374.2	1,197.5	1,044.0	978.6	831.4	1,097.1
Handline	65.4	57.4	56.8	46.8	98.9	154.1
Trawl/Unclassified	4.3	2.1	4.5	5.1	0.8	8.4
Rod and Reel**	27.5	34.7	20.5	25.5	27.2	65.9
Harpoon	0.0	0.0	0.0	0.2	0.1	0.2

* Includes landings and estimated dead discards from scientific observer and logbook sampling programs.

** Rod and reel catches and landings represent estimates of landing and dead discards based on statistical surveys of the U.S recreational harvesting sector.

Source: Annual Report of the United States to ICCAT (2020)

Swordfish landing, in pounds, and the average ex-vessel price from 2014-2019 are shown in Table 3.6 for the three swordfish permits this rulemaking will affect. The average dressed weight per swordfish captured by HMS Commercial Caribbean Small Boat, Swordfish General Commercial, and HMS Charter/Headboat vessels (which are only authorized to use handgear such as rod and reel, handline, buoy gear, green stick) cannot be calculated given the available data. Instead, NOAA Fisheries used an average weight of 69 pounds (lb) dw based on 2017 data, the most recent timeseries available to compare total landings weight and number of fish (2,110,463 lb dw of swordfish landed / 30,448 individual swordfish = 69 lb, NOAA Fisheries, 2019). NOAA Fisheries expects that this proxy may be somewhat higher than what is landed in

the handgear fleet given that the pelagic longline fleet generally operates further offshore and in deeper, colder waters where larger fish may be located. At $4.88/lb, which is the average price of swordfish from all three of the handgear affected by this rule, the average value of each swordfish was $336.72 in 2019.

The handgear fisheries for all HMS are typically most active during the summer and fall, although fishing also occurs in the South Atlantic and Gulf of Mexico during the winter months. Fishing usually takes place between 5 and 125 miles from shore. Those vessels using bait typically use herring, mackerel, whiting, mullet, menhaden, ballyhoo, butterfish, and squid. The U.S. Caribbean fleet is similar to the Southeastern U.S. fleet in that it consists primarily of small vessels making short, relative near-shore trips, producing high quality fresh product. The number of trips and active vessels for each permit from 2014-2019 are shown in Table 3.4 for the three swordfish permits this rulemaking will affect. Because there is limited data on the number of trips and active vessels for the three swordfish commercial permits, the breakdown of the number of trips and active vessels can only be shown by permit type and not region. For a breakdown of the number of HMS commercial and recreational permits please refer to Chapter 4.1 of the 2020 HMS SAFE Report (NOAA Fisheries 2021).

Table 3.6 2014-2019 U.S. Atlantic Swordfish Landings in Pounds Dressed Weight (dw) and Average Ex-Vessel Price per Pound for HMS Commercial Caribbean Small Boat, Swordfish General Commercial, and HMS Charter/Headboat Permits

Permit	2014	2015	2016	2017	2018	2019
HMS Commercial Caribbean Small Boat (lb dw)	291	1,165	1,776	522	2,412	1,953
Swordfish General Commercial (lb dw)	528	1,385	12,263	3,041	2,997	4,060
HMS Charter/Headboat (lb dw)	727	2,268	1,286	1,455	3,491	7,433
Average ex-vessel price per pound						
($/lb)	5.40	5.20	4.80	4.80	4.80	4.88

Source: eDealer and Territories landings data

Atlantic Shark Permits, Retention Limits, and Economic Aspects

In the U.S. Caribbean, four categories of permits authorized for commercial shark fishing are currently available/issued: Directed Shark, Incidental Shark, Smoothhound Shark Commercial, and HMS Commercial Caribbean Small Boat permits.

An Atlantic shark directed or incidental limited access permit is required to commercially harvest Atlantic sharks other than smoothhound sharks. Under the limited access program, the agency is no longer issuing new commercial permits. Shark limited access permit holders are authorized to use pelagic longline or bottom longline, handgear, and gillnet gear. These fishermen must also become certified at a Protected Species Safe Handling, Release, and Identification Workshop if fishing pelagic longline or gillnet gear and sell only to a federally permitted Shark Dealer. The current shark retention limit for the directed limited access permit is 45 large coastal sharks and no limit on the amount of small coastal (no more than eight blacknose sharks) and pelagic sharks retained. Incidental limited access permit holders can retain three large coastal sharks and a total of 16 small coastal and pelagic sharks combined (not more than eight blacknose sharks).

Commercial smoothhound shark vessels permits have been required since March 15, 2016. These permits are open-access, and are required to land and sell smoothhound sharks including smooth dogfish, Florida smoothhound, and Gulf smoothhound. Smoothhound shark can only be sold to a federally permitted shark dealer.

As previously described, the HMS Commercial Caribbean Small Boat permit is open-access and valid only in the U.S. Caribbean region on vessels that are less than 45 feet long. This permit cannot be held in conjunction with any other HMS permit in a calendar year. This permit allows the commercial retention of BAYS tunas, swordfish, and sharks. Vessels issued the HMS Commercial Caribbean Small Boat permit are authorized to possess rod and reel, handline, harpoon, bandit, and buoy gear to harvest swordfish. The current shark retention limit for the HMS Commercial Caribbean Small Boat permit is zero fish per vessel per trip. As described in Amendment 4 to the 2006 Consolidated Atlantic HMS FMP, this retention limit was established in order to minimize any potential adverse effects to all shark species while some of the shark complexes recovered and the Agency had time to collect more data on regional participants, catches, and discards. Therefore, in Amendment 4, NOAA Fisheries analyzed a retention limit range of zero to three non-sandbar large coastal sharks per vessel per trip and zero to16 small coastal and pelagic sharks (combined) per vessel per trip. Amendment 4 did not analyze the retention of smoothhound sharks as these species were not in the management unit at that time. Due to concerns about shark status and limited data, in Amendment 4, NOAA Fisheries took a conservative approach by implementing a retention limit of zero sharks. Since the implementation of the HMS Commercial Caribbean Small Boat permit, state and territorial commercial shark fishermen have continued to incidentally-catch sharks while targeting other species (i.e., grouper, snapper) and have requested the ability to retain sharks at incidental levels in federal waters.

The majority of sharks landed in Atlantic HMS fisheries are by Directed Shark Limited Access permit holders using bottom longline and gillnet gear. The majority of small-scale commercial vessels participating in HMS fisheries in the Caribbean region are small, and limited in range, hold capacity, crew size, and market infrastructure. These small-scale vessels in the U.S. Caribbean use handgear (handline, rod and reel) (Table 3.7 and Table 3.8) and rarely target sharks, but rather catch them as bycatch while targeting other federally permitted species (i.e., snapper, grouper). Because there are currently a limited number of shark fishing and dealer permits, and because the HMS Commercial Caribbean Small Boat permit does not allow for retention of sharks, there is limited catch and landings data from the U.S. Caribbean fisheries.

The limited amount of data available includes trip-ticket data from Puerto Rico and the U.S. Virgin Islands, which offers the best source of shark landings data.

Based on trip-ticket data from the U.S. Caribbean, in 2019, 52 commercial fishermen from Puerto Rico reported landing sharks, averaging 49 lb dw of sharks per trip, while in the U.S. Virgin Islands, 12 commercial fishermen reported landing sharks, averaging 29 lb dw of sharks per trip (Table 3.9). In addition, vessels that reported landing sharks in the U.S. Caribbean made an average of two trips per month. Table 3.10 shows the average dressed weight per shark species/complex (relevant to this rulemaking) and price per pound based on Southeast Fishery Science Center conversion factors, and 2019 trip-ticket price data from Puerto Rico and U.S. Virgin Islands, respectively. Given the limited territorial government trip-ticket shark landings data from the U.S. Caribbean, NOAA Fisheries used the 2019 average price for all unclassified sharks as a proxy for the price data of all species/management groups relevant to this rulemaking. Because the U.S. Virgin Islands trip ticket data did not report price data for sharks, NOAA Fisheries is using the 2019 average price per pound for sharks reported for Puerto Rico as a proxy. Atlantic shark landings, in pounds dressed weight, are shown in Table 3.11 and Table 3.12 for the state and territorial commercial shark fishermen in the U.S. Caribbean. Landings data shows a limited number of sharks being landed, with the majority of the sharks reported as unclassified sharks. This may indicate some misidentification issues by state and territorial commercial fishermen who catch sharks incidentally while targeting other fish and might not be familiar with how to properly identify sharks to species level.

Table 3.7 2014-2019 Atlantic Commercial Shark Landings Pounds (lb) Dressed Weight (dw) by Gear Type in Puerto Rico

Gear	2014	2015	2016	2017	2018	2019
Hook and Line	9,479	6,197	C	C	5,109	3,863
Net	4,853	3,775	C	C	4,057	4,583
Spearhand/Trap	0	1,103	C	C	220	2,364
Grand Total	14,332	11,076	7,782	7,345	9,386	10,810

Source: Territorial government trip-ticket data. The letter C denotes instances where data could not be presented due to confidentiality issues.

Table 3.8 2014-2019 Atlantic Commercial Shark Landings Pounds (lb) Dressed Weight (dw) by Gear Type in U.S. Virgin Islands

Gear	2014	2015	2016	2017	2018	2019
Hook and Line	1,164	C	604	426	360	741
Net/Spearhand/Trap	340	C	209	355	109	122
Grand Total	1,504	865	813	781	469	863

Source: Territorial government trip-ticket data. The letter C denotes instances where data could not be presented due to confidentiality issues.

Table 3.9 2014-2019 Number of vessels and trips landing sharks by year in Puerto Rico and the U.S. Virgin Islands

Island		2014	2015	2016	2017	2018	2019
Puerto Rico	Number of Vessels	57	60	66	43	47	52
	Number of Trips	243	210	281	177	196	201
U.S. Virgin Islands	Number of Vessels	8	9	11	11	14	12
	Number of Trips	41	19	21	28	31	27

Source: Territorial government trip-ticket data

Table 3.10 Average dressed weight and price data for Atlantic Sharks in the U.S. Caribbean

Species/Management Group	Average Dressed Weight (lb dw)	Price ($/lb)
Large Coastal Shark	34	2.07
Small Coastal Shark	3.25	
Pelagic Shark	43	
Tiger Shark	34	
Smoothhound Shark	5.6	

Source: Southeast Fishery Science Center conversion factors/2019 Territorial government trip-ticket data

Table 3.11 2014-2018 Atlantic Shark Landings in Pounds Dressed Weight (dw) by Species in Puerto Rico

Species	2014	2015	2016	2017	2018	2019
Sharks	6,487	4,937	3,095	C	3,498	3,766
Tiger shark	5,330	3,056	2,291	C	4,470	4,944
Lemon shark	947	2,503	1,655	C	C	939
Caribbean Reef shark	762	450	425	C	28	296
Hammerhead sharks	735	71	152	C	902	C
Sevengill shark	111	60	164	C	C	224
Grand Total	14,372	11,076	7,782	7,345	9,386	10,807

Source: Territorial government trip-ticket data. The letter C denotes instances where data could not be presented due to confidentiality concerns.

Table 3.12 2014-2018 Atlantic Shark Landings in Pounds Dressed Weight (dw) by Species in U.S. Virgin Islands

Shark Species	2014	2015	2016	2017	2018	2019
Sharks	C	C	C	C	C	C
Tiger shark	C	C	C	C	C	C
Lemon shark	C	C	C	C	C	C
Caribbean Reef shark	C	C	C	C	C	C
Hammerhead sharks	C	C	C	C	C	C
Nurse shark	C	C	C	C	C	C
Grand Total	1,504	865	813	781	469	863

Source: Territorial government trip ticket data. The letter C denotes instances where data could not be presented due to confidentiality concerns.

Fishery Participants

In order to understand the universe of entities potentially affected by this action, NOAA Fisheries analyzed the number of vessels and dealer permits issued. In 2020, there were 30 HMS Commercial Caribbean Small Boat permits, 665 Swordfish General Commercial permits, and 3,839 HMS Charter/Headboat permits issued. Of those 665 Swordfish General Commercial permit holders, 19 landed swordfish in 2020. Of 30 HMS Commercial Caribbean Small Boat permit holders, two landed swordfish in 2020. Of the 3,839 HMS Charter/Headboat vessels, 1,681 had an active sales endorsement and 23 landed swordfish in 2020. Table 3.13 to Table 3.16 provide the distribution of these permits across states and territories.

Table 3.13 Number of HMS Commercial Caribbean Small Boat Permits by State and Territories*

State/Territory	HMS Commercial Caribbean Small Boat** permits
South Carolina	1
Florida	18
Louisiana	2
Texas	1
Puerto Rico	5
U.S. Virgin Islands	3
2020 Totals	30
2019 Totals	35
2018 Totals	40
2017 Totals	39

* As of October 2021.

**The HMS Commercial Caribbean Small Boat permit is only valid in the U.S. Caribbean.

Table 3.14 Number of Swordfish General Commercial Permits by State*

State/Territory	Swordfish General Commercial permits	State/Territory	Swordfish General Commercial permits
Alabama	5	Mississippi	1
California	1	North Carolina	100
Connecticut	11	New Hampshire	22
Delaware	4	New Jersey	24
Florida	72	New York	38
Louisiana	12	Rhode Island	40
Massachusetts	158	South Carolina	7
Maryland	8	Texas	4
Maine	125	Virginia	17
2020 Totals		665	
2019 Totals		667	
2018 Totals		723	
2017 Totals		613	

* As of October 2020.

Table 3.15 Number of Atlantic HMS Charter/Headboat Permits by State*

State/Territory	HMS Charter/Headboat permits	State/Territory	HMS Charter/Headboat permits
Alaska	1	Mississippi	16
Alabama	59	New Hampshire	101
Connecticut	78	New Jersey	487
Delaware	101	New York	327
Florida	754	Ohio	2
Georgia	27	Oklahoma	1
Hawaii	1	Pennsylvania	7
Idaho	1	Rhode Island	142
Louisiana	86	South Carolina	122
Massachusetts	729	Texas	83
Maryland	134	Virginia	64
Maine	127	U.S. Virgin Islands	15
Michigan	3	Wisconsin	2
2020 Totals		3,839	
2019 Totals		3,769	
2018 Totals		3,635	
2017 Totals		3,618	

* As of October 2020.

Amendment 4 to the 2006 Consolidated Atlantic HMS FMP allowed Caribbean small-scale fishermen with the HMS Commercial Caribbean Small Boat permit to directly sell their catches of authorized HMS without possessing a dealer permit, provided that the fishermen

report the harvest and sale of these animals to their respective territorial governments, which will report these data to the NOAA Fisheries SEFSC. In 2020, there were 200 Atlantic swordfish and 92 Atlantic shark dealer permits. HMS dealer permits are open access and required for the "first receiver" of Atlantic tunas, swordfish, and sharks. A first receiver is any entity, person, or company that takes, for commercial purposes (other than solely for transport), immediate possession of the fish, or any part of the fish, as the fish are offloaded from a fishing vessel. Table 3.16 shows the distribution of Atlantic swordfish and shark dealer permits across the states and territories, and a summary of permits held between 2015 and 2020.

Table 3.16 Number of Domestic Atlantic Swordfish and Shark Dealer Permits*

State/Territory	2020 Permits by State/Territory†	
	Atlantic Swordfish	Atlantic Shark
Alabama	6	2
California	1	-
Connecticut	1	-
Delaware	1	-
Florida	91	27
Illinois	1	-
Georgia	1	1
Hawaii	-	-
Louisiana	6	3
Massachusetts	17	5
Maryland	4	3
Maine	-	-
Missouri	1	-
North Carolina	26	16
New Hampshire	2	-
New Jersey	9	9
New York	9	13
Pennsylvania	1	-
Puerto Rico	1	-
Rhode Island	5	2
South Carolina	10	7
Texas	3	2
Virginia	4	2
U.S. Virgin Islands	-	-
Vermont	-	-
2020† Totals	200	92
2019Totals	200	104
2018 Totals	193	108
2017 Totals	189	113
2016 Totals	182	111
2015 Totals	184	102

* As of October 2020.

† The actual number of permits per state/territory may change as permit holders move or sell their businesses.

3.4 Endangered Species Act and Marine Mammal Protection Act

The ESA is the primary federal legislation governing interactions between fisheries and species listed as threatened or endangered and effects on ESA-listed critical habitat. Through a consultation process, the ESA requires federal agencies to evaluate actions they authorize, fund,

or carry out that may affect a listed species. In the case of marine fisheries, the NOAA Fisheries Office of Sustainable Fisheries consults with the Office of Protected Resources to determine what impacts fishery management actions could have on threatened or endangered marine species and what actions can be taken to reduce or eliminate negative impacts. Under the ESA Section 7 consultation process, if a federal agency determines its action is likely to adversely affect a species or destroy or adversely modify critical habitat, the agency engages in formal consultation with NOAA Fisheries. At the conclusion of formal consultation, NOAA Fisheries issues a biological opinion, which analyzes the effects of the action. If NOAA Fisheries concludes the action will jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat, NOAA Fisheries specifies Reasonable and Prudent Alternatives to the final action. If NOAA Fisheries concludes the action will not jeopardize the continued existence of listed species nor result in the destruction or adverse modification of critical habitat, NOAA Fisheries specifies required Reasonable and Prudent Measures (RPMs) and Terms and Conditions, to mitigate the effects of the action, and authorizes any allowable “incidental take” of the species.

On May 15, 2020, NOAA Fisheries released a Biological Opinion for all Atlantic HMS fisheries other than the pelagic longline fishery (2020 Non-Pelagic Longline BiOp) that stated that the continued operation of these fisheries (including handgear fisheries) is not likely to jeopardize the continued existence of sea turtles, sawfish, Atlantic sturgeon, scalloped hammerhead shark (Caribbean and Central Atlantic DPS), oceanic whitetip shark, and giant manta ray. The 2020 Non-Pelagic Longline BiOp supersedes and replaces previous BiOps prepared for those fisheries. NOAA Fisheries has implemented the Reasonable and Prudent Measures and Terms and Conditions of the 2020 Non-Pelagic Longline BiOp. This action is not anticipated to affect the above-referenced ESA-listed species in any way not previously analyzed for existing regulations and there is no new information that would alter this conclusion. Any of the covered ESA-listed species taken with handgear would be considered against the Incidental Take Statement in the 2020 BiOp for the Atlantic HMS fisheries other than the pelagic longline fishery as long as the operations are consistent with the RPMs in that BiOp.

The MMPA established a national policy to prevent marine mammal species and population stocks from declining beyond the point where they ceased to be significant functioning elements of the ecosystems of which they are a part. The MMPA prohibits, with certain exceptions, the "take" of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S. Under MMPA requirements, NOAA Fisheries produces an annual List of Fisheries that classifies domestic commercial fisheries, by gear type, relative to their rates of incidental mortality or serious injury of marine mammals. The List of Fisheries includes three classifications:

- Category I fisheries are those with frequent serious injury or mortality to marine mammals;
- Category II fisheries are those with occasional serious injury or mortality; and
- Category III fisheries are those with remote likelihood of serious injury or mortality to marine mammals.

Fishermen participating in Category I or II fisheries are required to be registered under MMPA and, if selected, to accommodate an observer aboard their vessels. Vessel owners or

operators, or fishermen, in Category I, II, or III fisheries must report all incidental mortalities and injuries of marine mammals during the course of commercial fishing operations to NOAA Fisheries. There are currently no regulations requiring recreational fishermen to report takes, nor are they authorized to have incidental takes (i.e., they are illegal). NOAA Fisheries does require reporting and authorizes takes by charter/headboat fishermen (considered "commercial" by MMPA), and no takes in Atlantic HMS fisheries have been reported to NOAA Fisheries to date.

Commercial swordfish and shark landings under the HMS Commercial Caribbean Small Boat permit and swordfish landings under the Swordfish General Commercial permit are from handgear fisheries. The commercial handgear fishery is currently listed as a Category II fishery under MMPA. The swordfish harpoon fishery and the for-hire handgear fishery are currently listed as Category III fisheries under MMPA. Strict control and operations through the regulations of these fishing gears means these gear types are not likely to result in mortality or serious injury of marine mammals.

Please refer to Sections 3.8 and 3.9.9 of the 2006 Consolidated Atlantic HMS FMP and Chapter 6 of the 2020 HMS SAFE Report for additional information on the protected species and marine mammals in the area of Atlantic HMS fisheries.

4.0 Environmental Consequences of Alternatives

As described earlier, NOAA Fisheries developed management measures in this EA to modify swordfish retention limits for vessels possessing an HMS Commercial Caribbean Small Boat permit, Swordfish General Commercial permit, or vessels with an HMS Charter/Headboat permit on a commercial trip, and shark retention limits for vessels possessing an HMS Commercial Caribbean Small Boat permit. This rulemaking also modifies mechanisms to carry out inseason adjustments to the swordfish and shark retention limits of the HMS Commercial Caribbean Small Boat permit (Table 2.1, Table 2.2 and Table 2.3). This chapter details the environmental effects of the alternatives.

4.1 Impacts of Mechanisms to Adjust Retention Limits

NOAA Fisheries has analyzed three alternatives that consider modifying the mechanism to adjust swordfish and shark retention limits for the HMS Commercial Caribbean Small Boat permit and meet the objectives stated in Chapter 1.0.

Ecological Evaluation

Alternative A1-No Action

Under this alternative, NOAA Fisheries would maintain the current requirement to adjust the regional swordfish retention limits for vessels possessing the HMS Commercial Caribbean Small Boat permit only through framework adjustments. This alternative addresses the administrative process NOAA Fisheries would use to adjust any of the retention limits for the HMS Commercial Caribbean Small Boat permit. Since the HMS Commercial Caribbean Small Boat permit was implemented, the retention limits have not changed. For example, the current limit of two swordfish per vessel per trip remains the same now as it did when the rule was first implemented. Under this alternative, NOAA Fisheries would need to adjust any retention limits through a full framework adjustment, rather than a more timely inseason action. As a result, the retention limits would likely continue to remain at the same level throughout a year or from year to year. This administrative process is different from what is in place for the Swordfish General Commercial permit and HMS Charter/Headboat permit, where inseason actions can quickly adjust the swordfish retention limits. This process is also different from what is in place for the directed shark limited access permit, where inseason actions can quickly adjust the non-sandbar large coastal shark retention limit. Maintaining this administrative process is not expected to have any impact on the current level of fishing, catch rates, or distribution of fishing effort for swordfish or sharks. Thus, Alternative A1 would likely have neutral direct and indirect ecological impacts in the short- and long-term.

Alternative A2 (Preferred Alternative)

Under this alternative, the HMS Commercial Caribbean Small Boat permit swordfish retention limit could be modified within a range, as described in Alternatives B1 to B4, through inseason adjustment procedures identical to those codified at 50 CFR 635.24 (b)(4)(iv). Before making any inseason adjustments to regional retention limits, NOAA Fisheries would consider the following criteria and other relevant factors:

A. Usefulness of information obtained from biological sampling and monitoring of the North Atlantic swordfish stock;
B. Estimated ability of vessels participating in the fishery to land the amount of swordfish quota available before the end of the fishing year;
C. Estimated amounts by which quotas for other categories of the fishery might be exceeded;
D. Effects of the adjustment on accomplishing the objectives of the FMP and its amendments;
E. Variations in seasonal distribution, abundance, or migration patterns of swordfish;
F. Effects of catch rates in one region precluding vessels in another region from having a reasonable opportunity to harvest a portion of the overall swordfish quota; and
G. Review of dealer reports, landing trends, and the availability of swordfish on the fishing grounds.

The inseason adjustment procedures under this alternative would be more flexible and timely compared to the existing adjustment process (i.e., framework adjustment), resulting in the ability to change the retention limit more quickly and easily throughout the year, if needed, and thus, providing additional fishing opportunities to the U.S. Caribbean region when other factors, such as availability of fish on the grounds and available quota, support such an increase. Because this is a new regulatory process that would not change the North Atlantic commercial quotas or fishing effort, we expect no adverse ecological impacts under the new regulatory procedure for the HMS Commercial Caribbean Small Boat permit.

Note that during the comment period, NOAA Fisheries received several comments indicating that this Alternative and Alternative A3 were not appropriate given the lack of data in the U.S. Caribbean region. NOAA Fisheries disagrees that a lack of data in the U.S. Caribbean region negates the ability to adopt inseason adjustment criteria. This Alternative and Alternative A3 simply establish inseason adjustment criteria. Any review of the inseason adjustment criteria and any resulting inseason adjustment to the retention limits would be based upon the best scientific information available, consistent with the Magnuson-Stevens Act and other applicable laws. These data include the relevant shark and swordfish status information, dealer reports, and U.S. Caribbean trip ticket data. Similarly, if NOAA Fisheries maintains Alternative A1, the No Action alternative, and adjusts the retention limit via a framework action, NOAA Fisheries would use the same data. Under this alternative, the adjustment process would be more flexible and the retention limits could be adjusted more quickly than would be done under the existing process. This Alternative could result in an increased likelihood that the retention limits would be adjusted as needed throughout the year, reducing administrative costs and potentially providing more timely management changes to swordfish fishermen. This flexibility in reacting to the available data can assist in maintaining sustainable stocks and ensuring quotas are not exceeded. Thus, after considering all of the above, NOAA Fisheries believes that Alternative A2 would likely have neutral direct and indirect ecological impacts in the short- and long-term.

Alternative A3 (Preferred Alternative)

Under this alternative, the HMS Commercial Caribbean Small Boat permit default shark retention limit could be modified within a range, as described in Alternatives C1 to C3, through inseason adjustment procedures like those codified at 50 CFR 635.24(a)(8). Before making any

adjustments to regional retention limits, NOAA Fisheries would consider the following criteria and other relevant factors:

A. The amount of remaining shark quota in the relevant area or region, to date, based on dealer reports;
B. The catch rates of the relevant shark species/complexes, to date, based on dealer reports;
C. Estimated date of fishery closure based on when the landings are projected to reach 80 percent of the quota given the realized catch rates;
D. Effects of the adjustment on accomplishing the objectives of the 2006 Consolidated Atlantic HMS FMP and its amendments;
E. Variations in seasonal distribution, abundance, or migratory patterns of the relevant shark species based on scientific and fishery-based knowledge; and/or,
F. Effects of catch rates in one part of a region precluding vessels in another part of that region from having a reasonable opportunity to harvest a portion of the relevant quota.

The inseason adjustment procedures under this alternative would be more flexible and timely compared to the existing adjustment process (i.e., framework adjustment), resulting in the ability to change the retention limit more quickly and easily throughout the year, if needed, and thus, providing additional fishing opportunities to the U.S. Caribbean region when other factors, such as availability of fish on the grounds and available quota, support such an increase. Because this is a new regulatory process that would not change the Atlantic commercial shark quotas or fishing effort, we expect no adverse ecological impacts under the new regulatory procedure for the HMS Commercial Caribbean Small Boat permit.

As with Alternative A2, NOAA Fisheries received comments that this Alternative is not appropriate given the lack of data in the U.S. Caribbean region. However, as described above in Alternative A2, this alternative would simply establish inseason adjustment criteria, and any review of the inseason adjustment criteria and any resulting inseason adjustment to the retention limits would be based upon the best scientific information available, consistent with the Magnuson-Stevens Act and other applicable laws. Under this alternative, the adjustment process would be more flexible and the retention limits could be adjusted more quickly than would be done under the existing process. This alternative could result in an increased likelihood that the retention limits would be adjusted as needed throughout the year, reducing administrative costs and potentially providing more timely management changes to shark fishermen. This flexibility in reacting to the available data can assist in maintaining sustainable stocks and ensuring quotas are not exceeded. Thus, after considering all of the above, NOAA Fisheries believes that Alternative A3 would likely have neutral direct and indirect ecological impacts in the short- and long-term.

Social and Economic Impacts

Alternative A1-No Action

Under this alternative, NOAA Fisheries would maintain the current process of adjusting the regional retention limits for vessels possessing the HMS Commercial Caribbean Small Boat permit only through framework adjustments. As described above, maintaining this process would likely result in the retention limit remaining at the default level throughout a year, just as it has

since its implementation. Alternative A1 would likely result in neutral direct and indirect socioeconomic impacts in the short- and long-term because swordfish and shark fishing would continue to operate under current conditions, with HMS Commercial Caribbean Small Boat permit holders continuing to fish at similar rates and under similar trip limits. However, it is important to note that, in order to change the trip limit, this alternative would have additional administrative burden and time costs associated with conducting a full rulemaking for a framework adjustment to change the trip limit for the HMS Commercial Caribbean Small Boat permit.

Alternative A2 (Preferred Alternative)

Under this alternative, the HMS Commercial Caribbean Small Boat permit retention limit could be modified within a specified range. Before making any inseason adjustments to regional retention limits, NOAA Fisheries would consider the seven criteria previously mentioned and other relevant factors (Chapter 2.2).

Under this alternative, the adjustment process would be more flexible and could adjust the retention limit more quickly, compared to the existing adjustment process. This alternative could result in an increased likelihood that the retention limit would be adjusted as needed throughout the year, reducing administrative costs and potentially providing more timely management changes to swordfish fishermen. Alternative A2 would likely result in neutral direct and indirect socioeconomic impacts in the short- and long-term as HMS Commercial Caribbean Small Boat permit holders would continue to fish at similar rates and under similar trip limits.

Alternative A3 (Preferred Alternative)

Under this alternative, the HMS Commercial Caribbean Small Boat permit shark retention limit could be modified within a specified range. Before making any inseason adjustments to regional retention limits, NOAA Fisheries would consider the six criteria previously mentioned and other relevant factors (Chapter 2.2).

Under this alternative, the adjustment process would be more flexible and could adjust the retention limit more quickly, compared to the existing adjustment process. This alternative could result in an increased likelihood that the retention limit would be adjusted as needed throughout the year, reducing administrative costs and potentially providing more timely management changes to shark fishermen. Overall, the increase would not be significant, because it would only affect a few fishermen, and they would only be catching up to 3 sharks per trip, so any potential impacts probably would be similar and neutral. Thus, Alternative A3 would likely result in neutral direct and indirect socioeconomic impacts in the short- and long-term as HMS Commercial Caribbean Small Boat permit holders would continue to fish at similar rates and under similar trip limits.

4.2 Swordfish Retention Limit Alternatives

NOAA Fisheries has analyzed four alternatives that would modify swordfish retention limits and retention limit ranges for the HMS Commercial Caribbean Small Boat permit, Swordfish General Commercial permit, or vessels with an HMS Charter/Headboat permit on a commercial trip and meet the objectives stated in Chapter 1.0.

It is important to note that for the HMS Commercial Caribbean Small Boat permit, alternatives B2 through B4 would establish and codify a default swordfish retention limit and retention limit range for this permit. These alternatives are analyzed assuming Alternative A2 has been applied to the HMS Commercial Caribbean Small Boat permit. However, the effects of adding inseason adjustment to the HMS Commercial Caribbean Small Boat permit are discussed under Alternatives A1 and A2 whereas Alternatives B1 through B4 focus on the effects of modifying the retention limits within an established trip limit range.

Ecological Evaluation

Alternative B1-No Action

Under Alternative B1, the No Action alternative, NOAA Fisheries would maintain the existing swordfish retention limits within the swordfish management regions (Figure 1.3) for all vessels possessing an HMS Commercial Caribbean Small Boat permit, a Swordfish General Commercial permit, or an HMS Charter/Headboat permit on a commercial trip. For vessels possessing a Swordfish General Commercial permit or vessels with an HMS Charter/Headboat permit on a commercial trip, the current range of swordfish retention limits is zero to six swordfish per vessel per trip for all regions with the default retention limits listed above. For the HMS Commercial Caribbean Small Boat permit, the retention limit is two swordfish per vessel per trip. The retention limit cannot be raised or lowered without a framework adjustment.

Direct Impacts to Atlantic Swordfish by Swordfish General Commercial Permit holders and HMS Charter/Headboat Permit Holders on Commercial Trips

Alternative B1, the No Action alternative, would maintain the existing swordfish retention limits for all swordfish management regions for vessels possessing any of the two commercial swordfish permits above. As described in Chapter 1, the current swordfish retention limits for all existing and new vessels issued a Swordfish General Commercial permit and HMS Charter/Headboat permit holders with a commercial sale endorsement were implemented under Amendment 8 to provide more fishing opportunities to harvest the U.S. swordfish quota while minimizing any ecological impacts to protected resources and marine mammals. Because Alternative B1 would not change fishing effort or catch rates, Alternative B1 is anticipated to have neutral direct ecological impacts in the short- and long-term to the U.S. swordfish stock.

Direct Impacts to Atlantic Swordfish by HMS Commercial Caribbean Small Boat Permit Holders

Alternative B1, the No Action alternative, is anticipated to have no change in ecological impacts from Commercial Caribbean Small Boat permit holders. Under this alternative, all existing and new HMS Commercial Caribbean Small Boat permit holders would continue to be restricted by the same swordfish retention limits currently in place. As such, there would be no expected changes to the allowable level of fishing pressure within the fisheries themselves. Therefore, Alternative B1 is anticipated to have neutral direct ecological impacts to the U.S. swordfish stock in the short- and long-term, as the retention limits would remain unchanged, and thus there would be no change in the allowable fishing pressure, catch rates, or distribution of effort.

Indirect Impacts of Alternative B1

Because Alternative B1 would not change fishing effort or catch rates, the alternative would likely have neutral indirect ecological impacts in the short- and long-term for the entirety of the ecosystem.

Alternative B2

Under Alternative B2, NOAA Fisheries would increase the default swordfish retention limit for vessels possessing the Swordfish General Commercial permit and HMS Charter/Headboat permit holders with a commercial sale endorsement from three to six swordfish per vessel per trip for all regions except for the Florida Management Region, which would remain at zero. For the HMS Commercial Caribbean Small Boat permit, NOAA Fisheries would establish a swordfish retention limit range of zero to six swordfish per vessel per trip with a default retention limit of six swordfish per vessel per trip.

Direct Impacts to Atlantic Swordfish by Swordfish General Commercial Permit Holders and HMS Charter/Headboat Permit Holders on Commercial Trips

Under Alternative B2, the retention limit for vessels possessing the Swordfish General Commercial permit and HMS Charter/Headboat permit holders with a commercial sale endorsement could continue to be raised or lowered in each region in season within the same retention limit range of zero to six swordfish per vessel per trip. As described in Chapter 1, NOAA Fisheries has consistently adjusted the retention limit for the Swordfish General Commercial permit upward from the default limit in the U.S. Caribbean, Gulf of Mexico, and Northwest Atlantic management regions per trip to the maximum of six swordfish per vessel per trip in each of the past six years that the permit has been in existence. The adjustments were made to provide fishermen additional opportunities to harvest the U.S. swordfish quota given that the U.S quota is currently underharvested and the fact that the North Atlantic swordfish stock is not overfished nor is it experiencing overfishing. Because the fishermen with these permits already fish under the default retention limit preferred here, NOAA Fisheries does not anticipate any changes to current fishing practices or bycatch mortality rates not previously analyzed in Amendment 8, and NOAA Fisheries does not anticipate this alternative to have any adverse ecological impacts. Thus, Alternative B2 would have neutral direct ecological impacts on the U.S. swordfish stock in the short- and long-term.

Direct Impacts to Atlantic Swordfish by HMS Commercial Caribbean Small Boat Permit Holders

Under Alternative B2, the HMS Commercial Caribbean Small Boat permit swordfish retention limit could be raised or lowered in season within the retention limit range of zero to six swordfish per vessel per trip starting with a default limit of six swordfish per vessel per trip. This alternative would be a change from the current swordfish retention limit of two swordfish per vessel per trip. The fishermen who use this permit are authorized to use bandit, handline, harpoon, rod and reel, and buoy gear. An increase in fishing effort with these gear types is unlikely to affect the sustainability of the North Atlantic swordfish stock. As outlined in Chapter 3, the North Atlantic swordfish stock is rebuilt and domestic harvest levels have been below the ICCAT-allocated quota. The North Atlantic swordfish stock can support higher removal levels within established quotas without jeopardizing the sustainability of the stock. This action would not affect or alter the science-based quotas for the North Atlantic swordfish. Any additional landings would continue to be monitored to ensure that they remain within the ICCAT-

recommended U.S. North Atlantic swordfish quota. Thus, NOAA Fisheries expects this alternative to have neutral direct ecological impacts on the U.S. swordfish stock in the short- and long-term.

Indirect Impacts of Alternative B2

Alternative B2 is anticipated to have similar indirect ecological impacts as Alternative B1. Gears authorized for use with a Swordfish General Commercial permit are bandit, handline, harpoon, rod and reel, and green stick gear. Gear authorized for use with an HMS Charter/Headboat permit with a commercial sale endorsement are handline and rod and reel. Gears authorized for use with a HMS Commercial Caribbean Small Boat permit are bandit, handline, harpoon, rod and reel, and buoy gear. Each of these is a tended gear that rarely interacts with the benthic habitat, and has low bycatch and bycatch mortality, so an increase in the use of these gears is unlikely to adversely impact protected species, incidentally-caught species, or EFH. In addition, this alternative would continue to set the swordfish retention limit within the existing authorized retention limit range for the Swordfish General Commercial permit and HMS Charter/Headboat permit holders with a commercial sale endorsement, and thus NOAA Fisheries does not anticipate any impacts on protected species or marine mammals. Thus, Alternative B2 would likely have neutral indirect ecological impacts in the short- and long-term for the entirety of the ecosystem.

Alternative B3

Under Alternative B3, the retention limit range would be increased for Swordfish General Commercial permit holders and HMS Charter/Headboat permit holders with a commercial sale endorsement, from zero to six swordfish per vessel per trip to zero to 18 swordfish per vessel per trip for all regions with the same default retention limits as Alternative B2. For the HMS Commercial Caribbean Small Boat permit, NOAA Fisheries would establish a swordfish retention limit range of zero to 18 swordfish per vessel per trip with a default retention limit of six swordfish per vessel per trip.

Direct Impacts to Atlantic Swordfish by Swordfish General Commercial Permit Holders and HMS Charter/Headboat Permit Holders on Commercial Trips

Under Alternative B3, the retention limit could be raised or lowered in each region in season within the zero to 18 swordfish per vessel per trip range. As described in Chapter 1, NOAA Fisheries has consistently adjusted the retention limit for the Swordfish General Commercial permit upward from the default limit in the U.S. Caribbean, Gulf of Mexico, and Northwest Atlantic management regions per trip to the maximum of six swordfish per vessel per trip in each of the past six years that the permit has been in existence. Alternative B3 would increase the retention limit range. While the fishery has been operating under what would become the default retention limit, this Alternative could result in that retention limit being adjusted during the season up to 18 swordfish per trip after considering the seven inseason adjustment criteria (see section 2.1). Such an increase in the retention limit could increase fishing effort for swordfish. The gears authorized for use with a Swordfish General Commercial permit are bandit, handline, harpoon, rod and reel, and green stick gear. The gear authorized for use with an HMS Charter/Headboat permit with a commercial sale endorsement are handline and rod and reel. Any increase in fishing effort with these handgears is unlikely to affect the

sustainability of the North Atlantic swordfish stock. As outlined in Chapter 3, the North Atlantic swordfish stock is rebuilt and domestic harvest levels have been below the ICCAT-allocated quota. The North Atlantic swordfish stock can support higher removal levels within established quotas without jeopardizing the sustainability of the stock. This action would not affect or alter the science-based quotas for the North Atlantic swordfish. Any additional landings would continue to be monitored to ensure that they remain within the ICCAT-recommended U.S. North Atlantic swordfish quota. Thus, Alternative B3 would likely have neutral direct ecological impacts in the short- and long-term to Atlantic swordfish.

Direct Impacts to Atlantic Swordfish by HMS Commercial Caribbean Small Boat Permit Holders

Under Alternative B3, the retention limit could be raised or lowered in season within the zero to 18 swordfish per vessel per trip range. Currently, there are few landings of HMS Commercial Caribbean Small Boat permit holders harvesting swordfish (Table 3.6). It is possible that increasing the retention limit could make harvesting swordfish with this permit more attractive and that swordfish landings could increase. However as described above, an increase in fishing effort is unlikely to affect the sustainability of the North Atlantic swordfish stock. As outlined in Chapter 3.0, the North Atlantic swordfish stock is rebuilt and domestic harvest levels have been below the ICCAT-allocated quota. The North Atlantic swordfish stock can support higher removal levels without jeopardizing the sustainability of the stock. In addition, the HMS Commercial Caribbean Small Boat permit is only valid in the U.S. Caribbean on vessels less than 45 feet, and larger vessels cannot enter the fishery, minimizing the chance of any over capitalization from "new," larger vessels entering the regional fishery from the mainland. Any additional landings would continue to be monitored to ensure that they remain within the ICCAT-recommended U.S. North Atlantic swordfish quota. Thus, Alternative B3 would likely have neutral direct ecological impacts in the short- and long-term to Atlantic swordfish.

Indirect Impacts of Alternative B3

As mentioned previously in Alternatives B1 and B2, gears authorized for use with a Swordfish General Commercial permit are bandit, handline, harpoon, rod and reel, and green stick gear. Gear authorized for use with an HMS Charter/Headboat permit with a commercial sale endorsement are handline and rod and reel. Gears authorized for use with a HMS Commercial Caribbean Small Boat permit are bandit, handline, harpoon, rod and reel, and buoy gear. Each of these is a tended gear that rarely interacts with the benthic habitat, and has low bycatch and bycatch mortality, so an increase in the use of these gears is unlikely to adversely impact protected species, incidentally-caught species, or EFH. Thus, Alternative B3 would likely have neutral indirect ecological impacts in the short- and long-term on the entirety of the ecosystem.

Alternative B4 (Preferred Alternative)

Under Alternative B4, the preferred alternative, NOAA Fisheries would increase the retention limit range to zero to 18 swordfish per vessel per trip for all regions (i.e., Florida Swordfish Management area, and the U.S. Caribbean, the Gulf of Mexico, and the Northwest Atlantic regions) for all three swordfish commercial permits. The default swordfish retention limit for these permit holders in all regions would be set at 18 swordfish per vessel per trip, except for the Florida Swordfish Management Area, which would have a default swordfish

retention limit of zero. For the HMS Commercial Caribbean Small Boat permit, NOAA Fisheries would establish a swordfish retention limit range of zero to 18 swordfish per vessel per trip with a default retention limit of 18 swordfish per vessel per trip.

Direct Impacts to Atlantic Swordfish by Swordfish General Commercial Permit Holders and HMS Charter/Headboat Permit Holders on Commercial Trips

The retention limit in each region could be raised or lowered in season, within the zero to 18 swordfish per vessel per trip range. Currently, the range is zero to six swordfish per vessel per trip, so Alternative B4 would be an increase in the retention limit range to 18 swordfish per vessel per trip. The effects of an increase in the retention limit range and the default retention limit are likely to be similar to Alternative B3. While some of the public comments expressed concern about the sustainability of the North Atlantic swordfish stock, as described in Chapter 3, the ICCAT SCRS most recently assessed the stock in 2017. This assessment informed an Atlantic-wide TAC and the resulting domestic allocation of swordfish quota. Collectively, ICCAT Contracting Parties have not harvested the Atlantic-wide swordfish TAC in a number of years. Similarly, the United States has not harvested its full domestic allocation of swordfish quota in a number of years. Thus, additional effort and landings would not jeopardize the sustainability of the North Atlantic swordfish stock. Furthermore, any additional landings would be monitored to ensure that they remain within the ICCAT-recommended U.S. North Atlantic swordfish quota. Many vessels that hold a Swordfish General Commercial permit focus on short swordfish trips and are often smaller than vessels that hold a limited access Swordfish Directed or Incidental permit. Due to this smaller vessel size, it is likely that there is a limit to the number of swordfish that can be safely retained on the vessel. At minimum, 18 dressed swordfish would weigh approximately 600 lb (18 swordfish x 33 lb equivalent minimum weight = 594 lb), which may be more weight than the smaller vessels can generally hold safely. Therefore, an increase in fishing effort up to 18 swordfish per vessel per trip is unlikely. Thus, Alternative B4 would likely have neutral direct ecological impacts in the short- and long-term to Atlantic swordfish.

Direct Impacts to Atlantic Swordfish by HMS Commercial Caribbean Small Boat Permit Holders

Currently, there are few landings of HMS Commercial Caribbean Small Boat permit holders harvesting swordfish (Table 3.6). It is possible that increasing the retention limit range and default could make harvesting swordfish with this permit more attractive and that swordfish landings could increase. However, as described above, an increase in fishing effort by these permit holders is unlikely to affect the sustainability of the North Atlantic swordfish stock. In addition, the HMS Commercial Caribbean Small Boat permit is only valid in the U.S. Caribbean on vessels less than 45 feet (generally with small operational range and hold capacity), and larger vessels cannot enter the fishery. Furthermore, as described in Alternatives B1, B2, and B3, swordfish commercial vessels would continue to be restricted to using selected low bycatch gears (i.e., handgear and greenstick) and by swordfish retention limits. Any additional landings would be monitored to ensure that they remain within the ICCAT-recommended U.S. North Atlantic swordfish quota. Due to the vessel length limit, it is likely that there is a limit to the number of swordfish that can be safely retained on the vessel. At minimum, 18 dressed swordfish would weigh approximately 600 lb (18 swordfish x 33 lb equivalent minimum weight = 594 lb), which may be more weight than the smaller vessels can generally hold safely.

Therefore, vessels may not harvest the maximum trip limit. Thus, Alternative B4 would likely have neutral direct ecological impacts in the short- and long-term to Atlantic swordfish.

Indirect Impacts of Alternative B4

Gears authorized for use with a Swordfish General Commercial permit are bandit, handline, harpoon, rod and reel, and green stick gear. Gear authorized for use with an HMS Charter/Headboat permit with a commercial sale endorsement are handline and rod and reel. Gears authorized for use with a HMS Commercial Caribbean Small Boat permit are bandit, handline, harpoon, rod and reel, and buoy gear. Each of these is a tended gear that rarely interacts with the benthic habitat, and has low bycatch and bycatch mortality, so an increase in the use of these gears is unlikely to adversely impact protected species, incidentally-caught species, or EFH. Thus, Alternative B4 would likely have neutral indirect ecological impacts in the short- and long-term on the entirety of the ecosystem.

Social and Economic Impacts

Alternative B1-No Action

As described above, under Alternative B1, the No Action alternative, NOAA Fisheries would maintain the existing swordfish retention limits within the swordfish management regions (Figure 1.3) for all vessels possessing an HMS Commercial Caribbean Small Boat permit, a Swordfish General Commercial permit, or an HMS Charter/Headboat permit on a commercial trip.

Direct Impacts to Swordfish General Commercial Permit Holders and HMS Charter/Headboat Permit Holders on Commercial Trips

Alternative B1, the No Action alternative, would maintain the existing swordfish retention limits for all swordfish management regions for vessels possessing Swordfish General Commercial permits or HMS Charter/Headboat permits on a commercial trip. In the Florida Swordfish Management Area, the default retention limit would remain at zero where NOAA Fisheries has not increased the retention limit in the area due to gear conflict concerns. NOAA Fisheries has consistently increased the retention limit in the Northwest Atlantic, Gulf of Mexico, U.S. Caribbean regions to six swordfish per vessel per trip every year since the implementation of the swordfish retention limits under Amendment 8 to the 2006 Consolidated Atlantic HMS FMP. Since NOAA Fisheries has already been increasing the swordfish retention limit, through inseason adjustments to six swordfish per vessel per trip, no change in socioeconomic impacts are anticipated under this alternative, as fishermen would continue to fish at similar rates and under the previously-analyzed (i.e., Amendment 8) and implemented trip limits. Based on an average 29 trips per year (Table 3.4), Swordfish General Commercial permit holders could realize annual revenue between $ 19,529.76 and $29,294.64 per vessel, across all active vessels, depending on the region the fishing took place (Table 4.2). Similarly, based on an average 29 trips per year (Table 3.4), HMS Charter/Headboat permit holders could realize annual revenue between $ 19,529.76 and $29,294.64 per vessel, across all active vessels, depending on the region the fishing took place (Table 4.2). However, the No Action alternative would maintain management measures that may be restricting NOAA Fisheries' ability to provide additional fishing opportunities to fishermen when other factors, such as availability of fish on the grounds

and available quota, support such an increase. For the reasons stated above, Alternative B1 would likely have neutral direct socioeconomic impacts to the Swordfish General Commercial permit holders and the HMS Charter/Headboat permit holders with a commercial sale endorsement in the short- and long-term.

Direct Impacts to HMS Commercial Caribbean Small Boat Permit Holders

Alternative B1, the No Action alternative, would maintain the current HMS Commercial Caribbean Small Boat permit swordfish retention limit of two swordfish per vessel per trip. Ex-vessel revenues produced by this alternative are estimated at $673.44 ex-vessel for the two swordfish limit. Based on an average four trips per year (Table 3.4), HMS Commercial Caribbean Small Boat permit holders could realize annual revenue of $2,693.76 per vessel, across all active vessels (Table 4.2). However, the No Action alternative would maintain management measures that may be restricting NOAA Fisheries' ability to provide additional fishing opportunities to fishermen when other factors, such as availability of fish on the grounds and available quota, support such an increase. For the reasons stated above, Alternative B1 would likely have neutral direct socioeconomic impacts to HMS Commercial Caribbean Small Boat permit holders in the short- and long-term, as HMS Commercial Caribbean Small Boat permit holders would continue to fish at similar rates and under current trip limits.

Indirect Impacts of Alternative B1

Alternative B1 would likely result in neutral indirect socioeconomic impacts in the short- and long-term. Businesses supporting the Swordfish General Commercial permit, HMS Charter/Headboat, and HMS Commercial Caribbean Small Boat fisheries (e.g., dealers and tackle/bait/ice suppliers) are unlikely to be affected by Alternative B1, as this alternative would not change current fishing effort or catch.

Table 4.1 Average Weight, Average Ex-Vessel Revenue, and Ex-Vessel Value of Swordfish based on Commercial Landings Data by HMS Permit for Alternative B1 to B4

Alternative	Permit	Swordfish Management Region	A Swordfish Default Retention Limit Per Vessel Per Trip (retention limit range)	B Swordfish Default Retention Limit in Weight (lb dw) [A x 69 lb dw] (retention limit range in weight)	C Average Ex-Vessel Revenue [B x $4.88] (range in average ex-vessel revenue)
B1	HMS Commercial Caribbean Small Boat	Caribbean	2 (none)	138	$673.44
	Swordfish General Commercial/ HMS Charter/Headboat (with a commercial sales endorsement)	Northwest Atlantic	3 (0-6)	207 (0-414)	$1,010.16 ($0.00-$2,020.32)
		Gulf of Mexico			
		Caribbean	2 (0-6)	138 (0-414)	$673.44 ($0.00-$2,020.32)
		Florida Management Area	0 (0-6)	0 (0-414)	$0.00
B2	HMS Commercial Caribbean Small Boat	Caribbean	6 (0-6)	414 (0-414)	$2,020.32 ($0.00-$2,020.32)
	Swordfish General Commercial/ HMS Charter/Headboat (with a commercial sales endorsement)	Northwest Atlantic			
		Gulf of Mexico			
		Caribbean			
		Florida Management Area	0 (0-6)	0 (0-414)	$0.00
B3	HMS Commercial Caribbean Small Boat	Caribbean	6 (0-18)	414 (0-1,242)	$2,020.32 ($0.00-$6,060.96)
	Swordfish General Commercial/ HMS Charter/Headboat (with a commercial sales endorsement)	Northwest Atlantic	18 (0-18)	1,242 (0-1,242)	$6,060.96 ($0.00-$6,060.96)
		Gulf of Mexico			
		Caribbean			
		Florida Management Area	0 (0-18)	0 (0-1,242)	$0.00
B4	HMS Commercial Caribbean Small Boat	Caribbean	18 (0-18)	1,242 (0-1,242)	$6,060.96 ($0.00-$6,060.96)
	Swordfish General Commercial/ HMS Charter/Headboat (with a commercial sales endorsement)	Northwest Atlantic			
		Gulf of Mexico			
		Caribbean			
		Florida Management Area	0 (0-18)	0 (0-1,242)	$0.00

Table 4.2 Total Annual Revenue for Swordfish per HMS Commercial Caribbean Small Boat (CCSB), Swordfish General Commercial (SGC), and HMS Charter/Headboat (CHB) Permits Under Alternatives B1 to B4.
(Note: The total annual revenue calculation in Table 4.2 was revised from the draft environmental assessment to better estimate the total annual revenue for each alternative by focusing on the average number of trips taken by the fleet multiplied by the ex-vessel revenue per trip.)

Alternative	Permit	Swordfish Default Retention Limit per vessel per trip	Ex-Vessel Revenue (Table 4.1; Column C)	Average Total Number of Trips (Table 3.4)	Total Annual Revenue	2020 Number of Active Vessels (Table 3.4)
	A	B	C	D	E = C*D	
B1	CCSB	2	$673.44	4	$2,693.76	2
	SGC	2-3	$673.44-$1,010.16*	29	$19,529.76 - $29,294.64	19
	CHB	2- 3	$673.44-$1,010.16*	29	$19,529.76 - $29,294.64	23
B2	CCSB	6	$2,020.32	4	$8,081.28	2
	SGC	6	$2,020.32	29	$58,589.28	19
	CHB	6	$2,020.32	29	$58,589.28	23
B3	CCSB	6	$2,020.32	4	$8,081.28	2
	SGC	18	$6,060.96	29	$175,767.84	19
	CHB	18	$6,060.96	29	$175,767.84	23
B4	CCSB	18	$6,060.96	4	$24,243.84	2
	SGC	18	$6,060.96	29	$175,767.84	19
	CHB	18	$6,060.96	29	$175,767.84	23

* Reflects the ex-vessel range in revenue among regions. U.S. Caribbean region has a 2 swordfish limit, whereas the NW Atlantic and Gulf of Mexico have a 3 swordfish limit under Alternative B1.

Alternative B2

Under Alternative B2, NOAA Fisheries would adjust the default swordfish retention limit for Swordfish General Commercial permit holders and HMS Charter/Headboat permit holders with a commercial sale endorsement. NOAA Fisheries would also establish a swordfish retention limit range of zero to six swordfish per vessel per trip with a default retention limit of six swordfish per vessel per trip for HMS Commercial Caribbean Small Boat permit holders.

Direct Impacts to Swordfish General Commercial Permit Holders and HMS Charter/Headboat Permit Holders on Commercial Trips

Under Alternative B2, the retention limit could be raised or lowered in each region in season within the zero to six swordfish per vessel per trip retention limit range. Currently, the maximum swordfish retention limit is six swordfish per vessel per trip, with a default limit of three swordfish per vessel per trip, in the Northwest Atlantic and Gulf of Mexico regions and two swordfish per vessel per trip in the U.S. Caribbean region. NOAA Fisheries has had to adjust swordfish retention limits every year in order to provide additional fishing opportunities to harvest the U.S. swordfish quota, which is currently underharvested. Since NOAA Fisheries has increased the swordfish retention limit each year since implementation, through inseason adjustments to six swordfish per vessel per trip, no change in socioeconomic impacts are anticipated under this alternative. Based on an average 29 trips per year (Table 3.4), Swordfish General Commercial permit holders could realize annual revenue of $58,589.28 per vessel, across all active vessels (Table 4.2). Similarly, based on an average 29 trips per year (Table 3.4), HMS Charter/Headboat permit holders could realize annual revenue of $58,589.28 per vessel, across all active vessels (Table 4.2). Thus, this alternative would result in neutral direct socioeconomic impacts to the Swordfish General Commercial permit holders and the HMS Charter/Headboat permit holders with a commercial sale endorsement in the short- and long-term.

Direct Impacts to HMS Commercial Caribbean Small Boat Permit Holders

Under Alternative B2, the retention limit could be raised or lowered in each region in season within the zero to six swordfish per vessel per trip retention limit range. Currently, there are few landings of HMS Commercial Caribbean Small Boat permit holders harvesting swordfish (Table 3.13), but an increase in the retention limit may entice additional entries into the U.S. Caribbean swordfish fishery. If NOAA Fisheries increases the retention limit to six swordfish per vessel per trip, fishermen would realize higher trip revenues since they could sell up to four additional swordfish per trip. Table 4.1 summarizes the potential increase in revenue. These additional swordfish could increase ex-vessel revenue from $673.44 to $2,020.32 per trip (Table 4.1). Based on an average four trips per year (Table 3.4), HMS Commercial Caribbean Small Boat permit holders could realize annual revenue of $8,081.28 per vessel, across all active vessels (Table 4.2). This alternative would result in neutral direct socioeconomic impacts to the HMS Commercial Caribbean Small Boat permit holders in the short- and long-term as any increase in annual ex-vessel revenue would be relatively minor.

Indirect Impacts of Alternative B2

Alternative B2 would likely result in neutral indirect socioeconomic impacts in the short- and long-term. Businesses supporting the Swordfish General Commercial, HMS Charter/Headboat, and HMS Commercial Caribbean Small Boat fisheries (e.g., dealers and tackle/bait/ice suppliers) are unlikely to be affected by the potential increase in fishing effort or catch resulting from this alternative because any potential increase in effort would likely be minor.

Alternative B3

Under Alternative B3, NOAA Fisheries would increase the retention limit range and adjust the default swordfish retention limit for the Swordfish General Commercial permit, HMS Commercial Caribbean Small Boat permit, and HMS Charter/Headboat permit holders with a commercial sale endorsement. NOAA Fisheries would also establish a swordfish retention limit range of zero to 18 swordfish per vessel per trip with a default retention limit of 18 swordfish per vessel per trip for HMS Commercial Caribbean Small Boat permit holders.

Direct Impacts to Swordfish General Commercial Permit Holders and HMS Charter/Headboat Permit Holders on Commercial Trips

Under this alternative, the retention limit could be raised or lowered in each region between zero and 18 swordfish per vessel per trip. Economic impacts to Swordfish General Commercial permit holders and HMS Charter/Headboat permit holders with a commercial sale endorsement would vary by region. In the Florida Swordfish Management Area, the default retention limit would stay at zero swordfish and NOAA Fisheries has not increased the retention limit in the area due to gear conflict concerns. Thus, in the Florida Swordfish Management Area, Alternative B3 would likely have neutral direct socioeconomic impacts in the short- and long-term. In the Northwest Atlantic and Gulf of Mexico regions, the maximum retention limit would be set at 18 swordfish per vessel per trip with a default limit of 18 swordfish per vessel per trip. Currently, the maximum retention limit is six swordfish per vessel per trip with a default limit of three swordfish per vessel per trip, however, NOAA Fisheries has increased the retention limit in the Northwest Atlantic and Gulf of Mexico regions to six swordfish per vessel per trip every year since the implementation of the Swordfish General Commercial permit. If NOAA Fisheries does not adjust the default retention limit under Alternative B3, there would be no economic impacts. However, if NOAA Fisheries increases the retention limit to 18 swordfish per vessel per trip, fishermen would realize higher trip revenues because they would have more swordfish to sell. Table 4.1 summarizes the potential increase in revenue. Eighteen swordfish is estimated to be worth $6,060.96 ex-vessel, whereas six swordfish per vessel per trip is worth approximately $2,020.32 ex-vessel (Table 4.1). Based on an average 29 trips per year (Table 3.4), Swordfish General Commercial permit holders could realize annual revenue of $175,767.84 per vessel, across all active vessels (Table 4.2). Similarly, based on an average 29 trips per year (Table 3.4), HMS Charter/Headboat permit holders could realize annual revenue of $175,767.84 per vessel, across all active vessels (Table 4.2). Assuming a vessel is able to retain the maximum trip limit, more fishermen may choose to obtain the Swordfish General Commercial permit and conduct a greater number of trips or longer trips. This increase in per trip and annual ex-vessel revenue would result in minor beneficial direct socioeconomic impacts in the short- and long-term.

Some concern has been expressed that an increase in the Swordfish General Commercial permit retention limit could negatively affect the value of the Swordfish Directed, Incidental, or

Handgear Limited Access permits. The Swordfish Directed permit has no retention limit and the Swordfish Incidental permit has a 30 swordfish retention limit, both of which are higher than the proposed Swordfish General Commercial retention limit. More importantly, fishermen using pelagic longline gear to target and retain HMS must have either a Swordfish Directed or Incidental permit as part of the "tri-pack" permit requirement. Since the Swordfish Directed and Incidental permits are required for the use of pelagic longline in HMS fisheries, the value of these permits is likely to be unaffected. In the case of the Swordfish Handgear Limited Access permit, some constituents have expressed concern that fishermen may opt for the inexpensive open access Swordfish General Commercial permit over the expensive Swordfish Handgear Limited Access permit sold on the private market. However, this situation is unlikely to occur because of differences in the gear and locations fished with each of these permits. First, buoy gear is an authorized gear under the Swordfish Handgear Limited Access permit, but not under the open access Swordfish General Commercial permit, which could help maintain the desirability of the handgear permit. Second, and more importantly, the use of each permit does not geographically overlap. The retention limit for Swordfish General Commercial permit holders in the Florida Swordfish Management Area (which includes the southern half of the Florida east coast, the Florida Keys, and the southern tip of Florida) is zero. Consequently, the permit may not be used to commercially fish for swordfish in that area. The Swordfish Handgear Limited Access permit, though, can be used in those areas and, in fact, is almost exclusively used in those areas, likely because swordfish are located close to shore there. Between 2014 and 2019, only one percent of Swordfish Handgear permit landings occurred outside of the Florida Swordfish Management Area (HMS eDealer Landings Database). Purchasing and holding a Swordfish Handgear Limited Access permit gives the holder the ability to use buoy gear to target swordfish and to fish in the Florida Swordfish Management Area where swordfish are available close to shore with low transit times to the fishing area. Due to these two advantages, the limited access swordfish handgear permit is likely to maintain its value and thus this alternative would like not have any effect on the value of the Swordfish Handgear Limited Access permit.

Direct Impacts to HMS Commercial Caribbean Small Boat Permit Holders

Under this alternative, the retention limit could be raised or lowered in each region between zero and 18 swordfish per vessel per trip. Currently, there are few landings of HMS Commercial Caribbean Small Boat permit holders harvesting swordfish, but an increase in the retention limit may entice additional entries into the U.S. Caribbean swordfish fishery (Table 3.6). The current HMS Commercial Caribbean Small Boat permit swordfish retention limit is two swordfish per vessel per trip, with no mechanism for inseason changes. If NOAA Fisheries increases the retention limit above the default limit, though, fishermen would realize higher trip revenues since they would have more swordfish to sell. This is assuming a vessel is able to retain the maximum trip limit, and therefore more fishermen may conduct a greater number of trips or longer trips. Table 4.1 summarizes the potential increase in revenue, which range from $673.44 under a two swordfish limit to $2,020.32 under a six swordfish limit. Based on an average four trips per year (Table 3.4), HMS Commercial Caribbean Small Boat permit holders could realize annual revenue of $8,081.28 per vessel, across all active vessels (Table 4.2). This increase in per trip and annual ex-vessel revenue would result in minor beneficial direct socioeconomic impacts to the HMS Commercial Caribbean Small Boat permit holders in the short- and long-term.

Indirect Impacts of Alternative B3

Alternative B3 would likely result in neutral indirect socioeconomic impacts in the short- and long-term. Businesses supporting the Swordfish General Commercial, HMS Charter/Headboat, and HMS Commercial Caribbean Small Boat fisheries (e.g., dealers and tackle/bait/ice suppliers) are unlikely to be affected by the potential increase in fishing effort or catch resulting from this alternative because any potential increase in effort would likely be minor.

Alternative B4 (Preferred Alternative)

Under Alternative B4, the preferred alternative, NOAA Fisheries would increase the retention limit range and adjust the default swordfish retention limit for the Swordfish General Commercial permit, HMS Commercial Caribbean Small Boat permit, and vessels with an HMS Charter/Headboat permit on a commercial trip.

Direct Impacts to Swordfish General Commercial Permit Holders and HMS Charter/Headboat Permit Holders on Commercial Trips

Under this preferred alternative, the retention limit could be raised or lowered in each region between zero and 18 swordfish per vessel per trip. Economic impacts to Swordfish General Commercial permit holders and HMS Charter/Headboat permit holders with a commercial sale endorsement would vary by region. In the Florida Swordfish Management Area, the default retention limit would stay at zero swordfish and NOAA Fisheries has not increased the retention limit in the area due to gear conflict concerns. Thus, in the Florida Swordfish Management Area, Alternative B4 would likely have neutral direct socioeconomic impacts in the short- and long-term. In all other swordfish management regions, the maximum swordfish retention and default limit would be set at 18 swordfish. Currently, the maximum is six swordfish with a default limit of three swordfish per vessel per trip in the Northwest Atlantic and Gulf of Mexico regions, and two swordfish per vessel per trip in the U.S. Caribbean Region, however, NOAA Fisheries has increased the swordfish retention limit in the Northwest Atlantic, the Gulf of Mexico, and the U.S. Caribbean regions to six swordfish per vessel per trip every year since the implementation of the Swordfish General Commercial permit. Thus, Alternative B4 would increase the retention limit from six to 18 in the Northwest Atlantic and Gulf of Mexico and fishermen would realize higher trip revenues since they would have more swordfish to sell. Table 4.1 summarizes the potential increase in revenue, which would be approximately $6,060.96 per vessel per trip under an 18 swordfish limit, as compared to $2,020.32 under a six swordfish limit. Similar to Alternative B3, based on an average 29 trips per year (Table 3.4), Swordfish General Commercial permit holders could realize annual revenue of $175,767.84 per vessel, across all active vessels (Table 4.2). Similarly, based on an average 29 trips per year (Table 3.4), HMS Charter/Headboat permit holders could realize annual revenue of $175,767.84 per vessel, across all active vessels (Table 4.2). This increase in per trip and annual ex-vessel revenue would result in minor beneficial direct socioeconomic impacts in the short- and long-term.

As described in Alternative B3, changes to the Swordfish General Commercial permit swordfish retention limits are unlikely to affect the value of the Swordfish Directed, Incidental, or Handgear Limited Access permits.

Direct Impacts to HMS Commercial Caribbean Small Boat Permit Holders

Under this preferred alternative, the retention limit could be raised or lowered in season between zero and 18 swordfish per vessel per trip. Currently, there are few reports of HMS Commercial Caribbean Small Boat permit holders harvesting swordfish, but an increase in the retention limit may entice additional entries into the U.S. Caribbean swordfish fishery. The current HMS Commercial Caribbean Small Boat permit swordfish default retention limit is two swordfish per vessel per trip with no mechanism for inseason changes. If NOAA Fisheries increases the retention limit to 18 swordfish per trip, though, fishermen would realize higher trip revenues since they would have more swordfish to sell. Based on an average four trips per year (Table 3.4), HMS Commercial Caribbean Small Boat permit holders could realize annual revenue of $24,243.84 per vessel, across all active vessels (Table 4.2). This increase in per trip and annual ex-vessel revenue would result in minor beneficial direct socioeconomic impacts in the short- and long-term.

In the proposed rule, NOAA Fisheries specifically asked for comments on whether vessels having an HMS Commercial Caribbean Small Boat permit can support the extra weight of additional swordfish. Comments received indicated that many of the vessels cannot safely carry more than six swordfish. One commenter indicated that vessels may decide to transfer fish to another vessel at sea. NOAA Fisheries carefully considered these comments particularly given that safety at sea is an important consideration in fisheries management, and National Standard 10 compels the Agency to consider the issue. Overall, to reduce safety at sea concerns, management measures are specifically designed to give fishermen the flexibility to safely operate their vessels. In HMS fisheries, mitigating safety concerns has not included regulations limiting catch retention based on vessel weight capacity. Instead, retention limits are set based on analyses of ecological and socioeconomic impacts, leaving the weight capacity compliance to the discretion of the vessel operator. The HMS Management Division typically defers to vessel operators as to how best to safely operate their vessels. NOAA Fisheries has decided to continue with that approach in this rule and finalize a retention limit for these permit holders that could allow for up to 18 swordfish per vessel per trip. Permit holders are not required to land that many fish at one time, and NOAA Fisheries encourages vessel operators to keep only the amount of fish that can be safely retained on their vessel. NOAA Fisheries also reminds fishermen that the transfer of any HMS at sea or in port from one vessel to another vessel is expressly prohibited in the regulations (50 CFR §§ 635.29 (a) and 635.71 (a)(61)).

Indirect Impacts of Alternative B4

Alternative B4, the preferred alternative, would likely result in neutral indirect socioeconomic impacts in the short- and long-term. Businesses supporting the Swordfish General Commercial, HMS Charter/Headboat, and HMS Commercial Caribbean Small Boat fisheries (e.g., dealers and tackle/bait/ice suppliers) are unlikely to be affected by the potential increase in fishing effort or catch resulting from this alternative because any potential increase in effort would likely be minor.

4.3 Shark Retention Limit Alternatives

NOAA Fisheries has analyzed four alternatives that would modify shark retention limits and retention limit ranges for the HMS Commercial Caribbean Small Boat permit and meet the objectives stated in Chapter 1.0.

It is important to note that for the HMS Commercial Caribbean Small Boat permit, alternatives C2, C3, and C4 would establish and codify a default shark retention limit and retention limit range for this permit. These alternatives are analyzed assuming Alternative A3 has been applied to the HMS Commercial Caribbean Small Boat permit. However, the effects of adding inseason adjustment to the HMS Commercial Caribbean Small Boat permit are discussed under Alternatives A1 and A3 whereas Alternatives C1 through C4 focus on the effects of modifying the retention limits within an established trip limit range. As mentioned in Chapter 2, based in part upon public comments, a new preferred alternative (C4) was developed.

Ecological Evaluation

Alternative C1-No Action

Under Alternative C1, the No Action alternative, NOAA Fisheries would maintain the existing shark retention limit of zero sharks per vessel per trip for the HMS Commercial Caribbean Small Boat permit.

Direct impacts to Atlantic Sharks by HMS Commercial Caribbean Small Boat Permit Holders

Under this alternative, because there would be no changes in the regulations, there would be no expected changes to the allowable level of fishing pressure within the fisheries themselves, and the ecological impacts would continue to be the same as the ones previously analyzed in Amendment 4 to the 2006 Consolidated Atlantic HMS FMP. As described in Amendment 4, the zero retention limit was set at zero sharks per vessel per trip in order to minimize any potential adverse effects to all shark species while some of the shark complexes recovered and NOAA Fisheries had time to collect more data on regional participants, catches, and discards in the HMS Commercial Caribbean Small Boat fishery. However, the analysis in Amendment 4 determined that given the limited range and hold capacity of the small-scale vessels involved and remoteness of the U.S. Caribbean Region, even at the upper limits of the analyzed range of zero to three for non-prohibited large coastal sharks and zero to 16 for small coastal sharks/pelagics (combined) per vessel per trip, these retention limit ranges would not likely adversely affect shark populations. Therefore, Alternative C1 is anticipated to have neutral direct ecological impacts to shark stocks in the short- and long-term, as the quotas and retention limits would remain unchanged and would have no impact on the allowable fishing pressure, catch rates, or distribution of effort.

Indirect Impacts of Alternative C1

Alternative C1 would likely result in neutral indirect ecological impacts in the short- and long-term on the entirety of the ecosystem. Under this alternative, the indirect ecological impacts are expected to be the same as the ones previously analyzed in Amendment 4. Handgears used to target HMS in most other regions outside of the U.S. Caribbean have been documented to have very low bycatch and bycatch mortality of ESA-listed species, including sea turtles. Additionally, while sharks and other bycatch species may be caught during fishing activities targeting other species, the use of handgears in the small-scale fishery as authorized by the HMS Commercial Caribbean Small Boat permit would allow for a quick release of bycatch species, maximizing their post-release survival rate.

Alternative C2

Under Alternative C2, NOAA Fisheries would establish a retention limit range of zero to three smoothhound and/or tiger sharks (combined) per vessel per trip, with a default retention limit of three sharks per vessel per trip. The retention of any other shark species would not be allowed under this alternative.

Direct impacts to Atlantic Sharks by HMS Commercial Caribbean Small Boat Permit Holders

This alternative would have similar ecological impacts as Alternative C1 discussed above and would not likely adversely affect shark populations, for several reasons. First, the high end of this range is a conservative limit that is analogous to the lowest retention limit of the existing HMS permits that allow retention and sales of Atlantic sharks (i.e., Shark Incidental Limited Access permit). Second, as outlined in Chapter 3, the smoothhound shark stock is healthy, not overfished with no overfishing occurring. The tiger shark stock is part of the non-prohibited aggregated large coastal shark stocks. The non-prohibited large coastal shark stock status is unknown. However, tiger shark landings have been below the allocated shark quotas for the non-prohibited large coastal shark management group. In addition, the non-prohibited large coastal shark quotas have not been fully harvested in recent years and we are not expecting increased landings of tiger sharks to adversely affect the stocks. Therefore, both of these shark species can handle higher removals within the established quotas and potential retention limits without jeopardizing the sustainability of the stocks. Third, the quotas for smoothhound and non-prohibited large coastal sharks are not being modified in this rulemaking and fishermen would continue to be limited to the total amount of sharks that can be harvested, as well as by seasonal closures when the shark quotas have reached or are projected to reach 80 percent of the relevant quota or are projected to reach 100 percent of the relevant quota by the end of the fishing season. Fourth, shark landings will continue to be carefully monitored through the HMS e-Dealer reporting system and via the existing territorial reporting system ensuring timely quota monitoring. Fifth, both of these species have unique physical features that make them easy to distinguish from other shark species, regardless of whether and to what extent the carcass has been processed. For instance, smoothhound sharks are the only commonly encountered shark species that has an interdorsal ridge that extends forward of the first dorsal fin, forming a "pre-dorsal ridge." This pre-dorsal ridge can be used for positive species identification, regardless of the condition of the carcass, as long as some portion of this pre-dorsal area is intact, as in the case of most dressed sharks. Tiger sharks are also easily recognizable by the dark stripes that run up and down along their sides as well as the distinct shape of its nose, which is wide and blunt relative to other shark species. Therefore, for all the reasons highlighted above, Alternative C2 is anticipated to have neutral direct ecological impacts to shark stocks in the short- and long-term.

Indirect Impacts of Alternative C2

Alternative C2 would likely result in neutral indirect ecological impacts in the short- and long-term on the entirety of the ecosystem. Under Alternative C2, NOAA Fisheries would establish a retention limit range of zero to three smoothhounds and/or tiger sharks (aggregate) per vessel per trip, with a default retention limit of three sharks per vessel per trip. This alternative would have similar ecological impacts as Alternative C1 discussed above. While other bycatch species may be caught during fishing activities targeting smoothhound and/or tiger

sharks, the use of handgears in the small-scale fishery as authorized by the HMS Commercial Caribbean Small Boat permit would allow for a quick release of bycatch species, maximizing their post-release survival rate. It is anticipated that fishermen using handgear would have no adverse impacts on ESA-listed species, including marine mammals and sea turtles, in excess of the impacts analyzed in the 2020 Non-Pelagic Longline BiOp (See Section 3.4 for more information) which concluded that the HMS handgear fishery will not jeopardize any ESA-listed species.

Alternative C3

Under Alternative C3, NOAA Fisheries would establish a retention limit range of zero to six non-prohibited large coastal, small coastal, pelagic and/or smoothhound sharks (combined) per vessel per trip, with a default retention limit of six sharks per vessel per trip. Alternative C3 would have similar ecological impacts as Alternative C2 discussed above.

Direct impacts to Atlantic Sharks by HMS Commercial Caribbean Small Boat Permit Holders

Under this alternative, the range analyzed is a conservative limit that is within the range analyzed in Amendment 4 to the 2006 Consolidated Atlantic HMS FMP and determined not to adversely affect shark populations. The trip limit under this alternative is also considerably lower than the previously analyzed trip limit of up to 55 large coastal sharks (other than sandbar sharks) and unlimited for small coastal and pelagic sharks (combined) for existing HMS permits that allow the retention and sales of Atlantic sharks (i.e., Amendment 6 to the 2006 Consolidated Atlantic HMS FMP). Therefore, Alternative C3 is anticipated to have neutral direct ecological impacts to shark stocks in the short- and long-term, as the quotas for the different shark management groups are not being modified and fishermen would continue to be limited by the established shark quotas and a conservative trip limit. In addition, the proposed retention limits would not likely increase landings to a level that may adversely affect shark populations given the limited range and hold capacity of the small-scale vessels involved, and remoteness of the U.S. Caribbean Region.

Indirect Impacts of Alternative C3

Alternative C3 would likely result in neutral indirect ecological impacts in the short-term. Under Alternative C3, NOAA Fisheries would establish a retention limit range of zero to six non-prohibited large coastal, small coastal, pelagic, and/or smoothhound sharks (combined) per vessel per trip, with a default retention limit of six sharks per vessel per trip. This alternative would have similar ecological impacts as Alternative C2 discussed above. While other bycatch species may be caught during fishing activities targeting sharks, the use of handgears in the small-scale fishery as authorized by the HMS Commercial Caribbean Small Boat permit would allow for a quick release of bycatch species, maximizing their post-release survival rate. However, because of the higher retention limits and the allowance of harvest of all non-prohibited sharks under federal management, this alternative may potentially result in minor adverse indirect ecological impacts to scalloped hammerhead shark, which has been determined to be threatened under the ESA in the U.S. Caribbean, and slow down the rebuilding of overfished stocks, especially if there is a lack of timely reporting of landings, in the long-term.

Alternative C4 (Preferred Alternative)

Under this new preferred alternative, Alternative C4, NOAA Fisheries would establish a retention limit range of zero to three non-prohibited large coastal, small coastal, and/or smoothhound sharks (combined) per vessel per trip, with a default retention limit of three sharks per vessel per trip. Specifically, under this alternative, permit holders could retain and sell tiger, blacktip, bull, spinner, lemon, Atlantic sharpnose, finetooth, bonnethead, and smoothhound sharks. The retention or sale of pelagic, hammerhead, silky, blacknose, sandbar, and prohibited sharks would not be allowed under this alternative. This new preferred alternative is a hybrid of Alternative C2 and Alternative C3 and is responsive to public comments.

Direct impacts to Atlantic Sharks by HMS Commercial Caribbean Small Boat Permit Holders

Alternative C4 is anticipated to have neutral direct ecological impacts to shark stocks in the short- and long-term for several reasons. First, the quotas for the different shark management groups are not being modified, and fishermen would continue to be limited by the established shark quotas for these sustainably managed species. The quotas for many of these species have not been fully harvested in recent years. Therefore, additional retention of species under the large coastal (except hammerhead, silky, and sandbar sharks), small coastal (except blacknose sharks), and smoothhound shark management groups should not impact the sustainability of the stocks. Second, the retention limits in Alternative C4 would not likely increase landings to a level that may adversely affect shark populations given the limited range and hold capacity of the small-scale vessels involved. Third, NOAA Fisheries is also preferring the implementation of adaptive management measures (Alternative A3) that would allow NOAA Fisheries to quickly adjust shark retention limits regionally (down to zero fish, if necessary) in response to landings information. Fourth, NOAA Fisheries anticipates that allowing the retention of sharks under the HMS CCSB permit will not only provide increased fishing opportunities to harvest sustainably managed sharks, but also improve catch and landings data in the U.S. Caribbean shark fishery as NOAA Fisheries expects more fishermen to acquire the HMS CCSB permit given the ability to retain sharks. Increased participation and permitting would likely lead to improved data collection, more accurate stock assessments, and better management of the U.S. Caribbean shark fishery. Lastly, NOAA Fisheries intends to carry out extensive outreach and education to fishermen and government agencies in the U.S. Caribbean region following implementation of this final action to address species identification and compliance concerns.

Indirect Impacts of Alternative C4

Alternative C4 would have similar ecological impacts as Alternatives C2 and C3 discussed above. This alternative would likely result in neutral indirect ecological impacts in the short- and long-term. Under Alternative C4, NOAA Fisheries would establish a retention limit range of zero to three non-prohibited large coastal, small coastal, and/or smoothhound sharks (combined) per vessel per trip, with a default retention limit of three sharks per vessel per trip and no retention of pelagic, hammerhead, silky, blacknose, sandbar, and prohibited sharks allowed. While other bycatch species may be caught during fishing activities targeting sharks, the use of handgears in the small-scale fishery as authorized by the HMS Commercial Caribbean Small Boat permit would allow for a quick release of bycatch species, maximizing their post-release survival rate. In addition, it is anticipated that fishermen using handgear would have no

adverse impacts on ESA-listed species, including marine mammals, sea turtles, sawfish, Atlantic sturgeon, scalloped hammerhead shark (Caribbean and Central Atlantic DPS), oceanic whitetip shark, and giant manta ray, in excess of the impacts analyzed in the 2020 Non-Pelagic Longline BiOp which concluded that the continued operation of non-pelagic longline HMS fisheries (including handgear fisheries) will not jeopardize any ESA-listed species. However, because of the higher retention limits and the allowance of harvest of all non-prohibited sharks under federal management, this alternative may potentially result in minor adverse indirect ecological impacts to scalloped hammerhead shark, which has been determined to be threatened under the ESA in the U.S. Caribbean, and slow down the rebuilding of overfished stocks, especially if there is a lack of timely reporting of landings, in the long-term.

Social and Economic Impacts

Alternative C1-No Action

Under Alternative C1, the No Action alternative, NOAA Fisheries would maintain the existing shark retention limit of zero sharks per vessel per trip for the HMS Commercial Caribbean Small Boat permit.

Direct impacts to Atlantic Sharks by HMS Commercial Caribbean Small Boat Permit Holders

Under Alternative C1, the No Action alternative, fishermen wishing to land and sell smoothhound sharks must have a commercial smoothhound shark permit and sell to a federally permitted shark dealer, and fishermen wishing to land tiger sharks, a large costal shark, would need a Shark Directed or Incidental Limited Access permit, because there is a zero retention limit under the HMS Commercial Caribbean Small Boat permit. The high cost of limited access permits for these fisheries makes participation in the fisheries extremely difficult. In addition, there are currently no permitted shark dealers in the U.S. Caribbean. Thus, if the retention limit remains the same, there would be neutral direct socioeconomic impacts to HMS Commercial Caribbean Small Boat permit holder in the short- and long-term because the No Action alternative would maintain management measures currently in place. However, this alternative may not be addressing multiple requests (see Chapter 1) by commercial shark fishermen to land a limited number of sharks, restricting NOAA Fisheries' ability to provide additional fishing opportunities to fishermen when other factors, such as availability of fish on the grounds and available quota, support such an increase. Thus, Alternative C1 could likely result in potential positive social and economic benefits not being realized.

Indirect Impacts of Alternative C1

Alternative C1 would likely result in neutral indirect socioeconomic impacts in the short- and long-term. Businesses supporting the HMS Commercial Caribbean Small Boat fisheries (e.g., dealers and tackle/bait/ice suppliers) are unlikely to be affected by the potential increase in fishing effort or catch resulting from this alternative because any potential increase in effort would likely be minor.

Alternative C2

Under Alternative C2, NOAA Fisheries would establish a retention limit range of zero to three smoothhound and/or tiger sharks (combined) per vessel per trip, with a default retention limit of three sharks per vessel per trip. The retention of any other shark species would not be allowed under this alternative.

Direct impacts to Atlantic Sharks by HMS Commercial Caribbean Small Boat Permit Holders

Under Alternative C2, the retention limit could be raised or lowered in the region inseason within the zero to three sharks per vessel per trip range. Currently, there are few landings of state and territorial commercial shark fishermen harvesting sharks (Table 3.7, Table 3.8, Table 3.11 and Table 3.12), with some of the most commonly landed sharks being smoothhound and tiger sharks (R. Espinosa, personal communication, May 22 and September 5, 2019).

Under this alternative, permitted HMS Commercial Caribbean Small Boat permit holders would be able to land and sell smoothhound and tiger sharks. Thus, this allowance as well as the increase in the retention limit may provide fishing opportunities to fishermen in the Caribbean region who have been requesting to land a limited number of sharks. If NOAA Fisheries increases the retention limit to three sharks per vessel per trip, fishermen would potentially realize higher trip revenues since they could sell sharks. Table 4.3 summarizes the potential increase in annual ex-vessel revenue based on average weight and price data of smoothhound and tiger sharks. If a fisherman lands the maximum trip limit, with only tiger sharks being caught, and takes two trips per month (24 trips per year), then that fisherman could see approximately $5,067 in annual ex-vessel revenues. If the fisherman lands the full trip limit and conducts two trips per month (24 trips per year) with only smoothhound sharks being caught, then that fisherman's annual ex-vessel revenue would be $835. Because NOAA Fisheries would have the authority to adjust the shark retention limit from zero to three, the annual ex-vessel revenue estimates could vary from $0 (under a status quo) to as much as $835 to $5,067, depending on the species composition of the catch. This minor increase in per trip and annual revenue would result in neutral direct socioeconomic impacts in the short- and long-term to the HMS Commercial Caribbean Small Boat permit holders because any potential increase would be relatively minor.

Indirect Impacts of Alternative C2

Alternative C2 would likely result in neutral indirect socioeconomic impacts in the short- and long-term. Businesses supporting the HMS Commercial Caribbean Small Boat fisheries (e.g., dealers and tackle/bait/ice suppliers) are unlikely to be affected by the potential increase in fishing effort or catch resulting from this alternative because any potential increase in effort would likely be minor.

Table 4.3 Annual Ex-Vessel Revenue of Atlantic Shark Landings from HMS Commercial Caribbean Small Boat permit under Alternative C2

Shark Species	(A)	(B)	(C) Average Dressed	(D) Price per	(E) Annual Ex-Vessel

	Retention Limit (number)	Number of sharks landed/year	Weight (lb dw)	pound ($)	Revenue (B*C*D)
Smoothhound	3	72	5.6	2.07	$835
Tiger	3	72	34	2.07	$5,067

Source: Southeast Fisheries Science Center, and 2019 Caribbean government trip-ticket price data

Alternative C3

Under Alternative C3, NOAA Fisheries would establish a retention limit range of zero to six non-prohibited large coastal, small coastal, pelagic and/or smoothhound sharks (combined) per vessel per trip, with a default retention limit of six sharks per vessel per trip.

Direct impacts to Atlantic Sharks by HMS Commercial Caribbean Small Boat Permit Holders

Under Alternative C3, the retention limit could be raised or lowered in the region inseason within the zero to three sharks per vessel per trip range. Under this alternative, permitted HMS Commercial Caribbean Small Boat permit holders would be able to land and sell non-prohibited large coastal, small coastal, pelagic, and smoothhound shark. Thus, this allowance as well as the increase in the retention limit may provide fishing opportunities to fishermen in the Caribbean region who have been requesting to land a limited number of sharks.

Table 4.4 summarizes the potential increase in annual ex-vessel revenue based on average weight and price data of non-prohibited large coastal, small coastal, pelagic, and smoothhound sharks under Alternative C3. Assuming a successful trip and two trips per month, the annual revenue per vessel associated with fishermen landing the full trip limit of either non-prohibited large coastal, small coastal, pelagic or smoothhound sharks would be $10,135, $969, $12,817, or $1,669, respectively. Because NOAA Fisheries would have the authority to adjust the shark retention limit from zero to six, the annual ex-vessel revenue estimates could vary from $0 (under a zero fish limit) to as much as $969 to $12,817, depending on the species composition of the catch. This minor increase in per trip, and annual revenue would result in neutral direct socioeconomic impacts in the short- and long-term to the HMS Commercial Caribbean Small Boat permit holders because any potential increase would be relatively minor.

Indirect Impacts of Alternative C3

Alternative C3 would likely result in neutral indirect socioeconomic impacts in the short- and long-term. Businesses supporting the HMS Commercial Caribbean Small Boat fisheries (e.g., dealers and tackle/bait/ice suppliers) are unlikely to be affected by the potential increase in fishing effort or catch resulting from this alternative because any potential increase in effort would likely be minor.

Table 4.4 Annual Ex-Vessel Revenue of Atlantic Shark Landings from HMS Commercial Caribbean Small Boat permit under Alternative C3

Shark Management	(A)	(B)	(C)	(D)	(E)

Group/Species	Retention Limit (number)	Number of sharks landed per year	Average Dressed Weight (lb dw)	Price per pound ($)	Annual Ex-Vessel Revenue (B*C*D)
Large coastal shark	6	144	34	2.07	$10,135
Small coastal shark	6	144	3.25	2.07	$969
Pelagic shark	6	144	43	2.07	$12,817
Smoothhound shark	6	144	5.6	2.07	$1,669

Source: Southeast Fisheries Science Center, and 2019 Caribbean government trip-ticket data

Alternative C4 (Preferred Alternative)

Under this new preferred alternative, Alternative C4, NOAA Fisheries would establish a retention limit range of zero to three non-prohibited large coastal, small coastal, and/or smoothhound sharks (combined) per vessel per trip, with a default retention limit of three sharks per vessel per trip. Specifically, under this alternative, permit holders could retain and sell tiger, blacktip, bull, spinner, lemon, Atlantic sharpnose, finetooth, bonnethead, and smoothhound sharks. The retention or sale of pelagic, hammerhead, silky, blacknose, sandbar, and prohibited sharks would not be allowed under this alternative. This new preferred alternative is a hybrid of Alternative C2 and Alternative C3.

Direct impacts to Atlantic Sharks by HMS Commercial Caribbean Small Boat Permit Holders

Under Alternative C4, the retention limit could be raised or lowered in the region inseason within the zero to three sharks per vessel per trip range. Under this alternative, permitted HMS Commercial Caribbean Small Boat permit holders would be able to land and sell tiger, blacktip, bull, spinner, lemon, Atlantic sharpnose, finetooth, bonnethead, and smoothhound sharks. Thus, this allowance as well as the increase in the retention limit may provide fishing opportunities to fishermen in the Caribbean region who have been requesting to land a limited number of sharks. Table 4.5 summarizes the potential increase in annual ex-vessel revenue based on average weight and price data of non-prohibited large coastal, small coastal, and smoothhound sharks. Assuming a successful trip and two trips per month, the annual revenue per vessel associated with fishermen landing the full trip limit of either non-prohibited large coastal, small coastal, or smoothhound sharks would be $5,067, $484, or $835, respectively. Because NOAA Fisheries would have the authority to adjust the shark retention limit from zero to three, the annual ex-vessel revenue estimates could vary from $0 (under a zero fish limit) to as much as $484 to $5,067, depending on the species composition of the catch. This minor increase in per trip, and annual revenue would result in neutral direct socioeconomic impacts in the short- and long-term to the HMS Commercial Caribbean Small Boat permit holders because any potential increase would be relatively minor.

Indirect Impacts of Alternative C4

Alternative C4 would likely result in neutral indirect socioeconomic impacts in the short- and long-term. Businesses supporting the HMS Commercial Caribbean Small Boat fisheries (e.g., dealers and tackle/bait/ice suppliers) are unlikely to be affected by the potential increase in

fishing effort or catch resulting from this alternative because any potential increase in effort would likely be minor.

Table 4.5 Annual Ex-Vessel Revenue of Atlantic Shark Landings from HMS Commercial Caribbean Small Boat permit under Alternative C4

Shark Management Group/Species	(A) Retention Limit (number)	(B) Number of sharks landed per year	(C) Average Dressed Weight (lb dw)	(D) Price per pound ($)	(E) Annual Ex-Vessel Revenue (B*C*D)
Large coastal shark	3	72	34	2.07	$5,067
Small coastal shark	3	72	3.25	2.07	$484
Smoothhound shark	3	72	5.6	2.07	$835

Source: Southeast Fisheries Science Center, and 2019 Caribbean government trip-ticket price data

4.4 Essential Fish Habitat

Pursuant to 16 U.S.C. 1855(b)(1), and as implemented by 50 CFR 600.815, the Magnuson-Stevens Act requires NOAA Fisheries to identify and describe EFH for each life stage of managed species and to evaluate the potential adverse effects of fishing activities on EFH, including the cumulative effects of multiple fisheries activities. If NOAA Fisheries determines that fishing gears are having an adverse effect on HMS EFH, or other species' EFH, then NOAA Fisheries must include management measures that minimize adverse effects to the extent practicable.

In the 2006 Consolidated Atlantic HMS FMP and Amendment 1 to the 2006 Consolidated Atlantic HMS FMP (Amendment 1; NOAA Fisheries, 2009), NOAA Fisheries reviewed the various HMS gear types with the potential to affect EFH and, based on the best information available at that time, NOAA Fisheries determined that there is no evidence that physical effects caused by any authorized HMS gears were affecting EFH for targeted or non-targeted species, to the extent that physical effects can be identified on the habitat or the fisheries. NOAA Fisheries conducted a literature review as part of Draft Amendment 10 to the 2006 Consolidated Atlantic HMS FMP (81 FR 62100, September 8, 2016). NOAA Fisheries completed the Atlantic HMS EFH 5-Year Review in 2015 to investigate additional impacts of HMS fishing gears on Atlantic HMS EFH since Amendment 1. NOAA Fisheries did not find any significant changes in effects to HMS EFH from HMS and non-HMS fishing gears. NOAA Fisheries found no new information that any authorized HMS gear would have adverse effects on EFH. The Final Amendment 10 (82 FR 42329) was published on September 7, 2017. The final rule measures are not expected to change the fishing gears authorized relative to the status quo. Therefore, the final action in the context of the fishery as a whole will not have an adverse impact on EFH; therefore, an EFH consultation is not required.

4.5 Comparison of NEPA Alternatives

Table 4.6 provides a qualitative comparison of the impacts associated with the various alternatives considered in this rulemaking. This table summarizes the impacts that were discussed in detail in Chapters 4.1–4.4.

Table 4.6 Comparison of Alternatives Considered

Alternative	Ecological	Protected Resources	Socioeconomic
Alternative A1	Neutral	Neutral	Neutral
Alternative A2 ***(Preferred Alternative)***	Neutral	Neutral	Neutral
Alternative A3 ***(Preferred Alternative)***	Neutral	Neutral	Neutral
Alternative B1	Neutral	Neutral	Neutral
Alternative B2	Neutral	Neutral	Neutral
Alternative B3	Neutral	Neutral	Neutral to Minor Beneficial
Alternative B4 (*Preferred Alternative*)	Neutral	Neutral	Neutral to Minor Beneficial
Alternative C1	Neutral	Neutral	Neutral
Alternative C2	Neutral	Neutral	Neutral
Alternative C3	Neutral	Neutral to Minor Adverse	Neutral
Alternative C4 (*Preferred Alternative*)	Neutral	Neutral to Minor Adverse	Neutral

4.6 Cumulative Impacts

Under NEPA, a cumulative impact is an impact on the environment that results from the incremental impact of the final action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7). Cumulative impacts may also include the effects of natural processes and events, depending on the specific resource in question. Cumulative impacts include the total of all impacts to a particular resource that have occurred, are occurring, and would likely occur as a result of any action or influence, including the direct and reasonably foreseeable indirect impacts of a federal activity. The goal of this section is to describe the cumulative ecological, economic, and social impacts of past, present, and reasonably foreseeable future actions on swordfish and shark fishermen and the environment, with regard to the management measures presented in this document.

As discussed above, the management measures considered above would provide more flexibility and efficiency in how NOAA Fisheries manages the swordfish fishery in different regions and increased fishing opportunities for swordfish and shark fishermen to harvest the swordfish and shark commercial quotas. Since swordfish and shark have been federally managed, there have been many changes to the regulations and major rules either through FMP amendments or regulatory amendments to increase fishing opportunities that would allow fishermen to fully utilize the North Atlantic swordfish quota and available shark quotas. Despite these efforts, the North Atlantic quota continues to be underharvested and some of the shark quotas are either underharvested and/or species can handle higher removals within the established quotas and proposed retention limits without jeopardizing the sustainability of the stocks. The preferred alternatives would streamline HMS regulations in order to adjust existing retention limits under swordfish and shark commercial permits within the season, providing swordfish and shark fishermen with increased fishing opportunities to harvest the swordfish and shark commercial quotas in a timely, efficient manner throughout the fishing season.

Overall, the preferred alternatives in this Final EA would have neutral cumulative ecological impacts for swordfish and shark fisheries, based on the detailed discussions of the ecological impacts of each of the preferred actions above. Additionally, as discussed above, the preferred alternatives would simultaneously have largely neutral cumulative ecological impacts overall, with minimal impacts on protected species and marine mammals. The neutral ecological impacts associated with the preferred alternatives makes these actions favorable, given their associated economic benefits to swordfish and shark fishermen. The preferred alternatives would likely have no impact on the overall fishing effort or fishing rates, bycatch, or bycatch rates in the long-term beyond what was previously analyzed in Amendments 4, 8, and 9. Additionally, there would be no major impacts on EFH, and the preferred actions would both maintain sustainable swordfish and shark fisheries and maintain the status quo for species currently under a rebuilding timeframe. NOAA Fisheries is not aware of any reasonably foreseeable future actions that would impact the swordfish or shark fisheries or have impacts in the areas affected by this rule.

4.7 Protected Resources

None of the retention limit alternatives considered in this action are expected to impact protected resources relative to the status quo. The gear types affected by this action are all tended

gears with a low potential to harm protected resources. Gears authorized for use with a Swordfish General Commercial permit are bandit, handline, harpoon, rod and reel, and green stick gear. Gear authorized for use with an HMS Charter/Headboat permit with a commercial sale endorsement are handline and rod and reel. Gears authorized for use with an HMS Commercial Caribbean Small Boat permit are bandit, handline, harpoon, rod and reel, and buoy gear. Protected resources such as sea turtles, marine mammals, or sharks listed under the ESA or marine mammals protected by the MMPA have a low likelihood of interacting with these gear types. If an individual of one of these species were to be captured or hooked, it would be quickly removed and released since each of these gears is actively tended. Thus, each of the retention limit alternatives would have neutral direct and indirect impacts in the short- and long-term on protected resources.

The inseason adjustment alternatives are administrative in nature and would not affect fishing effort, practices, techniques, or location. Thus, each of the inseason adjustment alternatives would have neutral direct and indirect impacts in the short- and long-term on protected resources.

4.8 Environmental Justice Concerns

Executive Order 12898 requires agencies to identify and address disproportionately high and adverse environmental effects of its regulations on minority and low-income populations. To determine whether environmental justice concerns exist, the demographics of the affected geographic area should be examined to ascertain whether minority populations and low-income populations are present. If so, a determination must be made as to whether implementation of the alternatives may cause disproportionately high and adverse human health or environmental effects on these populations.

Community profile information is available in the 2006 Consolidated Atlantic HMS FMP (Chapter 9), a recent report by MRAG Americas, and Jepson (2008) titled "Updated Profiles for HMS Dependent Fishing Communities" (Appendix E of Action 2 to the 2006 Consolidated Atlantic HMS FMP), and in the 2015 HMS SAFE Report. The 2015 HMS SAFE Report and MRAG report updated community profiles presented in the 2006 Consolidated Atlantic HMS FMP, and provided new social impacts assessments for HMS fishing communities along the Atlantic and Gulf of Mexico coasts. The 2011 and 2012 SAFE Reports (NOAA Fisheries 2011 and NOAA Fisheries 2012) include updated census data for all coastal Atlantic states, and some selected communities that are known centers of HMS fishing, processing, or dealer activity. Demographic data indicate that coastal counties with fishing communities are variable in terms of social indicators like income, employment, and race and ethnic composition.

The preferred alternatives were selected to minimize ecological and economic impacts and provide for the sustained participation of fishing communities. The preferred alternatives would not have any effects on human health nor are they expected to have any disproportionate social or economic effects on minority and low-income communities.

4.9 Coastal Zone Management Act

The Coastal Zone Management Act (CZMA, 1972; reauthorized in 1996) requires that federal actions be consistent, to the extent practicable, with the enforceable policies of all state

coastal zone management programs. This action proposes to revise current regulations for North Atlantic swordfish retention limits in U.S. Atlantic, Gulf of Mexico, and Caribbean waters and Atlantic shark retention limits in the U.S. Caribbean. Overall, this action explores alternatives that would modify the swordfish and shark retention limits for existing swordfish and shark commercial permits and add regulatory criteria for inseason adjustment to adjust the swordfish and shark retention limit of the HMS Commercial Caribbean Small Boat permit. The goals of this final rule are to increase fishing opportunities, as well as flexibility and consistency of swordfish retention limits, for commercial swordfish fishermen fishing with similar gears within U.S. Atlantic and Caribbean waters, and to increase administrative efficiencies by managing the swordfish fishery in two regions with one action as needed (i.e., inseason adjustment). NOAA Fisheries finds the alternatives analyzed in this action to be consistent to the maximum extent practicable with the enforceable policies of states that have approved coastal zone management programs. On April 23, 2020, NOAA Fisheries provided each of the states with coastal zone management programs a consistency determination under CZMA §307(c) regarding the draft EA and its proposed rule. Under 15 C.F.R. § 930.41, states and/or U.S. territories have 60 days to respond after the receipt of the consistency determination and supporting materials. States can request an extension of up to 15 days. If a response is not received within those time limits, NOAA Fisheries can presume concurrence (15 C.F.R. § 930.41 (a)). The States of Connecticut, Delaware, Florida, Louisiana, New Jersey, New York, New Hampshire, North Carolina, Rhode Island, and Virginia replied within the response time period that the proposed regulations were consistent, to the extent practicable, with the enforceable policies of their coastal management programs. The States of Alabama, Georgia, Maine, Maryland, Massachusetts, Mississippi, Puerto Rico, South Carolina, Texas, and U.S. Virgin Islands did not respond within the response time period, nor did they request an extension of the response period; therefore, NOAA Fisheries presumes their concurrence.

4.10 References

Coastal Zone Management Act,16 U.S.C. §§ 1451 et seq.

Espinosa, Raimundo. (2019, May 22 and September 5). Personal interview with Delisse Ortiz.

MRAG, Americas, Inc., and M. Jepson. 2008. Updated Profiles for HMS Dependent Fishing Communities: Social Impact Assessment Services for HMS Fishing Communities. Solicitation Number: DG133F06RQ0381, 84 pp.

NOAA Fisheries. 2006. Final Consolidated Atlantic Highly Migratory Species Fishery Management Plan. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, 1315 East West Highway, Silver Spring, MD. Public Document. 1600 pp.

NOAA Fisheries. 2011. Stock Assessment and Fishery Evaluation (SAFE) Report for Atlantic Highly Migratory Species, 2011. Silver Spring MD: U.S. Department of Commerce, National Marine Fisheries Service. 294 pp.

NOAA Fisheries. 2012. Stock Assessment and Fishery Evaluation (SAFE) Report for Atlantic Highly Migratory Species, 2011. Silver Spring MD: U.S. Department of Commerce, National Marine Fisheries Service. 203 pp.

NOAA Fisheries. 2021. 2020 Stock Assessment and Fishery Evaluation Report for Atlantic Highly Migratory Species. Silver Spring MD: U.S. Department of Commerce, National Marine Fisheries Service. ### pp.

5.0 Mitigation and Unavoidable Adverse Impacts

Mitigation is an important mechanism that federal agencies can use to minimize, prevent, or eliminate damage to the human and natural environment associated with their actions. As described in the CEQ regulations, agencies can use mitigation to reduce environmental impact in several ways. Mitigation may include one or more of the following: avoiding the impact by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and compensating for the impact by replacing or providing substitute resources or environments. The mitigation measures discussed in an EA must cover the range of impacts of the proposal and must be considered even for impacts that by themselves would not be considered "significant." If a proposed action is considered as a whole to have significant effects, all of its specific effects on the environment must be considered, and mitigation measures must be developed where it is feasible to do so. NOAA Fisheries may consider mitigation, provided that the mitigation efforts do not circumvent the goals and objectives of the rulemaking or the mandate to rebuild fisheries under the Magnuson-Stevens Act.

Preferred Alternatives A2 and A3 would establish criteria to adjust the HMS Commercial Caribbean Small Boat permit swordfish and shark retention limits on an inseason basis. Preferred Alternative B4 would keep the current default swordfish retention limit for the Florida Swordfish Management Area, and increase the default swordfish retention limit to eighteen swordfish per vessel per trip for all other regions for all vessels possessing a Swordfish General Commercial permit, or vessels with an HMS Charter-Headboat permit on a commercial trip and establish a default retention limit of eighteen swordfish per vessel per trip within a zero to eighteen limit range for the HMS Commercial Caribbean Small Boat permit. Preferred Alternative C4 would establish a default shark retention limit of three sharks (only non-prohibited large coastal, small coastal, and smoothhound sharks, combined, with no retention of pelagic, hammerhead, silky, blacknose, sandbar, and prohibited sharks allowed), per vessel per trip, within a zero to three limit range for the HMS Commercial Caribbean Small Boat permit. These increases in the swordfish and shark retention limits and retention limit ranges might result in an increase in fishing effort and ex-vessel revenues particularly for the HMS Commercial Caribbean Small Boat permit. However, this increase in fishing effort is likely to be small, and is unlikely to affect the sustainability of the North Atlantic swordfish stock or shark stocks. As outlined in Chapter 3, the North Atlantic swordfish stock is rebuilt and domestic harvest levels have been below the ICCAT-allocated quota; the smoothhound shark stock is not overfished, with no overfishing occurring; and the harvest of non-prohibited large and small coastal sharks are well below the harvest levels of their allocated commercial quotas. Therefore, no adverse socioeconomic impacts are anticipated under any of the alternatives because fishermen could potentially benefit from the higher revenues from each trip under a higher retention limit, as well as faster management changes to respond to the needs of the swordfish and shark fisheries. Thus, these alternatives as a whole would likely have neutral ecological impacts and neutral to beneficial socioeconomic effects. As such, the final actions in this EA are not anticipated to have unavoidable adverse impacts and would not need to be mitigated.

5.1 Unavoidable Adverse Impacts

In general, there are no unavoidable adverse ecological impacts expected as a result of the preferred alternatives. The measures in this action focus on increasing opportunities and flexibility for U.S. swordfish and shark fishermen.

5.2 Irreversible and irretrievable commitment of resources

No irreversible or irretrievable commitments of resources are expected as a result of the preferred alternatives.

6.0 Regulatory Impact Review

NOAA Fisheries conducts a Regulatory Impact Review for all regulatory actions that are of public interest, to comply with E.O. 12866. The Regulatory Impact Review provides, for each alternative, an analysis of the economic benefits and costs to the applicable fishery(ies) and the nation as a whole. The information contained in Chapter 6, taken together with the data and analyses incorporated by reference, comprise the complete Regulatory Impact Review for this action.

The requirements for all regulatory actions specified in E.O.12866 are summarized in the following statement from the order:

> *In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits should be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nonetheless essential to consider. Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.*

E.O. 12866 further requires Office of Management and Budget review of proposed regulations that are considered to be "significant." A significant regulatory action is one that is likely to:

- Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments of communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

6.1 Description of Management Objectives

Please see Chapter 1 for a description of the objectives of this rulemaking.

6.2 Description of Fishery

Number of Vessel and Dealer Permit Holders

In order to examine the baseline universe of entities potentially affected by the preferred alternatives, NOAA Fisheries analyzed the number of HMS Commercial Caribbean Small Boat, Swordfish General Commercial, HMS Charter/Headboat, and HMS swordfish dealer permits. In 2020, there were a total of 30 HMS Commercial Caribbean Small Boat permit holders, 665 Swordfish General Commercial permit holders, 3,839 HMS Charter/Headboat permit holders, and 200 HMS swordfish dealers (Table 6.1). Of those 665 Swordfish General Commercial permit holders, 19 landed swordfish in 2020. Of 30 HMS Commercial Caribbean Small Boat permit holders, two landed swordfish in 2020. Of the 3,839 HMS Charter/Headboat vessels, 23 had an active commercial endorsement, and landed swordfish in 2020. The 2020 SAFE Report provides a summary of these permit holders since 2011. Further detail regarding commercial swordfish permit holders is provided in Chapter 3.0 of this document.

Table 6.1 2015-2020 HMS Commercial Caribbean Small Boat, Swordfish General Commercial, and HMS Charter/Headboat permit holders

Year	Number of HMS Commercial Caribbean Small Boat	Number of Swordfish General Commercial	Number of HMS Charter/Headboat*
2015	20	623	3,663
2016	39	613	3,594
2017	39	613	3,618
2018	40	723	3,635*
2019	35	667	3,769*
2020	30	665	3,040*

* For 2018, 2019, and 2020 Number of HMS Charter/Headboat with a commercial sale endorsement

In 2020, there were a total of 200 Atlantic swordfish dealer permit holders. Table 6.2 provides a summary of swordfish dealer permit holders by year. Further detail regarding swordfish dealer permit holders is provided in the 2006 Consolidated Atlantic HMS FMP and its amendments. All dealer permit holders are required to submit reports detailing the nature of their business. Since 2013, swordfish dealers must submit weekly electronic dealer reports on all HMS, other than bluefin tuna, that they purchase. To facilitate quota monitoring, "negative reports" are also required from swordfish dealers when no purchases are made (*i.e.*, NOAA Fisheries can determine who has not purchased fish versus who has neglected to report).

Table 6.2 2015 to 2020 Number of Swordfish Dealer Permits Issued*

Year	Swordfish Dealers	Shark Dealers
2015	184	102
2016	182	111
2017	189	113
2018	193	108
2019	200	104
2020	200	92

* The actual number of permits per region may change as permit holders move or sell their businesses.

Gross Revenue of the Swordfish Landings by Permit Type

Table 6.3 provides data on the prices swordfish fishermen received at the dock. The average values for ex-vessel prices and the estimated swordfish landings for the HMS Commercial Caribbean Small Boat, Swordfish General Commercial, and HMS Charter/Headboat permits are from the HMS eDealer database.

Table 6.3 2019 Total Ex-Vessel Revenues of North Atlantic Swordfish Landings from HMS Commercial Caribbean Small Boat permit, Swordfish General Commercial, and HMS Charter/Headboat Permit Holders

Permit Type	(A) Average Ex-Vessel Price*	(B) Total Landings (lb dw)	(C) Total Ex-Vessel Revenue (A x B)
HMS Commercial Caribbean Small Boat	$4.88	1,953	$9,531
Swordfish General Commercial	$4.88	4,060	$19,813
HMS Charter/Headboat with a commercial sale endorsement	$4.88	7,433	$36,273

Source: eDealer database.

*Average price of swordfish from all three of the handgear affected by this rule.

6.3 Statement of Problem

Please see Chapter 1 for a description of the problem and need for this rulemaking.

6.4 Description of Each Alternative

Please see Chapter 2.0 for a summary of each alternative suite and Chapter 4.0 for a complete description of each alternative and its expected ecological, social, and economic impacts. Chapters 3.0 and 6.0 provide additional information related to the economic impacts of the alternative suites.

6.5 Economic Analysis of Expected Effects of Each Alternative Relative to the Baseline

Table 6.4 summarizes the net economic benefits and costs of each of the alternatives analyzed in this EA. Additional details and more complete analyses are provided in Chapter 4.

6.6 Conclusion

As noted above, under E.O. 12866, a regulation is a "significant regulatory action" if it is likely to: (1) have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order. Pursuant to the procedures established to implement section 6 of E.O. 12866, the Office of Management and Budget has determined that this action is not significant. A summary of the expected net economic benefits and costs of each alternative, which are based on supporting text in Chapter 4, can be found in Table 6.4.

Table 6.4 Net Economic Benefits and Costs of Alternatives.

Alternatives	Economic Benefits	Economic Costs
Alternative A1: No action	None.	This alternative could continue to cause confusion among permit holders if the retention limits in different regions and for different permit holders are not changed at the same time.
Alternative A2 *Preferred Alternative*	This alternative could provide some additional fishing opportunities to the U.S. Caribbean region when other factors, such as availability of fish on the grounds and available quota, support such an increase. It would also reduce administrative costs and allow NOAA Fisheries to be more responsive to the changes needed in the swordfish fishery within the fishing season.	None.
Alternative A3 *Preferred Alternative*	This alternative could provide some additional fishing opportunities to the U.S. Caribbean region when other factors, such as availability of fish on the grounds and available quota, support such an increase. It would also reduce administrative costs and allow NOAA Fisheries to be more responsive to the changes needed in the shark fishery within the fishing season.	None.
Alternative B1: No action	None.	This alternative would continue to maintain management measures that may not be addressing the current needs (i.e., increasing retention limits), restricting NOAA Fisheries' ability to provide additional fishing opportunities to fishermen when other factors, such as availability of fish on the grounds and available quota, support such an increase.
Alternative B2	Because this alternative would allow for some increases in retention limits, under this alternative, fishermen could land additional fish. The additional revenue per vessel depends on the increase above the default swordfish retention limit, which could range from $673.44 under a two swordfish limit to $2,020.32 under a six swordfish limit. In total, this could have an annual benefit of $8,081.28, $58,589.28, and $58,589.28 per vessel for HMS Commercial Caribbean Small Boat, Swordfish General Commercial, and HMS Charter/Headboat (with a commercial sale endorsement) permit holders, respectively.	None.
Alternative B3	Similar to Alternative B2. The additional revenue per vessel depends on the increase above the default swordfish retention limit, which could range from $2,020.32 under a 6 swordfish limit to $6,060.96 under an 18 swordfish limit. In total, this could have an annual benefit of $8,081.28, $175,767.84, and $175,767.84 per vessel for HMS Commercial Caribbean Small Boat, Swordfish General Commercial, and HMS Charter/Headboat (with a commercial sale endorsement) permit holders, respectively.	None.
Alternative B4 *Preferred Alternative*	Similar to Alternative B2. The potential increase in revenue would be approximately $6,060.96 per vessel per trip under an 18 fish retention limit. In total, this could have an annual benefit of $24,243.84, $175,767.84, and $175,767.84 per vessel for HMS Commercial Caribbean Small Boat, Swordfish General Commercial, and HMS Charter/Headboat (with a commercial sale endorsement) permit holders, respectively	None.
Alternative C1: No action	None.	This alternative would continue to maintain management measures that may not be addressing the current needs (i.e., increasing retention limits), restricting NOAA Fisheries' ability to provide additional fishing opportunities to fishermen when other factors, such as availability of fish on the grounds and available quota, support such an increase.
Alternative C2	Because this alternative would increase the shark retention limit, under this alternative, fishermen could land additional fish. This increase in the retention limit could, depending on the retention limit, result in revenues of $0 (under a status quo) to as much as $835 to $5,067, depending on the species composition of the catch.	None.
Alternative C3	Similar to Alternative C2. This increase in the retention limit could, depending on the retention limits, result in revenues of $0 (under a zero fish limit) to as much as $969 to $12,817, depending on the species composition of the catch.	This alternative could potentially slow down the rebuilding of overfished stocks, especially if there is a lack of timely reporting of landings. This alternative could also have minor adverse ecological impacts to scalloped hammerhead sharks, which have been determined to be threatened under the ESA in the Caribbean.
Alternative C4 *Preferred Alternative*	Because this alternative would increase the shark retention limit, under this alternative, fishermen could land additional fish. This increase in the retention limit could, depending on the retention limit, result in revenues of $0 (under a status quo) to as much as $484 to $5,067, depending on the species composition of the catch.	This alternative could potentially slow down the rebuilding of overfished stocks, especially if there is a lack of timely reporting of landings. This alternative could

		also have minor adverse ecological impacts to scalloped hammerhead sharks, which have been determined to be threatened under the ESA in the Caribbean.

7.0 Final Regulatory Flexibility Act

This Final Regulatory Flexibility Analysis (FRFA) is conducted to comply with the Regulatory Flexibility Act (5 U.S.C. 601 et seq.) (RFA). The goal of the RFA is to minimize the economic burden of federal regulations on small entities. To that end, the RFA directs federal agencies to assess whether a proposed regulation is likely to result in significant economic impacts to a substantial number of small entities, and identify and analyze any significant alternatives to the proposed rule that accomplish the objectives of applicable statutes and minimize any significant effects on small entities. Certain data and analysis required in an FRFA are also included in other Chapters of this document. Therefore, this FRFA incorporates by reference the economic analyses and impacts in Chapter 4 of this document.

7.1 Statement of the Need for and Objectives of this Final Rule

Section 604 (a)(1) of the RFA requires Agencies to state the need for and objective of, the final action.

The objectives of this rulemaking are to provide consistency between the three open access swordfish handgear permits, all of which allow similar gears to be used within U.S. Atlantic and Caribbean waters, and to provide increased fishing opportunities for sharks in the U.S. Caribbean. Furthermore, this final action would increase administrative efficiencies and increase management flexibility by managing the open access swordfish commercial permits similarly.

7.2 A Summary of the Significant Issues Raised by the Public Comments in Response to the Initial Regulatory Flexibility Analysis, a Summary of the Agency's Assessment of Such Issues, and a Statement of Any Changes Made in the Rule as a Result of Such Comments.

Section 604(a)(2) requires that a FRFA include 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.

During the public comment period, commenters requested NOAA Fisheries implement a higher swordfish retention limit given the health of the stock, the availability of the resource, and the capacity and need of some permit holders to transport more than six swordfish when traveling further offshore to fishing grounds. Based on public comment, NOAA Fisheries now prefers Alternative B4, instead of the preferred alternative in the Draft EA, Alternative B2, as this alternative will provide consistency in swordfish retention limits among the three open access swordfish handgear permits and a higher retention limit than the one proposed, which would provide additional fishing opportunities because trips that target swordfish farther offshore will be profitable under the higher retention limit.

During the public comment period, some commenters expressed support for the preferred alternative in the Draft EA, Alternative C2, but also argued that smoothhound sharks are only caught incidentally and are not a target species. As a result, these commenters were concerned that Alternative C2 would place any shark meat demand solely on tiger sharks. The

commenters also felt Alternative C2 could potentially result in fishermen discarding sharks until tiger or smoothhound sharks were landed, potentially increasing fishing effort, discards, and shark mortality. The commenters also opposed the retention of any prohibited species along with some specific species, including pelagic and hammerhead sharks, given concerns regarding those species' vulnerability to fishing pressure, stock status, and effects on reef systems and ecotourism. Some commenters indicated that NOAA Fisheries should combine Alternative C2 with Alternative C3 to allow for fishing opportunities to harvest sustainably managed sharks, with a retention limit not to exceed six sharks given the capacity and size of the vessels, while avoiding overharvest of specific shark species, including pelagic and hammerhead sharks. Commenters also requested NOAA Fisheries provide extensive outreach and education to fishermen and government agencies on species identification and permit requirements. After considering public comment, NOAA Fisheries created a new alternative, Alternative C4 to address the issues raised by the public.

NOAA Fisheries 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. All of the comments and responses to the comments are summarized in Appendix I of the Final EA.

7.3 Description and Estimate of the Number of Small Entities to Which the Final Rule Would Apply

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 Advocacy and an opportunity for public comment (see 13 CFR 121.903(c)). Under this provision, NOAA Fisheries may establish size standards that differ from those established by the SBA Office of Size Standards, but only for use by NOAA Fisheries 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, NOAA Fisheries must publish such size standards in the Federal Register (FR), which NOAA Fisheries did on December 29, 2015 (80 FR 81194, December 29, 2015). In this final rule effective on July 1, 2016, NOAA Fisheries 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. NOAA Fisheries considers all HMS permit holders to be small entities because they had average annual receipts of less than $11 million for commercial fishing.

As discussed in Section 6.2.1, the final rule would apply to the 665 Swordfish General Commercial permit holders, 30 HMS Commercial Caribbean Small Boat permit holders, and 3,839 HMS Charter/Headboat permit holders with a commercial sale endorsement. Active permit holders are defined as those with valid permits that landed one swordfish based on HMS electronic dealer reports. Of those 665 Swordfish General Commercial permit holders, 19 landed swordfish in 2020. Of 30 HMS Commercial Caribbean Small Boat permit holders, two landed

swordfish in 2020. Of the 3,839 HMS Charter/Headboat vessels, 23 had an active commercial sale endorsement, and landed swordfish in 2020. NOAA Fisheries has determined that the final rule would not likely affect any small governmental jurisdictions. More information regarding the description of the fisheries affected, and the categories and number of permit holders can be found in Chapter 6.

7.4 Description of the Projected Reporting, Record keeping, and other Compliance Requirements of the Final Rule, including an Estimate of the Classes of Small Entities which will be Subject to the Requirements of the Report or Record

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.

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

Under section 604(a)(6) of the RFA requires Agencies in the FRFA 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. These impacts are discussed below and in Chapters 4 and 6 of this document.

The alternatives considered and analyzed are described below. The FRFA assumes that each vessel will have similar catch and gross revenues to show the relative impact of the final action on vessels.

Alternative A1 would maintain the current ability to adjust the regional swordfish retention limits for vessels possessing the HMS Commercial Caribbean Small Boat permit only through framework adjustment procedures. *See* 50 CFR 635.34(b). This alternative would not result in any change in economic impacts, and would have neutral economic impacts on HMS permit holders.

Alternative A2, the preferred alternative, would provide NOAA Fisheries the ability to adjust the swordfish retention limit for the HMS Commercial Caribbean Small Boat fishery on an inseason basis, as needed. NOAA Fisheries already has the ability to adjust the swordfish retention limits under the Swordfish General Commercial and HMS Charter/Headboat permits. Under this alternative, NOAA Fisheries would have more flexibility in the regulations to be more responsive to the changes needed in the swordfish fishery within the fishing season. The alternative would provide for a new regulatory process that would not change the actual retention limits. Therefore, this alternative would have neutral economic impacts to HMS permit holders.

Alternative A3, the preferred alternative, would provide NOAA Fisheries the ability to adjust the shark retention limit for the HMS Commercial Caribbean Small Boat fishery on an inseason basis, as needed. NOAA Fisheries already has the ability to adjust the shark retention limits under shark inseason trip limit adjustment authorization criteria for commercial shark

fishermen. Under this alternative, NOAA Fisheries would have more flexibility in the regulations to be more responsive to the changes needed in the shark fishery within the fishing season. The alternative would provide for a new regulatory process that would not change the actual retention limits. Therefore, this alternative would have neutral economic impacts to HMS permit holders.

Under Alternative B1, the No Action alternative, NOAA Fisheries would maintain the existing swordfish retention limits within the swordfish management regions for all vessels possessing an HMS Commercial Caribbean Small Boat permit, a Swordfish General Commercial permit, or an HMS Charter/Headboat permit on a commercial trip. For vessels possessing a Swordfish General Commercial permit or vessels with an HMS Charter/Headboat permit on a commercial trip, the current range of swordfish retention limits is zero to six swordfish per vessel per trip for all regions with the default retention limits (see Table 4.1). For the HMS Commercial Caribbean Small Boat permit, the retention limit is two swordfish per vessel per trip. As discussed in Chapter 3, a single swordfish is estimated to be worth $336.72 (ex-vessel), on average, whereas six swordfish are estimated to be worth $2,020.32 (ex-vessel). Under this alternative, the potential gross revenue per trip for each HMS Commercial Caribbean Small Boat vessel landing the trip limit would be approximately $673.44 based on the average ex-vessel price of swordfish. Similarly, the potential gross revenue per trip for vessels possessing a Swordfish General Commercial permit or HMS Charter/Headboat permit on a commercial trip fishing in either the U.S. Caribbean, Northwest Atlantic or Gulf of Mexico and landing the full trip limit would be $2,020.32, with gross revenue from swordfish ranging from either $673.44662 under a two swordfish limit or $1,010.16 under a three swordfish limit to $2,020.32 under a six swordfish limit. Alternative B1 would result in neutral economic impacts in the short- and long-term since there is no change in the management structure of the swordfish fishery.

Under Alternative B2, NOAA Fisheries would maintain the default swordfish retention limit of zero swordfish per vessel per trip for the Florida Management Region and establish a default swordfish retention limit of six swordfish per vessel per trip for all other regions and for HMS Commercial Caribbean Small Boat and Swordfish General Commercial permit holders, and HMS Charter/Headboat permit holders with a commercial sale endorsement. For these permits holders in all regions, the retention limit range would be zero to six swordfish per vessel per trip. Under this alternative, the potential gross revenue per trip for each vessel that has landed the maximum allowed trip limit under either of the three swordfish commercial swordfish permits (HMS Commercial Caribbean Small Boat permit, Swordfish General Commercial permit, and HMS Charter/Headboat permit, on a commercial trip) and within the U.S. Caribbean, Northwest Atlantic, and Gulf of Mexico would be $2,020.32 per vessel per trip (Table 4.1). For example, for a vessel making ten trips per year and retaining the six swordfish limit each trip, the annual gross revenue derived from swordfish would generate up to $20,203.20. By having a higher default trip limit for swordfish, this alternative would continue to provide a seasonal, or secondary, fishery for most participants as well as new economic benefits to some fishermen as well as fishing tackle manufacturers and suppliers, bait suppliers, fuel providers, and swordfish dealers. Alternative B2 would likely result in overall neutral economic impacts in the short- and long-term. NOAA Fisheries has increased the swordfish retention limit in the Northwest Atlantic and Gulf of Mexico, and the U.S Caribbean regions to six every year since the implementation of the Swordfish General Commercial permit, thus any economic impact would be neutral for Swordfish General Commercial permit holders and HMS Charter/Headboat permit holders with a commercial sale endorsement. For the HMS Commercial Caribbean Small Boat permit holders,

there would be a minor increase in revenue, but this minor increase would not have significant economic impacts for the fishery overall.

Under Alternative B3, the retention limit range would be increased for Swordfish General Commercial permit holders and HMS Charter/Headboat permit holders with a commercial sale endorsement, from zero to six swordfish per vessel per trip to 0-18 swordfish per vessel per trip for all regions with the same default retention limits as Alternative B2. For the HMS Commercial Caribbean Small Boat permit, NOAA Fisheries would establish a swordfish retention limit range of 0-18 swordfish per vessel per trip with a default retention limit of six swordfish per vessel per trip. Similar to Alternative B2, this alternative would establish a default swordfish retention limit of six swordfish per vessel per trip for the HMS Commercial Caribbean Small Boat permit holder within the U.S. Caribbean region. However, unlike Alternative B2, this alternative would increase the default swordfish retention limit from six swordfish per vessel per trip to 18 swordfish per vessel per trip for vessels possessing a Swordfish General Commercial permit, or vessels with an HMS Charter/Headboat permit with a commercial sale endorsement within the Northwest Atlantic, Gulf of Mexico, and the U.S. Caribbean swordfish management regions. The default swordfish retention trip limit for the Florida Swordfish Management Area would remain at zero. Under this alternative, the potential gross revenue for each vessel that has landed the maximum allowed trip limit under an HMS Commercial Caribbean Small Boat permit within the U.S. Caribbean region would be $2,020.32 per vessel per trip with gross revenue per trip from swordfish ranging from $2,020.32 to $6,060.96 under a six and eighteen swordfish limit, respectively (Table 4.1). Similarly, the potential gross revenue per trip for vessels possessing a Swordfish General Commercial permit or vessels with an HMS Charter/Headboat permit on a commercial trip fishing in either the U.S. Caribbean, Northwest Atlantic or Gulf of Mexico swordfish management regions retaining the maximum allowed limit on each trip would be $6,060.96 per vessel per trip (Table 4.1). For example, for a vessel making ten trips per year and retaining the maximum allowable limit (i.e., an 18 swordfish retention limit) each trip, the annual gross revenue derived from swordfish would generate up to $60,609.60. By having a higher default trip limit for swordfish, this alternative would continue to provide a seasonal, or secondary, fishery for most participants as well as new economic benefits to some fishermen as well as fishing tackle manufacturers and suppliers, bait suppliers, fuel providers, and swordfish dealers. Alternative B3 would likely result in minor beneficial direct economic impacts on HMS Caribbean Commercial Small Boat permit holders, Swordfish General Commercial permit holders or HMS Charter/Headboat permit holders with a commercial sale endorsement in the short- and long-term since the retention limit is set above the default limit for all swordfish management region, resulting in fishermen potentially realizing higher trip revenues since fishermen would have more swordfish to sell.

Under Alternative B4, the preferred alternative, NOAA Fisheries would increase the retention limit range to 0-18 swordfish per vessel per trip for all regions (i.e., Florida Swordfish Management area, and the U.S. Caribbean, the Gulf of Mexico, and the Northwest Atlantic regions) for all three swordfish commercial permits. The default swordfish retention limit for these permit holders in all regions would be set at 18 swordfish per vessel per trip, except for the Florida Swordfish Management Area, which would have a default swordfish retention limit of zero. As noted above, Alternative B3 would make the same modifications, but with a lower (six swordfish) default retention limit for the HMS Commercial Caribbean Small Boat permit within the U.S. Caribbean region. Similar to Alternative B3, the potential gross revenue per trip for each

vessel that has landed the maximum allowed trip limit (i.e., an 18 swordfish retention limit) with an HMS Commercial Caribbean Small Boat permit, a Swordfish General Commercial permit, or a vessel with an HMS Charter/Headboat permit on a commercial trip fishing in either the U.S. Caribbean, the Northwest Atlantic or the Gulf of Mexico swordfish management regions would be $6,060.96 (Table 4.1). For example, for a vessel making ten trips per year and retaining the maximum allowable limit (i.e., an 18 swordfish retention limit) each trip, the annual gross revenue derived from swordfish would generate up to $60,609.60. Similar to Alternative B3, by having a higher default trip limit for swordfish, this alternative would continue to provide a seasonal, or secondary, fishery for most participants. Increasing the retention limit above the default limit for all swordfish management regions would realize higher trip revenues since fishermen would have more swordfish to sell. Alternative B4 would likely result in minor beneficial direct economic impacts on HMS Commercial Caribbean Small Boat permit holders, Swordfish General Commercial permit holders or HMS Charter/Headboat permit holders with a commercial sale endorsement in the short- and long-term since the retention limit is set above the default limit for all swordfish management regions, resulting in fishermen potentially realizing higher trip revenues since fishermen would have more swordfish to sell.

Under Alternative C1, the No Action alternative, NOAA Fisheries would maintain the current retention limit of zero sharks per vessel per trip for vessels issued an HMS Commercial Caribbean Small Boat permit. Thus, this alternative would result in neutral direct economic impacts to HMS Commercial Caribbean Small Boat permit holder in the short- and long-term. However, the No Action alternative would maintain management measures that may not be addressing multiple requests (see Chapter 1) by commercial shark fishermen to land a limited number of sharks, restricting NOAA Fisheries' ability to provide additional fishing opportunities to fishermen when other factors, such as availability of fish on the grounds and available quota, support such an increase.

Under Alternative C2, NOAA Fisheries would establish a default shark retention limit of three smoothhound and/or tiger sharks (combined) per vessel per trip for the HMS Commercial Caribbean Small Boat permit holders. The retention limit range would be zero to three smoothhound and/or tiger sharks (combined) per vessel per trip. The retention of any other shark species would not be allowed under this alternative. Table 4.3 summarizes the potential increase in annual ex-vessel revenue based on average weight and price data of smoothhound and tiger sharks. If a fisherman landed the maximum trip limit, with only tiger sharks being caught, and takes two trips per month (24 trips per year), then the annual revenue per vessel associated with this activity would be $5,067. If the vessel landed the full trip limit and conducted two trips per month (24 trips per year), with only smoothhound sharks being caught, then the annual revenue per vessel would be $835. Because the Agency would have the authority to adjust the shark retention limit from zero to three, the annual ex-vessel revenue estimates could vary from $0 (under a zero fish limit) to as much as $835 to $5,067, depending on the species composition of the catch. This minor increase in per trip and annual revenue would result in neutral economic impacts in the short- and long-term to the HMS Commercial Caribbean Small Boat permit holders because any potential increase would be relatively minor.

Under Alternative C3, NOAA Fisheries would establish a default retention limit of six non-prohibited large coastal, small coastal, pelagic, and/or smoothhound sharks (combined) per vessel per trip for HMS Commercial Caribbean Small Boat permit holders. The retention limit

range would be zero to six for non-prohibited large coastal, small coastal, pelagic, and smoothhound sharks (combined) per vessel per trip.

Table 4.4 summarizes the potential increase in annual ex-vessel revenue based on average weight and price data of non-prohibited large coastal, small coastal, pelagic, and smoothhound sharks. If a fisherman landed the maximum trip limit, with only large coastal sharks being caught, and takes two trips per month (24 trips per year), then the annual revenue per vessel associated with this activity would be $10,135 (

Table 4.4). Assuming a successful trip and two trips per month, the annual revenue per vessel associated with fishermen landing the full trip limit of either, small coastal, pelagic or smoothhound sharks would be $969, $12,817, and $1,669, respectively. Because the Agency would have the authority to adjust the shark retention limit from zero to six, the annual ex-vessel revenue estimates could vary from $0 (under a zero fish limit) to as much as $969 to $12,817, depending on the species composition of the catch. This minor increase in per trip and annual revenue would result in neutral economic impacts to the HMS Commercial Caribbean Small Boat permit holders in the short- and long-term because any potential increase would be relatively minor.

Under Alternative C4, the preferred alternative, NOAA Fisheries would establish a retention limit range of zero to three non-prohibited large coastal, small coastal, and/or smoothhound sharks (combined) per vessel per trip, with a default retention limit of three sharks per vessel per trip. The retention of pelagic, hammerhead, silky, blacknose, sandbar, and prohibited sharks is not allowed under this alternative. Table 4.5 summarizes the potential increase in annual ex-vessel revenue based on average weight and price data of non-prohibited large coastal, small coastal, and smoothhound sharks. Assuming a successful trip and two trips per month (24 trips per year), the annual revenue per vessel associated with fishermen landing the full trip limit of either non-prohibited large coastal, small coastal, or smoothhound sharks would be $5,067, $484, and $835 respectively. Because the Agency would have the authority to adjust the shark retention limit from zero to three, the annual ex-vessel revenue estimates could vary from $0 (under a zero fish limit) to as much as $484 to $5,067, depending on the species composition of the catch. This minor increase in per trip, and annual revenue would result in neutral direct socioeconomic impacts in the short- and long-term to the HMS Commercial Caribbean Small Boat permit holders because any potential increase would be relatively minor.

At the proposed rule stage, NOAA Fisheries preferred Alternative C2, limiting the harvest to up to three tiger and/or smoothhound shark (combined) per vessel per trip for HMS CCSB permit holders. During the public comment period, some commenters expressed support for Alternative C2, but also argued that smoothhound sharks are only caught incidentally and are not a target species. As a result, these commenters were concerned that Alternative C2 would place any shark meat demand solely on tiger sharks. The commenters also felt Alternative C2 could potentially result in fishermen discarding sharks until tiger or smoothhound sharks were landed, potentially increasing fishing effort, discards, and shark mortality. The commenters also opposed the retention of any prohibited species along with some specific species, including pelagic and hammerhead sharks, given concerns regarding those species' vulnerability to fishing pressure, stock status, and effects on reef systems and ecotourism. Some commenters indicated that NOAA Fisheries should combine Alternative C2 with Alternative C3 to allow for fishing

opportunities to harvest sustainably managed sharks, with a retention limit not to exceed six sharks given the capacity and size of the vessels, while avoiding overharvest of specific shark species, including pelagic and hammerhead sharks. Commenters also requested NOAA Fisheries provide extensive outreach and education to fishermen and government agencies on species identification and permit requirements. After considering public comment, NOAA Fisheries created this new alternative, Alternative C4. This alternative is preferred because it is responsive to public comments and would meet the management goals highlighted in Chapter 1 by providing increased fishing opportunities to harvest sustainably managed sharks at incidental levels while still avoiding overharvest of specific species.

8.0 Applicable Law

8.1 Magnuson-Stevens Fishery Conservation and Management Act

NOAA Fisheries has determined that this action is consistent with the Magnuson-Stevens Act and other applicable laws, and the analyses in this document are consistent with the Magnuson-Stevens Act National Standards (see 50 CFR Part 600, Subpart D for National Standard Guidelines).

National Standard 1 requires NOAA Fisheries to prevent overfishing while achieving, on a continuing basis, optimum yield from each fishery for the U.S. fishing industry. As summarized in other chapters and in recent documents, over the past several years, NOAA Fisheries has undertaken numerous management actions, including the 2006 Consolidated Atlantic HMS FMP (NOAA Fisheries 2006), Amendment 2 to the 2006 Consolidated Atlantic HMS FMP (73 FR 40657, July 7, 2008), Amendment 3 to the 2006 Consolidated HMS FMP (76 FR 70064, November 10, 2011), Amendment 4 to the 2006 Consolidated HMS FMP (77 FR 59842, October 1, 2012), Amendment 5a to the 2006 Consolidated HMS FMP (78 FR 40317, July 3, 2013), Amendment 6 to the 2006 Consolidated HMS FMP (79 FR 30064; May 27, 2014), Amendment 8 to the 2006 Consolidated HMS FMP (78 FR 52011, August 21, 2013), and Amendment 9 to the 2006 Consolidated HMS FMP (79 FR 46217, August 7, 2014) to address the management of commercial swordfish within the swordfish management region and to address overfishing and to rebuild shark stocks. The preferred alternatives were specifically designed to be consistent with National Standard 1, by allowing more fishing opportunities for swordfish and sharks, and utilization of the North Atlantic swordfish and Atlantic shark quotas, and increasing flexibility in seasonal management of swordfish and sharks, while still preventing overfishing. The preferred alternatives are not expected to have significant impacts on the allowable level of fishing pressure, catch rates, or distribution of fishing effort.

National Standard 2 requires that conservation and management measures be based on the best scientific information available. The preferred alternatives in this document are consistent with National Standard 2. The preferred alternatives are based on retention limits and permit conditions previously analyzed in Amendment 4 (77 FR 59842, October 1, 2012), Amendment 6 (79 FR 30064; May 27, 2014), Amendment 8 (78 FR 52011, August 21, 2013), and Amendment 9 (79 FR 46217, August 7, 2014); the preferred alternatives consider the relevant shark and swordfish status information; and the data used for the analysis in the document consists of dealer reports and U.S. Caribbean trip ticket data from the last four years. Taken together, this information constitutes the best scientific information available. As such, the preferred alternatives are based on the best scientific information available.

National Standard 3 requires that, to the extent practicable, an individual stock of fish be managed as a unit throughout its range and interrelated stocks of fish be managed as a unit or in close coordination. The preferred alternatives in this document are consistent with National Standard 3. The preferred alternatives make management consistent throughout the range of the swordfish and shark stocks within the U.S. Exclusive Economic Zone and in state waters as a condition of federal HMS fishing permits, unless the state has measures that are more restrictive.

National Standard 4 requires that conservation and management measures do not discriminate between residents of different states. Furthermore, if it becomes necessary to allocate or assign fishing privileges among various U.S. fishermen, such allocation should be fair and equitable to all fishermen; be reasonably calculated to promote conservation; and should be carried out in such a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges. The preferred alternatives in this document are consistent with National Standard 4. They do not allocate or assign fishing privileges. The preferred alternatives apply to permit holders across the entire Atlantic, Gulf of Mexico, and U.S. Caribbean Exclusive Economic Zone and set the same retention limits for swordfish and establish the same regulatory procedures (i.e., inseason adjustment authorization) across all swordfish management regions except the Florida Swordfish Management area, which would have a default retention limit of zero. The swordfish retention limit in the Florida Swordfish Management area is and would continue to be different than other areas because of gear conflict concerns due to high numbers of fishermen fishing in a small area.

National Standard 5 requires that conservation and management measures should, where practicable, consider efficiency in the utilization of fishery resources, with the exception that no such measure shall have economic allocation as its sole purpose. The preferred alternatives in this document are consistent with National Standard 5. The preferred alternatives have been designed to increase efficiency by providing for the modification of regional swordfish and shark retention limits, while allowing for inseason flexibility to adjust the HMS Commercial Caribbean Small Boat permit retention limit in order to maximize full quota utilization, while still preventing overfishing. As demonstrated in the Final EA, none of the preferred alternatives has economic allocation as its sole purpose.

National Standard 6 states that conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches. The preferred alternatives in this document are consistent with National Standard 6. Each of the preferred alternatives would implement measures that consider the variations among, and contingencies in, fisheries, fishery resources, and catches. They provide additional fishing opportunities while providing flexibility regarding when to increase the regional swordfish and shark retention limits for the HMS Commercial Caribbean Small Boat permit during the season.

National Standard 7 states that conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication. The preferred alternatives in this document are consistent with National Standard 7. The preferred alternatives were chosen, in part, to minimize costs while meeting required conservation goals. The economic impacts section of the EA provides detailed analyses of the costs associated with each alternative. The preferred alternatives were also structured to avoid unnecessary duplication by taking into account the range of alternatives as well as existing requirements on the relevant fishery.

National Standard 8 states that conservation and management measures shall, consistent with the conservation requirements of the Magnuson-Stevens Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to provide for the sustained participation of such communities, and to the extent practicable, minimize adverse economic impacts on such communities. The preferred alternatives in this document are consistent with National Standard

8. The socioeconomic impacts of these alternatives on fishing communities are expected to be neutral to minor beneficial and were considered in Chapters 4, 6, and 7.

National Standard 9 states that conservation and management measures shall, to the extent practicable, minimize bycatch, and to the extent that bycatch cannot be avoided, minimize the mortality of such bycatch. The preferred alternatives in this document are consistent with National Standard 9. The preferred alternatives are not expected to cause significant changes in fishing effort, areas, or practices, and thus are not expected to lead to increases in potential bycatch or increased interactions with non-target, incidentally caught species, including protected species.

National Standard 10 states that conservation and management measures shall, to the extent practicable, promote the safety of human life at sea. The preferred alternatives in the document are consistent with National Standard 10. No impact to safety of life at sea is anticipated to result from these preferred alternatives. The preferred alternatives would not result in fishermen having to travel greater distances, fish in bad weather, or otherwise fish in an unsafe manner.

8.2 E.O. 13132: Federalism

This action does not contain regulatory provisions with federalism implications sufficient to warrant preparation of a Federalism Assessment under E.O. 13132.

8.3 References

NOAA Fisheries. 2003. Final Amendment 1 to the Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks, and Highly Migratory. NOAA, National Marine Fisheries Service, Highly Migratory Species Management Division, Silver Spring, MD. Public Document.

MRAG, Americas, Inc., and M. Jepson. 2008. Updated Profiles for HMS Dependent Fishing Communities: Social Impact Assessment Services for HMS Fishing Communities. Solicitation Number: DG133F06RQ0381, 84 pp.

NOAA Fisheries. 2006. Final Consolidated Atlantic Highly Migratory Species Fishery Management Plan. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, 1315 East West Highway, Silver Spring, MD. Public Document. pp. 1600.

NOAA Fisheries. 2012. Final Amendment 4 to the Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks, and Highly Migratory. NOAA, National Marine Fisheries Service, Highly Migratory Species Management Division, Silver Spring, MD. Public Document.

NOAA Fisheries. 2013. Final Amendment 8 to the Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks, and Highly Migratory. NOAA, National Marine Fisheries Service, Highly Migratory Species Management Division, Silver Spring, MD. Public Document.

NOAA Fisheries. 2020. 2019 Stock Assessment and Fishery Evaluation Report for Atlantic Highly Migratory Species. Silver Spring MD: U.S. Department of Commerce, National Marine Fisheries Service. 280 pp.

9.0 List of Preparers

The development of this rulemaking involved input from many people within NOAA Fisheries, contractors, and input from the public, constituent groups, and the HMS Advisory Panel. Staff and contractors from the Office of Sustainable Fisheries HMS Management Division, in alphabetical order, who worked on this document include:

Nicolas Alvarado, PhD, Fishery Management Specialist

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Please contact the HMS Management Division for a complete copy of current regulations for the Atlantic HMS commercial and recreational fisheries.

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9.1 List of Agencies/Persons Consulted

Discussions relevant to the formulation of the preferred alternatives and the analyses for this document involved input from individuals from several constituent groups and NOAA Fisheries offices, including the NOAA Office of General Counsel, Fisheries and Protected Resources Section, the members of the Atlantic HMS Advisory Panel (which include representatives from the commercial and recreational fishing industries, environmental and academic organizations, states, and fishery management councils). NOAA Fisheries also considered the numerous public comments received at HMS Advisory Panel meetings, Regional Fishery Management Council meetings, public hearings, and from individual fishermen and interested parties regarding these issues.

Appendix I. Response to Comments

Retention limit inseason adjustment process (Alternatives A1 - A3)

Comment 1: NOAA Fisheries received multiple comments stating that NOAA Fisheries should prefer the No Action alternative (Alternative A1) regarding the inseason adjustment process. In addition, the Puerto Rico Department of Natural and Environmental Resources (PR DNER) stated that the inseason retention limit adjustment process should not be changed because of the lack of data in the U.S. Caribbean region.

Response: NOAA Fisheries disagrees that a lack of data in the U.S. Caribbean region negates the ability to adopt inseason adjustment criteria. Alternatives A2 and A3 simply establish inseason adjustment criteria. Any inseason adjustment to the retention limits would be based upon the best scientific information available, consistent with the Magnuson-Stevens Act and other applicable laws. These data include the relevant shark and swordfish status information, dealer reports, and U.S. Caribbean trip ticket data. Similarly, if NOAA Fisheries maintains the No Action alternative and adjusts the retention limit via a framework action, NOAA Fisheries would use the same data. Under NOAA Fisheries' preferred alternatives A2 and A3, the adjustment process would be more flexible and the retention limits could be adjusted more quickly than would be done under the existing process. These alternatives could result in an increased likelihood that the retention limits would be adjusted as needed throughout the year, reducing administrative costs and potentially providing more timely management changes to swordfish and shark fishermen. This flexibility in reacting to the available data can assist in maintaining sustainable stocks and ensuring quotas are not exceeded.

Additionally, National Standard 3 requires that, to the extent practicable, an individual stock of fish be managed as a unit throughout its range and interrelated stocks of fish be managed as a unit or in close coordination. The preferred alternatives (Alternatives A2 and A3) make management consistent throughout the range of the swordfish and shark stocks within the U.S. Exclusive Economic Zone as well as in state waters, because federal HMS permit holders must comply with federal regulations no matter where they fish, unless a state has measures that are more restrictive.

Swordfish retention limits (Alternatives B1-B4)

Comment 2: NOAA Fisheries received suggestions regarding potential ways to adjust the swordfish retention limit in order to ensure the swordfish quota is not exceeded. One suggestion was starting with an 18 fish per vessel per trip retention limit for all affected permit holders and reducing that to six fish per vessel per trip when 80 percent of the quota is reached. Another suggestion was a 15 swordfish retention limit that drops to six fish once 50,000 lb of swordfish has been landed. Another suggestion was a 25-mt set-aside quota for the affected permit holders; the retention limit would be reduced to zero once that set-aside quota was reached.

Response: Currently, before making any inseason adjustments to regional retention limits for the Swordfish General Commercial permit, NOAA Fisheries considers the inseason adjustment criteria and other relevant factors codified in 50 CFR 635.24 (b)(4)(iv)(A)-(G).

NOAA Fisheries uses these criteria when determining whether retention limits need to be modified in the middle of a fishing season. Under preferred Alternative A2, NOAA Fisheries would adopt identical inseason adjustment criteria to allow for the adjustment of the regional swordfish retention limit for the HMS Commercial Caribbean Small Boat permit as well. While the suggestions provided are not explicitly incorporated into the inseason adjustment criteria, they are consistent with the factors NOAA Fisheries considers before making any inseason adjustments. For instance, if NOAA Fisheries determines that the retention limit for Swordfish General Commercial, HMS Commercial Caribbean Small Boat, and/or HMS Charter/Headboat permit holders could lead to an overharvest of the swordfish quota or lead to limited opportunities for vessels in other regions, as indicated under criteria C (the estimated amounts by which quotas for other categories of the fishery might be exceeded) or F (effects of catch rates in one region precluding vessels in another region from having a reasonable opportunity to harvest a portion of the overall swordfish quota), NOAA Fisheries can reduce the retention limit inseason to reduce the rate of landings under the inseason adjustment criteria in this final action. Based on current domestic quota utilization trends and the fact that the swordfish quota has not been fully utilized since 2003, NOAA Fisheries does not see a reason to create a separate quota category at this time.

Comment 3: NOAA Fisheries received comments supporting an increase in the swordfish retention limit to 18 fish per vessel per trip for the Swordfish General Commercial, HMS Commercial Caribbean Small Boat, and HMS Charter/Headboat permit holders. Commenters noted that the United States does not fully harvest the swordfish quota and that increasing the swordfish retention limit for these vessels could better utilize the quota. Commenters, including the Florida Fish and Wildlife Conservation Commission, also supported maintaining the zero swordfish retention limit in the Florida Swordfish Management Area.

Response: As a result of public comments and further consideration of the primary objectives of this rulemaking, NOAA Fisheries changed the preferred swordfish retention limit alternative from Alternative B2 to Alternative B4. Under Alternative B4, the default swordfish retention limit for HMS Commercial Caribbean Small Boat permit holders, and Swordfish General Commercial, and HMS Charter/Headboat permit holders outside of the Florida Swordfish Management Area would be 18 swordfish per trip. In the Florida Swordfish Management Area, the default swordfish retention limit would be zero fish for Swordfish General Commercial and HMS Charter/Headboat permit holders. NOAA Fisheries noted in the proposed rule that, with regard to Alternatives B3 and B4, it was not yet clear that Swordfish General Commercial permit holders or HMS Commercial Caribbean Small Boat permit holders would benefit from a retention limit range of zero to 18 swordfish per vessel per trip or if a default retention limit of six to 18 swordfish per trip was appropriate for the U.S. Caribbean region. Public comments indicated that a retention limit range of zero to 18 swordfish per vessel per trip and a default retention limit of 18 swordfish per trip for the U.S. Caribbean region would be beneficial and appropriate for Swordfish General Commercial permit holders and HMS Commercial Caribbean Small Boat permit holders.

The change in preferred alternatives from B2 to B4 was based on five considerations. First, one of the goals of this rulemaking is to provide consistency in swordfish retention limits among the three open access swordfish handgear permits. Thus, if an increased default retention limit for one permit is implemented, a similar default retention limit increase for the other

permits would be implemented, provided such a change is also supported. Second, the North Atlantic swordfish stock is not overfished nor is it experiencing overfishing, and therefore the stock can support higher removal levels within established quotas without jeopardizing the sustainability of the stock. Third, an increase in the retention limit to 18 swordfish per vessel per trip for Swordfish General Commercial and HMS Charter/Headboat permit holders outside of the Florida Swordfish Management Area could provide additional fishing opportunities because trips that target swordfish farther offshore will be more likely to be profitable due to the higher number of swordfish that could be landed and sold. Fourth, the HMS CCSB permit is currently underutilized by commercial fishermen in the region, and a greater retention limit of swordfish that matches the retention limit of other permits could incentivize use of the HMS Commercial Caribbean Small Boat permit. If more fishermen in the region obtain the permit and comply with the reporting requirements, NOAA Fisheries and territorial governments might receive better, more complete landings information. Fifth, this rule is also finalizing adaptive management measures (Alternative A2) that would allow NOAA Fisheries to quickly adjust swordfish retention limits regionally (down to zero fish, if necessary) in response to landings information.

Comment 4: NOAA Fisheries received comments that swordfish and shark retention limits (Alternatives C1 - C4) should not be increased until affected vessels are required to report catch in logbooks and have a vessel monitoring system (VMS) unit on board.

Response: While logbooks and VMS units can provide important information for sustainable management of HMS, their application may not be appropriate in all fisheries. In the case of HMS Commercial Caribbean Small Boat permit holders, revenues are not high enough to justify the high price of a VMS unit, which has an initial cost of over $3,000 in addition to monthly and annual service fees. The HMS Commercial Caribbean Small Boat permit was implemented to facilitate improved HMS landings data. While a logbook could provide important information in the future, the near-term priority is to gather basic landings data to help track HMS fishing mortality. Furthermore, additional logbook and VMS requirements could disincentivize fishermen from obtaining the HMS Commercial Caribbean Small Boat permit, which would be counterproductive to the permit's purpose. Currently, Commercial Caribbean Small Boat permit holders are required to report landings through territorial reporting programs.

Similarly, revenue in the Swordfish General Commercial and commercial HMS Charter/Headboat swordfish fisheries do not justify the high cost of a VMS unit. With an initial cost of $3,000 (not including monthly and annual service fees), a fisherman would need to sell 615 lb dw of swordfish to cover the cost (assuming average ex-vessel price of $4.88 per pound of swordfish). The current swordfish minimum length is equivalent to a 33 pound dressed weight fish, thus, the fishermen would need to land and sell 19 swordfish just to cover the cost of the VMS unit (615 lb dw / 33 lb minimum size = 18.6), which is more than the maximum retention limit. Thus, a fisherman would need to take approximately two trips just to cover the cost of the VMS unit. Data indicate that between 2014 and 2020, Swordfish General Commercial permit holders who retain swordfish conduct on average 29 trips per year. During that same time period, on average, approximately 15 vessels (out of 665 permitted vessels) were active annually in the fishery. Thus, the typical Swordfish General Commercial permit holder engages in fewer than two trips per year, and the cost of a VMS unit would exceed their annual ex-vessel revenue. The Agency expects this to be the case with HMS Commercial Caribbean Small Boat permit holders

too, but does not have the data necessary to perform an analogous economic analysis. As participation in these fisheries increases, data collection methodologies will be reassessed.

Regarding logbook requirements, NOAA Fisheries continues to monitor the fisheries and may increase logbook reporting requirements in the future, especially given the move towards electronic logbooks throughout the Agency and overlapping requirements between regions. For example, effective January 5, 2021, all South Atlantic Fishery Management Council and Gulf of Mexico Fishery Management Council Charter/Headboat permit holders are required to report in an electronic logbook (July 21, 2020; 85 FR 44005). Gulf of Mexico Council permit holders will also be required to submit hail in and hail out declarations via a VMS or VMS-type device that is capable of logging location data, although that requirement is delayed indefinitely per the July 21, 2020 final rule (85 FR 44005). Any HMS Charter/Headboat permit holders that are also permitted in for-hire South Atlantic or Gulf of Mexico Council fisheries will be required to abide by these reporting requirements.

Comment 5: NOAA Fisheries received multiple comments stating that the swordfish retention limit for HMS Commercial Caribbean Small Boat permit holders should not be increased above six fish per trip because the vessels engaged in that fishery cannot safely carry more than six swordfish. One commenter suggested that vessels too small to carry six or more swordfish may transfer the fish to another vessel while at sea, and that such transfers could encourage excessive landings and reduce prices in the local markets, causing economic harm. Other commenters stated that some vessels can safely hold more than 6 swordfish and that vessel safety weight limits should be left to the discretion of the vessel operator.

Response: At the proposed rule stage, NMFS preferred the alternative that would increase the retention limit range to zero to 6 swordfish per vessel per trip and the default retention limit to 6 swordfish per vessel per trip, for all three permits, because it was not clear that these permit holders would be able to benefit from a higher retention limit range. NMFS specifically requested public comments on the swordfish retention limits for these permits, and in particular, whether vessels with these permits could support the extra weight of additional swordfish. Public comments indicated that Swordfish General Commercial permit holders, HMS Charter/Headboat permit holders, and HMS Commercial Caribbean Small Boat permit holders would benefit from a retention limit range of zero to 18 swordfish per vessel per trip, and that a default retention limit of 18 swordfish per trip was appropriate for the U.S. Caribbean region because some vessels can safely hold more than 6 swordfish. After reviewing all the public comments, NOAA Fisheries feels Alternative B4, setting a retention limit range of zero to 18 swordfish per vessel per trip and a default retention limit of 18 swordfish per vessel per trip, is the most appropriate alternative to implement. In part, this is because it will give fishermen the greatest opportunity to harvest the North Atlantic swordfish quota. Additionally, an increase in the default retention limit to 18 swordfish per vessel per trip for Swordfish General Commercial and HMS Charter/Headboat permit holders outside of the Florida Swordfish Management Area could provide additional fishing opportunities, because trips that target swordfish farther offshore will now be profitable. Furthermore, the HMS CCSB permit is currently underutilized by commercial fishermen in the region, and a greater swordfish retention limit that matches the retention limit of other permits could incentivize use of the HMS CCSB permit. If more fishermen in the region obtain the permit and comply with the reporting requirements, NOAA Fisheries and territorial governments might receive better, more complete landings information. These social, economic,

and administrative benefits would not undermine the sustainable harvest of North Atlantic swordfish. As detailed in Section 3.1, the North Atlantic swordfish stock is not overfished and overfishing is not occurring. The United States has not harvested its domestic allocation of the stock in a number of years and the increased harvest by Swordfish General Commercial permit holders, HMS Charter/Headboat permit holders, and HMS Commercial Caribbean Small Boat permit holders would not jeopardize the sustainability of the fishery. Furthermore, the inseason adjustment criteria give NOAA Fisheries the ability to adjust retention limits regionally (down to zero fish, if necessary) in response to landings information. The healthy status of the North Atlantic swordfish stock, in concert with the inseason adjustment criteria, provide confidence that Alternative B4 would not lead to overfishing.

Safety at sea is an important consideration in fisheries management, and National Standard 10 compels the Agency to consider the issue. To reduce safety at sea concerns, management measures are specifically designed to give fishermen the flexibility to safely operate their vessels. In HMS fisheries, mitigating safety concerns has not included regulations limiting catch retention based on vessel weight capacity. Instead, retention limits are set based on analyses of ecological and socioeconomic impacts, leaving the weight capacity compliance to the discretion of the vessel operator. Provided compliance with applicable U.S. Coast Guard regulations, the HMS Management Division typically defers to vessel operators as to how best to safely operate their vessels and will do so in this rule as well.

The transfer of any HMS at sea or in port from one vessel to another vessel is expressly prohibited in the regulations at 50 CFR §§ 635.29 (a) and 635.71(a)(61).

Comment 6: One commenter expressed concern about setting the swordfish retention limit on a per trip basis because fishermen could take multiple trips per day, increasing the harvest of swordfish. As a solution, the commenter suggested a daily swordfish retention limit.

Response: A daily swordfish retention limit is not needed, because it is unlikely that fishermen would engage in multiple trips per day and gears authorized under the relevant permits are unlikely to catch large numbers of swordfish. As indicated in the response to Comment 3 above, there are limited geographic areas where swordfish are available close enough to shore to allow fishermen to make multiple trips per day. One of these areas is the south Florida region. However, the retention limit in that area under the Swordfish General Commercial permit is zero swordfish. The authorized gears use a limited number of hooks and are constantly tended by fishermen who quickly boat the swordfish once hooked. For these reasons, the gears authorized under these permits are unlikely to catch large numbers of swordfish. Swordfish General Commercial permit holders may use bandit, handline, harpoon, rod and reel, and green-stick gear when targeting and retaining swordfish. HMS Charter/Headboat vessel permit holders with a commercial sale endorsement may use rod and reel and handline under open-access swordfish commercial retention limits when on a commercial trip. HMS Commercial Caribbean Small Boat permit holders may use bandit, handline, harpoon, rod and reel, and buoy gear when targeting and retaining swordfish. Note that buoy gear in the context of HMS fisheries is defined in 50 CFR Part 635.2 as a fishing gear consisting of one or more floatation devices supporting a single mainline to which no more than two hooks or gangions are attached. The Caribbean Fishery Management Council is currently considering authorizing up to 25 hooks per vertical line in Council managed fisheries. Greater than 2 hooks would not be allowed when targeting and

retaining swordfish, and NOAA Fisheries will communicate this difference with targeted outreach in the U.S. Caribbean.

Furthermore, the North Atlantic swordfish stock is not overfished and not experiencing overfishing. The United States has not harvested its domestic allocation of swordfish quota in a number of years, and there is plenty of room under the quota for additional effort and landings. Thus, even if a small number of fishermen are able to make multiple trips per day, the increase in harvest would not impact the sustainability of the North Atlantic swordfish stock.

Comment 7: NOAA Fisheries received several comments about the stock status of North Atlantic swordfish, including whether a sub-population of swordfish existed in the U.S. Caribbean. These comments questioned whether the North Atlantic swordfish stock was healthy enough to support increased effort and harvest. The PR DNER submitted a comment stating that the size of sexual maturity has decreased for females, which could be a sign of an overfished stock. The PR DNER stated that the retention limit for swordfish should not be increased until Caribbean-specific research is performed on the stock.

Response: The North Atlantic swordfish stock is not overfished and is not experiencing overfishing. The ICCAT SCRS most recently assessed the stock in 2017. This assessment informed an Atlantic-wide TAC and the resulting domestic allocation of swordfish quota. Collectively, ICCAT Contracting Parties have not harvested the Atlantic-wide swordfish TAC in a number of years. Similarly, the United States has not harvested its full domestic allocation of swordfish quota. Thus, additional effort and landings would not jeopardize the sustainability of the North Atlantic swordfish stock.

The 2017 ICCAT SCRS North Atlantic swordfish stock assessment, which is the best scientific information available, considered all swordfish north of five degrees north latitude to be a single stock. The data considered in the assessment did not indicate any sub-populations in the Caribbean. NOAA Fisheries is unaware of any reports, data, or publications suggesting a decrease in size of maturity for female swordfish. Furthermore, ICCAT has not indicated that there are any signs of a decrease of size at maturity for female swordfish, with the North Atlantic swordfish stock currently not overfished or undergoing overfishing.

Shark retention limits (Alternatives C1 - C4)

Comment 8: NOAA Fisheries received a number of comments regarding the shark retention limit for the HMS Commercial Caribbean Small Boat permit. Several commenters supported the No Action alternative to not allow shark retention under the HMS Commercial Caribbean Small Boat permit. Some of these commenters stated that sharks in the U.S Caribbean are more valuable for tourism (including recreational SCUBA diving), recreational fishing, and ecological services than as a harvested resource. Other commenters indicated that a thorough analysis on the impacts to shark stocks and protected resources is needed before increasing the shark retention limit. NOAA Fisheries also received a number of comments generally supporting the retention of sharks under the HMS Commercial Caribbean Small Boat permit. Some commenters stated that a shark fishery exists in the region, with vessels being able to safely hold two to six sharks, so authorizing the retention of sharks could incentivize fishermen to obtain the appropriate permit and to report their catch for quota tracking, species diversity estimates, and

fishery-dependent data collection. NOAA Fisheries also received multiple comments stating that a combination of Alternatives C2 and C3 should be implemented for HMS Commercial Caribbean Small Boat permit holders. Commenters stated that the species included under Alternative C2 (smoothhounds and tiger sharks) are too limited and do not include the full range of species that can be sustainably harvested in the U.S. Caribbean. Commenters stated that smoothhound catch data reflect incidental catch and that fishermen are more likely to target tiger sharks than smoothhound sharks. Thus, an allowance for the combined retention of smoothhound sharks and tiger sharks will likely direct fishing pressure only to tiger sharks, possibly leading to unsustainable catch. Commenters suggested allowing retention of more authorized shark species including small coastal, large coastal, pelagic, and smoothhound sharks. The commenters also stated that the species list under Alternative C3 (non-prohibited large coastal, small coastal, pelagic, and smoothhound sharks) was closer to the appropriate list of allowable shark species, but the retention limit of six sharks was too high, with HMS Commercial Caribbean Small Boat vessels being able to hold two to six sharks. These commenters suggested a hybrid of the two alternatives would work, with an adjustable retention limit of up to three sharks of the following species groups: non-prohibited large coastal sharks (no hammerhead, silky, or sandbar sharks), small coastal sharks, and smoothhound sharks. Some of these commenters, including PR DNER, were also specifically concerned about the stock status of hammerhead, oceanic whitetip, and shortfin mako sharks, and suggested waiting until more is known about whether these species can tolerate increased harvest levels before any changes are made to the regulations. Some commenters stated that retention of pelagic sharks should not be authorized.

Response: NOAA Fisheries agrees that allowing a limited amount of shark retention could incentivize fishermen, who are already landing sharks, to obtain the appropriate permit and report landings. NOAA Fisheries disagrees that the commercial harvest of shark should not be allowed solely based on the potential economic benefits of tourism and recreational fishing. Under the Magnuson-Stevens Act, NOAA Fisheries strives to balance the needs of recreational and commercial fishing communities while also allowing for the opportunity to catch optimum yield. Given that many shark quotas are currently not being fully harvested, allowing for limited landings, which is also expected to improve compliance and data collection, is appropriate. Therefore, based on public comment regarding the species that should be allowed, NOAA Fisheries developed a new preferred alternative, Alternative C4. This new preferred alternative is a hybrid of proposed Alternative C2 and Alternative C3. Under Alternative C4, NOAA Fisheries establishes a retention limit range of zero to three non-prohibited large coastal, small coastal, and/or smoothhound sharks (combined) per vessel per trip, with a default retention limit of three sharks per vessel per trip. Prohibited sharks and pelagic (including shortfin mako and oceanic whitetip sharks), hammerhead, silky, blacknose, and sandbar sharks may not be retained under this alternative. This alternative is preferred because it would be responsive to public comments and would meet management goals by providing increased fishing opportunities to harvest sustainably managed sharks at incidental levels while still avoiding overharvest of specific species. This alternative is similar to Alternatives C2 and C3, with regional retention limits within the range discussed for all of the alternatives. Alternative C4 is anticipated to have neutral direct ecological impacts to shark stocks in the short- and long-term for several reasons. First, the quotas for the different shark management groups are not being modified, and fishermen would continue to be limited by the established shark quotas for these sustainably managed species. The quotas for many of these species have not been fully harvested in recent years. Therefore, additional retention of species under the large coastal (except hammerhead, silky, and sandbar

sharks), small coastal (except blacknose sharks), and smoothhound shark management groups should not impact the sustainability of the stocks. Second, the retention limits in Alternative C4 would not likely increase landings to a level that may adversely affect shark populations given the limited range and hold capacity of the small-scale vessels involved. Additionally, shortfin mako and oceanic whitetip sharks, which are both in the pelagic shark management group, would not be authorized for retention and would not be adversely impacted by this action. Third, this rule is also finalizing adaptive management measures (Alternative A3) that would allow NOAA Fisheries to quickly adjust shark retention limits regionally (down to zero fish, if necessary) in response to landings information. Fourth, NOAA Fisheries anticipates that allowing the retention of sharks under the HMS CCSB permit will not only provide increased fishing opportunities to harvest sustainably managed sharks, but also improve catch and landings data in the U.S. Caribbean shark fishery as NOAA Fisheries expects more fishermen to acquire the HMS CCSB permit given the ability to retain sharks. Increased participation and permitting would likely lead to improved data collection, more accurate stock assessments, and better management of the U.S. Caribbean shark fishery. Lastly, NOAA Fisheries would carry out extensive outreach and education to fishermen and government agencies in the U.S. Caribbean region following implementation of this final action to address species identification and compliance concerns.

Comment 9: Some commenters, including the PR DNER, expressed concern that fishermen in the U.S. Caribbean are unable to properly identify shark species. These commenters, including the PR DNER, suggested that shark identification education is an important priority for management.

Response: NOAA Fisheries is aware of the difficulty shark fishermen, including those in the U.S. Caribbean region, may have in accurately identifying shark species, and agrees with the commenters that education and outreach is a priority for management. As part of this rulemaking, NOAA Fisheries will aim to improve species identification through extensive training, outreach, and education to fishermen and territorial partners in the U.S. Caribbean region. Specifically, NOAA Fisheries plans to work with State and territorial agencies as well as the Caribbean Fishery Management Council to ensure that outreach and education materials on shark identification, safe handling, shark fishing regulations, and proper reporting reaches shark fishermen. In addition, NOAA Fisheries intends to make all outreach and educational material are available in both English and Spanish. This may include further developing educational materials, such as Caribbean HMS identification guides and brochures, that will be distributed at locations that fishermen frequent, and to individuals that acquire the HMS Commercial Caribbean Small Boat permit. NOAA Fisheries anticipates that the extensive education and outreach measures will improve species identification and accurate reporting of catches of sharks in the U.S. Caribbean region.

Comment 10: NOAA Fisheries received a comment expressing concern about shark catch in pupping and nursery areas. The commenter indicated that juveniles of threatened and endangered sharks are known to be caught incidentally during local small-scale fisheries interactions within pupping and nursery areas of coastal areas of Caribbean Islands. The commenter stated that shallow mangrove habitats and estuarine areas are easily accessible to local net fishermen and anglers from shore. However, the number and effort of these gears is

unknown due to lack of species-specific data on recreational fisheries. The presence of small juvenile specimens of multiple shark species (e.g., blacktip, lemon, hammerheads, oceanic whitetip, silky, and dusky) in the commercial fisheries suggest that U.S. Caribbean waters serve as critical nursery habitats for sharks. As such, NOAA Fisheries should consider the importance of the U.S. Caribbean for the sustainability or recovery of the shark species and factor this information into the stock assessments. The commenter is concerned that human related impacts may limit the survival of juvenile sharks, undermining the populations' ability to maintain sustainable fisheries.

Response: NOAA Fisheries agrees that, based on the limited information available, there are likely pupping and nursery areas of sharks found within the U.S. Caribbean, and that some juvenile sharks will likely be caught by commercial and recreational fishermen. Some of these sharks may be threatened species, but there are no endangered shark species found within the U.S. Caribbean. Specifically, within the U.S. Caribbean, two shark species are listed as threatened under the ESA. These species are the Central and Southwest Atlantic distinct population segment of scalloped hammerhead sharks (which is a different distinct population segment than that found along the mainland) and oceanic whitetip sharks throughout their range. At this time, there are no species of sharks listed as endangered in the U.S. Caribbean. As described above under Comment 8, NOAA Fisheries is finalizing a different alternative than proposed. Specifically, NOAA Fisheries is finalizing Alternative C4. Under this alternative, neither oceanic whitetip nor scalloped hammerhead sharks may be harvested, and NOAA Fisheries will work to provide education and outreach materials to improve shark identification in the area. This action is consistent with the results of the 2020 Biological Opinion issued under Section 7 of the ESA. On May 15, 2020, NOAA Fisheries released a Biological Opinion for all Atlantic HMS fisheries except pelagic longline, which stated that the continued operation of the fisheries analyzed in the Biological Opinion (including handgear fisheries) is not likely to jeopardize the continued existence of sea turtles, sawfish, Atlantic sturgeon, scalloped hammerhead shark (Caribbean and Central Atlantic DPS), oceanic whitetip shark, and giant manta ray. NOAA Fisheries is implementing the Reasonable and Prudent Measures and Terms and Conditions of that 2020 Biological Opinion. This action is not anticipated to affect the above-referenced ESA-listed species in any way not previously analyzed for existing regulations and there is no new information that would alter this conclusion. Furthermore, the Agency does not anticipate any increased risks to overfished sharks or their habitats in the region. The gears authorized with a HMS Commercial Caribbean Small Boat permit in federal waters are bandit, handline, harpoon, rod and reel, and buoy gear (see discussion of the definition of buoy gear in HMS fisheries and possible hook limit changes for buoy gear in Caribbean FMC-managed fisheries in the response to comment 6). Each of these is a tended gear that has low bycatch and bycatch mortality, which allows for quick release of shark species while minimizing adverse impact protected species, incidentally-caught species, or EFH. Additionally, NOAA Fisheries believes that allowing for a limited number of sharks to be harvested will provide additional information, including effort and gear information, that can be used in stock assessments as well as improve our understanding of the species and any nursery and pupping areas in the U.S. Caribbean.

Comment 11: One commenter expressed concern that allowing shark retention in the U.S. Caribbean could attract fishermen from the mainland United States to the region to fish, increasing fishing effort.

Response: Currently, federally permitted commercial shark fishermen are able to fish in the U.S. Caribbean region, with the retention limits for the directed and smoothhound shark permits being higher than those allowed by the HMS Commercial Caribbean Small Boat permit. Therefore, NOAA Fisheries disagrees that the allowance of up to three sharks per vessel per trip under the HMS Commercial Caribbean Small Boat permit would attract fishermen to the Caribbean and substantially increase fishing effort. The final retention limit is a conservative limit that is analogous to the lowest retention limit of the existing federal HMS permits authorized for commercial shark fishing both off the mainland of the U.S. and in the U.S. Caribbean region. The distance for commercial fishermen from the U.S. mainland to travel to the U.S. Caribbean is over 900 miles (from Miami to U.S. Caribbean waters off the northwest of Puerto Rico) which is a considerable investment in time and fuel for any vessel, but especially one that is under 45 feet in length. The harvest of three sharks per vessel per trip would likely not offset the cost of fuel and therefore would not make a commercial fishing trip profitable. In addition, the HMS Commercial Caribbean Small Boat is valid only in the U.S. Caribbean region on vessels that are less than 45 feet long and cannot be held in conjunction with any other HMS permit in a calendar year. The HMS Commercial Caribbean Small Boat permit also allows fishermen to directly sell their HMS catch without possessing a dealer permit, provided that the fishermen report the harvest and sale of these fish to their respective territorial governments, which will report these data to the NOAA Fisheries. This permit was implemented to provide fishermen in the region a way to comply with federal HMS regulations while taking into account the unique and artisanal nature of the local fishery. It is unlikely that the conservative trip limit in this rulemaking would attract more fishermen from the mainland U.S. to the U.S. Caribbean region given the higher trip limits and vessel capacity other commercial shark permits afford them outside of the U.S. Caribbean region.

Other

Comment 12: Multiple comments were submitted expressing concern about enforcement of swordfish and shark fishing regulations in the U.S. Caribbean. Commenters stated that there are not enough enforcement officers to monitor all fishing areas and ports. Some commenters, including PR DNER, commented that NOAA Fisheries should focus on enforcement of existing regulations and outreach before implementing changes to authorized species and increasing retention limits under the HMS Commercial Caribbean Small Boat permit.

Response: NOAA Fisheries and the U.S. Coast Guard continue to enhance enforcement resources in the U.S. Caribbean and to enforce all federal fisheries regulations with assistance from territorial governments through joint enforcement agreements. NOAA Fisheries also provides outreach and training as part of those agreements. NOAA Fisheries will provide targeted outreach and training on the measures of this final action to ensure compliance by fishermen. NOAA Fisheries believes that one of the benefits of the preferred alternatives, including the increased swordfish retention limit and the ability to retain some shark species, will be an increase in the number of HMS Commercial Caribbean Small Boat permit holders. As a condition of the permit, fishermen will be required to know and comply with federal regulations.

Comment 13: Comments were submitted supporting separate shark quotas for the U.S. Caribbean instead of combining the quota with the Gulf of Mexico region.

Response: These comments are outside the scope of this rulemaking because the purpose of this rulemaking is to modify the swordfish and shark retention limits for certain commercial swordfish and shark permits. The quotas and general management measures were established in the final rules to implement Amendment 2 to the 2006 Consolidated HMS FMP (73 FR 35778, June 24, 2008; corrected on 73 FR 40658; July 15, 2008), Amendment 5a to the 2006 Consolidated HMS FMP (78 FR 40318; July 3, 2013), Amendment 6 to the 2006 Consolidated HMS FMP (80 FR 50073; August 18, 2015), and Amendment 9 to the 2006 Consolidated HMS FMP (80 FR 73128; November 24, 2015), and Amendment 5b to the 2006 Consolidated HMS FMP (21 FR 14678).

Comment 14: One commenter suggested including mechanisms to ensure that sharks harvested in the U.S Caribbean region will be contained in the local markets or for personal consumption. Other commenters stated that there is little to no market for shark meat in the U.S. Caribbean region and that allowing the retention of sharks under the HMS Commercial Caribbean Small Boat permit could promote the clandestine export of shark fins.

Response: During the rulemaking process for Amendment 4 (77 FR 59842, October 1, 2012) to the 2006 Consolidated HMS Fishery Management Plan, NOAA Fisheries created the Commercial Caribbean Small Boat permit. At the time, NOAA Fisheries recognized the need for a unique Caribbean permit in part because of the smaller vessels, shorter trips, limited profit margins, and high local consumption of catches associated with Caribbean commercial fisheries. Currently, NOAA Fisheries does not believe that large amounts of sharks and shark products would be sold outside of local U.S. Caribbean markets because the retention limit is too low for vessels to make a profit shipping and selling the sharks outside of the U.S. Caribbean. Based on comments received from the HMS Advisory Panel, NOAA Fisheries believes that there are sharks being sold in the U.S. Caribbean, and therefore, there is a local market for shark meat. Increasing commercial shark fishing opportunities in the U.S. Caribbean in a limited manner under this action could expand the market for sustainably harvested shark meat in the region. With regard to the export of shark fins, trade of shark fins that are harvested from sharks legally landed with their fins attached is legal in the United States and its Caribbean territories, and can contribute to supporting a sustainable shark fishing industry. Although no retention of sharks is currently allowed under the HMS Commercial Caribbean Small Boat permit, vessels with other commercial shark permits can currently retain sharks in the U.S. Caribbean and can legally sell their fins if they are sold to a federally permitted dealer. Increasing the number of sharks that can be legally harvested by HMS Commercial Caribbean Small Boat permit holders is not expected to correspond with a rise in illegal harvest of sharks or promotion of a clandestine fin trade. Rather, allowing the legal retention of sharks by HMS Commercial Caribbean Small Boat permit holders should provide for more legal markets of shark products, which is expected to incentivize fishermen to obtain the HMS Commercial Caribbean Small Boat permit and ultimately correspond with additional data to continue managing those species sustainably, consistent with the Magnuson-Stevens Act.

Comment 15: One commenter expressed concern about contaminants in shark flesh and stated that research on the subject has not been performed in Puerto Rican waters.

Response: The United States Food and Drug Administration's (FDA) Hazard, Analysis, and Critical Control Points (HACCP) published regulations (December 18; 1995; 60 FR 65197)

that mandate the application of the HACCP principles to ensure the safe and sanitary processing of seafood products. Dealers are responsible for ensuring products they purchase and sell are in compliance with FDA HACCP regulations.

Comment 16: One commenter stated that one of the outcomes of the Caribbean Challenge Initiative summit in the British Virgin Islands in May 2013, which included the participation of the Secretary of the PR DNER, was a Communiqué emphasizing the urgent need to create protection for sharks and rays across the entire Caribbean Region. As a result, PR DNER agreed to protect sharks and rays in PR waters. Therefore, promoting a shark fishery is contrary to Puerto Rico's policy.

Response: Federal conservation and management measures have been and continue to be in place in federal waters of the U.S. Caribbean. These measures, which will continue under this action, have resulted in sustainable managed shark fisheries. As a condition of their permits, Federally permitted fishermen must abide by federal regulations wherever they fish, including state waters, unless the state (or territory in this case) has more restrictive regulations (see 50 CFR § 635.4 (a)(10)). NOAA Fisheries works closely with the states and territories to ensure consistent regulations for shark fishing, to the extent practicable. In some cases, the regulations are not consistent. As such, federally permitted fishermen operating from and/or landing fish in Puerto Rico or the U.S. Virgin Islands must abide by any territorial commercial shark fishing regulations that are more restrictive. It is up to the fishermen to understand the regulations that are applicable to their situation.

Additionally, this rule does not require Puerto Rico to promote a shark fishery. Rather, one of the purposes of this rulemaking is to adjust the shark retention limits of the existing HMS Commercial Caribbean Small Boat permit to better provide fishing opportunities for shark fishermen to harvest sustainably managed shark species. This permit is one of several existing federal commercial shark permits that allow the retention of sharks in federal waters of the United States, including the U.S. Caribbean region.

Comment 17: The PR DNER submitted a comment stating that shark, tuna, and swordfish in territorial waters are managed under Federal HMS regulations, and that commercial fishermen targeting or retaining these species must hold a Federal HMS permit. However, few commercial fishermen in Puerto Rico comply with this requirement, thus, PR DNER believes that data used in developing this action may be incomplete, and there is no evidence that an increase in the swordfish and shark retention limit is needed. In addition, PR DNER stated that data collection requirements should be enforced before increasing the swordfish and shark retention limits. Other commenters, including PR DNER, stated that additional research on U.S. Caribbean shark species is needed, and that HMS landings should be closely tracked. Several commenters stated that the Agency should carry out Caribbean-specific stock assessments for all sharks authorized for retention under the HMS Commercial Caribbean Small Boat permit. Some commenters specifically noted that stock status information is needed for smoothhound sharks in the Caribbean. Although the recent smoothhound shark stock assessments found that the stocks are healthy, not overfished, and with no overfishing occurring, the commenter stated that data from the U.S. Caribbean was not incorporated into the stock assessment. Two species of smoothhound sharks have been described in the U.S. Caribbean, but the assessment failed to

recognize the presence of a different subspecies (*Mustelus canis insularis Heemstra*, 1997) that occurs in the region and may be the bulk of the incidental catches.

Response: NOAA Fisheries agrees that reporting of HMS landings in the region could continue to be improved. NOAA Fisheries specifically implemented the HMS Commercial Caribbean Small Boat permit in 2012 (77 FR 59842; October 1, 2012) in part to improve the Agency's capability to monitor and sustainably manage the fishery. The HMS Commercial Caribbean Small Boat permit provides several advantages for U.S. Caribbean fishermen, including the ability to act as a dealer and sell catch directly to consumers and restaurants, thus better meeting the type of markets that exist in the U.S. Caribbean. Since 2012, the reporting of landings of HMS in the territorial trip ticket programs has improved; however, fishermen seem to remain reluctant to obtain the permit. NOAA Fisheries believes that one benefit of the preferred alternatives, including the increased swordfish retention limit and the ability to retain some shark species under the HMS Commercial Caribbean Small Boat permit, will be an increase in the number of HMS Commercial Caribbean Small Boat permit holders because the authorized species and retention limits may make the permit more desirable and may more closely match the existing fishing practices in the region. If more fishermen in the region obtain the permit and comply with the reporting requirements, NOAA Fisheries and territorial governments would get better, more complete landings information. For this reason, the Agency disagrees with the assertion that reporting compliance must be addressed before changes to the retention limits are made. Instead, changes to the retention limit would make the HMS Commercial Caribbean Small Boat permit more desirable since it increases the potential profitability and flexibility of each trip. This is expected to increase the adoption of the HMS Commercial Caribbean Small Boat permit, leading to increased reporting compliance, and increased HMS fishery data from the region.

Regarding the need for additional research and Caribbean-specific stock assessment for sharks authorized for retention under the HMS Commercial Caribbean Small Boat permit, management of the Atlantic shark fisheries is based on the best available science to achieve optimum yield while preventing overfishing and to rebuild overfished shark stocks. Domestic shark stock assessments are generally conducted through the Southeast Data, Assessment, and Review (SEDAR) process, in which NOAA Fisheries participates. This process is also used by the South Atlantic, Gulf of Mexico, and Caribbean Fishery Management Councils and is designed to provide transparency throughout the stock assessment process. Additionally, there are some shark stocks that are assessed internationally via the process established by ICCAT. In all cases, NOAA Fisheries ensures the data and models used are appropriate, all sources of mortality are considered, and that the end result constitutes the best available science, consistent with National Standard 2 and other requirements. To that end, this final action is allowing limited retention of non-prohibited sharks under the HMS Commercial Caribbean Small Boat permit, with shark landings being carefully monitored through the HMS e-Dealer reporting system and via the existing territorial reporting system to ensure timely quota monitoring. NOAA Fisheries anticipates, as mentioned above, that allowing the retention of sharks under the HMS Commercial Caribbean Small Boat permit will not only provide increased fishing opportunities to harvest sustainably managed sharks, but also improve catch and landings data in the U.S. Caribbean shark fisheries as NOAA Fisheries expects more fishermen to acquire the HMS Commercial Caribbean Small Boat permit given the ability to retain sharks. Increased

participation and permitting is expected to lead to improved data collection, more accurate stock assessments, and better management of the U.S. Caribbean shark fishery.

With regard to the concern on stock status information needed for smoothhound sharks in the Caribbean, the stocks of most Atlantic HMS span broad areas both within and beyond the Caribbean and regional stock assessments are not appropriate in such cases. A few shark species are found mainly in the Caribbean and in such cases regional stock assessments may be appropriate and are conducted accordingly as data are available. However, as is the case of species of smoothhound sharks, NOAA Fisheries has only limited data for some species, which requires management to be based on species within a complex of species. Because of the overlap in range between the different species and the extreme difficulty in distinguishing species of smoothhound sharks from one another without genetic analysis to distinguish between the species, NOAA Fisheries grouped all smoothhound species (all *Mustelus* species that are currently known and those that may be discovered within the U.S. EEZ of the Atlantic, Gulf of Mexico, and Caribbean) together within the term "smoothhound sharks" for management purposes and manages them as a complex and one stock. Thus, the term ''smoothhound sharks'' collectively refers to smooth dogfish (*Mustelus canis*), Florida smoothhound (*M. norrisi*), Gulf smoothhound (*M. sinusmexicanus*), small eye smoothhound (*M. higmani*), and any other *Mustelus* species that might be found in U.S. waters of the Atlantic, Gulf of Mexico, and/or Caribbean. Any *Mustelus* shark species retained by commercial fishermen in the U.S. Caribbean region under the new HMS Commercial Caribbean Small Boat shark retention limits in this final action will continue to be counted towards the smoothhound shark complex quota, which in turn will help inform future stock assessments.

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Finding of No Significant Impact

Final Finding of No Significant Impact for a final action to update and revise existing HMS regulations for North Atlantic swordfish and Atlantic sharks retention limits in U.S. Atlantic and Caribbean waters.

The Highly Migratory Species (HMS) Management Division of the Office of Sustainable Fisheries submits the attached EA for Atlantic HMS fisheries for Secretarial review under the procedures of the Magnuson-Stevens Act.

This Final EA analyzes the ecological, social, and economic impacts of the proposed action and was developed as an integrated document that includes a Regulatory Impact Review and Final Regulatory Flexibility Analysis. The final action streamlines HMS regulations to align retention limits for commercial swordfish permits established for HMS Commercial Caribbean Small Boat permit holders under Amendment 4 with those established in Amendment 8 for Swordfish General Commercial permit holders as well as revises shark retention limits established for the HMS Commercial Caribbean Small Boat permit under Amendment 4.

The responses in the Finding of No Significant Impact statement are supported by the analyses in the EA as well as in the other National Environmental Policy Act (NEPA) documents referenced in the EA. Copies of the EA/Regulatory Impact Review/Final Regulatory Flexibility Analysis are available at the following address:

Highly Migratory Species Management Division, F/SE1
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, Maryland 20910
Phone: (301) 427-8503
or
https://www.fisheries.noaa.gov/topic/atlantic-highly-migratory-species

The preferred alternatives of this action are:

- Alternative A2 (*Preferred Alternative*)**:** Adopt the Swordfish General Commercial Permit inseason adjustment authorization criteria to adjust the regional swordfish retention limit for the HMS Commercial Caribbean Small Boat permit.
- Alternative A3 (*Preferred Alternative*)**:** Adopt the shark inseason trip limit adjustment authorization criteria to adjust the regional shark retention limit for the HMS Commercial Caribbean Small Boat permit.
- Alternative B4 (*Preferred Alternative*): Maintain the default swordfish retention limit of zero swordfish per vessel per trip for the Florida Swordfish Management Region and establish a default swordfish retention limit of eighteen swordfish per vessel per trip for all other regions and for HMS Commercial Caribbean Small Boat and Swordfish General Commercial permit holders, and HMS Charter/Headboat permit holders with a commercial sale endorsement. For all permits and regions, the retention limit range would be zero to eighteen swordfish per vessel per trip.
- Alternative C4 (*Preferred Alternative*): Establish a default shark retention limit of three non-prohibited large coastal, small coastal, and smoothhound sharks (combined) per vessel per trip for the HMS Commercial Caribbean Small Boat permit holders. Specifically, under this alternative, permit holders could retain and sell tiger, blacktip, bull, spinner, lemon, Atlantic sharpnose, finetooth, bonnethead, and smoothhound sharks. The retention limit range would be zero to three sharks per vessel per trip. The retention of pelagic, hammerhead, silky, blacknose, sandbar, and prohibited sharks is not allowed under this alternative.

The 1978 CEQ regulations state that the determination of significance using an analysis of effects requires examination of both context and intensity, and lists ten criteria for intensity (40 CFR 1508.27). In addition, the Companion Manual for National Oceanic and Atmospheric Administration Administrative Order 216-6A provides sixteen criteria, the same ten as the CEQ regulations and six additional, for determining whether the impacts of a proposed action are significant. Each criterion is discussed below with respect to the final action and considered individually as well as in combination with the others.

1. Can the final action reasonably be expected to cause both beneficial and adverse impacts that overall may result in a significant effect, even if the effect will be beneficial?

No. This final action is expected to have neutral impacts and no adverse impacts because the preferred alternatives are largely administrative in nature and provide only slight increases to the retention limit for swordfish and sharks. Any swordfish catches resulting from the modified swordfish retention limits or limit range will remain limited to the applicable, previously analyzed and implemented quota for North Atlantic swordfish, which is adjusted annually consistent with NOAA Fisheries' obligations under ATCA, to promulgate such regulations as may be necessary and appropriate to carry out ICCAT recommendations. The final action would streamline the regulations to align swordfish retention limits for commercial swordfish permits established for HMS Commercial Caribbean Small Boat permit holders under Amendment 4 to the 2006 Consolidated Atlantic HMS FMP with those established in Amendment 8 to the 2006 Consolidated Atlantic HMS FMP for Swordfish General Commercial permit holders.

This action also modifies the swordfish and shark retention limits for existing swordfish and shark commercial permits and adds regulatory criteria for inseason adjustment to adjust the retention limits of the HMS Commercial Small Boat permit. The ICCAT SCRS assessed North Atlantic swordfish and found that the North Atlantic swordfish stock was not overfished nor was overfishing occurring. The SCRS also indicated that the North Atlantic swordfish stock has been rebuilt since at least 2013. The United States has not fully harvested its swordfish quota since 2003; therefore, there is a need to continue to provide additional opportunities for fishermen to catch the U.S. quota. The smoothhound shark stock is healthy, not overfished with no overfishing occurring. The relevant large and small coastal shark quotas have not been fully harvested in recent years and NOAA Fisheries is not expecting increased landings of sharks allowed by this action to adversely affect the stocks.

In addition, the quotas for sharks are not being modified in this rulemaking and fishermen would continue to be limited to the total amount of sharks that can be harvested, as well as by seasonal closures when the shark quotas have reached or are projected to reach 80 percent of the relevant quota or are projected to reach 100 percent of the relevant quota by the end of the fishing season. The final action is not expected to jeopardize the sustainability of the fully-rebuilt North Atlantic swordfish stock nor the shark stocks allowed under this action. Swordfish and shark landings will continue to be monitored carefully through the HMS e-Dealer reporting system and via the existing territorial reporting system. The action also includes adaptive management measures to allow NOAA Fisheries to quickly adjust swordfish and shark retention limits regionally (down to zero fish, if necessary) in response to landings information, changes in North Atlantic swordfish stock status, and U.S. swordfish quota availability. Thus, the final management measures are expected to have neutral impacts, as overall impacts to the fishery will remain unchanged.

2. Can the final action reasonably be expected to significantly affect public health or safety?

No. This action considers modifying the swordfish and shark retention limits for existing swordfish and shark commercial permits and adding regulatory criteria for inseason adjustment of those retention limits. The proposed modification of swordfish and shark management measures is to provide additional commercial fishing opportunities to small-scale swordfish and shark handgear fishermen. Therefore, no effects to public health and safety nor fishermen safety at sea are anticipated from their implementation.

3. Can the final action reasonably be expected to result in significant impacts to unique characteristics of the geographic area, such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas?

No. This action would not result in substantial impacts to unique areas, such as historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas because fishing effort would occur in open areas of the Atlantic Ocean that do not contain such unique areas. In addition, the action area does not contain any park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas, so there could be no impacts to these areas.

4. Are the final action's effects on the quality of the human environment likely to be highly controversial?

No. This action is not expected to have impacts on the quality of the human environment that are likely to be highly controversial. Since the public has been involved in the development of this action and the preferred actions were selected, based in part, on feedback from fisherman and the general public, the effects of this action on the human environment are not expected to be highly controversial. However, in this context the term "controversial" does not refer to the mere existence of opposition to, or interest in a proposed action; rather "controversial" refers to cases where a substantial dispute exists as to the size, nature, or effect of the major federal action. Such substantial dispute does not exist here, as the size, nature, and effect of the proposed action are well-defined by the preferred alternatives.

5. Are the final action's effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

No. Effects on the human environment would be similar to those effects analyzed in similar swordfish actions since 2013, some of which have been considered in the Final EIS prepared for the 2006 Consolidated Atlantic HMS FMP as well as the EISs for the Amendments to the 2006 Consolidated Atlantic HMS FMP. None of the previous actions resulted in highly uncertain effects or unique or unknown risks, and no highly uncertain, unique, or unknown risks are anticipated for this action.

6. Can the final action reasonably be expected to establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration?

No. The purpose of this rulemaking is to consider management measures for the North Atlantic swordfish and Atlantic shark fisheries that can be implemented to provide flexibility, consistency, and efficiency when managing three open access swordfish handgear permits, all of which allow similar gears to be used, among different regions, and to provide fishing opportunities for sharks in the U.S. Caribbean. It is NOAA Fisheries' goal to implement management measures that will increase management flexibility to adapt to the changing needs of the North Atlantic swordfish and Atlantic shark fisheries, and achieve optimum yield while rebuilding overfished stocks and ending overfishing. This action does not set a precedent for any future actions or represent a formal policy direction.

7. Is the final action related to other actions that when considered together will have individually insignificant but cumulatively significant impacts?

No. NOAA Fisheries does not anticipate there to be any significant cumulative ecological, economic, or social impacts. Overall, the preferred alternatives in this rulemaking would have neutral cumulative ecological impacts, because they would have no significant impact on fishing effort or behavior beyond what was analyzed in Amendment 4, 8, and 9. The neutral ecological impacts associated with the final action make this action favorable, particularly given the associated economic benefits to both swordfish and shark fishermen. There would be no significant impacts on current fishing levels or fishing mortality. Additionally, there would be no major impacts to EFH, and the preferred actions would both maintain sustainable

swordfish and shark fisheries and maintain the status quota for species currently under a rebuilding plan. Overall, the preferred alternatives in this action have a combination of neutral to minor beneficial socioeconomic impacts and would likely increase the efficiency and flexibility in managing these fisheries across different regions. This action is a continuation of the 2006 Consolidated Atlantic HMS FMP and its amendments, which have been considered in this document. The environmental impacts of those prior actions were evaluated at the time of the actions, and the combination of those impacts and impacts form this Final EA are not expected to result in cumulative significant impacts,

8. Can the final action reasonably be expected to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources?

No. The final action would occur in inshore and offshore waters of the Atlantic Ocean, and would not occur in any areas listed or eligible for listing in the National Register of Historic Places, and would not cause loss or destruction of significant scientific, cultural, or historical resources because there are no significant scientific, cultural, or historic resources within the action area.

9. Can the final action reasonably be expected to have a significant impact on endangered or threatened species, or their critical habitat as defined under the Endangered Species Act of 1973?

No. There would not be any negative ecological impacts to endangered or threatened species, or the critical habitat of these species beyond those impacts currently analyzed in the agency actions implementing North Atlantic swordfish or shark quotas. This action is not expected to adversely affect any endangered or threatened species. The effects on ESA-listed species for most handgears were analyzed under a Biological Opinion issued on May 15, 2020. On May 15, 2020, NOAA Fisheries released a Biological Opinion for all Atlantic HMS fisheries except pelagic longline, which stated that the continued operation of these fisheries (including handgear fisheries) is not likely to jeopardize the continued existence of sea turtles, sawfish, Atlantic sturgeon, scalloped hammerhead shark (Caribbean and Central Atlantic DPS), oceanic whitetip shark, and giant manta ray. NOAA Fisheries is implementing the Reasonable and Prudent Measures and Terms and Conditions of the 2020 Biological Opinion for Atlantic HMS fisheries except pelagic longline. This action is not anticipated to affect the above-referenced ESA-listed species in any way not previously analyzed for existing regulations and there is no new information that would alter this conclusion. Any of the covered ESA-listed species taken with handgear would be considered against the Incidental Take Statement in the 2020 BiOp for the Atlantic HMS fisheries except pelagic longline, as long as the operations are consistent with the RPMs in that BiOp.

10. Can the final action reasonably be expected to threaten a violation of Federal, state, or local law or requirements imposed for environmental protection?

No. The action would be consistent with the Magnuson-Stevens Act and the HMS regulations at 50 CFR part 635. NOAA Fisheries has determined that the final measure is consistent to the maximum extent practicable with the enforceable policies of those coastal states

in the Atlantic that have approved coastal zone management programs. The final action would not be expected to violate any federal, state, or local law or requirement imposed for the protection of the environment.

NOAA Fisheries produces an annual List of Fisheries that classifies domestic commercial fisheries (i.e., Category I, II, or III), by gear type, relative to their rates of incidental mortality or serious injury of marine mammals. Fishermen participating in Category I or II fisheries are required to be registered under MMPA and, if selected, to accommodate an observer aboard their vessels. Vessel owners or operators, or fishermen, in Category I, II, or III fisheries must report all incidental mortalities and injuries of marine mammals during the course of commercial fishing operations to NOAA Fisheries. There are currently no regulations requiring recreational fishermen to report takes, nor are they authorized to have incidental takes (i.e., they are illegal).

Commercial swordfish landings under the HMS Commercial Caribbean Small Boat and Swordfish General Commercial permits are from handgear fisheries. The commercial handgear fishery is currently listed as a Category II fishery under MMPA. The swordfish harpoon fishery and the for-hire handgear fishery are currently listed as Category III fisheries under MMPA. Strict control and operations through the regulations of these fishing gears means these gear types are not likely to result in mortality or serious injury of marine mammals or sea turtles.

11. Can the final action reasonably be expected to adversely affect stocks of marine mammals as defined in the Marine Mammal Protection Act?

No. NOAA Fisheries' annual List of Fisheries classifies domestic commercial fisheries, by gear type, relative to their rates of incidental mortality or serious injury of marine mammals. Commercial swordfish landings under the HMS Commercial Caribbean Small Boat and Swordfish General Commercial permits are from handgear fisheries. The commercial handgear fishery is listed as a Category II fishery under MMPA. The swordfish harpoon fishery, the for-hire handgear fishery and rod and reel gear are considered Category III fisheries under MMPA. Strict control and operations through the regulations of these fishing gears means these gear types are not likely to result in mortality or serious injury of marine mammals. The final action is not expected to alter fishing practices, techniques, or effort significantly and therefore should not have any further impacts on marine mammals.

12. Can the final action reasonably be expected to adversely affect managed fish species?

No. The action is not expected to result in adverse effects that could have a substantial effect on target species or non-target species. Currently, the swordfish retention limit range is zero to six swordfish per vessel per trip and NOAA Fisheries has had to adjust swordfish retention limits every six months since the implementation of Amendment 8 to the 2006 Consolidated Atlantic HMS FMP. The adjustments were made because of the underharvest of U.S. swordfish quota and to provide fishing opportunities for U.S. fishermen to catch more swordfish and sharks. The ICCAT SCRS assessed North Atlantic swordfish and found that the North Atlantic swordfish stock was not overfished nor was overfishing occurring. The SCRS also indicated that the North Atlantic swordfish stock has been rebuilt since at least 2013. The United States has not fully harvested its swordfish quota since 2003; therefore, there is a need to continue to provide additional opportunities for fishermen to catch the U.S. quota. The

smoothhound shark stock is healthy, not overfished with no overfishing occurring. The relevant large and small coastal shark quotas have not been fully harvested in recent years and NOAA Fisheries is not expecting increased landings of sharks allowed by this action to adversely affect the stocks. Because the commercial swordfish and shark quotas would remain unchanged for all commercial swordfish and shark fisheries and fishermen would continue to be quota-limited, there would likely be no impact on the allowable level of fishing pressure, catch rates, or distribution of fishing effort. Specific to the shark fisheries, under this rulemaking, fishermen would continue to be limited to the total amount and specific species of sharks that can be harvested, as well as by seasonal closures when the shark quotas have reached or are projected to reach 80 percent of the relevant quota or are projected to reach 100 percent of the relevant quota by the end of the fishing season In addition, swordfish and shark landings will continue to be carefully monitored through the HMS e-Dealer reporting system and via the existing territorial reporting system ensuring timely quota monitoring The action also includes adaptive management measures to allow NOAA Fisheries to quickly adjust swordfish and shark retention limits regionally (down to zero fish, if necessary) in response to landings information, changes in North Atlantic swordfish and shark stock status, and U.S. swordfish and shark quota availability if any concerns should arise. The rule would also align the swordfish retention limits for the HMS Commercial Caribbean Small Boat permit with the Swordfish General Commercial permit for the Caribbean region, with the addition of regulatory criteria for inseason adjustment to adjust the retention limits of the HMS Commercial Caribbean Small Boat permit. Therefore, the preferred actions would simultaneously have largely neutral cumulative ecological impacts on managed fish species. Lastly, shark and swordfish fishermen would be using selective handgears that have low bycatch and bycatch mortality, such that an increase in the use of these gears is unlikely to adversely impact incidentally-caught species. As such, the action would have little to no additional effect on non-target species.

13. Can the final action reasonably be expected to adversely affect essential fish habitat (EFH) as defined under the Magnuson-Stevens Act?

No. Impacts to EFH due to actions in this EA would likely be neutral and have no adverse effects because the preferred alternatives A2 and A3 represent an administrative change for how NOAA Fisheries would manage a fishery. Impacts to EFH due to changes to the existing HMS regulations for North Atlantic swordfish and Atlantic shark retention limits in U.S. Atlantic and Caribbean waters would also likely not have any adverse effects on EFH because the preferred alternatives B4 and C4 would not change the overall fishing effort on quota-limited commercial swordfish and shark fisheries. In addition, gears authorized for use with a Swordfish General Commercial permit are bandit, handline, harpoon, rod and reel, and green stick gear. Gear authorized for use with an HMS Charter/Headboat permit with a commercial sale endorsement are handline, and rod and reel. Gears authorized for use with a HMS Commercial Caribbean Small Boat permit are bandit, handline, harpoon, rod and reel, and buoy gear. All handgears are constantly tended by the fishermen and monitored so that there is very little bycatch of unwanted fish and protected resources species and rarely interact with benthic habitat. Swordfish handgear is very selective because it is deployed at times, depths, and locations where swordfish, as opposed to other coastal species, are typically encountered. Thus, there is no evidence to suggest that implementing the preferred alternatives in this EA would adversely affect EFH.

14. Can the final action reasonably be expected to adversely affect vulnerable marine or coastal ecosystems, including but not limited to, deep coral ecosystems?

No. The final action is not expected to adversely affect vulnerable marine or coastal ecosystems because the preferred alternatives represent minor changes in shark and swordfish retention limits of certain commercial swordfish and shark fishermen, and administrative changes for NOAA Fisheries in managing the swordfish and shark fisheries. These preferred alternatives are unlikely to change the overall fishing effort, quotas, or catch rates. In addition, gears authorized for use with a Swordfish General Commercial permit are bandit, handline, harpoon, rod and reel, and green stick gear. Gear authorized for use with an HMS Charter/Headboat permit with a commercial sale endorsement are handline, and rod and reel. Gears authorized for use with a HMS Commercial Caribbean Small Boat permit are bandit, handline, harpoon, rod and reel, and buoy gear. All handgears and green-stick gear are constantly tended by the fishermen and monitored so that there is very little bycatch of unwanted fish and protected resources species and any bycatch or unmarketable species captured on the fishing gears authorized can be dehooked and released quickly with a high chance of post-release survival. Because these gears are closely tended and rarely interact with benthic habitat, with both shallow and deep water corals, NOAA Fisheries does not anticipate any adverse effects on shallow or deep water coral from handgear and green-stick gear. Therefore, the final action is not expected to adversely affect vulnerable marine or coastal ecosystems, including but not limited to, deep coral ecosystems.

15. Can the final action reasonably be expected to adversely affect biodiversity or ecosystem functioning (e.g., benthic productivity, predator-prey relationships, etc.)?

No. The preferred alternative is not expected to have a substantial impact on biodiversity and ecosystem function within the affected area, because the preferred alternatives represent minor changes in shark and swordfish retention limits for certain commercial swordfish and shark fishermen (B4 and C4), and an administrative change for NOAA Fisheries in managing the swordfish and shark fisheries (A2 and A3). The preferred alternatives are not expected to jeopardize the sustainability of the fully-rebuilt North Atlantic swordfish stock or shark stocks. Swordfish and shark landings will continue to be carefully monitored through the HMS e-Dealer reporting system and via the state and territories. The action also includes adaptive management measures to allow NOAA Fisheries to quickly adjust swordfish and shark retention limits regionally (down to zero fish, if necessary) in response to landings information, changes in North Atlantic swordfish and shark stock status, and U.S. swordfish and shark quota availability. Thus, the final action is expected to have neutral impacts as overall impacts to the fishery will remain unchanged. In addition, shark and swordfish fishermen would be using selective handgears that have low bycatch and bycatch mortality, such that an increase in the use of these gears is unlikely to adversely impact incidentally-caught species, and that rarely interact with benthic habitats. Hence, the final action as a whole is not likely to have substantial adverse impacts on biodiversity and/or ecosystem function within the Atlantic Ocean including the Gulf of Mexico and Caribbean Sea.

16. Can the final action reasonably be expected to result in the introduction or spread of a nonindigenous species?

No. The final action is not expected to result in any change in fishing patterns or behaviors to those previously analyzed in Amendment 4 and Amendment 8 to the 2006 Consolidated Atlantic HMS FMP. Most vessels in the Atlantic swordfish fisheries are small vessels with limited range, hold capacity, and do not travel between ecologically different bodies of water or exchange ballast water. Thus, they do not contribute to the introduction or spread of non-indigenous species.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting EA prepared for this Final Rule to modify the North Atlantic swordfish and shark retention limit in the U.S. Atlantic and Caribbean waters and inseason adjustment criteria authorization, it is hereby determined that this final action will not significantly impact the quality of the human environment as described above and in the supporting EA. In addition, all beneficial and adverse impacts of the final action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an environmental impact statement for this action is not necessary.

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Kelly Denit
Director, Office of Sustainable Fisheries, NOAA

Date